Appendix C1 Noise Report

Traffic Noise Analysis For:

Northwest Arkansas Regional Airport Intermodal Access Road

Prepared For:

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EXECUTIVE SUMMARY

This report examines the potential noise impacts associated with the construction of the proposed Northwest Arkansas Regional Airport Intermodal Access Road project. The proposed project consists of a four-lane roadway composed of two general-purpose lanes in each direction to be constructed from Interstate 540 to the entrance of the Northwest Arkansas Regional Airport. This report assesses the noise impacts associated with two alternative alignments for the project. These alternatives include Alignment 4, and 5. Two scenarios are analyzed for each alternative alignment, a No Toll scenario where the facility operates toll free, and a With Toll scenario where the facility operates as a toll road.

The land uses along the proposed alignment are primarily agricultural with scattered residences. There are two housing developments that would be located adjacent to the road that have graded lots and some homes constructed but are not complete. There is a school adjacent to one of these developments that would also be adjacent to the road. For the purpose of this noise report, 78 receptor sites have been analyzed. The noise sensitive land uses for this project are considered to be the nearest existing schools, residential areas, local parks, regional parks including campground and recreational land uses, and future schools. Generally, each receptor represents a single residence. Although there are a few newer residential developments where a receptor may represent as many as 19 homes. The receptors were selected by reviewing maps and aerial photographs available for the area and by an inspection of the area.

Future noise levels were modeled at the receptors using the FHWA Traffic Noise Model (TNM). Receptors are impacted if the traffic noise levels with the project approach or exceed the Noise Abatement Criteria (NAC) as defined by FHWA and the AHTD or are projected to experience a substantial noise increase of 10 dB or greater with the project over existing conditions. It was found that between approximately 149 and 152 residential dwelling units and one school would be impacted by the project depending on which alignment was selected. Alignment 5 would result in one more home being impacted than Alignment 4. Conditions under the No Toll scenario are projected to result in impacts at one more residence compared to the With Toll scenario

Non-toll conditions result in the access road generating approximately one half dB more noise than the toll condition. For receptors where the access road is the dominant source of noise, a result increase of one half dB will occur under the non-toll condition in comparison to the toll condition. Receptors near roadways other than the access road have a substantial overall noise level contributed by a near roadway with a difference less than one half dB.

With Alignment 4, 49 receptors representing 149 dwelling units and a school are projected be impacted (i.e., subject to a noise level approaching or exceeding the Noise Abatement Criteria, and/or subject to a substantial noise increase of 10 dB or more due to the project) under the With Toll scenario. Fifty-one receptors representing 151 dwelling units and one school are projected to be impacted under the No Toll scenario with Alignment 4. With Alternative 5, 50 receptors representing 150 residences and one school are projected to be impacted under the With Toll scenario and 52 receptors representing 152 dwelling units and a school are projected to be

impacted with the No Toll scenario. Noise abatement must be considered for the impacted residences.

Noise abatement must be feasible and reasonable to be implemented. To be feasible, the noise abatement must provide a substantial noise reduction for at least one residence. The AHTD has determined that 10 dBA is a substantial noise reduction. The determination of reasonableness is a more subjective criterion than feasibility. It considers the specific circumstances of the particular project. The cost of the abatement, desire for the abatement by the benefited residences, date of the construction of the residences relative to the construction of the highway, how long the residences have been in place, the absolute noise levels with the project and the increases in the noise levels with the project compared to existing and future no project conditions are all considered in the determination of reasonableness. These seven factors are rated from a "High No" to a "High Yes" based on the criteria developed by AHTD.

Noise barriers are typically the only practical way of providing noise abatement for highways. It was determined that the cost per residence of any feasible noise barriers would likely generate a response of "Low No" to "High No" to this reasonableness criterion. Responses for six of the seven reasonableness criteria are presented in Tables 16 through 19 in Section 3.2.4 of the body of the report. The only criterion not assessed is the desire of the residences. A majority of the benefited residences will need to want the noise barrier for it to be implemented.

It is up to the AHTD to make the final determination if a noise abatement measure will be reasonable or not based on the responses to the reasonableness criteria. Further, additional, more detailed, analysis of the noise abatement measures shall be performed as a part of the final engineering design. At that time, more detailed information about the roadway (particularly elevation) will be available and will allow a more exact determination of the noise abatement requirements and their feasibility and reasonableness.

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1.0 EXISTING SETTING

1.1 Project Description

This report examines the potential noise impacts associated with the construction of the proposed Northwest Arkansas Regional Airport Intermodal Access Road project. The proposed project consists of a four-lane roadway composed of two general-purpose lanes in each direction to be constructed from Interstate 540 to the entrance of the Northwest Arkansas Regional Airport. This report assesses the noise impacts associated with two alternate alignments for the project designated Alignment 4, and Alignment 5. The locations of these alternative alignments are shown in Exhibit 1.

1.2 Existing Land Uses

The lands uses along the proposed alignments are primarily agricultural. Most of the residences in the project area are scattered but there are two new housing developments located directly along the proposed alignments. Pads have been graded for homes and some homes have been constructed but many lots contain no structures. There is a new school located next to one of the new housing developments that would also be located along the proposed alignments. For the purpose of this noise report, 78 receptor sites have been chosen for analysis representing approximately 190 dwelling units and one school. No other noise sensitive land uses have been identified along the proposed alignments. The receptors were selected by reviewing the maps and aerial photographs available for the area and by an inspection of the area. The locations of these receptor sites are presented in Section 1.4.

1.3 Background Information on Noise

1.3.1 Noise Criteria Background

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the Decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Exhibit 2 provides examples of various noises and their typical A-weighted noise level.

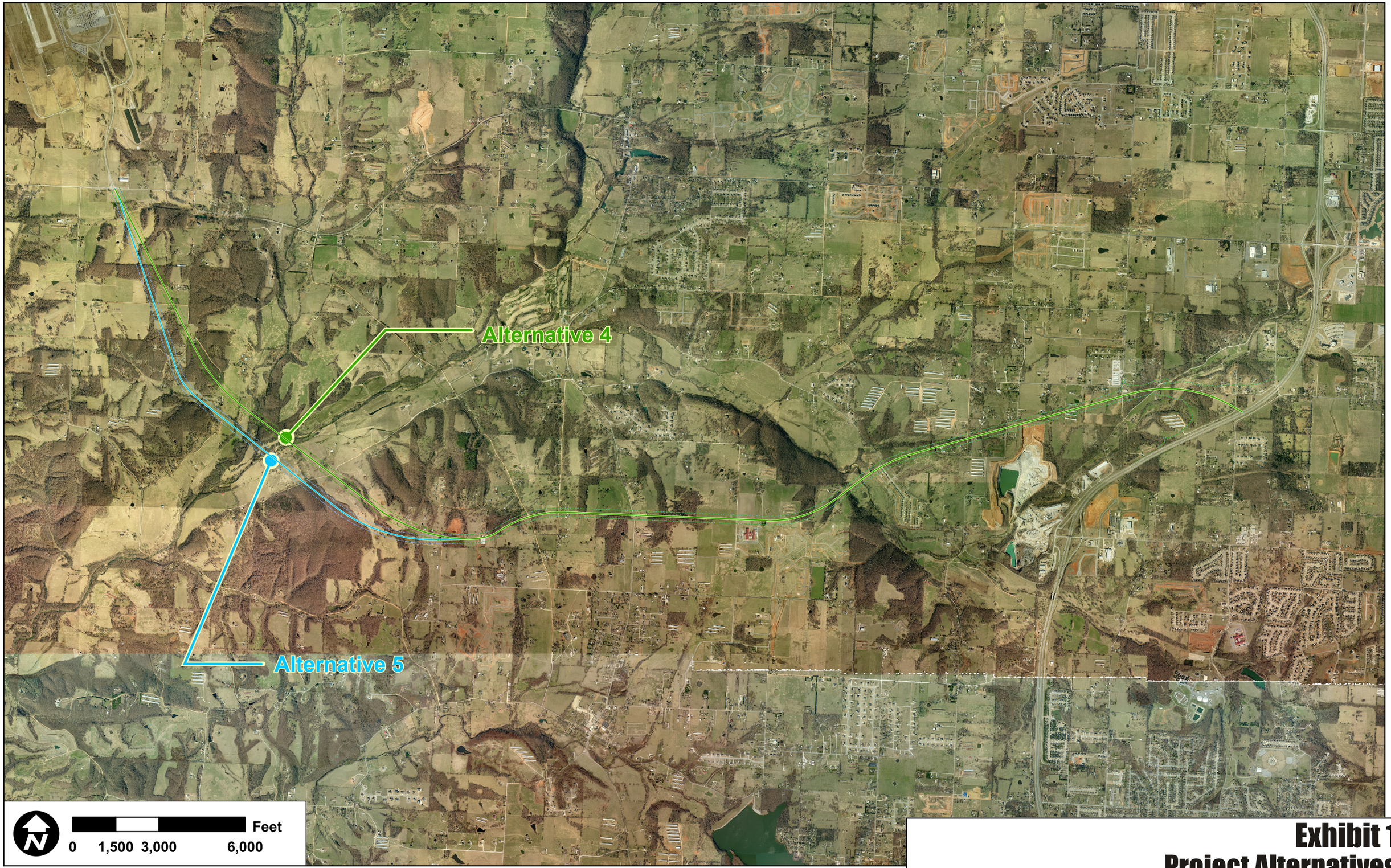

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Exhibit 1
Project Alternatives

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

Numbers in Parentheses are the A-Scale Weighted Sound Levels for that Noise Event

dB(A)	OVER-ALL LEVEL Sound Pressure Level Reference: 0.0002 Microbars	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130		Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110	UNCOMFORTABLY LOUD	Concord Takeoff (113)*	Riveting Machine (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100		Boeing 747-200 Takeoff (101)*		100 dB(A) 8 Times as Loud
90	VERY LOUD	Power Mower (96) DC-10-30 Takeoff (96)* Motorcycle @25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Boeing 727 w/ Hushkit Takeoff (96)* Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 +or- 6) Boeing 757 Takeoff (76)*	Living Room Music (76) TV-Audio, Vacuum Cleaner	70 dB(A)
60		Propeller Airplane Takeoff (67)* Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
20	JUST AUDIBLE	(dB[A] Scale Interrupted) Desert at Night		
10	THRESHOLD OF HEARING			

*Aircraft takeoff noise measured 6,500 meters from beginning of takeoff roll

SOURCE: Leo L. Beranek "Noise And Vibration Control," 1971
*Aircraft Levels From FAA Advisory Circular AC-36-3G

EXHIBIT 2
TYPICAL A-WEIGHTED NOISE LEVELS

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption, and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in determining the degree of attenuation. Intervening topography can also have a substantial effect on the effective perceived noise levels.

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

HEARING LOSS is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud to cause hearing loss.

SPEECH INTERFERENCE is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

SLEEP INTERFERENCE is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

PHYSIOLOGICAL RESPONSES are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm.

ANNOYANCE is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

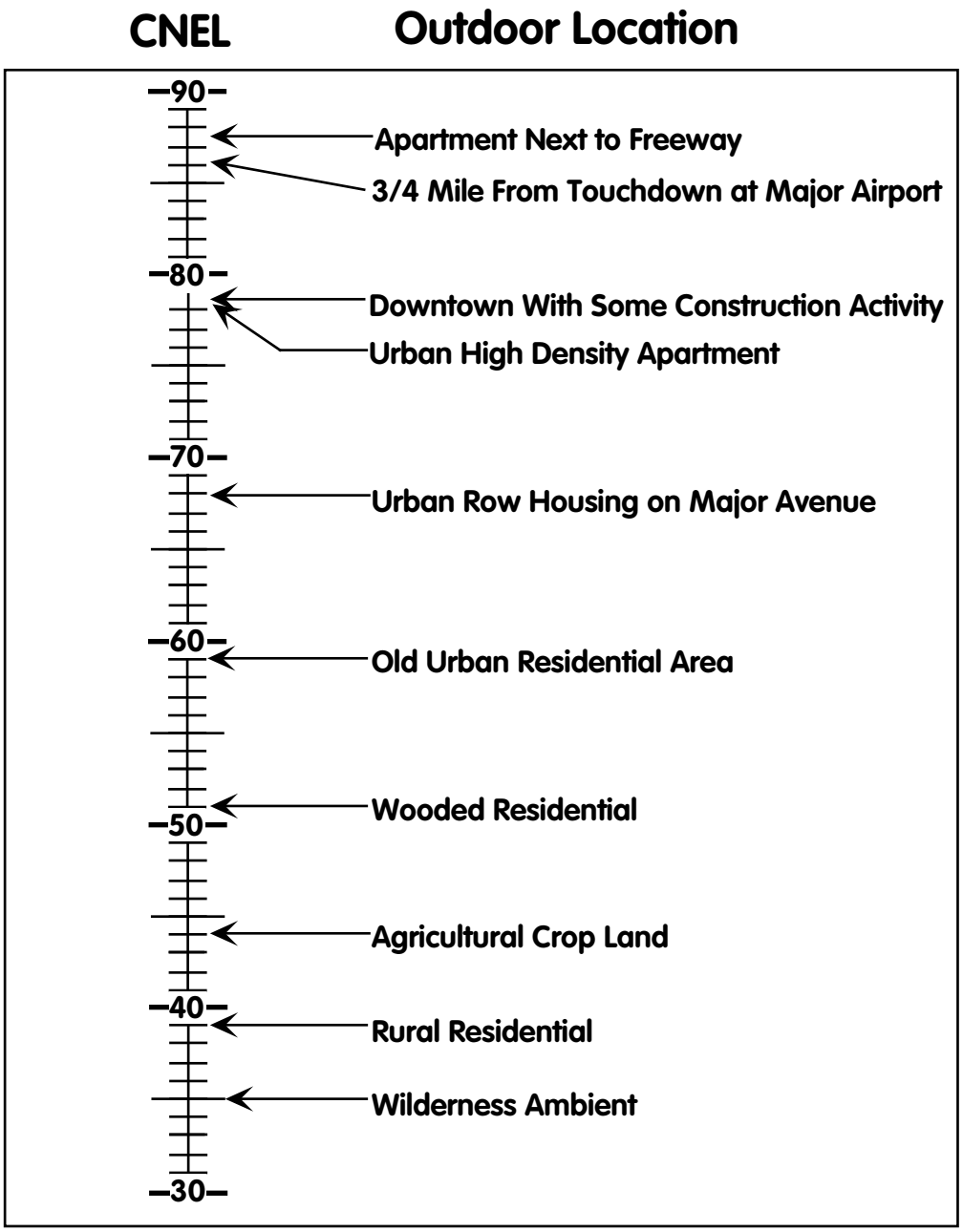
1.3.2 Noise Assessment Metrics

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the myriad of noise metrics that have been developed for describing noise impacts. Each of these metrics attempts to quantify noise levels with respect to community response. Most of the metrics use the A-Weighted noise level to quantify noise impacts on humans. A-Weighting is a frequency weighting that accounts for human sensitivity to different frequencies.

Noise metrics can be divided into two categories: single event and cumulative. Single-event metrics describe the noise levels from an individual event such as an aircraft fly over or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of analysis, cumulative noise metrics will be used.

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. Two of the predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

> **LEQ** is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for 1 hour. This 1-hour noise level can also be referred to as the Hourly Noise Level (HNL). It is the energy sum of all the events and background noise levels that occur during that time period.
>
> **CNEL**, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 3.



Source: U.S. Environmental Protection Agency, "Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure," EPA Report NTID 73.4, 1973.

Exhibit 3
Typical Outdoor Noise Levels

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Ldn, the day-night scale is similar to the CNEL scale except that evening noises are not penalized. It is a measure of the overall noise experienced during an entire day. The time-weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. In the Ldn scale, those noise levels that occur during the night (10 pm to 7 am) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where home and sleep is the most probable activity.

L(%) is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(%) is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example since 5 minutes is 25% of 20 minutes, L(25) is the noise level that is equal to or exceeded for five minutes in a twenty-minute measurement period. It is L(%) that is used for most noise ordinance standards. For example most daytime city, state and county noise ordinances use an ordinance standard of 55 dBA for 30 minutes per hour or an L(50) level of 55 dBA. In other words, the noise ordinance states that no noise level should exceed 55 dBA for more that fifty percent of a given period.

1.3.3 FHWA/AHTD Noise Criteria

The Federal Highway Administration (FHWA) has adopted and published noise abatement criteria for highway construction projects. The requirement of the use of the FHWA TNM became effective on May 2, 2005. The standards are codified in the Code of Federal Regulations 23 CFR 772.17(a). 23 CFR, Part 772.17(a) states that any analysis required by this Traffic Noise Prediction must use the FHWA Traffic Noise Model (FHWA TNM), and is described in "FHWA Traffic Noise Model" Report No. FHWA-PD-96-010.

> *"NOISE STANDARDS. The highway traffic noise prediction requirements, noise analyses, noise abatement criteria, and requirements for informing local officials in this directive constitute the noise standards mandated by 23 U.S.C. 109(i). All highway projects which are developed in conformance with this directive shall be deemed to be in conformance with this directive shall be deemed to be in conformance with the Federal Highway Administration (FHWA) noise standards"*

The Arkansas State Highway and Transportation Department (AHTD) have adopted the noise abatement criteria specified by the FHWA. The Noise Abatement Criteria (NAC) is presented here in Table 1. Noise abatement criteria apply to various land uses as indicated in the table. For interior areas, the criteria assume that typical wood frame homes provide 10 dBA noise reduction (outdoor to indoor) with windows open and 20 dBA reduction with windows closed.

Traffic noise impacts occur when the predicted future project noise levels approach or exceed the NAC. Approaching the NAC is considered as a noise level within 1 dB of the NAC. Even if the predicted noise level does not approach or exceed the NAC, traffic noise impacts can occur when the noise levels substantially exceed the existing noise levels. A substantial increase is considered to be a 10 dBA increase in the peak hour Leq noise level. Noise abatement measures must be considered when traffic noise impacts have been identified.

Table 1
FHWA/AHTD Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA Leq(h)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 Exterior	Picnic Areas, recreation areas, playgrounds active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties or activities not included in Categories A or B above.
D	--	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: Code of Federal Regulation, Title 23 Part 722, Revised August 1982.

1.4 Existing Noise Environment

Accurate determination of the existing noise levels at potentially impacted receptors is important because it is used in the determination of impacts with the substantial increase criteria. Noise levels were measured directly at several locations in the vicinity of the project. The results of these measurements are presented in Section 1.4.1. Existing traffic noise levels were also modeled at the potentially impacted receptors in the vicinity of the project. The results of this modeling are presented in Section 1.4.2. The methodology used to model the traffic noise levels is described in Section 2.2. The measured and modeled noise levels are then analyzed to determine the appropriate existing noise level to be used as the baseline for the substantial increase criteria. This is discussed in Section 1.4.3.

1.4.1 Measured Noise Levels

Ambient noise measurements were conducted at 16 sites along the proposed project alignments to document the existing noise environment. The locations of these receptor sites are shown in Exhibits 4 and 5. The noise measurements are used to determine the existing ambient noise levels in these sensitive land use areas. Existing ambient noise levels will be compared with the potential noise levels associated with the project and the future noise impacts will be assessed.

Measurements of the ambient noise levels were made during the daytime hours between 10:00 a.m. and 6:00 p.m on October 29, 2008. One measurement was made at each site. The measurements had a minimum duration of 15 minutes, but were continued for a long enough period to insure that they were representative of the Leq for 1 hour.

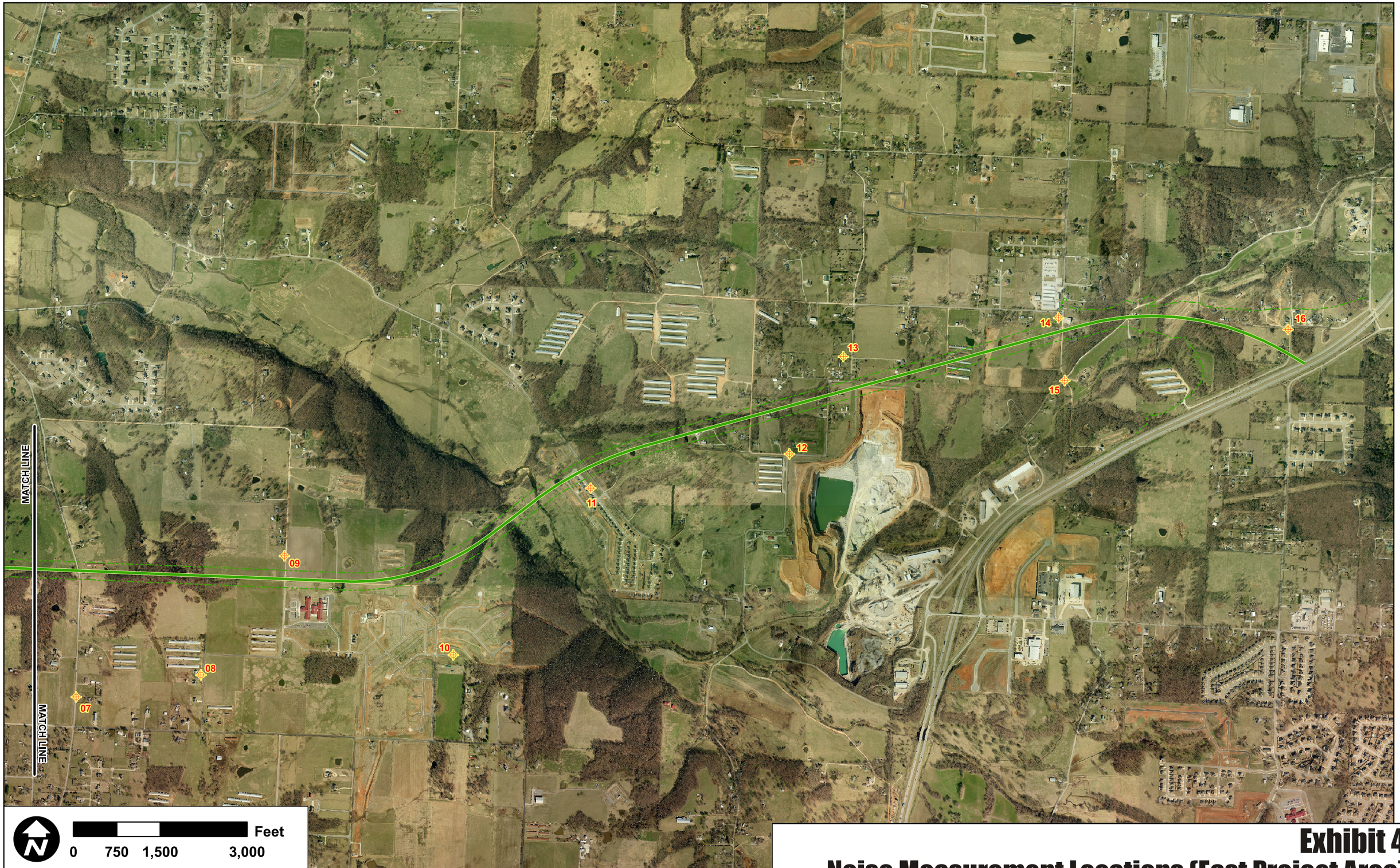

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Exhibit 4
Noise Measurement Locations (East Project Area)

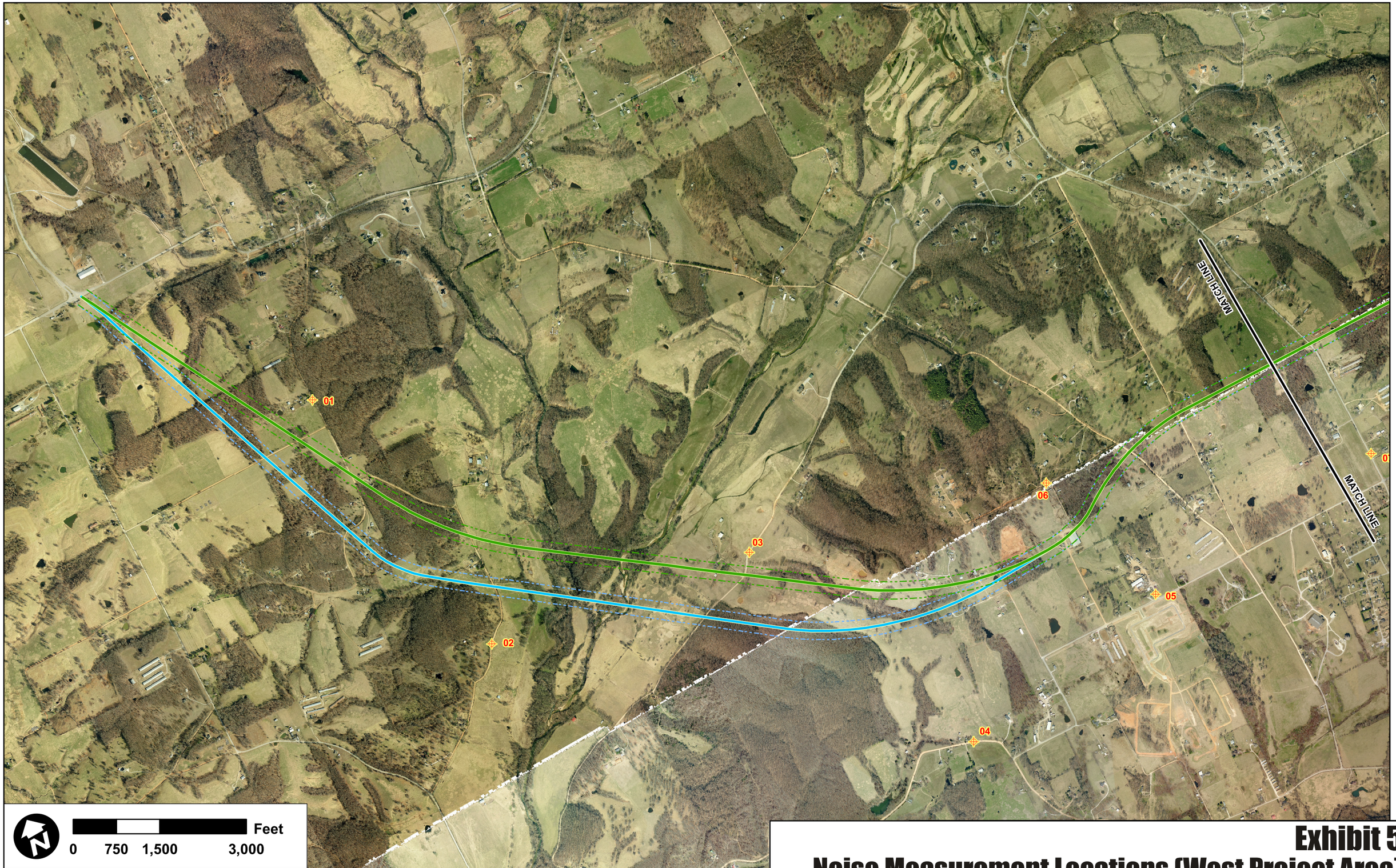

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Exhibit 5
Noise Measurement Locations (West Project Area)

The existing ambient noise environment for each of these receptor sites is described in the table below. The wind speed during the time of measurements was light to moderate (0 to 10 miles per hour). The measurements were made with a Brüel & Kjær Type 2238 sound level meters. The monitors were calibrated before and after each measurement series. The calibration is traceable to the National Institute of Standards and Technology. The measurement levels are presented in Table 2. The results are presented in terms of the Leq average noise level, Lmax maximum noise level and Lmin minimum noise level. The sources of noise at each site during the measurement period are also noted.

Table 2
Existing Ambient Noise Levels (dBA)

Site	Location Description	Time	Leq	Lmax	Lmin	Noise Sources
1	Holmes Road	5:07 AM	34.4	51.1	28.4	Birds, Distant Dogs, Aircraft, Cows
2	Hayden Road	10:55 AM	40.7	53.1	33.4	Birds, Insects, Rustling Leaves
3	Wager Road	11:38 AM	36.1	44.6	32.1	Birds, Insects, Rustling Leaves.
4	Snavely Road	12:19 PM	47.0	57.1	44.2	Birds, Insects, Distant Saw, Distant Dog
5	Marchant Road	12:58 PM	42.0	52.6	37.4	Farm Equipment, Occasional Local Traffic
6	Fair Lane	1:33 PM	40.4	51.9	33.1	Machinery, Insects, Rustling Leaves, People Talking, Aircraft, Occasional Local Traffic
7	Main Street (SR-112)	2:24 PM	65.6	84.4	37.2	Traffic on Main Street
8	Grimsley Road	2:58 PM	49.4	64.7	38.5	Insects, Frequent Local Traffic
9	W. Miller Road	3:31 PM	37.7	43.4	34.1	Birds, Insects, Cows, Distant Voices
10	S. Miller Road	4:03 PM	38.1	43.3	33.7	Birds, Insects, Rustling Leaves, Distant Traffic, Aircraft
11	Wagon Wheel Road	4:40 PM	47.2	57.8	42.3	Insects, Occasional Local Traffic, Rustling Leaves
12	Sharp Springs Road	5:10 PM	45.3	48.6	40.8	Birds, Insects, Rustling Leaves, Distant Traffic, Occasional Local Traffic, Aircraft

(Table Continued)

Table 2 (Continued)
Existing Ambient Noise Levels (dBA)

Site	Location Description	Time	Leq	Lmax	Lmin	Noise Sources
13	Zion Road	11:46 AM	50.7	61.8	46.1	Insects, Rustling Leaves, Distant Traffic, Aircraft, Occasional Local Traffic
14	Spring Creek Road	12:17 PM	59.6	72.5	51.6	Rustling Leaves, Distant Traffic (I-540), Dog, Occasional Local Traffic
15	Puppy Creek Road	12:42 PM	57.1	63.0	53.2	Rustling Leaves, Distant Traffic (I-540), Occasional Local Traffic, Aircraft
16	Burrel Place at Conrad Place	1:31 PM	61.6	67.0	57.0	Insects, Traffic on I-540

The measured noise levels presented in Table 2 are representative of the noise environment in the vicinity of the proposed project Alignments 4, and 5. According to the data in Table 2, the existing residential areas within the project vicinity currently experience ambient Leq noise levels ranging from 34 to 66 dBA. The loudest Leq was measured at Site 7, which was located adjacent to Main Street (SR-112). Noise from traffic on Main Street determined the noise level at Site 7. The next highest Leq levels were measured at Sites 14, 15, and 16. The noise levels at these sites were high due to their proximity to I-540. The lowest noise levels measured at Sites 1, 3, 9, and 10. These sites are located away from existing noise sources and typical of a quiet agricultural community.

1.4.2 Modeled Noise Levels

Existing traffic noise levels from major roadways in the project area (i.e.; I-540, SR-264 and SR-112) were modeled using the FHWA Traffic Noise Model (TNM) at the 16 measurement sites. TNM is described in Section 2.2. The traffic data used in the modeling is presented in the appendix.

The results of the modeling of existing noise levels at the measurement are presented in Table 3 along with the measured Leq(H) noise level and the difference between the two. Note that the modeled noise levels presented in Table 3 only represent the noise generated by traffic on the major roadways included in the model. Further, the modeled noise levels are based on the peak hour traffic volumes. The measurements were not necessarily performed during a period with traffic volumes equivalent to the peak hour.

Table 3 shows that the absolute differences between the measured and modeled noise levels ranged from 0.5 dB to 11.3 dBA. A positive difference in levels shows that the modeled noise level is higher than the measured noise level, which occurred at Sites 1, 7, 9, 10, and 16. The difference at Sites 7 and 16 were likely due to the measurements not being performed during the peak traffic hour while the modeling reflects peak traffic hour conditions. The differences at Sites 1, 9, and 10 are likely due to the measurements not being performed during the peak hour

and due to shielding from topography or structures that is not accounted for in the model. See Section 2.2 for a discussion of the TNM modeling performed for this analysis.

At the eleven remaining sites the measured noise levels where higher than the modeled noise levels. These sites are located away from existing roads with considerable traffic volumes and exposed to noise sources other than traffic on the roads included in the TNM modeling.

Table 3
Modeled Existing Noise Levels at Measurement Sites (dBA)

Receptor	Modeled Leq(H)	Measured Leq(H)	Difference
1	36.8	34.4	2.4
2	34.0	40.7	-6.7
3	35.4	36.1	-0.7
4	35.7	47.0	-11.3
5	37.8	42.0	-4.2
6	37.5	40.4	-2.9
7	70.8	65.6	5.2
8	41.6	49.4	-7.8
9	40.0	37.7	2.3
10	41.0	38.1	2.9
11	41.9	47.2	-5.3
12	44.8	45.3	-0.5
13	44.4	50.7	-6.3
14	48.5	59.6	-11.1
15	52.8	57.1	-4.3
16	64.3	61.6	2.7

In most cases, the measurements could not be performed at the outdoor areas of frequent human use where the FHWA/AHDT Noise Abatement Criteria are applicable. Further, noise measurements were not able to be performed at each sensitive receptor potentially impacted by the project. Exhibits 6 and 7 show the locations of 78 receptors that represent the outdoor areas of frequent use of residences and a school (Site 09b) that are potentially impacted by the project. It is these receptors that will be used to analyze the potential noise impacts from the project. The receptors are numbered based on the nearest measurement site with letters appended to designate individual sites. Existing noise levels at these locations were determined based on measured and modeled noise levels as discussed in Section 1.4.3. Table 4 presents the results of the noise modeling at the receptor locations

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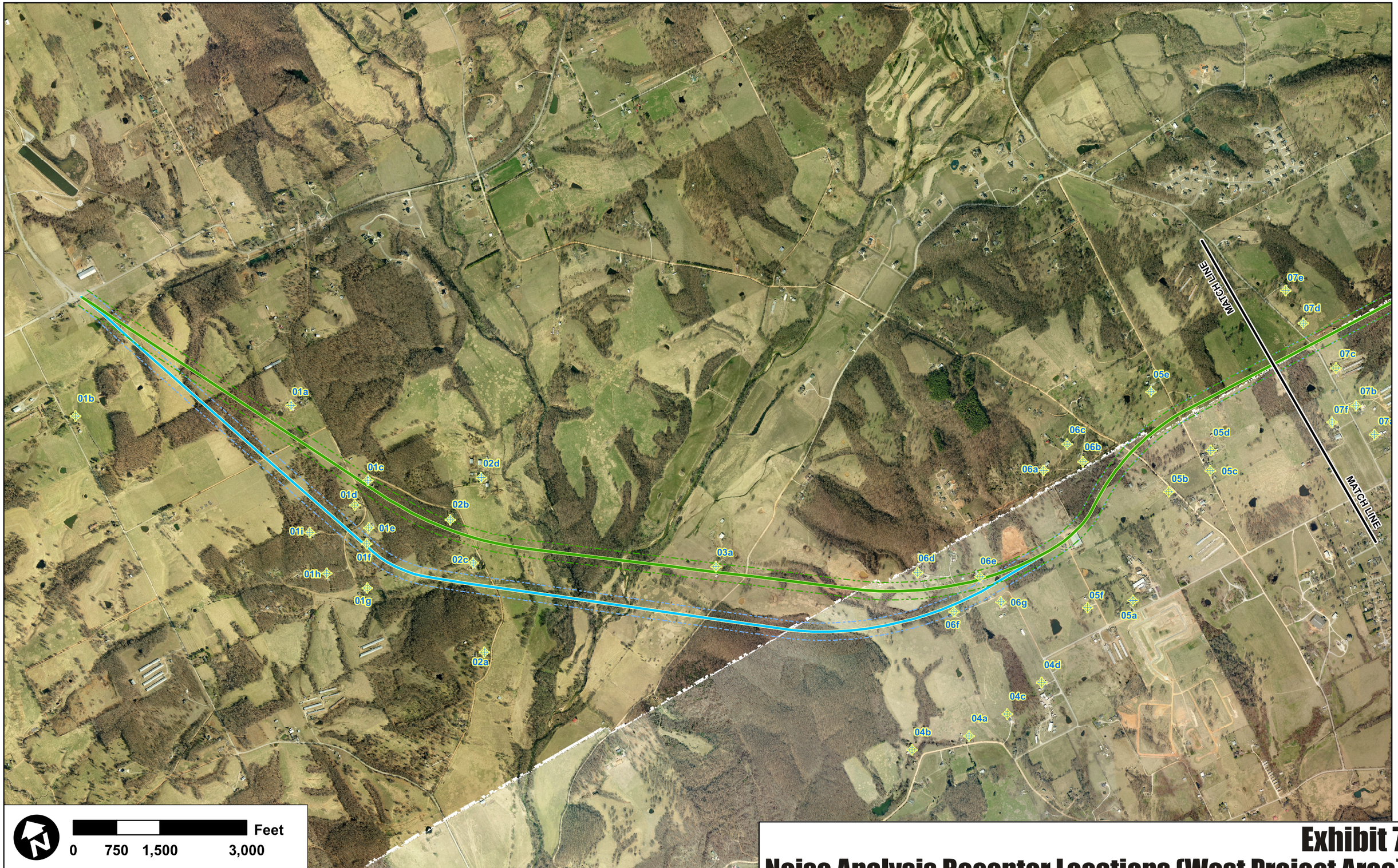
Exhibit 6
Noise Analysis Receptor Locations (East Project Area)



Mestre Greve Associates

Exhibit 7
Noise Analysis Receptor Locations (West Project Area)

Table 4
Modeled Existing Noise Levels at Receptor Sites (dBA)

Receptor	Modeled Leq(H)	Receptor	Modeled Leq(H)	Receptor	Modeled Leq(H)
01a	36	06c	38	11f	42
01b	37	06d	36	11g	42
01c	35	06e	37	11h	41
01d	35	06f	36	12a	45
01e	34	06g	37	12b	44
01f	34	07a	63	12c	45
01g	34	07b	66	12d	44
01h	34	07c	66	13a	45
01i	34	07d	62	13b	46
02a	34	07e	55	13c	45
02b	35	07f	60	13d	45
02c	34	09a	40	13e	44
02d	35	09b	40	13f	44
03a	35	09c	40	13g	43
04a	36	10a	41	14a	48
04b	35	10b	40	14b	49
04c	36	10c	40	14c	48
04d	36	10d	41	14d	48
05a	38	10e	41	14e	47
05b	39	10f	41	15a	53
05c	40	10g	41	15b	55
05d	41	11a	44	15c	52
05e	40	11b	43	16a	62
05f	37	11c	43	16b	57
06a	38	11d	42	16c	56
06b	38	11e	42	16d	50

Table 4 shows that existing traffic noise levels are relatively low in most areas. Except for receptors along Main Street (SR-112) and near I-540, existing traffic noise levels are projected to be less than 50 dBA Leq(H). Two of the receptors along Main Street, 07b, and 07c, are exposed to noise levels that approach (come within 1 dB of) the residential NAC of 67 dBA Leq(H). The remaining receptors along Main Street, 07a and 07d–07f, as well as the receptors near I-540, 15a–15c and 16a–16d, are exposed to noise levels exceeding 50 dBA but do not approach the residential NAC.

1.4.3 Existing Noise Levels

For receptors near existing major roadways, traffic noise is often the dominant source of noise and the modeled noise level is similar to the measured noise level. If the measurement occurred near the peak traffic hour the measured and modeled noise levels will be the same. If traffic was much lower than during the peak hour the modeled noise level will be higher than the measured noise level. In this case, the modeled noise level is the appropriate existing noise level as it is representative of the peak noise hour noise level.

Away from the major roadways, other sources of noise, including traffic on other roadways, aircraft, other activities, or insects/wildlife, can be the dominant source of noise. These noise sources are not included in the noise model. In this case, the measured noise level is the appropriate existing noise level as it is representative of the noise level experienced at the receptor.

Table 5 presents the measured, modeled and existing Leq(H) noise level for each analysis receptor along with the use represented by each receptor and the number of dwelling units represented by the receptor. The Residential-F designation indicates future residential uses where lot grading has occurred and some homes have been constructed but there are some lots without structures. The first two numbers in the Receptor designation indicate the closest representative measurement site. The measured noise level from the nearest measurement site is presented in the "Measured Leq(H)" column. The traffic noise level modeled at each receptor is presented in the "Modeled Leq(H)" column. The existing noise level that will be used in the remainder of the analysis is presented in the final column of the table, "Existing Leq(H)" with the basis for this value presented in the penultimate column. This level was determined using the criteria presented above. In all cases, the existing noise level is the higher of the measured or modeled noise levels.

Table 5
Existing Noise Levels (dBA)

Receptor	Use	Dwelling Units	Measured Leq(H)	Modeled Leq(H)	Value Used	Existing Leq(H)
01a	Residential	1	34	36	Modeled	36
01b	Residential	1	34	37	Modeled	37
01c	Residential	1	34	35	Modeled	35
01d	Residential	1	34	35	Modeled	35
01e	Residential	1	34	34	Modeled	34
01f	Residential	1	34	34	Measured	34
01g	Residential	1	34	34	Measured	34
01h	Residential	1	34	34	Measured	34
01i	Residential	1	34	34	Measured	34
02a	Residential	1	41	34	Measured	41
02b	Residential	1	41	35	Measured	41
02c	Residential	1	41	34	Measured	41
02d	Residential	1	41	35	Measured	41
03a	Residential	1	36	35	Measured	36
04a	Residential	1	47	36	Measured	47
04b	Residential	1	47	35	Measured	47
04c	Residential	1	47	36	Measured	47
04d	Residential	4	47	36	Measured	47

(Table Continued)

Table 5 (Continued)
Existing Noise Levels (dBA)

Receptor	Use	Dwelling Units	Measured Leq(H)	Modeled Leq(H)	Value Used	Existing Leq(H)
05a	Residential	3	42	38	Measured	42
05b	Residential	3	42	39	Measured	42
05c	Residential	2	42	40	Measured	42
05d	Residential	2	42	41	Measured	42
05e	Residential	1	42	40	Measured	42
05f	Residential	1	42	37	Measured	42
06a	Residential	1	40	38	Measured	40
06b	Residential	1	40	38	Measured	40
06c	Residential	3	40	38	Measured	40
06d	Residential	1	40	36	Measured	40
06e	Residential	1	40	37	Measured	40
06f	Residential	1	40	36	Measured	40
06g	Residential	1	40	37	Measured	40
07a	Residential	1	66	63	Measured	66
07b	Residential	1	66	66	Modeled	66
07c	Residential	1	66	66	Modeled	66
07d	Residential	1	66	62	Measured	66
07e	Residential	1	66	55	Measured	66
07f	Residential	1	66	60	Measured	66
09a	Residential	1	38	40	Modeled	40
09b	School	n/a	38	40	Modeled	40
09c	Residential	1	38	40	Modeled	40
10a	Residential	1	38	41	Modeled	41
10b	Residential-F	12	38	40	Modeled	40
10c	Residential	1	38	40	Modeled	40
10d	Residential	19	38	41	Modeled	41
10e	Residential-F	12	38	41	Modeled	41
10f	Residential-F	11	38	41	Modeled	41
10g	Residential-F	9	38	41	Modeled	41
11a	Residential	1	47	44	Measured	47
11b	Residential	1	47	43	Measured	47
11c	Residential	1	47	43	Measured	47
11d	Residential	11	47	42	Measured	47
11e	Residential	7	47	42	Measured	47
11f	Residential	5	47	42	Measured	47
11g	Residential	12	47	42	Measured	47
11h	Residential	4	47	41	Measured	47

(Table Continued)

Table 5 (Continued)
Existing Noise Levels (dBA)

Receptor	Use	Dwelling Units	Measured Leq(H)	Modeled Leq(H)	Value Used	Existing Leq(H)
12a	Residential	2	45	45	Modeled	45
12b	Residential	1	45	44	Measured	45
12c	Residential	1	45	45	Measured	45
12d	Residential	1	45	44	Measured	45
13a	Residential	2	51	45	Measured	51
13b	Residential	1	51	46	Measured	51
13c	Residential	4	51	45	Measured	51
13d	Residential	3	51	45	Measured	51
13e	Residential	2	51	44	Measured	51
13f	Residential	1	51	44	Measured	51
13g	Residential	1	51	43	Measured	51
14a	Residential	3	60	48	Measured	60
14b	Residential	1	60	49	Measured	60
14c	Residential	1	60	48	Measured	60
14d	Residential	1	60	48	Measured	60
14e	Residential	1	60	47	Measured	60
15a	Residential	1	57	53	Measured	57
15b	Residential	1	57	55	Measured	57
15c	Residential	1	57	52	Measured	57
16a	Residential	1	62	62	Modeled	62
16b	Residential	1	62	57	Measured	62
16c	Residential	1	62	56	Measured	62
16d	Residential	1	62	50	Measured	62

2.0 POTENTIAL NOISE IMPACTS

Potential noise impacts are commonly divided into two groups; temporary and long term. Temporary impacts are usually associated with noise generated by construction activities. Long-term impacts are the noise increases and ultimate noise levels generated by the traffic on the roadway at the sensitive receptors in the vicinity of the project. Exhibits 6 and 7 presented previously, display the location of the sensitive receptors in the vicinity of the project alternative alignments that are potentially impacted by the project.

Receptors 01c, 03a, and 06e are located within 150 feet of the proposed centerline of Alignment 4. These Receptors would be within the right-of-way of Alignment 4 and the homes represented by these receptors would be removed if it were selected. Therefore, noise impacts are not assessed at receptors 01a, 03a, and 06e for Alignment 4.

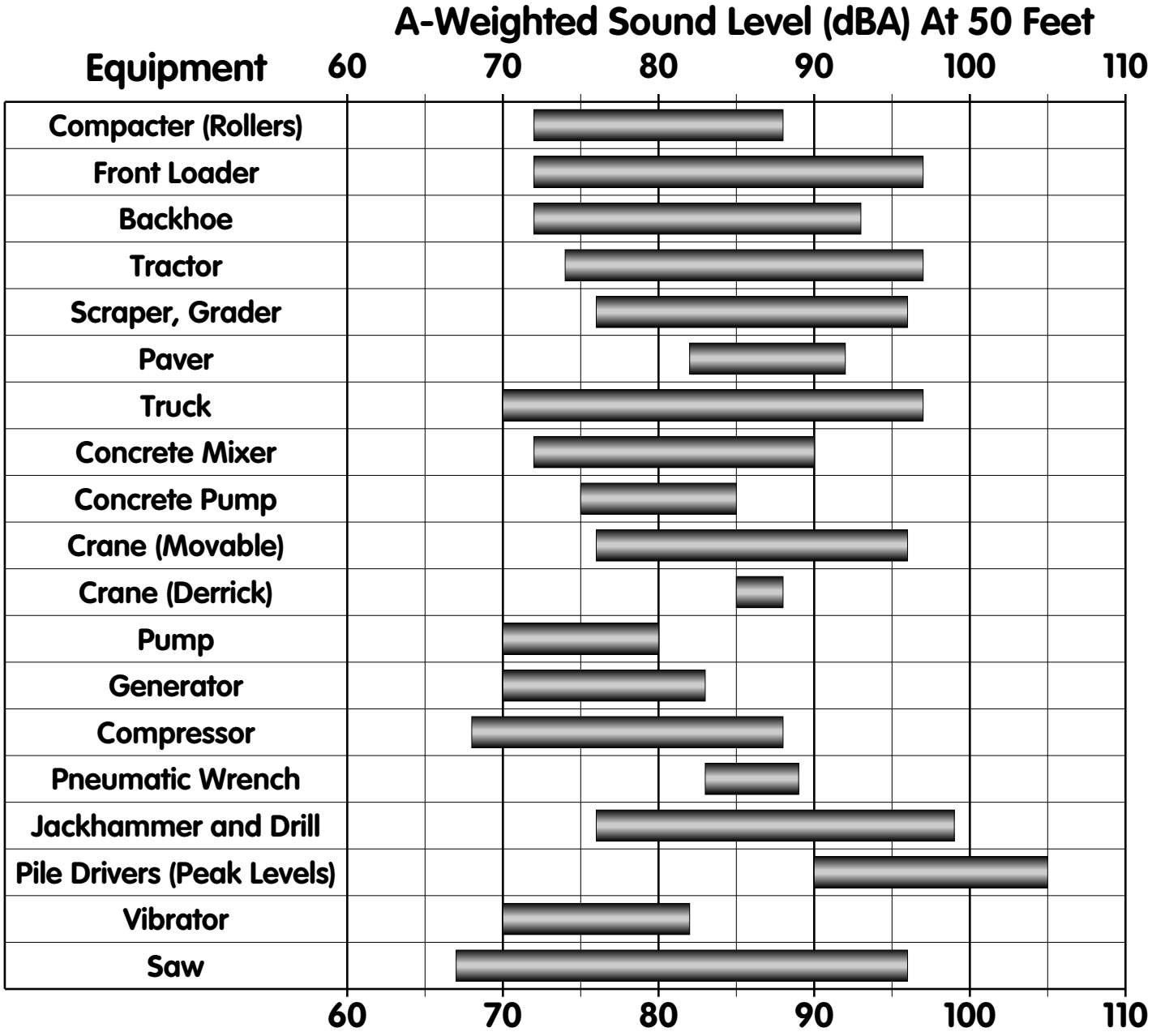
Similarly, Receptors 01f and 06f are located within 150 of the proposed centerline of Alignment 5. Therefore, the homes represented by these receptors would be removed under Alignment 5 and noise impacts are not assessed at these Receptors for Alignment 5.

2.1 Short-Term Construction Noise

Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. For the proposed project, the highest noise generating activities will include clearing and grading of the roadway. As discussed previously, there are scattered residential uses all along both project alignments.

Worst-case examples of construction noise at 50 feet are presented in Exhibit 8. The peak noise level for most of the equipment that will be used during the construction is 70 to 95 dBA at a distance of 50 feet. At 150 feet, the peak construction noise levels range from 61 to 86 dBA. At 1000’ the peak noise levels range from 44 to 69 dBA. Note that these noise levels are based upon worst-case conditions. Measurements of construction equipment performed by Mestre Greve Associates show that peak noise levels rarely exceed the middle of the range indicated in Exhibit 8.

Table 6 presents the range of peak construction noise levels at the receptors. This is the range of the highest noise levels from equipment operating at the edge of the proposed roadway shoulder nearest to the receptor. As the equipment travels away from the receptor, the noise levels will drop off quickly.



Source: "Handbook of Noise Control," by Cyril Harris, 1979

Exhibit 8
Construction Equipment Noise Levels

Table 6
Range of Peak Construction Noise Levels at Receptors

Receptor	Alternative 4	Alternative 5
01a	51 dBA to 80 dBA	44 dBA to 71 dBA
01b	39 dBA to 65 dBA	40 dBA to 66 dBA
01c	--	45 dBA to 72 dBA
01d	52 dBA to 81 dBA	52 dBA to 81 dBA
01e	48 dBA to 76 dBA	55 dBA to 87 dBA
01f	45 dBA to 72 dBA	--
01g	40 dBA to 66 dBA	49 dBA to 77 dBA
01h	40 dBA to 65 dBA	46 dBA to 73 dBA
01i	42 dBA to 68 dBA	51 dBA to 79 dBA
02a	38 dBA to 64 dBA	43 dBA to 69 dBA
02b	60 dBA to 104 dBA	44 dBA to 70 dBA
02c	51 dBA to 80 dBA	53 dBA to 82 dBA
02d	44 dBA to 70 dBA	39 dBA to 64 dBA
03a	--	45 dBA to 71 dBA
04a	36 dBA to 61 dBA	37 dBA to 63 dBA
04b	35 dBA to 61 dBA	37 dBA to 63 dBA
04c	36 dBA to 62 dBA	38 dBA to 63 dBA
04d	38 dBA to 64 dBA	38 dBA to 64 dBA
05a	40 dBA to 66 dBA	40 dBA to 66 dBA
05b	45 dBA to 71 dBA	45 dBA to 71 dBA
05c	43 dBA to 69 dBA	43 dBA to 69 dBA
05d	46 dBA to 72 dBA	46 dBA to 72 dBA
05e	49 dBA to 76 dBA	49 dBA to 76 dBA
05f	42 dBA to 69 dBA	42 dBA to 69 dBA
06a	43 dBA to 70 dBA	43 dBA to 70 dBA
06b	49 dBA to 77 dBA	49 dBA to 77 dBA
06c	44 dBA to 71 dBA	44 dBA to 71 dBA
06d	54 dBA to 85 dBA	47 dBA to 74 dBA
06e	--	57 dBA to 91 dBA
06f	51 dBA to 79 dBA	--
06g	50 dBA to 79 dBA	54 dBA to 84 dBA
07a	38 dBA to 64 dBA	38 dBA to 64 dBA
07b	42 dBA to 68 dBA	42 dBA to 68 dBA
07c	49 dBA to 77 dBA	49 dBA to 77 dBA
07d	52 dBA to 82 dBA	52 dBA to 82 dBA
07e	44 dBA to 70 dBA	44 dBA to 70 dBA
07f	41 dBA to 67 dBA	41 dBA to 67 dBA
09a	49 dBA to 76 dBA	49 dBA to 76 dBA
09b	57 dBA to 93 dBA	57 dBA to 93 dBA

(Table Continued)

Table 6 (Continued)
Range of Peak Construction Noise Levels at Receptors

Receptor	Alternative 4	Alternative 5
09c	44 dBA to 70 dBA	44 dBA to 70 dBA
10a	39 dBA to 65 dBA	39 dBA to 65 dBA
10b	52 dBA to 81 dBA	52 dBA to 81 dBA
10c	52 dBA to 81 dBA	52 dBA to 81 dBA
10d	53 dBA to 83 dBA	53 dBA to 83 dBA
10e	50 dBA to 78 dBA	50 dBA to 78 dBA
10f	47 dBA to 74 dBA	47 dBA to 74 dBA
10g	43 dBA to 70 dBA	43 dBA to 70 dBA
11a	38 dBA to 64 dBA	38 dBA to 64 dBA
11b	42 dBA to 68 dBA	42 dBA to 68 dBA
11c	45 dBA to 72 dBA	45 dBA to 72 dBA
11d	58 dBA to 95 dBA	58 dBA to 95 dBA
11e	53 dBA to 83 dBA	53 dBA to 83 dBA
11f	46 dBA to 73 dBA	46 dBA to 73 dBA
11g	57 dBA to 93 dBA	57 dBA to 93 dBA
11h	57 dBA to 93 dBA	57 dBA to 93 dBA
12a	54 dBA to 84 dBA	54 dBA to 84 dBA
12b	49 dBA to 77 dBA	49 dBA to 77 dBA
12c	39 dBA to 65 dBA	39 dBA to 65 dBA
12d	57 dBA to 90 dBA	57 dBA to 90 dBA
13a	47 dBA to 74 dBA	47 dBA to 74 dBA
13b	58 dBA to 96 dBA	58 dBA to 96 dBA
13c	59 dBA to 102 dBA	59 dBA to 102 dBA
13d	50 dBA to 79 dBA	50 dBA to 79 dBA
13e	51 dBA to 79 dBA	51 dBA to 79 dBA
13f	59 dBA to 102 dBA	59 dBA to 102 dBA
13g	52 dBA to 82 dBA	52 dBA to 82 dBA
14a	52 dBA to 81 dBA	52 dBA to 81 dBA
14b	55 dBA to 87 dBA	55 dBA to 87 dBA
14c	54 dBA to 85 dBA	54 dBA to 85 dBA
14d	52 dBA to 81 dBA	52 dBA to 81 dBA
14e	53 dBA to 83 dBA	53 dBA to 83 dBA
15a	46 dBA to 72 dBA	46 dBA to 72 dBA
15b	41 dBA to 67 dBA	41 dBA to 67 dBA
15c	53 dBA to 84 dBA	53 dBA to 84 dBA
16a	43 dBA to 69 dBA	43 dBA to 69 dBA
16b	45 dBA to 72 dBA	45 dBA to 72 dBA
16c	49 dBA to 77 dBA	49 dBA to 77 dBA

Noise levels in excess of 70 dBA can interfere with outdoor speech communication and noise levels in excess of 82 dBA can interfere with indoor speech communication with open windows. With closed windows, noise levels would need to exceed 90 dBA to interfere with speech

communication. Table 6 shows that with Alternative 4, up to 48 receptors representing 146 residences and a school may be exposed to construction noise levels that could interfere outdoor speech communication. Up to 17 receptors representing 68 residences and a school may be exposed to noise levels that interfere with indoor communication with open windows. With closed windows, up to 8 receptors representing 34 homes and a school could be exposed to noise levels that interfere with speech communication. With Alternative 5, up to 51 receptors representing 149 residences may be exposed to construction noise levels that could interfere outdoor speech communication. Up to 18 receptors representing 69 residences and a school may be exposed to noise levels that interfere with indoor communication with open windows. With closed windows, up to 8 receptors representing 34 homes and a school could be exposed to noise levels that interfere with speech communication. Note that the high end of the construction noise level projections is for the loudest equipment operating in its loudest mode at the nearest point to the receptor. This would only be expected to occur intermittently during construction of the project for relatively short periods of time as the mobile equipment would not operate in a single location for extended periods of time.

Construction noise represents a short-term noise impact. It is not possible at this time to determine the exact length of time that grading will occur in any one area. The most effective way of mitigating construction related noise is through the limitation of the hours of construction. Limiting construction to the hours of 7:00 a.m. to 8:00 p.m. Monday through Saturday and prohibiting construction on Sundays or National Holidays will eliminate noise impacts from construction.

2.2 Long-Term Traffic Noise Impacts

23 CFR 772 requires this noise assessment to predict traffic noise levels using traffic characteristics that will yield the worst hourly traffic noise impact on a regular basis for the design year." If the roadway does not exceed Level of Service (LOS) "C," than the worst case hourly noise impact occurs during the peak traffic hour. If the peak hour traffic volume exceeds LOS C, then congestion will result in slowing. This slowing will result in lower noise levels during the peak traffic hour. The peak noise hour occurs when traffic volumes are very high on the roadway, but not so high that travel speeds fall to a point where noise levels drop. This condition occurs when there are 1,500 vehicles per lane per hour traveling at a speed of 55 miles per hour. This condition is what traffic engineers refer to as LOS "C". The LOS C traffic conditions result the peak noise hour condition. Traffic volumes greater than 1,500 vehicles per lane per hour would reduce travel speeds, which result in a reduction of noise levels. Similarly, fewer vehicles result in higher speeds, but the increase in speed is not sufficiently high to offset the reduction in traffic. In this case the roadway does not exceed LOS C and the peak hour traffic will result in the peak noise hour.

Traffic noise levels were modeled using Traffic Noise Model (TNM). TNM was developed by the using Federal Highway Administration with assistance from the Volpe National Transportation Systems Center. 23 CFR, Part 772.17(a) states that any analysis required by this subpart must use the FHWA Traffic Noise Model (FHWA TNM), which is described in "FHWA Traffic Noise Model" Report No. FHWA-PD-96-010. Selected input and output tables from TNM® are presented in the appendix of the report. A CD containing all of the modeling files is included in the appendix.

Peak hour traffic volumes have not been projected for the Access Road. Average daily traffic (ADT) volumes have been projected. Based on the ratio of the peak hour to daily trip generation rates for the uses at the Northwest Arkansas Regional Airport, peak hour traffic represents approximately 10% of the ADT. The traffic study indicates that 10% of this traffic will consist of trucks. As a worst-case assumption, 25% of the trucks were modeled as medium (2 axel) trucks and 75% of the trucks were modeled to be heavy (3 or more axel) trucks. Autos were modeled at a speed of 65 miles per hour and trucks were modeled at a speed of 55 miles per hour.

Noise generated by traffic on the major existing roadways in the project area (i.e.; SR-264, SR-112 and I-540) was also included in the noise model. As with the Access Road, only ADT volumes were available for these roadways. The same assumption was used that the peak hour volumes are 10% of the ADT. Truck percentages for the roadways were taken from the traffic study. As a worst-case assumption, 25% of the trucks were modeled as medium (2 axle) trucks and 75% of the trucks were modeled to be heavy (3 or more axle) trucks. Autos were modeled at a speed of 65 miles per hour and trucks were modeled at a speed of 55 miles per hour. The specific traffic data used in the noise modeling are presented in the appendix.

2.2.1 Future No Project Scenario

Future traffic noise levels without the development of the project were modeled at the receptors shown in Exhibits 6 and 7. In some cases, the modeled future traffic noise level is less than the existing noise level determined in Section 1.4.3. This is because other sources of noise (i.e. non traffic sources) dominate the noise environment at these receptors. In these cases, there is no reason to believe that the future non-traffic noise sources will change substantially. Therefore, where the existing noise level is higher than the modeled future no project traffic noise level, the existing noise level will be used as the future no project noise level for all further analysis.

Table 7 presents the existing noise levels as determined in Section 1.4.3 and the modeled future no project traffic noise levels. The future no project noise level that will be used for the analysis is presented in second to the last column of Table 7, “Future No Project Leq(H).” The final column shows the projected noise level increase in the future without the project over existing conditions.

Table 7
Future No Project Noise Levels

Receptor	Use	Dwelling Units	Existing Leq(H)	Modeled Future No Project Leq(H)	Future No Project Leq(H)	Increase Over Existing
01a	Residential	1	36	40	40	4
01b	Residential	1	37	40	40	4
01c	Residential	1	35	38	38	4
01d	Residential	1	35	38	38	3
01e	Residential	1	34	38	38	3
01f	Residential	1	34	38	38	3
01g	Residential	1	34	37	37	3
01h	Residential	1	34	37	37	3
01i	Residential	1	34	38	38	3
02a	Residential	1	41	37	41	0
02b	Residential	1	41	38	41	0
02c	Residential	1	41	38	41	0
02d	Residential	1	41	38	41	0
03a	Residential	1	36	39	39	3
04a	Residential	1	47	39	47	0
04b	Residential	1	47	39	47	0
04c	Residential	1	47	40	47	0
04d	Residential	4	47	40	47	0
05a	Residential	3	42	41	42	0
05b	Residential	3	42	43	43	1
05c	Residential	2	42	44	44	2
05d	Residential	2	42	45	45	3
05e	Residential	1	42	44	44	2
05f	Residential	1	42	41	42	0
06a	Residential	1	40	42	42	1
06b	Residential	1	40	42	42	2
06c	Residential	3	40	42	42	2
06d	Residential	1	40	40	40	0
06e	Residential	1	40	40	40	0
06f	Residential	1	40	40	40	0
06g	Residential	1	40	40	40	0
07a	Residential	1	66	68	68	2
07b	Residential	1	66	71	71	5
07c	Residential	1	66	71	71	5
07d	Residential	1	66	68	68	2
07e	Residential	1	66	60	66	0
07f	Residential	1	66	65	66	0

(Table Continued)

Table 7 (Continued)
Future No Project Noise Levels

Receptor	Use	Dwelling Units	Existing Leq(H)	Modeled Future No Project Leq(H)	Future No Project Leq(H)	Increase Over Existing
09a	Residential	1	40	43	43	3
09b	School	n/a	40	43	43	3
09c	Residential	1	40	43	43	3
10a	Residential	1	41	44	44	3
10b	Residential-F	12	40	43	43	3
10c	Residential	1	40	43	43	3
10d	Residential	19	41	43	43	3
10e	Residential-F	12	41	44	44	3
10f	Residential-F	11	41	44	44	3
10g	Residential-F	9	41	44	44	3
11a	Residential	1	47	47	47	0
11b	Residential	1	47	46	47	0
11c	Residential	1	47	45	47	0
11d	Residential	11	47	45	47	0
11e	Residential	7	47	45	47	0
11f	Residential	5	47	45	47	0
11g	Residential	12	47	44	47	0
11h	Residential	4	47	44	47	0
12a	Residential	2	45	48	48	3
12b	Residential	1	45	47	47	2
12c	Residential	1	45	47	47	2
12d	Residential	1	45	46	46	1
13a	Residential	2	51	48	51	0
13b	Residential	1	51	48	51	0
13c	Residential	4	51	48	51	0
13d	Residential	3	51	47	51	0
13e	Residential	2	51	47	51	0
13f	Residential	1	51	46	51	0
13g	Residential	1	51	46	51	0
14a	Residential	3	60	51	60	0
14b	Residential	1	60	51	60	0
14c	Residential	1	60	51	60	0
14d	Residential	1	60	51	60	0
14e	Residential	1	60	49	60	0

(Table Continued)

Table 7 (Continued)
Future No Project Noise Levels

Receptor	Use	Dwelling Units	Existing Leq(H)	Modeled Future No Project Leq(H)	Future No Project Leq(H)	Increase Over Existing
15a	Residential	1	57	56	57	0
15b	Residential	1	57	57	57	0
15c	Residential	1	57	54	57	0
16a	Residential	1	62	65	65	3
16b	Residential	1	62	60	62	0
16c	Residential	1	62	58	62	0
16d	Residential	1	62	52	62	0

Table 7 shows that future noise levels without the project are projected to increase between 0 and 5 dB over existing conditions. The greatest increases are projected to occur at Receptors 07b and 07c which are located adjacent to Main Street (SR-112). Community noise level changes of 3 dB or less are generally considered to be undetectable. Changes greater than 5 dB are considered to be detectable by most persons.

2.2.2 With Toll Scenario

This section presents the analysis of noise impacts for the two project alternatives assuming they are operating as toll facilities. First, generalized noise contours are presented. These contours show how the noise levels drop off away from the roadway. These contours are presented in a table and graphically for each of the alternatives. Next, projected noise levels at each of the analysis receptors are presented for each alternative. Impacted receptors are determined through the application of the FHWA/AHTD Noise Abatement Criteria (NAC) and the substantial increase criteria.

Noise Contours

Table 8 presents the distances to the peak hour 71, 66, and 56 dBA Leq(H) noise contours for the two access road alignments under the With Toll scenario. These contours correspond to approaching or exceeding the NAC for categories A, B, and C presented in Table 1. The contours are presented graphically for Alignment 4 in Exhibits 9 and 10, and for Alignment 5 in Exhibits 11 and 12. Exhibits 9 and 11 show the eastern end of the project and Exhibits 10 and 12 show the western project area. Note that the contours presented in Table 8 and Exhibits 9, 10, 11, and 12 do not include any effects of topography or noise barriers that may lower noise levels. Noise levels will be reduced at where topographic features, buildings or other solid objects break the line-of-sight from the roadway to a receiver.

Table 8
Distance To Peak Hour Leq (H) dBA Noise Contours With Toll

	Distance to Peak Hour Leq (H) dBA Contour †		
Roadway	71 dBA Leq(H)	66 dBA Leq(H)	56 dBA Leq(H)
Alignment 4	113	275	737
Alignment 5	113	275	737

† feet from centerline of road

Table 8 and Exhibits 9, 10, 11, and 12 show there is no difference in the noise levels generated by each alignment. This is because the traffic volumes on the access road are the same for both alignments. The 71 dBA Leq(H) contour will likely not extend beyond the right-of-way which is estimated to extend 150 feet on either side of the centerline. The 66 dBA Leq(H) contour will extend approximately 125 feet from the edge of the right-of-way and the 56 dBA contour will extend approximately 590 feet from the edge of the right-of-way.

Receptor Noise Levels With Alignment 4

Noise levels generated by traffic on Alignment 4 under the With Toll scenario were modeled using TNM at the sensitive receptors presented previously in Exhibits 6 and 7. The results of the modeling are presented in Table 9. The first column of Table 9 lists the receptors. The second and third columns present the use represented by each receptor and the number of dwelling units represented for residential receptors. Residential receptors with an F appended to the use description are future residences where lots have been graded but some homes have not yet been constructed. All potentially impacted receptors are residences or a school and are subject to the Activity Category B Noise Abatement Criteria of 67 dBA Leq(H). The fourth column presents the existing noise level at each receptor determined as described in Section 1.4.3. The fifth column presents the future noise level without the project at each receptor determined as described in Section 2.2.1. The sixth column of Table 9 presents the future noise level with Alignment 4 determined by the FHWA TNM modeling. The seventh column indicates if the future noise level with the project approaches or exceeds the applicable NAC. The eighth column shows the increase in the noise level with Alignment 4 under the With Toll scenario over existing conditions. The ninth column indicates if the increase over the existing noise level with the project is 10 dBA or greater and considered a substantial noise increase. Receptors exposed to noise levels approaching or exceeding the NAC or subject to a substantial increase are considered impacted. Noise abatement must be considered for these receptors. This is done in Section 3.2.

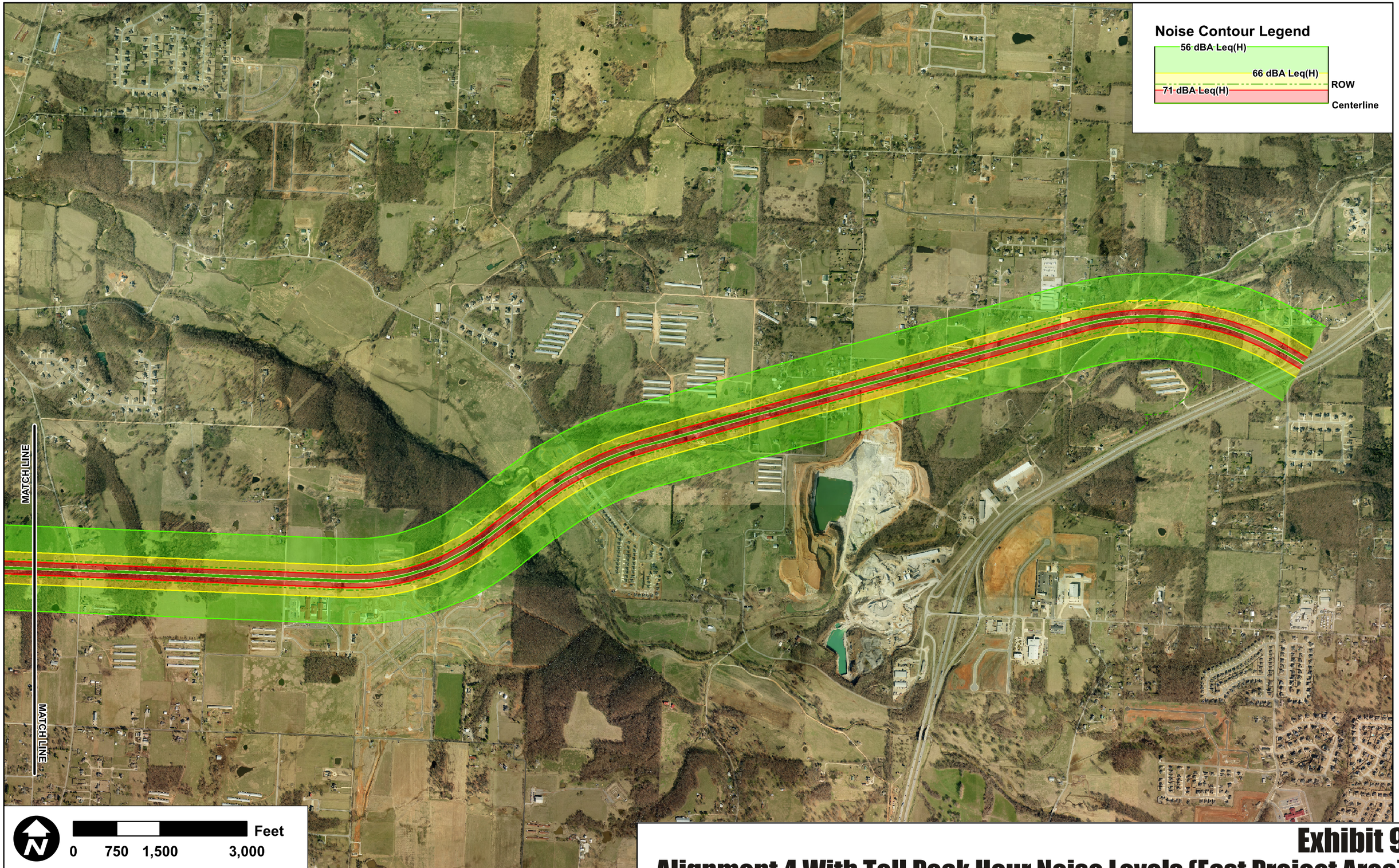


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Exhibit 9

Alignment 4 With Toll Peak Hour Noise Levels (East Project Area)

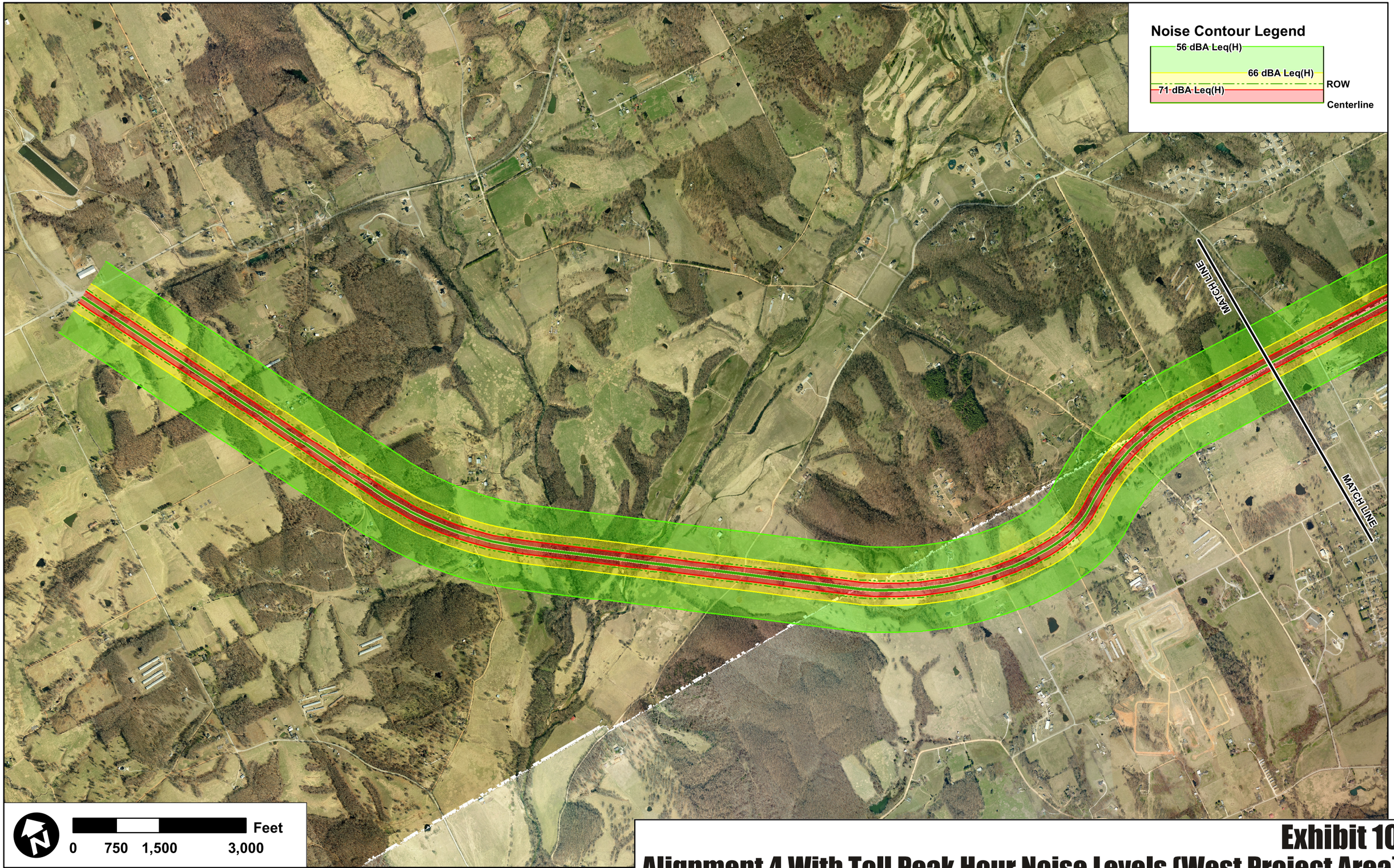

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Exhibit 10
Alignment 4 With Toll Peak Hour Noise Levels (West Project Area)

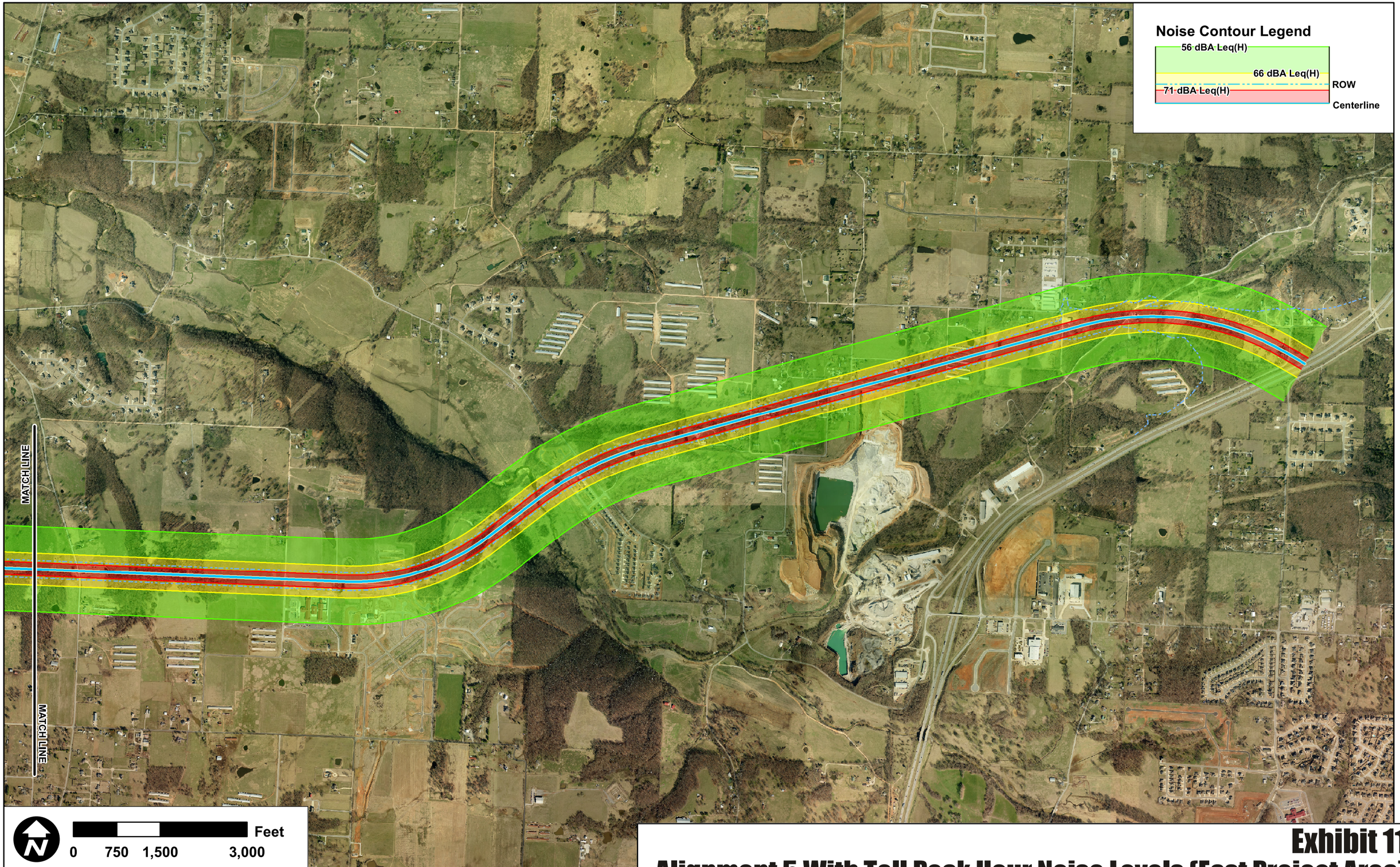

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Exhibit 11

Alignment 5 With Toll Peak Hour Noise Levels (East Project Area)

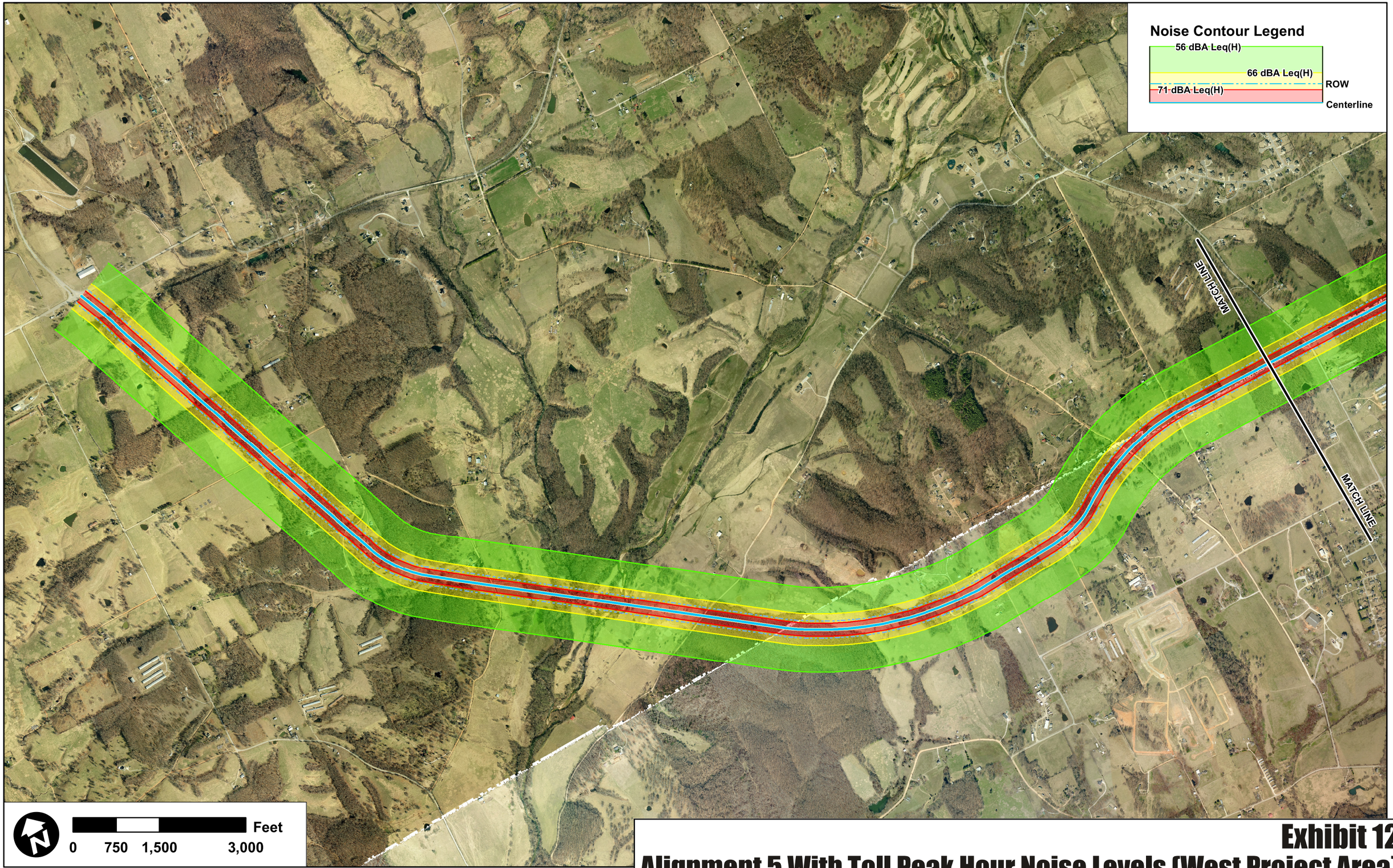

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Exhibit 12
Alignment 5 With Toll Peak Hour Noise Levels (West Project Area)

Table 9
Noise Modeling Results for Alignment 4 With Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
01a	Residential	1	36	40	63	No	27	***Yes***
01b	Residential	1	37	40	45	No	8	No
01d	Residential	1	35	38	64	No	29	***Yes***
01e	Residential	1	34	38	59	No	25	***Yes***
01f	Residential	1	34	38	54	No	20	***Yes***
01g	Residential	1	34	37	47	No	13	***Yes***
01h	Residential	1	34	37	46	No	12	***Yes***
01i	Residential	1	34	38	50	No	16	***Yes***
02a	Residential	1	41	41	45	No	4	No
02b	Residential	1	41	41	69	***Yes***	28	***Yes***
02c	Residential	1	41	41	63	No	22	***Yes***
02d	Residential	1	41	41	52	No	11	***Yes***
04a	Residential	1	47	47	47	No	0	No
04b	Residential	1	47	47	47	No	0	No
04c	Residential	1	47	47	47	No	0	No
04d	Residential	4	47	47	47	No	0	No
05a	Residential	3	42	42	48	No	6	No
05b	Residential	3	42	43	54	No	12	***Yes***
05c	Residential	2	42	44	52	No	10	***Yes***
05d	Residential	2	42	45	55	No	13	***Yes***
05e	Residential	1	42	44	59	No	17	***Yes***
05f	Residential	1	42	42	51	No	9	No
06a	Residential	1	40	42	52	No	12	***Yes***
06b	Residential	1	40	42	60	No	19	***Yes***
06c	Residential	3	40	42	53	No	13	***Yes***
06d	Residential	1	40	40	66	***Yes***	25	***Yes***
06f	Residential	1	40	40	63	No	22	***Yes***
06g	Residential	1	40	40	62	No	22	***Yes***
07a	Residential	1	66	68	68	***Yes***	2	No
07b	Residential	1	66	71	71	***Yes***	5	No
07c	Residential	1	66	71	71	***Yes***	5	No
07d	Residential	1	66	68	68	***Yes***	2	No
07e	Residential	1	66	66	66	***Yes***	0	No
07f	Residential	1	66	66	66	***Yes***	0	No
09a	Residential	1	40	43	59	No	19	***Yes***
09b	School	n/a	40	43	68	***Yes***	27	***Yes***
09c	Residential	1	40	43	52	No	12	***Yes***

(Table Continued)

Table 9 (Continued)
Noise Modeling Results for Alignment 4 With Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
10a	Residential	1	41	44	47	No	6	No
10b	Residential-F	12	40	43	63	No	23	***Yes***
10c	Residential	1	40	43	62	No	22	***Yes***
10d	Residential	19	41	43	65	No	24	***Yes***
10e	Residential-F	12	41	44	61	No	21	***Yes***
10f	Residential-F	11	41	44	57	No	17	***Yes***
10g	Residential-F	9	41	44	52	No	11	***Yes***
11a	Residential	1	47	47	48	No	1	No
11b	Residential	1	47	47	50	No	3	No
11c	Residential	1	47	47	54	No	7	No
11d	Residential	11	47	47	68	***Yes***	21	***Yes***
11e	Residential	7	47	47	65	No	17	***Yes***
11f	Residential	5	47	47	56	No	9	No
11g	Residential	12	47	47	67	***Yes***	20	***Yes***
11h	Residential	4	47	47	66	***Yes***	19	***Yes***
12a	Residential	2	45	48	65	No	20	***Yes***
12b	Residential	1	45	47	60	No	14	***Yes***
12c	Residential	1	45	47	49	No	4	No
12d	Residential	1	45	46	67	***Yes***	22	***Yes***
13a	Residential	2	51	51	57	No	6	No
13b	Residential	1	51	51	68	***Yes***	17	***Yes***
13c	Residential	4	51	51	69	***Yes***	18	***Yes***
13d	Residential	3	51	51	62	No	11	***Yes***
13e	Residential	2	51	51	62	No	12	***Yes***
13f	Residential	1	51	51	69	***Yes***	18	***Yes***
13g	Residential	1	51	51	64	No	13	***Yes***
14a	Residential	3	60	60	64	No	4	No
14b	Residential	1	60	60	66	***Yes***	6	No
14c	Residential	1	60	60	65	No	6	No
14d	Residential	1	60	60	64	No	4	No
14e	Residential	1	60	60	65	No	5	No
15a	Residential	1	57	57	58	No	1	No
15b	Residential	1	57	57	58	No	1	No
15c	Residential	1	57	57	65	No	8	No
16a	Residential	1	62	65	65	No	3	No
16b	Residential	1	62	62	62	No	0	No
16c	Residential	1	62	62	62	No	0	No
16d	Residential	1	62	62	62	No	0	No

Table 9 shows that future noise levels with Alternative 4 under the With Toll scenario are projected to approach or exceed the NAC at seven receptors, 07a, 07b, 07c, 07d, 07e, 07f, and 14b, representing seven dwelling units. Ten receptors, 02b, 06d, 09b, 11d, 11g, 11h, 12d, 13b, 13c, and 13f, representing 36 dwelling units and a school are projected to be subject to a substantial noise increase as well experience noise levels approaching or exceeding the NAC. These receptors are potentially impacted by Alternative 4 under the With Toll scenario and noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

Receptors 07a, 07b, 07c, 07d, 07e, and 07f are projected to experience the same future noise levels with or without Alternative 4 under the With Toll scenario. These receptors are impacted by traffic noise from SR-112 under the no project condition. These receptors are impacted by the project because the traffic volume on SR-112 with the project is projected to be less than half the volume without the project. By itself, this would result in a reduction in traffic noise generated by SR-112 by approximately 3 dB. Since the noise levels at these receptors are projected to be the same with or without Alternative 4 under the With Toll scenario, this means that the reduction in noise from the reduced traffic on SR-112 is offset by traffic noise generated by the project. Therefore, these receptors are potentially impacted by Alternative 4 under the With Toll scenario.

Thirty-two receptors, 01a, 01d, 01e, 01f, 01g, 01h, 01i, 02c, 02d, 05b, 05c, 05d, 05e, 06a, 06b, 06c, 06f, 06g, 09a, 09c, 10b, 10c, 10d, 10e, 10f, 10g, 11e, 12a, 12b, 13d, 13e, and 13g, representing 106 dwelling units are projected to be exposed to substantial noise increase over existing conditions with the development of Alternative 4 under the With Toll scenario. Noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

Receptor Noise Levels with Alignment 5

In the same format as Table 9, Table 10 presents the results of the noise modeling for Alignment 5 under the With Toll scenario. The input and output files of the FHWA TNM run are presented in the appendix.

Table 10
Noise Modeling Results for Alignment 5 With Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
01a	Residential	1	36	40	52	No	16	***Yes***
01b	Residential	1	37	40	46	No	9	No
01c	Residential	1	35	38	53	No	19	***Yes***
01d	Residential	1	35	38	63	No	29	***Yes***
01e	Residential	1	34	38	66	***Yes***	32	***Yes***
01g	Residential	1	34	37	60	No	26	***Yes***
01h	Residential	1	34	37	56	No	21	***Yes***
01i	Residential	1	34	38	62	No	28	***Yes***
02a	Residential	1	41	41	51	No	11	***Yes***
02b	Residential	1	41	41	52	No	11	***Yes***
02c	Residential	1	41	41	64	No	23	***Yes***
02d	Residential	1	41	41	45	No	5	No
03a	Residential	1	36	39	53	No	17	***Yes***
04a	Residential	1	47	47	47	No	0	No
04b	Residential	1	47	47	47	No	0	No
04c	Residential	1	47	47	47	No	0	No
04d	Residential	4	47	47	47	No	0	No
05a	Residential	3	42	42	47	No	5	No
05b	Residential	3	42	43	54	No	12	***Yes***
05c	Residential	2	42	44	52	No	10	***Yes***
05d	Residential	2	42	45	55	No	13	***Yes***
05e	Residential	1	42	44	59	No	17	***Yes***
05f	Residential	1	42	42	51	No	9	No
06a	Residential	1	40	42	52	No	12	***Yes***
06b	Residential	1	40	42	60	No	19	***Yes***
06c	Residential	3	40	42	53	No	13	***Yes***
06d	Residential	1	40	40	56	No	15	***Yes***
06e	Residential	1	40	40	67	***Yes***	27	***Yes***
06g	Residential	1	40	40	65	No	24	***Yes***
07a	Residential	1	66	68	68	***Yes***	2	No
07b	Residential	1	66	71	71	***Yes***	5	No
07c	Residential	1	66	71	71	***Yes***	5	No
07d	Residential	1	66	68	68	***Yes***	2	No
07e	Residential	1	66	66	66	***Yes***	0	No
07f	Residential	1	66	66	66	***Yes***	0	No
09a	Residential	1	40	43	59	No	19	***Yes***
09b	School	n/a	40	43	68	***Yes***	27	***Yes***
09c	Residential	1	40	43	52	No	12	***Yes***

(Table Continued)

Table 10 (Continued)
Noise Modeling Results for Alignment 5 With Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
10a	Residential	1	41	44	47	No	6	No
10b	Residential-F	12	40	43	63	No	23	***Yes***
10c	Residential	1	40	43	62	No	22	***Yes***
10d	Residential	19	41	43	65	No	24	***Yes***
10e	Residential-F	12	41	44	61	No	21	***Yes***
10f	Residential-F	11	41	44	57	No	17	***Yes***
10g	Residential-F	9	41	44	52	No	11	***Yes***
11a	Residential	1	47	47	48	No	1	No
11b	Residential	1	47	47	50	No	3	No
11c	Residential	1	47	47	54	No	7	No
11d	Residential	11	47	47	68	***Yes***	21	***Yes***
11e	Residential	7	47	47	65	No	17	***Yes***
11f	Residential	5	47	47	56	No	9	No
11g	Residential	12	47	47	67	***Yes***	20	***Yes***
11h	Residential	4	47	47	66	***Yes***	19	***Yes***
12a	Residential	2	45	48	65	No	20	***Yes***
12b	Residential	1	45	47	60	No	14	***Yes***
12c	Residential	1	45	47	49	No	4	No
12d	Residential	1	45	46	67	***Yes***	22	***Yes***
13a	Residential	2	51	51	57	No	6	No
13b	Residential	1	51	51	68	***Yes***	17	***Yes***
13c	Residential	4	51	51	69	***Yes***	18	***Yes***
13d	Residential	3	51	51	62	No	11	***Yes***
13e	Residential	2	51	51	62	No	12	***Yes***
13f	Residential	1	51	51	69	***Yes***	18	***Yes***
13g	Residential	1	51	51	64	No	13	***Yes***
14a	Residential	3	60	60	64	No	4	No
14b	Residential	1	60	60	66	***Yes***	6	No
14c	Residential	1	60	60	65	No	6	No
14d	Residential	1	60	60	64	No	4	No
14e	Residential	1	60	60	65	No	5	No
15a	Residential	1	57	57	58	No	1	No
15b	Residential	1	57	57	58	No	1	No
15c	Residential	1	57	57	65	No	8	No
16a	Residential	1	62	65	65	No	3	No
16b	Residential	1	62	62	62	No	0	No
16c	Residential	1	62	62	62	No	0	No
16d	Residential	1	62	62	62	No	0	No

Table 10 shows that future noise levels with Alternative 5 under the With Toll scenario are projected to approach or exceed the NAC at seven receptors, 07a, 07b 07c, 07d, 07f, and 14b, that represent seven dwelling units. Ten receptors, 01e, 06e, 09b, 11d, 11g, 11h, 12d, 13b, 13c, and 13f, representing 37 dwelling units and a school are projected to be subject to a substantial noise increase as well as experience noise levels approaching or exceeding the NAC. These receptors are potentially impacted by Alternative 5 under the With Toll scenario and noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

Receptors 07a, 07b, 07d, 07e, and 07f are projected to experience the same future noise levels with or without Alternative 5 under the With Toll scenario. These receptors are impacted by traffic noise from SR-112 under the no project condition. These receptors are impacted by the project because the traffic volume on SR-112 with the project is projected to be less than half the volume without the project. By itself, this would result in a reduction in traffic noise generated by SR-112 by approximately 3 dB. Since the noise levels at these receptors are projected to be the same with or without Alternative 5 under the With Toll scenario, this means that the reduction in noise from the reduced traffic on SR-112 is offset by traffic noise generated by the project. Therefore, these receptors are potentially impacted by Alternative 5 under the With Toll scenario.

Thirty-three receptors, 01a, 01c, 01d, 01g, 01h, 01i, 02a, 02b, 02c, 03a, 05b, 05c, 05d, 05e, 06a, 06b, 06c, 06d, 06g, 09a, 09c, 10b, 10c, 10d, 10e, 10f, 10g, 11e, 12a, 12b, 13d, 13e, 13g representing 107 dwelling units are projected to be exposed to substantial noise increase over existing conditions with the development of Alternative 5 under the With Toll scenario. Noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

2.2.3 No Toll Scenario

Noise Contours

Table 11 presents the distances to the peak hour 71, 66, and 56 dBA Leq(H) noise contours for the four access road alignments under the No Toll scenario. These contours correspond to approaching or exceeding the NAC for categories A, B, and C presented in Table 1. The contours are presented graphically for Alignment 4 in Exhibits 13 and 14, and for Alignment 5 in Exhibits 15 and 16. Exhibits 13 and 15 show the eastern end of the project and Exhibits 14 and 16 show the western end of the project. Note that the contours presented in Table 11 and Exhibits 13, 14, 15, and 16 do not include any effects of topography or noise barriers that may lower noise levels. Noise levels will be reduced at where topographic features, buildings or other solid objects break the line-of-sight from the roadway to a receiver.

Table 11
Distance To Peak Hour Leq (H) dBA Noise Contours No Toll Scenario

	Distance to Peak Hour Leq (H) dBA Contour †		
Roadway	**71 dBA Leq(H)**	**66 dBA Leq(H)**	**56 dBA Leq(H)**
Alignment 4	126	303	768
Alignment 5	126	303	768

† feet from centerline of road

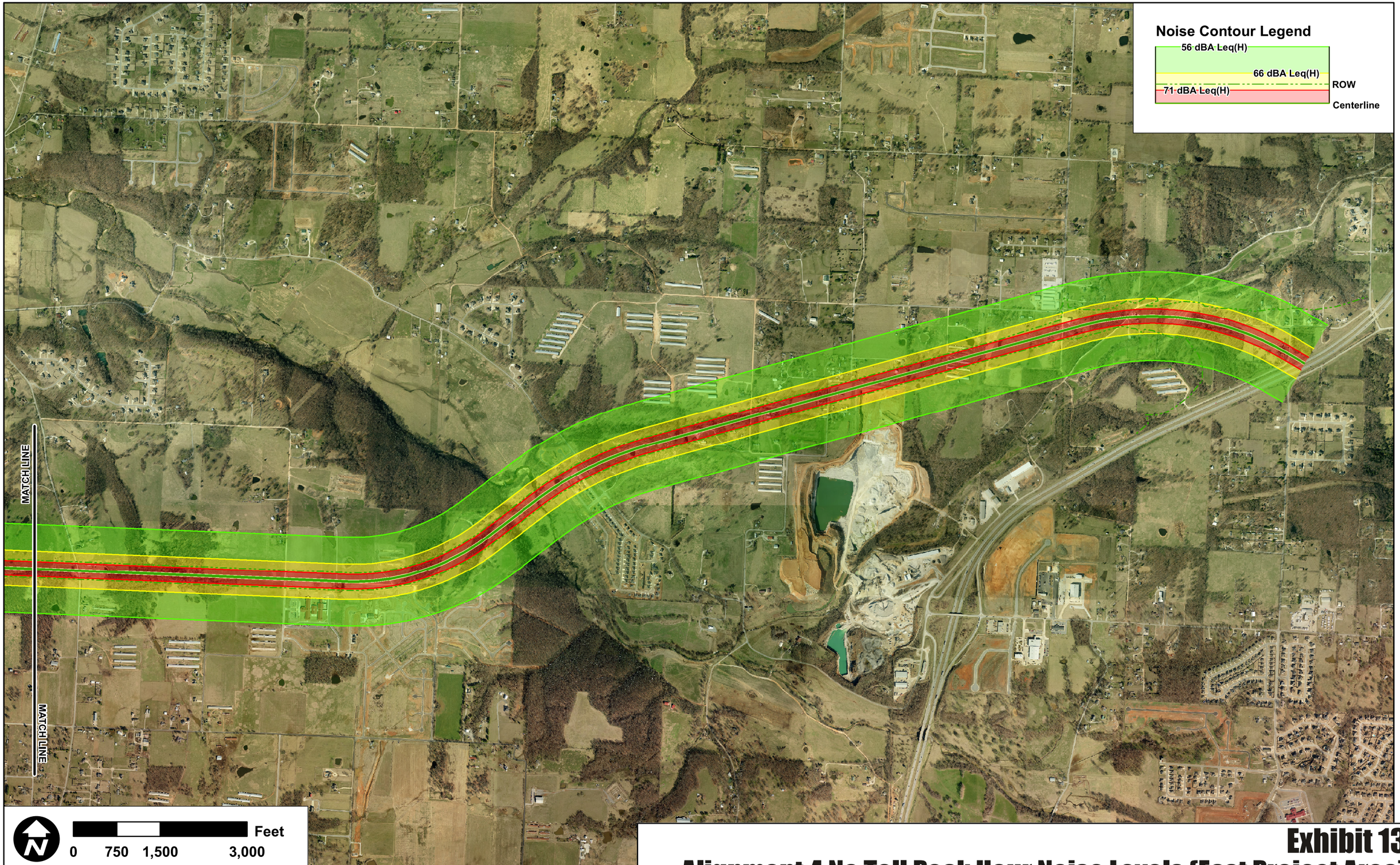

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Exhibit 13
Alignment 4 No Toll Peak Hour Noise Levels (East Project Area)

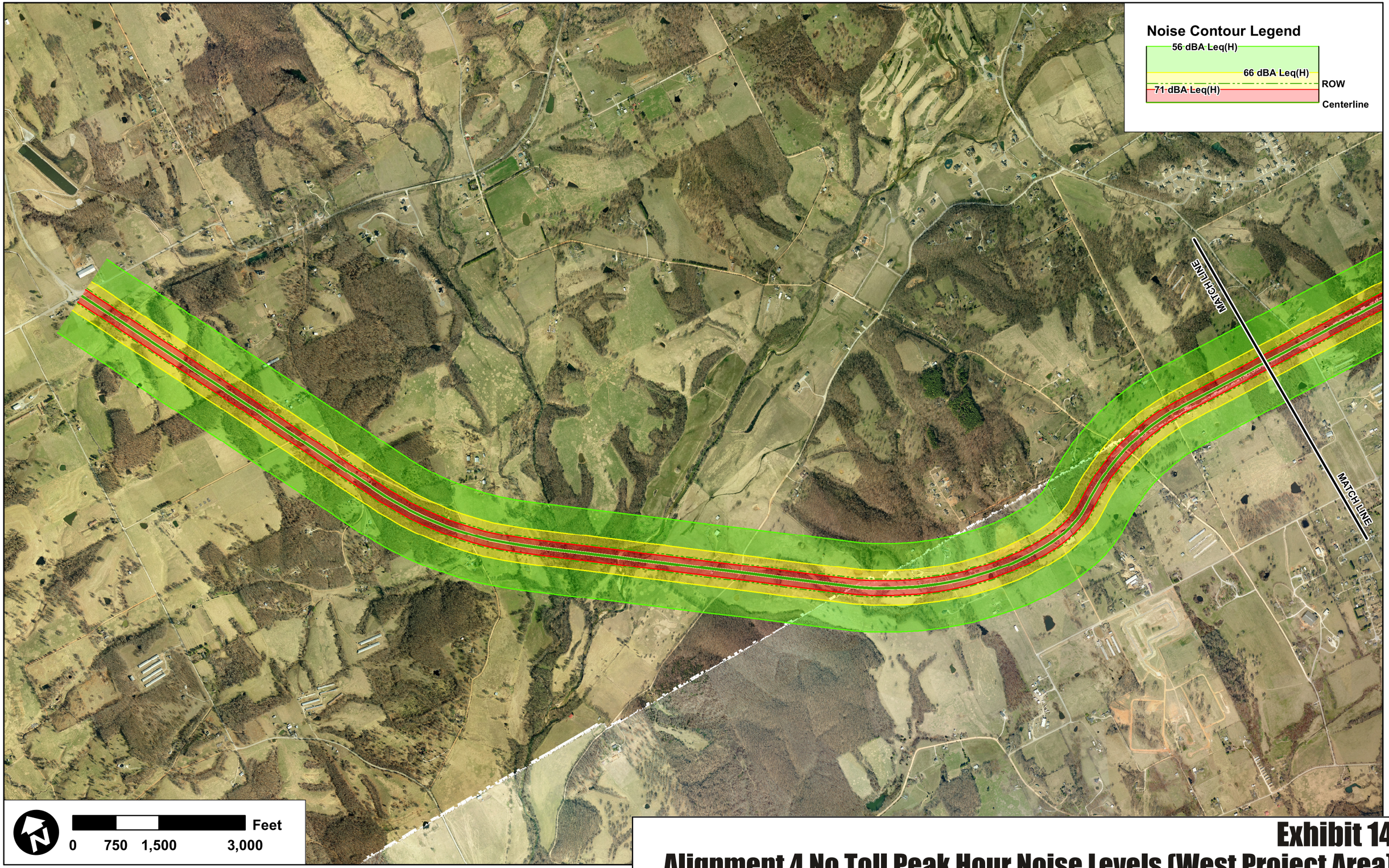

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Exhibit 14
Alignment 4 No Toll Peak Hour Noise Levels (West Project Area)

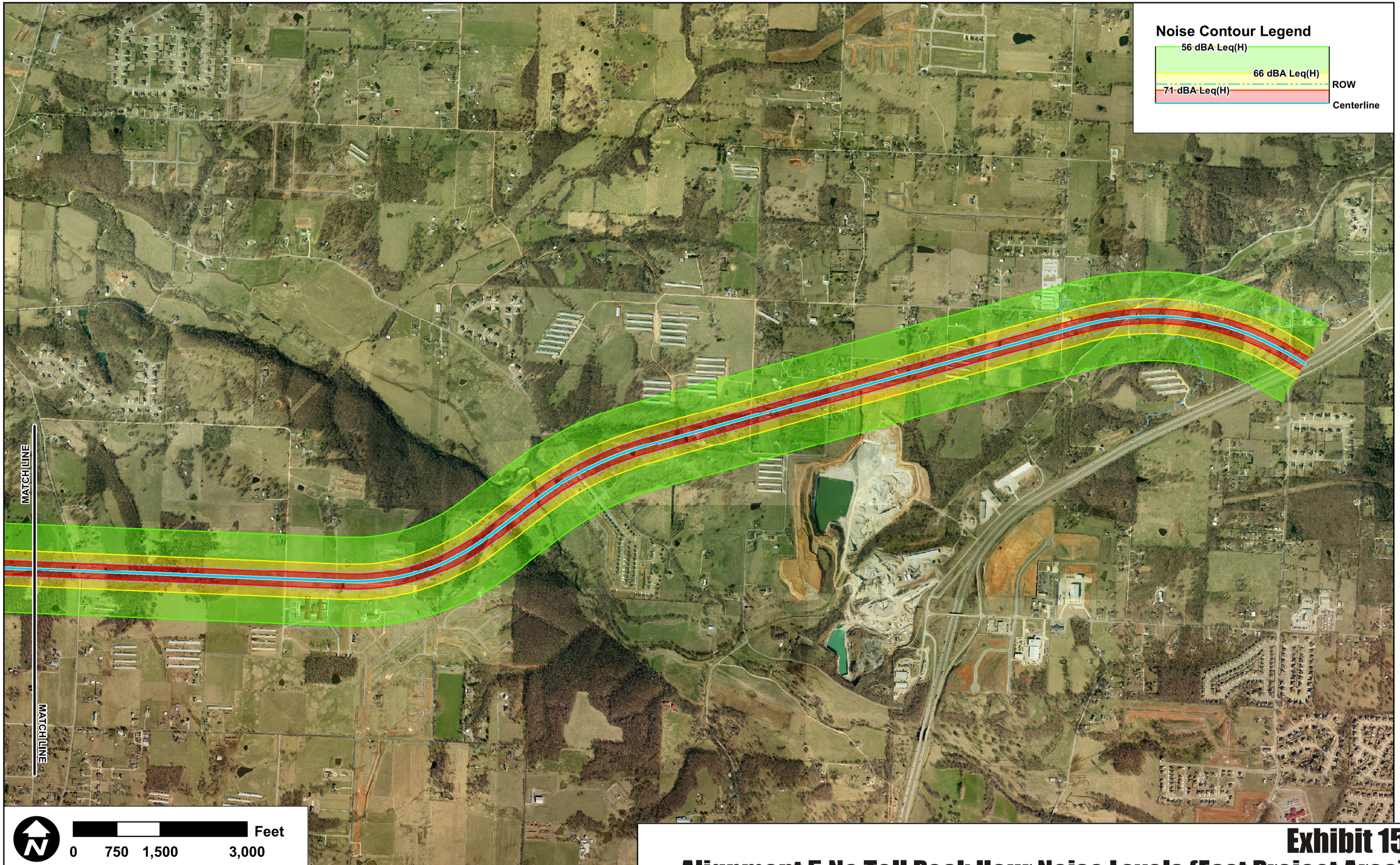

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Exhibit 15
Alignment 5 No Toll Peak Hour Noise Levels (East Project Area)

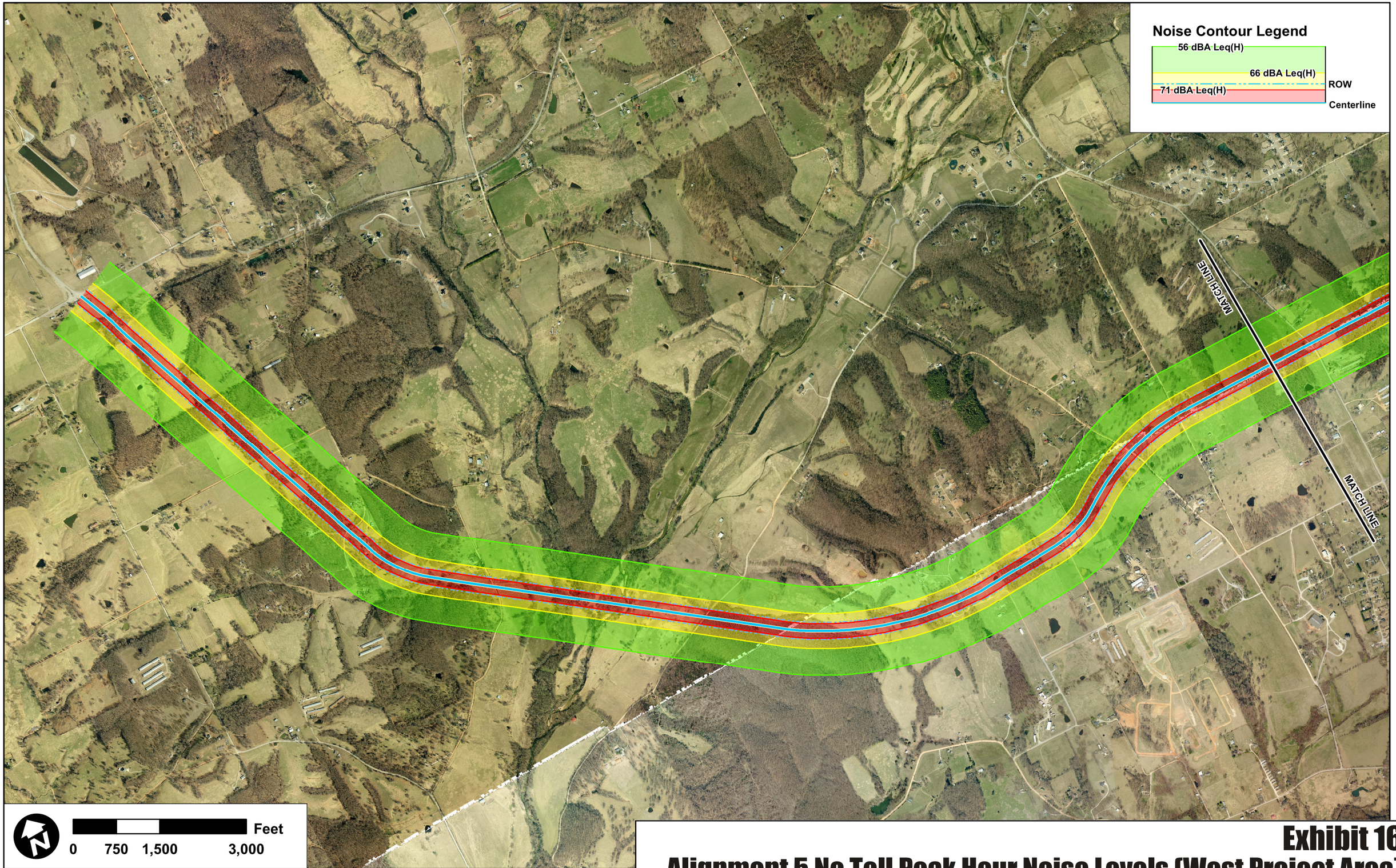

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Exhibit 16
Alignment 5 No Toll Peak Hour Noise Levels (West Project Area)

Table 11 and Exhibits 13, 14, 15, and 16 show there are no differences in the noise levels generated by each alignment. This is because the traffic volume on the access road is projected to be the same for both alignments. The 71 dBA Leq(H) contour will likely not extend beyond the right-of-way which is estimated to extend 150 feet on either side of the centerline. The 66 dBA Leq(H) contour will extend approximately 155 feet from the edge of the right-of-way and the 56 dBA contour will extend approximately 620 feet from the edge of the right-of-way.

Receptor Noise Levels with Alignment 4

In the same format as the previous tables, Table 12 presents the results of the noise modeling for Alignment 4 under the No Toll Scenario. The input and output files of the FHWA TNM® run are presented in the appendix.

Table 12
Noise Modeling Results for Alignment 4 No Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
01a	Residential	1	36	40	64	No	28	***Yes***
01b	Residential	1	37	40	45	No	8	No
01d	Residential	1	35	38	64	No	30	***Yes***
01e	Residential	1	34	38	60	No	25	***Yes***
01f	Residential	1	34	38	55	No	21	***Yes***
01g	Residential	1	34	37	47	No	13	***Yes***
01h	Residential	1	34	37	47	No	12	***Yes***
01i	Residential	1	34	38	51	No	16	***Yes***
02a	Residential	1	41	41	45	No	4	No
02b	Residential	1	41	41	70	***Yes***	29	***Yes***
02c	Residential	1	41	41	64	No	23	***Yes***
02d	Residential	1	41	41	52	No	11	***Yes***
04a	Residential	1	47	47	47	No	0	No
04b	Residential	1	47	47	47	No	0	No
04c	Residential	1	47	47	47	No	0	No
04d	Residential	4	47	47	47	No	0	No
05a	Residential	3	42	42	48	No	6	No
05b	Residential	3	42	43	54	No	12	***Yes***
05c	Residential	2	42	44	52	No	10	***Yes***
05d	Residential	2	42	45	56	No	14	***Yes***
05e	Residential	1	42	44	60	No	18	***Yes***
05f	Residential	1	42	42	51	No	9	No
06a	Residential	1	40	42	53	No	12	***Yes***
06b	Residential	1	40	42	61	No	20	***Yes***
06c	Residential	3	40	42	54	No	13	***Yes***
06d	Residential	1	40	40	66	***Yes***	26	***Yes***
06f	Residential	1	40	40	63	No	23	***Yes***
06g	Residential	1	40	40	63	No	22	***Yes***

(Table Continued)

Table 12 (Continued)
Noise Modeling Results for Alignment 4 No Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
07a	Residential	1	66	68	68	***Yes***	2	No
07b	Residential	1	66	71	71	***Yes***	5	No
07c	Residential	1	66	71	71	***Yes***	5	No
07d	Residential	1	66	68	68	***Yes***	2	No
07e	Residential	1	66	66	66	***Yes***	0	No
07f	Residential	1	66	66	66	***Yes***	0	No
09a	Residential	1	40	43	60	No	20	***Yes***
09b	School	n/a	40	43	68	***Yes***	28	***Yes***
09c	Residential	1	40	43	53	No	13	***Yes***
10a	Residential	1	41	44	48	No	7	No
10b	Residential-F	12	40	43	64	No	24	***Yes***
10c	Residential	1	40	43	63	No	22	***Yes***
10d	Residential	19	41	43	65	No	25	***Yes***
10e	Residential-F	12	41	44	62	No	21	***Yes***
10f	Residential-F	11	41	44	58	No	17	***Yes***
10g	Residential-F	9	41	44	53	No	12	***Yes***
11a	Residential	1	47	47	49	No	1	No
11b	Residential	1	47	47	51	No	4	No
11c	Residential	1	47	47	55	No	8	No
11d	Residential	11	47	47	69	***Yes***	21	***Yes***
11e	Residential	7	47	47	65	No	18	***Yes***
11f	Residential	5	47	47	56	No	9	No
11g	Residential	12	47	47	68	***Yes***	21	***Yes***
11h	Residential	4	47	47	66	***Yes***	19	***Yes***
12a	Residential	2	45	48	66	***Yes***	20	***Yes***
12b	Residential	1	45	47	60	No	15	***Yes***
12c	Residential	1	45	47	50	No	4	No
12d	Residential	1	45	46	68	***Yes***	22	***Yes***
13a	Residential	2	51	51	57	No	6	No
13b	Residential	1	51	51	69	***Yes***	18	***Yes***
13c	Residential	4	51	51	69	***Yes***	19	***Yes***
13d	Residential	3	51	51	62	No	12	***Yes***
13e	Residential	2	51	51	63	No	12	***Yes***
13f	Residential	1	51	51	69	***Yes***	19	***Yes***
13g	Residential	1	51	51	65	No	14	***Yes***
14a	Residential	3	60	60	65	No	5	No
14b	Residential	1	60	60	67	***Yes***	7	No
14c	Residential	1	60	60	66	***Yes***	6	No

(Table Continued)

Table 12 (Continued)
Noise Modeling Results for Alignment 4 No Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
14d	Residential	1	60	60	65	No	5	No
14e	Residential	1	60	60	65	No	6	No
15a	Residential	1	57	57	58	No	1	No
15b	Residential	1	57	57	58	No	1	No
15c	Residential	1	57	57	66	***Yes***	9	No
16a	Residential	1	62	65	65	No	3	No
16b	Residential	1	62	62	62	No	0	No
16c	Residential	1	62	62	62	No	1	No
16d	Residential	1	62	62	62	No	0	No

Table 12 shows that future noise levels with Alternative 4 under the No Toll scenario are projected to approach or exceed the NAC at nine receptors, 07a, 07b, 07d, 07e, 07f, 14b. 14c, and 15c, representing nine dwelling units. Eleven receptors, 02b, 06d, 09b, 11d, 11g, 11h, 12a, 12d, 13b, 13c, and 13f, representing 38 dwelling units and a school are projected to be subject to a substantial noise increase as well experience noise levels approaching or exceeding the NAC. These receptors are potentially impacted by Alternative 4 under the No Toll scenario and noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

Receptors 07a, 07b, 07d, 07e, and 07f are projected to experience the same future noise levels with or without Alternative 4 under the No Toll scenario. These receptors are impacted by traffic noise from SR-112 under the no project condition. These receptors are impacted by the project because the traffic volume on SR-112 with the project is projected to be less than half the volume without the project. By itself, this would result in a reduction in traffic noise generated by SR-112 by approximately 3 dB. Since the noise levels at these receptors are projected to be the same with or without Alternative 4 under the No Toll scenario, this means that the reduction in noise from the reduced traffic on SR-112 is offset by traffic noise generated by the project. Therefore, these receptors are potentially impacted by Alternative 4 under the No Toll scenario.

Thirty-one receptors, 01a, 01d, 01e, 01f, 01g, 01h, 01i, 02c, 02d, 05b, 05c, 05d, 05e, 06a, 06b, 06c, 06f, 06g, 09a, 09c, 10b, 10c, 10d, 10e, 10f, 10g, 11e, 12b, 13d, 13e, and 13g representing 104 dwelling units are projected to be exposed to substantial noise increase over existing conditions with the development of Alternative 4 under the No Toll scenario. Noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

Receptor Noise Levels with Alternative 5

In the same format as the previous tables, Table 13 presents the results of the noise modeling for Alignment 5 under the No Toll scenario.

Table 13
Noise Modeling Results for Alignment 5 No Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
01a	Residential	1	36	40	53	No	17	***Yes***
01b	Residential	1	37	40	46	No	9	No
01c	Residential	1	35	38	54	No	19	***Yes***
01d	Residential	1	35	38	64	No	29	***Yes***
01e	Residential	1	34	38	67	***Yes***	32	***Yes***
01g	Residential	1	34	37	61	No	26	***Yes***
01h	Residential	1	34	37	56	No	22	***Yes***
01i	Residential	1	34	38	63	No	29	***Yes***
02a	Residential	1	41	41	52	No	11	***Yes***
02b	Residential	1	41	41	52	No	11	***Yes***
02c	Residential	1	41	41	65	No	24	***Yes***
02d	Residential	1	41	41	46	No	5	No
03a	Residential	1	36	39	54	No	18	***Yes***
04a	Residential	1	47	47	47	No	0	No
04b	Residential	1	47	47	47	No	0	No
04c	Residential	1	47	47	47	No	0	No
04d	Residential	4	47	47	47	No	0	No
05a	Residential	3	42	42	48	No	6	No
05b	Residential	3	42	43	54	No	12	***Yes***
05c	Residential	2	42	44	52	No	10	***Yes***
05d	Residential	2	42	45	56	No	14	***Yes***
05e	Residential	1	42	44	60	No	18	***Yes***
05f	Residential	1	42	42	51	No	9	No
06a	Residential	1	40	42	53	No	12	***Yes***
06b	Residential	1	40	42	61	No	20	***Yes***
06c	Residential	3	40	42	54	No	13	***Yes***
06d	Residential	1	40	40	56	No	16	***Yes***
06e	Residential	1	40	40	68	***Yes***	27	***Yes***
06g	Residential	1	40	40	66	***Yes***	25	***Yes***
07a	Residential	1	66	68	68	***Yes***	2	No
07b	Residential	1	66	71	71	***Yes***	5	No
07c	Residential	1	66	71	71	***Yes***	5	No
07d	Residential	1	66	68	68	***Yes***	2	No

(Table Continued)

Table 13 (Continued)
Noise Modeling Results for Alignment 5 No Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
07e	Residential	1	66	66	66	***Yes***	0	No
07f	Residential	1	66	66	66	***Yes***	0	No
09a	Residential	1	40	43	60	No	20	***Yes***
09b	School	n/a	40	43	68	***Yes***	28	***Yes***
09c	Residential	1	40	43	53	No	13	***Yes***
10a	Residential	1	41	44	48	No	7	No
10b	Residential-F	12	40	43	64	No	24	***Yes***
10c	Residential	1	40	43	63	No	22	***Yes***
10d	Residential	19	41	43	65	No	25	***Yes***
10e	Residential-F	12	41	44	62	No	21	***Yes***
10f	Residential-F	11	41	44	58	No	17	***Yes***
10g	Residential-F	9	41	44	53	No	12	***Yes***
11a	Residential	1	47	47	49	No	1	No
11b	Residential	1	47	47	51	No	4	No
11c	Residential	1	47	47	55	No	8	No
11d	Residential	11	47	47	69	***Yes***	21	***Yes***
11e	Residential	7	47	47	65	No	18	***Yes***
11f	Residential	5	47	47	56	No	9	No
11g	Residential	12	47	47	68	***Yes***	21	***Yes***
11h	Residential	4	47	47	66	***Yes***	19	***Yes***
12a	Residential	2	45	48	66	***Yes***	20	***Yes***
12b	Residential	1	45	47	60	No	15	***Yes***
12c	Residential	1	45	47	50	No	4	No
12d	Residential	1	45	46	68	***Yes***	22	***Yes***
13a	Residential	2	51	51	57	No	6	No
13b	Residential	1	51	51	69	***Yes***	18	***Yes***
13c	Residential	4	51	51	69	***Yes***	19	***Yes***
13d	Residential	3	51	51	62	No	12	***Yes***
13e	Residential	2	51	51	63	No	12	***Yes***
13f	Residential	1	51	51	69	***Yes***	19	***Yes***
13g	Residential	1	51	51	65	No	14	***Yes***
14a	Residential	3	60	60	65	No	5	No
14b	Residential	1	60	60	67	***Yes***	7	No
14c	Residential	1	60	60	66	***Yes***	6	No
14d	Residential	1	60	60	65	No	5	No
14e	Residential	1	60	60	65	No	6	No
15a	Residential	1	57	57	58	No	1	No
15b	Residential	1	57	57	58	No	1	No
15c	Residential	1	57	57	66	***Yes***	9	No

(Table Continued)

Table 13 (Continued)
Noise Modeling Results for Alignment 5 No Toll

Receptor	Use	Dwelling Units	Existing Leq(h)	Future No Project Leq(H)	Future w/ Project Leq(H)	Approach or Exceed NAC?	Leq(H) dBA Increase	Substantial Increase?
16a	Residential	1	62	65	65	No	3	No
16b	Residential	1	62	62	62	No	0	No
16c	Residential	1	62	62	62	No	1	No
16d	Residential	1	62	62	62	No	0	No

Table 13 shows that future noise levels with Alternative 5 under the No Toll scenario are projected to approach or exceed the NAC at nine receptors, 07a, 07b 07c, 07d, 07e, 07f, 14b, 14c, and 15c that represent nine dwelling units. Twelve receptors, 01e, 06e, 06g, 09b, 11d, 11g, 11h, 12a, 12d, 13b, 13c, and 13f, representing 39 dwelling units and a school are projected to be subject to a substantial noise increase as weal as experience noise levels approaching or exceeding the NAC. These receptors are potentially impacted by Alternative 5 under the No Toll scenario and noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

Receptors 07a, 07b, 07d, 07e, and 07f are projected to experience the same future noise levels with or without Alternative 5 under the No Toll scenario. These receptors are impacted by traffic noise from SR-112 under the no project condition. These receptors are impacted by the project because the traffic volume on SR-112 with the project is projected to be less than half the volume without the project. By itself, this would result in a reduction in traffic noise generated by SR-112 by approximately 3 dB. Since the noise levels at these receptors are projected to be the same with or without Alternative 5 under the No Toll scenario, this means that the reduction in noise from the reduced traffic on SR-112 is offset by traffic noise generated by the project. Therefore, these receptors are potentially impacted by Alternative 5 under the No Toll scenario.

Thirty-one receptors, 01a, 01c, 01d, 01g, 01h, 01i, 02a, 02b, 02c, 03a, 05b, 05c, 05d, 05e, 06a, 06b, 06c, 06d, 09a, 09c, 10b, 10c, 10d, 10e, 10f, 10g, 11e, 12b, 13d, 13e, 13g representing 104 dwelling units are projected to be exposed to substantial noise increase over existing conditions with the development of Alternative 5 under the No Toll scenario. Noise abatement must be considered for these residences if this scenario is selected. Potential noise abatement measures along with their reasonableness and feasibility are discussed in Section 3.2.

3.0 NOISE ABATEMENT MEASURES

3.1 Short-Term Impacts

The most effective way of mitigating construction related noise is through the limitation of the hours of construction. Noise generating construction activities within 1,000 feet of residential uses shall be restricted to the hours of 7:00 a.m. to 8:00 p.m. Monday through Saturday and at no time on Sundays or National Holidays. Additionally, stationary noise generating equipment used for construction should be located as far as practical from noise sensitive uses and proper mufflers should be utilized for all construction equipment.

3.2 Long–Term Traffic Noise Impacts

Noise abatement must be considered to reduce the noise levels at the receptors projected to experience noise levels that approach or exceed the NAC or experience a substantial noise increase due to the project for whichever alternative is selected. Possible noise abatement alternatives are discussed in Section 3.2.1. In order to be implemented, the abatement must be found feasible and reasonable. Noise abatement is feasible if it can provide substantial noise reduction given the conditions of a specific location. AHTD has defined a substantial noise reduction as being a reduction of 10 dB for at least one residence. The determination of reasonableness is a more subjective criterion than feasibility. It considers the specific circumstances of the particular project. Reasonableness criteria is discussed in Section 3.2.2. The receptors that are potentially impacted by the project as determined by the analysis presented previously in Sections 2.2.2 and 2.2.3 are summarized in Section 3.2.3. An analysis of implementing noise barriers is presented in Section 3.2.4

3.2.1 Noise Abatement Alternatives

Various methods of noise abatement are available to minimize the potential noise impact of the project. Reduction of speed limits could be used to reduce noise generated by the roadway. However, this is seldom practical due to the resulting reduction of the roadways operational efficiency. Prohibiting or restricting truck traffic would reduce the noise generated by the roadway. This would not be consistent with the project's stated purpose and need, though.

Altering the horizontal or vertical alignment of the road can also be used to limit the noise impacts. However, this study considers tow alternative alignments and a total of seven alternative alignments were initially considered for the project. The rejected alignments were found to be undesirable for reasons other than noise impacts. Noise impacts will be included in the decision on the final alignment along with many other factors. Altering the vertical alignment is typically not practical because of the amount of material that would have to be moved to alter the vertical alignment substantially.

Acquisition of property to create buffer zones is another measure that can reduce noise impacts. However, this is typically cost prohibitive. Note that the currently planned roadway 'right-of-way' is quite wide extending approximately 150 feet from the centerline of the roadway for most of the length for both alternatives.

In most cases, the only practical way to mitigate highway noise is through the construction of noise barriers. Noise barriers reduce noise levels when they break the line of sight between a

receiver and a noise source. The amount of noise reduction provided by the barrier is dependent on how much the noise has to bend around the barrier or, equivalently, by how much the barrier breaks the line of sight. The more the sound has to bend or the more the barrier breaks the line of sight the greater the noise reduction. Earthen berms can be used to decrease the required height of the wall or even eliminate a wall. An earthen berm with the same height as a wall will reduce noise levels more than the wall. Walls constructed on top of berms with the same top of wall elevation as a wall not on a berm provide the same amount of noise reduction with a lower height.

3.2.2 Reasonableness Criteria

The determination of reasonableness is a more subjective criterion than feasibility. It considers the specific circumstances of the particular project. The cost of the abatement, desire for the abatement by the benefited residences, date of the construction of the residences relative to the construction of the highway, how long the residences have been in place, the absolute noise levels with the project and the increases in the noise levels with the project compared to existing and future no project conditions are all considered in the determination of reasonableness. These seven factors are rated from a "High No" to a "High Yes" based on the criteria developed by AHTD and summarized below.

- **Mitigation Cost per Residence –** Cost should be no more than $36,000 per residence with a minimum decrease of 5 dBA.

Less than $27,000/Residence	"High Yes"
$27,000 to $36,000/Residence	"Low Yes"
$36,001 to $45,000 /Residence	"Low No"
More Than $45,000/Residence	"High No"

- **Opinion of Residents –** Most impacted residents benefited want noise abatement measure.

Greater than 80%	"High Yes"
50% to 80%	"Low Yes"
40% to 49%	"Low No"
Less than 40%	"High No"

- **Date of Residence Construction –** Most impacted residences benefited were constructed prior to initial construction of Highway.

Greater than 80%	"High Yes"
50% to 80%	"Low Yes"
30% to 49%	"Low No"
Les than 30%	"High No"

- **Duration of Residence Existence –** Most impacted residences benefited were have existed for more than 10 years.

Greater than 80%	"High Yes"
50% to 80%	"Low Yes"
30% to 49%	"Low No"
Les than 30%	"High No"

- **With Project Noise Levels –** Future with project noise levels approach or exceed Noise Abatement Criteria for applicable Activity Category.

Activity Category "B"

Greater than 72 dBA	"High Yes"
66 dBA to 72 dBA	"Low Yes"
62 dBA to 65 dBA	"Low No"
Greater than 62 dBA	"High No"

Activity Category "A"

Greater than 62 dBA	"High Yes"
56 dBA to 62 dBA	"Low Yes"
52 dBA to 55 dBA	"Low No"
Greater than52 dBA	"High No"

Activity Category "C"

Greater than 78 dBA	"High Yes"
71 dBA to 78 dBA	"Low Yes"
68 dBA to 70 dBA	"Low No"
Greater than 68 dBA	"High No"

- **Increase Over Existing Noise Levels –** Future noise levels substantially exceed (10 dBA greater) than existing noise levels.

Greater than 15 dBA Leq (H)	"High Yes"
10 to 15 dBA Leq (H)	"Low Yes"
5 to 9 dBA Leq (H)	"Low No"
Les than 5 dBA Leq (H)	"High No"

- **Increase Over Future Noise Levels Without Project –** Future noise with project more than 7 dBA greater than levels without project.

Greater than 10 dBA Leq (H)	"High Yes"
7 to 10 dBA Leq (H)	"Low Yes"
4 to 6 dBA Leq (H)	"Low No"
Les than 4 dBA Leq (H)	"High No"

3.2.3 Impacted Receptors

Alternative 4

Table 14 presents a summary of the impacted receptors under Alternative 4. Receptors and the number of dwelling units are listed in columns by the type of impact, approaching or exceeding the NAC, experiencing a substantial increase in noise, or both for the With Toll and No Toll scenarios. The last row of the table shows the number of receptors and dwelling units impacted for each impact category.

For the most part the same receptors would be impacted under both the With Toll and No Toll scenarios. The exceptions are Receptors 14c, 15c that would be impacted due to the noise level approaching or exceeding the NAC under the No Toll scenario but would not be impacted under the With Toll scenario. Under the With Toll scenario, Receptor 12a would only experience a substantial increase in noise levels. Under the No Toll scenario the receptor would experience a substantial increase in noise levels and a noise level approaching or exceeding the NAC.

Alternative 5

Table 15 presents a summary of the impacted receptors under Alternative 5. Receptors are listed in columns by the type of impact, approaching or exceeding the NAC, experiencing a substantial increase in noise, or both for the With Toll and No Toll scenarios. The last row of the table shows the number of receptors impacted for each impact category.

For the most part the same receptors would be impacted under both the With Toll and No Toll scenarios. The exceptions are Receptors 14c, 15c that would be impacted due to the noise level approaching or exceeding the NAC under the No Toll scenario but would not be impacted under the With Toll scenario. Under the With Toll scenario, Receptors 06g and 12a would only experience a substantial increase in noise levels. Under the No Toll scenario these two receptors would experience a substantial increase in noise levels and a noise level approaching or exceeding the NAC.

Table 14
Receptors Impacted Under Alternative 4

With Toll Scenario						No Toll					
Approach or Exceed NAC		Substantial Increase		Both		Approach or Exceed NAC		Substantial Increase		Both	
Receptor	du	Receptor	du	Receptor	du	Receptor	du	Receptor	du	Receptor	du
07a	1	01a	1	02b	1	07a	1	01a	1	02b	1
07b	1	01d	1	06d	1	07b	1	01d	1	06d	1
07c	1	01e	1	09b	n/a	07c	1	01e	1	09b	n/a
07d	1	01f	1	11d	11	07d	1	01f	1	11d	11
07e	1	01g	1	11g	12	07e	1	01g	1	11g	12
07f	1	01h	1	11h	4	07f	1	01h	1	11h	4
14b	1	01i	1	12d	1	14b	1	01i	1	12a	2
		02c	1	13b	1	14c	1	02c	1	12d	1
		02d	1	13c	4	15c	1	02d	1	13b	1
		05b	3	13f	1			05b	3	13c	4
		05c	2					05c	2	13f	1
		05d	2					05d	2		
		05e	1					05e	1		
		06a	1					06a	1		
		06b	1					06b	1		
		06c	3					06c	3		
		06f	1					06f	1		
		06g	1					06g	1		
		09a	1					09a	1		
		09c	1					09c	1		
		10b	12					10b	12		
		10c	1					10c	1		
		10d	19					10d	19		
		10e	12					10e	12		
		10f	11					10f	11		
		10g	9					10g	9		
		11e	7					11e	7		
		12a	2					12b	1		
		12b	1					13d	3		
		13d	3					13e	2		
		13e	2					13g	1		
		13g	1								
7	**7**	**32**	**106**	**10**	**36**	**9**	**9**	**31**	**104**	**11**	**38**

Table 15
Receptors Impacted Under Alternative 5

With Toll Scenario						No Toll Scenario					
Approach or Exceed NAC		Substantial Increase		Both		Approach or Exceed NAC		Substantial Increase		Both	
Receptor	du	Receptor	du	Receptor	du	Receptor	du	Receptor	du	Receptor	du
07a	1	01a	1	01e	1	07a	1	01a	1	01e	1
07b	1	01c	1	06e	1	07b	1	01c	1	06e	1
07c	1	01d	1	09b	n/a	07c	1	01d	1	06g	1
07d	1	01g	1	11d	11	07d	1	01g	1	09b	n/a
07e	1	01h	1	11g	12	07e	1	01h	1	11d	11
07f	1	01i	1	11h	4	07f	1	01i	1	11g	12
14b	1	02a	1	12d	1	14b	1	02a	1	11h	4
		02b	1	13b	1	14c	1	02b	1	12a	2
		02c	1	13c	4	15c	1	02c	1	12d	1
		03a	1	13f	1			03a	1	13b	1
		05b	3					05b	3	13c	4
		05c	2					05c	2	13f	1
		05d	2					05d	2		
		05e	1					05e	1		
		06a	1					06a	1		
		06b	1					06b	1		
		06c	3					06c	3		
		06d	1					06d	1		
		06g	1					09a	1		
		09a	1					09c	1		
		09c	1					10b	12		
		10b	12					10c	1		
		10c	1					10d	19		
		10d	19					10e	12		
		10e	12					10f	11		
		10f	11					10g	9		
		10g	9					11e	7		
		11e	7					12b	1		
		12a	2					13d	3		
		12b	1					13e	2		
		13d	3					13g	1		
		13e	2								
		13g	1								
7	**7**	**33**	**107**	**10**	**36**	**9**	**9**	**31**	**104**	**12**	**39**

3.2.4 Noise Barrier Analysis

At this time, only the horizontal alignments of the alternatives have been determined. The vertical alignment has not been determined. To determine the amount of sound reduction provided by the noise barrier the vertical relation between the roadway, noise barrier and receptor are required. This means that specific noise barrier requirements cannot be determined at this time. They can be discussed in a general manner.

For this analysis, we will assume that the area around the road is flat. If, in reality, a barrier were to be located at a location lower than the roadway a higher barrier would be required. If the barrier were elevated relative to the roadway then a lower height would be required. The height differences would be the same as the difference in the base of barrier and roadway elevations. Similarly, if a receptor were located at a higher elevation than the roadway, a higher barrier would be required and if the receptor were depressed relative to the roadway, a lower barrier would be required. However, this would not be directly related to the elevation difference as the distance from the roadway and barrier would also affect how this changes the height of the required barrier.

Most often noise barriers are constructed along the roadway near the edge. The nearest impacted receptors are located along the edge of the right-of-way 150 feet from the centerline and 75 feet from the edge of shoulder. If a barrier was constructed at the edge of roadway it would need to be approximately 14 feet high and run for approximately 2,000 feet along the edge of the roadway to provide the required 10 dB of noise reduction to be considered feasible. Assuming a noise barrier cost of $25 per square foot, this barrier would have to benefit approximately 20 residences to be considered reasonable (i.e. cost less than $36,000 per residence). Receptors further from the roadway would need higher barriers run for longer distances. A receptor 650 feet from the roadway, the average distance of all impacted receptors, would require approximately 1.5 miles of 16-foot high barrier. To be considered reasonable this barrier would need to provide noise reduction for approximately 90 residences. Most of the impacted receptors only represent only a few residences and it is unlikely that barriers for these areas would have a cost of less than $36,000 per residence. Therefore, the response to the first criterion of the reasonableness analysis would be at least a “Low No” with a “High No” likely. To be conservative these receptors are listed as “Low No” in the tables below. It is possible that walls for the two new developments and school represented by Receptors 09b, 10c-10g, and 11d-11h will have high enough densities that the wall cost would fall below $36,000 and these receptors are listed as “Low Yes” in the tables below”

Tables 16 through 19 present the responses to the seven AHTD reasonableness criteria as described above for each alternative. Tables 16 and 17 present the responses for the With Toll scenario and Tables 18 and 19 respond for the No Toll scenario. Responses for each receptor are provided. As discussed above, we have assumed that the costs per residence for a barrier considered feasible would generate a “Low No” response for most of the receptors and a “Low Yes for the receptors in the new, denser, residential developments.. At this time the residents’ wishes for noise barriers is not known and this column shows question marks. The desire of the residents for noise abatement will need to be ascertained prior to implementation of the abatement. Because this is a new highway, the housing predates the highway. It was also assumed that all of the homes in the vicinity of the highway have been in existence for more than

10 years, except for those in the new developments represented by Receptors 09b, 10c-10g, and 11d-11h.

Table 16 presents responses for the receptors impacted by Alternative 4 under the With Toll scenario. Table 17 presents responses for the receptors potentially impacted by Alternative 5 under the With Toll scenario. Table 18 presents responses for the receptors potentially impacted by Alternative 4 under the No Toll scenario. Table 19 presents the responses for the receptors potentially impacted by Alternative 5 under the No Toll scenario.

It is up to the AHTD to make the final determination if a noise abatement measure will be reasonable or not based on the answers to the criteria presented in Tables 16 trough 19. Further, a more detailed analysis of noise abatement measures will be performed as a part of final engineering design. At that time more detailed information about the roadway (particularly elevation) will be available and will allow a more exact determination of the noise abatement requirements and their feasibility and reasonableness.

Table 16
Preliminary Noise Barrier Reasonableness Analysis – Alternative 4 With Toll

Receptor	Use	Dwelling Units	Cost of Abatement	Resident's Desire	Housing Predates Highway	Housing Existence Duration	Future Build Levels	Increase Over Existing	Increase Over Future No Project
01a	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
01d	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
01e	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01f	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01g	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
01h	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
01i	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
02b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
02c	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
02d	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05b	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05c	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
05d	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
05e	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06a	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06b	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06c	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
06f	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
06g	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
07a	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No

(Table Continued)

Table 16 (Continued)
Preliminary Noise Barrier Reasonableness Analysis – Alternative 4 With Toll

Receptor	Use	Dwelling Units	Cost	Resident's Desire	Housing Predates Highway	Housing Existence	Future Build Levels	Increase Over Existing	Increase Over Future No Project
09a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
09b	School	n/a	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
09c	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
10b	Residential-F	12	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10c	Residential	1	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10d	Residential	19	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10e	Residential-F	12	Low Yes	??	High Yes	High No	High No	High Yes	High Yes
10f	Residential-F	11	Low Yes	??	High Yes	High No	High No	High Yes	High Yes
10g	Residential-F	9	Low Yes	??	High Yes	High No	High No	Low Yes	Low Yes
11d	Residential	11	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
11e	Residential	7	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
11g	Residential	12	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
11h	Residential	4	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
12a	Residential	2	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
12b	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
12d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13c	Residential	4	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13d	Residential	3	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13e	Residential	2	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13g	Residential	1	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
14b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low No

Table 17
Preliminary Noise Barrier Reasonableness Analysis – Alternative 5 With Toll

Receptor	Use	Dwelling Units	Cost	Resident's Desire	Housing Predates Highway	Housing Existence	Future Build Levels	Increase Over Existing	Increase Over Future No Project
01a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01c	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01d	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
01e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
01g	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01h	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01i	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
02a	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
02b	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
02c	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
03a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
05b	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05c	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
05d	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05e	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06a	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06b	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06c	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06d	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
06g	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
07a	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No

(Table Continued)

Table 17 (Continued)
Preliminary Noise Barrier Reasonableness Analysis – Alternative 5 With Toll

Receptor	Use	Dwelling Units	Cost	Resident's Desire	Housing Predates Highway	Housing Existence	Future Build Levels	Increase Over Existing	Increase Over Future No Project
07e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
09a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
09b	School	n/a	Low Yes	??	High No	High Yes	Low Yes	High Yes	High Yes
09c	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
10b	Residential-F	12	Low Yes	??	High No	High Yes	Low No	High Yes	High Yes
10c	Residential	1	Low Yes	??	High No	High Yes	Low No	High Yes	High Yes
10d	Residential	19	Low Yes	??	High No	High Yes	Low No	High Yes	High Yes
10e	Residential-F	12	Low Yes	??	High No	High Yes	Low No	High Yes	High Yes
10f	Residential-F	11	Low Yes	??	High No	High Yes	High No	High Yes	High Yes
10g	Residential-F	9	Low Yes	??	High No	High Yes	High No	Low Yes	Low Yes
11d	Residential	11	Low Yes	??	High No	High Yes	Low Yes	High Yes	High Yes
11e	Residential	7	Low Yes	??	High No	High Yes	Low No	High Yes	High Yes
11g	Residential	12	Low Yes	??	High No	High Yes	Low Yes	High Yes	High Yes
11h	Residential	4	Low Yes	??	High No	High Yes	Low Yes	High Yes	High Yes
12a	Residential	2	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
12b	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
12d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13c	Residential	4	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13d	Residential	3	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13e	Residential	2	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13g	Residential	1	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
14b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low Yes

Table 18
Preliminary Noise Barrier Reasonableness Analysis – Alternative 4 No Toll

Receptor	Use	Dwelling Units	Cost	Resident's Desire	Housing Predates Highway	Housing Existence	Future Build Levels	Increase Over Existing	Increase Over Future No Project
01a	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
01d	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
01e	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01f	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01g	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
01h	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
01i	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
02b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
02c	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
02d	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05b	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05c	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
05d	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05e	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06a	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06b	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06c	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
06f	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
06g	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
07a	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
09a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes

(Table Continued)

Table 18 (Continued)
Preliminary Noise Barrier Reasonableness Analysis – Alternative 4 No Toll

Receptor	Use	Dwelling Units	Cost	Resident's Desire	Housing Predates Highway	Housing Existence	Future Build Levels	Increase Over Existing	Increase Over Future No Project
09b	School	n/a	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
09c	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
10b	Residential-F	12	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10c	Residential	1	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10d	Residential	19	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10e	Residential-F	12	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10f	Residential-F	11	Low Yes	??	High Yes	High No	High No	High Yes	High Yes
10g	Residential-F	9	Low Yes	??	High Yes	High No	High No	Low Yes	Low Yes
11d	Residential	11	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
11e	Residential	7	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
11g	Residential	12	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
11h	Residential	4	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
12a	Residential	2	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
12b	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
12d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13c	Residential	4	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13d	Residential	3	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13e	Residential	2	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13g	Residential	1	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
14b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low Yes
14c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low No
15c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low Yes

Table 19
Preliminary Noise Barrier Reasonableness Analysis – Alternative 5 No Toll

Receptor	Use	Dwelling Units	Cost	Resident's Desire	Housing Predates Highway	Housing Existence	Future Build Levels	Increase Over Existing	Increase Over Future No Project
01a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01c	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01d	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
01e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
01g	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01h	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
01i	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
02a	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
02b	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
02c	Residential	1	Low No	??	High Yes	High Yes	Low No	High Yes	High Yes
03a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
05b	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05c	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
05d	Residential	2	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
05e	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06a	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06b	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06c	Residential	3	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
06d	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
06e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
06g	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
07a	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	High No
07d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No

(Table Continued)

Table 19 (Continued)
Preliminary Noise Barrier Reasonableness Analysis – Alternative 5 No Toll

Receptor	Use	Dwelling Units	Cost	Resident's Desire	Housing Predates Highway	Housing Existence	Future Build Levels	Increase Over Existing	Increase Over Future No Project
07e	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
07f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High No	High No
09a	Residential	1	Low No	??	High Yes	High Yes	High No	High Yes	High Yes
09b	School	n/a	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
09c	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	Low Yes
10b	Residential-F	12	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10c	Residential	1	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10d	Residential	19	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10e	Residential-F	12	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
10f	Residential-F	11	Low Yes	??	High Yes	High No	High No	High Yes	High Yes
10g	Residential-F	9	Low Yes	??	High Yes	High No	High No	Low Yes	Low Yes
11d	Residential	11	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
11e	Residential	7	Low Yes	??	High Yes	High No	Low No	High Yes	High Yes
11g	Residential	12	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
11h	Residential	4	Low Yes	??	High Yes	High No	Low Yes	High Yes	High Yes
12a	Residential	2	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
12b	Residential	1	Low No	??	High Yes	High Yes	High No	Low Yes	High Yes
12d	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13c	Residential	4	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13d	Residential	3	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13e	Residential	2	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
13f	Residential	1	Low No	??	High Yes	High Yes	Low Yes	High Yes	High Yes
13g	Residential	1	Low No	??	High Yes	High Yes	Low No	Low Yes	High Yes
14b	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low Yes
14c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low No
15c	Residential	1	Low No	??	High Yes	High Yes	Low Yes	Low No	Low Yes

APPENDIX

References

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FHWA Traffic Noise Model User's Guide, Report No. FHWA-PD-96-009 1, Federal Highway Administration, April 2004

FHWA Traffic Noise Model Technical Manual, Report No. FHWA-PD-96-0101, Federal Highway Administration, April 2004

Traffic Data Used For Noise Modeling

Table A-1
Traffic Data Used for Existing Condition Noise Modeling

Roadway Segment	ADT (1,000's)	Peak Hour	Percent Trucks	Auto	Med. Trucks	Heavy Trucks
SR-264						
West of SR-112	4.6	460	6%	433	7	21
East of SR-112	5.3	530	10%	477	14	40
West of I-540	8.3	830	7%	772	15	44
SR-112						
Near Access Road	6.4	640	13%	557	21	63
I-540						
S of Access Road	65.5	6,550	10%	5,895	164	492
N of Access Road	63.9	6,390	10%	5,751	160	480
N of SR-264	66.0	6,600	13%	5,742	215	644

Table A-2
Traffic Data Used for Future Without Project Noise Modeling Future (2031) No Project

Roadway Segment	ADT (1,000's)	Peak Hour	Percent Trucks	Auto	Med. Trucks	Heavy Trucks
SR-264						
West of SR-112	10.4	1,040	6%	978	16	47
East of SR-112	13.0	1,300	10%	1,170	33	98
West of I-540	17.3	1,730	7%	1,609	31	91
SR-112						
Near Access Road	21.1	2,110	13%	1,836	69	206
I-540						
S of Access Road	114.1	11,410	10%	10,269	286	856
N of Access Road	118.3	11,830	10%	10,647	296	888
N of SR-264	126.7	12,670	13%	11,023	412	1,236

Table A-3
Traffic Data Used for Future With Project Noise Modeling (2031)

Roadway Segment	ADT (1,000's)	Peak Hour	Percent Trucks	Auto	Med. Trucks	Heavy Trucks
SR-264						
West of SR-112	2.9	290	10%	261	8	22
East of SR-112	8.5	850	10%	765	22	64
West of I-540	13.8	1,380	7%	1,284	25	73
SR-112						
Near Access Road	9.8	980	13%	853	32	96
I-540						
S of Access Road	113.7	11,370	10%	10,233	285	853
N of Access Road	108.7	10,870	10%	9,783	272	816
N of SR-264	110.4	11,040	13%	9,605	359	1,077
Access Road						
With Toll	15.1	1,510	10%	1,359	38	114
No Toll	17.3	1,730	10%	1,557	44	130

Noise Measurement Field Data Sheets

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

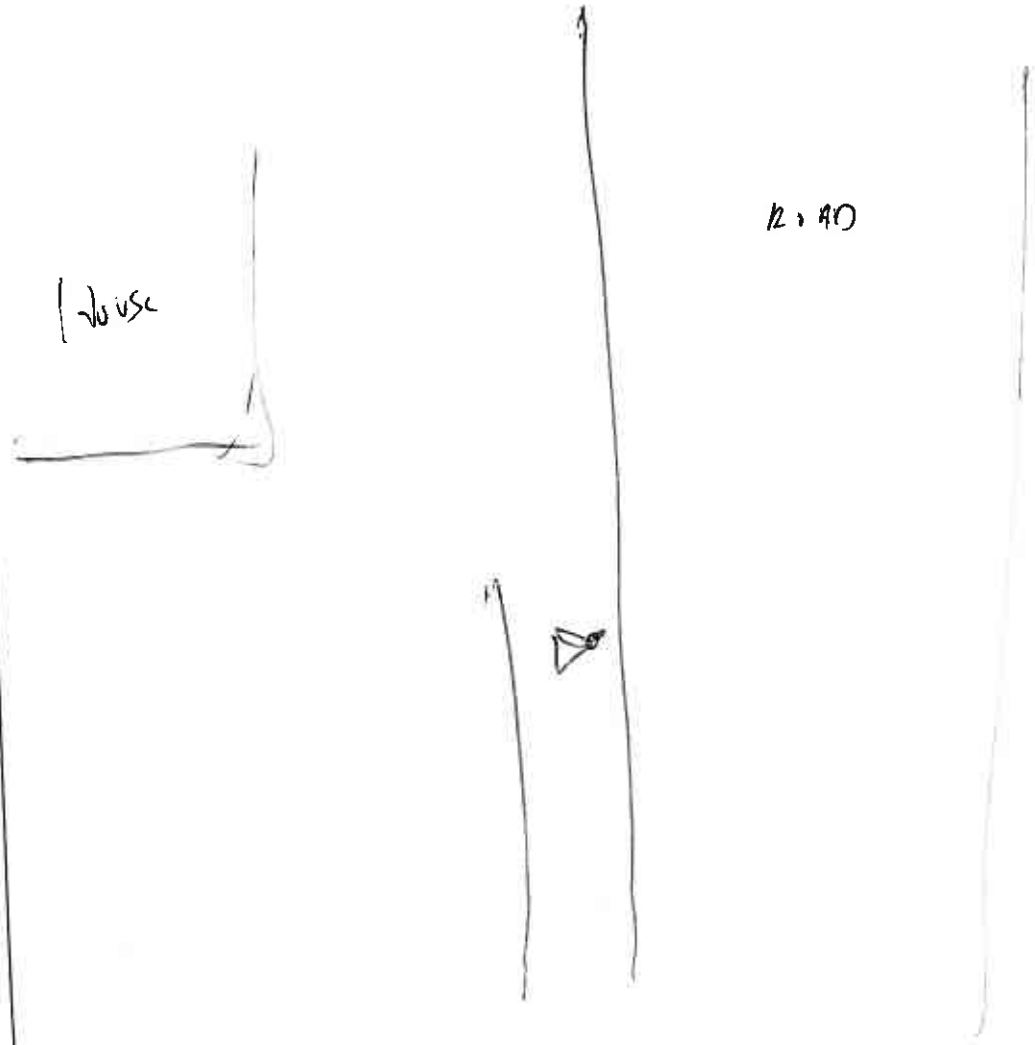
Date: Oct 29, 2008 Initials: TSR

Site Name: 1

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 1

Date: OCT 29, 2008 Operator: T.S. Reid

System #: 2238-2 Calibrator:

Calibration:

Before: ~~[illegible]~~ 10:04 A.M.

Level: 93.8

After: 10:20

Level: 93.8

Results:

Start:

End: 05:2

Leq: 52.0

Lmax: ~~[illegible]~~ 71.7

Lmin: 28.8

Record: file 01

Weather:

Time: 10:28

Cover: 0%

Temp: ~~[illegible]~~ 51.4 °F

Humidity: 61 %

Wind Dir: EAST

Wind Spd: 4

Comments: cold!

Clock on Meter was STILL set to Hawaii time clock on meter is 5 hours behind local time ~~This Measurement ONLY~~

General Noise Sources: Birds, Dogs in the distance Background, Airplanes? from Airport cows mooing

Noise Events:

Time	Description
	Airplane noise with 1st 1.5 minutes of start
1:53	Airplane corresponds to 5:09:03
05:14:??	Bird chirp up to 45 dBA
05:16:09	Loud bird chirp
05:18:14	Airplane ??? too faint to tell
05:19:50	something was dropped
05:20:10	Airplane noise only briefly about 1-5 sec

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

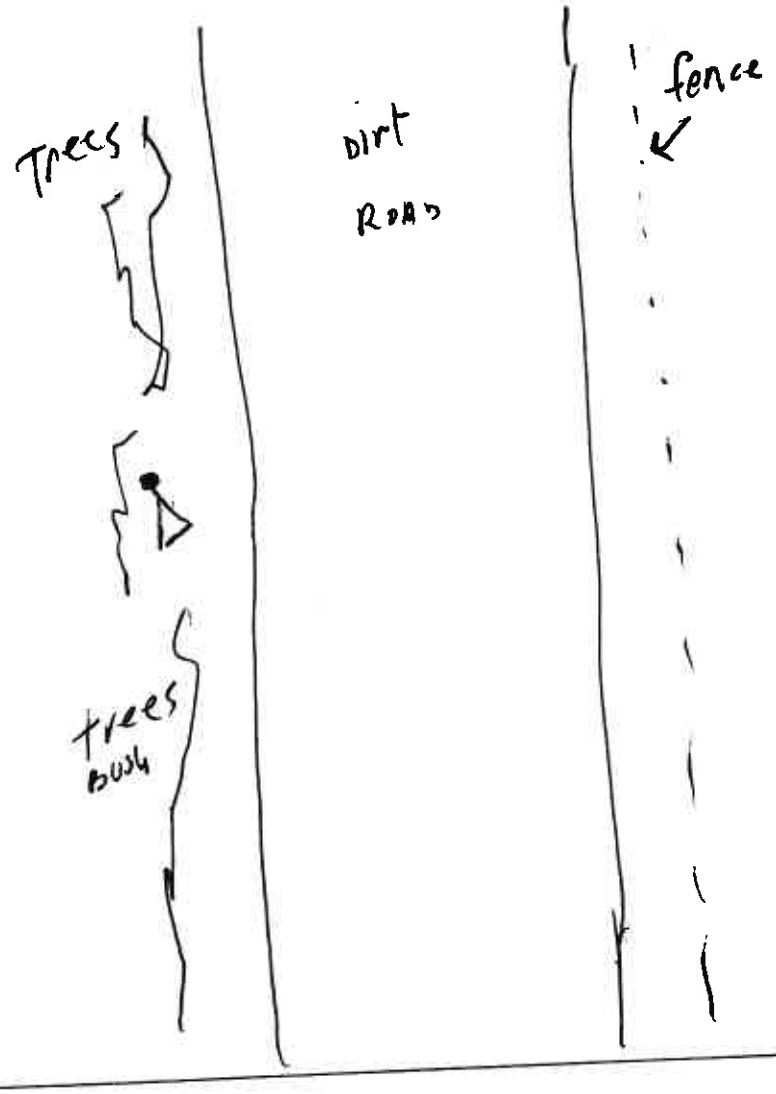
Date: Oct 29, 2008 Initials: TSR

Site Name: 2

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 2
Date: OCT
Operator: T.S. Reid
System #: 2238-2
Calibrator: 2

Calibration:
Before: 10:55
Level: 93.9

After: 11:16
Level: 93.8

Results:
Start: 10:55:53
End: 11:11:01
Leq: 42.1
Lmax: 56.3
Lmin: 33.9
Record: File 02

Weather:
Time:
Cover: 0%
Temp: 77.6
Humidity: 39%
Wind Dir: N/A
Wind Spd: 0

Comments: 36°
14.001' N
94° 16.856' W

General Noise Sources: Birds, Bug noises
Rustling Leaves

Noise Events:

Time	Description
10:56:36	Airplane
11:07:47	Dog Bark

NWARA Access Road
Site Information Data Sheet

Mestre Greve Associates

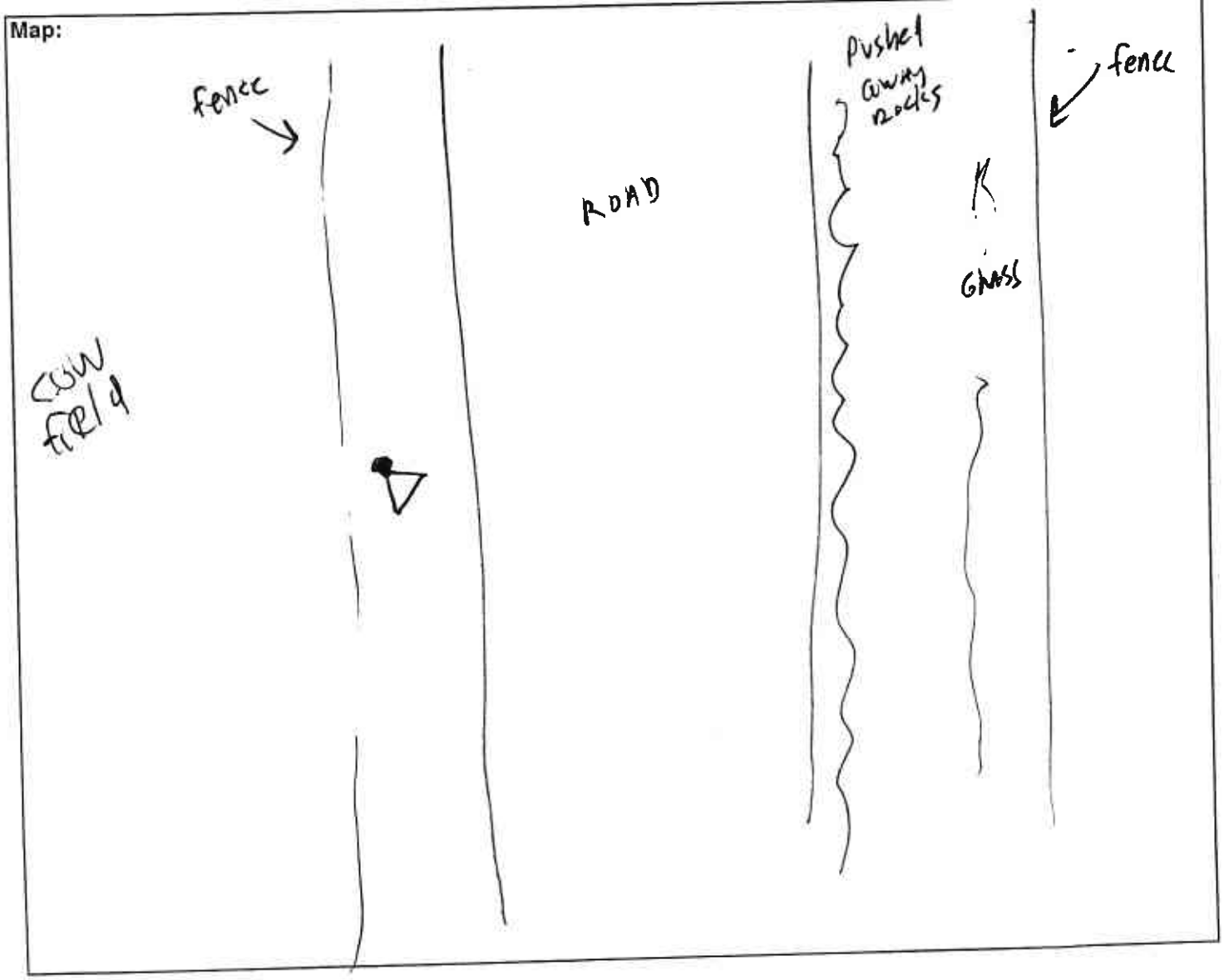
Date: Oct 29, 2008 Initials: TSN

Site Name: 3

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 3

Date: oct 29, 2008 Operator: T.S. Reid

System #: 2238-2 Calibrator: 2

Calibration:

Before: 11:37

Level: 93.9

After: 11:55

Level: 93.9

Results:

Start: 11:38:10

End:

Leq: 36.4

Lmax: 51.8

Lmin: 32.3

Record: File 03

Weather:

Time: 11:39

Cover: 0 %

Temp: 65.1

Humidity: 40 %

Wind Dir: East

Wind Spd: 3

Comments:

36° 13.877' N

94° 15.905' W

General Noise Sources: Birds same as site 2

Noise Events:

Time	Description

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

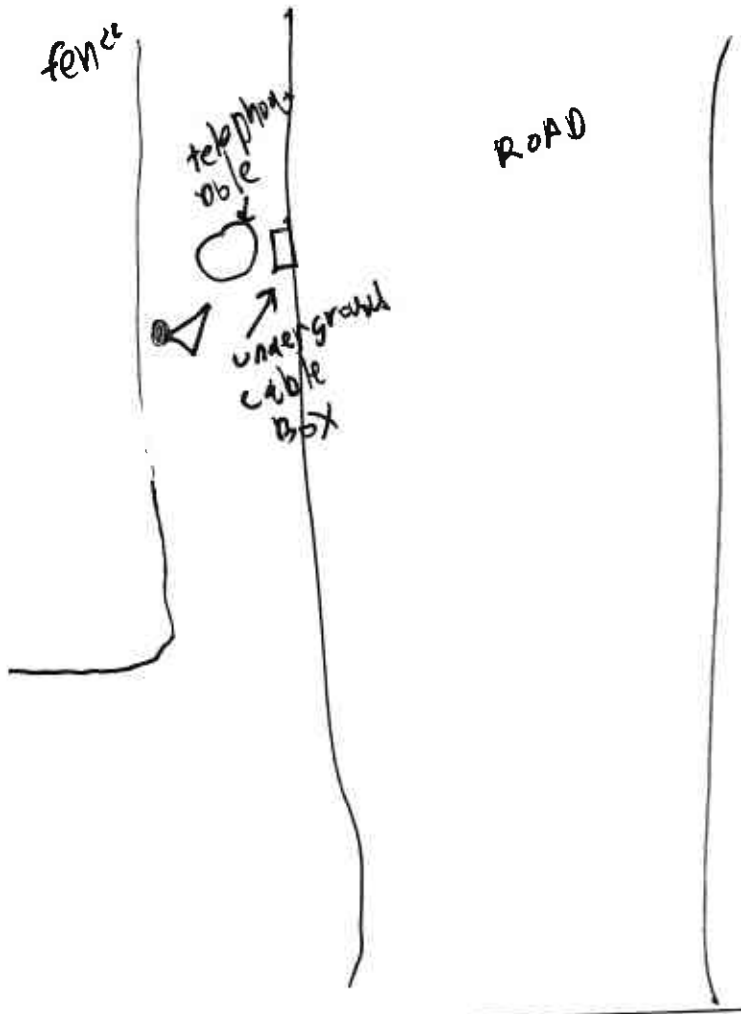
Date: Oct 29, 2008 Initials: TSA

Site Name: 4

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 4
Date: oct 29, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before:
Level: 93.8

After: 12:34
Level: 93.8

Results:
Start: 12:19:00
End:
Leq: 47.0
Lmax: 57.3
Lmin: 44.5
Record: File 04

Weather:
Time: 12:20
Cover: 0%
Temp: 77.7 °F
Humidity: 37%
Wind Dir: EAST
Wind Spd: 1-2 mph

Comments: 13.096'N
36° ~~[illegible]~~
94° 15.532' W

General Noise Sources: Birds, crickets
saw in the far backyard rustling leaves

Noise Events:

Time	Description
12:31:54	Barking Dogs in the far distance (for about 1 minute)

NWARA Access Road
Site Information Data Sheet

Mestre Greve Associates

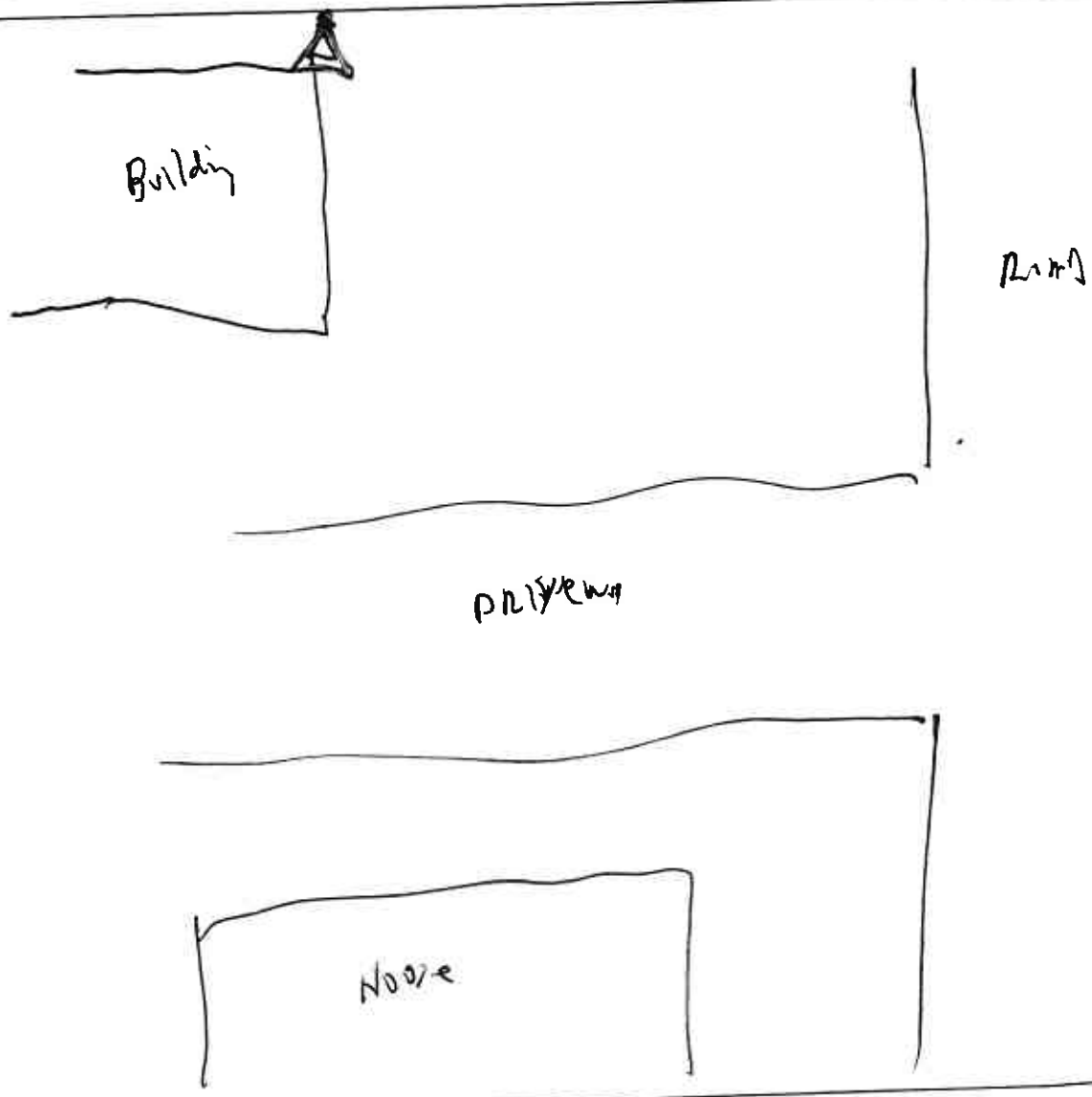
Date: Oct 29, 2008 Initials: TSA

Site Name: 5

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 5
Date: oct 29 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 12:58
Level: 93.8

After: 1:14 p.m
Level: 93.8

Results:
Start: 12:58:30
End: 1:19 p.
Leq: 46.9
Lmax: 60.8
Lmin: 37.5
Record: File 05

Weather:
Time: 1:09 p.m.
Cover: ~~[illegible]~~ 0%
Temp: 70.7
Humidity: 35
Wind Dir:
Wind Spd: 3-5 mph

Comments:
36° 13.216' N
94° 14.720' W

General Noise Sources: Noises From Farm machinery (e.g. tractor, Forklifts)

Noise Events:

Time	Description (or Fork lift)
12:58:37	tractor starting up and drives around tractor is on other side of building from meter
1:06:07	wind Breeze
1:10:51	pickup truck drive By on marchant Road
1:11:38	Pickup truck pull out of driveway and turn right (away from meter)
1:13:28	boc
1:13:38	Another pickup truck pulls out of driveway but turns Left in front of meter

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

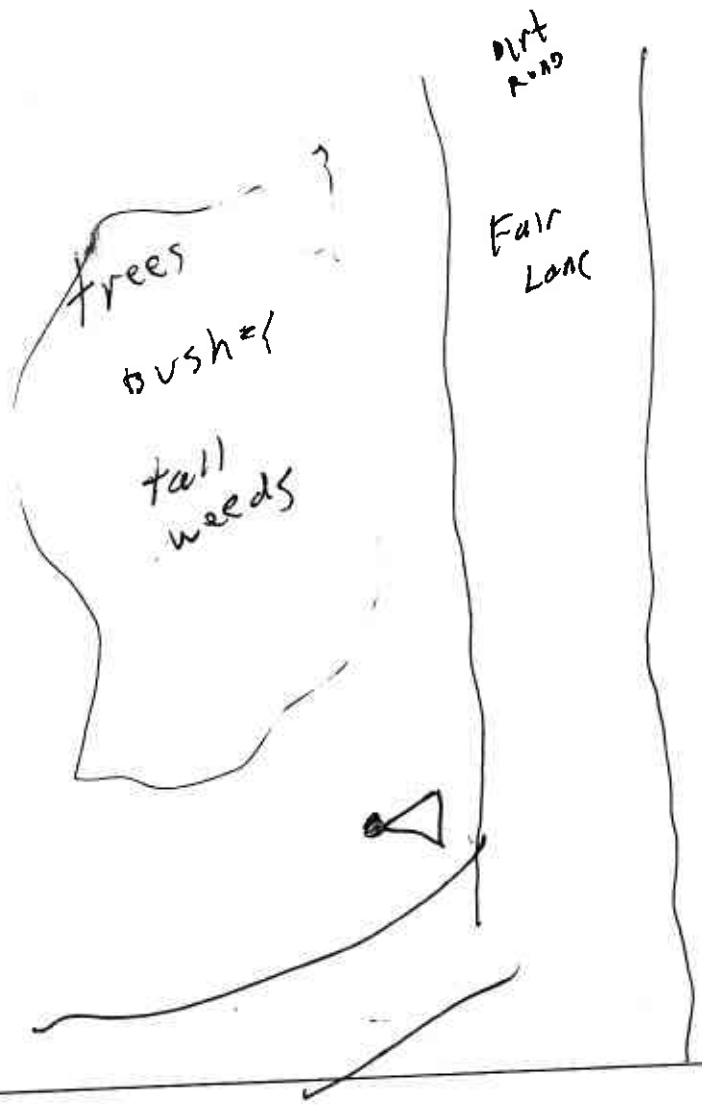
Date: Oct 29, 2008 Initials: TSh

Site Name: 6

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 6
Date: oct 29, 2008 Operator: T.S. hed
System #: 22382 Calibrator: 2

Calibration:
Before: 1:32
Level: 93.8

After: 1:48
Level: 93.8

Results:
Start: 13:33:20
End: 13:48
Leq: 44.1
Lmax: 66.0
Lmin: 33.6
Record: File 06

Weather:
Time: 1:34 p.m.
Cover: 0%
Temp: 71.0 °F
Humidity: 33
Wind Dir: East
Wind Spd: 1-2

Comments:
36° 13.644' N
94° 14.871' W

General Noise Sources: ~~Machinery~~ Machinery and people talking, bugs, rustling leaves

Noise Events:

Time	Description
1:38:04	Airplane
1:41:23	} someone dropping something ?? in the distance
1:42:42	Airplane (when noise is audible)
1:43:42	
1:46:07	vehicle passing on Far lane
1:46:24	loudest point
1:46:47	completely gone

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

Date: Oct 29, 2008

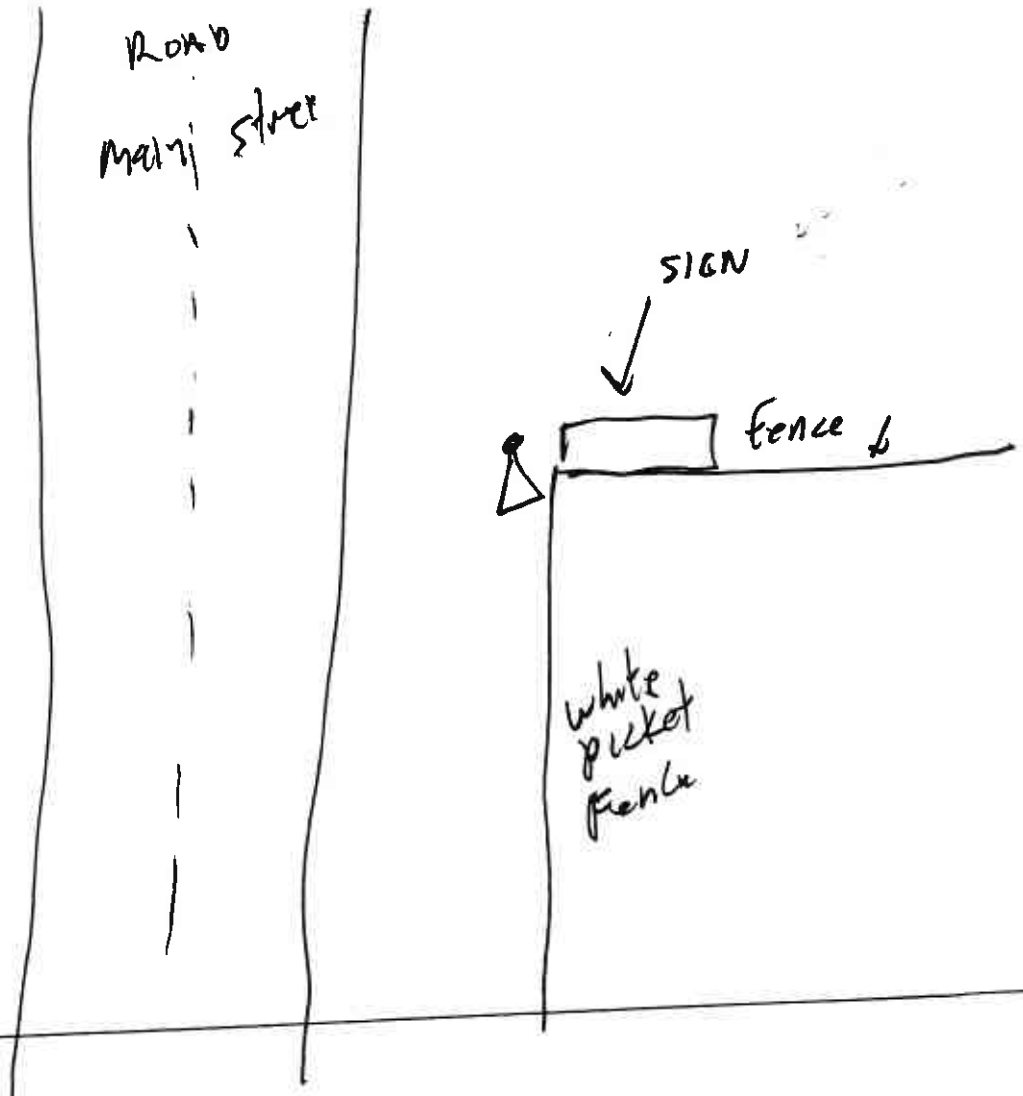
Initials: TSA

Site Name: 7

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 7
Date: oct 29, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 2:23
Level: 93.8

After: 2:40
Level: 93.8

Results:
Start: 2:24:10
End:
Leq: 65.6
Lmax: 83.4
Lmin: 37.5
Record: File 07

Weather:
Time:
Cover: 0%
Temp: 69°F
Humidity: 34%
Wind Dir: East
Wind Spd: 5-6 mph

Comments:
36° 13.273' N
94° 13.821' W

General Noise Sources: traffic along main street

Noise Events:

Time	Description
2:24:??	2:29:14 CAR passes
2:24:32	29:15
24:40	29:21
24:46	29:54
25:10	30:09
25:12	30:42 BIG truck
25:50	30:59
26:03	31:06
26:04	31:36
26:13	31:40
26:21	31:51
26:34	32:02
27:03	32:12
27:10	32:26
27:31	32:37
27:33	32:39
27:39	32:41
27:43	33:00
27:57	33:02
28:19 Motorcycle	33:03
28:50	33:05
28:58	33:41
29:13	34:00

NWARA Access Road
Site Information Data Sheet

Mestre Greve Associates

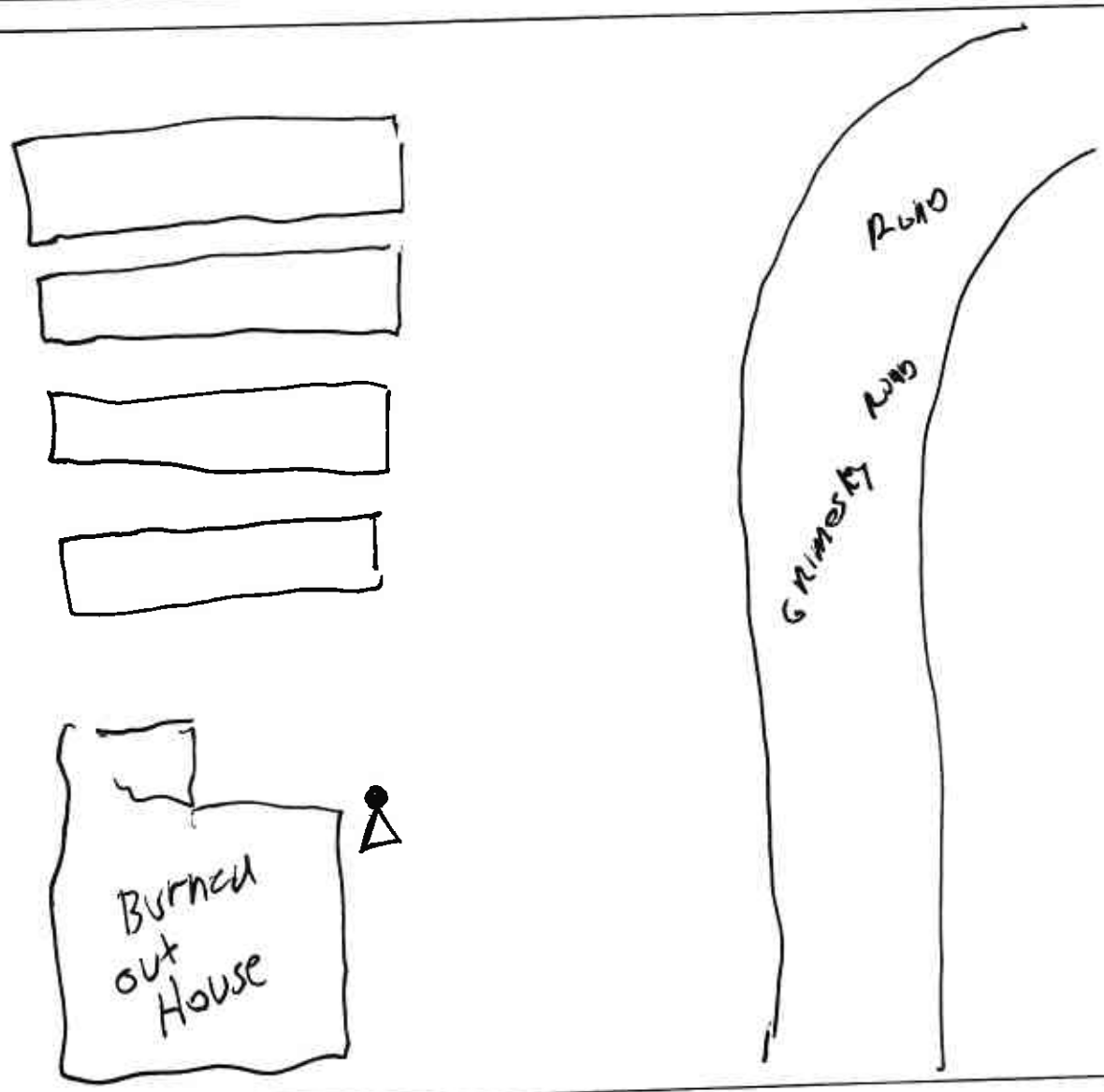
Date: oct 29, 2008 Initials: TSL

Site Name: 8

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 8
Date: oct 29, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 2:57
Level: 93.8

After: 3:16
Level: 93.8

Results:
Start: 2:58:61
End:
Leq: ~~89.2~~ 49.4
Lmax: 64.2
Lmin: 38.9
Record: File 08

Weather:
Time: 3:16
Cover: 0%
Temp: 78.6
Humidity: 35%
Wind Dir: East
Wind Spd: ~1 mph

Comments:
36° 13.343' N
94° 13.381' W

General Noise Sources: Bug Noise, traffic more traffic Than expected

Noise Events:

Time	Description
2:58:02 – 3:02	less than 5 cars maybe 3 or 4
3:03	1 or 2 cars
3:04:56	car
3:05:06	car
3:05:23	pickup
3:05:40	van
3:05:48	Airplane
3:05:58	car
3:06:04	car
3:06:56	car
3:07 01	car
07:08	car
7:16	car
7:25	car
7:30	car
7:37	car
7:41	car
7:47	car
8:05	car
8:13	car
8:18	car
3:08:20	car
08:35	car
08:43	car
08:51	car
09:04 09:04	car
09:09	
09:19	
9:21	
9:25	
9:27	
9:30	
9:32	
9:40	
10:02	
10:04	
10:09	
10:25	
10:28	
10:33	
10:36	

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

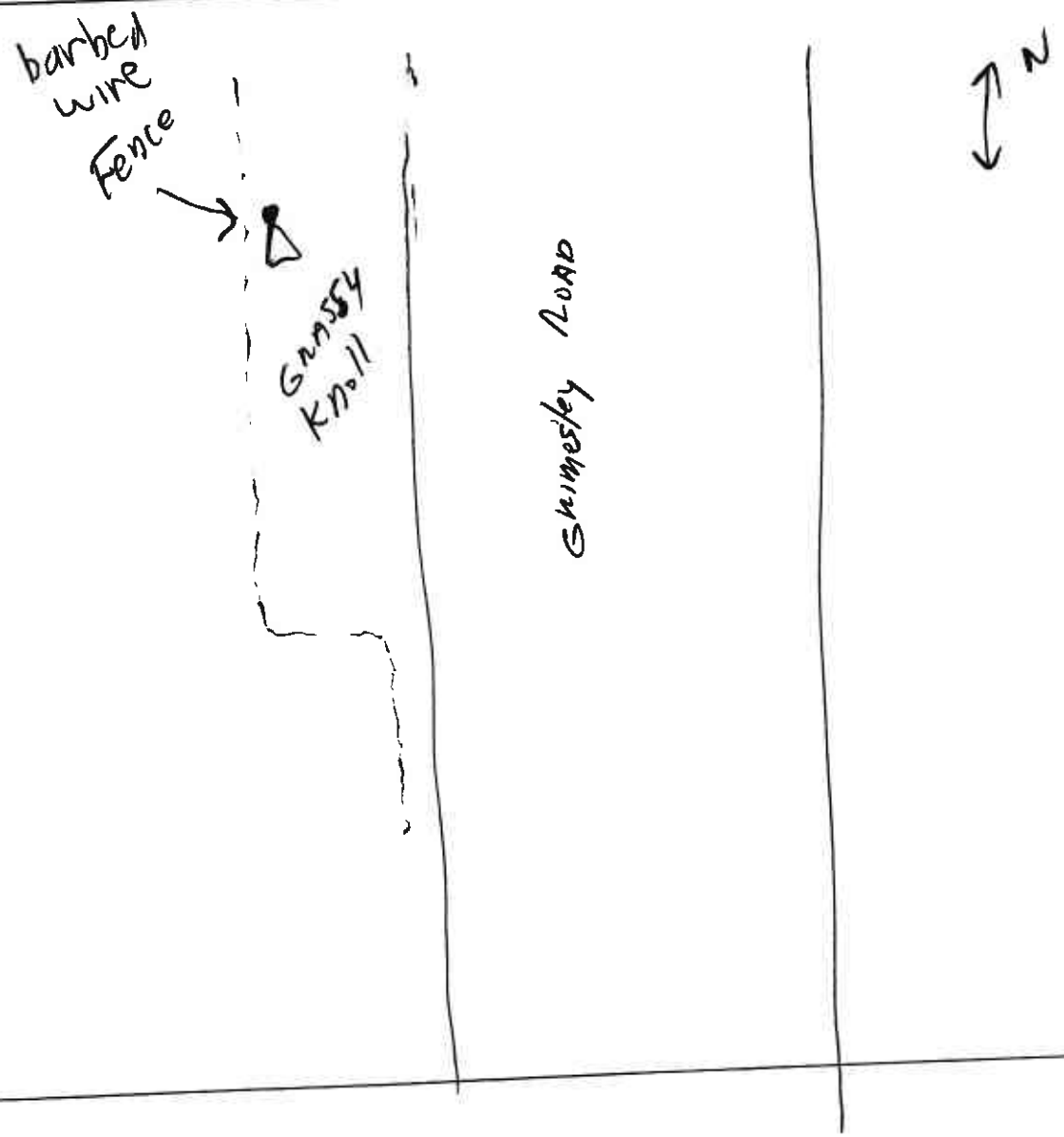
Date: oct 29, 2008 Initials: T.S.R

Site Name: 9

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 9
Date: oct 29, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 3:31
Level: 93.8

After:
Level:

Results:
Start: 3:31:45
End:
Leq: 37.7
Lmax: 45.8
Lmin: 34.1
Record: File 09

Weather:
Time: 3:34 p.m
Cover: 0%
Temp: 76.5°F
Humidity: 39%
Wind Dir: North
Wind Spd: ~4 mph

Comments:
36° 13.687
94° 13.097

General Noise Sources: Birds, BUGS, MOOING cows

Noise Events:

Time	Description
3:34	very faint voices at the school

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

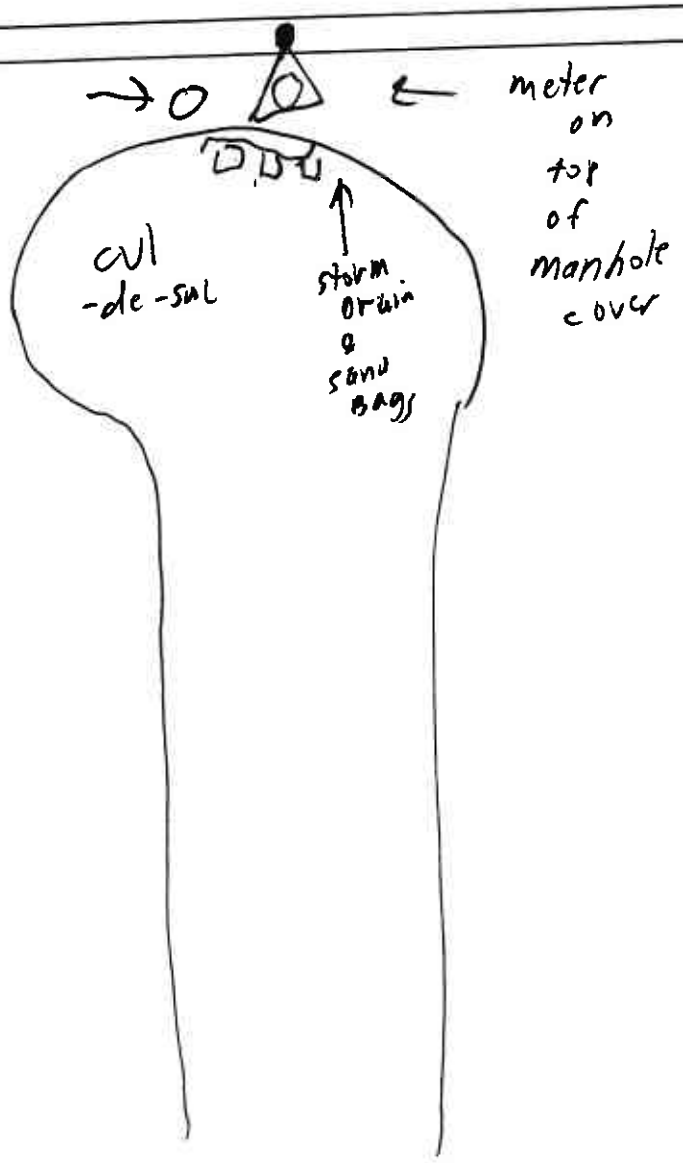
Date: oct 29, 2008 Initials: TSn

Site Name: 10

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 10
Date: oct 29, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 4:03
Level: 93.8

After: 4:18
Level: 93.8

Results:
Start: 4:03:20
End:
Leq: 39.9
Lmax: 49.4
Lmin: 33.9
Record: File 010

Weather:
Time: 4:07
Cover: 0%
Temp: 74.2°F
Humidity: 38
Wind Dir: EAST
Wind Spd: 3-4 mph

Comments:
36° 13.416 N
~~12.99~~
94° 12.497 W

General Noise Sources: crickets, and othe bugs Humming and Birds rustling grass. In the Far Distance (very faint) it sound like traffic on the main Hway

Noise Events:

Time	Description
4:18:56	High altitude jet (not as Loud as the crickets)
4:14:28	can Hear very faint roaring sound like an airplane, but I don't see it
4:16:08	brief sound of a motorcycle (very-very faint)

NWARA Access Road
Site Information Data Sheet

Mestre Greve Associates

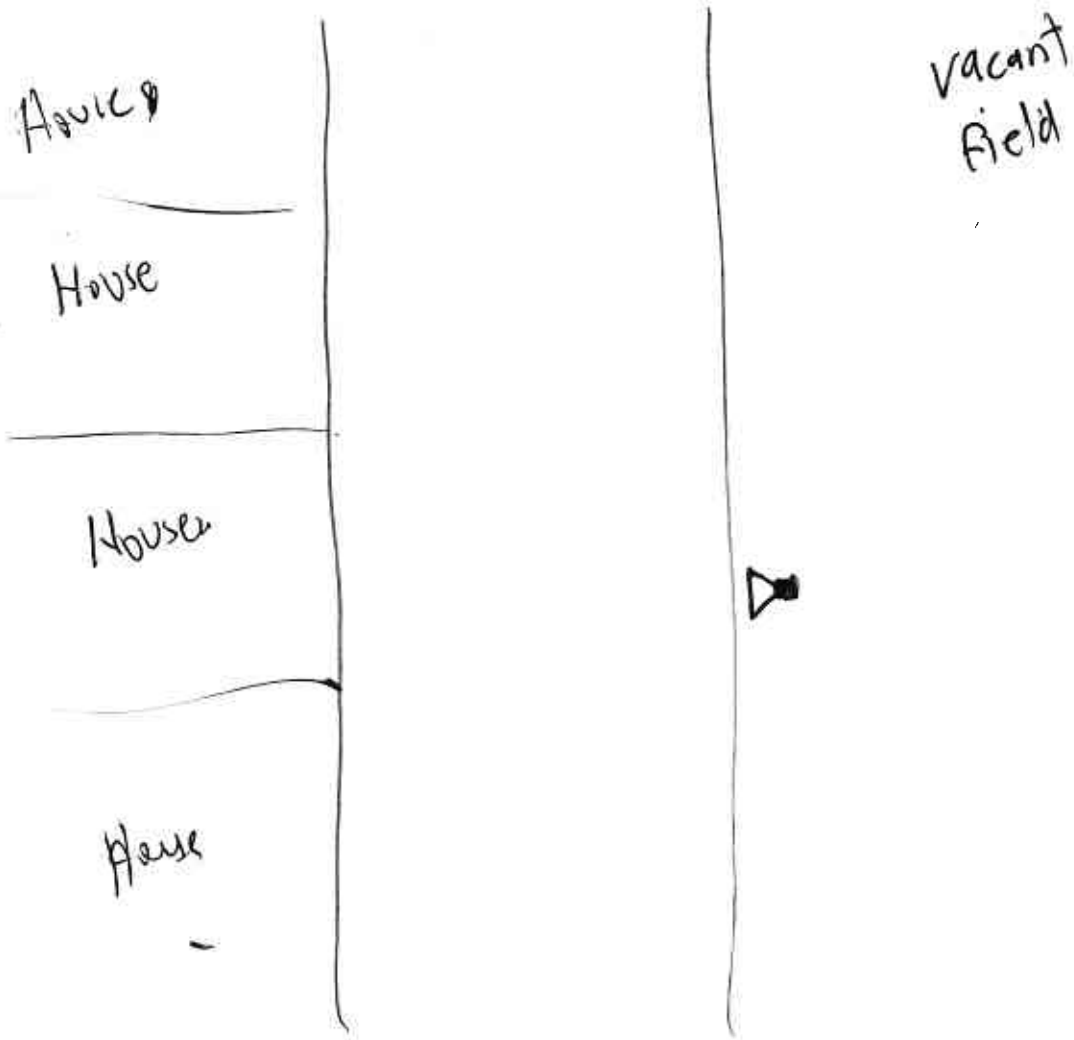
Date: oct 29, 2008 Initials: TSA

Site Name: //

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 11

Date: oct 29, 2008 Operator: T.S. Reid

System #: 2238-2 Calibrator: 2

Calibration:

Before: 4:39

Level: 93.8

After: 4:56

Level:

Results:

Start: 4:40

End:

Leq: 47.2

Lmax: 57.4

Lmin: 42.5

Record: File 011

Weather:

Time: 4:59 p.m.

Cover: 0%

Temp: 72.2

Humidity: 42%

Wind Dir: -

Wind Spd: 0

Comments:

36° 13.900' N

94° 12.027' W

General Noise Sources: Bugs, occasional traffic on CLAY rustling leaves

Noise Events: WW = Wagon wheel

Time	Description
4:42:27	car passes on ~~clay~~ WW
43:19	Dog in distance
43:47	bird
4:44:01	Garage Door opening
44:13	car passes on ~~clay~~ WW
45:44	truck passes on ~~clay~~ WW
47:00	Briefly airplane (faint)
48:46	engine (motorcycle??)
49:34	car passes on ~~clay~~ WW
50:06	car passes on ~~clay~~ WW
51:42	car passes on ~~clay~~ WW
52:27	Roaring sound
52:39	Gun shot??
52:52	car passes on ~~clay~~ WW
52:12	gun shot
52:19	car passes on ~~clay~~ WW
55:02	gun shot
55:10	gun shot

NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 12
Date: oct 29, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 5:09
Level: 93.8

After: 5:26
Level: 93.8

Results:
Start: 5:10:05
End:
Leq: 52.8
Lmax: 70.9
Lmin: 41.0
Record: File 012

Weather:
Time: 5:08
Cover: 0%
Temp: 72.8
Humidity: 40%
Wind Dir:
Wind Spd: 1-2 mph

Comments:

General Noise Sources: Rustling leaves, Birds, Bugs very slight noise from "the main Highway"

Noise Events:

Time	Description
5:11:50	car passes
~5:14	Gun shots
5:15:05	airplane
5:15:44	pickup truck
5:16:24	car
5:19:35	VAN right next to meter (need to take out a few seconds on both sides)
5:20:32	car
5:20:49	Barking Dogs
24:19	car

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

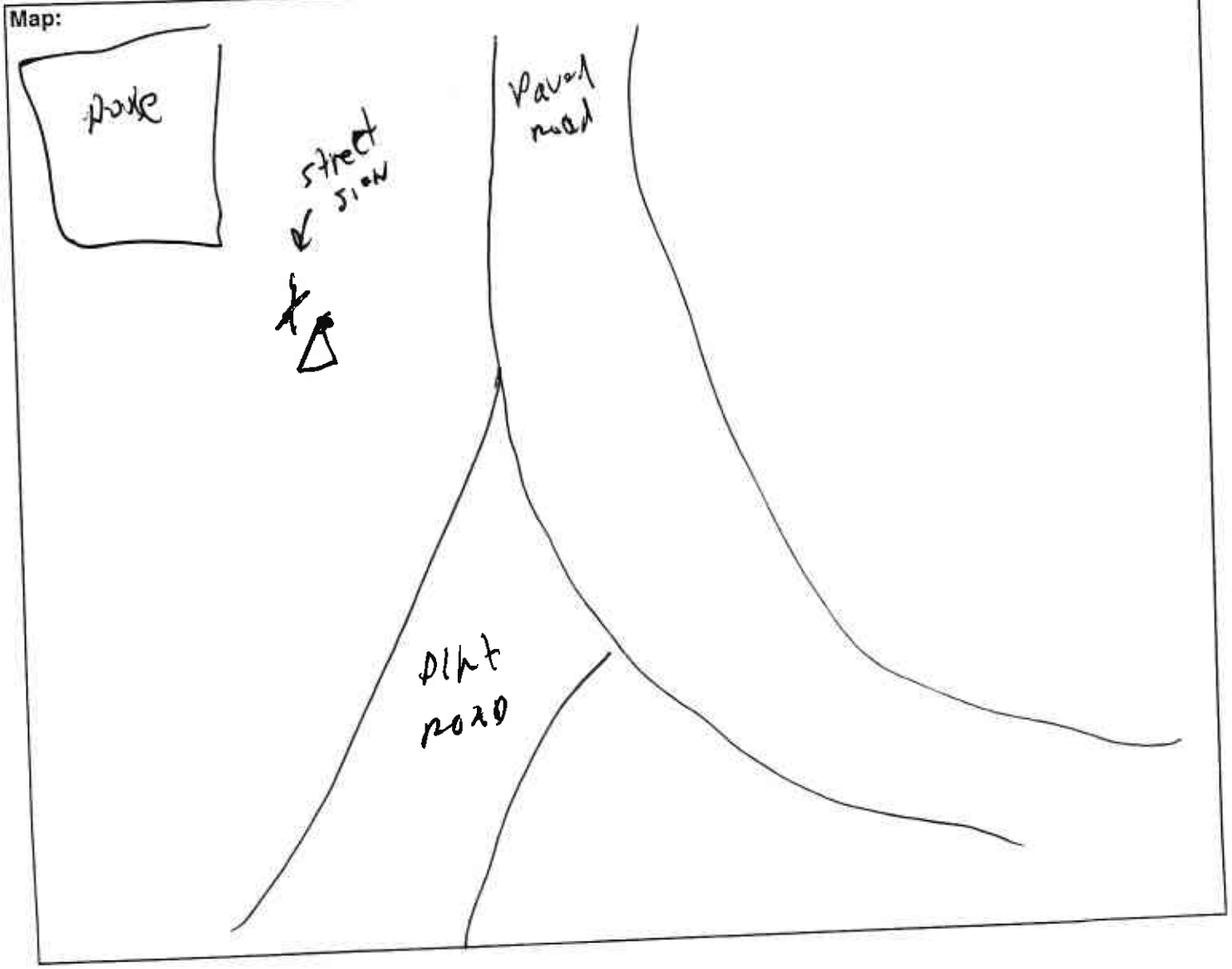
Date: Oct 27, 2008 Initials: TSh

Site Name: 12

Description:

Comments:

Map:



Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

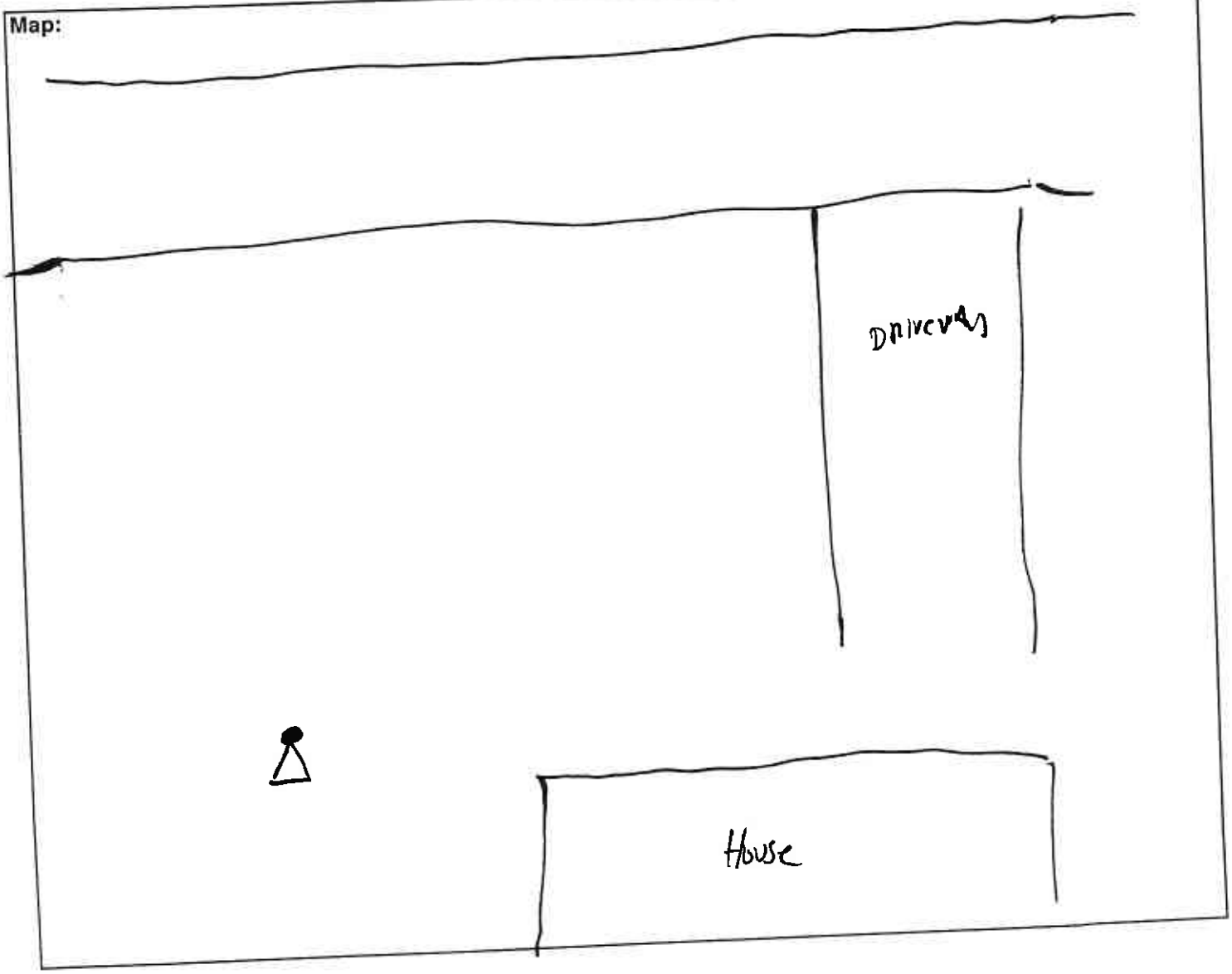
Date: 13 Initials: TSA

Site Name: ~~oct 29, 2008~~ oct 30, 2008

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 13
Date: ~~Oct 29, 2008~~ Oct 30, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 11:45 A.M.
Level: 93.8

After: 12:01
Level: 93.9

Results:
Start: 11:46:00
End:
Leq: 50.7
Lmax: 61.5
Lmin: 46.3
Record:

Weather:
Time: 11:48 A.M.
Cover: 0%
Temp: 72.1 °F
Humidity: 56%
Wind Dir:
Wind Spd: 1.2 mph
later 5-6 mph

Comments:
36° 14.290' N
94° 11.150' W

General Noise Sources: traffic on the Main Road (540) very apparent
crickets, Rustling Leaves
Backup warning Beeper in the Distance

Noise Events:

Time	Description
11:55:20	Airplane (start)
11:56:18	Airplane (end)
11:58:55	truck passes
11:59	wind starting up more
12:00:51	car passes

NWARA Access Road
Site Information Data Sheet

Mestre Greve Associates

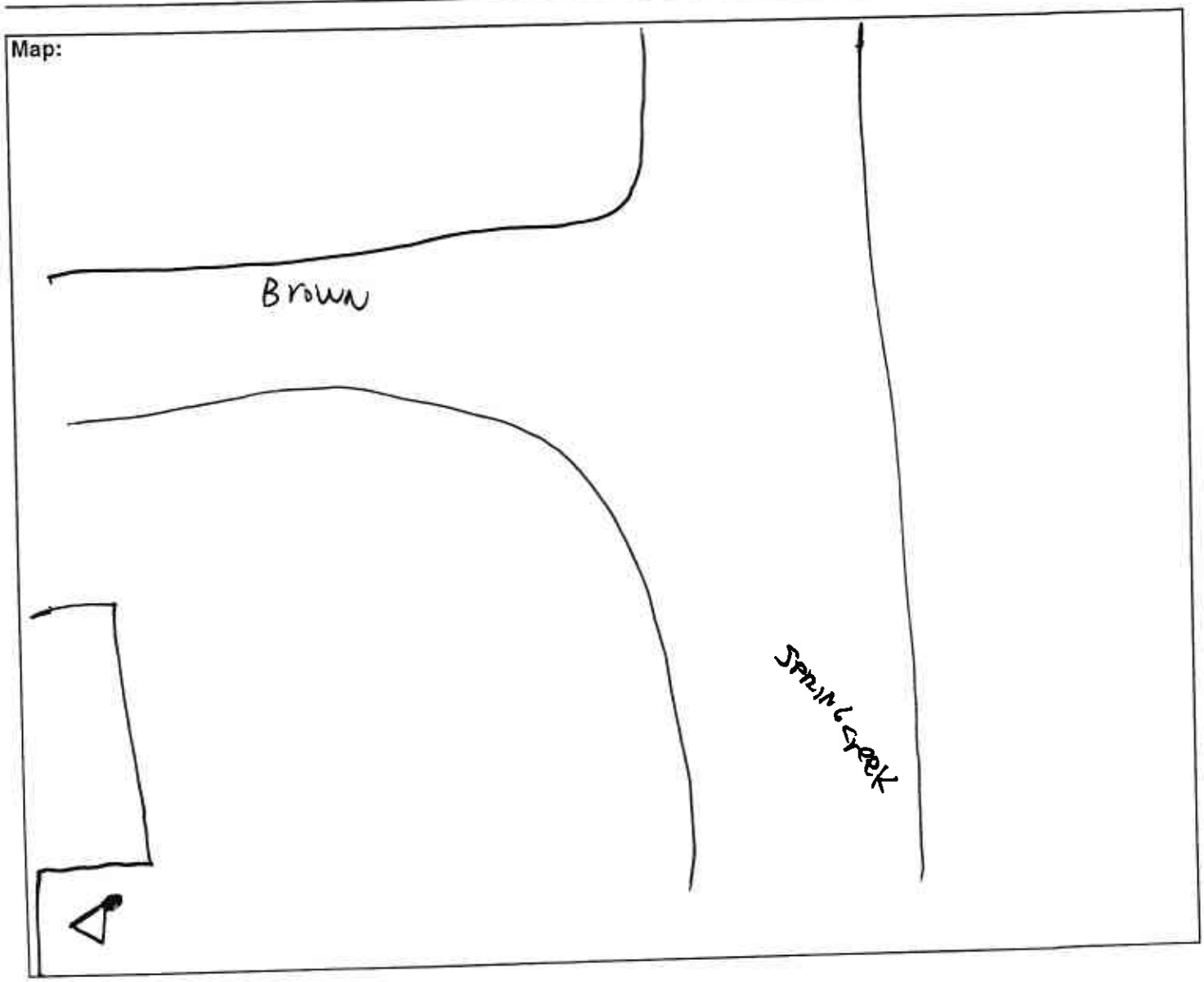
Date: oct 30, 2008 Initials: TSA

Site Name: 14

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 14
Date: oct 30, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 12:16
Level: 93.8

After: 12:32
Level: 93.8

Results:
Start: 12:17:00
End:
Leq: 59.6
Lmax: 71.5
Lmin: 57.8
Record: File 014

Weather:
Time:
Cover: O
Temp: 73°F
Humidity: 50%
Wind Dir: North
Wind Spd: up to 7 mph
Gust up to 9.8 mph

Comments:
Windy

when the wind isn't blowing the noise level is about (53-55)dBA

General Noise Sources: Traffic on the main road even louder than site 13 rustling leaves (very apparent)

Noise Events:

Time	Description
12:18:12	DOG barking
12:22	
12:24:45	BIG truck turns from Brown to Spring Creek
12:25:12	Another truck

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

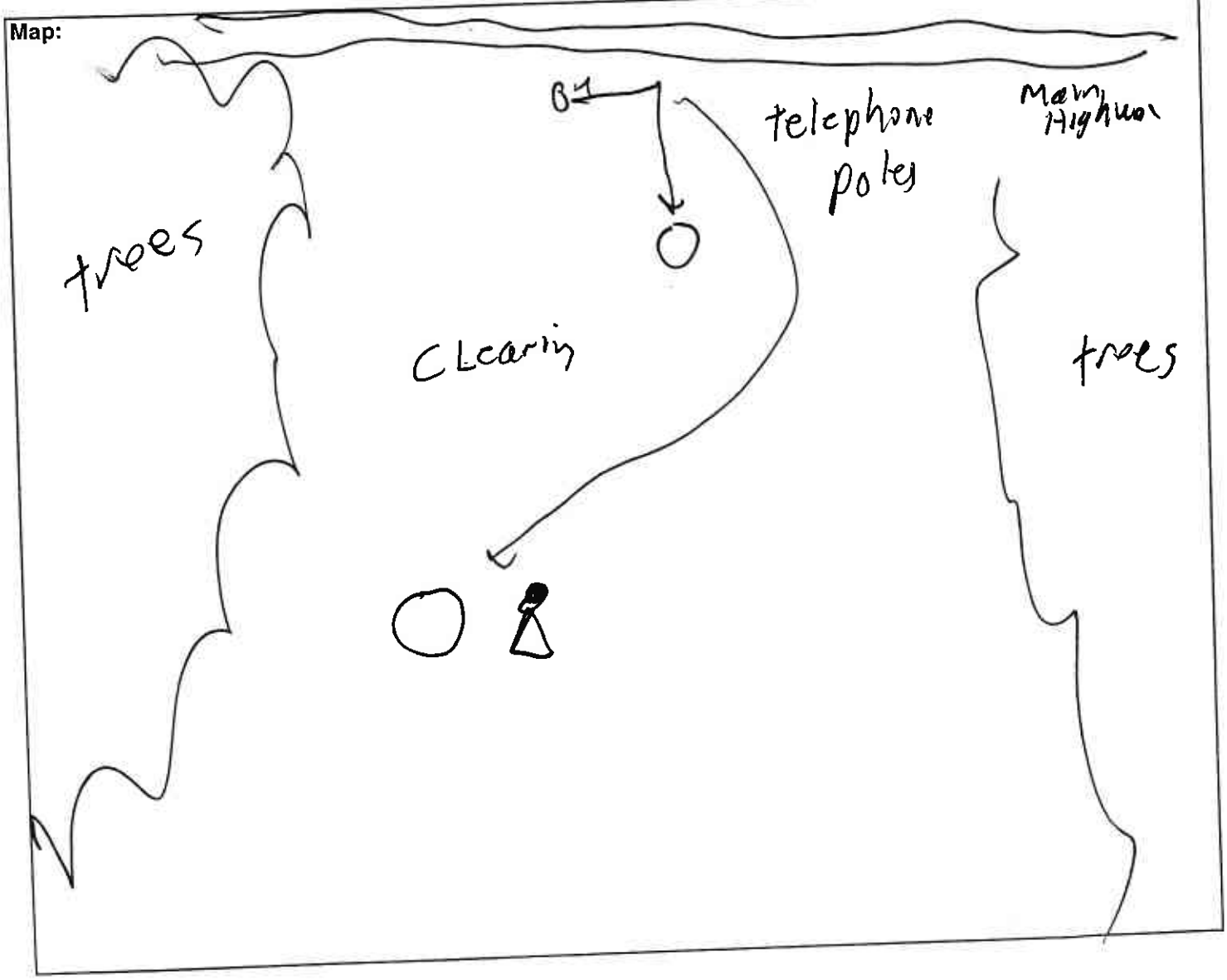
Date: Oct 30, 2008 Initials: TSA

Site Name: 15

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 15
Date: OCT 30, 2008 Operator: TS, Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 12:42
Level: 93.8

After: 12:57
Level: 93.8

Results:
Start: 12:42:15
End:
Leq: 57.1
Lmax: 63.0
Lmin: 53.3
Record:

Weather:
Time: 12:46
Cover: 0%
Temp: 81.9°F
Humidity: 44%
Wind Dir:
Wind Spd: 1-2 mph

Comments:
can see the traffic on the main road, when wind isn't blowing the noise is about 56 dBA

General Noise Sources: traffic is even louder than site 14, rustling leaves (from main road)

Noise Events:

Time	Description
12:43:30	Airplane
12:46:18	pickup truck drives by
12:48:20	pickup
12:48:22	pickup
~12:50:00 - 12:50:24	someone asks for directions in a van
12:51:34	SUV
12:55:03	Pickup

Mestre Greve Associates

NWARA Access Road
Site Information Data Sheet

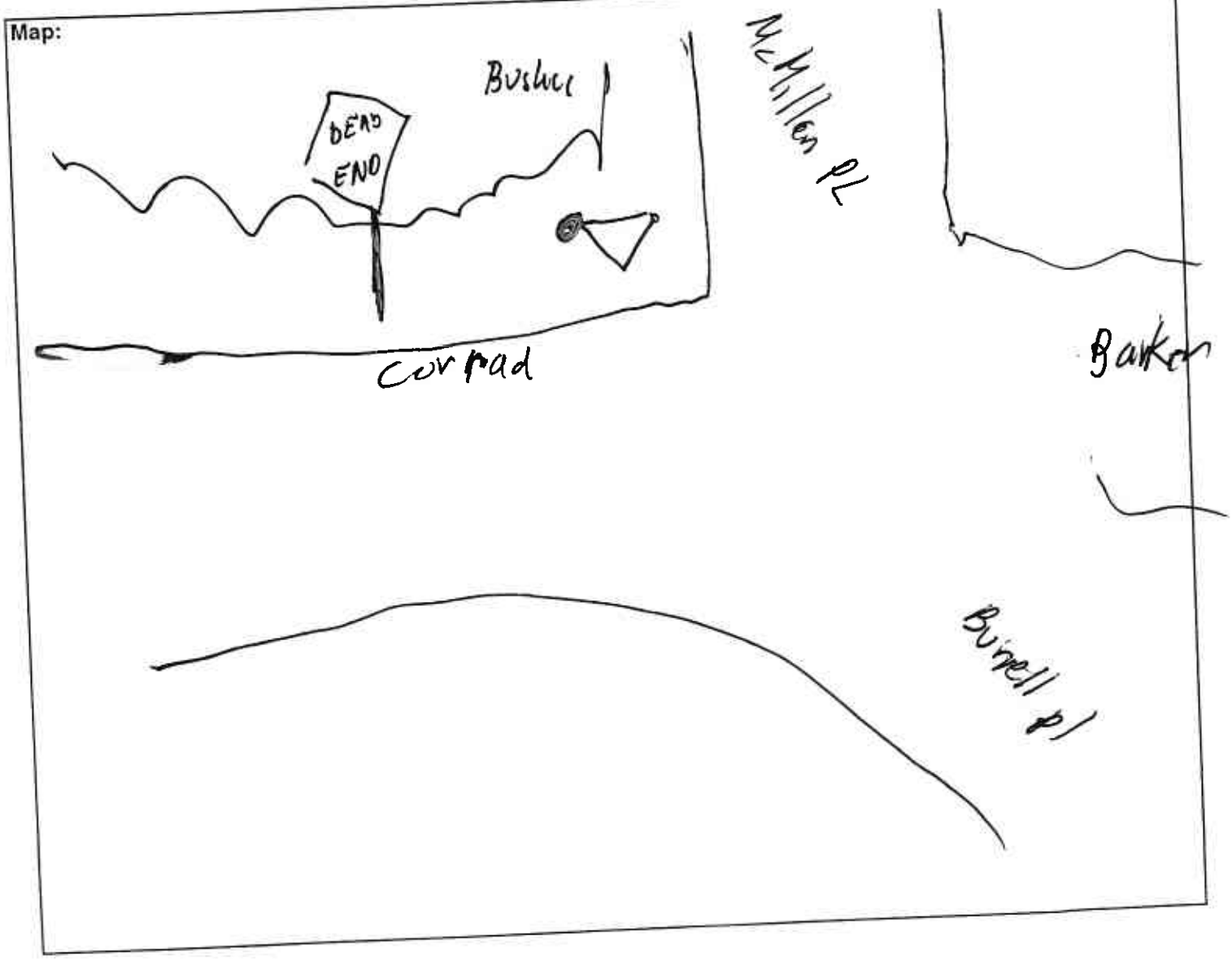
Date: Oct 30, 2008 Initials: TSR

Site Name: 16

Description:

Comments:

Map:



NWARA Access Road
Noise Measurement Sheet

Mestre Greve Associates

Site: 16
Date: OCT 30, 2008 Operator: T.S. Reid
System #: 2238-2 Calibrator: 2

Calibration:
Before: 1:31
Level: 93.8

After: 1:47
Level: 93.8

Results:
Start: 1:31:40 p.m.
End:
Leq: 61.6
Lmax: 66.8
Lmin: 57.4
Record: File 016

Weather:
Time: 1:33
Cover: 0%
Temp: 77°F
Humidity: 47%
Wind Dir: WEST
Wind Spd: 2.3 mph

Comments:
about 65 vehicles passed on 540 in 53.47 seconds

65 vehicle is 1' 2.11"

General Noise Sources: Traffic on 540 the loudest traffic of all sites
crickets

Noise Events:

Time	Description

36° 14.395' N
94° 9.590' W

FHWA Traffic Noise Model Input and Output Tables

Mestre Greve Associates 14 April 2009
MBJ TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
540 south of access road	108.5	17a	299	675,704.1	700,379.8	0.00				Average	
		17b	296	674,098.5	699,642.0	0.00				Average	
		18	295	671,263.0	698,061.0	0.00				Average	
		19	292	670,453.0	697,350.0	0.00				Average	
		20	1	669,922.0	696,648.0	0.00				Average	
		21	2	669,454.0	695,128.0	0.00				Average	
		22	3	668,662.0	692,257.0	0.00				Average	
		23	4	668,554.0	689,774.0	0.00				Average	
		24	5	668,474.0	687,611.0	0.00				Average	
		25	6	668,619.0	686,802.0	0.00				Average	
		26	7	668,795.0	686,054.0	0.00				Average	
		27	8	668,993.0	685,226.0	0.00				Average	
		28	9	669,213.0	684,225.0	0.00				Average	
		29	10	669,240.0	684,121.0	0.00				Average	
		30	11	669,248.0	684,036.0	0.00				Average	
		31	12	669,350.0	683,480.0	0.00				Average	
		32	13	669,353.0	683,343.0	0.00				Average	
		33	14	669,369.0	682,947.0	0.00				Average	
		34	15	669,364.0	681,105.0	0.00				Average	
		35	16	669,361.0	680,563.0	0.00				Average	
		36	17	669,358.0	680,162.0	0.00				Average	
		37	18	669,345.0	679,964.0	0.00				Average	
		38	19	669,303.0	679,785.0	0.00				Average	
		39	20	669,163.0	679,480.0	0.00				Average	
		40	21	668,558.0	678,842.0	0.00				Average	

		41	22	668,300.0	678,666.0	0.00				Average	
		42	23	668,006.0	678,498.0	0.00				Average	
		43	24	667,765.0	678,362.0	0.00				Average	
		44	25	667,434.0	677,994.0	0.00				Average	
		45	26	667,255.0	677,652.0	0.00				Average	
		46	27	667,092.0	677,358.0	0.00				Average	
		47	28	667,018.0	677,121.0	0.00				Average	
		48	29	666,961.0	676,868.0	0.00				Average	
		49	30	666,955.0	675,553.0	0.00					
112	24.0	1	31	654,338.0	710,514.0	0.00				Average	
		2	32	654,362.0	709,819.0	0.00				Average	
		3	33	654,362.0	709,149.0	0.00				Average	
		4	34	654,409.0	708,837.0	0.00				Average	
		5	35	654,433.0	708,334.0	0.00				Average	
		6	36	654,194.0	707,256.0	0.00				Average	
		7	37	653,673.0	705,536.0	0.00				Average	
		8	38	653,588.0	705,298.0	0.00				Average	
		9	39	653,537.0	705,068.0	0.00				Average	
		10	40	653,341.0	704,515.0	0.00				Average	
		11	41	653,214.0	704,319.0	0.00				Average	
		12	42	652,269.0	703,468.0	0.00				Average	
		13	43	652,201.0	703,357.0	0.00				Average	
		14	44	652,167.0	703,212.0	0.00				Average	
		15	45	652,169.0	702,177.0	0.00				Average	
		16	46	652,180.0	702,069.0	0.00				Average	
		17	47	652,213.0	701,916.0	0.00				Average	
		18	48	652,281.0	701,731.0	0.00				Average	
		19	49	652,496.0	701,316.0	0.00				Average	
		20	50	652,769.0	701,035.0	0.00				Average	
		21	51	653,698.0	699,929.0	0.00				Average	
		22	52	653,859.0	699,349.0	0.00				Average	
		23	53	653,914.0	699,008.0	0.00				Average	
		24	54	653,939.0	698,685.0	0.00				Average	
		25	55	654,491.0	696,858.0	1.00				Average	Y
		26	56	654,532.0	696,618.0	1.00				Average	Y
		27	57	654,411.0	693,900.0	0.00				Average	
		28	58	654,287.0	693,186.0	0.00				Average	
		29	59	654,131.0	692,561.0	0.00				Average	
		30	60	653,705.0	690,965.0	0.00				Average	

		31	61	653,644.0	690,600.0	0.00				Average	
		32	62	653,561.0	690,319.0	0.00				Average	
		33	63	653,545.0	690,236.0	0.00				Average	
		34	64	653,030.0	689,206.0	0.00				Average	
		35	65	652,788.0	688,751.0	0.00				Average	
		36	66	652,773.0	688,592.0	0.00				Average	
		37	67	652,849.0	688,464.0	0.00				Average	
		38	68	653,386.0	688,024.0	0.00					
264 west of sr-112	50.0	1	69	634,663.0	708,285.0	0.00				Average	
		2	70	636,427.0	708,219.0	0.00				Average	
		3	71	637,660.0	708,173.0	0.00				Average	
		4	72	638,604.0	708,114.0	0.00				Average	
		5	73	639,108.0	708,101.0	0.00				Average	
		6	74	639,272.0	708,062.0	0.00				Average	
		7	75	639,279.0	707,609.0	0.00				Average	
		8	76	639,292.0	707,518.0	0.00				Average	
		9	77	639,384.0	707,446.0	0.00				Average	
		10	78	639,626.0	707,406.0	0.00				Average	
		11	79	640,092.0	707,321.0	0.00				Average	
		12	80	640,446.0	707,262.0	0.00				Average	
		13	81	641,672.0	707,144.0	0.00				Average	
		14	82	642,236.0	707,026.0	0.00				Average	
		15	83	643,541.0	706,600.0	0.00				Average	
		16	84	643,803.0	706,560.0	0.00				Average	
		17	85	644,216.0	706,600.0	0.00				Average	
		18	86	644,701.0	706,737.0	0.00				Average	
		19	87	645,835.0	707,668.0	0.00				Average	
		20	88	647,035.0	708,947.0	0.00				Average	
		21	89	648,956.0	710,212.0	0.00				Average	
		22	90	649,336.0	710,514.0	0.00				Average	
		23	91	649,507.0	710,593.0	0.00				Average	
		24	92	649,710.0	710,665.0	0.00				Average	
		25	93	651,231.0	710,901.0	0.00				Average	
		26	94	652,077.0	710,920.0	0.00				Average	
		27	95	652,463.0	710,847.0	0.00				Average	
		28	96	652,664.0	710,825.0	0.00				Average	
		29	97	654,344.0	710,538.0	0.00					
540 north of access road	108.5	2	98	678,458.0	706,204.0	0.00				Average	
		3	99	678,412.0	705,562.0	0.00				Average	

		4	100	678,398.0	705,449.0	0.00				Average	
		5	101	678,391.0	705,403.0	0.00				Average	
		6	102	678,387.0	705,351.0	0.00				Average	
		7	103	678,324.0	705,040.0	0.00				Average	
		8	104	678,267.0	704,885.0	0.00				Average	
		9	105	678,151.0	704,405.0	0.00				Average	
		10	106	678,080.0	703,975.0	0.00				Average	
		11	107	678,052.0	703,354.0	0.00				Average	
		12	108	677,982.0	703,029.0	0.00				Average	
		13	109	677,837.0	702,557.0	0.00				Average	
		14	110	677,601.0	702,006.0	0.00				Average	
		15	111	677,424.0	701,721.0	0.00				Average	
		16	112	677,177.0	701,410.0	0.00				Average	
		17	113	676,934.0	701,223.0	0.00				Average	
		17a	291	675,704.1	700,379.8	0.00					
540 north of sr-264	108.5	1	117	678,582.0	710,416.0	0.00				Average	
		2	118	678,458.0	706,204.0	0.00					
264 west of I-540	50.0	7	119	666,454.0	706,994.0	0.00				Average	
		8	120	666,519.0	706,882.0	0.00				Average	
		9	121	666,581.0	706,805.0	0.00				Average	
		10	122	666,697.0	706,784.0	0.00				Average	
		11	123	667,850.0	706,752.0	0.00				Average	
		12	124	678,454.0	706,205.0	0.00					
264 east of sr-112	50.0	1	125	654,426.0	708,645.0	0.00				Average	
		2	126	665,582.0	708,191.0	0.00				Average	
		3	127	666,224.0	708,128.0	0.00				Average	
		4	128	666,344.0	708,093.0	0.00				Average	
		5	129	666,432.0	708,042.0	0.00				Average	
		6	130	666,491.0	707,918.0	0.00				Average	
		7	131	666,454.0	706,994.0	0.00					

Mestre Greve Associates 14 April 2009
MBJ TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
540 south of access road	17a	299	5895	65	164	55	492	55	0	0	0	0
	17b	296	5895	65	164	55	492	55	0	0	0	0
	18	295	5895	65	164	55	492	55	0	0	0	0
	19	292	5895	65	164	55	492	55	0	0	0	0
	20	1	5895	65	164	55	492	55	0	0	0	0
	21	2	5895	65	164	55	492	55	0	0	0	0
	22	3	5895	65	164	55	492	55	0	0	0	0
	23	4	5895	65	164	55	492	55	0	0	0	0
	24	5	5895	65	164	55	492	55	0	0	0	0
	25	6	5895	65	164	55	492	55	0	0	0	0
	26	7	5895	65	164	55	492	55	0	0	0	0
	27	8	5895	65	164	55	492	55	0	0	0	0
	28	9	5895	65	164	55	492	55	0	0	0	0
	29	10	5895	65	164	55	492	55	0	0	0	0
	30	11	5895	65	164	55	492	55	0	0	0	0
	31	12	5895	65	164	55	492	55	0	0	0	0
	32	13	5895	65	164	55	492	55	0	0	0	0
	33	14	5895	65	164	55	492	55	0	0	0	0
	34	15	5895	65	164	55	492	55	0	0	0	0
	35	16	5895	65	164	55	492	55	0	0	0	0
	36	17	5895	65	164	55	492	55	0	0	0	0
	37	18	5895	65	164	55	492	55	0	0	0	0
	38	19	5895	65	164	55	492	55	0	0	0	0

	39	20	5895	65	164	55	492	55	0	0	0	0
	40	21	5895	65	164	55	492	55	0	0	0	0
	41	22	5895	65	164	55	492	55	0	0	0	0
	42	23	5895	65	164	55	492	55	0	0	0	0
	43	24	5895	65	164	55	492	55	0	0	0	0
	44	25	5895	65	164	55	492	55	0	0	0	0
	45	26	5895	65	164	55	492	55	0	0	0	0
	46	27	5895	65	164	55	492	55	0	0	0	0
	47	28	5895	65	164	55	492	55	0	0	0	0
	48	29	5895	65	164	55	492	55	0	0	0	0
	49	30										
112	1	31	557	65	21	55	63	55	0	0	0	0
	2	32	557	65	21	55	63	55	0	0	0	0
	3	33	557	65	21	55	63	55	0	0	0	0
	4	34	557	65	21	55	63	55	0	0	0	0
	5	35	557	65	21	55	63	55	0	0	0	0
	6	36	557	65	21	55	63	55	0	0	0	0
	7	37	557	65	21	55	63	55	0	0	0	0
	8	38	557	65	21	55	63	55	0	0	0	0
	9	39	557	65	21	55	63	55	0	0	0	0
	10	40	557	65	21	55	63	55	0	0	0	0
	11	41	557	65	21	55	63	55	0	0	0	0
	12	42	557	65	21	55	63	55	0	0	0	0
	13	43	557	65	21	55	63	55	0	0	0	0
	14	44	557	65	21	55	63	55	0	0	0	0
	15	45	557	65	21	55	63	55	0	0	0	0
	16	46	557	65	21	55	63	55	0	0	0	0
	17	47	557	65	21	55	63	55	0	0	0	0
	18	48	557	65	21	55	63	55	0	0	0	0
	19	49	557	65	21	55	63	55	0	0	0	0
	20	50	557	65	21	55	63	55	0	0	0	0
	21	51	557	65	21	55	63	55	0	0	0	0
	22	52	557	65	21	55	63	55	0	0	0	0
	23	53	557	65	21	55	63	55	0	0	0	0
	24	54	557	65	21	55	63	55	0	0	0	0
	25	55	557	65	21	55	63	55	0	0	0	0

	26	56	557	65	21	55	63	55	0	0	0	0
	27	57	557	65	21	55	63	55	0	0	0	0
	28	58	557	65	21	55	63	55	0	0	0	0
	29	59	557	65	21	55	63	55	0	0	0	0
	30	60	557	65	21	55	63	55	0	0	0	0
	31	61	557	65	21	55	63	55	0	0	0	0
	32	62	557	65	21	55	63	55	0	0	0	0
	33	63	557	65	21	55	63	55	0	0	0	0
	34	64	557	65	21	55	63	55	0	0	0	0
	35	65	557	65	21	55	63	55	0	0	0	0
	36	66	557	65	21	55	63	55	0	0	0	0
	37	67	557	65	21	55	63	55	0	0	0	0
	38	68										
264 west of sr-112	1	69	433	65	7	55	21	55	0	0	0	0
	2	70	433	65	7	55	21	55	0	0	0	0
	3	71	433	65	7	55	21	55	0	0	0	0
	4	72	433	65	7	55	21	55	0	0	0	0
	5	73	433	65	7	55	21	55	0	0	0	0
	6	74	433	65	7	55	21	55	0	0	0	0
	7	75	433	65	7	55	21	55	0	0	0	0
	8	76	433	65	7	55	21	55	0	0	0	0
	9	77	433	65	7	55	21	55	0	0	0	0
	10	78	433	65	7	55	21	55	0	0	0	0
	11	79	433	65	7	55	21	55	0	0	0	0
	12	80	433	65	7	55	21	55	0	0	0	0
	13	81	433	65	7	55	21	55	0	0	0	0
	14	82	433	65	7	55	21	55	0	0	0	0
	15	83	433	65	7	55	21	55	0	0	0	0
	16	84	433	65	7	55	21	55	0	0	0	0
	17	85	433	65	7	55	21	55	0	0	0	0
	18	86	433	65	7	55	21	55	0	0	0	0
	19	87	433	65	7	55	21	55	0	0	0	0
	20	88	433	65	7	55	21	55	0	0	0	0
	21	89	433	65	7	55	21	55	0	0	0	0
	22	90	433	65	7	55	21	55	0	0	0	0
	23	91	433	65	7	55	21	55	0	0	0	0

	24	92	433	65	7	55	21	55	0	0	0	0
	25	93	433	65	7	55	21	55	0	0	0	0
	26	94	433	65	7	55	21	55	0	0	0	0
	27	95	433	65	7	55	21	55	0	0	0	0
	28	96	433	65	7	55	21	55	0	0	0	0
	29	97										
540 north of access road	2	98	5751	65	160	55	480	55	0	0	0	0
	3	99	5751	65	160	55	480	55	0	0	0	0
	4	100	5751	65	160	55	480	55	0	0	0	0
	5	101	5751	65	160	55	480	55	0	0	0	0
	6	102	5751	65	160	55	480	55	0	0	0	0
	7	103	5751	65	160	55	480	55	0	0	0	0
	8	104	5751	65	160	55	480	55	0	0	0	0
	9	105	5751	65	160	55	480	55	0	0	0	0
	10	106	5751	65	160	55	480	55	0	0	0	0
	11	107	5751	65	160	55	480	55	0	0	0	0
	12	108	5751	65	160	55	480	55	0	0	0	0
	13	109	5751	65	160	55	480	55	0	0	0	0
	14	110	5751	65	160	55	480	55	0	0	0	0
	15	111	5751	65	160	55	480	55	0	0	0	0
	16	112	5751	65	160	55	480	55	0	0	0	0
	17	113	5751	65	160	55	480	55	0	0	0	0
	17a	291										
540 north of sr-264	1	117	5742	65	215	55	644	55	0	0	0	0
	2	118										
264 west of I-540	7	119	772	65	15	55	44	55	0	0	0	0
	8	120	772	65	15	55	44	55	0	0	0	0
	9	121	772	65	15	55	44	55	0	0	0	0
	10	122	772	65	15	55	44	55	0	0	0	0
	11	123	772	65	15	55	44	55	0	0	0	0
	12	124										
264 east of sr-112	1	125	477	65	14	55	40	55	0	0	0	0
	2	126	477	65	14	55	40	55	0	0	0	0
	3	127	477	65	14	55	40	55	0	0	0	0
	4	128	477	65	14	55	40	55	0	0	0	0
	5	129	477	65	14	55	40	55	0	0	0	0

	6	130	477	65	14	55	40	55	0	0	0	0
	7	131										

Mestre Greve Associates 14 April 2009
MBJ TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
01a	1	1	638,711.2	704,708.6	0.00	5.00	0.00	66	10.0	8.0	Y
01b	2	1	635,391.8	706,412.3	0.00	5.00	0.00	66	10.0	8.0	Y
01c	3	1	639,215.9	702,926.2	0.00	5.00	0.00	66	10.0	8.0	Y
01d	4	1	638,808.5	702,662.3	0.00	5.00	0.00	66	10.0	8.0	Y
01e	5	1	638,817.8	702,204.0	0.00	5.00	0.00	66	10.0	8.0	Y
01f	6	1	638,649.9	701,978.9	0.00	5.00	0.00	66	10.0	8.0	Y
01g	7	1	638,276.1	701,311.0	0.00	5.00	0.00	66	10.0	8.0	Y
01h	8	1	637,797.0	701,884.5	0.00	5.00	0.00	66	10.0	8.0	Y
01i	9	1	637,895.0	702,639.4	0.00	5.00	0.00	66	10.0	8.0	Y
02a	10	1	639,473.7	699,343.2	0.00	5.00	0.00	66	10.0	8.0	Y
02b	11	1	640,109.4	701,620.6	0.00	5.00	0.00	66	10.0	8.0	Y
02c	12	1	640,077.0	700,773.4	0.00	5.00	0.00	66	10.0	8.0	Y
02d	13	1	640,936.4	701,985.2	0.00	5.00	0.00	66	10.0	8.0	Y
03a	14	1	643,681.2	698,617.6	0.00	5.00	0.00	66	10.0	8.0	Y
04a	15	1	646,006.0	693,894.9	0.00	5.00	0.00	66	10.0	8.0	Y
04b	16	1	645,033.8	694,176.1	0.00	5.00	0.00	66	10.0	8.0	Y
04c	17	1	646,769.9	693,891.4	0.00	5.00	0.00	66	10.0	8.0	Y
04d	18	4	647,557.4	694,067.5	0.00	5.00	0.00	66	10.0	8.0	Y
05a	19	3	649,634.9	694,506.7	0.00	5.00	0.00	66	10.0	8.0	Y
05b	20	3	651,114.1	695,826.1	0.00	5.00	0.00	66	10.0	8.0	Y
05c	21	2	651,915.4	695,785.3	0.00	5.00	0.00	66	10.0	8.0	Y
05d	22	2	652,098.8	696,084.1	0.00	5.00	0.00	66	10.0	8.0	Y

05e	23	1	651,707.1	697,477.4	0.00	5.00	0.00	66	10.0	8.0	Y
05f	24	1	648,889.7	694,791.2	0.00	5.00	0.00	66	10.0	8.0	Y
06a	25	1	649,419.8	697,228.6	0.00	5.00	0.00	66	10.0	8.0	Y
06b	26	1	650,083.9	697,017.1	0.00	5.00	0.00	66	10.0	8.0	Y
06c	27	3	649,997.4	697,420.1	0.00	5.00	0.00	66	10.0	8.0	Y
06d	28	1	646,646.8	696,786.4	0.00	5.00	0.00	66	10.0	8.0	Y
06e	29	1	647,549.6	696,184.6	0.00	5.00	0.00	66	10.0	8.0	Y
06f	30	1	646,856.9	695,884.2	0.00	5.00	0.00	66	10.0	8.0	Y
06g	31	1	647,644.4	695,630.1	0.00	5.00	0.00	66	10.0	8.0	Y
07a	32	1	654,685.8	694,902.6	0.00	5.00	0.00	66	10.0	8.0	Y
07b	33	1	654,657.9	695,496.2	0.00	5.00	0.00	66	10.0	8.0	Y
07c	34	1	654,685.8	696,233.4	0.00	5.00	0.00	66	10.0	8.0	Y
07d	35	1	654,582.2	697,186.9	0.00	5.00	0.00	66	10.0	8.0	Y
07e	36	1	654,601.8	697,827.2	0.00	5.00	0.00	66	10.0	8.0	Y
07f	37	1	654,157.5	695,458.1	0.00	5.00	0.00	66	10.0	8.0	Y
09a	38	1	658,074.0	697,252.0	0.00	5.00	0.00	66	10.0	8.0	Y
09b	39	0	658,585.4	696,426.2	0.00	5.00	0.00	66	10.0	8.0	Y
09c	40	1	658,974.6	697,647.5	0.00	5.00	0.00	66	10.0	8.0	Y
10a	41	1	660,987.0	695,179.3	0.00	5.00	0.00	66	10.0	8.0	Y
10b	42	3	659,235.1	696,204.6	0.00	5.00	0.00	66	10.0	8.0	Y
10c	43	1	659,630.7	696,151.4	0.00	5.00	0.00	66	10.0	8.0	Y
10d	44	4	660,029.6	696,340.4	0.00	5.00	0.00	66	10.0	8.0	Y
10e	45	4	660,627.1	696,326.8	0.00	5.00	0.00	66	10.0	8.0	Y
10f	46	5	661,109.2	696,306.4	0.00	5.00	0.00	66	10.0	8.0	Y
10g	47	3	661,828.9	696,272.5	0.00	5.00	0.00	66	10.0	8.0	Y
11a	48	1	665,350.0	697,174.6	0.00	5.00	0.00	66	10.0	8.0	Y
11b	49	1	664,890.4	697,766.6	0.00	5.00	0.00	66	10.0	8.0	Y
11c	50	1	664,152.2	697,996.4	0.00	5.00	0.00	66	10.0	8.0	Y
11d	51	4	663,173.2	698,274.5	0.00	5.00	0.00	66	10.0	8.0	Y
11e	52	4	663,469.8	698,247.8	0.00	5.00	0.00	66	10.0	8.0	Y
11f	53	5	663,714.8	697,916.0	0.00	5.00	0.00	66	10.0	8.0	Y
11g	54	6	662,883.9	698,585.2	0.00	5.00	0.00	66	10.0	8.0	Y
11h	55	3	662,577.7	698,470.4	0.00	5.00	0.00	66	10.0	8.0	Y
12a	56	2	667,742.9	699,567.7	0.00	5.00	0.00	66	10.0	8.0	Y
12b	57	1	666,634.2	699,007.5	0.00	5.00	0.00	66	10.0	8.0	Y
12c	58	1	666,190.9	697,694.2	0.00	5.00	0.00	66	10.0	8.0	Y

12d	59	1	666,004.6	699,180.3	0.00	5.00	0.00	66	10.0	8.0	Y
13a	60	2	668,782.5	700,954.2	0.00	5.00	0.00	66	10.0	8.0	Y
13b	61	1	668,831.6	700,403.2	0.00	5.00	0.00	66	10.0	8.0	Y
13c	62	4	667,993.9	700,150.8	0.00	5.00	0.00	66	10.0	8.0	Y
13d	63	3	667,716.9	700,397.9	0.00	5.00	0.00	66	10.0	8.0	Y
13e	64	2	666,988.3	700,178.6	0.00	5.00	0.00	66	10.0	8.0	Y
13f	65	1	666,318.5	699,688.9	0.00	5.00	0.00	66	10.0	8.0	Y
13g	66	1	665,969.8	699,806.4	0.00	5.00	0.00	66	10.0	8.0	Y
14a	67	3	672,006.9	701,473.4	0.00	5.00	0.00	66	10.0	8.0	Y
14b	68	1	671,751.8	701,298.9	0.00	5.00	0.00	66	10.0	8.0	Y
14c	69	1	671,454.1	701,248.0	0.00	5.00	0.00	66	10.0	8.0	Y
14d	70	1	670,787.7	701,147.0	0.00	5.00	0.00	66	10.0	8.0	Y
14e	71	1	670,059.6	700,899.4	0.00	5.00	0.00	66	10.0	8.0	Y
15a	72	1	671,803.0	700,161.5	0.00	5.00	0.00	66	10.0	8.0	Y
15b	73	1	670,460.4	699,244.9	0.00	5.00	0.00	66	10.0	8.0	Y
15c	74	1	672,681.8	700,846.4	0.00	5.00	0.00	66	10.0	8.0	Y
16a	75	1	676,010.0	701,483.1	0.00	5.00	0.00	66	10.0	8.0	Y
16b	76	1	675,503.2	701,518.7	0.00	5.00	0.00	66	10.0	8.0	Y
16c	77	1	674,932.8	701,400.8	0.00	5.00	0.00	66	10.0	8.0	Y
16d	78	1	674,244.6	702,177.8	0.00	5.00	0.00	66	10.0	8.0	Y
1	79	0	639,085.2	704,596.2	0.00	5.00	0.00	66	10.0	8.0	Y
2	80	0	639,659.3	699,384.3	0.00	5.00	0.00	66	10.0	8.0	Y
3	81	0	644,315.6	698,524.2	0.00	5.00	0.00	66	10.0	8.0	Y
4	82	0	646,039.9	693,744.6	0.00	5.00	0.00	66	10.0	8.0	Y
5	83	0	650,047.8	694,381.2	0.00	5.00	0.00	66	10.0	8.0	Y
6	84	0	649,364.8	696,994.4	0.00	5.00	0.00	66	10.0	8.0	Y
7	85	0	654,493.2	694,624.8	0.00	5.00	0.00	66	10.0	8.0	Y
8	86	0	656,646.6	695,002.2	0.00	5.00	0.00	66	10.0	8.0	Y
9	87	0	658,089.4	697,057.4	0.00	5.00	0.00	66	10.0	8.0	Y
10	88	0	661,001.4	695,347.2	0.00	5.00	0.00	66	10.0	8.0	Y
11	89	0	663,377.1	698,231.5	0.00	5.00	0.00	66	10.0	8.0	Y
12	90	0	666,807.6	698,819.4	0.00	5.00	0.00	66	10.0	8.0	Y
13	93	0	667,739.7	700,501.2	0.00	5.00	0.00	66	10.0	8.0	Y
14	94	0	671,451.7	701,171.1	0.00	5.00	0.00	66	10.0	8.0	Y
15	95	0	671,563.5	700,081.9	0.00	5.00	0.00	66	10.0	8.0	Y
16	96	0	675,419.7	700,969.0	0.00	5.00	0.00	66	10.0	8.0	Y

Mestre Greve Associates
MBJ

14 April 2009
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
01a	1	1	0.0	36.0	66	36.0	10	----	36.0	0.0	8	-8.0
01b	2	1	0.0	36.7	66	36.7	10	----	36.7	0.0	8	-8.0
01c	3	1	0.0	34.9	66	34.9	10	----	34.9	0.0	8	-8.0
01d	4	1	0.0	34.6	66	34.6	10	----	34.6	0.0	8	-8.0
01e	5	1	0.0	34.4	66	34.4	10	----	34.4	0.0	8	-8.0
01f	6	1	0.0	34.2	66	34.2	10	----	34.2	0.0	8	-8.0
01g	7	1	0.0	33.9	66	33.9	10	----	33.9	0.0	8	-8.0
01h	8	1	0.0	33.9	66	33.9	10	----	33.9	0.0	8	-8.0
01i	9	1	0.0	34.2	66	34.2	10	----	34.2	0.0	8	-8.0
02a	10	1	0.0	33.9	66	33.9	10	----	33.9	0.0	8	-8.0
02b	11	1	0.0	34.6	66	34.6	10	----	34.6	0.0	8	-8.0
02c	12	1	0.0	34.4	66	34.4	10	----	34.4	0.0	8	-8.0
02d	13	1	0.0	35.0	66	35.0	10	----	35.0	0.0	8	-8.0
03a	14	1	0.0	35.1	66	35.1	10	----	35.1	0.0	8	-8.0
04a	15	1	0.0	35.7	66	35.7	10	----	35.7	0.0	8	-8.0
04b	16	1	0.0	35.3	66	35.3	10	----	35.3	0.0	8	-8.0
04c	17	1	0.0	36.0	66	36.0	10	----	36.0	0.0	8	-8.0
04d	18	4	0.0	36.4	66	36.4	10	----	36.4	0.0	8	-8.0
05a	19	3	0.0	37.5	66	37.5	10	----	37.5	0.0	8	-8.0
05b	20	3	0.0	38.8	66	38.8	10	----	38.8	0.0	8	-8.0
05c	21	2	0.0	40.1	66	40.1	10	----	40.1	0.0	8	-8.0
05d	22	2	0.0	40.5	66	40.5	10	----	40.5	0.0	8	-8.0
05e	23	1	0.0	39.9	66	39.9	10	----	39.9	0.0	8	-8.0
05f	24	1	0.0	37.1	66	37.1	10	----	37.1	0.0	8	-8.0

06a	25	1	0.0	37.6	66	37.6	10	----	37.6	0.0	8	-8.0
06b	26	1	0.0	38.0	66	38.0	10	----	38.0	0.0	8	-8.0
06c	27	3	0.0	38.0	66	38.0	10	----	38.0	0.0	8	-8.0
06d	28	1	0.0	36.1	66	36.1	10	----	36.1	0.0	8	-8.0
06e	29	1	0.0	36.5	66	36.5	10	----	36.5	0.0	8	-8.0
06f	30	1	0.0	36.2	66	36.2	10	----	36.2	0.0	8	-8.0
06g	31	1	0.0	36.5	66	36.5	10	----	36.5	0.0	8	-8.0
07a	32	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
07b	33	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
07c	34	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
07d	35	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
07e	36	1	0.0	54.8	66	54.8	10	----	54.8	0.0	8	-8.0
07f	37	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0
09a	38	1	0.0	40.0	66	40.0	10	----	40.0	0.0	8	-8.0
09b	39	0	0.0	40.1	66	40.1	10	----	40.1	0.0	8	-8.0
09c	40	1	0.0	40.0	66	40.0	10	----	40.0	0.0	8	-8.0
10a	41	1	0.0	41.0	66	41.0	10	----	41.0	0.0	8	-8.0
10b	42	3	0.0	40.2	66	40.2	10	----	40.2	0.0	8	-8.0
10c	43	1	0.0	40.3	66	40.3	10	----	40.3	0.0	8	-8.0
10d	44	4	0.0	40.5	66	40.5	10	----	40.5	0.0	8	-8.0
10e	45	4	0.0	40.7	66	40.7	10	----	40.7	0.0	8	-8.0
10f	46	5	0.0	40.9	66	40.9	10	----	40.9	0.0	8	-8.0
10g	47	3	0.0	41.3	66	41.3	10	----	41.3	0.0	8	-8.0
11a	48	1	0.0	44.1	66	44.1	10	----	44.1	0.0	8	-8.0
11b	49	1	0.0	43.3	66	43.3	10	----	43.3	0.0	8	-8.0
11c	50	1	0.0	42.5	66	42.5	10	----	42.5	0.0	8	-8.0
11d	51	4	0.0	41.7	66	41.7	10	----	41.7	0.0	8	-8.0
11e	52	4	0.0	41.9	66	41.9	10	----	41.9	0.0	8	-8.0
11f	53	5	0.0	42.2	66	42.2	10	----	42.2	0.0	8	-8.0
11g	54	6	0.0	41.5	66	41.5	10	----	41.5	0.0	8	-8.0
11h	55	3	0.0	41.3	66	41.3	10	----	41.3	0.0	8	-8.0
12a	56	2	0.0	45.4	66	45.4	10	----	45.4	0.0	8	-8.0
12b	57	1	0.0	44.4	66	44.4	10	----	44.4	0.0	8	-8.0
12c	58	1	0.0	44.8	66	44.8	10	----	44.8	0.0	8	-8.0
12d	59	1	0.0	43.6	66	43.6	10	----	43.6	0.0	8	-8.0
13a	60	2	0.0	45.2	66	45.2	10	----	45.2	0.0	8	-8.0
13b	61	1	0.0	45.9	66	45.9	10	----	45.9	0.0	8	-8.0
13c	62	4	0.0	45.1	66	45.1	10	----	45.1	0.0	8	-8.0
13d	63	3	0.0	44.5	66	44.5	10	----	44.5	0.0	8	-8.0
13e	64	2	0.0	44.0	66	44.0	10	----	44.0	0.0	8	-8.0
13f	65	1	0.0	43.6	66	43.6	10	----	43.6	0.0	8	-8.0

13g	66	1	0.0	43.3	66	43.3	10	----	43.3	0.0	8	-8.0
14a	67	3	0.0	48.2	66	48.2	10	----	48.2	0.0	8	-8.0
14b	68	1	0.0	48.5	66	48.5	10	----	48.5	0.0	8	-8.0
14c	69	1	0.0	48.3	66	48.3	10	----	48.3	0.0	8	-8.0
14d	70	1	0.0	48.3	66	48.3	10	----	48.3	0.0	8	-8.0
14e	71	1	0.0	46.9	66	46.9	10	----	46.9	0.0	8	-8.0
15a	72	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
15b	73	1	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0
15c	74	1	0.0	51.9	66	51.9	10	----	51.9	0.0	8	-8.0
16a	75	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
16b	76	1	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
16c	77	1	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
16d	78	1	0.0	49.5	66	49.5	10	----	49.5	0.0	8	-8.0
1	79	0	0.0	36.8	66	36.8	10	----	36.8	0.0	8	-8.0
2	80	0	0.0	34.0	66	34.0	10	----	34.0	0.0	8	-8.0
3	81	0	0.0	35.4	66	35.4	10	----	35.4	0.0	8	-8.0
4	82	0	0.0	35.7	66	35.7	10	----	35.7	0.0	8	-8.0
5	83	0	0.0	37.8	66	37.8	10	----	37.8	0.0	8	-8.0
6	84	0	0.0	37.5	66	37.5	10	----	37.5	0.0	8	-8.0
7	85	0	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0
8	86	0	0.0	41.6	66	41.6	10	----	41.6	0.0	8	-8.0
9	87	0	0.0	40.0	66	40.0	10	----	40.0	0.0	8	-8.0
10	88	0	0.0	41.0	66	41.0	10	----	41.0	0.0	8	-8.0
11	89	0	0.0	41.9	66	41.9	10	----	41.9	0.0	8	-8.0
12	90	0	0.0	44.8	66	44.8	10	----	44.8	0.0	8	-8.0
13	93	0	0.0	44.4	66	44.4	10	----	44.4	0.0	8	-8.0
14	94	0	0.0	48.5	66	48.5	10	----	48.5	0.0	8	-8.0
15	95	0	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0
16	96	0	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	129	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Mestre Greve Associates 14 April 2009
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INPUT: ROADWAYS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
540 south of access road	108.5	17a	299	675,704.1	700,379.8	0.00				Average	
		17b	296	674,098.5	699,642.0	0.00				Average	
		18	295	671,263.0	698,061.0	0.00				Average	
		19	292	670,453.0	697,350.0	0.00				Average	
		20	1	669,922.0	696,648.0	0.00				Average	
		21	2	669,454.0	695,128.0	0.00				Average	
		22	3	668,662.0	692,257.0	0.00				Average	
		23	4	668,554.0	689,774.0	0.00				Average	
		24	5	668,474.0	687,611.0	0.00				Average	
		25	6	668,619.0	686,802.0	0.00				Average	
		26	7	668,795.0	686,054.0	0.00				Average	
		27	8	668,993.0	685,226.0	0.00				Average	
		28	9	669,213.0	684,225.0	0.00				Average	
		29	10	669,240.0	684,121.0	0.00				Average	
		30	11	669,248.0	684,036.0	0.00				Average	
		31	12	669,350.0	683,480.0	0.00				Average	
		32	13	669,353.0	683,343.0	0.00				Average	
		33	14	669,369.0	682,947.0	0.00				Average	
		34	15	669,364.0	681,105.0	0.00				Average	
		35	16	669,361.0	680,563.0	0.00				Average	
		36	17	669,358.0	680,162.0	0.00				Average	
		37	18	669,345.0	679,964.0	0.00				Average	
		38	19	669,303.0	679,785.0	0.00				Average	
		39	20	669,163.0	679,480.0	0.00				Average	
		40	21	668,558.0	678,842.0	0.00				Average	

		41	22	668,300.0	678,666.0	0.00				Average	
		42	23	668,006.0	678,498.0	0.00				Average	
		43	24	667,765.0	678,362.0	0.00				Average	
		44	25	667,434.0	677,994.0	0.00				Average	
		45	26	667,255.0	677,652.0	0.00				Average	
		46	27	667,092.0	677,358.0	0.00				Average	
		47	28	667,018.0	677,121.0	0.00				Average	
		48	29	666,961.0	676,868.0	0.00				Average	
		49	30	666,955.0	675,553.0	0.00					
112	24.0	1	31	654,338.0	710,514.0	0.00				Average	
		2	32	654,362.0	709,819.0	0.00				Average	
		3	33	654,362.0	709,149.0	0.00				Average	
		4	34	654,409.0	708,837.0	0.00				Average	
		5	35	654,433.0	708,334.0	0.00				Average	
		6	36	654,194.0	707,256.0	0.00				Average	
		7	37	653,673.0	705,536.0	0.00				Average	
		8	38	653,588.0	705,298.0	0.00				Average	
		9	39	653,537.0	705,068.0	0.00				Average	
		10	40	653,341.0	704,515.0	0.00				Average	
		11	41	653,214.0	704,319.0	0.00				Average	
		12	42	652,269.0	703,468.0	0.00				Average	
		13	43	652,201.0	703,357.0	0.00				Average	
		14	44	652,167.0	703,212.0	0.00				Average	
		15	45	652,169.0	702,177.0	0.00				Average	
		16	46	652,180.0	702,069.0	0.00				Average	
		17	47	652,213.0	701,916.0	0.00				Average	
		18	48	652,281.0	701,731.0	0.00				Average	
		19	49	652,496.0	701,316.0	0.00				Average	
		20	50	652,769.0	701,035.0	0.00				Average	
		21	51	653,698.0	699,929.0	0.00				Average	
		22	52	653,859.0	699,349.0	0.00				Average	
		23	53	653,914.0	699,008.0	0.00				Average	
		24	54	653,939.0	698,685.0	0.00				Average	
		25	55	654,491.0	696,858.0	1.00				Average	Y
		26	56	654,532.0	696,618.0	1.00				Average	Y
		27	57	654,411.0	693,900.0	0.00				Average	
		28	58	654,287.0	693,186.0	0.00				Average	
		29	59	654,131.0	692,561.0	0.00				Average	
		30	60	653,705.0	690,965.0	0.00				Average	

		31	61	653,644.0	690,600.0	0.00				Average	
		32	62	653,561.0	690,319.0	0.00				Average	
		33	63	653,545.0	690,236.0	0.00				Average	
		34	64	653,030.0	689,206.0	0.00				Average	
		35	65	652,788.0	688,751.0	0.00				Average	
		36	66	652,773.0	688,592.0	0.00				Average	
		37	67	652,849.0	688,464.0	0.00				Average	
		38	68	653,386.0	688,024.0	0.00					
264 west of sr-112	50.0	1	69	634,663.0	708,285.0	0.00				Average	
		2	70	636,427.0	708,219.0	0.00				Average	
		3	71	637,660.0	708,173.0	0.00				Average	
		4	72	638,604.0	708,114.0	0.00				Average	
		5	73	639,108.0	708,101.0	0.00				Average	
		6	74	639,272.0	708,062.0	0.00				Average	
		7	75	639,279.0	707,609.0	0.00				Average	
		8	76	639,292.0	707,518.0	0.00				Average	
		9	77	639,384.0	707,446.0	0.00				Average	
		10	78	639,626.0	707,406.0	0.00				Average	
		11	79	640,092.0	707,321.0	0.00				Average	
		12	80	640,446.0	707,262.0	0.00				Average	
		13	81	641,672.0	707,144.0	0.00				Average	
		14	82	642,236.0	707,026.0	0.00				Average	
		15	83	643,541.0	706,600.0	0.00				Average	
		16	84	643,803.0	706,560.0	0.00				Average	
		17	85	644,216.0	706,600.0	0.00				Average	
		18	86	644,701.0	706,737.0	0.00				Average	
		19	87	645,835.0	707,668.0	0.00				Average	
		20	88	647,035.0	708,947.0	0.00				Average	
		21	89	648,956.0	710,212.0	0.00				Average	
		22	90	649,336.0	710,514.0	0.00				Average	
		23	91	649,507.0	710,593.0	0.00				Average	
		24	92	649,710.0	710,665.0	0.00				Average	
		25	93	651,231.0	710,901.0	0.00				Average	
		26	94	652,077.0	710,920.0	0.00				Average	
		27	95	652,463.0	710,847.0	0.00				Average	
		28	96	652,664.0	710,825.0	0.00				Average	
		29	97	654,344.0	710,538.0	0.00					
540 north of access road	108.5	2	98	678,458.0	706,204.0	0.00				Average	
		3	99	678,412.0	705,562.0	0.00				Average	

		4	100	678,398.0	705,449.0	0.00				Average	
		5	101	678,391.0	705,403.0	0.00				Average	
		6	102	678,387.0	705,351.0	0.00				Average	
		7	103	678,324.0	705,040.0	0.00				Average	
		8	104	678,267.0	704,885.0	0.00				Average	
		9	105	678,151.0	704,405.0	0.00				Average	
		10	106	678,080.0	703,975.0	0.00				Average	
		11	107	678,052.0	703,354.0	0.00				Average	
		12	108	677,982.0	703,029.0	0.00				Average	
		13	109	677,837.0	702,557.0	0.00				Average	
		14	110	677,601.0	702,006.0	0.00				Average	
		15	111	677,424.0	701,721.0	0.00				Average	
		16	112	677,177.0	701,410.0	0.00				Average	
		17	113	676,934.0	701,223.0	0.00				Average	
		17a	291	675,704.1	700,379.8	0.00					
540 north of sr-264	108.5	1	117	678,582.0	710,416.0	0.00				Average	
		2	118	678,458.0	706,204.0	0.00					
264 west of I-540	50.0	7	119	666,454.0	706,994.0	0.00				Average	
		8	120	666,519.0	706,882.0	0.00				Average	
		9	121	666,581.0	706,805.0	0.00				Average	
		10	122	666,697.0	706,784.0	0.00				Average	
		11	123	667,850.0	706,752.0	0.00				Average	
		12	124	678,454.0	706,205.0	0.00					
264 east of sr-112	50.0	1	125	654,426.0	708,645.0	0.00				Average	
		2	126	665,582.0	708,191.0	0.00				Average	
		3	127	666,224.0	708,128.0	0.00				Average	
		4	128	666,344.0	708,093.0	0.00				Average	
		5	129	666,432.0	708,042.0	0.00				Average	
		6	130	666,491.0	707,918.0	0.00				Average	
		7	131	666,454.0	706,994.0	0.00					

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INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
540 south of access road	17a	299	10269	65	286	55	856	55	0	0	0	0
	17b	296	10269	65	286	55	856	55	0	0	0	0
	18	295	10269	65	286	55	856	55	0	0	0	0
	19	292	10269	65	286	55	856	55	0	0	0	0
	20	1	10269	65	286	55	856	55	0	0	0	0
	21	2	10269	65	286	55	856	55	0	0	0	0
	22	3	10269	65	286	55	856	55	0	0	0	0
	23	4	10269	65	286	55	856	55	0	0	0	0
	24	5	10269	65	286	55	856	55	0	0	0	0
	25	6	10269	65	286	55	856	55	0	0	0	0
	26	7	10269	65	286	55	856	55	0	0	0	0
	27	8	10269	65	286	55	856	55	0	0	0	0
	28	9	10269	65	286	55	856	55	0	0	0	0
	29	10	10269	65	286	55	856	55	0	0	0	0
	30	11	10269	65	286	55	856	55	0	0	0	0
	31	12	10269	65	286	55	856	55	0	0	0	0
	32	13	10269	65	286	55	856	55	0	0	0	0
	33	14	10269	65	286	55	856	55	0	0	0	0
	34	15	10269	65	286	55	856	55	0	0	0	0
	35	16	10269	65	286	55	856	55	0	0	0	0
	36	17	10269	65	286	55	856	55	0	0	0	0
	37	18	10269	65	286	55	856	55	0	0	0	0
	38	19	10269	65	286	55	856	55	0	0	0	0

	39	20	10269	65	286	55	856	55	0	0	0	0
	40	21	10269	65	286	55	856	55	0	0	0	0
	41	22	10269	65	286	55	856	55	0	0	0	0
	42	23	10269	65	286	55	856	55	0	0	0	0
	43	24	10269	65	286	55	856	55	0	0	0	0
	44	25	10269	65	286	55	856	55	0	0	0	0
	45	26	10269	65	286	55	856	55	0	0	0	0
	46	27	10269	65	286	55	856	55	0	0	0	0
	47	28	10269	65	286	55	856	55	0	0	0	0
	48	29	10269	65	286	55	856	55	0	0	0	0
	49	30										
112	1	31	1836	65	69	55	206	55	0	0	0	0
	2	32	1836	65	69	55	206	55	0	0	0	0
	3	33	1836	65	69	55	206	55	0	0	0	0
	4	34	1836	65	69	55	206	55	0	0	0	0
	5	35	1836	65	69	55	206	55	0	0	0	0
	6	36	1836	65	69	55	206	55	0	0	0	0
	7	37	1836	65	69	55	206	55	0	0	0	0
	8	38	1836	65	69	55	206	55	0	0	0	0
	9	39	1836	65	69	55	206	55	0	0	0	0
	10	40	1836	65	69	55	206	55	0	0	0	0
	11	41	1836	65	69	55	206	55	0	0	0	0
	12	42	1836	65	69	55	206	55	0	0	0	0
	13	43	1836	65	69	55	206	55	0	0	0	0
	14	44	1836	65	69	55	206	55	0	0	0	0
	15	45	1836	65	69	55	206	55	0	0	0	0
	16	46	1836	65	69	55	206	55	0	0	0	0
	17	47	1836	65	69	55	206	55	0	0	0	0
	18	48	1836	65	69	55	206	55	0	0	0	0
	19	49	1836	65	69	55	206	55	0	0	0	0
	20	50	1836	65	69	55	206	55	0	0	0	0
	21	51	1836	65	69	55	206	55	0	0	0	0
	22	52	1836	65	69	55	206	55	0	0	0	0
	23	53	1836	65	69	55	206	55	0	0	0	0
	24	54	1836	65	69	55	206	55	0	0	0	0
	25	55	1836	65	69	55	206	55	0	0	0	0

	26	56	1836	65	69	55	206	55	0	0	0	0
	27	57	1836	65	69	55	206	55	0	0	0	0
	28	58	1836	65	69	55	206	55	0	0	0	0
	29	59	1836	65	69	55	206	55	0	0	0	0
	30	60	1836	65	69	55	206	55	0	0	0	0
	31	61	1836	65	69	55	206	55	0	0	0	0
	32	62	1836	65	69	55	206	55	0	0	0	0
	33	63	1836	65	69	55	206	55	0	0	0	0
	34	64	1836	65	69	55	206	55	0	0	0	0
	35	65	1836	65	69	55	206	55	0	0	0	0
	36	66	1836	65	69	55	206	55	0	0	0	0
	37	67	1836	65	69	55	206	55	0	0	0	0
	38	68										
264 west of sr-112	1	69	978	65	16	55	47	55	0	0	0	0
	2	70	978	65	16	55	47	55	0	0	0	0
	3	71	978	65	16	55	47	55	0	0	0	0
	4	72	978	65	16	55	47	55	0	0	0	0
	5	73	978	65	16	55	47	55	0	0	0	0
	6	74	978	65	16	55	47	55	0	0	0	0
	7	75	978	65	16	55	47	55	0	0	0	0
	8	76	978	65	16	55	47	55	0	0	0	0
	9	77	978	65	16	55	47	55	0	0	0	0
	10	78	978	65	16	55	47	55	0	0	0	0
	11	79	978	65	16	55	47	55	0	0	0	0
	12	80	978	65	16	55	47	55	0	0	0	0
	13	81	978	65	16	55	47	55	0	0	0	0
	14	82	978	65	16	55	47	55	0	0	0	0
	15	83	978	65	16	55	47	55	0	0	0	0
	16	84	978	65	16	55	47	55	0	0	0	0
	17	85	978	65	16	55	47	55	0	0	0	0
	18	86	978	65	16	55	47	55	0	0	0	0
	19	87	978	65	16	55	47	55	0	0	0	0
	20	88	978	65	16	55	47	55	0	0	0	0
	21	89	978	65	16	55	47	55	0	0	0	0
	22	90	978	65	16	55	47	55	0	0	0	0
	23	91	978	65	16	55	47	55	0	0	0	0

	24	92	978	65	16	55	47	55	0	0	0	0
	25	93	978	65	16	55	47	55	0	0	0	0
	26	94	978	65	16	55	47	55	0	0	0	0
	27	95	978	65	16	55	47	55	0	0	0	0
	28	96	978	65	16	55	47	55	0	0	0	0
	29	97										
540 north of access road	2	98	10647	65	296	55	888	55	0	0	0	0
	3	99	10647	65	296	55	888	55	0	0	0	0
	4	100	10647	65	296	55	888	55	0	0	0	0
	5	101	10647	65	296	55	888	55	0	0	0	0
	6	102	10647	65	296	55	888	55	0	0	0	0
	7	103	10647	65	296	55	888	55	0	0	0	0
	8	104	10647	65	296	55	888	55	0	0	0	0
	9	105	10647	65	296	55	888	55	0	0	0	0
	10	106	10647	65	296	55	888	55	0	0	0	0
	11	107	10647	65	296	55	888	55	0	0	0	0
	12	108	10647	65	296	55	888	55	0	0	0	0
	13	109	10647	65	296	55	888	55	0	0	0	0
	14	110	10647	65	296	55	888	55	0	0	0	0
	15	111	10647	65	296	55	888	55	0	0	0	0
	16	112	10647	65	296	55	888	55	0	0	0	0
	17	113	10647	65	296	55	888	55	0	0	0	0
	17a	291										
540 north of sr-264	1	117	11023	65	412	55	1236	55	0	0	0	0
	2	118										
264 west of I-540	7	119	1609	65	31	55	91	55	0	0	0	0
	8	120	1609	65	31	55	91	55	0	0	0	0
	9	121	1609	65	31	55	91	55	0	0	0	0
	10	122	1609	65	31	55	91	55	0	0	0	0
	11	123	1609	65	31	55	91	55	0	0	0	0
	12	124										
264 east of sr-112	1	125	1170	65	33	55	98	55	0	0	0	0
	2	126	1170	65	33	55	98	55	0	0	0	0
	3	127	1170	65	33	55	98	55	0	0	0	0
	4	128	1170	65	33	55	98	55	0	0	0	0
	5	129	1170	65	33	55	98	55	0	0	0	0

	6	130	1170	65	33	55	98	55	0	0	0	0
	7	131										

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INPUT: RECEIVERS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
01a	1	1	638,711.2	704,708.6	0.00	5.00	0.00	66	10.0	8.0	Y
01b	2	1	635,391.8	706,412.3	0.00	5.00	0.00	66	10.0	8.0	Y
01c	3	1	639,215.9	702,926.2	0.00	5.00	0.00	66	10.0	8.0	Y
01d	4	1	638,808.5	702,662.3	0.00	5.00	0.00	66	10.0	8.0	Y
01e	5	1	638,817.8	702,204.0	0.00	5.00	0.00	66	10.0	8.0	Y
01f	6	1	638,649.9	701,978.9	0.00	5.00	0.00	66	10.0	8.0	Y
01g	7	1	638,276.1	701,311.0	0.00	5.00	0.00	66	10.0	8.0	Y
01h	8	1	637,797.0	701,884.5	0.00	5.00	0.00	66	10.0	8.0	Y
01i	9	1	637,895.0	702,639.4	0.00	5.00	0.00	66	10.0	8.0	Y
02a	10	1	639,473.7	699,343.2	0.00	5.00	0.00	66	10.0	8.0	Y
02b	11	1	640,109.4	701,620.6	0.00	5.00	0.00	66	10.0	8.0	Y
02c	12	1	640,077.0	700,773.4	0.00	5.00	0.00	66	10.0	8.0	Y
02d	13	1	640,936.4	701,985.2	0.00	5.00	0.00	66	10.0	8.0	Y
03a	14	1	643,681.2	698,617.6	0.00	5.00	0.00	66	10.0	8.0	Y
04a	15	1	646,006.0	693,894.9	0.00	5.00	0.00	66	10.0	8.0	Y
04b	16	1	645,033.8	694,176.1	0.00	5.00	0.00	66	10.0	8.0	Y
04c	17	1	646,769.9	693,891.4	0.00	5.00	0.00	66	10.0	8.0	Y
04d	18	4	647,557.4	694,067.5	0.00	5.00	0.00	66	10.0	8.0	Y
05a	19	3	649,634.9	694,506.7	0.00	5.00	0.00	66	10.0	8.0	Y
05b	20	3	651,114.1	695,826.1	0.00	5.00	0.00	66	10.0	8.0	Y
05c	21	2	651,915.4	695,785.3	0.00	5.00	0.00	66	10.0	8.0	Y
05d	22	2	652,098.8	696,084.1	0.00	5.00	0.00	66	10.0	8.0	Y

05e	23	1	651,707.1	697,477.4	0.00	5.00	0.00	66	10.0	8.0	Y
05f	24	1	648,889.7	694,791.2	0.00	5.00	0.00	66	10.0	8.0	Y
06a	25	1	649,419.8	697,228.6	0.00	5.00	0.00	66	10.0	8.0	Y
06b	26	1	650,083.9	697,017.1	0.00	5.00	0.00	66	10.0	8.0	Y
06c	27	3	649,997.4	697,420.1	0.00	5.00	0.00	66	10.0	8.0	Y
06d	28	1	646,646.8	696,786.4	0.00	5.00	0.00	66	10.0	8.0	Y
06e	29	1	647,549.6	696,184.6	0.00	5.00	0.00	66	10.0	8.0	Y
06f	30	1	646,856.9	695,884.2	0.00	5.00	0.00	66	10.0	8.0	Y
06g	31	1	647,644.4	695,630.1	0.00	5.00	0.00	66	10.0	8.0	Y
07a	32	1	654,685.8	694,902.6	0.00	5.00	0.00	66	10.0	8.0	Y
07b	33	1	654,657.9	695,496.2	0.00	5.00	0.00	66	10.0	8.0	Y
07c	34	1	654,685.8	696,233.4	0.00	5.00	0.00	66	10.0	8.0	Y
07d	35	1	654,582.2	697,186.9	0.00	5.00	0.00	66	10.0	8.0	Y
07e	36	1	654,601.8	697,827.2	0.00	5.00	0.00	66	10.0	8.0	Y
07f	37	1	654,157.5	695,458.1	0.00	5.00	0.00	66	10.0	8.0	Y
09a	38	1	658,074.0	697,252.0	0.00	5.00	0.00	66	10.0	8.0	Y
09b	39	0	658,585.4	696,426.2	0.00	5.00	0.00	66	10.0	8.0	Y
09c	40	1	658,974.6	697,647.5	0.00	5.00	0.00	66	10.0	8.0	Y
10a	41	1	660,987.0	695,179.3	0.00	5.00	0.00	66	10.0	8.0	Y
10b	42	3	659,235.1	696,204.6	0.00	5.00	0.00	66	10.0	8.0	Y
10c	43	1	659,630.7	696,151.4	0.00	5.00	0.00	66	10.0	8.0	Y
10d	44	4	660,029.6	696,340.4	0.00	5.00	0.00	66	10.0	8.0	Y
10e	45	4	660,627.1	696,326.8	0.00	5.00	0.00	66	10.0	8.0	Y
10f	46	5	661,109.2	696,306.4	0.00	5.00	0.00	66	10.0	8.0	Y
10g	47	3	661,828.9	696,272.5	0.00	5.00	0.00	66	10.0	8.0	Y
11a	48	1	665,350.0	697,174.6	0.00	5.00	0.00	66	10.0	8.0	Y
11b	49	1	664,890.4	697,766.6	0.00	5.00	0.00	66	10.0	8.0	Y
11c	50	1	664,152.2	697,996.4	0.00	5.00	0.00	66	10.0	8.0	Y
11d	51	4	663,173.2	698,274.5	0.00	5.00	0.00	66	10.0	8.0	Y
11e	52	4	663,469.8	698,247.8	0.00	5.00	0.00	66	10.0	8.0	Y
11f	53	5	663,714.8	697,916.0	0.00	5.00	0.00	66	10.0	8.0	Y
11g	54	6	662,883.9	698,585.2	0.00	5.00	0.00	66	10.0	8.0	Y
11h	55	3	662,577.7	698,470.4	0.00	5.00	0.00	66	10.0	8.0	Y
12a	56	2	667,742.9	699,567.7	0.00	5.00	0.00	66	10.0	8.0	Y
12b	57	1	666,634.2	699,007.5	0.00	5.00	0.00	66	10.0	8.0	Y
12c	58	1	666,190.9	697,694.2	0.00	5.00	0.00	66	10.0	8.0	Y

12d	59	1	666,004.6	699,180.3	0.00	5.00	0.00	66	10.0	8.0	Y
13a	60	2	668,782.5	700,954.2	0.00	5.00	0.00	66	10.0	8.0	Y
13b	61	1	668,831.6	700,403.2	0.00	5.00	0.00	66	10.0	8.0	Y
13c	62	4	667,993.9	700,150.8	0.00	5.00	0.00	66	10.0	8.0	Y
13d	63	3	667,716.9	700,397.9	0.00	5.00	0.00	66	10.0	8.0	Y
13e	64	2	666,988.3	700,178.6	0.00	5.00	0.00	66	10.0	8.0	Y
13f	65	1	666,318.5	699,688.9	0.00	5.00	0.00	66	10.0	8.0	Y
13g	66	1	665,969.8	699,806.4	0.00	5.00	0.00	66	10.0	8.0	Y
14a	67	3	672,006.9	701,473.4	0.00	5.00	0.00	66	10.0	8.0	Y
14b	68	1	671,751.8	701,298.9	0.00	5.00	0.00	66	10.0	8.0	Y
14c	69	1	671,454.1	701,248.0	0.00	5.00	0.00	66	10.0	8.0	Y
14d	70	1	670,787.7	701,147.0	0.00	5.00	0.00	66	10.0	8.0	Y
14e	71	1	670,059.6	700,899.4	0.00	5.00	0.00	66	10.0	8.0	Y
15a	72	1	671,803.0	700,161.5	0.00	5.00	0.00	66	10.0	8.0	Y
15b	73	1	670,460.4	699,244.9	0.00	5.00	0.00	66	10.0	8.0	Y
15c	74	1	672,681.8	700,846.4	0.00	5.00	0.00	66	10.0	8.0	Y
16a	75	1	676,010.0	701,483.1	0.00	5.00	0.00	66	10.0	8.0	Y
16b	76	1	675,503.2	701,518.7	0.00	5.00	0.00	66	10.0	8.0	Y
16c	77	1	674,932.8	701,400.8	0.00	5.00	0.00	66	10.0	8.0	Y
16d	78	1	674,244.6	702,177.8	0.00	5.00	0.00	66	10.0	8.0	Y
1	79	1	639,085.2	704,596.2	0.00	5.00	0.00	66	10.0	8.0	Y
2	80	1	639,659.3	699,384.3	0.00	5.00	0.00	66	10.0	8.0	Y
3	81	1	644,315.6	698,524.2	0.00	5.00	0.00	66	10.0	8.0	Y
4	82	1	646,039.9	693,744.6	0.00	5.00	0.00	66	10.0	8.0	Y
5	83	1	650,047.8	694,381.2	0.00	5.00	0.00	66	10.0	8.0	Y
6	84	1	649,364.8	696,994.4	0.00	5.00	0.00	66	10.0	8.0	Y
7	85	1	654,493.2	694,624.8	0.00	5.00	0.00	66	10.0	8.0	Y
8	86	1	656,646.6	695,002.2	0.00	5.00	0.00	66	10.0	8.0	Y
9	87	1	658,089.4	697,057.4	0.00	5.00	0.00	66	10.0	8.0	Y
10	88	1	661,001.4	695,347.2	0.00	5.00	0.00	66	10.0	8.0	Y
11	89	1	663,377.1	698,231.5	0.00	5.00	0.00	66	10.0	8.0	Y
12	90	1	666,807.6	698,819.4	0.00	5.00	0.00	66	10.0	8.0	Y
13	93	1	667,739.7	700,501.2	0.00	4.92	0.00	66	10.0	8.0	Y
14	94	1	671,451.7	701,171.1	0.00	4.92	0.00	66	10.0	8.0	Y
15	95	1	671,563.5	700,081.9	0.00	4.92	0.00	66	10.0	8.0	Y
16	96	1	675,419.7	700,969.0	0.00	4.92	0.00	66	10.0	8.0	Y

Mestre Greve Associates
MBJ

14 April 2009
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Existing Condition Noise Modeling
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
01a	1	1	0.0	39.5	66	39.5	10	----	39.5	0.0	8	-8.0
01b	2	1	0.0	40.2	66	40.2	10	----	40.2	0.0	8	-8.0
01c	3	1	0.0	38.4	66	38.4	10	----	38.4	0.0	8	-8.0
01d	4	1	0.0	38.0	66	38.0	10	----	38.0	0.0	8	-8.0
01e	5	1	0.0	37.8	66	37.8	10	----	37.8	0.0	8	-8.0
01f	6	1	0.0	37.6	66	37.6	10	----	37.6	0.0	8	-8.0
01g	7	1	0.0	37.3	66	37.3	10	----	37.3	0.0	8	-8.0
01h	8	1	0.0	37.3	66	37.3	10	----	37.3	0.0	8	-8.0
01i	9	1	0.0	37.6	66	37.6	10	----	37.6	0.0	8	-8.0
02a	10	1	0.0	37.3	66	37.3	10	----	37.3	0.0	8	-8.0
02b	11	1	0.0	38.0	66	38.0	10	----	38.0	0.0	8	-8.0
02c	12	1	0.0	37.8	66	37.8	10	----	37.8	0.0	8	-8.0
02d	13	1	0.0	38.4	66	38.4	10	----	38.4	0.0	8	-8.0
03a	14	1	0.0	38.6	66	38.6	10	----	38.6	0.0	8	-8.0
04a	15	1	0.0	39.1	66	39.1	10	----	39.1	0.0	8	-8.0
04b	16	1	0.0	38.7	66	38.7	10	----	38.7	0.0	8	-8.0
04c	17	1	0.0	39.5	66	39.5	10	----	39.5	0.0	8	-8.0
04d	18	4	0.0	39.9	66	39.9	10	----	39.9	0.0	8	-8.0
05a	19	3	0.0	41.3	66	41.3	10	----	41.3	0.0	8	-8.0
05b	20	3	0.0	42.8	66	42.8	10	----	42.8	0.0	8	-8.0
05c	21	2	0.0	44.3	66	44.3	10	----	44.3	0.0	8	-8.0
05d	22	2	0.0	44.9	66	44.9	10	----	44.9	0.0	8	-8.0
05e	23	1	0.0	44.2	66	44.2	10	----	44.2	0.0	8	-8.0
05f	24	1	0.0	40.8	66	40.8	10	----	40.8	0.0	8	-8.0

06a	25	1	0.0	41.5	66	41.5	10	----	41.5	0.0	8	-8.0
06b	26	1	0.0	42.0	66	42.0	10	----	42.0	0.0	8	-8.0
06c	27	3	0.0	42.0	66	42.0	10	----	42.0	0.0	8	-8.0
06d	28	1	0.0	39.7	66	39.7	10	----	39.7	0.0	8	-8.0
06e	29	1	0.0	40.1	66	40.1	10	----	40.1	0.0	8	-8.0
06f	30	1	0.0	39.7	66	39.7	10	----	39.7	0.0	8	-8.0
06g	31	1	0.0	40.1	66	40.1	10	----	40.1	0.0	8	-8.0
07a	32	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
07b	33	1	0.0	71.0	66	71.0	10	Snd Lvl	71.0	0.0	8	-8.0
07c	34	1	0.0	71.1	66	71.1	10	Snd Lvl	71.1	0.0	8	-8.0
07d	35	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
07e	36	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0
07f	37	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
09a	38	1	0.0	43.4	66	43.4	10	----	43.4	0.0	8	-8.0
09b	39	0	0.0	43.3	66	43.3	10	----	43.3	0.0	8	-8.0
09c	40	1	0.0	43.2	66	43.2	10	----	43.2	0.0	8	-8.0
10a	41	1	0.0	43.9	66	43.9	10	----	43.9	0.0	8	-8.0
10b	42	3	0.0	43.3	66	43.3	10	----	43.3	0.0	8	-8.0
10c	43	1	0.0	43.4	66	43.4	10	----	43.4	0.0	8	-8.0
10d	44	4	0.0	43.4	66	43.4	10	----	43.4	0.0	8	-8.0
10e	45	4	0.0	43.6	66	43.6	10	----	43.6	0.0	8	-8.0
10f	46	5	0.0	43.8	66	43.8	10	----	43.8	0.0	8	-8.0
10g	47	3	0.0	44.1	66	44.1	10	----	44.1	0.0	8	-8.0
11a	48	1	0.0	46.6	66	46.6	10	----	46.6	0.0	8	-8.0
11b	49	1	0.0	45.9	66	45.9	10	----	45.9	0.0	8	-8.0
11c	50	1	0.0	45.2	66	45.2	10	----	45.2	0.0	8	-8.0
11d	51	4	0.0	44.5	66	44.5	10	----	44.5	0.0	8	-8.0
11e	52	4	0.0	44.6	66	44.6	10	----	44.6	0.0	8	-8.0
11f	53	5	0.0	44.9	66	44.9	10	----	44.9	0.0	8	-8.0
11g	54	6	0.0	44.2	66	44.2	10	----	44.2	0.0	8	-8.0
11h	55	3	0.0	44.1	66	44.1	10	----	44.1	0.0	8	-8.0
12a	56	2	0.0	47.9	66	47.9	10	----	47.9	0.0	8	-8.0
12b	57	1	0.0	47.0	66	47.0	10	----	47.0	0.0	8	-8.0
12c	58	1	0.0	47.4	66	47.4	10	----	47.4	0.0	8	-8.0
12d	59	1	0.0	46.2	66	46.2	10	----	46.2	0.0	8	-8.0
13a	60	2	0.0	47.7	66	47.7	10	----	47.7	0.0	8	-8.0
13b	61	1	0.0	48.4	66	48.4	10	----	48.4	0.0	8	-8.0
13c	62	4	0.0	47.6	66	47.6	10	----	47.6	0.0	8	-8.0
13d	63	3	0.0	47.1	66	47.1	10	----	47.1	0.0	8	-8.0
13e	64	2	0.0	46.6	66	46.6	10	----	46.6	0.0	8	-8.0
13f	65	1	0.0	46.2	66	46.2	10	----	46.2	0.0	8	-8.0

13g	66	1	0.0	45.9	66	45.9	10	----	45.9	0.0	8	-8.0
14a	67	3	0.0	50.7	66	50.7	10	----	50.7	0.0	8	-8.0
14b	68	1	0.0	51.0	66	51.0	10	----	51.0	0.0	8	-8.0
14c	69	1	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0
14d	70	1	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0
14e	71	1	0.0	49.4	66	49.4	10	----	49.4	0.0	8	-8.0
15a	72	1	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
15b	73	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
15c	74	1	0.0	54.3	66	54.3	10	----	54.3	0.0	8	-8.0
16a	75	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
16b	76	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
16c	77	1	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0
16d	78	1	0.0	52.0	66	52.0	10	----	52.0	0.0	8	-8.0
1	79	1	0.0	40.2	66	40.2	10	----	40.2	0.0	8	-8.0
2	80	1	0.0	37.3	66	37.3	10	----	37.3	0.0	8	-8.0
3	81	1	0.0	38.9	66	38.9	10	----	38.9	0.0	8	-8.0
4	82	1	0.0	39.1	66	39.1	10	----	39.1	0.0	8	-8.0
5	83	1	0.0	41.6	66	41.6	10	----	41.6	0.0	8	-8.0
6	84	1	0.0	41.4	66	41.4	10	----	41.4	0.0	8	-8.0
7	85	1	0.0	75.9	66	75.9	10	Snd Lvl	75.9	0.0	8	-8.0
8	86	1	0.0	45.8	66	45.8	10	----	45.8	0.0	8	-8.0
9	87	1	0.0	43.4	66	43.4	10	----	43.4	0.0	8	-8.0
10	88	1	0.0	43.9	66	43.9	10	----	43.9	0.0	8	-8.0
11	89	1	0.0	44.6	66	44.6	10	----	44.6	0.0	8	-8.0
12	90	1	0.0	47.3	66	47.3	10	----	47.3	0.0	8	-8.0
13	93	1	0.0	47.0	66	47.0	10	----	47.0	0.0	8	-8.0
14	94	1	0.0	50.9	66	50.9	10	----	50.9	0.0	8	-8.0
15	95	1	0.0	55.2	66	55.2	10	----	55.2	0.0	8	-8.0
16	96	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	145	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 With Toll

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
540 south of access road	108.5	17a	299	675,704.1	700,379.8	0.00				Average	
		17b	296	674,098.5	699,642.0	0.00				Average	
		18	295	671,263.0	698,061.0	0.00				Average	
		19	292	670,453.0	697,350.0	0.00				Average	
		20	1	669,922.0	696,648.0	0.00				Average	
		21	2	669,454.0	695,128.0	0.00				Average	
		22	3	668,662.0	692,257.0	0.00				Average	
		23	4	668,554.0	689,774.0	0.00				Average	
		24	5	668,474.0	687,611.0	0.00				Average	
		25	6	668,619.0	686,802.0	0.00				Average	
		26	7	668,795.0	686,054.0	0.00				Average	
		27	8	668,993.0	685,226.0	0.00				Average	
		28	9	669,213.0	684,225.0	0.00				Average	
		29	10	669,240.0	684,121.0	0.00				Average	
		30	11	669,248.0	684,036.0	0.00				Average	
		31	12	669,350.0	683,480.0	0.00				Average	
		32	13	669,353.0	683,343.0	0.00				Average	
		33	14	669,369.0	682,947.0	0.00				Average	
		34	15	669,364.0	681,105.0	0.00				Average	
		35	16	669,361.0	680,563.0	0.00				Average	
		36	17	669,358.0	680,162.0	0.00				Average	
		37	18	669,345.0	679,964.0	0.00				Average	
		38	19	669,303.0	679,785.0	0.00				Average	
		39	20	669,163.0	679,480.0	0.00				Average	
		40	21	668,558.0	678,842.0	0.00				Average	

		41	22	668,300.0	678,666.0	0.00				Average	
		42	23	668,006.0	678,498.0	0.00				Average	
		43	24	667,765.0	678,362.0	0.00				Average	
		44	25	667,434.0	677,994.0	0.00				Average	
		45	26	667,255.0	677,652.0	0.00				Average	
		46	27	667,092.0	677,358.0	0.00				Average	
		47	28	667,018.0	677,121.0	0.00				Average	
		48	29	666,961.0	676,868.0	0.00				Average	
		49	30	666,955.0	675,553.0	0.00					
112	24.0	1	31	654,338.0	710,514.0	0.00				Average	
		2	32	654,362.0	709,819.0	0.00				Average	
		3	33	654,362.0	709,149.0	0.00				Average	
		4	34	654,409.0	708,837.0	0.00				Average	
		5	35	654,433.0	708,334.0	0.00				Average	
		6	36	654,194.0	707,256.0	0.00				Average	
		7	37	653,673.0	705,536.0	0.00				Average	
		8	38	653,588.0	705,298.0	0.00				Average	
		9	39	653,537.0	705,068.0	0.00				Average	
		10	40	653,341.0	704,515.0	0.00				Average	
		11	41	653,214.0	704,319.0	0.00				Average	
		12	42	652,269.0	703,468.0	0.00				Average	
		13	43	652,201.0	703,357.0	0.00				Average	
		14	44	652,167.0	703,212.0	0.00				Average	
		15	45	652,169.0	702,177.0	0.00				Average	
		16	46	652,180.0	702,069.0	0.00				Average	
		17	47	652,213.0	701,916.0	0.00				Average	
		18	48	652,281.0	701,731.0	0.00				Average	
		19	49	652,496.0	701,316.0	0.00				Average	
		20	50	652,769.0	701,035.0	0.00				Average	
		21	51	653,698.0	699,929.0	0.00				Average	
		22	52	653,859.0	699,349.0	0.00				Average	
		23	53	653,914.0	699,008.0	0.00				Average	
		24	54	653,939.0	698,685.0	0.00				Average	
		25	55	654,491.0	696,858.0	1.00				Average	Y
		26	56	654,532.0	696,618.0	1.00				Average	Y
		27	57	654,411.0	693,900.0	0.00				Average	
		28	58	654,287.0	693,186.0	0.00				Average	
		29	59	654,131.0	692,561.0	0.00				Average	
		30	60	653,705.0	690,965.0	0.00				Average	

		31	61	653,644.0	690,600.0	0.00				Average	
		32	62	653,561.0	690,319.0	0.00				Average	
		33	63	653,545.0	690,236.0	0.00				Average	
		34	64	653,030.0	689,206.0	0.00				Average	
		35	65	652,788.0	688,751.0	0.00				Average	
		36	66	652,773.0	688,592.0	0.00				Average	
		37	67	652,849.0	688,464.0	0.00				Average	
		38	68	653,386.0	688,024.0	0.00					
264 west of sr-112	50.0	1	69	634,663.0	708,285.0	0.00				Average	
		2	70	636,427.0	708,219.0	0.00				Average	
		3	71	637,660.0	708,173.0	0.00				Average	
		4	72	638,604.0	708,114.0	0.00				Average	
		5	73	639,108.0	708,101.0	0.00				Average	
		6	74	639,272.0	708,062.0	0.00				Average	
		7	75	639,279.0	707,609.0	0.00				Average	
		8	76	639,292.0	707,518.0	0.00				Average	
		9	77	639,384.0	707,446.0	0.00				Average	
		10	78	639,626.0	707,406.0	0.00				Average	
		11	79	640,092.0	707,321.0	0.00				Average	
		12	80	640,446.0	707,262.0	0.00				Average	
		13	81	641,672.0	707,144.0	0.00				Average	
		14	82	642,236.0	707,026.0	0.00				Average	
		15	83	643,541.0	706,600.0	0.00				Average	
		16	84	643,803.0	706,560.0	0.00				Average	
		17	85	644,216.0	706,600.0	0.00				Average	
		18	86	644,701.0	706,737.0	0.00				Average	
		19	87	645,835.0	707,668.0	0.00				Average	
		20	88	647,035.0	708,947.0	0.00				Average	
		21	89	648,956.0	710,212.0	0.00				Average	
		22	90	649,336.0	710,514.0	0.00				Average	
		23	91	649,507.0	710,593.0	0.00				Average	
		24	92	649,710.0	710,665.0	0.00				Average	
		25	93	651,231.0	710,901.0	0.00				Average	
		26	94	652,077.0	710,920.0	0.00				Average	
		27	95	652,463.0	710,847.0	0.00				Average	
		28	96	652,664.0	710,825.0	0.00				Average	
		29	97	654,344.0	710,538.0	0.00					
540 north of access road	108.5	2	98	678,458.0	706,204.0	0.00				Average	
		3	99	678,412.0	705,562.0	0.00				Average	

		4	100	678,398.0	705,449.0	0.00				Average	
		5	101	678,391.0	705,403.0	0.00				Average	
		6	102	678,387.0	705,351.0	0.00				Average	
		7	103	678,324.0	705,040.0	0.00				Average	
		8	104	678,267.0	704,885.0	0.00				Average	
		9	105	678,151.0	704,405.0	0.00				Average	
		10	106	678,080.0	703,975.0	0.00				Average	
		11	107	678,052.0	703,354.0	0.00				Average	
		12	108	677,982.0	703,029.0	0.00				Average	
		13	109	677,837.0	702,557.0	0.00				Average	
		14	110	677,601.0	702,006.0	0.00				Average	
		15	111	677,424.0	701,721.0	0.00				Average	
		16	112	677,177.0	701,410.0	0.00				Average	
		17	113	676,934.0	701,223.0	0.00				Average	
		17a	291	675,704.1	700,379.8	0.00					
540 north of sr-264	108.5	1	117	678,582.0	710,416.0	0.00				Average	
		2	118	678,458.0	706,204.0	0.00					
264 west of I-540	50.0	7	119	666,454.0	706,994.0	0.00				Average	
		8	120	666,519.0	706,882.0	0.00				Average	
		9	121	666,581.0	706,805.0	0.00				Average	
		10	122	666,697.0	706,784.0	0.00				Average	
		11	123	667,850.0	706,752.0	0.00				Average	
		12	124	678,454.0	706,205.0	0.00					
264 east of sr-112	50.0	1	125	654,426.0	708,645.0	0.00				Average	
		2	126	665,582.0	708,191.0	0.00				Average	
		3	127	666,224.0	708,128.0	0.00				Average	
		4	128	666,344.0	708,093.0	0.00				Average	
		5	129	666,432.0	708,042.0	0.00				Average	
		6	130	666,491.0	707,918.0	0.00				Average	
		7	131	666,454.0	706,994.0	0.00					
Alt4	108.0	1	132	636,517.3	708,136.4	0.00				Average	
		2	133	636,630.8	707,908.4	0.00				Average	
		3	134	636,796.2	707,578.8	0.00				Average	
		4	135	637,119.0	706,931.2	0.00				Average	
		5	136	638,093.8	704,987.2	0.00				Average	
		6	137	639,240.8	702,693.6	0.00				Average	
		7	138	639,353.2	702,467.1	0.00				Average	
		8	139	639,478.0	702,251.2	0.00				Average	
		9	140	639,581.4	702,067.4	0.00				Average	

		10	141	639,745.5	701,823.0	0.00				Average	
		11	142	639,968.4	701,528.7	0.00				Average	
		12	143	640,121.3	701,348.1	0.00				Average	
		13	144	640,326.3	701,123.3	0.00				Average	
		14	145	640,417.3	701,032.3	0.00				Average	
		15	146	640,545.7	700,907.4	0.00				Average	
		16	147	640,797.2	700,691.6	0.00				Average	
		17	148	640,973.7	700,548.8	0.00				Average	
		18	149	641,200.2	700,375.8	0.00				Average	
		19	150	642,275.6	699,567.3	0.00				Average	
		20	151	642,673.3	699,264.0	0.00				Average	
		21	152	642,953.9	699,056.3	0.00				Average	
		22	153	643,331.9	698,765.5	0.00				Average	
		23	154	643,697.5	698,490.8	0.00				Average	
		24	155	644,161.2	698,144.7	0.00				Average	
		25	156	644,946.7	697,546.7	0.00				Average	
		26	157	645,670.8	697,002.5	0.00				Average	
		27	158	645,921.2	696,835.6	0.00				Average	
		28	159	646,219.0	696,666.1	0.00				Average	
		29	160	646,566.8	696,487.7	0.00				Average	
		30	161	646,907.4	696,346.8	0.00				Average	
		31	162	647,047.1	696,294.1	0.00				Average	
		32	163	647,373.4	696,185.2	0.00				Average	
		33	164	647,803.2	696,081.7	0.00				Average	
		34	165	648,193.8	696,014.0	0.00				Average	
		35	166	648,498.9	695,988.2	0.00				Average	
		36	167	648,808.8	695,975.5	0.00				Average	
		37	168	648,961.5	695,979.9	0.00				Average	
		39	170	649,030.4	695,985.6	0.00				Average	
		40	171	649,105.2	695,993.5	0.00				Average	
		41	172	649,188.5	696,005.8	0.00				Average	
		42	173	649,271.2	696,021.1	0.00				Average	
		43	174	649,342.1	696,036.3	0.00				Average	
		44	175	649,413.7	696,054.5	0.00				Average	
		45	176	649,488.7	696,075.7	0.00				Average	
		46	177	649,565.5	696,101.0	0.00				Average	
		47	178	649,627.1	696,125.7	0.00				Average	
		48	179	649,715.9	696,166.1	0.00				Average	
		49	180	649,804.4	696,219.1	0.00				Average	

		50	181	649,886.8	696,271.4	0.00				Average	
		51	182	649,970.4	696,325.0	0.00				Average	
		52	183	650,055.3	696,376.4	0.00				Average	
		53	184	650,141.5	696,425.6	0.00				Average	
		54	185	650,229.0	696,472.5	0.00				Average	
		55	186	650,317.6	696,517.1	0.00				Average	
		56	187	650,407.4	696,559.4	0.00				Average	
		57	188	650,498.3	696,599.4	0.00				Average	
		58	189	650,590.1	696,637.0	0.00				Average	
		59	190	650,682.9	696,672.2	0.00				Average	
		60	191	650,776.6	696,705.0	0.00				Average	
		61	192	650,871.1	696,735.3	0.00				Average	
		62	193	650,966.4	696,763.2	0.00				Average	
		63	194	651,062.4	696,788.5	0.00				Average	
		64	195	651,158.9	696,811.4	0.00				Average	
		65	196	651,256.1	696,831.8	0.00				Average	
		66	197	651,353.7	696,849.6	0.00				Average	
		67	198	651,451.8	696,864.9	0.00				Average	
		68	199	651,550.2	696,877.6	0.00				Average	
		69	200	651,649.0	696,887.8	0.00				Average	
		70	201	651,747.9	696,895.4	0.00				Average	
		71	202	651,847.1	696,900.4	0.00				Average	
		72	203	651,946.3	696,902.8	0.00				Average	
		73	204	652,045.5	696,902.7	0.00				Average	
		74	205	652,144.8	696,900.0	0.00				Average	
		75	206	659,133.4	696,618.1	0.00				Average	
		76	207	659,231.2	696,615.4	0.00				Average	
		77	208	659,329.0	696,615.2	0.00				Average	
		78	209	659,426.7	696,617.5	0.00				Average	
		79	210	659,524.4	696,622.4	0.00				Average	
		80	211	659,621.9	696,629.7	0.00				Average	
		81	212	659,719.2	696,639.5	0.00				Average	
		82	213	659,816.2	696,651.8	0.00				Average	
		83	214	659,912.9	696,666.6	0.00				Average	
		84	215	660,009.2	696,683.8	0.00				Average	
		85	216	660,104.9	696,703.5	0.00				Average	
		86	217	660,200.2	696,725.7	0.00				Average	
		87	218	660,294.8	696,750.3	0.00				Average	
		88	219	660,388.8	696,777.3	0.00				Average	

		89	220	660,482.1	696,806.7	0.00				Average	
		90	221	660,574.6	696,838.4	0.00				Average	
		91	222	660,666.2	696,872.6	0.00				Average	
		92	223	660,757.0	696,909.0	0.00				Average	
		93	224	660,846.7	696,947.8	0.00				Average	
		94	225	660,935.5	696,988.9	0.00				Average	
		95	226	661,023.1	697,032.2	0.00				Average	
		96	227	661,109.7	697,077.7	0.00				Average	
		97	228	661,195.0	697,125.5	0.00				Average	
		98	229	661,279.1	697,175.4	0.00				Average	
		99	230	661,361.9	697,227.5	0.00				Average	
		100	231	661,443.3	697,281.6	0.00				Average	
		101	232	661,523.3	697,337.8	0.00				Average	
		102	233	661,601.9	697,396.1	0.00				Average	
		103	234	662,396.5	698,001.4	0.00				Average	
		104	235	662,494.0	698,074.0	0.00				Average	
		105	236	662,593.0	698,144.6	0.00				Average	
		106	237	662,693.5	698,213.0	0.00				Average	
		107	238	662,795.4	698,279.3	0.00				Average	
		108	239	662,898.7	698,343.4	0.00				Average	
		109	240	663,003.3	698,405.3	0.00				Average	
		110	241	663,109.2	698,464.9	0.00				Average	
		111	242	663,216.4	698,522.3	0.00				Average	
		112	243	663,324.7	698,577.5	0.00				Average	
		113	244	663,434.2	698,630.3	0.00				Average	
		114	245	663,544.8	698,680.7	0.00				Average	
		115	246	663,656.5	698,728.9	0.00				Average	
		116	247	663,769.1	698,774.6	0.00				Average	
		117	248	663,882.7	698,817.9	0.00				Average	
		118	249	663,997.2	698,858.9	0.00				Average	
		119	250	664,112.5	698,897.3	0.00				Average	
		120	251	664,228.6	698,933.4	0.00				Average	
		121	252	664,345.4	698,966.9	0.00				Average	
		122	253	671,843.0	701,034.1	0.00				Average	
		123	254	671,947.0	701,061.4	0.00				Average	
		124	255	672,051.6	701,086.4	0.00				Average	
		125	256	672,156.8	701,108.8	0.00				Average	
		126	257	672,262.5	701,128.8	0.00				Average	
		127	258	672,368.6	701,146.3	0.00				Average	

		128	259	672,475.1	701,161.3	0.00				Average	
		129	260	672,582.0	701,173.8	0.00				Average	
		130	261	672,689.1	701,183.8	0.00				Average	
		131	262	672,796.4	701,191.3	0.00				Average	
		132	263	672,903.8	701,196.2	0.00				Average	
		133	264	673,011.3	701,198.7	0.00				Average	
		134	265	673,118.9	701,198.6	0.00				Average	
		135	266	673,226.4	701,196.0	0.00				Average	
		136	267	673,333.9	701,190.8	0.00				Average	
		137	268	673,441.2	701,183.2	0.00				Average	
		138	269	673,548.2	701,173.0	0.00				Average	
		139	270	673,655.0	701,160.3	0.00				Average	
		140	271	673,761.5	701,145.1	0.00				Average	
		141	272	673,867.6	701,127.5	0.00				Average	
		142	273	673,973.3	701,107.3	0.00				Average	
		143	274	674,078.4	701,084.7	0.00				Average	
		144	275	674,183.0	701,059.6	0.00				Average	
		145	276	674,287.0	701,032.0	0.00				Average	
		146	277	674,390.3	701,002.0	0.00				Average	
		147	278	674,492.8	700,969.7	0.00				Average	
		148	279	674,594.6	700,934.9	0.00				Average	
		149	280	674,695.6	700,897.7	0.00				Average	
		150	281	674,795.6	700,858.2	0.00				Average	
		151	282	674,894.7	700,816.3	0.00				Average	
		152	283	674,992.7	700,772.1	0.00				Average	
		153	284	675,089.7	700,725.7	0.00				Average	
		154	285	675,185.6	700,676.9	0.00				Average	
		155	286	675,280.4	700,626.0	0.00				Average	
		156	287	675,373.8	700,572.8	0.00				Average	
		156a	451	675,704.1	700,379.8	0.00					

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 With Toll

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
540 south of access road	17a	299	10233	65	285	55	853	55	0	0	0	0
	17b	296	10233	65	285	55	853	55	0	0	0	0
	18	295	10233	65	285	55	853	55	0	0	0	0
	19	292	10233	65	285	55	853	55	0	0	0	0
	20	1	10233	65	285	55	853	55	0	0	0	0
	21	2	10233	65	285	55	853	55	0	0	0	0
	22	3	10233	65	285	55	853	55	0	0	0	0
	23	4	10233	65	285	55	853	55	0	0	0	0
	24	5	10233	65	285	55	853	55	0	0	0	0
	25	6	10233	65	285	55	853	55	0	0	0	0
	26	7	10233	65	285	55	853	55	0	0	0	0
	27	8	10233	65	285	55	853	55	0	0	0	0
	28	9	10233	65	285	55	853	55	0	0	0	0
	29	10	10233	65	285	55	853	55	0	0	0	0
	30	11	10233	65	285	55	853	55	0	0	0	0
	31	12	10233	65	285	55	853	55	0	0	0	0
	32	13	10233	65	285	55	853	55	0	0	0	0
	33	14	10233	65	285	55	853	55	0	0	0	0
	34	15	10233	65	285	55	853	55	0	0	0	0
	35	16	10233	65	285	55	853	55	0	0	0	0
	36	17	10233	65	285	55	853	55	0	0	0	0
	37	18	10233	65	285	55	853	55	0	0	0	0
	38	19	10233	65	285	55	853	55	0	0	0	0

	39	20	10233	65	285	55	853	55	0	0	0	0
	40	21	10233	65	285	55	853	55	0	0	0	0
	41	22	10233	65	285	55	853	55	0	0	0	0
	42	23	10233	65	285	55	853	55	0	0	0	0
	43	24	10233	65	285	55	853	55	0	0	0	0
	44	25	10233	65	285	55	853	55	0	0	0	0
	45	26	10233	65	285	55	853	55	0	0	0	0
	46	27	10233	65	285	55	853	55	0	0	0	0
	47	28	10233	65	285	55	853	55	0	0	0	0
	48	29	10233	65	285	55	853	55	0	0	0	0
	49	30										
112	1	31	853	65	32	55	96	55	0	0	0	0
	2	32	853	65	32	55	96	55	0	0	0	0
	3	33	853	65	32	55	96	55	0	0	0	0
	4	34	853	65	32	55	96	55	0	0	0	0
	5	35	853	65	32	55	96	55	0	0	0	0
	6	36	853	65	32	55	96	55	0	0	0	0
	7	37	853	65	32	55	96	55	0	0	0	0
	8	38	853	65	32	55	96	55	0	0	0	0
	9	39	853	65	32	55	96	55	0	0	0	0
	10	40	853	65	32	55	96	55	0	0	0	0
	11	41	853	65	32	55	96	55	0	0	0	0
	12	42	853	65	32	55	96	55	0	0	0	0
	13	43	853	65	32	55	96	55	0	0	0	0
	14	44	853	65	32	55	96	55	0	0	0	0
	15	45	853	65	32	55	96	55	0	0	0	0
	16	46	853	65	32	55	96	55	0	0	0	0
	17	47	853	65	32	55	96	55	0	0	0	0
	18	48	853	65	32	55	96	55	0	0	0	0
	19	49	853	65	32	55	96	55	0	0	0	0
	20	50	853	65	32	55	96	55	0	0	0	0
	21	51	853	65	32	55	96	55	0	0	0	0
	22	52	853	65	32	55	96	55	0	0	0	0
	23	53	853	65	32	55	96	55	0	0	0	0
	24	54	853	65	32	55	96	55	0	0	0	0
	25	55	853	65	32	55	96	55	0	0	0	0

	26	56	853	65	32	55	96	55	0	0	0	0
	27	57	853	65	32	55	96	55	0	0	0	0
	28	58	853	65	32	55	96	55	0	0	0	0
	29	59	853	65	32	55	96	55	0	0	0	0
	30	60	853	65	32	55	96	55	0	0	0	0
	31	61	853	65	32	55	96	55	0	0	0	0
	32	62	853	65	32	55	96	55	0	0	0	0
	33	63	853	65	32	55	96	55	0	0	0	0
	34	64	853	65	32	55	96	55	0	0	0	0
	35	65	853	65	32	55	96	55	0	0	0	0
	36	66	853	65	32	55	96	55	0	0	0	0
	37	67	853	65	32	55	96	55	0	0	0	0
	38	68										
264 west of sr-112	1	69	261	65	8	55	22	55	0	0	0	0
	2	70	261	65	8	55	22	55	0	0	0	0
	3	71	261	65	8	55	22	55	0	0	0	0
	4	72	261	65	8	55	22	55	0	0	0	0
	5	73	261	65	8	55	22	55	0	0	0	0
	6	74	261	65	8	55	22	55	0	0	0	0
	7	75	261	65	8	55	22	55	0	0	0	0
	8	76	261	65	8	55	22	55	0	0	0	0
	9	77	261	65	8	55	22	55	0	0	0	0
	10	78	261	65	8	55	22	55	0	0	0	0
	11	79	261	65	8	55	22	55	0	0	0	0
	12	80	261	65	8	55	22	55	0	0	0	0
	13	81	261	65	8	55	22	55	0	0	0	0
	14	82	261	65	8	55	22	55	0	0	0	0
	15	83	261	65	8	55	22	55	0	0	0	0
	16	84	261	65	8	55	22	55	0	0	0	0
	17	85	261	65	8	55	22	55	0	0	0	0
	18	86	261	65	8	55	22	55	0	0	0	0
	19	87	261	65	8	55	22	55	0	0	0	0
	20	88	261	65	8	55	22	55	0	0	0	0
	21	89	261	65	8	55	22	55	0	0	0	0
	22	90	261	65	8	55	22	55	0	0	0	0
	23	91	261	65	8	55	22	55	0	0	0	0

	24	92	261	65	8	55	22	55	0	0	0	0
	25	93	261	65	8	55	22	55	0	0	0	0
	26	94	261	65	8	55	22	55	0	0	0	0
	27	95	261	65	8	55	22	55	0	0	0	0
	28	96	261	65	8	55	22	55	0	0	0	0
	29	97										
540 north of access road	2	98	9783	65	272	55	816	55	0	0	0	0
	3	99	9783	65	272	55	816	55	0	0	0	0
	4	100	9783	65	272	55	816	55	0	0	0	0
	5	101	9783	65	272	55	816	55	0	0	0	0
	6	102	9783	65	272	55	816	55	0	0	0	0
	7	103	9783	65	272	55	816	55	0	0	0	0
	8	104	9783	65	272	55	816	55	0	0	0	0
	9	105	9783	65	272	55	816	55	0	0	0	0
	10	106	9783	65	272	55	816	55	0	0	0	0
	11	107	9783	65	272	55	816	55	0	0	0	0
	12	108	9783	65	272	55	816	55	0	0	0	0
	13	109	9783	65	272	55	816	55	0	0	0	0
	14	110	9783	65	272	55	816	55	0	0	0	0
	15	111	9783	65	272	55	816	55	0	0	0	0
	16	112	9783	65	272	55	816	55	0	0	0	0
	17	113	9783	65	272	55	816	55	0	0	0	0
	17a	291										
540 north of sr-264	1	117	9605	65	359	55	1077	55	0	0	0	0
	2	118										
264 west of I-540	7	119	1284	65	25	55	73	55	0	0	0	0
	8	120	1284	65	25	55	73	55	0	0	0	0
	9	121	1284	65	25	55	73	55	0	0	0	0
	10	122	1284	65	25	55	73	55	0	0	0	0
	11	123	1284	65	25	55	73	55	0	0	0	0
	12	124										
264 east of sr-112	1	125	765	65	22	55	64	55	0	0	0	0
	2	126	765	65	22	55	64	55	0	0	0	0
	3	127	765	65	22	55	64	55	0	0	0	0
	4	128	765	65	22	55	64	55	0	0	0	0
	5	129	765	65	22	55	64	55	0	0	0	0

	6	130	765	65	22	55	64	55	0	0	0	0
	7	131										
Alt4	1	132	1359	65	38	55	114	55	0	0	0	0
	2	133	1359	65	38	55	114	55	0	0	0	0
	3	134	1359	65	38	55	114	55	0	0	0	0
	4	135	1359	65	38	55	114	55	0	0	0	0
	5	136	1359	65	38	55	114	55	0	0	0	0
	6	137	1359	65	38	55	114	55	0	0	0	0
	7	138	1359	65	38	55	114	55	0	0	0	0
	8	139	1359	65	38	55	114	55	0	0	0	0
	9	140	1359	65	38	55	114	55	0	0	0	0
	10	141	1359	65	38	55	114	55	0	0	0	0
	11	142	1359	65	38	55	114	55	0	0	0	0
	12	143	1359	65	38	55	114	55	0	0	0	0
	13	144	1359	65	38	55	114	55	0	0	0	0
	14	145	1359	65	38	55	114	55	0	0	0	0
	15	146	1359	65	38	55	114	55	0	0	0	0
	16	147	1359	65	38	55	114	55	0	0	0	0
	17	148	1359	65	38	55	114	55	0	0	0	0
	18	149	1359	65	38	55	114	55	0	0	0	0
	19	150	1359	65	38	55	114	55	0	0	0	0
	20	151	1359	65	38	55	114	55	0	0	0	0
	21	152	1359	65	38	55	114	55	0	0	0	0
	22	153	1359	65	38	55	114	55	0	0	0	0
	23	154	1359	65	38	55	114	55	0	0	0	0
	24	155	1359	65	38	55	114	55	0	0	0	0
	25	156	1359	65	38	55	114	55	0	0	0	0
	26	157	1359	65	38	55	114	55	0	0	0	0
	27	158	1359	65	38	55	114	55	0	0	0	0
	28	159	1359	65	38	55	114	55	0	0	0	0
	29	160	1359	65	38	55	114	55	0	0	0	0
	30	161	1359	65	38	55	114	55	0	0	0	0
	31	162	1359	65	38	55	114	55	0	0	0	0
	32	163	1359	65	38	55	114	55	0	0	0	0
	33	164	1359	65	38	55	114	55	0	0	0	0
	34	165	1359	65	38	55	114	55	0	0	0	0

	35	166	1359	65	38	55	114	55	0	0	0	0
	36	167	1359	65	38	55	114	55	0	0	0	0
	37	168	1359	65	38	55	114	55	0	0	0	0
	39	170	1359	65	38	55	114	55	0	0	0	0
	40	171	1359	65	38	55	114	55	0	0	0	0
	41	172	1359	65	38	55	114	55	0	0	0	0
	42	173	1359	65	38	55	114	55	0	0	0	0
	43	174	1359	65	38	55	114	55	0	0	0	0
	44	175	1359	65	38	55	114	55	0	0	0	0
	45	176	1359	65	38	55	114	55	0	0	0	0
	46	177	1359	65	38	55	114	55	0	0	0	0
	47	178	1359	65	38	55	114	55	0	0	0	0
	48	179	1359	65	38	55	114	55	0	0	0	0
	49	180	1359	65	38	55	114	55	0	0	0	0
	50	181	1359	65	38	55	114	55	0	0	0	0
	51	182	1359	65	38	55	114	55	0	0	0	0
	52	183	1359	65	38	55	114	55	0	0	0	0
	53	184	1359	65	38	55	114	55	0	0	0	0
	54	185	1359	65	38	55	114	55	0	0	0	0
	55	186	1359	65	38	55	114	55	0	0	0	0
	56	187	1359	65	38	55	114	55	0	0	0	0
	57	188	1359	65	38	55	114	55	0	0	0	0
	58	189	1359	65	38	55	114	55	0	0	0	0
	59	190	1359	65	38	55	114	55	0	0	0	0
	60	191	1359	65	38	55	114	55	0	0	0	0
	61	192	1359	65	38	55	114	55	0	0	0	0
	62	193	1359	65	38	55	114	55	0	0	0	0
	63	194	1359	65	38	55	114	55	0	0	0	0
	64	195	1359	65	38	55	114	55	0	0	0	0
	65	196	1359	65	38	55	114	55	0	0	0	0
	66	197	1359	65	38	55	114	55	0	0	0	0
	67	198	1359	65	38	55	114	55	0	0	0	0
	68	199	1359	65	38	55	114	55	0	0	0	0
	69	200	1359	65	38	55	114	55	0	0	0	0
	70	201	1359	65	38	55	114	55	0	0	0	0
	71	202	1359	65	38	55	114	55	0	0	0	0

	72	203	1359	65	38	55	114	55	0	0	0	0
	73	204	1359	65	38	55	114	55	0	0	0	0
	74	205	1359	65	38	55	114	55	0	0	0	0
	75	206	1359	65	38	55	114	55	0	0	0	0
	76	207	1359	65	38	55	114	55	0	0	0	0
	77	208	1359	65	38	55	114	55	0	0	0	0
	78	209	1359	65	38	55	114	55	0	0	0	0
	79	210	1359	65	38	55	114	55	0	0	0	0
	80	211	1359	65	38	55	114	55	0	0	0	0
	81	212	1359	65	38	55	114	55	0	0	0	0
	82	213	1359	65	38	55	114	55	0	0	0	0
	83	214	1359	65	38	55	114	55	0	0	0	0
	84	215	1359	65	38	55	114	55	0	0	0	0
	85	216	1359	65	38	55	114	55	0	0	0	0
	86	217	1359	65	38	55	114	55	0	0	0	0
	87	218	1359	65	38	55	114	55	0	0	0	0
	88	219	1359	65	38	55	114	55	0	0	0	0
	89	220	1359	65	38	55	114	55	0	0	0	0
	90	221	1359	65	38	55	114	55	0	0	0	0
	91	222	1359	65	38	55	114	55	0	0	0	0
	92	223	1359	65	38	55	114	55	0	0	0	0
	93	224	1359	65	38	55	114	55	0	0	0	0
	94	225	1359	65	38	55	114	55	0	0	0	0
	95	226	1359	65	38	55	114	55	0	0	0	0
	96	227	1359	65	38	55	114	55	0	0	0	0
	97	228	1359	65	38	55	114	55	0	0	0	0
	98	229	1359	65	38	55	114	55	0	0	0	0
	99	230	1359	65	38	55	114	55	0	0	0	0
	100	231	1359	65	38	55	114	55	0	0	0	0
	101	232	1359	65	38	55	114	55	0	0	0	0
	102	233	1359	65	38	55	114	55	0	0	0	0
	103	234	1359	65	38	55	114	55	0	0	0	0
	104	235	1359	65	38	55	114	55	0	0	0	0
	105	236	1359	65	38	55	114	55	0	0	0	0
	106	237	1359	65	38	55	114	55	0	0	0	0
	107	238	1359	65	38	55	114	55	0	0	0	0

	108	239	1359	65	38	55	114	55	0	0	0	0
	109	240	1359	65	38	55	114	55	0	0	0	0
	110	241	1359	65	38	55	114	55	0	0	0	0
	111	242	1359	65	38	55	114	55	0	0	0	0
	112	243	1359	65	38	55	114	55	0	0	0	0
	113	244	1359	65	38	55	114	55	0	0	0	0
	114	245	1359	65	38	55	114	55	0	0	0	0
	115	246	1359	65	38	55	114	55	0	0	0	0
	116	247	1359	65	38	55	114	55	0	0	0	0
	117	248	1359	65	38	55	114	55	0	0	0	0
	118	249	1359	65	38	55	114	55	0	0	0	0
	119	250	1359	65	38	55	114	55	0	0	0	0
	120	251	1359	65	38	55	114	55	0	0	0	0
	121	252	1359	65	38	55	114	55	0	0	0	0
	122	253	1359	65	38	55	114	55	0	0	0	0
	123	254	1359	65	38	55	114	55	0	0	0	0
	124	255	1359	65	38	55	114	55	0	0	0	0
	125	256	1359	65	38	55	114	55	0	0	0	0
	126	257	1359	65	38	55	114	55	0	0	0	0
	127	258	1359	65	38	55	114	55	0	0	0	0
	128	259	1359	65	38	55	114	55	0	0	0	0
	129	260	1359	65	38	55	114	55	0	0	0	0
	130	261	1359	65	38	55	114	55	0	0	0	0
	131	262	1359	65	38	55	114	55	0	0	0	0
	132	263	1359	65	38	55	114	55	0	0	0	0
	133	264	1359	65	38	55	114	55	0	0	0	0
	134	265	1359	65	38	55	114	55	0	0	0	0
	135	266	1359	65	38	55	114	55	0	0	0	0
	136	267	1359	65	38	55	114	55	0	0	0	0
	137	268	1359	65	38	55	114	55	0	0	0	0
	138	269	1359	65	38	55	114	55	0	0	0	0
	139	270	1359	65	38	55	114	55	0	0	0	0
	140	271	1359	65	38	55	114	55	0	0	0	0
	141	272	1359	65	38	55	114	55	0	0	0	0
	142	273	1359	65	38	55	114	55	0	0	0	0
	143	274	1359	65	38	55	114	55	0	0	0	0

	144	275	1359	65	38	55	114	55	0	0	0	0
	145	276	1359	65	38	55	114	55	0	0	0	0
	146	277	1359	65	38	55	114	55	0	0	0	0
	147	278	1359	65	38	55	114	55	0	0	0	0
	148	279	1359	65	38	55	114	55	0	0	0	0
	149	280	1359	65	38	55	114	55	0	0	0	0
	150	281	1359	65	38	55	114	55	0	0	0	0
	151	282	1359	65	38	55	114	55	0	0	0	0
	152	283	1359	65	38	55	114	55	0	0	0	0
	153	284	1359	65	38	55	114	55	0	0	0	0
	154	285	1359	65	38	55	114	55	0	0	0	0
	155	286	1359	65	38	55	114	55	0	0	0	0
	156	287	1359	65	38	55	114	55	0	0	0	0
	156a	451										

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 With Toll

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
01a	1	1	638,711.2	704,708.6	0.00	5.00	0.00	66	10.0	8.0	Y
01b	2	1	635,391.8	706,412.3	0.00	5.00	0.00	66	10.0	8.0	Y
01c	3	0	1.0	1.0	1.00	5.00	0.00	66	10.0	8.0	Y
01d	4	1	638,808.5	702,662.3	0.00	5.00	0.00	66	10.0	8.0	Y
01e	5	1	638,817.8	702,204.0	0.00	5.00	0.00	66	10.0	8.0	Y
01f	6	1	638,649.9	701,978.9	0.00	5.00	0.00	66	10.0	8.0	Y
01g	7	1	638,276.1	701,311.0	0.00	5.00	0.00	66	10.0	8.0	Y
01h	8	1	637,797.0	701,884.5	0.00	5.00	0.00	66	10.0	8.0	Y
01i	9	1	637,895.0	702,639.4	0.00	5.00	0.00	66	10.0	8.0	Y
02a	10	1	639,473.7	699,343.2	0.00	5.00	0.00	66	10.0	8.0	Y
02b	11	1	640,109.4	701,620.6	0.00	5.00	0.00	66	10.0	8.0	Y
02c	12	1	640,077.0	700,773.4	0.00	5.00	0.00	66	10.0	8.0	Y
02d	13	1	640,936.4	701,985.2	0.00	5.00	0.00	66	10.0	8.0	Y
03a	14	0	2.0	2.0	2.00	5.00	0.00	66	10.0	8.0	Y
04a	15	1	646,006.0	693,894.9	0.00	5.00	0.00	66	10.0	8.0	Y
04b	16	1	645,033.8	694,176.1	0.00	5.00	0.00	66	10.0	8.0	Y
04c	17	1	646,769.9	693,891.4	0.00	5.00	0.00	66	10.0	8.0	Y
04d	18	4	647,557.4	694,067.5	0.00	5.00	0.00	66	10.0	8.0	Y
05a	19	3	649,634.9	694,506.7	0.00	5.00	0.00	66	10.0	8.0	Y
05b	20	3	651,114.1	695,826.1	0.00	5.00	0.00	66	10.0	8.0	Y
05c	21	2	651,915.4	695,785.3	0.00	5.00	0.00	66	10.0	8.0	Y
05d	22	2	652,098.8	696,084.1	0.00	5.00	0.00	66	10.0	8.0	Y

05e	23	1	651,707.1	697,477.4	0.00	5.00	0.00	66	10.0	8.0	Y
05f	24	1	648,889.7	694,791.2	0.00	5.00	0.00	66	10.0	8.0	Y
06a	25	1	649,419.8	697,228.6	0.00	5.00	0.00	66	10.0	8.0	Y
06b	26	1	650,083.9	697,017.1	0.00	5.00	0.00	66	10.0	8.0	Y
06c	27	3	649,997.4	697,420.1	0.00	5.00	0.00	66	10.0	8.0	Y
06d	28	1	646,646.8	696,786.4	0.00	5.00	0.00	66	10.0	8.0	Y
06e	29	0	3.0	3.0	3.00	5.00	0.00	66	10.0	8.0	Y
06f	30	1	646,856.9	695,884.2	0.00	5.00	0.00	66	10.0	8.0	Y
06g	31	1	647,644.4	695,630.1	0.00	5.00	0.00	66	10.0	8.0	Y
07a	32	1	654,685.8	694,902.6	0.00	5.00	0.00	66	10.0	8.0	Y
07b	33	1	654,657.9	695,496.2	0.00	5.00	0.00	66	10.0	8.0	Y
07c	34	1	654,685.8	696,233.4	0.00	5.00	0.00	66	10.0	8.0	Y
07d	35	1	654,582.2	697,186.9	0.00	5.00	0.00	66	10.0	8.0	Y
07e	36	1	654,601.8	697,827.2	0.00	5.00	0.00	66	10.0	8.0	Y
07f	37	1	654,157.5	695,458.1	0.00	5.00	0.00	66	10.0	8.0	Y
09a	38	1	658,074.0	697,252.0	0.00	5.00	0.00	66	10.0	8.0	Y
09b	39	0	658,585.4	696,426.2	0.00	5.00	0.00	66	10.0	8.0	Y
09c	40	1	658,974.6	697,647.5	0.00	5.00	0.00	66	10.0	8.0	Y
10a	41	1	660,987.0	695,179.3	0.00	5.00	0.00	66	10.0	8.0	Y
10b	42	3	659,235.1	696,204.6	0.00	5.00	0.00	66	10.0	8.0	Y
10c	43	1	659,630.7	696,151.4	0.00	5.00	0.00	66	10.0	8.0	Y
10d	44	4	660,029.6	696,340.4	0.00	5.00	0.00	66	10.0	8.0	Y
10e	45	4	660,627.1	696,326.8	0.00	5.00	0.00	66	10.0	8.0	Y
10f	46	5	661,109.2	696,306.4	0.00	5.00	0.00	66	10.0	8.0	Y
10g	47	3	661,828.9	696,272.5	0.00	5.00	0.00	66	10.0	8.0	Y
11a	48	1	665,350.0	697,174.6	0.00	5.00	0.00	66	10.0	8.0	Y
11b	49	1	664,890.4	697,766.6	0.00	5.00	0.00	66	10.0	8.0	Y
11c	50	1	664,152.2	697,996.4	0.00	5.00	0.00	66	10.0	8.0	Y
11d	51	4	663,173.2	698,274.5	0.00	5.00	0.00	66	10.0	8.0	Y
11e	52	4	663,469.8	698,247.8	0.00	5.00	0.00	66	10.0	8.0	Y
11f	53	5	663,714.8	697,916.0	0.00	5.00	0.00	66	10.0	8.0	Y
11g	54	6	662,883.9	698,585.2	0.00	5.00	0.00	66	10.0	8.0	Y
11h	55	3	662,577.7	698,470.4	0.00	5.00	0.00	66	10.0	8.0	Y
12a	56	2	667,742.9	699,567.7	0.00	5.00	0.00	66	10.0	8.0	Y
12b	57	1	666,634.2	699,007.5	0.00	5.00	0.00	66	10.0	8.0	Y
12c	58	1	666,190.9	697,694.2	0.00	5.00	0.00	66	10.0	8.0	Y

12d	59	1	666,004.6	699,180.3	0.00	5.00	0.00	66	10.0	8.0	Y
13a	60	2	668,782.5	700,954.2	0.00	5.00	0.00	66	10.0	8.0	Y
13b	61	1	668,831.6	700,403.2	0.00	5.00	0.00	66	10.0	8.0	Y
13c	62	4	667,993.9	700,150.8	0.00	5.00	0.00	66	10.0	8.0	Y
13d	63	3	667,716.9	700,397.9	0.00	5.00	0.00	66	10.0	8.0	Y
13e	64	2	666,988.3	700,178.6	0.00	5.00	0.00	66	10.0	8.0	Y
13f	65	1	666,318.5	699,688.9	0.00	5.00	0.00	66	10.0	8.0	Y
13g	66	1	665,969.8	699,806.4	0.00	5.00	0.00	66	10.0	8.0	Y
14a	67	3	672,006.9	701,473.4	0.00	5.00	0.00	66	10.0	8.0	Y
14b	68	1	671,751.8	701,298.9	0.00	5.00	0.00	66	10.0	8.0	Y
14c	69	1	671,454.1	701,248.0	0.00	5.00	0.00	66	10.0	8.0	Y
14d	70	1	670,787.7	701,147.0	0.00	5.00	0.00	66	10.0	8.0	Y
14e	71	1	670,059.6	700,899.4	0.00	5.00	0.00	66	10.0	8.0	Y
15a	72	1	671,803.0	700,161.5	0.00	5.00	0.00	66	10.0	8.0	Y
15b	73	1	670,460.4	699,244.9	0.00	5.00	0.00	66	10.0	8.0	Y
15c	74	1	672,681.8	700,846.4	0.00	5.00	0.00	66	10.0	8.0	Y
16a	75	1	676,010.0	701,483.1	0.00	5.00	0.00	66	10.0	8.0	Y
16b	76	1	675,503.2	701,518.7	0.00	5.00	0.00	66	10.0	8.0	Y
16c	77	1	674,932.8	701,400.8	0.00	5.00	0.00	66	10.0	8.0	Y
16d	78	1	674,244.6	702,177.8	0.00	5.00	0.00	66	10.0	8.0	Y
1	79	1	639,085.2	704,596.2	0.00	5.00	0.00	66	10.0	8.0	Y
2	80	1	639,659.3	699,384.3	0.00	5.00	0.00	66	10.0	8.0	Y
3	81	1	644,315.6	698,524.2	0.00	5.00	0.00	66	10.0	8.0	Y
4	82	1	646,039.9	693,744.6	0.00	5.00	0.00	66	10.0	8.0	Y
5	83	1	650,047.8	694,381.2	0.00	5.00	0.00	66	10.0	8.0	Y
6	84	1	649,364.8	696,994.4	0.00	5.00	0.00	66	10.0	8.0	Y
7	85	1	654,493.2	694,624.8	0.00	5.00	0.00	66	10.0	8.0	Y
8	86	1	656,646.6	695,002.2	0.00	5.00	0.00	66	10.0	8.0	Y
9	87	1	658,089.4	697,057.4	0.00	5.00	0.00	66	10.0	8.0	Y
10	88	1	661,001.4	695,347.2	0.00	5.00	0.00	66	10.0	8.0	Y
11	89	1	663,377.1	698,231.5	0.00	5.00	0.00	66	10.0	8.0	Y
12	90	1	666,807.6	698,819.4	0.00	5.00	0.00	66	10.0	8.0	Y
13	93	1	667,739.7	700,501.2	0.00	5.00	0.00	66	10.0	8.0	Y
14	94	1	671,451.7	701,171.1	0.00	5.00	0.00	66	10.0	8.0	Y
15	95	1	671,563.5	700,081.9	0.00	5.00	0.00	66	10.0	8.0	Y
16	96	1	675,419.7	700,969.0	0.00	5.00	0.00	66	10.0	8.0	Y

Mestre Greve Associates
MBJ

15 April 2009
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 With Toll
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
01a	1	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
01b	2	1	0.0	44.5	66	44.5	10	----	44.5	0.0	8	-8.0
01c	3	0	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
01d	4	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
01e	5	1	0.0	59.1	66	59.1	10	----	59.1	0.0	8	-8.0
01f	6	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0
01g	7	1	0.0	46.9	66	46.9	10	----	46.9	0.0	8	-8.0
01h	8	1	0.0	46.1	66	46.1	10	----	46.1	0.0	8	-8.0
01i	9	1	0.0	50.0	66	50.0	10	----	50.0	0.0	8	-8.0
02a	10	1	0.0	44.7	66	44.7	10	----	44.7	0.0	8	-8.0
02b	11	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0
02c	12	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
02d	13	1	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0
03a	14	0	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
04a	15	1	0.0	43.3	66	43.3	10	----	43.3	0.0	8	-8.0
04b	16	1	0.0	42.9	66	42.9	10	----	42.9	0.0	8	-8.0
04c	17	1	0.0	43.9	66	43.9	10	----	43.9	0.0	8	-8.0
04d	18	4	0.0	45.0	66	45.0	10	----	45.0	0.0	8	-8.0
05a	19	3	0.0	47.7	66	47.7	10	----	47.7	0.0	8	-8.0
05b	20	3	0.0	53.7	66	53.7	10	----	53.7	0.0	8	-8.0
05c	21	2	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0
05d	22	2	0.0	54.9	66	54.9	10	----	54.9	0.0	8	-8.0
05e	23	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0
05f	24	1	0.0	50.7	66	50.7	10	----	50.7	0.0	8	-8.0

06a	25	1	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0
06b	26	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0
06c	27	3	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
06d	28	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
06e	29	0	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
06f	30	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
06g	31	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0
07a	32	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
07b	33	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
07c	34	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
07d	35	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
07e	36	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0
07f	37	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
09a	38	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0
09b	39	0	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
09c	40	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0
10a	41	1	0.0	47.3	66	47.3	10	----	47.3	0.0	8	-8.0
10b	42	3	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
10c	43	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
10d	44	4	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
10e	45	4	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
10f	46	5	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
10g	47	3	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0
11a	48	1	0.0	48.4	66	48.4	10	----	48.4	0.0	8	-8.0
11b	49	1	0.0	50.4	66	50.4	10	----	50.4	0.0	8	-8.0
11c	50	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0
11d	51	4	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
11e	52	4	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
11f	53	5	0.0	55.9	66	55.9	10	----	55.9	0.0	8	-8.0
11g	54	6	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
11h	55	3	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
12a	56	2	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
12b	57	1	0.0	59.7	66	59.7	10	----	59.7	0.0	8	-8.0
12c	58	1	0.0	49.4	66	49.4	10	----	49.4	0.0	8	-8.0
12d	59	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
13a	60	2	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0
13b	61	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0
13c	62	4	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
13d	63	3	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
13e	64	2	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
13f	65	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0

13g	66	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
14a	67	3	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
14b	68	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
14c	69	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
14d	70	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
14e	71	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
15a	72	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
15b	73	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
15c	74	1	0.0	65.2	66	65.2	10	----	65.2	0.0	8	-8.0
16a	75	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
16b	76	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
16c	77	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
16d	78	1	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0
1	79	1	0.0	56.4	66	56.4	10	----	56.4	0.0	8	-8.0
2	80	1	0.0	45.6	66	45.6	10	----	45.6	0.0	8	-8.0
3	81	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
4	82	1	0.0	43.0	66	43.0	10	----	43.0	0.0	8	-8.0
5	83	1	0.0	46.5	66	46.5	10	----	46.5	0.0	8	-8.0
6	84	1	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0
7	85	1	0.0	72.6	66	72.6	10	Snd Lvl	72.6	0.0	8	-8.0
8	86	1	0.0	47.9	66	47.9	10	----	47.9	0.0	8	-8.0
9	87	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
10	88	1	0.0	48.0	66	48.0	10	----	48.0	0.0	8	-8.0
11	89	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
12	90	1	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
13	93	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
14	94	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
15	95	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
16	96	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	142	0.0	0.0	0.0
All Impacted	24	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 5 With Toll

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
540 south of access road	108.5	17a	299	675,704.1	700,379.8	0.00				Average	
		17b	296	674,098.5	699,642.0	0.00				Average	
		18	295	671,263.0	698,061.0	0.00				Average	
		19	292	670,453.0	697,350.0	0.00				Average	
		20	1	669,922.0	696,648.0	0.00				Average	
		21	2	669,454.0	695,128.0	0.00				Average	
		22	3	668,662.0	692,257.0	0.00				Average	
		23	4	668,554.0	689,774.0	0.00				Average	
		24	5	668,474.0	687,611.0	0.00				Average	
		25	6	668,619.0	686,802.0	0.00				Average	
		26	7	668,795.0	686,054.0	0.00				Average	
		27	8	668,993.0	685,226.0	0.00				Average	
		28	9	669,213.0	684,225.0	0.00				Average	
		29	10	669,240.0	684,121.0	0.00				Average	
		30	11	669,248.0	684,036.0	0.00				Average	
		31	12	669,350.0	683,480.0	0.00				Average	
		32	13	669,353.0	683,343.0	0.00				Average	
		33	14	669,369.0	682,947.0	0.00				Average	
		34	15	669,364.0	681,105.0	0.00				Average	
		35	16	669,361.0	680,563.0	0.00				Average	
		36	17	669,358.0	680,162.0	0.00				Average	
		37	18	669,345.0	679,964.0	0.00				Average	
		38	19	669,303.0	679,785.0	0.00				Average	
		39	20	669,163.0	679,480.0	0.00				Average	
		40	21	668,558.0	678,842.0	0.00				Average	

		41	22	668,300.0	678,666.0	0.00				Average	
		42	23	668,006.0	678,498.0	0.00				Average	
		43	24	667,765.0	678,362.0	0.00				Average	
		44	25	667,434.0	677,994.0	0.00				Average	
		45	26	667,255.0	677,652.0	0.00				Average	
		46	27	667,092.0	677,358.0	0.00				Average	
		47	28	667,018.0	677,121.0	0.00				Average	
		48	29	666,961.0	676,868.0	0.00				Average	
		49	30	666,955.0	675,553.0	0.00					
112	24.0	1	31	654,338.0	710,514.0	0.00				Average	
		2	32	654,362.0	709,819.0	0.00				Average	
		3	33	654,362.0	709,149.0	0.00				Average	
		4	34	654,409.0	708,837.0	0.00				Average	
		5	35	654,433.0	708,334.0	0.00				Average	
		6	36	654,194.0	707,256.0	0.00				Average	
		7	37	653,673.0	705,536.0	0.00				Average	
		8	38	653,588.0	705,298.0	0.00				Average	
		9	39	653,537.0	705,068.0	0.00				Average	
		10	40	653,341.0	704,515.0	0.00				Average	
		11	41	653,214.0	704,319.0	0.00				Average	
		12	42	652,269.0	703,468.0	0.00				Average	
		13	43	652,201.0	703,357.0	0.00				Average	
		14	44	652,167.0	703,212.0	0.00				Average	
		15	45	652,169.0	702,177.0	0.00				Average	
		16	46	652,180.0	702,069.0	0.00				Average	
		17	47	652,213.0	701,916.0	0.00				Average	
		18	48	652,281.0	701,731.0	0.00				Average	
		19	49	652,496.0	701,316.0	0.00				Average	
		20	50	652,769.0	701,035.0	0.00				Average	
		21	51	653,698.0	699,929.0	0.00				Average	
		22	52	653,859.0	699,349.0	0.00				Average	
		23	53	653,914.0	699,008.0	0.00				Average	
		24	54	653,939.0	698,685.0	0.00				Average	
		25	55	654,491.0	696,858.0	1.00				Average	Y
		26	56	654,532.0	696,618.0	1.00				Average	Y
		27	57	654,411.0	693,900.0	0.00				Average	
		28	58	654,287.0	693,186.0	0.00				Average	
		29	59	654,131.0	692,561.0	0.00				Average	
		30	60	653,705.0	690,965.0	0.00				Average	

		31	61	653,644.0	690,600.0	0.00				Average	
		32	62	653,561.0	690,319.0	0.00				Average	
		33	63	653,545.0	690,236.0	0.00				Average	
		34	64	653,030.0	689,206.0	0.00				Average	
		35	65	652,788.0	688,751.0	0.00				Average	
		36	66	652,773.0	688,592.0	0.00				Average	
		37	67	652,849.0	688,464.0	0.00				Average	
		38	68	653,386.0	688,024.0	0.00					
264 west of sr-112	50.0	1	69	634,663.0	708,285.0	0.00				Average	
		2	70	636,427.0	708,219.0	0.00				Average	
		3	71	637,660.0	708,173.0	0.00				Average	
		4	72	638,604.0	708,114.0	0.00				Average	
		5	73	639,108.0	708,101.0	0.00				Average	
		6	74	639,272.0	708,062.0	0.00				Average	
		7	75	639,279.0	707,609.0	0.00				Average	
		8	76	639,292.0	707,518.0	0.00				Average	
		9	77	639,384.0	707,446.0	0.00				Average	
		10	78	639,626.0	707,406.0	0.00				Average	
		11	79	640,092.0	707,321.0	0.00				Average	
		12	80	640,446.0	707,262.0	0.00				Average	
		13	81	641,672.0	707,144.0	0.00				Average	
		14	82	642,236.0	707,026.0	0.00				Average	
		15	83	643,541.0	706,600.0	0.00				Average	
		16	84	643,803.0	706,560.0	0.00				Average	
		17	85	644,216.0	706,600.0	0.00				Average	
		18	86	644,701.0	706,737.0	0.00				Average	
		19	87	645,835.0	707,668.0	0.00				Average	
		20	88	647,035.0	708,947.0	0.00				Average	
		21	89	648,956.0	710,212.0	0.00				Average	
		22	90	649,336.0	710,514.0	0.00				Average	
		23	91	649,507.0	710,593.0	0.00				Average	
		24	92	649,710.0	710,665.0	0.00				Average	
		25	93	651,231.0	710,901.0	0.00				Average	
		26	94	652,077.0	710,920.0	0.00				Average	
		27	95	652,463.0	710,847.0	0.00				Average	
		28	96	652,664.0	710,825.0	0.00				Average	
		29	97	654,344.0	710,538.0	0.00					
540 north of access road	108.5	2	98	678,458.0	706,204.0	0.00				Average	
		3	99	678,412.0	705,562.0	0.00				Average	

		4	100	678,398.0	705,449.0	0.00				Average	
		5	101	678,391.0	705,403.0	0.00				Average	
		6	102	678,387.0	705,351.0	0.00				Average	
		7	103	678,324.0	705,040.0	0.00				Average	
		8	104	678,267.0	704,885.0	0.00				Average	
		9	105	678,151.0	704,405.0	0.00				Average	
		10	106	678,080.0	703,975.0	0.00				Average	
		11	107	678,052.0	703,354.0	0.00				Average	
		12	108	677,982.0	703,029.0	0.00				Average	
		13	109	677,837.0	702,557.0	0.00				Average	
		14	110	677,601.0	702,006.0	0.00				Average	
		15	111	677,424.0	701,721.0	0.00				Average	
		16	112	677,177.0	701,410.0	0.00				Average	
		17	113	676,934.0	701,223.0	0.00				Average	
		17a	291	675,704.1	700,379.8	0.00					
540 north of sr-264	108.5	1	117	678,582.0	710,416.0	0.00				Average	
		2	118	678,458.0	706,204.0	0.00					
264 west of I-540	50.0	7	119	666,454.0	706,994.0	0.00				Average	
		8	120	666,519.0	706,882.0	0.00				Average	
		9	121	666,581.0	706,805.0	0.00				Average	
		10	122	666,697.0	706,784.0	0.00				Average	
		11	123	667,850.0	706,752.0	0.00				Average	
		12	124	678,454.0	706,205.0	0.00					
264 east of sr-112	50.0	1	125	654,426.0	708,645.0	0.00				Average	
		2	126	665,582.0	708,191.0	0.00				Average	
		3	127	666,224.0	708,128.0	0.00				Average	
		4	128	666,344.0	708,093.0	0.00				Average	
		5	129	666,432.0	708,042.0	0.00				Average	
		6	130	666,491.0	707,918.0	0.00				Average	
		7	131	666,454.0	706,994.0	0.00					
Alt5	108.0	1	300	636,511.3	708,147.7	0.00				Average	
		2	301	636,686.7	707,704.2	0.00				Average	
		3	302	636,769.2	707,441.0	0.00				Average	
		4	303	636,859.5	707,146.4	0.00				Average	
		5	304	637,436.2	705,430.9	0.00				Average	
		6	305	637,807.3	704,333.0	0.00				Average	
		7	306	638,666.3	701,814.3	0.00				Average	
		8	307	638,725.3	701,667.0	0.00				Average	
		9	308	638,795.9	701,527.6	0.00				Average	

		10	309	638,879.8	701,393.7	0.00				Average	
		11	310	639,005.4	701,226.8	0.00				Average	
		12	311	639,101.6	701,116.8	0.00				Average	
		13	312	639,213.6	701,006.8	0.00				Average	
		14	313	639,370.6	700,875.2	0.00				Average	
		15	314	639,808.5	700,523.6	0.00				Average	
		16	315	641,122.1	699,493.8	0.00				Average	
		17	316	643,129.2	697,906.8	0.00				Average	
		18	317	644,220.4	697,049.2	0.00				Average	
		19	318	644,383.4	696,931.4	0.00				Average	
		20	319	644,562.0	696,813.5	0.00				Average	
		21	320	644,841.4	696,652.0	0.00				Average	
		22	321	645,151.7	696,496.8	0.00				Average	
		23	322	645,401.0	696,386.9	0.00				Average	
		24	323	645,705.3	696,272.9	0.00				Average	
		25	324	646,173.4	696,130.0	0.00				Average	
		26	325	646,385.5	696,082.9	0.00				Average	
		27	326	646,687.8	696,025.9	0.00				Average	
		28	327	647,035.4	695,980.8	0.00				Average	
		29	328	647,441.8	695,951.3	0.00				Average	
		30	329	647,619.2	695,955.9	0.00				Average	
		31	330	648,805.3	695,975.0	0.00				Average	
		33	331	648,961.5	695,979.9	0.00				Average	
		34	332	649,030.4	695,985.6	0.00				Average	
		35	333	649,105.2	695,993.5	0.00				Average	
		36	334	649,188.5	696,005.8	0.00				Average	
		37	335	649,271.2	696,021.1	0.00				Average	
		38	336	649,342.1	696,036.3	0.00				Average	
		39	337	649,413.7	696,054.5	0.00				Average	
		40	338	649,488.7	696,075.7	0.00				Average	
		41	339	649,565.5	696,101.0	0.00				Average	
		42	340	649,627.1	696,125.7	0.00				Average	
		43	341	649,715.9	696,166.1	0.00				Average	
		44	342	649,804.4	696,219.1	0.00				Average	
		45	343	649,886.8	696,271.4	0.00				Average	
		46	344	649,970.4	696,325.0	0.00				Average	
		47	345	650,055.3	696,376.4	0.00				Average	
		48	346	650,141.5	696,425.6	0.00				Average	
		49	347	650,229.0	696,472.5	0.00				Average	

		50	348	650,317.6	696,517.1	0.00				Average	
		51	349	650,407.4	696,559.4	0.00				Average	
		52	350	650,498.3	696,599.4	0.00				Average	
		53	351	650,590.1	696,637.0	0.00				Average	
		54	352	650,682.9	696,672.2	0.00				Average	
		55	353	650,776.6	696,705.0	0.00				Average	
		56	354	650,871.1	696,735.3	0.00				Average	
		57	355	650,966.4	696,763.2	0.00				Average	
		58	356	651,062.4	696,788.5	0.00				Average	
		59	357	651,158.9	696,811.4	0.00				Average	
		60	358	651,256.1	696,831.8	0.00				Average	
		61	359	651,353.7	696,849.6	0.00				Average	
		62	360	651,451.8	696,864.9	0.00				Average	
		63	361	651,550.2	696,877.6	0.00				Average	
		64	362	651,649.0	696,887.8	0.00				Average	
		65	363	651,747.9	696,895.4	0.00				Average	
		66	364	651,847.1	696,900.4	0.00				Average	
		67	365	651,946.3	696,902.8	0.00				Average	
		68	366	652,045.5	696,902.7	0.00				Average	
		69	367	652,144.8	696,900.0	0.00				Average	
		70	368	659,133.4	696,618.1	0.00				Average	
		71	369	659,231.2	696,615.4	0.00				Average	
		72	370	659,329.0	696,615.2	0.00				Average	
		73	371	659,426.7	696,617.5	0.00				Average	
		74	372	659,524.4	696,622.4	0.00				Average	
		75	373	659,621.9	696,629.7	0.00				Average	
		76	374	659,719.2	696,639.5	0.00				Average	
		77	375	659,816.2	696,651.8	0.00				Average	
		78	376	659,912.9	696,666.6	0.00				Average	
		79	377	660,009.2	696,683.8	0.00				Average	
		80	378	660,104.9	696,703.5	0.00				Average	
		81	379	660,200.2	696,725.7	0.00				Average	
		82	380	660,294.8	696,750.3	0.00				Average	
		83	381	660,388.8	696,777.3	0.00				Average	
		84	382	660,482.1	696,806.7	0.00				Average	
		85	383	660,574.6	696,838.4	0.00				Average	
		86	384	660,666.2	696,872.6	0.00				Average	
		87	385	660,757.0	696,909.0	0.00				Average	
		88	386	660,846.7	696,947.8	0.00				Average	

		89	387	660,935.5	696,988.9	0.00				Average	
		90	388	661,023.1	697,032.2	0.00				Average	
		91	389	661,109.7	697,077.7	0.00				Average	
		92	390	661,195.0	697,125.5	0.00				Average	
		93	391	661,279.1	697,175.4	0.00				Average	
		94	392	661,361.9	697,227.5	0.00				Average	
		95	393	661,443.3	697,281.6	0.00				Average	
		96	394	661,523.3	697,337.8	0.00				Average	
		97	395	661,601.9	697,396.1	0.00				Average	
		98	396	662,396.5	698,001.4	0.00				Average	
		99	397	662,494.0	698,074.0	0.00				Average	
		100	398	662,593.0	698,144.6	0.00				Average	
		101	399	662,693.5	698,213.0	0.00				Average	
		102	400	662,795.4	698,279.3	0.00				Average	
		103	401	662,898.7	698,343.4	0.00				Average	
		104	402	663,003.3	698,405.3	0.00				Average	
		105	403	663,109.2	698,464.9	0.00				Average	
		106	404	663,216.4	698,522.3	0.00				Average	
		107	405	663,324.7	698,577.5	0.00				Average	
		108	406	663,434.2	698,630.3	0.00				Average	
		109	407	663,544.8	698,680.7	0.00				Average	
		110	408	663,656.5	698,728.9	0.00				Average	
		111	409	663,769.1	698,774.6	0.00				Average	
		112	410	663,882.7	698,817.9	0.00				Average	
		113	411	663,997.2	698,858.9	0.00				Average	
		114	412	664,112.5	698,897.3	0.00				Average	
		115	413	664,228.6	698,933.4	0.00				Average	
		116	414	664,345.4	698,966.9	0.00				Average	
		117	415	671,843.0	701,034.1	0.00				Average	
		118	416	671,947.0	701,061.4	0.00				Average	
		119	417	672,051.6	701,086.4	0.00				Average	
		120	418	672,156.8	701,108.8	0.00				Average	
		121	419	672,262.5	701,128.8	0.00				Average	
		122	420	672,368.6	701,146.3	0.00				Average	
		123	421	672,475.1	701,161.3	0.00				Average	
		124	422	672,582.0	701,173.8	0.00				Average	
		125	423	672,689.1	701,183.8	0.00				Average	
		126	424	672,796.4	701,191.3	0.00				Average	
		127	425	672,903.8	701,196.2	0.00				Average	

		128	426	673,011.3	701,198.7	0.00				Average	
		129	427	673,118.9	701,198.6	0.00				Average	
		130	428	673,226.4	701,196.0	0.00				Average	
		131	429	673,333.9	701,190.8	0.00				Average	
		132	430	673,441.2	701,183.2	0.00				Average	
		133	431	673,548.2	701,173.0	0.00				Average	
		134	432	673,655.0	701,160.3	0.00				Average	
		135	433	673,761.5	701,145.1	0.00				Average	
		136	434	673,867.6	701,127.5	0.00				Average	
		137	435	673,973.3	701,107.3	0.00				Average	
		138	436	674,078.4	701,084.7	0.00				Average	
		139	437	674,183.0	701,059.6	0.00				Average	
		140	438	674,287.0	701,032.0	0.00				Average	
		141	439	674,390.3	701,002.0	0.00				Average	
		142	440	674,492.8	700,969.7	0.00				Average	
		143	441	674,594.6	700,934.9	0.00				Average	
		144	442	674,695.6	700,897.7	0.00				Average	
		145	443	674,795.6	700,858.2	0.00				Average	
		146	444	674,894.7	700,816.3	0.00				Average	
		147	445	674,992.7	700,772.1	0.00				Average	
		148	446	675,089.7	700,725.7	0.00				Average	
		149	447	675,185.6	700,676.9	0.00				Average	
		150	448	675,280.4	700,626.0	0.00				Average	
		151	449	675,373.8	700,572.8	0.00				Average	
		151a	452	675,704.1	700,379.8	0.00					

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 5 With Toll

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
540 south of access road	17a	299	10233	65	285	55	853	55	0	0	0	0
	17b	296	10233	65	285	55	853	55	0	0	0	0
	18	295	10233	65	285	55	853	55	0	0	0	0
	19	292	10233	65	285	55	853	55	0	0	0	0
	20	1	10233	65	285	55	853	55	0	0	0	0
	21	2	10233	65	285	55	853	55	0	0	0	0
	22	3	10233	65	285	55	853	55	0	0	0	0
	23	4	10233	65	285	55	853	55	0	0	0	0
	24	5	10233	65	285	55	853	55	0	0	0	0
	25	6	10233	65	285	55	853	55	0	0	0	0
	26	7	10233	65	285	55	853	55	0	0	0	0
	27	8	10233	65	285	55	853	55	0	0	0	0
	28	9	10233	65	285	55	853	55	0	0	0	0
	29	10	10233	65	285	55	853	55	0	0	0	0
	30	11	10233	65	285	55	853	55	0	0	0	0
	31	12	10233	65	285	55	853	55	0	0	0	0
	32	13	10233	65	285	55	853	55	0	0	0	0
	33	14	10233	65	285	55	853	55	0	0	0	0
	34	15	10233	65	285	55	853	55	0	0	0	0
	35	16	10233	65	285	55	853	55	0	0	0	0
	36	17	10233	65	285	55	853	55	0	0	0	0
	37	18	10233	65	285	55	853	55	0	0	0	0
	38	19	10233	65	285	55	853	55	0	0	0	0

	39	20	10233	65	285	55	853	55	0	0	0	0
	40	21	10233	65	285	55	853	55	0	0	0	0
	41	22	10233	65	285	55	853	55	0	0	0	0
	42	23	10233	65	285	55	853	55	0	0	0	0
	43	24	10233	65	285	55	853	55	0	0	0	0
	44	25	10233	65	285	55	853	55	0	0	0	0
	45	26	10233	65	285	55	853	55	0	0	0	0
	46	27	10233	65	285	55	853	55	0	0	0	0
	47	28	10233	65	285	55	853	55	0	0	0	0
	48	29	10233	65	285	55	853	55	0	0	0	0
	49	30										
112	1	31	853	65	32	55	96	55	0	0	0	0
	2	32	853	65	32	55	96	55	0	0	0	0
	3	33	853	65	32	55	96	55	0	0	0	0
	4	34	853	65	32	55	96	55	0	0	0	0
	5	35	853	65	32	55	96	55	0	0	0	0
	6	36	853	65	32	55	96	55	0	0	0	0
	7	37	853	65	32	55	96	55	0	0	0	0
	8	38	853	65	32	55	96	55	0	0	0	0
	9	39	853	65	32	55	96	55	0	0	0	0
	10	40	853	65	32	55	96	55	0	0	0	0
	11	41	853	65	32	55	96	55	0	0	0	0
	12	42	853	65	32	55	96	55	0	0	0	0
	13	43	853	65	32	55	96	55	0	0	0	0
	14	44	853	65	32	55	96	55	0	0	0	0
	15	45	853	65	32	55	96	55	0	0	0	0
	16	46	853	65	32	55	96	55	0	0	0	0
	17	47	853	65	32	55	96	55	0	0	0	0
	18	48	853	65	32	55	96	55	0	0	0	0
	19	49	853	65	32	55	96	55	0	0	0	0
	20	50	853	65	32	55	96	55	0	0	0	0
	21	51	853	65	32	55	96	55	0	0	0	0
	22	52	853	65	32	55	96	55	0	0	0	0
	23	53	853	65	32	55	96	55	0	0	0	0
	24	54	853	65	32	55	96	55	0	0	0	0
	25	55	853	65	32	55	96	55	0	0	0	0

	26	56	853	65	32	55	96	55	0	0	0	0
	27	57	853	65	32	55	96	55	0	0	0	0
	28	58	853	65	32	55	96	55	0	0	0	0
	29	59	853	65	32	55	96	55	0	0	0	0
	30	60	853	65	32	55	96	55	0	0	0	0
	31	61	853	65	32	55	96	55	0	0	0	0
	32	62	853	65	32	55	96	55	0	0	0	0
	33	63	853	65	32	55	96	55	0	0	0	0
	34	64	853	65	32	55	96	55	0	0	0	0
	35	65	853	65	32	55	96	55	0	0	0	0
	36	66	853	65	32	55	96	55	0	0	0	0
	37	67	853	65	32	55	96	55	0	0	0	0
	38	68										
264 west of sr-112	1	69	261	65	8	55	22	55	0	0	0	0
	2	70	261	65	8	55	22	55	0	0	0	0
	3	71	261	65	8	55	22	55	0	0	0	0
	4	72	261	65	8	55	22	55	0	0	0	0
	5	73	261	65	8	55	22	55	0	0	0	0
	6	74	261	65	8	55	22	55	0	0	0	0
	7	75	261	65	8	55	22	55	0	0	0	0
	8	76	261	65	8	55	22	55	0	0	0	0
	9	77	261	65	8	55	22	55	0	0	0	0
	10	78	261	65	8	55	22	55	0	0	0	0
	11	79	261	65	8	55	22	55	0	0	0	0
	12	80	261	65	8	55	22	55	0	0	0	0
	13	81	261	65	8	55	22	55	0	0	0	0
	14	82	261	65	8	55	22	55	0	0	0	0
	15	83	261	65	8	55	22	55	0	0	0	0
	16	84	261	65	8	55	22	55	0	0	0	0
	17	85	261	65	8	55	22	55	0	0	0	0
	18	86	261	65	8	55	22	55	0	0	0	0
	19	87	261	65	8	55	22	55	0	0	0	0
	20	88	261	65	8	55	22	55	0	0	0	0
	21	89	261	65	8	55	22	55	0	0	0	0
	22	90	261	65	8	55	22	55	0	0	0	0
	23	91	261	65	8	55	22	55	0	0	0	0

	24	92	261	65	8	55	22	55	0	0	0	0
	25	93	261	65	8	55	22	55	0	0	0	0
	26	94	261	65	8	55	22	55	0	0	0	0
	27	95	261	65	8	55	22	55	0	0	0	0
	28	96	261	65	8	55	22	55	0	0	0	0
	29	97										
540 north of access road	2	98	9783	65	272	55	816	55	0	0	0	0
	3	99	9783	65	272	55	816	55	0	0	0	0
	4	100	9783	65	272	55	816	55	0	0	0	0
	5	101	9783	65	272	55	816	55	0	0	0	0
	6	102	9783	65	272	55	816	55	0	0	0	0
	7	103	9783	65	272	55	816	55	0	0	0	0
	8	104	9783	65	272	55	816	55	0	0	0	0
	9	105	9783	65	272	55	816	55	0	0	0	0
	10	106	9783	65	272	55	816	55	0	0	0	0
	11	107	9783	65	272	55	816	55	0	0	0	0
	12	108	9783	65	272	55	816	55	0	0	0	0
	13	109	9783	65	272	55	816	55	0	0	0	0
	14	110	9783	65	272	55	816	55	0	0	0	0
	15	111	9783	65	272	55	816	55	0	0	0	0
	16	112	9783	65	272	55	816	55	0	0	0	0
	17	113	9783	65	272	55	816	55	0	0	0	0
	17a	291										
540 north of sr-264	1	117	9605	65	359	55	1077	55	0	0	0	0
	2	118										
264 west of I-540	7	119	1284	65	25	55	73	55	0	0	0	0
	8	120	1284	65	25	55	73	55	0	0	0	0
	9	121	1284	65	25	55	73	55	0	0	0	0
	10	122	1284	65	25	55	73	55	0	0	0	0
	11	123	1284	65	25	55	73	55	0	0	0	0
	12	124										
264 east of sr-112	1	125	765	65	22	55	64	55	0	0	0	0
	2	126	765	65	22	55	64	55	0	0	0	0
	3	127	765	65	22	55	64	55	0	0	0	0
	4	128	765	65	22	55	64	55	0	0	0	0
	5	129	765	65	22	55	64	55	0	0	0	0

	6	130	765	65	22	55	64	55	0	0	0	0
	7	131										
Alt5	1	300	1359	65	38	55	114	55	0	0	0	0
	2	301	1359	65	38	55	114	55	0	0	0	0
	3	302	1359	65	38	55	114	55	0	0	0	0
	4	303	1359	65	38	55	114	55	0	0	0	0
	5	304	1359	65	38	55	114	55	0	0	0	0
	6	305	1359	65	38	55	114	55	0	0	0	0
	7	306	1359	65	38	55	114	55	0	0	0	0
	8	307	1359	65	38	55	114	55	0	0	0	0
	9	308	1359	65	38	55	114	55	0	0	0	0
	10	309	1359	65	38	55	114	55	0	0	0	0
	11	310	1359	65	38	55	114	55	0	0	0	0
	12	311	1359	65	38	55	114	55	0	0	0	0
	13	312	1359	65	38	55	114	55	0	0	0	0
	14	313	1359	65	38	55	114	55	0	0	0	0
	15	314	1359	65	38	55	114	55	0	0	0	0
	16	315	1359	65	38	55	114	55	0	0	0	0
	17	316	1359	65	38	55	114	55	0	0	0	0
	18	317	1359	65	38	55	114	55	0	0	0	0
	19	318	1359	65	38	55	114	55	0	0	0	0
	20	319	1359	65	38	55	114	55	0	0	0	0
	21	320	1359	65	38	55	114	55	0	0	0	0
	22	321	1359	65	38	55	114	55	0	0	0	0
	23	322	1359	65	38	55	114	55	0	0	0	0
	24	323	1359	65	38	55	114	55	0	0	0	0
	25	324	1359	65	38	55	114	55	0	0	0	0
	26	325	1359	65	38	55	114	55	0	0	0	0
	27	326	1359	65	38	55	114	55	0	0	0	0
	28	327	1359	65	38	55	114	55	0	0	0	0
	29	328	1359	65	38	55	114	55	0	0	0	0
	30	329	1359	65	38	55	114	55	0	0	0	0
	31	330	1359	65	38	55	114	55	0	0	0	0
	33	331	1359	65	38	55	114	55	0	0	0	0
	34	332	1359	65	38	55	114	55	0	0	0	0
	35	333	1359	65	38	55	114	55	0	0	0	0

	36	334	1359	65	38	55	114	55	0	0	0	0
	37	335	1359	65	38	55	114	55	0	0	0	0
	38	336	1359	65	38	55	114	55	0	0	0	0
	39	337	1359	65	38	55	114	55	0	0	0	0
	40	338	1359	65	38	55	114	55	0	0	0	0
	41	339	1359	65	38	55	114	55	0	0	0	0
	42	340	1359	65	38	55	114	55	0	0	0	0
	43	341	1359	65	38	55	114	55	0	0	0	0
	44	342	1359	65	38	55	114	55	0	0	0	0
	45	343	1359	65	38	55	114	55	0	0	0	0
	46	344	1359	65	38	55	114	55	0	0	0	0
	47	345	1359	65	38	55	114	55	0	0	0	0
	48	346	1359	65	38	55	114	55	0	0	0	0
	49	347	1359	65	38	55	114	55	0	0	0	0
	50	348	1359	65	38	55	114	55	0	0	0	0
	51	349	1359	65	38	55	114	55	0	0	0	0
	52	350	1359	65	38	55	114	55	0	0	0	0
	53	351	1359	65	38	55	114	55	0	0	0	0
	54	352	1359	65	38	55	114	55	0	0	0	0
	55	353	1359	65	38	55	114	55	0	0	0	0
	56	354	1359	65	38	55	114	55	0	0	0	0
	57	355	1359	65	38	55	114	55	0	0	0	0
	58	356	1359	65	38	55	114	55	0	0	0	0
	59	357	1359	65	38	55	114	55	0	0	0	0
	60	358	1359	65	38	55	114	55	0	0	0	0
	61	359	1359	65	38	55	114	55	0	0	0	0
	62	360	1359	65	38	55	114	55	0	0	0	0
	63	361	1359	65	38	55	114	55	0	0	0	0
	64	362	1359	65	38	55	114	55	0	0	0	0
	65	363	1359	65	38	55	114	55	0	0	0	0
	66	364	1359	65	38	55	114	55	0	0	0	0
	67	365	1359	65	38	55	114	55	0	0	0	0
	68	366	1359	65	38	55	114	55	0	0	0	0
	69	367	1359	65	38	55	114	55	0	0	0	0
	70	368	1359	65	38	55	114	55	0	0	0	0
	71	369	1359	65	38	55	114	55	0	0	0	0

	72	370	1359	65	38	55	114	55	0	0	0	0
	73	371	1359	65	38	55	114	55	0	0	0	0
	74	372	1359	65	38	55	114	55	0	0	0	0
	75	373	1359	65	38	55	114	55	0	0	0	0
	76	374	1359	65	38	55	114	55	0	0	0	0
	77	375	1359	65	38	55	114	55	0	0	0	0
	78	376	1359	65	38	55	114	55	0	0	0	0
	79	377	1359	65	38	55	114	55	0	0	0	0
	80	378	1359	65	38	55	114	55	0	0	0	0
	81	379	1359	65	38	55	114	55	0	0	0	0
	82	380	1359	65	38	55	114	55	0	0	0	0
	83	381	1359	65	38	55	114	55	0	0	0	0
	84	382	1359	65	38	55	114	55	0	0	0	0
	85	383	1359	65	38	55	114	55	0	0	0	0
	86	384	1359	65	38	55	114	55	0	0	0	0
	87	385	1359	65	38	55	114	55	0	0	0	0
	88	386	1359	65	38	55	114	55	0	0	0	0
	89	387	1359	65	38	55	114	55	0	0	0	0
	90	388	1359	65	38	55	114	55	0	0	0	0
	91	389	1359	65	38	55	114	55	0	0	0	0
	92	390	1359	65	38	55	114	55	0	0	0	0
	93	391	1359	65	38	55	114	55	0	0	0	0
	94	392	1359	65	38	55	114	55	0	0	0	0
	95	393	1359	65	38	55	114	55	0	0	0	0
	96	394	1359	65	38	55	114	55	0	0	0	0
	97	395	1359	65	38	55	114	55	0	0	0	0
	98	396	1359	65	38	55	114	55	0	0	0	0
	99	397	1359	65	38	55	114	55	0	0	0	0
	100	398	1359	65	38	55	114	55	0	0	0	0
	101	399	1359	65	38	55	114	55	0	0	0	0
	102	400	1359	65	38	55	114	55	0	0	0	0
	103	401	1359	65	38	55	114	55	0	0	0	0
	104	402	1359	65	38	55	114	55	0	0	0	0
	105	403	1359	65	38	55	114	55	0	0	0	0
	106	404	1359	65	38	55	114	55	0	0	0	0
	107	405	1359	65	38	55	114	55	0	0	0	0

	108	406	1359	65	38	55	114	55	0	0	0	0
	109	407	1359	65	38	55	114	55	0	0	0	0
	110	408	1359	65	38	55	114	55	0	0	0	0
	111	409	1359	65	38	55	114	55	0	0	0	0
	112	410	1359	65	38	55	114	55	0	0	0	0
	113	411	1359	65	38	55	114	55	0	0	0	0
	114	412	1359	65	38	55	114	55	0	0	0	0
	115	413	1359	65	38	55	114	55	0	0	0	0
	116	414	1359	65	38	55	114	55	0	0	0	0
	117	415	1359	65	38	55	114	55	0	0	0	0
	118	416	1359	65	38	55	114	55	0	0	0	0
	119	417	1359	65	38	55	114	55	0	0	0	0
	120	418	1359	65	38	55	114	55	0	0	0	0
	121	419	1359	65	38	55	114	55	0	0	0	0
	122	420	1359	65	38	55	114	55	0	0	0	0
	123	421	1359	65	38	55	114	55	0	0	0	0
	124	422	1359	65	38	55	114	55	0	0	0	0
	125	423	1359	65	38	55	114	55	0	0	0	0
	126	424	1359	65	38	55	114	55	0	0	0	0
	127	425	1359	65	38	55	114	55	0	0	0	0
	128	426	1359	65	38	55	114	55	0	0	0	0
	129	427	1359	65	38	55	114	55	0	0	0	0
	130	428	1359	65	38	55	114	55	0	0	0	0
	131	429	1359	65	38	55	114	55	0	0	0	0
	132	430	1359	65	38	55	114	55	0	0	0	0
	133	431	1359	65	38	55	114	55	0	0	0	0
	134	432	1359	65	38	55	114	55	0	0	0	0
	135	433	1359	65	38	55	114	55	0	0	0	0
	136	434	1359	65	38	55	114	55	0	0	0	0
	137	435	1359	65	38	55	114	55	0	0	0	0
	138	436	1359	65	38	55	114	55	0	0	0	0
	139	437	1359	65	38	55	114	55	0	0	0	0
	140	438	1359	65	38	55	114	55	0	0	0	0
	141	439	1359	65	38	55	114	55	0	0	0	0
	142	440	1359	65	38	55	114	55	0	0	0	0
	143	441	1359	65	38	55	114	55	0	0	0	0

	144	442	1359	65	38	55	114	55	0	0	0	0
	145	443	1359	65	38	55	114	55	0	0	0	0
	146	444	1359	65	38	55	114	55	0	0	0	0
	147	445	1359	65	38	55	114	55	0	0	0	0
	148	446	1359	65	38	55	114	55	0	0	0	0
	149	447	1359	65	38	55	114	55	0	0	0	0
	150	448	1359	65	38	55	114	55	0	0	0	0
	151	449	1359	65	38	55	114	55	0	0	0	0
	151a	452										

Mestre Greve Associates **15 April 2009**
MBJ **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **NWARA Intermodal Access Road**
RUN: **Future With Alt. 5 With Toll**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
01a	1	1	638,711.2	704,708.6	0.00	5.00	0.00	66	10.0	8.0	Y
01b	2	1	635,391.8	706,412.3	0.00	5.00	0.00	66	10.0	8.0	Y
01c	3	1	639,215.9	702,926.2	0.00	5.00	0.00	66	10.0	8.0	Y
01d	4	1	638,808.5	702,662.3	0.00	5.00	0.00	66	10.0	8.0	Y
01e	5	1	638,817.8	702,204.0	0.00	5.00	0.00	66	10.0	8.0	Y
01f	6	1	1.0	1.0	1.00	5.00	0.00	66	10.0	8.0	Y
01g	7	1	638,276.1	701,311.0	0.00	5.00	0.00	66	10.0	8.0	Y
01h	8	1	637,797.0	701,884.5	0.00	5.00	0.00	66	10.0	8.0	Y
01i	9	1	637,895.0	702,639.4	0.00	5.00	0.00	66	10.0	8.0	Y
02a	10	1	639,473.7	699,343.2	0.00	5.00	0.00	66	10.0	8.0	Y
02b	11	1	640,109.4	701,620.6	0.00	5.00	0.00	66	10.0	8.0	Y
02c	12	1	640,077.0	700,773.4	0.00	5.00	0.00	66	10.0	8.0	Y
02d	13	1	640,936.4	701,985.2	0.00	5.00	0.00	66	10.0	8.0	Y
03a	14	1	643,681.2	698,617.6	0.00	5.00	0.00	66	10.0	8.0	Y
04a	15	1	646,006.0	693,894.9	0.00	5.00	0.00	66	10.0	8.0	Y
04b	16	1	645,033.8	694,176.1	0.00	5.00	0.00	66	10.0	8.0	Y
04c	17	1	646,769.9	693,891.4	0.00	5.00	0.00	66	10.0	8.0	Y
04d	18	4	647,557.4	694,067.5	0.00	5.00	0.00	66	10.0	8.0	Y
05a	19	3	649,634.9	694,506.7	0.00	5.00	0.00	66	10.0	8.0	Y
05b	20	3	651,114.1	695,826.1	0.00	5.00	0.00	66	10.0	8.0	Y
05c	21	2	651,915.4	695,785.3	0.00	5.00	0.00	66	10.0	8.0	Y
05d	22	2	652,098.8	696,084.1	0.00	5.00	0.00	66	10.0	8.0	Y

05e	23	1	651,707.1	697,477.4	0.00	5.00	0.00	66	10.0	8.0	Y
05f	24	1	648,889.7	694,791.2	0.00	5.00	0.00	66	10.0	8.0	Y
06a	25	1	649,419.8	697,228.6	0.00	5.00	0.00	66	10.0	8.0	Y
06b	26	1	650,083.9	697,017.1	0.00	5.00	0.00	66	10.0	8.0	Y
06c	27	3	649,997.4	697,420.1	0.00	5.00	0.00	66	10.0	8.0	Y
06d	28	1	646,646.8	696,786.4	0.00	5.00	0.00	66	10.0	8.0	Y
06e	29	1	647,549.6	696,184.6	0.00	5.00	0.00	66	10.0	8.0	Y
06f	30	1	2.0	2.0	2.00	5.00	0.00	66	10.0	8.0	Y
06g	31	1	647,644.4	695,630.1	0.00	5.00	0.00	66	10.0	8.0	Y
07a	32	1	654,685.8	694,902.6	0.00	5.00	0.00	66	10.0	8.0	Y
07b	33	1	654,657.9	695,496.2	0.00	5.00	0.00	66	10.0	8.0	Y
07c	34	1	654,685.8	696,233.4	0.00	5.00	0.00	66	10.0	8.0	Y
07d	35	1	654,582.2	697,186.9	0.00	5.00	0.00	66	10.0	8.0	Y
07e	36	1	654,601.8	697,827.2	0.00	5.00	0.00	66	10.0	8.0	Y
07f	37	1	654,157.5	695,458.1	0.00	5.00	0.00	66	10.0	8.0	Y
09a	38	1	658,074.0	697,252.0	0.00	5.00	0.00	66	10.0	8.0	Y
09b	39	0	658,585.4	696,426.2	0.00	5.00	0.00	66	10.0	8.0	Y
09c	40	1	658,974.6	697,647.5	0.00	5.00	0.00	66	10.0	8.0	Y
10a	41	1	660,987.0	695,179.3	0.00	5.00	0.00	66	10.0	8.0	Y
10b	42	3	659,235.1	696,204.6	0.00	5.00	0.00	66	10.0	8.0	Y
10c	43	1	659,630.7	696,151.4	0.00	5.00	0.00	66	10.0	8.0	Y
10d	44	4	660,029.6	696,340.4	0.00	5.00	0.00	66	10.0	8.0	Y
10e	45	4	660,627.1	696,326.8	0.00	5.00	0.00	66	10.0	8.0	Y
10f	46	5	661,109.2	696,306.4	0.00	5.00	0.00	66	10.0	8.0	Y
10g	47	3	661,828.9	696,272.5	0.00	5.00	0.00	66	10.0	8.0	Y
11a	48	1	665,350.0	697,174.6	0.00	5.00	0.00	66	10.0	8.0	Y
11b	49	1	664,890.4	697,766.6	0.00	5.00	0.00	66	10.0	8.0	Y
11c	50	1	664,152.2	697,996.4	0.00	5.00	0.00	66	10.0	8.0	Y
11d	51	4	663,173.2	698,274.5	0.00	5.00	0.00	66	10.0	8.0	Y
11e	52	4	663,469.8	698,247.8	0.00	5.00	0.00	66	10.0	8.0	Y
11f	53	5	663,714.8	697,916.0	0.00	5.00	0.00	66	10.0	8.0	Y
11g	54	6	662,883.9	698,585.2	0.00	5.00	0.00	66	10.0	8.0	Y
11h	55	3	662,577.7	698,470.4	0.00	5.00	0.00	66	10.0	8.0	Y
12a	56	2	667,742.9	699,567.7	0.00	5.00	0.00	66	10.0	8.0	Y
12b	57	1	666,634.2	699,007.5	0.00	5.00	0.00	66	10.0	8.0	Y
12c	58	1	666,190.9	697,694.2	0.00	5.00	0.00	66	10.0	8.0	Y

12d	59	1	666,004.6	699,180.3	0.00	5.00	0.00	66	10.0	8.0	Y
13a	60	2	668,782.5	700,954.2	0.00	5.00	0.00	66	10.0	8.0	Y
13b	61	1	668,831.6	700,403.2	0.00	5.00	0.00	66	10.0	8.0	Y
13c	62	4	667,993.9	700,150.8	0.00	5.00	0.00	66	10.0	8.0	Y
13d	63	3	667,716.9	700,397.9	0.00	5.00	0.00	66	10.0	8.0	Y
13e	64	2	666,988.3	700,178.6	0.00	5.00	0.00	66	10.0	8.0	Y
13f	65	1	666,318.5	699,688.9	0.00	5.00	0.00	66	10.0	8.0	Y
13g	66	1	665,969.8	699,806.4	0.00	5.00	0.00	66	10.0	8.0	Y
14a	67	3	672,006.9	701,473.4	0.00	5.00	0.00	66	10.0	8.0	Y
14b	68	1	671,751.8	701,298.9	0.00	5.00	0.00	66	10.0	8.0	Y
14c	69	1	671,454.1	701,248.0	0.00	5.00	0.00	66	10.0	8.0	Y
14d	70	1	670,787.7	701,147.0	0.00	5.00	0.00	66	10.0	8.0	Y
14e	71	1	670,059.6	700,899.4	0.00	5.00	0.00	66	10.0	8.0	Y
15a	72	1	671,803.0	700,161.5	0.00	5.00	0.00	66	10.0	8.0	Y
15b	73	1	670,460.4	699,244.9	0.00	5.00	0.00	66	10.0	8.0	Y
15c	74	1	672,681.8	700,846.4	0.00	5.00	0.00	66	10.0	8.0	Y
16a	75	1	676,010.0	701,483.1	0.00	5.00	0.00	66	10.0	8.0	Y
16b	76	1	675,503.2	701,518.7	0.00	5.00	0.00	66	10.0	8.0	Y
16c	77	1	674,932.8	701,400.8	0.00	5.00	0.00	66	10.0	8.0	Y
16d	78	1	674,244.6	702,177.8	0.00	5.00	0.00	66	10.0	8.0	Y
1	79	1	639,085.2	704,596.2	0.00	5.00	0.00	66	10.0	8.0	Y
2	80	1	639,659.3	699,384.3	0.00	5.00	0.00	66	10.0	8.0	Y
3	81	1	644,315.6	698,524.2	0.00	5.00	0.00	66	10.0	8.0	Y
4	82	1	646,039.9	693,744.6	0.00	5.00	0.00	66	10.0	8.0	Y
5	83	1	650,047.8	694,381.2	0.00	5.00	0.00	66	10.0	8.0	Y
6	84	1	649,364.8	696,994.4	0.00	5.00	0.00	66	10.0	8.0	Y
7	85	1	654,493.2	694,624.8	0.00	5.00	0.00	66	10.0	8.0	Y
8	86	1	656,646.6	695,002.2	0.00	5.00	0.00	66	10.0	8.0	Y
9	87	1	658,089.4	697,057.4	0.00	5.00	0.00	66	10.0	8.0	Y
10	88	1	661,001.4	695,347.2	0.00	5.00	0.00	66	10.0	8.0	Y
11	89	1	663,377.1	698,231.5	0.00	5.00	0.00	66	10.0	8.0	Y
12	90	1	666,807.6	698,819.4	0.00	5.00	0.00	66	10.0	8.0	Y
13	93	1	667,739.7	700,501.2	0.00	5.00	0.00	66	10.0	8.0	Y
14	94	1	671,451.7	701,171.1	0.00	5.00	0.00	66	10.0	8.0	Y
15	95	1	671,563.5	700,081.9	0.00	5.00	0.00	66	10.0	8.0	Y
16	96	1	675,419.7	700,969.0	0.00	5.00	0.00	66	10.0	8.0	Y

Mestre Greve Associates
MBJ

15 April 2009
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 5 With Toll
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
01a	1	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0
01b	2	1	0.0	45.5	66	45.5	10	----	45.5	0.0	8	-8.0
01c	3	1	0.0	53.4	66	53.4	10	----	53.4	0.0	8	-8.0
01d	4	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
01e	5	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
01f	6	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
01g	7	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0
01h	8	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0
01i	9	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
02a	10	1	0.0	51.3	66	51.3	10	----	51.3	0.0	8	-8.0
02b	11	1	0.0	51.5	66	51.5	10	----	51.5	0.0	8	-8.0
02c	12	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
02d	13	1	0.0	45.3	66	45.3	10	----	45.3	0.0	8	-8.0
03a	14	1	0.0	53.2	66	53.2	10	----	53.2	0.0	8	-8.0
04a	15	1	0.0	44.3	66	44.3	10	----	44.3	0.0	8	-8.0
04b	16	1	0.0	44.1	66	44.1	10	----	44.1	0.0	8	-8.0
04c	17	1	0.0	44.9	66	44.9	10	----	44.9	0.0	8	-8.0
04d	18	4	0.0	46.2	66	46.2	10	----	46.2	0.0	8	-8.0
05a	19	3	0.0	47.2	66	47.2	10	----	47.2	0.0	8	-8.0
05b	20	3	0.0	53.8	66	53.8	10	----	53.8	0.0	8	-8.0
05c	21	2	0.0	51.6	66	51.6	10	----	51.6	0.0	8	-8.0
05d	22	2	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0
05e	23	1	0.0	59.4	66	59.4	10	----	59.4	0.0	8	-8.0
05f	24	1	0.0	50.5	66	50.5	10	----	50.5	0.0	8	-8.0

06a	25	1	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0
06b	26	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0
06c	27	3	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
06d	28	1	0.0	55.8	66	55.8	10	----	55.8	0.0	8	-8.0
06e	29	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
06f	30	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
06g	31	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
07a	32	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
07b	33	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
07c	34	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
07d	35	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
07e	36	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0
07f	37	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
09a	38	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0
09b	39	0	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
09c	40	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0
10a	41	1	0.0	47.3	66	47.3	10	----	47.3	0.0	8	-8.0
10b	42	3	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0
10c	43	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
10d	44	4	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
10e	45	4	0.0	61.4	66	61.4	10	----	61.4	0.0	8	-8.0
10f	46	5	0.0	57.4	66	57.4	10	----	57.4	0.0	8	-8.0
10g	47	3	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0
11a	48	1	0.0	48.4	66	48.4	10	----	48.4	0.0	8	-8.0
11b	49	1	0.0	50.4	66	50.4	10	----	50.4	0.0	8	-8.0
11c	50	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0
11d	51	4	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
11e	52	4	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
11f	53	5	0.0	55.9	66	55.9	10	----	55.9	0.0	8	-8.0
11g	54	6	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
11h	55	3	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0
12a	56	2	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
12b	57	1	0.0	59.7	66	59.7	10	----	59.7	0.0	8	-8.0
12c	58	1	0.0	49.4	66	49.4	10	----	49.4	0.0	8	-8.0
12d	59	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
13a	60	2	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0
13b	61	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0
13c	62	4	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
13d	63	3	0.0	61.9	66	61.9	10	----	61.9	0.0	8	-8.0
13e	64	2	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0
13f	65	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0

13g	66	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
14a	67	3	0.0	63.9	66	63.9	10	----	63.9	0.0	8	-8.0
14b	68	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
14c	69	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0
14d	70	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
14e	71	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
15a	72	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
15b	73	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
15c	74	1	0.0	65.2	66	65.2	10	----	65.2	0.0	8	-8.0
16a	75	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
16b	76	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0
16c	77	1	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
16d	78	1	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0
1	79	1	0.0	48.6	66	48.6	10	----	48.6	0.0	8	-8.0
2	80	1	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0
3	81	1	0.0	49.4	66	49.4	10	----	49.4	0.0	8	-8.0
4	82	1	0.0	43.8	66	43.8	10	----	43.8	0.0	8	-8.0
5	83	1	0.0	46.1	66	46.1	10	----	46.1	0.0	8	-8.0
6	84	1	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0
7	85	1	0.0	72.6	66	72.6	10	Snd Lvl	72.6	0.0	8	-8.0
8	86	1	0.0	47.9	66	47.9	10	----	47.9	0.0	8	-8.0
9	87	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
10	88	1	0.0	48.0	66	48.0	10	----	48.0	0.0	8	-8.0
11	89	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
12	90	1	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
13	93	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
14	94	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
15	95	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
16	96	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	145	0.0	0.0	0.0
All Impacted	25	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 No Toll

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
540 south of access road	108.5	17a	299	675,704.1	700,379.8	0.00				Average	
		17b	296	674,098.5	699,642.0	0.00				Average	
		18	295	671,263.0	698,061.0	0.00				Average	
		19	292	670,453.0	697,350.0	0.00				Average	
		20	1	669,922.0	696,648.0	0.00				Average	
		21	2	669,454.0	695,128.0	0.00				Average	
		22	3	668,662.0	692,257.0	0.00				Average	
		23	4	668,554.0	689,774.0	0.00				Average	
		24	5	668,474.0	687,611.0	0.00				Average	
		25	6	668,619.0	686,802.0	0.00				Average	
		26	7	668,795.0	686,054.0	0.00				Average	
		27	8	668,993.0	685,226.0	0.00				Average	
		28	9	669,213.0	684,225.0	0.00				Average	
		29	10	669,240.0	684,121.0	0.00				Average	
		30	11	669,248.0	684,036.0	0.00				Average	
		31	12	669,350.0	683,480.0	0.00				Average	
		32	13	669,353.0	683,343.0	0.00				Average	
		33	14	669,369.0	682,947.0	0.00				Average	
		34	15	669,364.0	681,105.0	0.00				Average	
		35	16	669,361.0	680,563.0	0.00				Average	
		36	17	669,358.0	680,162.0	0.00				Average	
		37	18	669,345.0	679,964.0	0.00				Average	
		38	19	669,303.0	679,785.0	0.00				Average	
		39	20	669,163.0	679,480.0	0.00				Average	
		40	21	668,558.0	678,842.0	0.00				Average	

		41	22	668,300.0	678,666.0	0.00				Average	
		42	23	668,006.0	678,498.0	0.00				Average	
		43	24	667,765.0	678,362.0	0.00				Average	
		44	25	667,434.0	677,994.0	0.00				Average	
		45	26	667,255.0	677,652.0	0.00				Average	
		46	27	667,092.0	677,358.0	0.00				Average	
		47	28	667,018.0	677,121.0	0.00				Average	
		48	29	666,961.0	676,868.0	0.00				Average	
		49	30	666,955.0	675,553.0	0.00					
112	24.0	1	31	654,338.0	710,514.0	0.00				Average	
		2	32	654,362.0	709,819.0	0.00				Average	
		3	33	654,362.0	709,149.0	0.00				Average	
		4	34	654,409.0	708,837.0	0.00				Average	
		5	35	654,433.0	708,334.0	0.00				Average	
		6	36	654,194.0	707,256.0	0.00				Average	
		7	37	653,673.0	705,536.0	0.00				Average	
		8	38	653,588.0	705,298.0	0.00				Average	
		9	39	653,537.0	705,068.0	0.00				Average	
		10	40	653,341.0	704,515.0	0.00				Average	
		11	41	653,214.0	704,319.0	0.00				Average	
		12	42	652,269.0	703,468.0	0.00				Average	
		13	43	652,201.0	703,357.0	0.00				Average	
		14	44	652,167.0	703,212.0	0.00				Average	
		15	45	652,169.0	702,177.0	0.00				Average	
		16	46	652,180.0	702,069.0	0.00				Average	
		17	47	652,213.0	701,916.0	0.00				Average	
		18	48	652,281.0	701,731.0	0.00				Average	
		19	49	652,496.0	701,316.0	0.00				Average	
		20	50	652,769.0	701,035.0	0.00				Average	
		21	51	653,698.0	699,929.0	0.00				Average	
		22	52	653,859.0	699,349.0	0.00				Average	
		23	53	653,914.0	699,008.0	0.00				Average	
		24	54	653,939.0	698,685.0	0.00				Average	
		25	55	654,491.0	696,858.0	1.00				Average	Y
		26	56	654,532.0	696,618.0	1.00				Average	Y
		27	57	654,411.0	693,900.0	0.00				Average	
		28	58	654,287.0	693,186.0	0.00				Average	
		29	59	654,131.0	692,561.0	0.00				Average	
		30	60	653,705.0	690,965.0	0.00				Average	

		31	61	653,644.0	690,600.0	0.00				Average	
		32	62	653,561.0	690,319.0	0.00				Average	
		33	63	653,545.0	690,236.0	0.00				Average	
		34	64	653,030.0	689,206.0	0.00				Average	
		35	65	652,788.0	688,751.0	0.00				Average	
		36	66	652,773.0	688,592.0	0.00				Average	
		37	67	652,849.0	688,464.0	0.00				Average	
		38	68	653,386.0	688,024.0	0.00					
264 west of sr-112	50.0	1	69	634,663.0	708,285.0	0.00				Average	
		2	70	636,427.0	708,219.0	0.00				Average	
		3	71	637,660.0	708,173.0	0.00				Average	
		4	72	638,604.0	708,114.0	0.00				Average	
		5	73	639,108.0	708,101.0	0.00				Average	
		6	74	639,272.0	708,062.0	0.00				Average	
		7	75	639,279.0	707,609.0	0.00				Average	
		8	76	639,292.0	707,518.0	0.00				Average	
		9	77	639,384.0	707,446.0	0.00				Average	
		10	78	639,626.0	707,406.0	0.00				Average	
		11	79	640,092.0	707,321.0	0.00				Average	
		12	80	640,446.0	707,262.0	0.00				Average	
		13	81	641,672.0	707,144.0	0.00				Average	
		14	82	642,236.0	707,026.0	0.00				Average	
		15	83	643,541.0	706,600.0	0.00				Average	
		16	84	643,803.0	706,560.0	0.00				Average	
		17	85	644,216.0	706,600.0	0.00				Average	
		18	86	644,701.0	706,737.0	0.00				Average	
		19	87	645,835.0	707,668.0	0.00				Average	
		20	88	647,035.0	708,947.0	0.00				Average	
		21	89	648,956.0	710,212.0	0.00				Average	
		22	90	649,336.0	710,514.0	0.00				Average	
		23	91	649,507.0	710,593.0	0.00				Average	
		24	92	649,710.0	710,665.0	0.00				Average	
		25	93	651,231.0	710,901.0	0.00				Average	
		26	94	652,077.0	710,920.0	0.00				Average	
		27	95	652,463.0	710,847.0	0.00				Average	
		28	96	652,664.0	710,825.0	0.00				Average	
		29	97	654,344.0	710,538.0	0.00					
540 north of access road	108.5	2	98	678,458.0	706,204.0	0.00				Average	
		3	99	678,412.0	705,562.0	0.00				Average	

		4	100	678,398.0	705,449.0	0.00				Average	
		5	101	678,391.0	705,403.0	0.00				Average	
		6	102	678,387.0	705,351.0	0.00				Average	
		7	103	678,324.0	705,040.0	0.00				Average	
		8	104	678,267.0	704,885.0	0.00				Average	
		9	105	678,151.0	704,405.0	0.00				Average	
		10	106	678,080.0	703,975.0	0.00				Average	
		11	107	678,052.0	703,354.0	0.00				Average	
		12	108	677,982.0	703,029.0	0.00				Average	
		13	109	677,837.0	702,557.0	0.00				Average	
		14	110	677,601.0	702,006.0	0.00				Average	
		15	111	677,424.0	701,721.0	0.00				Average	
		16	112	677,177.0	701,410.0	0.00				Average	
		17	113	676,934.0	701,223.0	0.00				Average	
		17a	291	675,704.1	700,379.8	0.00					
540 north of sr-264	108.5	1	117	678,582.0	710,416.0	0.00				Average	
		2	118	678,458.0	706,204.0	0.00					
264 west of I-540	50.0	7	119	666,454.0	706,994.0	0.00				Average	
		8	120	666,519.0	706,882.0	0.00				Average	
		9	121	666,581.0	706,805.0	0.00				Average	
		10	122	666,697.0	706,784.0	0.00				Average	
		11	123	667,850.0	706,752.0	0.00				Average	
		12	124	678,454.0	706,205.0	0.00					
264 east of sr-112	50.0	1	125	654,426.0	708,645.0	0.00				Average	
		2	126	665,582.0	708,191.0	0.00				Average	
		3	127	666,224.0	708,128.0	0.00				Average	
		4	128	666,344.0	708,093.0	0.00				Average	
		5	129	666,432.0	708,042.0	0.00				Average	
		6	130	666,491.0	707,918.0	0.00				Average	
		7	131	666,454.0	706,994.0	0.00					
Alt4	108.0	1	132	636,517.3	708,136.4	0.00				Average	
		2	133	636,630.8	707,908.4	0.00				Average	
		3	134	636,796.2	707,578.8	0.00				Average	
		4	135	637,119.0	706,931.2	0.00				Average	
		5	136	638,093.8	704,987.2	0.00				Average	
		6	137	639,240.8	702,693.6	0.00				Average	
		7	138	639,353.2	702,467.1	0.00				Average	
		8	139	639,478.0	702,251.2	0.00				Average	
		9	140	639,581.4	702,067.4	0.00				Average	

		10	141	639,745.5	701,823.0	0.00				Average	
		11	142	639,968.4	701,528.7	0.00				Average	
		12	143	640,121.3	701,348.1	0.00				Average	
		13	144	640,326.3	701,123.3	0.00				Average	
		14	145	640,417.3	701,032.3	0.00				Average	
		15	146	640,545.7	700,907.4	0.00				Average	
		16	147	640,797.2	700,691.6	0.00				Average	
		17	148	640,973.7	700,548.8	0.00				Average	
		18	149	641,200.2	700,375.8	0.00				Average	
		19	150	642,275.6	699,567.3	0.00				Average	
		20	151	642,673.3	699,264.0	0.00				Average	
		21	152	642,953.9	699,056.3	0.00				Average	
		22	153	643,331.9	698,765.5	0.00				Average	
		23	154	643,697.5	698,490.8	0.00				Average	
		24	155	644,161.2	698,144.7	0.00				Average	
		25	156	644,946.7	697,546.7	0.00				Average	
		26	157	645,670.8	697,002.5	0.00				Average	
		27	158	645,921.2	696,835.6	0.00				Average	
		28	159	646,219.0	696,666.1	0.00				Average	
		29	160	646,566.8	696,487.7	0.00				Average	
		30	161	646,907.4	696,346.8	0.00				Average	
		31	162	647,047.1	696,294.1	0.00				Average	
		32	163	647,373.4	696,185.2	0.00				Average	
		33	164	647,803.2	696,081.7	0.00				Average	
		34	165	648,193.8	696,014.0	0.00				Average	
		35	166	648,498.9	695,988.2	0.00				Average	
		36	167	648,808.8	695,975.5	0.00				Average	
		37	168	648,961.5	695,979.9	0.00				Average	
		39	170	649,030.4	695,985.6	0.00				Average	
		40	171	649,105.2	695,993.5	0.00				Average	
		41	172	649,188.5	696,005.8	0.00				Average	
		42	173	649,271.2	696,021.1	0.00				Average	
		43	174	649,342.1	696,036.3	0.00				Average	
		44	175	649,413.7	696,054.5	0.00				Average	
		45	176	649,488.7	696,075.7	0.00				Average	
		46	177	649,565.5	696,101.0	0.00				Average	
		47	178	649,627.1	696,125.7	0.00				Average	
		48	179	649,715.9	696,166.1	0.00				Average	
		49	180	649,804.4	696,219.1	0.00				Average	

		50	181	649,886.8	696,271.4	0.00				Average	
		51	182	649,970.4	696,325.0	0.00				Average	
		52	183	650,055.3	696,376.4	0.00				Average	
		53	184	650,141.5	696,425.6	0.00				Average	
		54	185	650,229.0	696,472.5	0.00				Average	
		55	186	650,317.6	696,517.1	0.00				Average	
		56	187	650,407.4	696,559.4	0.00				Average	
		57	188	650,498.3	696,599.4	0.00				Average	
		58	189	650,590.1	696,637.0	0.00				Average	
		59	190	650,682.9	696,672.2	0.00				Average	
		60	191	650,776.6	696,705.0	0.00				Average	
		61	192	650,871.1	696,735.3	0.00				Average	
		62	193	650,966.4	696,763.2	0.00				Average	
		63	194	651,062.4	696,788.5	0.00				Average	
		64	195	651,158.9	696,811.4	0.00				Average	
		65	196	651,256.1	696,831.8	0.00				Average	
		66	197	651,353.7	696,849.6	0.00				Average	
		67	198	651,451.8	696,864.9	0.00				Average	
		68	199	651,550.2	696,877.6	0.00				Average	
		69	200	651,649.0	696,887.8	0.00				Average	
		70	201	651,747.9	696,895.4	0.00				Average	
		71	202	651,847.1	696,900.4	0.00				Average	
		72	203	651,946.3	696,902.8	0.00				Average	
		73	204	652,045.5	696,902.7	0.00				Average	
		74	205	652,144.8	696,900.0	0.00				Average	
		75	206	659,133.4	696,618.1	0.00				Average	
		76	207	659,231.2	696,615.4	0.00				Average	
		77	208	659,329.0	696,615.2	0.00				Average	
		78	209	659,426.7	696,617.5	0.00				Average	
		79	210	659,524.4	696,622.4	0.00				Average	
		80	211	659,621.9	696,629.7	0.00				Average	
		81	212	659,719.2	696,639.5	0.00				Average	
		82	213	659,816.2	696,651.8	0.00				Average	
		83	214	659,912.9	696,666.6	0.00				Average	
		84	215	660,009.2	696,683.8	0.00				Average	
		85	216	660,104.9	696,703.5	0.00				Average	
		86	217	660,200.2	696,725.7	0.00				Average	
		87	218	660,294.8	696,750.3	0.00				Average	
		88	219	660,388.8	696,777.3	0.00				Average	

		89	220	660,482.1	696,806.7	0.00				Average	
		90	221	660,574.6	696,838.4	0.00				Average	
		91	222	660,666.2	696,872.6	0.00				Average	
		92	223	660,757.0	696,909.0	0.00				Average	
		93	224	660,846.7	696,947.8	0.00				Average	
		94	225	660,935.5	696,988.9	0.00				Average	
		95	226	661,023.1	697,032.2	0.00				Average	
		96	227	661,109.7	697,077.7	0.00				Average	
		97	228	661,195.0	697,125.5	0.00				Average	
		98	229	661,279.1	697,175.4	0.00				Average	
		99	230	661,361.9	697,227.5	0.00				Average	
		100	231	661,443.3	697,281.6	0.00				Average	
		101	232	661,523.3	697,337.8	0.00				Average	
		102	233	661,601.9	697,396.1	0.00				Average	
		103	234	662,396.5	698,001.4	0.00				Average	
		104	235	662,494.0	698,074.0	0.00				Average	
		105	236	662,593.0	698,144.6	0.00				Average	
		106	237	662,693.5	698,213.0	0.00				Average	
		107	238	662,795.4	698,279.3	0.00				Average	
		108	239	662,898.7	698,343.4	0.00				Average	
		109	240	663,003.3	698,405.3	0.00				Average	
		110	241	663,109.2	698,464.9	0.00				Average	
		111	242	663,216.4	698,522.3	0.00				Average	
		112	243	663,324.7	698,577.5	0.00				Average	
		113	244	663,434.2	698,630.3	0.00				Average	
		114	245	663,544.8	698,680.7	0.00				Average	
		115	246	663,656.5	698,728.9	0.00				Average	
		116	247	663,769.1	698,774.6	0.00				Average	
		117	248	663,882.7	698,817.9	0.00				Average	
		118	249	663,997.2	698,858.9	0.00				Average	
		119	250	664,112.5	698,897.3	0.00				Average	
		120	251	664,228.6	698,933.4	0.00				Average	
		121	252	664,345.4	698,966.9	0.00				Average	
		122	253	671,843.0	701,034.1	0.00				Average	
		123	254	671,947.0	701,061.4	0.00				Average	
		124	255	672,051.6	701,086.4	0.00				Average	
		125	256	672,156.8	701,108.8	0.00				Average	
		126	257	672,262.5	701,128.8	0.00				Average	
		127	258	672,368.6	701,146.3	0.00				Average	

		128	259	672,475.1	701,161.3	0.00				Average	
		129	260	672,582.0	701,173.8	0.00				Average	
		130	261	672,689.1	701,183.8	0.00				Average	
		131	262	672,796.4	701,191.3	0.00				Average	
		132	263	672,903.8	701,196.2	0.00				Average	
		133	264	673,011.3	701,198.7	0.00				Average	
		134	265	673,118.9	701,198.6	0.00				Average	
		135	266	673,226.4	701,196.0	0.00				Average	
		136	267	673,333.9	701,190.8	0.00				Average	
		137	268	673,441.2	701,183.2	0.00				Average	
		138	269	673,548.2	701,173.0	0.00				Average	
		139	270	673,655.0	701,160.3	0.00				Average	
		140	271	673,761.5	701,145.1	0.00				Average	
		141	272	673,867.6	701,127.5	0.00				Average	
		142	273	673,973.3	701,107.3	0.00				Average	
		143	274	674,078.4	701,084.7	0.00				Average	
		144	275	674,183.0	701,059.6	0.00				Average	
		145	276	674,287.0	701,032.0	0.00				Average	
		146	277	674,390.3	701,002.0	0.00				Average	
		147	278	674,492.8	700,969.7	0.00				Average	
		148	279	674,594.6	700,934.9	0.00				Average	
		149	280	674,695.6	700,897.7	0.00				Average	
		150	281	674,795.6	700,858.2	0.00				Average	
		151	282	674,894.7	700,816.3	0.00				Average	
		152	283	674,992.7	700,772.1	0.00				Average	
		153	284	675,089.7	700,725.7	0.00				Average	
		154	285	675,185.6	700,676.9	0.00				Average	
		155	286	675,280.4	700,626.0	0.00				Average	
		156	287	675,373.8	700,572.8	0.00				Average	
		156a	451	675,704.1	700,379.8	0.00					

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 No Toll

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
540 south of access road	17a	299	10233	65	285	55	853	55	0	0	0	0
	17b	296	10233	65	285	55	853	55	0	0	0	0
	18	295	10233	65	285	55	853	55	0	0	0	0
	19	292	10233	65	285	55	853	55	0	0	0	0
	20	1	10233	65	285	55	853	55	0	0	0	0
	21	2	10233	65	285	55	853	55	0	0	0	0
	22	3	10233	65	285	55	853	55	0	0	0	0
	23	4	10233	65	285	55	853	55	0	0	0	0
	24	5	10233	65	285	55	853	55	0	0	0	0
	25	6	10233	65	285	55	853	55	0	0	0	0
	26	7	10233	65	285	55	853	55	0	0	0	0
	27	8	10233	65	285	55	853	55	0	0	0	0
	28	9	10233	65	285	55	853	55	0	0	0	0
	29	10	10233	65	285	55	853	55	0	0	0	0
	30	11	10233	65	285	55	853	55	0	0	0	0
	31	12	10233	65	285	55	853	55	0	0	0	0
	32	13	10233	65	285	55	853	55	0	0	0	0
	33	14	10233	65	285	55	853	55	0	0	0	0
	34	15	10233	65	285	55	853	55	0	0	0	0
	35	16	10233	65	285	55	853	55	0	0	0	0
	36	17	10233	65	285	55	853	55	0	0	0	0
	37	18	10233	65	285	55	853	55	0	0	0	0
	38	19	10233	65	285	55	853	55	0	0	0	0

	39	20	10233	65	285	55	853	55	0	0	0	0
	40	21	10233	65	285	55	853	55	0	0	0	0
	41	22	10233	65	285	55	853	55	0	0	0	0
	42	23	10233	65	285	55	853	55	0	0	0	0
	43	24	10233	65	285	55	853	55	0	0	0	0
	44	25	10233	65	285	55	853	55	0	0	0	0
	45	26	10233	65	285	55	853	55	0	0	0	0
	46	27	10233	65	285	55	853	55	0	0	0	0
	47	28	10233	65	285	55	853	55	0	0	0	0
	48	29	10233	65	285	55	853	55	0	0	0	0
	49	30										
112	1	31	853	65	32	55	96	55	0	0	0	0
	2	32	853	65	32	55	96	55	0	0	0	0
	3	33	853	65	32	55	96	55	0	0	0	0
	4	34	853	65	32	55	96	55	0	0	0	0
	5	35	853	65	32	55	96	55	0	0	0	0
	6	36	853	65	32	55	96	55	0	0	0	0
	7	37	853	65	32	55	96	55	0	0	0	0
	8	38	853	65	32	55	96	55	0	0	0	0
	9	39	853	65	32	55	96	55	0	0	0	0
	10	40	853	65	32	55	96	55	0	0	0	0
	11	41	853	65	32	55	96	55	0	0	0	0
	12	42	853	65	32	55	96	55	0	0	0	0
	13	43	853	65	32	55	96	55	0	0	0	0
	14	44	853	65	32	55	96	55	0	0	0	0
	15	45	853	65	32	55	96	55	0	0	0	0
	16	46	853	65	32	55	96	55	0	0	0	0
	17	47	853	65	32	55	96	55	0	0	0	0
	18	48	853	65	32	55	96	55	0	0	0	0
	19	49	853	65	32	55	96	55	0	0	0	0
	20	50	853	65	32	55	96	55	0	0	0	0
	21	51	853	65	32	55	96	55	0	0	0	0
	22	52	853	65	32	55	96	55	0	0	0	0
	23	53	853	65	32	55	96	55	0	0	0	0
	24	54	853	65	32	55	96	55	0	0	0	0
	25	55	853	65	32	55	96	55	0	0	0	0

	26	56	853	65	32	55	96	55	0	0	0	0
	27	57	853	65	32	55	96	55	0	0	0	0
	28	58	853	65	32	55	96	55	0	0	0	0
	29	59	853	65	32	55	96	55	0	0	0	0
	30	60	853	65	32	55	96	55	0	0	0	0
	31	61	853	65	32	55	96	55	0	0	0	0
	32	62	853	65	32	55	96	55	0	0	0	0
	33	63	853	65	32	55	96	55	0	0	0	0
	34	64	853	65	32	55	96	55	0	0	0	0
	35	65	853	65	32	55	96	55	0	0	0	0
	36	66	853	65	32	55	96	55	0	0	0	0
	37	67	853	65	32	55	96	55	0	0	0	0
	38	68										
264 west of sr-112	1	69	261	65	8	55	22	55	0	0	0	0
	2	70	261	65	8	55	22	55	0	0	0	0
	3	71	261	65	8	55	22	55	0	0	0	0
	4	72	261	65	8	55	22	55	0	0	0	0
	5	73	261	65	8	55	22	55	0	0	0	0
	6	74	261	65	8	55	22	55	0	0	0	0
	7	75	261	65	8	55	22	55	0	0	0	0
	8	76	261	65	8	55	22	55	0	0	0	0
	9	77	261	65	8	55	22	55	0	0	0	0
	10	78	261	65	8	55	22	55	0	0	0	0
	11	79	261	65	8	55	22	55	0	0	0	0
	12	80	261	65	8	55	22	55	0	0	0	0
	13	81	261	65	8	55	22	55	0	0	0	0
	14	82	261	65	8	55	22	55	0	0	0	0
	15	83	261	65	8	55	22	55	0	0	0	0
	16	84	261	65	8	55	22	55	0	0	0	0
	17	85	261	65	8	55	22	55	0	0	0	0
	18	86	261	65	8	55	22	55	0	0	0	0
	19	87	261	65	8	55	22	55	0	0	0	0
	20	88	261	65	8	55	22	55	0	0	0	0
	21	89	261	65	8	55	22	55	0	0	0	0
	22	90	261	65	8	55	22	55	0	0	0	0
	23	91	261	65	8	55	22	55	0	0	0	0

	24	92	261	65	8	55	22	55	0	0	0	0
	25	93	261	65	8	55	22	55	0	0	0	0
	26	94	261	65	8	55	22	55	0	0	0	0
	27	95	261	65	8	55	22	55	0	0	0	0
	28	96	261	65	8	55	22	55	0	0	0	0
	29	97										
540 north of access road	2	98	9783	65	272	55	816	55	0	0	0	0
	3	99	9783	65	272	55	816	55	0	0	0	0
	4	100	9783	65	272	55	816	55	0	0	0	0
	5	101	9783	65	272	55	816	55	0	0	0	0
	6	102	9783	65	272	55	816	55	0	0	0	0
	7	103	9783	65	272	55	816	55	0	0	0	0
	8	104	9783	65	272	55	816	55	0	0	0	0
	9	105	9783	65	272	55	816	55	0	0	0	0
	10	106	9783	65	272	55	816	55	0	0	0	0
	11	107	9783	65	272	55	816	55	0	0	0	0
	12	108	9783	65	272	55	816	55	0	0	0	0
	13	109	9783	65	272	55	816	55	0	0	0	0
	14	110	9783	65	272	55	816	55	0	0	0	0
	15	111	9783	65	272	55	816	55	0	0	0	0
	16	112	9783	65	272	55	816	55	0	0	0	0
	17	113	9783	65	272	55	816	55	0	0	0	0
	17a	291										
540 north of sr-264	1	117	9605	65	359	55	1077	55	0	0	0	0
	2	118										
264 west of I-540	7	119	1284	65	25	55	73	55	0	0	0	0
	8	120	1284	65	25	55	73	55	0	0	0	0
	9	121	1284	65	25	55	73	55	0	0	0	0
	10	122	1284	65	25	55	73	55	0	0	0	0
	11	123	1284	65	25	55	73	55	0	0	0	0
	12	124										
264 east of sr-112	1	125	765	65	22	55	64	55	0	0	0	0
	2	126	765	65	22	55	64	55	0	0	0	0
	3	127	765	65	22	55	64	55	0	0	0	0
	4	128	765	65	22	55	64	55	0	0	0	0
	5	129	765	65	22	55	64	55	0	0	0	0

	6	130	765	65	22	55	64	55	0	0	0	0
	7	131										
Alt4	1	132	1557	65	44	55	130	55	0	0	0	0
	2	133	1557	65	44	55	130	55	0	0	0	0
	3	134	1557	65	44	55	130	55	0	0	0	0
	4	135	1557	65	44	55	130	55	0	0	0	0
	5	136	1557	65	44	55	130	55	0	0	0	0
	6	137	1557	65	44	55	130	55	0	0	0	0
	7	138	1557	65	44	55	130	55	0	0	0	0
	8	139	1557	65	44	55	130	55	0	0	0	0
	9	140	1557	65	44	55	130	55	0	0	0	0
	10	141	1557	65	44	55	130	55	0	0	0	0
	11	142	1557	65	44	55	130	55	0	0	0	0
	12	143	1557	65	44	55	130	55	0	0	0	0
	13	144	1557	65	44	55	130	55	0	0	0	0
	14	145	1557	65	44	55	130	55	0	0	0	0
	15	146	1557	65	44	55	130	55	0	0	0	0
	16	147	1557	65	44	55	130	55	0	0	0	0
	17	148	1557	65	44	55	130	55	0	0	0	0
	18	149	1557	65	44	55	130	55	0	0	0	0
	19	150	1557	65	44	55	130	55	0	0	0	0
	20	151	1557	65	44	55	130	55	0	0	0	0
	21	152	1557	65	44	55	130	55	0	0	0	0
	22	153	1557	65	44	55	130	55	0	0	0	0
	23	154	1557	65	44	55	130	55	0	0	0	0
	24	155	1557	65	44	55	130	55	0	0	0	0
	25	156	1557	65	44	55	130	55	0	0	0	0
	26	157	1557	65	44	55	130	55	0	0	0	0
	27	158	1557	65	44	55	130	55	0	0	0	0
	28	159	1557	65	44	55	130	55	0	0	0	0
	29	160	1557	65	44	55	130	55	0	0	0	0
	30	161	1557	65	44	55	130	55	0	0	0	0
	31	162	1557	65	44	55	130	55	0	0	0	0
	32	163	1557	65	44	55	130	55	0	0	0	0
	33	164	1557	65	44	55	130	55	0	0	0	0
	34	165	1557	65	44	55	130	55	0	0	0	0

	35	166	1557	65	44	55	130	55	0	0	0	0
	36	167	1557	65	44	55	130	55	0	0	0	0
	37	168	1557	65	44	55	130	55	0	0	0	0
	39	170	1557	65	44	55	130	55	0	0	0	0
	40	171	1557	65	44	55	130	55	0	0	0	0
	41	172	1557	65	44	55	130	55	0	0	0	0
	42	173	1557	65	44	55	130	55	0	0	0	0
	43	174	1557	65	44	55	130	55	0	0	0	0
	44	175	1557	65	44	55	130	55	0	0	0	0
	45	176	1557	65	44	55	130	55	0	0	0	0
	46	177	1557	65	44	55	130	55	0	0	0	0
	47	178	1557	65	44	55	130	55	0	0	0	0
	48	179	1557	65	44	55	130	55	0	0	0	0
	49	180	1557	65	44	55	130	55	0	0	0	0
	50	181	1557	65	44	55	130	55	0	0	0	0
	51	182	1557	65	44	55	130	55	0	0	0	0
	52	183	1557	65	44	55	130	55	0	0	0	0
	53	184	1557	65	44	55	130	55	0	0	0	0
	54	185	1557	65	44	55	130	55	0	0	0	0
	55	186	1557	65	44	55	130	55	0	0	0	0
	56	187	1557	65	44	55	130	55	0	0	0	0
	57	188	1557	65	44	55	130	55	0	0	0	0
	58	189	1557	65	44	55	130	55	0	0	0	0
	59	190	1557	65	44	55	130	55	0	0	0	0
	60	191	1557	65	44	55	130	55	0	0	0	0
	61	192	1557	65	44	55	130	55	0	0	0	0
	62	193	1557	65	44	55	130	55	0	0	0	0
	63	194	1557	65	44	55	130	55	0	0	0	0
	64	195	1557	65	44	55	130	55	0	0	0	0
	65	196	1557	65	44	55	130	55	0	0	0	0
	66	197	1557	65	44	55	130	55	0	0	0	0
	67	198	1557	65	44	55	130	55	0	0	0	0
	68	199	1557	65	44	55	130	55	0	0	0	0
	69	200	1557	65	44	55	130	55	0	0	0	0
	70	201	1557	65	44	55	130	55	0	0	0	0
	71	202	1557	65	44	55	130	55	0	0	0	0

	72	203	1557	65	44	55	130	55	0	0	0	0
	73	204	1557	65	44	55	130	55	0	0	0	0
	74	205	1557	65	44	55	130	55	0	0	0	0
	75	206	1557	65	44	55	130	55	0	0	0	0
	76	207	1557	65	44	55	130	55	0	0	0	0
	77	208	1557	65	44	55	130	55	0	0	0	0
	78	209	1557	65	44	55	130	55	0	0	0	0
	79	210	1557	65	44	55	130	55	0	0	0	0
	80	211	1557	65	44	55	130	55	0	0	0	0
	81	212	1557	65	44	55	130	55	0	0	0	0
	82	213	1557	65	44	55	130	55	0	0	0	0
	83	214	1557	65	44	55	130	55	0	0	0	0
	84	215	1557	65	44	55	130	55	0	0	0	0
	85	216	1557	65	44	55	130	55	0	0	0	0
	86	217	1557	65	44	55	130	55	0	0	0	0
	87	218	1557	65	44	55	130	55	0	0	0	0
	88	219	1557	65	44	55	130	55	0	0	0	0
	89	220	1557	65	44	55	130	55	0	0	0	0
	90	221	1557	65	44	55	130	55	0	0	0	0
	91	222	1557	65	44	55	130	55	0	0	0	0
	92	223	1557	65	44	55	130	55	0	0	0	0
	93	224	1557	65	44	55	130	55	0	0	0	0
	94	225	1557	65	44	55	130	55	0	0	0	0
	95	226	1557	65	44	55	130	55	0	0	0	0
	96	227	1557	65	44	55	130	55	0	0	0	0
	97	228	1557	65	44	55	130	55	0	0	0	0
	98	229	1557	65	44	55	130	55	0	0	0	0
	99	230	1557	65	44	55	130	55	0	0	0	0
	100	231	1557	65	44	55	130	55	0	0	0	0
	101	232	1557	65	44	55	130	55	0	0	0	0
	102	233	1557	65	44	55	130	55	0	0	0	0
	103	234	1557	65	44	55	130	55	0	0	0	0
	104	235	1557	65	44	55	130	55	0	0	0	0
	105	236	1557	65	44	55	130	55	0	0	0	0
	106	237	1557	65	44	55	130	55	0	0	0	0
	107	238	1557	65	44	55	130	55	0	0	0	0

	108	239	1557	65	44	55	130	55	0	0	0	0
	109	240	1557	65	44	55	130	55	0	0	0	0
	110	241	1557	65	44	55	130	55	0	0	0	0
	111	242	1557	65	44	55	130	55	0	0	0	0
	112	243	1557	65	44	55	130	55	0	0	0	0
	113	244	1557	65	44	55	130	55	0	0	0	0
	114	245	1557	65	44	55	130	55	0	0	0	0
	115	246	1557	65	44	55	130	55	0	0	0	0
	116	247	1557	65	44	55	130	55	0	0	0	0
	117	248	1557	65	44	55	130	55	0	0	0	0
	118	249	1557	65	44	55	130	55	0	0	0	0
	119	250	1557	65	44	55	130	55	0	0	0	0
	120	251	1557	65	44	55	130	55	0	0	0	0
	121	252	1557	65	44	55	130	55	0	0	0	0
	122	253	1557	65	44	55	130	55	0	0	0	0
	123	254	1557	65	44	55	130	55	0	0	0	0
	124	255	1557	65	44	55	130	55	0	0	0	0
	125	256	1557	65	44	55	130	55	0	0	0	0
	126	257	1557	65	44	55	130	55	0	0	0	0
	127	258	1557	65	44	55	130	55	0	0	0	0
	128	259	1557	65	44	55	130	55	0	0	0	0
	129	260	1557	65	44	55	130	55	0	0	0	0
	130	261	1557	65	44	55	130	55	0	0	0	0
	131	262	1557	65	44	55	130	55	0	0	0	0
	132	263	1557	65	44	55	130	55	0	0	0	0
	133	264	1557	65	44	55	130	55	0	0	0	0
	134	265	1557	65	44	55	130	55	0	0	0	0
	135	266	1557	65	44	55	130	55	0	0	0	0
	136	267	1557	65	44	55	130	55	0	0	0	0
	137	268	1557	65	44	55	130	55	0	0	0	0
	138	269	1557	65	44	55	130	55	0	0	0	0
	139	270	1557	65	44	55	130	55	0	0	0	0
	140	271	1557	65	44	55	130	55	0	0	0	0
	141	272	1557	65	44	55	130	55	0	0	0	0
	142	273	1557	65	44	55	130	55	0	0	0	0
	143	274	1557	65	44	55	130	55	0	0	0	0

	144	275	1557	65	44	55	130	55	0	0	0	0
	145	276	1557	65	44	55	130	55	0	0	0	0
	146	277	1557	65	44	55	130	55	0	0	0	0
	147	278	1557	65	44	55	130	55	0	0	0	0
	148	279	1557	65	44	55	130	55	0	0	0	0
	149	280	1557	65	44	55	130	55	0	0	0	0
	150	281	1557	65	44	55	130	55	0	0	0	0
	151	282	1557	65	44	55	130	55	0	0	0	0
	152	283	1557	65	44	55	130	55	0	0	0	0
	153	284	1557	65	44	55	130	55	0	0	0	0
	154	285	1557	65	44	55	130	55	0	0	0	0
	155	286	1557	65	44	55	130	55	0	0	0	0
	156	287	1557	65	44	55	130	55	0	0	0	0
	156a	451										

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 No Toll

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
01a	1	1	638,711.2	704,708.6	0.00	5.00	0.00	66	10.0	8.0	Y
01b	2	1	635,391.8	706,412.3	0.00	5.00	0.00	66	10.0	8.0	Y
01c	3	0	1.0	1.0	1.00	5.00	0.00	66	10.0	8.0	Y
01d	4	1	638,808.5	702,662.3	0.00	5.00	0.00	66	10.0	8.0	Y
01e	5	1	638,817.8	702,204.0	0.00	5.00	0.00	66	10.0	8.0	Y
01f	6	1	638,649.9	701,978.9	0.00	5.00	0.00	66	10.0	8.0	Y
01g	7	1	638,276.1	701,311.0	0.00	5.00	0.00	66	10.0	8.0	Y
01h	8	1	637,797.0	701,884.5	0.00	5.00	0.00	66	10.0	8.0	Y
01i	9	1	637,895.0	702,639.4	0.00	5.00	0.00	66	10.0	8.0	Y
02a	10	1	639,473.7	699,343.2	0.00	5.00	0.00	66	10.0	8.0	Y
02b	11	1	640,109.4	701,620.6	0.00	5.00	0.00	66	10.0	8.0	Y
02c	12	1	640,077.0	700,773.4	0.00	5.00	0.00	66	10.0	8.0	Y
02d	13	1	640,936.4	701,985.2	0.00	5.00	0.00	66	10.0	8.0	Y
03a	14	0	2.0	2.0	2.00	5.00	0.00	66	10.0	8.0	Y
04a	15	1	646,006.0	693,894.9	0.00	5.00	0.00	66	10.0	8.0	Y
04b	16	1	645,033.8	694,176.1	0.00	5.00	0.00	66	10.0	8.0	Y
04c	17	1	646,769.9	693,891.4	0.00	5.00	0.00	66	10.0	8.0	Y
04d	18	4	647,557.4	694,067.5	0.00	5.00	0.00	66	10.0	8.0	Y
05a	19	3	649,634.9	694,506.7	0.00	5.00	0.00	66	10.0	8.0	Y
05b	20	3	651,114.1	695,826.1	0.00	5.00	0.00	66	10.0	8.0	Y
05c	21	2	651,915.4	695,785.3	0.00	5.00	0.00	66	10.0	8.0	Y
05d	22	2	652,098.8	696,084.1	0.00	5.00	0.00	66	10.0	8.0	Y

05e	23	1	651,707.1	697,477.4	0.00	5.00	0.00	66	10.0	8.0	Y
05f	24	1	648,889.7	694,791.2	0.00	5.00	0.00	66	10.0	8.0	Y
06a	25	1	649,419.8	697,228.6	0.00	5.00	0.00	66	10.0	8.0	Y
06b	26	1	650,083.9	697,017.1	0.00	5.00	0.00	66	10.0	8.0	Y
06c	27	3	649,997.4	697,420.1	0.00	5.00	0.00	66	10.0	8.0	Y
06d	28	1	646,646.8	696,786.4	0.00	5.00	0.00	66	10.0	8.0	Y
06e	29	0	3.0	3.0	3.00	5.00	0.00	66	10.0	8.0	Y
06f	30	1	646,856.9	695,884.2	0.00	5.00	0.00	66	10.0	8.0	Y
06g	31	1	647,644.4	695,630.1	0.00	5.00	0.00	66	10.0	8.0	Y
07a	32	1	654,685.8	694,902.6	0.00	5.00	0.00	66	10.0	8.0	Y
07b	33	1	654,657.9	695,496.2	0.00	5.00	0.00	66	10.0	8.0	Y
07c	34	1	654,685.8	696,233.4	0.00	5.00	0.00	66	10.0	8.0	Y
07d	35	1	654,582.2	697,186.9	0.00	5.00	0.00	66	10.0	8.0	Y
07e	36	1	654,601.8	697,827.2	0.00	5.00	0.00	66	10.0	8.0	Y
07f	37	1	654,157.5	695,458.1	0.00	5.00	0.00	66	10.0	8.0	Y
09a	38	1	658,074.0	697,252.0	0.00	5.00	0.00	66	10.0	8.0	Y
09b	39	0	658,585.4	696,426.2	0.00	5.00	0.00	66	10.0	8.0	Y
09c	40	1	658,974.6	697,647.5	0.00	5.00	0.00	66	10.0	8.0	Y
10a	41	1	660,987.0	695,179.3	0.00	5.00	0.00	66	10.0	8.0	Y
10b	42	3	659,235.1	696,204.6	0.00	5.00	0.00	66	10.0	8.0	Y
10c	43	1	659,630.7	696,151.4	0.00	5.00	0.00	66	10.0	8.0	Y
10d	44	4	660,029.6	696,340.4	0.00	5.00	0.00	66	10.0	8.0	Y
10e	45	4	660,627.1	696,326.8	0.00	5.00	0.00	66	10.0	8.0	Y
10f	46	5	661,109.2	696,306.4	0.00	5.00	0.00	66	10.0	8.0	Y
10g	47	3	661,828.9	696,272.5	0.00	5.00	0.00	66	10.0	8.0	Y
11a	48	1	665,350.0	697,174.6	0.00	5.00	0.00	66	10.0	8.0	Y
11b	49	1	664,890.4	697,766.6	0.00	5.00	0.00	66	10.0	8.0	Y
11c	50	1	664,152.2	697,996.4	0.00	5.00	0.00	66	10.0	8.0	Y
11d	51	4	663,173.2	698,274.5	0.00	5.00	0.00	66	10.0	8.0	Y
11e	52	4	663,469.8	698,247.8	0.00	5.00	0.00	66	10.0	8.0	Y
11f	53	5	663,714.8	697,916.0	0.00	5.00	0.00	66	10.0	8.0	Y
11g	54	6	662,883.9	698,585.2	0.00	5.00	0.00	66	10.0	8.0	Y
11h	55	3	662,577.7	698,470.4	0.00	5.00	0.00	66	10.0	8.0	Y
12a	56	2	667,742.9	699,567.7	0.00	5.00	0.00	66	10.0	8.0	Y
12b	57	1	666,634.2	699,007.5	0.00	5.00	0.00	66	10.0	8.0	Y
12c	58	1	666,190.9	697,694.2	0.00	5.00	0.00	66	10.0	8.0	Y

12d	59	1	666,004.6	699,180.3	0.00	5.00	0.00	66	10.0	8.0	Y
13a	60	2	668,782.5	700,954.2	0.00	5.00	0.00	66	10.0	8.0	Y
13b	61	1	668,831.6	700,403.2	0.00	5.00	0.00	66	10.0	8.0	Y
13c	62	4	667,993.9	700,150.8	0.00	5.00	0.00	66	10.0	8.0	Y
13d	63	3	667,716.9	700,397.9	0.00	5.00	0.00	66	10.0	8.0	Y
13e	64	2	666,988.3	700,178.6	0.00	5.00	0.00	66	10.0	8.0	Y
13f	65	1	666,318.5	699,688.9	0.00	5.00	0.00	66	10.0	8.0	Y
13g	66	1	665,969.8	699,806.4	0.00	5.00	0.00	66	10.0	8.0	Y
14a	67	3	672,006.9	701,473.4	0.00	5.00	0.00	66	10.0	8.0	Y
14b	68	1	671,751.8	701,298.9	0.00	5.00	0.00	66	10.0	8.0	Y
14c	69	1	671,454.1	701,248.0	0.00	5.00	0.00	66	10.0	8.0	Y
14d	70	1	670,787.7	701,147.0	0.00	5.00	0.00	66	10.0	8.0	Y
14e	71	1	670,059.6	700,899.4	0.00	5.00	0.00	66	10.0	8.0	Y
15a	72	1	671,803.0	700,161.5	0.00	5.00	0.00	66	10.0	8.0	Y
15b	73	1	670,460.4	699,244.9	0.00	5.00	0.00	66	10.0	8.0	Y
15c	74	1	672,681.8	700,846.4	0.00	5.00	0.00	66	10.0	8.0	Y
16a	75	1	676,010.0	701,483.1	0.00	5.00	0.00	66	10.0	8.0	Y
16b	76	1	675,503.2	701,518.7	0.00	5.00	0.00	66	10.0	8.0	Y
16c	77	1	674,932.8	701,400.8	0.00	5.00	0.00	66	10.0	8.0	Y
16d	78	1	674,244.6	702,177.8	0.00	5.00	0.00	66	10.0	8.0	Y
1	79	1	639,085.2	704,596.2	0.00	5.00	0.00	66	10.0	8.0	Y
2	80	1	639,659.3	699,384.3	0.00	5.00	0.00	66	10.0	8.0	Y
3	81	1	644,315.6	698,524.2	0.00	5.00	0.00	66	10.0	8.0	Y
4	82	1	646,039.9	693,744.6	0.00	5.00	0.00	66	10.0	8.0	Y
5	83	1	650,047.8	694,381.2	0.00	5.00	0.00	66	10.0	8.0	Y
6	84	1	649,364.8	696,994.4	0.00	5.00	0.00	66	10.0	8.0	Y
7	85	1	654,493.2	694,624.8	0.00	5.00	0.00	66	10.0	8.0	Y
8	86	1	656,646.6	695,002.2	0.00	5.00	0.00	66	10.0	8.0	Y
9	87	1	658,089.4	697,057.4	0.00	5.00	0.00	66	10.0	8.0	Y
10	88	1	661,001.4	695,347.2	0.00	5.00	0.00	66	10.0	8.0	Y
11	89	1	663,377.1	698,231.5	0.00	5.00	0.00	66	10.0	8.0	Y
12	90	1	666,807.6	698,819.4	0.00	5.00	0.00	66	10.0	8.0	Y
13	93	1	667,739.7	700,501.2	0.00	5.00	0.00	66	10.0	8.0	Y
14	94	1	671,451.7	701,171.1	0.00	5.00	0.00	66	10.0	8.0	Y
15	95	1	671,563.5	700,081.9	0.00	5.00	0.00	66	10.0	8.0	Y
16	96	1	675,419.7	700,969.0	0.00	5.00	0.00	66	10.0	8.0	Y

Mestre Greve Associates
MBJ

15 April 2009
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 4 No Toll
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
01a	1	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
01b	2	1	0.0	45.0	66	45.0	10	----	45.0	0.0	8	-8.0
01c	3	0	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
01d	4	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
01e	5	1	0.0	59.6	66	59.6	10	----	59.6	0.0	8	-8.0
01f	6	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0
01g	7	1	0.0	47.4	66	47.4	10	----	47.4	0.0	8	-8.0
01h	8	1	0.0	46.7	66	46.7	10	----	46.7	0.0	8	-8.0
01i	9	1	0.0	50.6	66	50.6	10	----	50.6	0.0	8	-8.0
02a	10	1	0.0	45.2	66	45.2	10	----	45.2	0.0	8	-8.0
02b	11	1	0.0	69.5	66	69.5	10	Snd Lvl	69.5	0.0	8	-8.0
02c	12	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
02d	13	1	0.0	52.2	66	52.2	10	----	52.2	0.0	8	-8.0
03a	14	0	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
04a	15	1	0.0	43.8	66	43.8	10	----	43.8	0.0	8	-8.0
04b	16	1	0.0	43.3	66	43.3	10	----	43.3	0.0	8	-8.0
04c	17	1	0.0	44.4	66	44.4	10	----	44.4	0.0	8	-8.0
04d	18	4	0.0	45.4	66	45.4	10	----	45.4	0.0	8	-8.0
05a	19	3	0.0	48.2	66	48.2	10	----	48.2	0.0	8	-8.0
05b	20	3	0.0	54.2	66	54.2	10	----	54.2	0.0	8	-8.0
05c	21	2	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0
05d	22	2	0.0	55.5	66	55.5	10	----	55.5	0.0	8	-8.0
05e	23	1	0.0	59.9	66	59.9	10	----	59.9	0.0	8	-8.0
05f	24	1	0.0	51.2	66	51.2	10	----	51.2	0.0	8	-8.0

06a	25	1	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0
06b	26	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
06c	27	3	0.0	53.7	66	53.7	10	----	53.7	0.0	8	-8.0
06d	28	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
06e	29	0	0.0	0.0	66	0.0	10	invalid	0.0	0.0	8	0.0
06f	30	1	0.0	63.2	66	63.2	10	----	63.2	0.0	8	-8.0
06g	31	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
07a	32	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
07b	33	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0
07c	34	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
07d	35	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
07e	36	1	0.0	57.8	66	57.8	10	----	57.8	0.0	8	-8.0
07f	37	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
09a	38	1	0.0	59.5	66	59.5	10	----	59.5	0.0	8	-8.0
09b	39	0	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0
09c	40	1	0.0	52.6	66	52.6	10	----	52.6	0.0	8	-8.0
10a	41	1	0.0	47.7	66	47.7	10	----	47.7	0.0	8	-8.0
10b	42	3	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0
10c	43	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0
10d	44	4	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
10e	45	4	0.0	62.0	66	62.0	10	----	62.0	0.0	8	-8.0
10f	46	5	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
10g	47	3	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0
11a	48	1	0.0	48.7	66	48.7	10	----	48.7	0.0	8	-8.0
11b	49	1	0.0	50.8	66	50.8	10	----	50.8	0.0	8	-8.0
11c	50	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0
11d	51	4	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
11e	52	4	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
11f	53	5	0.0	56.4	66	56.4	10	----	56.4	0.0	8	-8.0
11g	54	6	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0
11h	55	3	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
12a	56	2	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
12b	57	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
12c	58	1	0.0	49.6	66	49.6	10	----	49.6	0.0	8	-8.0
12d	59	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
13a	60	2	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0
13b	61	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0
13c	62	4	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0
13d	63	3	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
13e	64	2	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0
13f	65	1	0.0	69.3	66	69.3	10	Snd Lvl	69.3	0.0	8	-8.0

13g	66	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
14a	67	3	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
14b	68	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
14c	69	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
14d	70	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0
14e	71	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
15a	72	1	0.0	58.1	66	58.1	10	----	58.1	0.0	8	-8.0
15b	73	1	0.0	57.6	66	57.6	10	----	57.6	0.0	8	-8.0
15c	74	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
16a	75	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
16b	76	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0
16c	77	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
16d	78	1	0.0	54.7	66	54.7	10	----	54.7	0.0	8	-8.0
1	79	1	0.0	57.0	66	57.0	10	----	57.0	0.0	8	-8.0
2	80	1	0.0	46.1	66	46.1	10	----	46.1	0.0	8	-8.0
3	81	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
4	82	1	0.0	43.4	66	43.4	10	----	43.4	0.0	8	-8.0
5	83	1	0.0	47.0	66	47.0	10	----	47.0	0.0	8	-8.0
6	84	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0
7	85	1	0.0	72.6	66	72.6	10	Snd Lvl	72.6	0.0	8	-8.0
8	86	1	0.0	48.2	66	48.2	10	----	48.2	0.0	8	-8.0
9	87	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0
10	88	1	0.0	48.4	66	48.4	10	----	48.4	0.0	8	-8.0
11	89	1	0.0	65.5	66	65.5	10	----	65.5	0.0	8	-8.0
12	90	1	0.0	56.0	66	56.0	10	----	56.0	0.0	8	-8.0
13	93	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
14	94	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
15	95	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
16	96	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	142	0.0	0.0	0.0
All Impacted	29	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 5 No Toll

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
540 south of access road	108.5	17a	299	675,704.1	700,379.8	0.00				Average	
		17b	296	674,098.5	699,642.0	0.00				Average	
		18	295	671,263.0	698,061.0	0.00				Average	
		19	292	670,453.0	697,350.0	0.00				Average	
		20	1	669,922.0	696,648.0	0.00				Average	
		21	2	669,454.0	695,128.0	0.00				Average	
		22	3	668,662.0	692,257.0	0.00				Average	
		23	4	668,554.0	689,774.0	0.00				Average	
		24	5	668,474.0	687,611.0	0.00				Average	
		25	6	668,619.0	686,802.0	0.00				Average	
		26	7	668,795.0	686,054.0	0.00				Average	
		27	8	668,993.0	685,226.0	0.00				Average	
		28	9	669,213.0	684,225.0	0.00				Average	
		29	10	669,240.0	684,121.0	0.00				Average	
		30	11	669,248.0	684,036.0	0.00				Average	
		31	12	669,350.0	683,480.0	0.00				Average	
		32	13	669,353.0	683,343.0	0.00				Average	
		33	14	669,369.0	682,947.0	0.00				Average	
		34	15	669,364.0	681,105.0	0.00				Average	
		35	16	669,361.0	680,563.0	0.00				Average	
		36	17	669,358.0	680,162.0	0.00				Average	
		37	18	669,345.0	679,964.0	0.00				Average	
		38	19	669,303.0	679,785.0	0.00				Average	
		39	20	669,163.0	679,480.0	0.00				Average	
		40	21	668,558.0	678,842.0	0.00				Average	

		41	22	668,300.0	678,666.0	0.00				Average	
		42	23	668,006.0	678,498.0	0.00				Average	
		43	24	667,765.0	678,362.0	0.00				Average	
		44	25	667,434.0	677,994.0	0.00				Average	
		45	26	667,255.0	677,652.0	0.00				Average	
		46	27	667,092.0	677,358.0	0.00				Average	
		47	28	667,018.0	677,121.0	0.00				Average	
		48	29	666,961.0	676,868.0	0.00				Average	
		49	30	666,955.0	675,553.0	0.00					
112	24.0	1	31	654,338.0	710,514.0	0.00				Average	
		2	32	654,362.0	709,819.0	0.00				Average	
		3	33	654,362.0	709,149.0	0.00				Average	
		4	34	654,409.0	708,837.0	0.00				Average	
		5	35	654,433.0	708,334.0	0.00				Average	
		6	36	654,194.0	707,256.0	0.00				Average	
		7	37	653,673.0	705,536.0	0.00				Average	
		8	38	653,588.0	705,298.0	0.00				Average	
		9	39	653,537.0	705,068.0	0.00				Average	
		10	40	653,341.0	704,515.0	0.00				Average	
		11	41	653,214.0	704,319.0	0.00				Average	
		12	42	652,269.0	703,468.0	0.00				Average	
		13	43	652,201.0	703,357.0	0.00				Average	
		14	44	652,167.0	703,212.0	0.00				Average	
		15	45	652,169.0	702,177.0	0.00				Average	
		16	46	652,180.0	702,069.0	0.00				Average	
		17	47	652,213.0	701,916.0	0.00				Average	
		18	48	652,281.0	701,731.0	0.00				Average	
		19	49	652,496.0	701,316.0	0.00				Average	
		20	50	652,769.0	701,035.0	0.00				Average	
		21	51	653,698.0	699,929.0	0.00				Average	
		22	52	653,859.0	699,349.0	0.00				Average	
		23	53	653,914.0	699,008.0	0.00				Average	
		24	54	653,939.0	698,685.0	0.00				Average	
		25	55	654,491.0	696,858.0	1.00				Average	Y
		26	56	654,532.0	696,618.0	1.00				Average	Y
		27	57	654,411.0	693,900.0	0.00				Average	
		28	58	654,287.0	693,186.0	0.00				Average	
		29	59	654,131.0	692,561.0	0.00				Average	
		30	60	653,705.0	690,965.0	0.00				Average	

		31	61	653,644.0	690,600.0	0.00				Average	
		32	62	653,561.0	690,319.0	0.00				Average	
		33	63	653,545.0	690,236.0	0.00				Average	
		34	64	653,030.0	689,206.0	0.00				Average	
		35	65	652,788.0	688,751.0	0.00				Average	
		36	66	652,773.0	688,592.0	0.00				Average	
		37	67	652,849.0	688,464.0	0.00				Average	
		38	68	653,386.0	688,024.0	0.00					
264 west of sr-112	50.0	1	69	634,663.0	708,285.0	0.00				Average	
		2	70	636,427.0	708,219.0	0.00				Average	
		3	71	637,660.0	708,173.0	0.00				Average	
		4	72	638,604.0	708,114.0	0.00				Average	
		5	73	639,108.0	708,101.0	0.00				Average	
		6	74	639,272.0	708,062.0	0.00				Average	
		7	75	639,279.0	707,609.0	0.00				Average	
		8	76	639,292.0	707,518.0	0.00				Average	
		9	77	639,384.0	707,446.0	0.00				Average	
		10	78	639,626.0	707,406.0	0.00				Average	
		11	79	640,092.0	707,321.0	0.00				Average	
		12	80	640,446.0	707,262.0	0.00				Average	
		13	81	641,672.0	707,144.0	0.00				Average	
		14	82	642,236.0	707,026.0	0.00				Average	
		15	83	643,541.0	706,600.0	0.00				Average	
		16	84	643,803.0	706,560.0	0.00				Average	
		17	85	644,216.0	706,600.0	0.00				Average	
		18	86	644,701.0	706,737.0	0.00				Average	
		19	87	645,835.0	707,668.0	0.00				Average	
		20	88	647,035.0	708,947.0	0.00				Average	
		21	89	648,956.0	710,212.0	0.00				Average	
		22	90	649,336.0	710,514.0	0.00				Average	
		23	91	649,507.0	710,593.0	0.00				Average	
		24	92	649,710.0	710,665.0	0.00				Average	
		25	93	651,231.0	710,901.0	0.00				Average	
		26	94	652,077.0	710,920.0	0.00				Average	
		27	95	652,463.0	710,847.0	0.00				Average	
		28	96	652,664.0	710,825.0	0.00				Average	
		29	97	654,344.0	710,538.0	0.00					
540 north of access road	108.5	2	98	678,458.0	706,204.0	0.00				Average	
		3	99	678,412.0	705,562.0	0.00				Average	

		4	100	678,398.0	705,449.0	0.00				Average	
		5	101	678,391.0	705,403.0	0.00				Average	
		6	102	678,387.0	705,351.0	0.00				Average	
		7	103	678,324.0	705,040.0	0.00				Average	
		8	104	678,267.0	704,885.0	0.00				Average	
		9	105	678,151.0	704,405.0	0.00				Average	
		10	106	678,080.0	703,975.0	0.00				Average	
		11	107	678,052.0	703,354.0	0.00				Average	
		12	108	677,982.0	703,029.0	0.00				Average	
		13	109	677,837.0	702,557.0	0.00				Average	
		14	110	677,601.0	702,006.0	0.00				Average	
		15	111	677,424.0	701,721.0	0.00				Average	
		16	112	677,177.0	701,410.0	0.00				Average	
		17	113	676,934.0	701,223.0	0.00				Average	
		17a	291	675,704.1	700,379.8	0.00					
540 north of sr-264	108.5	1	117	678,582.0	710,416.0	0.00				Average	
		2	118	678,458.0	706,204.0	0.00					
264 west of I-540	50.0	7	119	666,454.0	706,994.0	0.00				Average	
		8	120	666,519.0	706,882.0	0.00				Average	
		9	121	666,581.0	706,805.0	0.00				Average	
		10	122	666,697.0	706,784.0	0.00				Average	
		11	123	667,850.0	706,752.0	0.00				Average	
		12	124	678,454.0	706,205.0	0.00					
264 east of sr-112	50.0	1	125	654,426.0	708,645.0	0.00				Average	
		2	126	665,582.0	708,191.0	0.00				Average	
		3	127	666,224.0	708,128.0	0.00				Average	
		4	128	666,344.0	708,093.0	0.00				Average	
		5	129	666,432.0	708,042.0	0.00				Average	
		6	130	666,491.0	707,918.0	0.00				Average	
		7	131	666,454.0	706,994.0	0.00					
Alt5	108.0	1	300	636,511.3	708,147.7	0.00				Average	
		2	301	636,686.7	707,704.2	0.00				Average	
		3	302	636,769.2	707,441.0	0.00				Average	
		4	303	636,859.5	707,146.4	0.00				Average	
		5	304	637,436.2	705,430.9	0.00				Average	
		6	305	637,807.3	704,333.0	0.00				Average	
		7	306	638,666.3	701,814.3	0.00				Average	
		8	307	638,725.3	701,667.0	0.00				Average	
		9	308	638,795.9	701,527.6	0.00				Average	

		10	309	638,879.8	701,393.7	0.00				Average	
		11	310	639,005.4	701,226.8	0.00				Average	
		12	311	639,101.6	701,116.8	0.00				Average	
		13	312	639,213.6	701,006.8	0.00				Average	
		14	313	639,370.6	700,875.2	0.00				Average	
		15	314	639,808.5	700,523.6	0.00				Average	
		16	315	641,122.1	699,493.8	0.00				Average	
		17	316	643,129.2	697,906.8	0.00				Average	
		18	317	644,220.4	697,049.2	0.00				Average	
		19	318	644,383.4	696,931.4	0.00				Average	
		20	319	644,562.0	696,813.5	0.00				Average	
		21	320	644,841.4	696,652.0	0.00				Average	
		22	321	645,151.7	696,496.8	0.00				Average	
		23	322	645,401.0	696,386.9	0.00				Average	
		24	323	645,705.3	696,272.9	0.00				Average	
		25	324	646,173.4	696,130.0	0.00				Average	
		26	325	646,385.5	696,082.9	0.00				Average	
		27	326	646,687.8	696,025.9	0.00				Average	
		28	327	647,035.4	695,980.8	0.00				Average	
		29	328	647,441.8	695,951.3	0.00				Average	
		30	329	647,619.2	695,955.9	0.00				Average	
		31	330	648,805.3	695,975.0	0.00				Average	
		33	331	648,961.5	695,979.9	0.00				Average	
		34	332	649,030.4	695,985.6	0.00				Average	
		35	333	649,105.2	695,993.5	0.00				Average	
		36	334	649,188.5	696,005.8	0.00				Average	
		37	335	649,271.2	696,021.1	0.00				Average	
		38	336	649,342.1	696,036.3	0.00				Average	
		39	337	649,413.7	696,054.5	0.00				Average	
		40	338	649,488.7	696,075.7	0.00				Average	
		41	339	649,565.5	696,101.0	0.00				Average	
		42	340	649,627.1	696,125.7	0.00				Average	
		43	341	649,715.9	696,166.1	0.00				Average	
		44	342	649,804.4	696,219.1	0.00				Average	
		45	343	649,886.8	696,271.4	0.00				Average	
		46	344	649,970.4	696,325.0	0.00				Average	
		47	345	650,055.3	696,376.4	0.00				Average	
		48	346	650,141.5	696,425.6	0.00				Average	
		49	347	650,229.0	696,472.5	0.00				Average	

		50	348	650,317.6	696,517.1	0.00				Average	
		51	349	650,407.4	696,559.4	0.00				Average	
		52	350	650,498.3	696,599.4	0.00				Average	
		53	351	650,590.1	696,637.0	0.00				Average	
		54	352	650,682.9	696,672.2	0.00				Average	
		55	353	650,776.6	696,705.0	0.00				Average	
		56	354	650,871.1	696,735.3	0.00				Average	
		57	355	650,966.4	696,763.2	0.00				Average	
		58	356	651,062.4	696,788.5	0.00				Average	
		59	357	651,158.9	696,811.4	0.00				Average	
		60	358	651,256.1	696,831.8	0.00				Average	
		61	359	651,353.7	696,849.6	0.00				Average	
		62	360	651,451.8	696,864.9	0.00				Average	
		63	361	651,550.2	696,877.6	0.00				Average	
		64	362	651,649.0	696,887.8	0.00				Average	
		65	363	651,747.9	696,895.4	0.00				Average	
		66	364	651,847.1	696,900.4	0.00				Average	
		67	365	651,946.3	696,902.8	0.00				Average	
		68	366	652,045.5	696,902.7	0.00				Average	
		69	367	652,144.8	696,900.0	0.00				Average	
		70	368	659,133.4	696,618.1	0.00				Average	
		71	369	659,231.2	696,615.4	0.00				Average	
		72	370	659,329.0	696,615.2	0.00				Average	
		73	371	659,426.7	696,617.5	0.00				Average	
		74	372	659,524.4	696,622.4	0.00				Average	
		75	373	659,621.9	696,629.7	0.00				Average	
		76	374	659,719.2	696,639.5	0.00				Average	
		77	375	659,816.2	696,651.8	0.00				Average	
		78	376	659,912.9	696,666.6	0.00				Average	
		79	377	660,009.2	696,683.8	0.00				Average	
		80	378	660,104.9	696,703.5	0.00				Average	
		81	379	660,200.2	696,725.7	0.00				Average	
		82	380	660,294.8	696,750.3	0.00				Average	
		83	381	660,388.8	696,777.3	0.00				Average	
		84	382	660,482.1	696,806.7	0.00				Average	
		85	383	660,574.6	696,838.4	0.00				Average	
		86	384	660,666.2	696,872.6	0.00				Average	
		87	385	660,757.0	696,909.0	0.00				Average	
		88	386	660,846.7	696,947.8	0.00				Average	

		89	387	660,935.5	696,988.9	0.00				Average	
		90	388	661,023.1	697,032.2	0.00				Average	
		91	389	661,109.7	697,077.7	0.00				Average	
		92	390	661,195.0	697,125.5	0.00				Average	
		93	391	661,279.1	697,175.4	0.00				Average	
		94	392	661,361.9	697,227.5	0.00				Average	
		95	393	661,443.3	697,281.6	0.00				Average	
		96	394	661,523.3	697,337.8	0.00				Average	
		97	395	661,601.9	697,396.1	0.00				Average	
		98	396	662,396.5	698,001.4	0.00				Average	
		99	397	662,494.0	698,074.0	0.00				Average	
		100	398	662,593.0	698,144.6	0.00				Average	
		101	399	662,693.5	698,213.0	0.00				Average	
		102	400	662,795.4	698,279.3	0.00				Average	
		103	401	662,898.7	698,343.4	0.00				Average	
		104	402	663,003.3	698,405.3	0.00				Average	
		105	403	663,109.2	698,464.9	0.00				Average	
		106	404	663,216.4	698,522.3	0.00				Average	
		107	405	663,324.7	698,577.5	0.00				Average	
		108	406	663,434.2	698,630.3	0.00				Average	
		109	407	663,544.8	698,680.7	0.00				Average	
		110	408	663,656.5	698,728.9	0.00				Average	
		111	409	663,769.1	698,774.6	0.00				Average	
		112	410	663,882.7	698,817.9	0.00				Average	
		113	411	663,997.2	698,858.9	0.00				Average	
		114	412	664,112.5	698,897.3	0.00				Average	
		115	413	664,228.6	698,933.4	0.00				Average	
		116	414	664,345.4	698,966.9	0.00				Average	
		117	415	671,843.0	701,034.1	0.00				Average	
		118	416	671,947.0	701,061.4	0.00				Average	
		119	417	672,051.6	701,086.4	0.00				Average	
		120	418	672,156.8	701,108.8	0.00				Average	
		121	419	672,262.5	701,128.8	0.00				Average	
		122	420	672,368.6	701,146.3	0.00				Average	
		123	421	672,475.1	701,161.3	0.00				Average	
		124	422	672,582.0	701,173.8	0.00				Average	
		125	423	672,689.1	701,183.8	0.00				Average	
		126	424	672,796.4	701,191.3	0.00				Average	
		127	425	672,903.8	701,196.2	0.00				Average	

		128	426	673,011.3	701,198.7	0.00				Average	
		129	427	673,118.9	701,198.6	0.00				Average	
		130	428	673,226.4	701,196.0	0.00				Average	
		131	429	673,333.9	701,190.8	0.00				Average	
		132	430	673,441.2	701,183.2	0.00				Average	
		133	431	673,548.2	701,173.0	0.00				Average	
		134	432	673,655.0	701,160.3	0.00				Average	
		135	433	673,761.5	701,145.1	0.00				Average	
		136	434	673,867.6	701,127.5	0.00				Average	
		137	435	673,973.3	701,107.3	0.00				Average	
		138	436	674,078.4	701,084.7	0.00				Average	
		139	437	674,183.0	701,059.6	0.00				Average	
		140	438	674,287.0	701,032.0	0.00				Average	
		141	439	674,390.3	701,002.0	0.00				Average	
		142	440	674,492.8	700,969.7	0.00				Average	
		143	441	674,594.6	700,934.9	0.00				Average	
		144	442	674,695.6	700,897.7	0.00				Average	
		145	443	674,795.6	700,858.2	0.00				Average	
		146	444	674,894.7	700,816.3	0.00				Average	
		147	445	674,992.7	700,772.1	0.00				Average	
		148	446	675,089.7	700,725.7	0.00				Average	
		149	447	675,185.6	700,676.9	0.00				Average	
		150	448	675,280.4	700,626.0	0.00				Average	
		151	449	675,373.8	700,572.8	0.00				Average	
		151a	452	675,704.1	700,379.8	0.00					

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 5 No Toll

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
540 south of access road	17a	299	10233	65	285	55	853	55	0	0	0	0
	17b	296	10233	65	285	55	853	55	0	0	0	0
	18	295	10233	65	285	55	853	55	0	0	0	0
	19	292	10233	65	285	55	853	55	0	0	0	0
	20	1	10233	65	285	55	853	55	0	0	0	0
	21	2	10233	65	285	55	853	55	0	0	0	0
	22	3	10233	65	285	55	853	55	0	0	0	0
	23	4	10233	65	285	55	853	55	0	0	0	0
	24	5	10233	65	285	55	853	55	0	0	0	0
	25	6	10233	65	285	55	853	55	0	0	0	0
	26	7	10233	65	285	55	853	55	0	0	0	0
	27	8	10233	65	285	55	853	55	0	0	0	0
	28	9	10233	65	285	55	853	55	0	0	0	0
	29	10	10233	65	285	55	853	55	0	0	0	0
	30	11	10233	65	285	55	853	55	0	0	0	0
	31	12	10233	65	285	55	853	55	0	0	0	0
	32	13	10233	65	285	55	853	55	0	0	0	0
	33	14	10233	65	285	55	853	55	0	0	0	0
	34	15	10233	65	285	55	853	55	0	0	0	0
	35	16	10233	65	285	55	853	55	0	0	0	0
	36	17	10233	65	285	55	853	55	0	0	0	0
	37	18	10233	65	285	55	853	55	0	0	0	0
	38	19	10233	65	285	55	853	55	0	0	0	0

	39	20	10233	65	285	55	853	55	0	0	0	0
	40	21	10233	65	285	55	853	55	0	0	0	0
	41	22	10233	65	285	55	853	55	0	0	0	0
	42	23	10233	65	285	55	853	55	0	0	0	0
	43	24	10233	65	285	55	853	55	0	0	0	0
	44	25	10233	65	285	55	853	55	0	0	0	0
	45	26	10233	65	285	55	853	55	0	0	0	0
	46	27	10233	65	285	55	853	55	0	0	0	0
	47	28	10233	65	285	55	853	55	0	0	0	0
	48	29	10233	65	285	55	853	55	0	0	0	0
	49	30										
112	1	31	853	65	32	55	96	55	0	0	0	0
	2	32	853	65	32	55	96	55	0	0	0	0
	3	33	853	65	32	55	96	55	0	0	0	0
	4	34	853	65	32	55	96	55	0	0	0	0
	5	35	853	65	32	55	96	55	0	0	0	0
	6	36	853	65	32	55	96	55	0	0	0	0
	7	37	853	65	32	55	96	55	0	0	0	0
	8	38	853	65	32	55	96	55	0	0	0	0
	9	39	853	65	32	55	96	55	0	0	0	0
	10	40	853	65	32	55	96	55	0	0	0	0
	11	41	853	65	32	55	96	55	0	0	0	0
	12	42	853	65	32	55	96	55	0	0	0	0
	13	43	853	65	32	55	96	55	0	0	0	0
	14	44	853	65	32	55	96	55	0	0	0	0
	15	45	853	65	32	55	96	55	0	0	0	0
	16	46	853	65	32	55	96	55	0	0	0	0
	17	47	853	65	32	55	96	55	0	0	0	0
	18	48	853	65	32	55	96	55	0	0	0	0
	19	49	853	65	32	55	96	55	0	0	0	0
	20	50	853	65	32	55	96	55	0	0	0	0
	21	51	853	65	32	55	96	55	0	0	0	0
	22	52	853	65	32	55	96	55	0	0	0	0
	23	53	853	65	32	55	96	55	0	0	0	0
	24	54	853	65	32	55	96	55	0	0	0	0
	25	55	853	65	32	55	96	55	0	0	0	0

	26	56	853	65	32	55	96	55	0	0	0	0
	27	57	853	65	32	55	96	55	0	0	0	0
	28	58	853	65	32	55	96	55	0	0	0	0
	29	59	853	65	32	55	96	55	0	0	0	0
	30	60	853	65	32	55	96	55	0	0	0	0
	31	61	853	65	32	55	96	55	0	0	0	0
	32	62	853	65	32	55	96	55	0	0	0	0
	33	63	853	65	32	55	96	55	0	0	0	0
	34	64	853	65	32	55	96	55	0	0	0	0
	35	65	853	65	32	55	96	55	0	0	0	0
	36	66	853	65	32	55	96	55	0	0	0	0
	37	67	853	65	32	55	96	55	0	0	0	0
	38	68										
264 west of sr-112	1	69	261	65	8	55	22	55	0	0	0	0
	2	70	261	65	8	55	22	55	0	0	0	0
	3	71	261	65	8	55	22	55	0	0	0	0
	4	72	261	65	8	55	22	55	0	0	0	0
	5	73	261	65	8	55	22	55	0	0	0	0
	6	74	261	65	8	55	22	55	0	0	0	0
	7	75	261	65	8	55	22	55	0	0	0	0
	8	76	261	65	8	55	22	55	0	0	0	0
	9	77	261	65	8	55	22	55	0	0	0	0
	10	78	261	65	8	55	22	55	0	0	0	0
	11	79	261	65	8	55	22	55	0	0	0	0
	12	80	261	65	8	55	22	55	0	0	0	0
	13	81	261	65	8	55	22	55	0	0	0	0
	14	82	261	65	8	55	22	55	0	0	0	0
	15	83	261	65	8	55	22	55	0	0	0	0
	16	84	261	65	8	55	22	55	0	0	0	0
	17	85	261	65	8	55	22	55	0	0	0	0
	18	86	261	65	8	55	22	55	0	0	0	0
	19	87	261	65	8	55	22	55	0	0	0	0
	20	88	261	65	8	55	22	55	0	0	0	0
	21	89	261	65	8	55	22	55	0	0	0	0
	22	90	261	65	8	55	22	55	0	0	0	0
	23	91	261	65	8	55	22	55	0	0	0	0

	24	92	261	65	8	55	22	55	0	0	0	0
	25	93	261	65	8	55	22	55	0	0	0	0
	26	94	261	65	8	55	22	55	0	0	0	0
	27	95	261	65	8	55	22	55	0	0	0	0
	28	96	261	65	8	55	22	55	0	0	0	0
	29	97										
540 north of access road	2	98	9783	65	272	55	816	55	0	0	0	0
	3	99	9783	65	272	55	816	55	0	0	0	0
	4	100	9783	65	272	55	816	55	0	0	0	0
	5	101	9783	65	272	55	816	55	0	0	0	0
	6	102	9783	65	272	55	816	55	0	0	0	0
	7	103	9783	65	272	55	816	55	0	0	0	0
	8	104	9783	65	272	55	816	55	0	0	0	0
	9	105	9783	65	272	55	816	55	0	0	0	0
	10	106	9783	65	272	55	816	55	0	0	0	0
	11	107	9783	65	272	55	816	55	0	0	0	0
	12	108	9783	65	272	55	816	55	0	0	0	0
	13	109	9783	65	272	55	816	55	0	0	0	0
	14	110	9783	65	272	55	816	55	0	0	0	0
	15	111	9783	65	272	55	816	55	0	0	0	0
	16	112	9783	65	272	55	816	55	0	0	0	0
	17	113	9783	65	272	55	816	55	0	0	0	0
	17a	291										
540 north of sr-264	1	117	9605	65	359	55	1077	55	0	0	0	0
	2	118										
264 west of I-540	7	119	1284	65	25	55	73	55	0	0	0	0
	8	120	1284	65	25	55	73	55	0	0	0	0
	9	121	1284	65	25	55	73	55	0	0	0	0
	10	122	1284	65	25	55	73	55	0	0	0	0
	11	123	1284	65	25	55	73	55	0	0	0	0
	12	124										
264 east of sr-112	1	125	765	65	22	55	64	55	0	0	0	0
	2	126	765	65	22	55	64	55	0	0	0	0
	3	127	765	65	22	55	64	55	0	0	0	0
	4	128	765	65	22	55	64	55	0	0	0	0
	5	129	765	65	22	55	64	55	0	0	0	0

	6	130	765	65	22	55	64	55	0	0	0	0
	7	131										
Alt5	1	300	1557	65	44	55	130	55	0	0	0	0
	2	301	1557	65	44	55	130	55	0	0	0	0
	3	302	1557	65	44	55	130	55	0	0	0	0
	4	303	1557	65	44	55	130	55	0	0	0	0
	5	304	1557	65	44	55	130	55	0	0	0	0
	6	305	1557	65	44	55	130	55	0	0	0	0
	7	306	1557	65	44	55	130	55	0	0	0	0
	8	307	1557	65	44	55	130	55	0	0	0	0
	9	308	1557	65	44	55	130	55	0	0	0	0
	10	309	1557	65	44	55	130	55	0	0	0	0
	11	310	1557	65	44	55	130	55	0	0	0	0
	12	311	1557	65	44	55	130	55	0	0	0	0
	13	312	1557	65	44	55	130	55	0	0	0	0
	14	313	1557	65	44	55	130	55	0	0	0	0
	15	314	1557	65	44	55	130	55	0	0	0	0
	16	315	1557	65	44	55	130	55	0	0	0	0
	17	316	1557	65	44	55	130	55	0	0	0	0
	18	317	1557	65	44	55	130	55	0	0	0	0
	19	318	1557	65	44	55	130	55	0	0	0	0
	20	319	1557	65	44	55	130	55	0	0	0	0
	21	320	1557	65	44	55	130	55	0	0	0	0
	22	321	1557	65	44	55	130	55	0	0	0	0
	23	322	1557	65	44	55	130	55	0	0	0	0
	24	323	1557	65	44	55	130	55	0	0	0	0
	25	324	1557	65	44	55	130	55	0	0	0	0
	26	325	1557	65	44	55	130	55	0	0	0	0
	27	326	1557	65	44	55	130	55	0	0	0	0
	28	327	1557	65	44	55	130	55	0	0	0	0
	29	328	1557	65	44	55	130	55	0	0	0	0
	30	329	1557	65	44	55	130	55	0	0	0	0
	31	330	1557	65	44	55	130	55	0	0	0	0
	33	331	1557	65	44	55	130	55	0	0	0	0
	34	332	1557	65	44	55	130	55	0	0	0	0
	35	333	1557	65	44	55	130	55	0	0	0	0

	36	334	1557	65	44	55	130	55	0	0	0	0
	37	335	1557	65	44	55	130	55	0	0	0	0
	38	336	1557	65	44	55	130	55	0	0	0	0
	39	337	1557	65	44	55	130	55	0	0	0	0
	40	338	1557	65	44	55	130	55	0	0	0	0
	41	339	1557	65	44	55	130	55	0	0	0	0
	42	340	1557	65	44	55	130	55	0	0	0	0
	43	341	1557	65	44	55	130	55	0	0	0	0
	44	342	1557	65	44	55	130	55	0	0	0	0
	45	343	1557	65	44	55	130	55	0	0	0	0
	46	344	1557	65	44	55	130	55	0	0	0	0
	47	345	1557	65	44	55	130	55	0	0	0	0
	48	346	1557	65	44	55	130	55	0	0	0	0
	49	347	1557	65	44	55	130	55	0	0	0	0
	50	348	1557	65	44	55	130	55	0	0	0	0
	51	349	1557	65	44	55	130	55	0	0	0	0
	52	350	1557	65	44	55	130	55	0	0	0	0
	53	351	1557	65	44	55	130	55	0	0	0	0
	54	352	1557	65	44	55	130	55	0	0	0	0
	55	353	1557	65	44	55	130	55	0	0	0	0
	56	354	1557	65	44	55	130	55	0	0	0	0
	57	355	1557	65	44	55	130	55	0	0	0	0
	58	356	1557	65	44	55	130	55	0	0	0	0
	59	357	1557	65	44	55	130	55	0	0	0	0
	60	358	1557	65	44	55	130	55	0	0	0	0
	61	359	1557	65	44	55	130	55	0	0	0	0
	62	360	1557	65	44	55	130	55	0	0	0	0
	63	361	1557	65	44	55	130	55	0	0	0	0
	64	362	1557	65	44	55	130	55	0	0	0	0
	65	363	1557	65	44	55	130	55	0	0	0	0
	66	364	1557	65	44	55	130	55	0	0	0	0
	67	365	1557	65	44	55	130	55	0	0	0	0
	68	366	1557	65	44	55	130	55	0	0	0	0
	69	367	1557	65	44	55	130	55	0	0	0	0
	70	368	1557	65	44	55	130	55	0	0	0	0
	71	369	1557	65	44	55	130	55	0	0	0	0

	72	370	1557	65	44	55	130	55	0	0	0	0
	73	371	1557	65	44	55	130	55	0	0	0	0
	74	372	1557	65	44	55	130	55	0	0	0	0
	75	373	1557	65	44	55	130	55	0	0	0	0
	76	374	1557	65	44	55	130	55	0	0	0	0
	77	375	1557	65	44	55	130	55	0	0	0	0
	78	376	1557	65	44	55	130	55	0	0	0	0
	79	377	1557	65	44	55	130	55	0	0	0	0
	80	378	1557	65	44	55	130	55	0	0	0	0
	81	379	1557	65	44	55	130	55	0	0	0	0
	82	380	1557	65	44	55	130	55	0	0	0	0
	83	381	1557	65	44	55	130	55	0	0	0	0
	84	382	1557	65	44	55	130	55	0	0	0	0
	85	383	1557	65	44	55	130	55	0	0	0	0
	86	384	1557	65	44	55	130	55	0	0	0	0
	87	385	1557	65	44	55	130	55	0	0	0	0
	88	386	1557	65	44	55	130	55	0	0	0	0
	89	387	1557	65	44	55	130	55	0	0	0	0
	90	388	1557	65	44	55	130	55	0	0	0	0
	91	389	1557	65	44	55	130	55	0	0	0	0
	92	390	1557	65	44	55	130	55	0	0	0	0
	93	391	1557	65	44	55	130	55	0	0	0	0
	94	392	1557	65	44	55	130	55	0	0	0	0
	95	393	1557	65	44	55	130	55	0	0	0	0
	96	394	1557	65	44	55	130	55	0	0	0	0
	97	395	1557	65	44	55	130	55	0	0	0	0
	98	396	1557	65	44	55	130	55	0	0	0	0
	99	397	1557	65	44	55	130	55	0	0	0	0
	100	398	1557	65	44	55	130	55	0	0	0	0
	101	399	1557	65	44	55	130	55	0	0	0	0
	102	400	1557	65	44	55	130	55	0	0	0	0
	103	401	1557	65	44	55	130	55	0	0	0	0
	104	402	1557	65	44	55	130	55	0	0	0	0
	105	403	1557	65	44	55	130	55	0	0	0	0
	106	404	1557	65	44	55	130	55	0	0	0	0
	107	405	1557	65	44	55	130	55	0	0	0	0

	108	406	1557	65	44	55	130	55	0	0	0	0
	109	407	1557	65	44	55	130	55	0	0	0	0
	110	408	1557	65	44	55	130	55	0	0	0	0
	111	409	1557	65	44	55	130	55	0	0	0	0
	112	410	1557	65	44	55	130	55	0	0	0	0
	113	411	1557	65	44	55	130	55	0	0	0	0
	114	412	1557	65	44	55	130	55	0	0	0	0
	115	413	1557	65	44	55	130	55	0	0	0	0
	116	414	1557	65	44	55	130	55	0	0	0	0
	117	415	1557	65	44	55	130	55	0	0	0	0
	118	416	1557	65	44	55	130	55	0	0	0	0
	119	417	1557	65	44	55	130	55	0	0	0	0
	120	418	1557	65	44	55	130	55	0	0	0	0
	121	419	1557	65	44	55	130	55	0	0	0	0
	122	420	1557	65	44	55	130	55	0	0	0	0
	123	421	1557	65	44	55	130	55	0	0	0	0
	124	422	1557	65	44	55	130	55	0	0	0	0
	125	423	1557	65	44	55	130	55	0	0	0	0
	126	424	1557	65	44	55	130	55	0	0	0	0
	127	425	1557	65	44	55	130	55	0	0	0	0
	128	426	1557	65	44	55	130	55	0	0	0	0
	129	427	1557	65	44	55	130	55	0	0	0	0
	130	428	1557	65	44	55	130	55	0	0	0	0
	131	429	1557	65	44	55	130	55	0	0	0	0
	132	430	1557	65	44	55	130	55	0	0	0	0
	133	431	1557	65	44	55	130	55	0	0	0	0
	134	432	1557	65	44	55	130	55	0	0	0	0
	135	433	1557	65	44	55	130	55	0	0	0	0
	136	434	1557	65	44	55	130	55	0	0	0	0
	137	435	1557	65	44	55	130	55	0	0	0	0
	138	436	1557	65	44	55	130	55	0	0	0	0
	139	437	1557	65	44	55	130	55	0	0	0	0
	140	438	1557	65	44	55	130	55	0	0	0	0
	141	439	1557	65	44	55	130	55	0	0	0	0
	142	440	1557	65	44	55	130	55	0	0	0	0
	143	441	1557	65	44	55	130	55	0	0	0	0

	144	442	1557	65	44	55	130	55	0	0	0	0
	145	443	1557	65	44	55	130	55	0	0	0	0
	146	444	1557	65	44	55	130	55	0	0	0	0
	147	445	1557	65	44	55	130	55	0	0	0	0
	148	446	1557	65	44	55	130	55	0	0	0	0
	149	447	1557	65	44	55	130	55	0	0	0	0
	150	448	1557	65	44	55	130	55	0	0	0	0
	151	449	1557	65	44	55	130	55	0	0	0	0
	151a	452										

Mestre Greve Associates 15 April 2009
MBJ TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: NWARA Intermodal Access Road
RUN: Future With Alt. 5 No Toll

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
01a	1	1	638,711.2	704,708.6	0.00	5.00	0.00	66	10.0	8.0	Y
01b	2	1	635,391.8	706,412.3	0.00	5.00	0.00	66	10.0	8.0	Y
01c	3	1	639,215.9	702,926.2	0.00	5.00	0.00	66	10.0	8.0	Y
01d	4	1	638,808.5	702,662.3	0.00	5.00	0.00	66	10.0	8.0	Y
01e	5	1	638,817.8	702,204.0	0.00	5.00	0.00	66	10.0	8.0	Y
01f	6	1	1.0	1.0	1.00	5.00	0.00	66	10.0	8.0	Y
01g	7	1	638,276.1	701,311.0	0.00	5.00	0.00	66	10.0	8.0	Y
01h	8	1	637,797.0	701,884.5	0.00	5.00	0.00	66	10.0	8.0	Y
01i	9	1	637,895.0	702,639.4	0.00	5.00	0.00	66	10.0	8.0	Y
02a	10	1	639,473.7	699,343.2	0.00	5.00	0.00	66	10.0	8.0	Y
02b	11	1	640,109.4	701,620.6	0.00	5.00	0.00	66	10.0	8.0	Y
02c	12	1	640,077.0	700,773.4	0.00	5.00	0.00	66	10.0	8.0	Y
02d	13	1	640,936.4	701,985.2	0.00	5.00	0.00	66	10.0	8.0	Y
03a	14	1	643,681.2	698,617.6	0.00	5.00	0.00	66	10.0	8.0	Y
04a	15	1	646,006.0	693,894.9	0.00	5.00	0.00	66	10.0	8.0	Y
04b	16	1	645,033.8	694,176.1	0.00	5.00	0.00	66	10.0	8.0	Y
04c	17	1	646,769.9	693,891.4	0.00	5.00	0.00	66	10.0	8.0	Y
04d	18	4	647,557.4	694,067.5	0.00	5.00	0.00	66	10.0	8.0	Y
05a	19	3	649,634.9	694,506.7	0.00	5.00	0.00	66	10.0	8.0	Y
05b	20	3	651,114.1	695,826.1	0.00	5.00	0.00	66	10.0	8.0	Y
05c	21	2	651,915.4	695,785.3	0.00	5.00	0.00	66	10.0	8.0	Y
05d	22	2	652,098.8	696,084.1	0.00	5.00	0.00	66	10.0	8.0	Y