

I-275 (STATE ROAD 93) EXPRESS LANES

PROJECT DEVELOPMENT & ENVIRONMENT STUDY

From north of Dr. Martin Luther King Jr. Boulevard (SR 574)
to north of Bearss Avenue (SR 678/CR 582)

ETDM Number: 13854

Work Program Item Segment Number: 431821-1

HILLSBOROUGH COUNTY, FLORIDA

DRAFT NOISE STUDY REPORT

Prepared for:
**Florida Department
of Transportation
District Seven**

October 2015

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate the need for capacity and operational improvements along 9.57 miles of State Road 93 (SR 93)/Interstate 275 (I-275) from north of Dr. Martin Luther King, Jr. Boulevard/SR 574 (MLK Boulevard) to north of Bearss Avenue (SR 678/County Road (CR) 582) in Hillsborough County, Florida.

This *Noise Study Report* (NSR) for the project was prepared as part of the PD&E Study as required by the FDOT's PD&E Manual, Part 2, Chapter 17 (May 4, 2011) and in accordance with the Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772)—Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010).

Two-thousand and twenty-five noise sensitive receptors (i.e., discrete representative locations on a property that has noise sensitive land uses) representing 1,719 noise sensitive land uses were evaluated within 50 noise sensitive areas (NSAs). One thousand five hundred and eighty-eight receptors were evaluated on residential properties, 25 at places of worship, 55 at four schools, 27 in parks, 19 at recreational areas, one at a medical facility (an assisted living facility) and four at hotels.

Of the 2,025 evaluated receptors, 459 are predicted to be impacted by traffic noise with existing conditions. In the future without the proposed improvements 468 of the receptors are predicted to be impacted. Finally, with the proposed improvements, 697 receptors are predicted to be impacted by traffic noise. One-thousand five-hundred and eighty-eight of the 1,719 receptors were evaluated on residential properties, 25 at places of worship, 55 at four schools, 27 in parks, four at the volleyball court, one at an assisted living facility, four at hotels, and 15 on a golf course.

Traffic management measures, modifications to the roadway alignment, buffer zones and noise barriers were considered as abatement measures. With the exception of the proposed noise barriers for the impacted properties within the following NSAs, the noise abatement measures were not determined to be feasible, reasonable, and cost effective:

- NSA 1: Residences between Osborne Avenue and Giddens Avenue on the east side of I-275 (see Sheets 1 in **Appendix B**)
- NSA 3: Residences between Osborne Avenue and Seminole Presbyterian Church on the west side of I-275 (see Sheet 1 in **Appendix B**)
- NSA 5: Residences between the Seminole Presbyterian Church and Hillsborough Avenue on the west side of I-275 (see Sheet 1 in **Appendix B**)
- NSA 6: Residences between Hillsborough Avenue and Kingsway Road on the east side of I-275 (see Sheet 2 in **Appendix B**)
- NSA 7: Residences between Idlewild Avenue to E Hanna Avenue on the east side of I-275 (see Sheet 2 in **Appendix B**)
- NSA 8: Residences between Hillsborough Avenue and E Paris Street on the west side of I-275 (see Sheet 3 in **Appendix B**)

- NSA 9: Residences between E Hanna Avenue to Sligh Avenue on the west side of I-275 (see Sheet 2 in **Appendix B**)
- NSA 11: Residences between E Fern Street to Sligh Avenue on the west side of I-275 (see Sheet 3 in **Appendix B**)
- NSA 12: Residences between Sligh Avenue and Broad Street on the east side of I-275 (see Sheet 4 in **Appendix B**)
- NSA 14: Residences between Broad Street and the Hillsborough River on the east side of I-275 (see Sheet 5 in **Appendix B**)
- NSA 16: Residences between Sligh Avenue and Broad Street on the west side of I-275 (see Sheet 4 in **Appendix B**)
- NSA 17: Residences between Broad Street and the Hillsborough River on the west side of I-275 (see Sheet 4 in **Appendix B**)
- NSA 19: Residences between Waters Avenue and E Yukon Street on the east side of I-275 (see Sheet 6 in **Appendix B**)
- NSA 20: Residences between Waters Avenue and E Yukon Street on the west side of I-275 (see Sheet 6 in **Appendix B**)
- NSA 42 & 46: Residences between 145th Avenue and Bearss Avenue on the east side of I-275 (see Sheets 12 and 13 in **Appendix B**)
- NSA 43: Residences between Fletcher Avenue and Gateway Christian Center on the west side of I-275 (see Sheet 12 in **Appendix B**)
- NSA 45: Residences between Gateway Christian Center and 145th Avenue on the west side of I-275 (see Sheet 12 in **Appendix B**)
- NSA 45: Residences between Gateway Christian Center and 145th Avenue on the west side of I-275 (see Sheet 12 in **Appendix B**)
- NSA 47: Residences between Fletcher Avenue and Bearss Avenue on the west side of I-275 (see Sheet 13 in **Appendix B**)

The estimated cost to construct the noise barriers ranges from \$98,000 to \$1,790,000 depending on barrier length and height.

The FDOT is committed to the construction of noise barriers at the locations above, contingent upon the following:

- Detailed noise analysis during the final design process supports the need for, and the feasibility and reasonableness of providing the barriers as abatement;
- The detailed analysis demonstrates that the cost of the noise barrier will not exceed the cost effective limit;

- The residents/property owners benefitted by the noise barrier desire that a noise barrier be constructed; and
- All safety and engineering conflicts or issues related to construction of a noise barrier are resolved.

Notably, the noise barriers for the impacted properties in NSAs 3, 6, 7, 8, 9, 12, 14, 16, 19, 20, 45, and 47 have the potential to visually block outdoor advertising signs. Should the barriers at these locations remain a feasible and reasonable abatement measure after the detailed noise analysis during the final design process and the signs are determined to be conforming and legally permitted signs, a notice of the possible noise wall screening will be provided to the affected sign permit holder(s) and the appropriate local sign regulating agency and a public hearing will be held to receive input on the proposed noise barrier/sign conflict.

Some land uses adjacent to I-275 are identified on the FDOT listing of noise- and vibration-sensitive sites (e.g., residential use). Application of the *FDOT Standard Specifications for Road and Bridge Construction* may minimize or eliminate potential issues should they arise during the construction process.

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1.0 INTRODUCTION

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate capacity and operational improvements along State Road 93 (SR 93)/Interstate 275 (I-275) from north of Dr. Martin Luther King, Jr. Boulevard (MLK Boulevard) to north of Bearss Avenue in Hillsborough County, Florida.

The objective of the PD&E Study is to assist FDOT and the Federal Highway Administration in reaching a decision on the type, location, and conceptual design of the I-275 improvements to safely and efficiently accommodate future travel demand. This PD&E Study documents the need for the improvements and the steps taken to develop and evaluate improvement alternatives along with proposed typical sections, special designation of travel lanes, and interchange enhancement alternatives.

This Noise Study Report (NSR) is one of several documents being prepared as part of the I-275 Project Development and Environment (PD&E) Study. Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010), requires that projects requiring approval, or that are funded by, the Federal Highway Administration (FHWA) be subjected to a traffic noise analysis and, if applicable, an evaluation of abatement measures.

To implement this guidance, the Florida Department of Transportation (FDOT) authored Part 2, Chapter 17 of the PD&E Manual (May 4, 2011), which identifies and explains the purpose, process and procedures that are to be used when conducting a traffic noise analysis. This NSR has been prepared in accordance with all applicable guidelines as stated within both 23 CFR 772 and Part 2, Chapter 17 of the FDOT PD&E Manual.

1.1 Description of Proposed Action

The proposed action evaluates the need to provide capacity and operational improvements along 9.57 miles of State Road 93 (SR 93)/Interstate 275 (I-275) from north of Dr. Martin Luther King, Jr. Boulevard (MLK Boulevard) to north of Bearss Avenue in Hillsborough County, Florida (see **Figure 1**). This evaluation considers the operational and highway safety benefits of implementing capacity improvements and compares them to the cost savings and minimization of adverse impacts associated with a No-Build Alternative. An evaluation matrix compares the No-Build and Build Alternatives on a variety of factors. This process identifies the alternative that best balances the benefits (such as improved traffic operations and safety) with the impacts (such as environmental effects and construction costs).

The Build Alternative includes one express lane in each direction within the median of I-275. The preliminary proposed typical section contains one 11-foot express lane, a 2-foot buffer, two 11-foot general use lanes, and one 12-foot general use lane in each direction. The improvements would be constructed on the existing alignment, on the same existing horizontal and vertical geometries. The Bearss Avenue interchange would be reconstructed as part of the proposed improvements. Right-of-way acquisition would be required only for stormwater management facilities (SMFs) associated with the Bearss Avenue interchange reconstruction.

**Figure 1
Project Location Map**



The *TBX Master Plan* provides guidance for developing improvements to the Tampa Bay interstate system and identifies specific freeway segments where it would be cost feasible to implement express lanes. The *TBX Master Plan* identified a Starter Project and an Ultimate Project for this segment of I-275. The Starter Project includes one express lane in each direction and the Ultimate Project includes two express lanes in each direction. In order to accommodate two express lanes in each direction the Ultimate Project would require complete reconstruction of the I-275 general use lanes, including replacing all the bridges along the project corridor. Since the starter project involves only widening in lieu of reconstruction of the existing mainline and bridges to accommodate the one express lane in each direction, implementing the starter alternative would create a lower overall impact to the environment. For these reasons, the Ultimate Project is no longer being considered as a viable alternative as part of this Study.

1.2 Existing Facility

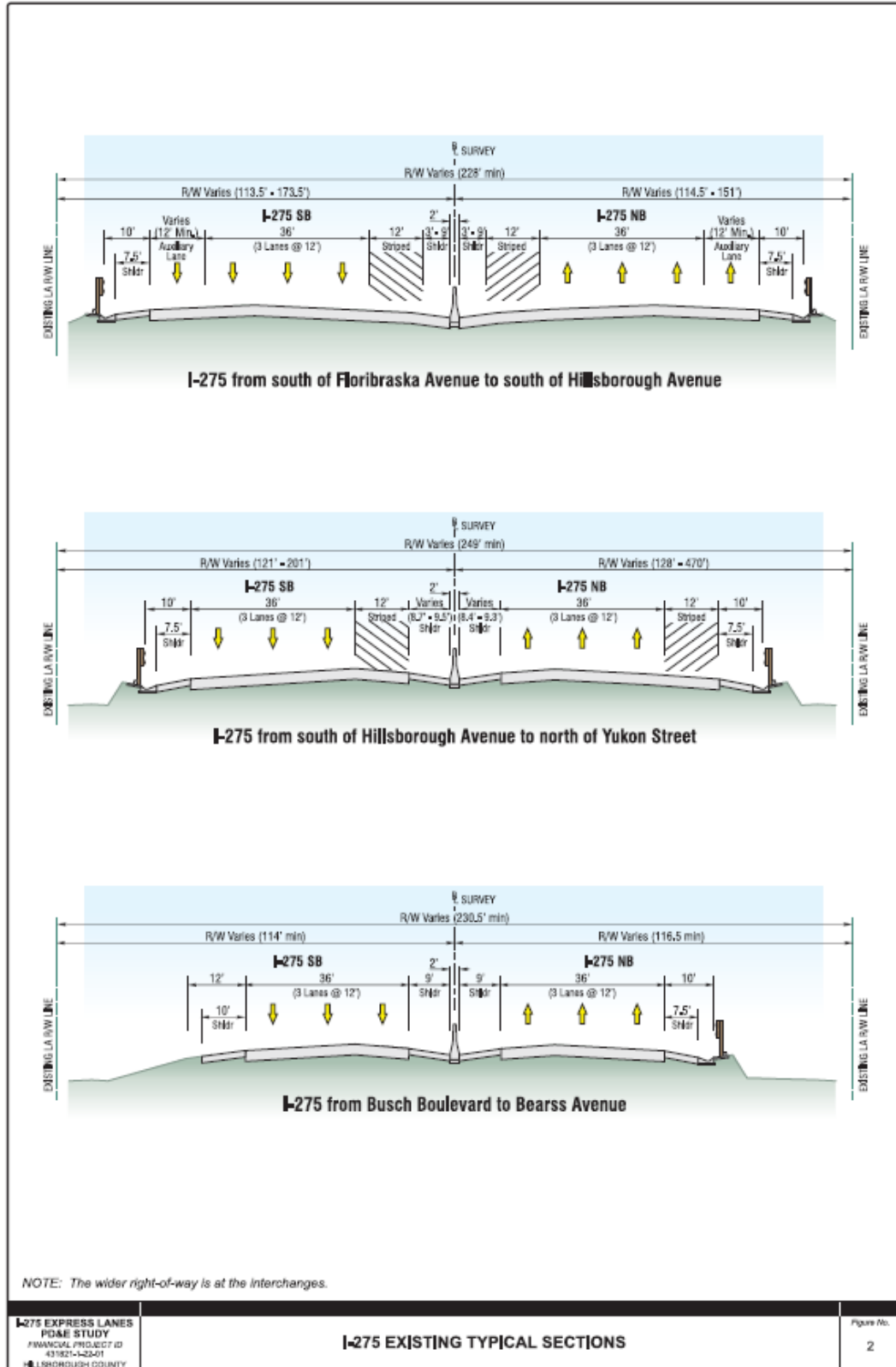
I-275 is a limited access freeway that runs in a north-south direction within the project limits. I-275 is part of the Federal Highway System (National Highway System) Interstate System, Florida's State Highway System, and the Strategic Intermodal System. I-275 is a six-lane divided highway with a posted speed that varies from 55 mph to 60 mph. Within the project limits there are eight interchanges:

- MLK Boulevard
- Hillsborough Avenue
- Sligh Avenue
- Bird Street
- Busch Boulevard
- Fowler Avenue
- Fletcher Avenue
- Bearss Avenue

The existing I-275 is a six-lane divided urban typical section which varies slightly throughout the project limits (see **Figure 2**). The existing right-of-way along I-275 ranges from approximately 220 feet between Linebaugh Avenue and Bougainvillea Avenue to approximately 1,400 feet at the Busch Boulevard interchange.

The I-275 corridor contains 21 bridges. Seventeen bridges span roadways, two bridges span both a roadway and railroad tracks, and two bridges span waterways. Only two of the bridges over roadways meet the minimum required vertical clearance of 16.5 feet. The two bridges over railroads do not meet the minimum required 23.5 vertical clearance standard.

Figure 2
I-275 Existing Typical Sections



1.3 Project Purpose and Need

The purpose of the project is to provide tolled express lanes along I-275 from north of MLK Boulevard to north of Bearss Avenue, as an alternative to general use lanes during peak use period. These improvements are expected to enhance the capacity, overall safety, and operating conditions of the facility within the project limits.

Statewide and regional transportation plans and studies by FDOT, the Tampa Bay Area Regional Transportation Authority (TBARTA), and Hillsborough County Metropolitan Planning Organization (MPO) identify the need for interstate improvements. Improvements include express lanes, a type of managed lane that responds to changing conditions with features such as dynamic pricing, managed accessibility, and vehicle eligibility. These features would assist in managing congestion on the Tampa Bay interstate system.

This segment of I-275 provides a vital connection to area tourist and recreational destinations, major employment/activity centers, and the University of South Florida; and is a convenient route for commuters and other work-related travel both north and south of the area. The corridor is also critical to the transport of goods and services. The capacity improvements are needed to accommodate projected future traffic and enhance corridor mobility.

The need for improvements on this segment of I-275 is based on several factors. These factors include plan consistency, regional connectivity, improving safety and capacity, enhancing emergency evacuation, accommodating projected population and employment growth, supporting multi-modal service, and providing access to intermodal and freight centers. Each of these factors is discussed in more detail in the Preliminary Engineering Report (PER).

1.4 Improvement Alternatives

1.4.1 No-Build Alternative

The No-Build Alternative assumes that the existing conditions along the I-275 corridor would remain unchanged, except for currently planned and programmed projects already committed. The No-Build Alternative forms the basis of the comparative analysis for the Build Alternative.

The benefit of the No-Build Alternative is there would be no construction-related or short-term operational impacts that are associated with the Build Alternative. However, with the No-Build Alternative, traffic operating conditions are anticipated to worsen over time, further increasing delays and congestion. The No-Build Alternative will offer no benefits to the existing or anticipated future traffic congestion along I-275.

The advantages of the No-Build Alternative are no impacts and associated inconvenience to motorists due to construction activities; no expenditures of funds for design, right-of-way acquisition, or construction; no impacts to the natural, physical, and human environments; and no disruption to existing land uses from construction activities. The disadvantages of the No-Build Alternative are increase in traffic congestion and road user costs, unacceptable level of service and an increase in crashes associated with increased travel times (due to excessive delays) and traffic volumes; increase in crash potential due to congestion; increase in maintenance costs associated with roadway and structure deterioration; increase in emergency vehicle response time and an increase in evacuation time during weather

emergencies as result of heavy congestion; and increase in the levels of carbon monoxide and other pollutants due to increased traffic congestion.

The No-Build Alternative will remain a viable alternative through the public involvement process. The final selection of an alternative will not be made until all impacts are considered and the public hearing comments have been evaluated.

1.4.2 Build Alternative

The Build Alternative includes widening I-275 from an existing six-lane divided interstate to an eight-lane divided interstate, consisting of one express lane and three general use lanes in each direction. The Bearss Avenue interchange will be reconfigured; no other interchange configurations will change with the improvements.

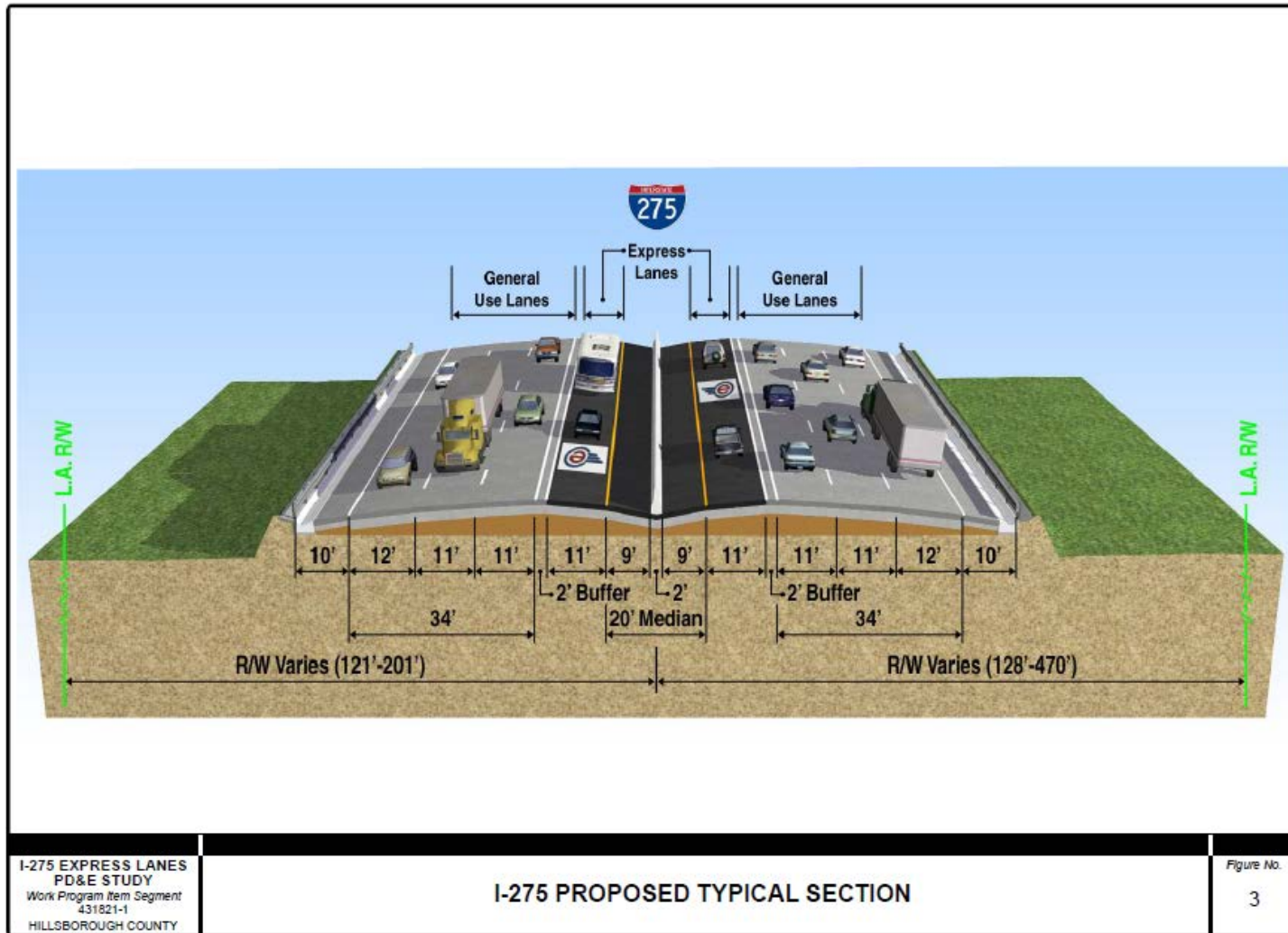
Similar to other managed lanes systems, travelers who choose to pay for the express lanes will do so because the value of the trips they choose will exceed the value of the toll in effect for that trip. The initiation and use of transit in the express lanes addresses the needs of low-income and other transportation-disadvantaged groups. In addition, former general use lane users will shift voluntarily to the express lanes providing an overall degree of reduced congestion for the general use lanes.

The proposed I-275 eight-lane typical section includes six general use lanes (three in each direction) on the outside, two express lanes (one in each direction) on the inside, a 2-foot wide buffer with plastic delineators separating the general use lanes and the express lanes, 10-foot wide outside shoulders, 9-foot wide inside shoulders, and a 2-foot wide concrete barrier separating the two directions of travel. The proposed I-275 mainline typical section is shown **Figure 3**.

The design will accommodate ingress and egress access points along the corridor through the use of slip ramps, which will also accommodate law enforcement. Vehicles can enter or exit the express lanes in two locations: between Busch Boulevard and Fowler Avenue and at the northern project limit north of Bearss Avenue.

The existing horizontal and vertical alignment will be maintained in the Build Alternative to avoid right-of-way impacts. The proposed improvements will be within the existing right-of-way way, except for stormwater management at the Bearss Avenue interchange.

Figure 3
I-275 Proposed Typical Section



2.0 METHODOLOGY

As stated in the Introduction of this NSR, the traffic noise analysis has been prepared in accordance with all applicable guidelines as stated within both 23 CFR 772 and Part 2, Chapter 17 of the FDOT PD&E Manual. As such, the analysis was performed using the FHWA's Traffic Noise Model (TNM, Version 2.5). Use of the TNM is required when evaluating the potential for traffic noise impacts during the design year of roadway improvement projects for which the regulations, policies and guidelines with 23 CFR 772 and Part 2, Chapter 17 of the PD&E Manual are applicable.

For properties with uses other than residential, the methodologies described in the FDOT's A Method to Determine Reasonableness and Feasibility of Noise Abatement at Special Use Locations were also used. Special land uses include churches, schools, parks and golf courses.

2.1 Noise Metrics

The predicted traffic noise levels presented in this report are expressed in decibels on the "A"-weighted scale (dB(A)). This scale most closely approximates the response characteristics of the human ear to traffic noise. All traffic noise levels are reported as equivalent levels (Leq(h)). Levels reported as Leq(h) are equivalent steady-state sound levels that contain the same acoustic energy as time-varying sound levels over a period of one hour.

2.2 Traffic Data

Noise levels are low when traffic volumes are low and operating conditions are good (level-of-service (LOS) A or B) and when traffic is so congested that movement is slow (LOS D, E, or F). Generally, the maximum hourly noise level occurs between these two conditions (i.e., LOS C).

The traffic volumes used in the analysis were either the roadway design LOS C volume or the forecast demand volume, whichever was less, so that the predicted traffic noise levels with the improvements to I-275 represent the maximum hourly noise level during the project's design year. The Existing (year 2012), Future No-Build (year 2040) and Future Build (year 2040) traffic data used in the analysis are provided in **Appendix A** of this NSR.

2.3 Noise Abatement Criteria

For the purpose of evaluating traffic noise, the FHWA established Noise Abatement Criteria (NAC). As shown in **Table 2-1**, these criteria vary according to a properties' activity category (i.e., land use). For comparative purposes, typical noise levels for common indoor and outdoor activities are provided in **Table 2-2**.

When predicted traffic noise levels "approach" or exceed the NAC, or when predicted future noise levels increase substantially from existing levels, the FHWA requires that noise abatement measures be considered. FDOT defines the word "approach" to mean within 1 dB(A) of the NAC. The FDOT's NAC are also shown in Table 2-1.

Table 2-1 FHWA/FDOT Noise Abatement Criteria

Activity Category	Description of Activity Category	Activity Leq(h) ¹	
		FHWA	FDOT
A	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.	57 (Exterior)	56 (Exterior)
B ²	Residential	67 (Exterior)	66 (Exterior)
C ²	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails and trail crossings.	67 (Exterior)	66 (Exterior)
D	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools and television studios.	52 (Interior)	51 (Interior)
E ²	Hotels, motels, offices, restaurants/bars and other developed lands, properties or activities not included in A-D or F.	72 (Exterior)	71 (Exterior)
F	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing.	--	--
G	Undeveloped lands that are not permitted.	--	--
<p>Sources: Table 1 of 23 CFR Part 772 and Table 17.1 of Chapter 17 of the FDOT's PD&E Manual (dated 5-24-11).</p> <p>¹ The Leq(h) activity criteria values are for impact determination only, and are not design standards for noise abatement measures.</p> <p>² Includes undeveloped lands permitted for this activity category.</p> <p><i>Note:</i> Noise abatement considerations are also warranted when a substantial noise increase is predicted to occur (i.e., when the predicted future traffic noise level with an improvement project is equal to or greater than 15 dB(A) when compared to the existing traffic noise level.</p>			

Table 2-2 Typical Noise Levels

Common Outdoor Activities	Noise Level dB(A)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck at 50 feet at 50 mph	80	Food blender at 3 feet Garbage disposal at 3 feet
Noisy urban area daytime	70	Vacuum cleaner at 10 feet Normal speech at 3 feet
Gas lawnmower at 100 feet	60	
Commercial area	50	Large business office Dishwasher in next room
Heavy traffic at 300 feet	40	Theater, large conference room (background)
Quiet urban daytime	30	Library
Quiet urban nighttime	20	Bedroom at night, concert hall (background)
Quiet suburban nighttime	10	Broadcast/recording studio
Quiet rural nighttime	0	

FHWA regulations also state that a traffic noise impact is predicted to occur when predicted traffic noise levels with a proposed improvement are considered substantial when compared to existing levels. The FDOT considers a substantial increase to be when traffic noise levels are predicted to increase 15 dB(A) or more above existing conditions as a direct result of a transportation improvement project.

2.4 Noise Abatement Measures

When traffic noise impacts are predicted, noise abatement measures are considered for the impacted properties and the feasibility and reasonableness of providing an abatement measure are considered. Feasibility factors are related to the acoustical and engineering properties of an abatement measure while reasonableness factors relate to the social, economic and environmental properties of a measure.

The following subsections of this NSR present and discuss four methods of abating traffic noise impacts.

2.4.1 Traffic Management

Some types of traffic management reduce noise levels. For example, trucks can be prohibited from certain streets and roads, or be permitted to only use certain streets and roads during daylight hours. The timing of traffic lights can also be changed to smooth out the flow of traffic and eliminate the need for frequent stops and starts. Speed limits can also be reduced.

2.4.2 Alignment Modifications

Modifying the horizontal and/or vertical alignment of a roadway can also be an effective traffic noise mitigation measure. When the horizontal alignment is shifted (i.e., moved) away from a noise sensitive property or when the vertical alignment is shifted below (i.e., placing the roadway below the elevation of a noise sensitive land use) or above a noise sensitive property.

2.4.3 Buffer Zones

Providing a buffer between a roadway and noise-sensitive land uses is an abatement measure that can minimize/eliminate noise impacts. To abate traffic noise at an existing noise sensitive land use, the property would be acquired to create a buffer zone. Buffer zones can also be used to eliminate the potential for new noise sensitive land uses to be impacted by traffic noise. For this purpose, and to encourage use of this abatement measure through local land use planning, noise contours have been developed and are further discussed in Section 5.0 of this NSR.

2.4.4 Noise Barriers

The most common type of noise abatement measure is construction of a noise barrier. Noise barriers have the potential to reduce traffic noise levels by blocking the sound path between the motor vehicles on the roadway (the source) and the noise-sensitive land uses adjacent to the roadway.

In order to effectively reduce traffic noise, a noise barrier must be relatively long, continuous (without intermittent openings) and sufficiently tall. For a noise barrier to be considered a potential abatement measure the barrier must also provide the following noise reduction requirements:

- **Minimum Noise Reduction Requirements** - A barrier must provide at least a 5 dB(A) reduction in traffic noise for two or more impacted noise-sensitive receptors and also provide at least a 7 dB(A) reduction (i.e., the FDOT's noise reduction design goal) for at least one impacted receptor. Receptors are discrete representative locations on a property that has noise sensitive land uses (see Table 2-1).

The cost of a noise barrier must also be reasonable. For this purpose, the FDOT established the following cost effective limit:

- **Cost Effective Limit** – At a cost of \$30 per square foot, a barrier should not cost more than \$42,000 per benefited noise sensitive receptor (a benefited receptor is one that receives at least a 5 dB(A) reduction in noise from a mitigation measure). For special land uses (e.g., the outdoor eating area of a restaurant), the cost of a barrier is based on the number of people using the impacted and benefitted area.

If the results of the preliminary analysis indicate that a noise barrier would provide the required reduction in traffic noise at a cost at or below the cost effective limit, additional factors are then considered. These factors relate to barrier design and construction (i.e., given site-specific details, can a barrier actually be constructed), safety, access to and from adjacent properties, right-of-way (ROW) requirements, maintenance and impacts on utilities and drainage amongst other factors. The viewpoint of the impacted property owners (and renters if applicable) who may, or may not, desire a noise barrier, is also a factor that is considered when evaluating noise barriers as an abatement measure.

3.0 TRAFFIC NOISE ANALYSIS

3.1 Noise Sensitive Receptors

As previously stated, noise sensitive receptors are representative locations of a noise sensitive land use. The location of the receptors evaluated for the I-275 Starter Project are shown on aerials provided in **Appendix B**. One-thousand seven hundred and nineteen noise sensitive receptors (i.e., discrete representative locations on a property that has noise sensitive land uses) representing 2,025 noise sensitive land uses were evaluated within 50 noise sensitive areas (NSAs). One thousand five hundred and eighty-eight receptors were evaluated on residential properties, 25 at places of worship, 55 at four schools, 27 in parks, 19 at recreational areas, one at a medical facility (an assisted living facility) and four at hotels.

Table 3-1 lists and describes each NSA and provides the number of evaluated noise sensitive receptors in each area.

Table 3-1 Noise Sensitive Areas

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Name and/or Location of Noise Sensitive Properties
1	1	B - Residential	82	Residences east of I-275 between East Osborne Avenue and East Giddens Avenue
2	1	C - Place of Worship (Exterior)	2	Seminole Heights Baptist Church
3	1	B - Residential	56	Residences west of I-275 between East Osborne Avenue and East Caracas Street in the Seminole Heights Historic District
4	1	C - Place of Worship (Exterior)	3	Seminole Presbyterian Church
		D - Place of Worship (Interior)		
5	1	B - Residential	29	Residences west of I-275 between East Wilder Avenue and East Giddens Avenue
6	2	B - Residential	58	Residences east of I-275 between East Mohawk Avenue and East Henry Avenue including Miami Place and Osceola Place
7	2	B - Residential	27	Residences east of I-275 between East Idlewild Avenue and East Hanna Avenue
8	3	B - Residential	55	Residences east of I-275 between East Hanna Avenue and East Sligh Avenue
9	2	B - Residential	77	Residences west of I-275 between East Mohawk Avenue and East Paris Street

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Name and/or Location of Noise Sensitive Properties
10	2-3	C - Place of Worship (Exterior)	23	Seminole Heights Methodist Church and Seminole Heights Elementary School
		C - School (Exterior)		
		D - Place of Worship (Interior)		
11	3	B - Residential	75	Residences west of I-275 between East Fern Street and East Sligh Avenue
12	4	B - Residential	68	Residences east of I-275 between East Sligh Avenue and East Broad Street
13	4	D - Place of Worship (Interior)	1	Word of Life Tabernacle
14	5	B - Residential	67	Residences east of I-275 between East Broad Street and the Hillsborough River
15	5	C- Park	4	Sulfur Springs Pool & Park
16	4	B - Residential	69	Residences west of I-275 between East Sligh Avenue and East Broad Street
17	5	B - Residential	80	Residences west of I-275 between East Broad Street and the Hillsborough River
18	5	C - Park	16	River Tower Park
19	6	B - Residential	71	Residences east of I-275 between East Waters Avenue and East Yukon Street and Cheney Park
		C - Park		
20	6	B - Residential	55	Residences west of I-275 between East Waters Avenue and East Yukon Street
21	6	B - Residential	6	Residences east of I-275 between East Eskimo Avenue and East Skagway Avenue
22	6	D - Place of Worship (Interior)	1	Ambassadors of Christ Temple of Prayer
23	6	C – Recreational Area	4	Volleyball court at residences in the Westchester Manor Condominiums
24	7-8	B - Residential	126	Residences east of I-275 between East Wilma Street and East Linebaugh Avenue
25	7	B - Residential	61	Residences in the Central Mobile Home Park and the Jersey Mobile Home Park
26	8	C - School (Exterior)	21	Most Holy Redeemer Inter-Parochial School
27	8-9	B - Residential	106	Residences west of I-275 between East Althea Avenue and East 109th

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Name and/or Location of Noise Sensitive Properties
				Avenue and including all of North Dixon Avenue
28	8-9	B - Residential	161	Residences east of I-275 between East Bougainvillea Avenue and East Fowler Avenue
29	9	C - School (Exterior)	12	Community Charter Schools of Excellence
30	10	B - Residential	81	Residences east of I-275 between East 118 th Avenue and East 127 th Avenue
31	10	B - Residential	35	Residences west of I-275 between East 119 th Avenue and East 122 th Avenue
32	10	D - School (Interior)	11	Frank D. Miles Elementary and Step Ahead Academy and Memory Care Assisted Living Facility
		C - School (Exterior)		
		D – Medical Facility (Interior)		
33	10	B - Residential	20	Residences west of I-275 between East 124 th Avenue and East 127 th Avenue
34	11	B - Residential	64	Residences east of I-275 between East 127 th Avenue and East 132 nd Avenue
35	11	D - Place of Worship (Interior)	1	Rohoboth Faith Cathedral
36	11	E - Hotel	2	Days Inn Hotel pool
37	11	D - Place of Worship (Interior)	1	Chinese Christian Alliance Church
38	11	B - Residential	42	Residences west of I-275 between Hoffman Boulevard and East 132 nd Avenue
39	11	E - Hotel	2	Super 8 Motel Pool
40	12	B - Residential	60	Residences east of I-275 between East Fletcher Avenue and East 138 th Avenue including the Hidden Oaks Mobile Home Park
41	12	D - Place of Worship (Interior)	16	Iglesia De Dios Pentecostal and Grand Prix Tampa (a miniature golf course)
		C – Recreational Facility		
42	12	B - Residential	10	Residences along East 145 th Avenue
43	12	B - Residential	52	Residences in the Oak Grove Apartments
44	12	C - Place of Worship (Exterior)	2	Gateway Christian Center
		D - Place of Worship (Interior)		

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Name and/or Location of Noise Sensitive Properties
45	12	B - Residential	32	Residences west of I-275 between East 143 rd Avenue and East 145 th Avenue
46	13	B - Residential	58	Residences in the Fountain Palm Apartment Homes and the Chalet Village Mobile Home Park
47	13	B - Residential	37	Residences west of I-275 between Garland Court and East Bearss Avenue
48	13	D - Place of Worship (Interior)	2	Christian Growth Fellowship
49	14	B - Residential	5	Residences along Clear Lane
50	14	B - Residential	76	Residences in the Lakeshore Villas Mobile Home Park
Total			2,025	

Following FHWA/FDOT guidance, the residences were evaluated as Activity Category “B” (i.e. abatement considered at a predicted traffic noise of 66 dB(A)). Where exterior areas of use exist the schools, parks, recreational areas and the places of worship were evaluated as Activity Category “C” (i.e., abatement considered at a predicted traffic noise level of 66 dB(A)). Several places of worship do not have areas of exterior use. Therefore, these receptors were evaluated as Activity Category “D” (i.e., abatement considered at a predicted interior level of 51 dB(A)). Finally, the hotels were evaluated as Activity Category “E” (i.e., abatement considered at a predicted traffic noise level of 71 dB(A)). These Activity Categories are also listed in the table above for each NSA.

3.2 Measured Noise Levels

Both existing and future noise levels (with and without the proposed improvements) were modeled using the TNM. To verify the accuracy of the predictions, the computer model was validated using field measured noise levels adjacent to the project corridor. Traffic data including motor vehicle volumes, vehicle mix, vehicle speeds and meteorological conditions were recorded during each measurement period.

The field measurements were conducted in accordance with the FHWA’s Measurement of Highway-Related Noise. The measurements were obtained using a Larson Davis Model CA-250, Type II integrating sound level meter (SLM). The SLM was calibrated before and after the measurement period with a Larson Davis CAL200 calibrator.

The recorded traffic data were used as input for the TNM to determine if, given the topography and site conditions of the area, the computer model could “re-create” the measured levels with the existing roadway. Following FDOT guidelines, a noise prediction model is considered within the accepted level of accuracy if the measured and predicted noise levels are within a tolerance standard of 3 dB(A).

Table 3-2 presents the field measurements and the validation results. As shown, the ability of the model to predict noise levels within the FDOT limits of plus or minus 3 dB(A) for the project was confirmed. Documentation in support of the validation is provided in **Appendix C** of this NSR.

Table 3-2 Validation Data

General Location	Site Number: Location	Measurement Period	Modeled (dB(A))	Measured (dB(A))	Difference
South of West Bearss Avenue and West of I-275	Site MS1-1: First Row Residence (143 East 143rd Avenue)	1	68.4	66.6	1.8
		2	67.7	65.6	2.1
		3	67.7	65.7	2.0
	Site MS1-2: Second Row Residence (138 East 143rd Avenue)	1	65.0	62.2	2.8
		2	64.5	61.5	3.0
		3	64.6	61.8	2.8
South of East Broad Street and East of I-275	Site MS2-1: First Row Residence (7307 North Huntley Avenue)	1	70.0	68.6	1.4
		2	70.5	68.9	1.6
		3	70.6	69.7	0.9
	Site MS2-2: Second Row - Word of Life Tabernacle (7309 North Huntley Avenue)	1	64.6	62.9	1.7
		2	65.1	63.0	2.1
		3	65.3	63.7	1.6

3.3 Predicted Traffic Noise Levels

The predicted traffic noise levels for each evaluated receptor are provided in **Appendix D. Table 3-3** lists the number of evaluated receptors in each NSA and the number of receptors predicted to be impacted by traffic noise with existing conditions and for future conditions with and without the improvements to I-275.

Table 3-3 Summary of Traffic Noise Analysis Results

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Impacted Receptors		
				Existing (2012)	No Build	Build (2040)
1	1	B – Residential	82	28	28	45
2	1	C - Place of Worship (Exterior)	2	1	1	2
3	1	B – Residential	56	23	23	37
4	1	C - Place of Worship (Exterior)	3	0	0	2
		D - Place of Worship (Interior)				
5	1	B – Residential	29	20	21	26
6	2	B – Residential	58	23	23	33
7	2	B - Residential	27	17	17	21
8	3	B - Residential	55	36	37	48
9	2	B - Residential	77	39	39	56
10	2-3	C - Place of Worship (Exterior)	23	6	6	22
		C - School (Exterior)				
		D - Place of Worship (Interior)				

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Impacted Receptors		
				Existing (2012)	No Build	Build (2040)
11	3	B - Residential	75	34	36	57
12	4	B - Residential	68	35	36	44
13	4	D - Place of Worship (Interior)	1	0	0	0
14	5	B - Residential	67	9	9	23
15	5	C - Park	4	0	0	0
16	4	B - Residential	69	17	19	25
17	5	B - Residential	80	31	31	43
18	5	C - Park	16	2	2	3
19	6	B - Residential	71	12	12	26
		C - Park				
20	6	B - Residential	55	20	20	26
21	6	B - Residential	6	0	0	0
22	6	D - Place of Worship (Interior)	1	0	0	0
23	6	C - Recreational Area	4	0	0	0
24	7-8	B - Residential	126	10	11	16
25	7	B - Residential	61	0	0	0
26	8	C - School (Exterior)	21	0	0	0
27	8-9	B - Residential	106	0	0	0
28	8-9	B - Residential	161	0	0	0
29	9	C - School (Exterior)	12	9	9	12
30	10	B - Residential	81	21	21	29
31	10	B - Residential	35	5	6	9
32	10	D - School (Interior)	11	0	0	1
		C - School (Exterior)				
		D - Medical Facility (Interior)				
33	10	B - Residential	20	10	10	10
34	11	B - Residential	64	0	0	0
35	11	D - Place of Worship (Interior)	1	0	0	0
36	11	E - Hotel	2	0	0	0
37	11	D - Place of Worship (Interior)	1	0	0	0
38	11	B - Residential	42	0	0	0
39	11	E - Hotel	2	0	0	0
40	12	B - Residential	60	1	1	2
41	12	D - Place of Worship (Interior)	16	7	7	9
		C - Recreational Area				
42	12	B - Residential	10	0	0	2
43	12	B - Residential	52	19	19	26
44	12	C - Place of Worship (Exterior)	2	0	0	0
		D - Place of Worship (Interior)				
45	12	B - Residential	32	7	7	14
46	13	B - Residential	58	1	1	2
47	13	B - Residential	37	14	14	23
48	13	D - Place of Worship (Interior)	2	0	0	0
49	14	B - Residential	5	2	2	3
50	14	B - Residential	76	0	0	0
Total			2,025	459	468	697

As shown in the table above, of the 2,025 evaluated receptors, 459 are predicted to be impacted by traffic noise with existing conditions. In the future without the proposed improvements 468 of the receptors are predicted to be impacted. Finally, with the proposed improvements, 697 receptors are

predicted to be impacted by traffic noise. Six hundred and forty-five of the 697 receptors were evaluated on residential properties, fourteen at places of worship, twenty-five at three schools, four in two parks, and nine in a recreational area (a commercial facility with a miniature golf course).

3.4 Abatement Considerations

As previously stated, when traffic noise impacts are predicted, noise abatement measures are considered for the impacted properties. The following discusses the FDOT's consideration of each of the measures for which an overview was provided in Section 2.4 of this NSR.

3.4.1 Traffic Management

Reducing traffic speeds and/or the traffic volume or changing the motor vehicle fleet on I-275 is inconsistent with the goal of improving the ability of the roadway to handle the forecast traffic volume. Therefore traffic management measures are not considered to be a reasonable noise abatement measure for the I-275 project.

3.4.2 Alignment Modifications

The proposed improvements would be constructed to follow the existing roadway alignment. Because shifting the alignment horizontally would require substantial ROW acquisitions and, because noise sensitive land uses are located on both sides of the roadway, a modification to the alignment of I-275 for the purpose of reducing traffic impacts is not considered to be a reasonable noise abatement measure.

3.4.3 Buffer Zones

As previously stated, to abate predicted traffic noise at an existing noise sensitive land use, the property would have to be acquired. The same cost effective limit that applies to noise barriers (i.e., \$42,000 per benefited noise sensitive receptor) would apply to the purchase price of any impacted noise sensitive property. A review of data from the Hillsborough and Polk County Property Appraisers indicates that the cost to acquire the developed properties adjacent to I-275 exceed the cost effective limit. Therefore, creating a buffer zone by acquiring existing noise sensitive properties is not considered to be a reasonable noise abatement measure.

3.4.4 Noise Barriers

TNM was used to evaluate the ability of noise barriers to reduce traffic noise levels for the impacted noise sensitive receptors adjacent to I-275. The barriers were evaluated at heights from eight to 22 feet (in two-foot increments). The length of each barrier was optimized to determine if at least the minimum noise reduction requirements (i.e., a minimum reduction of 5 dB(A) for two impacted receptors and a minimum reduction of 7 dB(A) for one benefitted receptor) could be achieved.

For the majority of the NSAs, noise barriers were evaluated five feet within the FDOT's ROW. In elevated sections of I-275 (e.g., overpasses at interchanges), barriers were evaluated on the roadway shoulder. Several combinations of ROW barriers and shoulder barriers were also evaluated in NSAs that included elevated portions of I-275.

Notably, barriers were optimized (length and height) in an attempt to benefit all of the impacted receptors in an NSA. In areas with varying densities of receptors (e.g., NSA 1). The barriers were optimized by inserting gaps in the barrier, where possible, between the areas of higher density impacted receptors.

The following provides the results of the noise barrier evaluation and discusses the potential amount of noise reduction and the cost effectiveness of providing barriers as an abatement measure for the NSAs in which traffic noise has been predicted to impact noise sensitive properties (i.e., the NSAs listed in **Table 3-3** for which receptors are predicted to be impacted with the Build Alternative).

3.4.4.1 NSA 1

A barrier was evaluated for the 45 impacted residences located east of I-275 between East Osborne Avenue and East Giddens Avenue (Receptors 1, 2, 6, 7, 12 through 14, 18 through 21, 25 through 27, 30 through 32, 35 through 37, 41 through 44, 46, 47, 50, 51, 55, 56, 59 through 61, 64 through 68, 70 through 73 and 75 through 77).

The results of the evaluation are provided in **Table 3-4**. As shown, at barrier heights of 10 to 22 feet, at least 14 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved, and the cost of the barrier would be below the FDOT's cost reasonable limit.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-5**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 1.

Table 3-4 NSA 1: Barrier Results for Residences East of I-275 between Osborne Avenue and Giddens Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	999	4	0	1	5	0	5	\$239,760	\$47,952	No
10	1,481	7	4	3	14	0	14	\$444,300	\$31,736	Yes
12	1,851	8	3	16	27	1	28	\$666,360	\$23,799	Yes
14	1,851	8	3	16	27	1	28	\$777,420	\$27,765	Yes
16	1,851	2	8	18	28	2	30	\$888,480	\$29,616	Yes
18	1,951	4	3	25	32	7	39	\$1,053,540	\$27,014	Yes
20	2,053	3	4	27	34	14	48	\$1,231,800	\$25,663	Yes
22	2,155	5	3	29	37	14	51	\$1,422,300	\$27,888	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-5 NSA 1: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's I-275 ROW and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.2 NSA 2

A noise barrier was evaluated for the impacted area of the Seminole Heights Baptist Church (Receptors 1 and 2). The church is located north of East Giddens Avenue, east of I-275. The impacted frequent use area is a playground. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 342 feet right of way barrier with an optimal height of 20 feet, and 348 feet shoulder barrier with a height of 14 feet. A barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A). Because it is not known how frequently the impacted and benefited area of the church would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the church in order for a barrier to be considered cost effective is 988 person-hours (i.e., 988 people would have to use the area for one hour each day of the year). Because it is not reasonable to assume that this level of activity would occur within the impacted area that would be benefited by a barrier, it is not considered a reasonable noise abatement measure for the impacted area of the Seminole Heights Baptist Church.

3.4.4.3 NSA 3

A barrier was for the 45 impacted residences located west of I-275 between East Osborne Avenue and East Caracas Street (Receptors 1 through 3, 5 through 8, 12 through 20, 22 through 24, 27, 29, 30 32 through 38, 42 and 43).

The results of the evaluation are provided in **Table 3-6**. As shown, at barrier heights of 8 to 22 feet, at least 8 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-7**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 3.

Table 3-6 NSA 3: Barrier Results for Residences West of I-275 between Osborne Avenue and Seminole Presbyterian Church

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	1,010	3	2	3	8	0	8	\$242,400	\$30,300	Yes
10	1,034	9	2	7	18	0	18	\$310,200	\$17,233	Yes
12	1,196	5	8	10	23	0	23	\$430,560	\$18,720	Yes
14	1,264	3	8	13	24	0	24	\$530,880	\$22,120	Yes
16	1,264	6	1	20	27	1	28	\$606,720	\$21,669	Yes
18	1,264	4	4	20	28	2	30	\$682,560	\$22,752	Yes
20	1,264	9	3	23	35	12	47	\$758,400	\$16,136	Yes
22	1,264	4	7	24	35	14	49	\$834,240	\$17,025	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-7 NSA 3: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.4 NSA 4

A noise barrier was evaluated for the impacted area of the Seminole Presbyterian Church (Receptors 1, 2 and 3). The church is located off of North Central Avenue, west of I-275. The impacted frequent use area is a playground. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 710 feet and an optimal height of 18 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A). Because it is not known how frequently the impacted and benefited area of the church would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the church in order for a barrier to be considered cost effective is 426 person-hours (i.e., 426 people would have to use the area for one hour each day of the year). Because it is not reasonable to assume that this level of activity would occur within the

impacted area that would be benefited by a barrier, it is not considered a reasonable noise abatement measure for the impacted area of the Seminole Presbyterian Church.

3.4.4.5 NSA 5

A barrier was evaluated five feet within the FDOT ROW line for the 26 impacted residences located west of I-275 between East Caracas Street and East Hillsborough Avenue (Receptors 1 through 5, and 7 through 18).

The results of the evaluation are provided in **Table 3-8**. As shown, at barrier heights of 8 to 12 feet and 16 to 22 feet, at least 8 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved, and the cost of the barrier would be below the FDOT’s cost reasonable limit.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-9**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 5.

Table 3-8 NSA 5: Barrier Results for Residences from west side of I-275 Seminole Presbyterian Church and Hillsborough Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	651	5	0	3	8	0	8	\$156,240	\$19,530	Yes
10	1,077	5	0	9	14	0	14	\$323,100	\$23,079	Yes
12	1,320	4	4	9	17	0	17	\$475,200	\$27,953	Yes
14	1,907	2	4	13	19	0	19	\$800,940	\$42,155	No
16	1,001	1	5	13	19	1	20	\$480,480	\$24,024	Yes
18	1,012	3	4	14	21	1	22	\$546,480	\$24,840	Yes
20	1,182	2	3	18	23	1	24	\$709,200	\$29,550	Yes
22	860	5	4	14	23	1	24	\$567,600	\$23,650	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-9 NSA 5: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's I-275 ROW and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.6 NSA 6

A noise barrier was evaluated five feet within the FDOT ROW line for the 33 impacted residences located east of I-275 between East Mohawk Avenue and East Clifton Street (Receptors 1, 2, 4, 6, 8, 9, 11, 12, 15 through 19, 21, 22, 24 through 26, 29, 30, 33 through 35, 37, 38, 41, 42, 45, 46, and 48 through 50).

The results of the evaluation are provided in **Table 3-10**. As shown, at barrier heights of 10 to 22 feet, at least 15 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-11**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 6.

Table 3-10 NSA 6: Barrier Results for Residences east side of I-275 from Hillsborough Avenue to Kingsway Road

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	1,687	4	1	1	6	0	6	\$404,880	\$67,480	No
10	1,687	3	10	3	16	0	16	\$506,100	\$31,631	Yes
12	1,981	5	2	16	23	0	23	\$713,160	\$31,007	Yes
14	1,687	6	4	18	28	0	28	\$708,540	\$25,305	Yes
16	1,687	3	7	20	30	1	31	\$809,760	\$26,121	Yes
18	1,687	1	5	25	31	1	32	\$910,980	\$28,468	Yes
20	1,687	1	2	29	32	10	42	\$1,012,200	\$24,100	Yes
22	1,687	1	1	30	32	18	50	\$1,113,420	\$22,268	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-11 NSA 6: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.7 NSA 7

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line, two barriers along the shoulder, and one on the wall structure. There are 21 impacted residences located east of I-275 between East Clifton Street and East Hanna Avenue (Receptors 1 through 8, 11 through 13, 16, and 17).

The results of the evaluation are provided in **Table 3-12**. As shown, at barrier heights of 10 to 22 feet, at least 12 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Following FDOT's Plans Preparation Manual (PPM), the height of roadway shoulder barriers is limited to a maximum of 14 feet and the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-13**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 7.

Table 3-12 NSA 7: Barrier Results for Residences east side of I-275 from Idlewild Avenue to E Hanna Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	2,607	6	0	7	13	0	13	\$625,680	\$48,129	No
10	2,393 ⁵	10	1	9	20	0	20	\$705,780	\$35,289	Yes
12	1,911 ⁵	7	5	9	21	2	23	\$663,720	\$28,857	Yes
14	1,611 ⁵	7	2	12	21	2	23	\$640,260	\$27,837	Yes
16	1,407 ^{5,6}	5	4	12	21	2	23	\$590,640	\$25,680	Yes
18	1,407 ^{5,6}	5	3	13	21	2	23	\$626,700	\$27,248	Yes
20	1,307 ^{5,6}	6	3	12	21	2	23	\$620,760	\$26,990	Yes
22	1,307 ^{5,6}	6	2	13	21	2	23	\$656,820	\$28,557	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 8 foot shoulder barrier on a structure is included in total barrier length and cost.

⁶ 14 foot shoulder barrier included in total barrier length and cost.

Table 3-13 NSA 7: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located with portions within the FDOT's I-275 ROW and portions on the shoulder of I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.8 NSA 8

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line, three barriers along the shoulder, and one on the wall structure. There are 48 impacted residences located east of I-275 between Hanna Avenue and Sligh Avenue (Receptors 1, 3 through 12, 14 through 20, 22 through 33, 35 through 41, 43 through 45, and 47 through 50).

The results of the evaluation are provided in **Table 3-14**. As shown, at barrier heights of 10 to 22 feet, at least 35 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Following FDOT's Plans Preparation Manual (PPM), the height of roadway shoulder barriers is limited to a maximum of 14 feet and the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-15**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 8.

Table 3-14 NSA 8: Barrier Results for Residences east side of I-275 from Hanna Avenue to Sligh Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	4,753	15	4	3	22	0	22	\$1,140,720	\$51,851	No
10	3,508 ⁵	11	10	14	35	1	36	\$1,028,280	\$28,563	Yes
12	3,576 ⁵	10	6	25	41	1	42	\$1,227,120	\$29,217	Yes
14	3,389 ⁵	9	6	33	48	4	52	\$1,351,020	\$25,981	Yes
16	3,174 ^{5,6}	7	8	33	48	5	53	\$1,427,040	\$26,925	Yes
18	3,072 ^{5,6}	6	5	37	48	5	53	\$1,538,280	\$29,024	Yes
20	3,006 ^{5,6}	3	4	41	48	5	53	\$1,694,880	\$31,979	Yes
22	2,906 ^{5,6}	3	4	41	48	5	53	\$1,791,120	\$33,795	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 8 foot shoulder barrier on a structure is included in total barrier length and cost.

⁶ 14 foot shoulder barrier included in total barrier length and cost.

Table 3-15 NSA 8: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located with portions within the FDOT's I-275 ROW and portions on the shoulder of I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project’s design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.9 NSA 9

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line, two barriers along the shoulder, and one on the wall structure. There are 48 impacted residences located west of I-275 between East Mohawk Avenue and Ease Paris Street (Receptors 1 through 17, 19 through 21, 23, 25, 27, 28, 30, 32, 33, 36 through 38, 40 through 52, 55 through 57, and 59 through 61).

The results of the evaluation are provided in **Table 3-16**. As shown, at barrier heights of 10 to 22 feet, at least 35 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Following FDOT’s Plans Preparation Manual (PPM), the height of roadway shoulder barriers is limited to a maximum of 14 feet and the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-17**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 9.

Table 3-16 NSA 9: Barrier Results for Residences west side of I-275 from Hillsborough Avenue to E Paris Street

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	4,387	7	5	2	14	0	14	\$1,052,880	\$75,206	No
10	2,738 ⁵	16	11	8	35	0	35	\$815,400	\$23,297	Yes
12	2,337 ⁵	14	9	27	50	2	52	\$817,320	\$15,718	Yes
14	2,342	11	13	29	53	3	56	\$983,640	\$17,565	Yes
16	2,738 ^{5,6}	1	11	42	54	12	66	\$1,290,240	\$19,549	Yes
18	2,539 ⁶	3	9	42	54	11	65	\$1,371,060	\$21,093	Yes
20	2,539 ⁶	3	5	46	54	12	66	\$1,523,400	\$23,082	Yes
22	2,439 ⁶	3	5	46	54	12	66	\$1,609,740	\$24,390	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.
² Receptors with a predicted reduction of five dB(A) or more are considered benefited.
³ Based on a unit cost of \$30 per square foot.
⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.
⁵ 8 foot shoulder barrier on a structure is included in total barrier length and cost.
⁶ 14 foot shoulder barrier included in total barrier length and cost.

Table 3-17 NSA 9: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located with portions within the FDOT's I-275 ROW and portions on the shoulder of I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/ maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.10 NSA 10

A noise barrier was evaluated for the impacted area of the Seminole Heights Elementary School (Receptors 10A-1 through 10A-10, 10B-1 through 10B-12 and 10C-1). The school is located between East Hanna Avenue and East Fern Street, west of I-275. The impacted frequent use area is a playground. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 2,103 feet and an optimal height of 10 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A). Because it is not known how frequently the impacted and benefited area of the church would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within

the impacted and benefited area of the school in order for a barrier to be considered cost effective is 914 person-hours (i.e., 914 people would have to use the area for one hour each day of the year). Because it is not reasonable to assume that this level of activity would occur within the impacted area that would be benefited by a barrier, it is not considered a reasonable noise abatement measure for the impacted area of the Seminole Heights Elementary School.

3.4.4.11 NSA 11

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line, two barriers along the shoulder to the south, and one on the wall structure to the north. There are 57 impacted residences located west of I-275 between East Fern Street and Sligh Avenue (Receptors 1, 2, 5 through 7, 10 through 12, 15 through 19, 22 through 26, 28 through 42, 44 through 57, and 59 through 63).

The results of the evaluation are provided in **Table 3-18**. As shown, at barrier heights of 8 to 22 feet, at least 11 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Following FDOT’s Plans Preparation Manual (PPM), the height of roadway shoulder barriers is limited to a maximum of 14 feet and the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-19**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 11.

Table 3-18 NSA 11: Barrier Results for Residences west side of I-275 from E Fern Street to Sligh Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	1,820	4	5	2	11	0	11	\$436,800	\$39,709	Yes
10	3,031 ⁵	9	6	10	25	0	25	\$894,420	\$35,777	Yes
12	2,536 ⁵	15	14	15	44	0	44	\$888,960	\$20,204	Yes
14	2,337 ⁵	9	16	27	52	9	61	\$963,540	\$15,796	Yes
16	2,489 ^{5,6}	3	9	42	54	13	67	\$1,146,720	\$17,115	Yes
18	2,489 ^{5,6}	3	2	50	55	15	70	\$1,284,060	\$18,344	Yes
20	2,588 ^{5,6}	2	1	53	56	16	72	\$1,480,800	\$20,567	Yes
22	2,489 ^{5,6}	3	1	52	56	14	70	\$1,558,740	\$22,268	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 8 foot shoulder barrier on a structure is included in total barrier length and cost.

⁶ 14 foot shoulder barrier included in total barrier length and cost.

Table 3-19 NSA 11: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located with portions within the FDOT's I-275 ROW and portions on the shoulder of I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/ maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.12 NSA 12

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line, two barriers along the shoulder, and two on the wall structure. There are 44 impacted residences located east of I-275 between East Sligh Avenue and Broad Street (Receptors 1, 5 through 8, 11 through 15, 17 through 19, 22 through 45, 47, 49, 51 through 53, and 55).

The results of the evaluation are provided in **Table 3-20**. As shown, at barrier heights of 10 to 22 feet, at least 20 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Following FDOT's Plans Preparation Manual (PPM), the height of roadway shoulder barriers is limited to a maximum of 14 feet and the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-21**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 12.

Table 3-20 NSA 12: Barrier Results for Residences east side of I-275 from Sligh Avenue to Broad Street

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	2,298	8	1	1	10	1	11	\$551,520	\$50,138	No
10	2,198	5	10	5	20	2	22	\$647,400	\$29,427	Yes
12	2,699	13	1	19	33	11	44	\$935,640	\$21,265	Yes
14	2,099	7	10	19	36	6	42	\$845,580	\$20,133	Yes
16	1,999	7	6	25	38	3	41	\$911,520	\$22,232	Yes
18	2,199	5	5	32	42	4	46	\$1,097,460	\$23,858	Yes
20	2,099	5	5	33	43	5	48	\$1,187,400	\$24,738	Yes
22	1,999	3	6	34	43	6	49	\$1,235,340	\$25,211	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-21 NSA 12: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.13 NSA 14

In NSA 14, two barriers were evaluated for the 22 impacted residential receptors located between East Broad Street and Hillsborough River ((Receptors 1, 30, 32, 35 through 37, 39 through 42, 44, 45 and 50). The first barrier was evaluated five feet within the FDOT's ROW. The results of the evaluation for this barrier are provided in **Table 3-22**. As shown, at barrier heights between 12 and 22 feet, at least three of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT's cost reasonable limit, a barrier five feet within the FDOT's ROW is not considered a reasonable noise abatement measure.

The NSA is located in the southeast quadrant of the I-275 and the Hillsborough River. As previously stated, for those impacted receptors located near this elevated portion of I-275, shoulder barriers were also evaluated if the results of the analysis indicates that a barrier five feet within the ROW would not be feasible and reasonable. For the receptors in this area, a combination barrier, segments both five feet within the ROW and on the roadway shoulder was evaluated. The results of the evaluation for this shoulder barrier are provided in **Table 3-23**.

As shown in **Table 3-23**, at barrier height of 14 feet, at least three of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-24**.

Table 3-22 NSA 14: ROW Barrier Results for Residences east side of I-275 from Broad Street to Hillsborough River

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	NA ^{5,6}	0	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
10	NA ^{5,6}	2	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
12	1,862	3	0	1	4	1	5	\$634,440	\$126,888	No
14	1,720	4	2	1	7	1	8	\$658,140	\$82,268	No
16	1,363	2	4	2	8	3	11	\$654,240	\$59,476	No
18	1,363	0	3	5	8	3	11	\$736,020	\$66,911	No
20	1,363	1	1	7	9	3	12	\$817,800	\$68,150	No
22	1,363	1	0	8	9	3	12	\$899,580	\$74,965	No

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 7 dB(A) reduction not achieved at any receptor.

⁶ 5 dB(A) reduction or greater was not achieved at two or more receptors.

Table 3-23 NSA 14: Shoulder Barrier Results Residences east side of I-275 from Broad Street to Hillsborough River

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	NA ^{5,6}	3	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
10	NA ^{5,6}	17	2	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
12	NA ^{5,6}	15	6	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
14	1,068	15	4	2	21	0	21	\$384,300	\$18,300	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 7 dB(A) reduction not achieved at any receptor.

⁶ 5 dB(A) reduction or greater was not achieved at two or more receptors.

Table 3-24 NSA 14: Additional Shoulder Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's shoulder for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.14 NSA 16

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line, two barriers along the shoulder, and one on the wall structure along the north end of the NSA. There are 25 impacted residences located west of I-275 between East Sligh Avenue and Broad Street (Receptors 1, 11, 12, 14, 16, 18, 23, 26 through 30, 32 through 35, 39, 40, 44, and 48 through 51).

The results of the evaluation are provided in **Table 3-25**. As shown, at barrier heights of 10 to 22 feet, at least 19 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Following FDOT’s Plans Preparation Manual (PPM), the height of roadway shoulder barriers is limited to a maximum of 14 feet and the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-26**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 16.

Table 3-25 NSA 16: Barrier Results for Residences west side of I-275 from Sligh Avenue to Broad Street

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	1,813	10	2	0	12	1	13	\$435,120	\$33,471	Yes
10 ⁵	1,847	11	4	4	19	3	22	\$542,100	\$24,641	Yes
12 ⁵	1,823	7	7	7	21	4	25	\$632,280	\$25,291	Yes
14 ⁵	1,637	4	5	13	22	14	36	\$651,540	\$18,098	Yes
16 ^{5,6}	2,023	4	5	14	23	18	41	\$923,040	\$22,513	Yes
18 ^{5,6}	2,023	5	4	15	24	23	47	\$1,032,420	\$21,966	Yes
20 ^{5,6}	2,023	3	6	15	24	25	49	\$1,141,800	\$23,302	Yes
22 ^{5,6}	2,023	4	3	17	24	37	61	\$1,251,180	\$20,511	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 8 foot shoulder barrier on a structure is included in total barrier length and cost.

⁶ 14 foot shoulder barrier included in total barrier length and cost.

Table 3-26 NSA 16: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located with portions within the FDOT's I-275 ROW and portions on the shoulder of I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/ maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.15 NSA 17

A noise barrier was evaluated for the forty-three impacted residences (Receptors 1,5, 9, 14, 15, 18, 19, 21 through 23, 25 through 28, 30 through 33, 35, 36, 38, 39, 41 through 58, and 60) along North Central Avenue, East Kirby Street, and North Riverdale Avenue. The barrier was evaluated five feet inside of the FDOT ROW line.

The results of the evaluation are provided in **Table 3-27**. As shown, at barrier heights between 18 and 22 feet, nineteen of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit.

Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier will be evaluated further. A summary of the additional barrier considerations is provided in **Table 3-28**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 17.

Table 3-27 NSA 17: Barrier Results for Residences west side of I-275 from Broad Street to Hillsborough River

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	NA ^{5,6}	0	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
10	NA ^{5,6}	0	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
12	NA ^{5,6}	1	1	0	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
14	1,319	4	0	2	6	0	6	\$490,980	\$81,830	No
16	1,169	3	3	3	9	0	9	\$513,120	\$57,013	No
18	1,269	9	3	7	19	0	19	\$595,260	\$31,329	Yes
20	1,419	5	10	10	25	0	25	\$725,400	\$29,016	Yes
22	1,819	11	6	19	36	4	40	\$1,011,540	\$25,289	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 7 dB(A) reduction not achieved at any receptor.

⁶ 5 dB(A) reduction or greater was not achieved at two or more receptors.

Table 3-28 NSA 17: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.16 NSA 18

A noise barrier was evaluated for the impacted area of the River Tower Park (Receptors 1 through 13). The park is located south of Bird Street, west of I-275. The impacted frequent use area is a park. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 825 feet and an optimal height of 16 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A). Because it is not known how frequently the impacted and benefited area of the church would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the park in order for a barrier to be considered cost effective is 2,705 person-hours (i.e., 2,705 people would have to use the area for one hour each day of the year). Because it is not reasonable to assume that this level of activity would occur within the impacted area that would be benefited by a barrier, it is not considered a reasonable noise abatement measure for the impacted area of River Tower Park.

3.4.4.17 NSA 19

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line and two on wall structures at the north and south ends of the NSA. There are 25 impacted residences located east of I-275 between East Waters Avenue and East Yukon Street (Receptors 1 through 4, 7, 10, 12 through 17, 19 through 21, 24, 25, 31, 32, 39, 45 and 1-1).

The results of the evaluation are provided in **Table 3-29**. As shown, at barrier heights of 18 to 22 feet, at least 21 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Following FDOT's Plans Preparation Manual (PPM), the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-30**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 19.

Table 3-29 NSA 19: Barrier Results for Residences east of I-275 between Waters Avenue and E Yukon Street

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	NA	0	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
10	NA	2	0	0	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
12	1,471 ⁷	3	2	1	6	0	6	\$511,440	\$85,240	No
14	1,320	3	2	3	8	0	8	\$554,400	\$69,300	No
16	1,667 ⁷	3	2	6	11	1	12	\$739,680	\$61,640	No
18	1,566 ⁷	10	3	8	21	1	22	\$800,340	\$36,379	Yes
20	1,663 ⁷	4	11	9	24	3	27	\$908,520	\$33,649	Yes
22	1,465 ⁷	2	5	17	24	3	27	\$945,900	\$35,033	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 7 dB(A) reduction not achieved at any receptor.

⁶ 5 dB(A) reduction or greater was not achieved at two or more receptors.

⁷ 8 foot shoulder barrier on a structure is included in total barrier length and cost.

Table 3-30 NSA 19: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located with portions within the FDOT's I-275 ROW and portions on the shoulder of I-275 and would not block ingress or egress to any property
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project’s design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.18 NSA 20

A combination of noise barriers were evaluated, one located five feet within the FDOT ROW line and one on the wall structure at the north end of the NSA. There are 25 impacted residences located west of I-275 between East Waters Avenue and East Yukon Street (Receptors 1, 3, 4, 6 through 9, 11, 15 through 19, 21, 22, 24 through 26, 30, 32, 33, 36, 37, 39 and 40).

The results of the evaluation are provided in **Table 3-31**. As shown, at barrier heights of 16 to 22 feet, at least 11 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Following FDOT’s Plans Preparation Manual (PPM), the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet.

Because a barrier is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-32**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 20.

Table 3-31 NSA 20: Barrier Results for Residences west of I-275 between Waters Avenue and E Yukon Street

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	NA ^{5,6}	2	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
10	NA ⁵	1	2	0	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
12	355	0	1	2	3	0	3	\$127,800	\$42,600	No
14	865	1	3	4	8	0	8	\$363,300	\$45,413	No
16	920	2	1	8	11	0	11	\$441,600	\$40,145	Yes
18	1,319 ⁷	7	0	11	18	0	18	\$652,560	\$36,253	Yes
20	1,419 ⁷	3	7	11	21	1	22	\$779,760	\$35,444	Yes
22	1,503 ⁷	5	4	16	25	3	28	\$908,400	\$32,443	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.
² Receptors with a predicted reduction of five dB(A) or more are considered benefited.
³ Based on a unit cost of \$30 per square foot.
⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.
⁵ 7 dB(A) reduction not achieved at any receptor.
⁶ 5 dB(A) reduction or greater was not achieved at two or more receptors.
⁷ An 8 foot shoulder barrier on a structure is included in total barrier length and cost.

Table 3-32 NSA 20: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located with portions within the FDOT's I-275 ROW and portions on the shoulder of I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/ maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.19 NSA 24

A barrier extension, along the ROW line and the shoulder, to the north and south ends of the existing noise barrier (Barrier B4R) at this NSA was evaluated for the 21 newly impacted residences located east of I-275 between Busch Boulevard and Bougainvillea Avenue (Receptors 2 through 9, 10, 11, 12, 14, 15, 18, 19, 20, and 115). These impacted receptors are located at, or near, the ends of the existing barrier. The existing barrier provides a noise reduction of at least 5 dB(A) to two or more impacted residences and provides the noise reduction goal of 7 dB(A) to at least one impacted residence.

The results of the barrier extension evaluation are provided in **Table 3-33**. As shown, an extension of the south end of the existing barrier (18 feet tall) and an extension of the north end of the existing barrier (22 feet tall), all 16 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the cost of the barrier extension would be below the FDOT's cost reasonable limit.

Because the barrier extension is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier extension was evaluated further. A summary of the additional barrier extension considerations is provided in **Table 3-34**. Based on the review of these factors, extension of the existing barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 24.

Table 3-33 NSA 24: Barrier Results for Residences east of I-275 between Busch Boulevard and Bougainvillea Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
18 to 22 ⁵	1,150 ⁶	2	0	14	16	4	20	\$543,480	\$27,174	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ The south end of the existing barrier is 18 feet tall and the north end is 22 feet.

⁶ An 8 foot shoulder barrier on a structure is included in total barrier length and cost.

Table 3-34 NSA 24: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW and shoulder for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.20 NSA 29 SLU

A noise barrier was evaluated for the impacted area of the Community Charter Schools of Excellence (Receptors 1 through 12). The school is located between North Central Avenue and North Dixon Avenue, just north of East 109th Avenue, west of I-275. The impacted frequent use area is a playground and multi-use area. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 1,078 feet and an optimal height of 14 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A). Because it is not known how frequently the impacted and benefited area of the church would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the school in order for a barrier to be considered cost effective is 1,114 person-hours (i.e., 1,114 people would have to use the area for one hour each day of the year). Because it is not reasonable to assume that this level of activity would occur within the impacted area that would be benefited by a barrier, it is not considered a reasonable noise abatement measure for the impacted area of the Community Charter Schools of Excellence.

3.4.4.21 NSA 30

A barrier extension, along the ROW line, to the south end of the existing noise barrier (Barrier B10/B11R) at this NSA was evaluated for the 29 newly impacted residences located east of I-275 between Fowler Avenue and 127th Avenue (Receptors 1 through 7, 9 through 12, 14 through 16, 18 through 22, 24 through 27, 29 through 31, 33, 34, and 37). These impacted receptors are located at, or near, the south end of the existing barrier. The existing barrier provides a noise reduction of at least 5 dB(A) to two or more impacted residences and provides the noise reduction goal of 7 dB(A) to at least one impacted residence.

The results of the barrier extension evaluation are provided in **Table 3-35**. As shown, an extension of the south end of the existing barrier (20 feet tall), 27 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the cost of the barrier extension would be below the FDOT's cost reasonable limit.

Because the barrier extension is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier extension was evaluated further. A summary of the additional barrier extension considerations is provided in **Table 3-36**. Based on the review of these factors, extension of the existing barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 30.

Table 3-35 NSA 30: Existing Barrier Extension Results for Residences east of I-275 between Fowler Avenue and 127th Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
18 to 22 ⁵	1,150 ⁶	2	0	14	16	4	20	\$543,480	\$27,174	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-36 NSA 30: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.22 NSA 31

A barrier extension, along the shoulder, to the south end of the existing noise barrier (Barrier B14) at this NSA was evaluated for the 9 newly impacted residences located west of I-275 between Fowler Avenue and 122nd Avenue (Receptors 1 through 3, 6 through 9, 12, and 13). These impacted receptors are located at, or near, the south end of the existing barrier. The existing barrier provides a noise reduction of at least 5 dB(A) to two or more impacted residences and provides the noise reduction goal of 7 dB(A) to at least one impacted residence.

The results of the barrier extension evaluation are provided in **Table 3-37**. Since there is insufficient space within the ROW to extend the existing barrier farther south, the barrier extension was evaluated on the shoulder. As shown, an extension of the south end of the existing barrier (evaluated at heights of 8 to 14 feet), up to 5 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the cost of the barrier extension would be below the FDOT's cost reasonable limit.

Because the barrier extension is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier extension was evaluated further. A summary of the additional barrier extension considerations is provided in **Table 3-38**. Based on the review of these factors, extension of the existing barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 31.

Table 3-37 NSA 31: Existing Barrier Extension Results for Residences west of I-275 between Fowler Avenue and 122nd Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	699	2	2	0	4	0	4	\$167,760	\$41,940	Yes
10	699	3	1	1	5	1	6	\$209,700	\$34,950	Yes
12	599	3	1	1	5	1	6	\$215,640	\$35,940	Yes
14	499	3	1	1	5	0	5	\$209,580	\$41,916	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-38 NSA 31: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the shoulder of I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.23 NSA 32

A noise barrier was evaluated for the impacted area of the Miles Elementary (Receptors 1.1 through 1.9), Step Ahead Academy (Receptor 3), and Memory Care Assisted Living Facility (1 through 2). The schools and assisted living facility are located between East 122nd Avenue and 127th Avenue, west of I-275. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

Due to the distance of the receptors from the barrier, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, a barrier is not considered a reasonable noise abatement measure for the impacted area of NSA 32.

3.4.4.24 NSA 33

Combinations of noise barriers were evaluated for the residences in the subdivision off of East 127th Street on Oak Rose Lane (Receptors 1 and 2). The results of the barrier analysis are provided in **Table 3-39**. Following FDOT's Plans Preparation Manual (PPM), the height of roadway shoulder barriers is limited to a maximum of 14 feet and the height of a roadway shoulder barrier on structure is limited to a maximum of 8 feet. No combinations of ROW barrier, shoulder barrier, or shoulder barrier on structure, at any of the evaluated barrier heights, achieved the noise reduction design goal of 7 dB(A). Therefore, a barrier is not considered a reasonable noise abatement measure for the impacted residences in NSA 33.

Table 3-39 NSA 33: Barrier Results for Residences west of I-275, south of East 127th Street and east of Oak Rose Lane

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	NA ^{5,6}	0	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
10-22	NA ⁵	0	0	0	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}

¹ Receptors with a predicted noise level of 66 dB(A) or greater.
² Receptors with a predicted reduction of five dB(A) or more are considered benefited.
³ Based on a unit cost of \$30 per square foot.
⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.
⁵ 7 dB(A) reduction not achieved at any receptor.
⁶ 5 dB(A) reduction or greater was not achieved at two or more receptors.

3.4.4.25 NSA 40

A barrier extension, along the ROW line, to the north end of the existing noise barrier (Barrier B18) at this NSA was evaluated for the 2 newly impacted residences located east of I-275 between Fletcher Avenue and 138th Avenue (Receptors 41 and 44). These impacted receptors are located at, or near, the north end of the existing barrier. The existing barrier provides a noise reduction of at least 5 dB(A) to two or more impacted residences and provides the noise reduction goal of 7 dB(A) to at least one impacted residence.

The results of the barrier extension evaluation are provided in **Table 3-40**. As shown, an extension of the north end of the existing barrier (evaluated at heights of 8 feet to the existing barrier height of 16 feet), up to 2 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more. However, because the cost of the barrier extension at all barrier heights would be above the FDOT’s cost reasonable limit, a barrier extension is not considered a reasonable noise abatement measure.

Table 3-40 NSA 40: Barrier Results for Residences west of I-275 between Fletcher Avenue and 138th Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	442	1	0	0	1	0	1	\$106,080	\$106,080	No
10	400	1	0	1	2	0	2	\$120,000	\$60,000	No
12	300	1	0	1	2	0	2	\$108,000	\$54,000	No
14	300	0	1	1	2	0	2	\$126,000	\$63,000	No
16	300	0	1	1	2	0	2	\$144,000	\$72,000	No

¹ Receptors with a predicted noise level of 66 dB(A) or greater.
² Receptors with a predicted reduction of five dB(A) or more are considered benefited.
³ Based on a unit cost of \$30 per square foot.
⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

3.4.4.26 NSA 41

A noise barrier was evaluated for the impacted area of the Iglesia De Dios Pentecostal (Receptor 1). The church is located between East 138th Avenue and east 145th Avenue, east of I-275. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 414 feet and an optimal height of 16 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of 7 dB(A). Because it is not known how frequently the impacted and benefited area of the church would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the church in order for a barrier to be considered cost effective is 489 person-hours (i.e., 489 people would have to use the area for one hour each day of the year). Because it is not reasonable to assume that this level of activity would occur within the impacted area that would be benefited by a barrier, it is not considered a reasonable noise abatement measure for the impacted area of Iglesia De Dios Pentecostal.

3.4.4.27 NSA 42 and 46

A barrier extension, along the ROW line, to the south and north end of the existing noise barrier (Barrier B19) at these two NSAs was evaluated for the four newly impacted residences located east of I-275 between 145th Avenue and Bearss Avenue (Receptors 2, 3, 29, and 30). These impacted receptors are located at, or near, the ends of the existing barrier. The existing barrier provides a noise reduction of at least 5 dB(A) to two or more impacted residences and provides the noise reduction goal of 7 dB(A) to at least one impacted residence.

The results of the barrier extension evaluation are provided in **Table 3-41**. As shown, an extension of the north and south ends of the existing barrier (16 feet tall), all four of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the cost of the barrier extension would be below the FDOT's cost reasonable limit.

Because the barrier extension is predicted to provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier extension was evaluated further. A summary of the additional barrier extension considerations is provided in **Table 3-42**. Based on the review of these factors, an extension of the existing barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 42 and 46.

Table 3-41 NSA 42 and 46: Barrier Results for Residences west of I-275 between Fletcher Avenue and 138th Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
16	205	0	2	2	4	0	4	\$98,400	\$24,600	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-42 NSA 42 and 46: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.28 NSA 43

A noise barrier was evaluated for the eleven impacted residences (Receptors 1, 2, 6 through 8, 12, 13, 16 through 18, and 22) along North Central Avenue, East 137th Avenue, and East 138th Avenue. The barrier was evaluated five feet inside of the FDOT ROW line.

The results of the evaluation are provided in **Table 3-43**. As shown, at barrier heights between 8 and 22 feet, at least five of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit.

Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier will be evaluated further. A summary of the additional barrier considerations is provided in **Table 3-44**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 43.

Table 3-43 NSA 43: Barrier Results for Residences west of I-275 between Fletcher Avenue and Gateway Christian Center

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	1,104	8	5	4	17	0	17	\$264,960	\$15,586	Yes
10	1,596	4	1	16	21	0	21	\$478,800	\$22,800	Yes
12	1,421	2	4	16	22	12	34	\$511,560	\$15,046	Yes
14	1,601	2	5	16	23	12	35	\$672,420	\$19,212	Yes
16	1,880	3	1	21	25	12	37	\$902,400	\$24,389	Yes
18	3,085	2	2	22	26	16	42	\$1,665,900	\$39,664	Yes
20	1,805	3	1	22	26	17	43	\$1,083,000	\$25,186	Yes
22	1,805	3	1	22	26	17	43	\$1,191,300	\$27,705	Yes

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-44 NSA 43: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

3.4.4.29 NSA 45

A noise barrier was evaluated for the fourteen impacted residences (Receptors 1 through 3, 7, 8, 13, 14, 18, 19, 22, and 26 through 29) along East 143rd Avenue, East 144th Avenue, and East 145th Avenue. The barrier was evaluated five feet inside of the FDOT ROW line.

The results of the evaluation are provided in **Table 3-45**. As shown, at barrier heights between 8 and 10 feet, at least eight of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit.

Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier will be evaluated further. A summary of the additional barrier considerations is provided in **Table 3-46**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 45.

Table 3-45 NSA 45: Barrier Results for Residences west of I-275 between Gateway Christian Center and 145th Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	1,304	4	2	2	8	0	8	\$312,960	\$39,120	Yes
10	1,400	4	2	4	10	1	11	\$420,000	\$38,182	Yes
12	1,300	3	3	4	10	1	11	\$468,000	\$42,545	No
14	1,204	1	4	5	10	1	11	\$505,680	\$45,971	No
16	1,104	2	2	6	10	1	11	\$529,920	\$48,175	No
18	1,104	2	0	8	10	3	13	\$596,160	\$45,858	No
20	2,201	3	0	10	13	5	18	\$1,320,600	\$73,367	No
22	1,304	4	1	8	13	3	16	\$860,640	\$53,790	No

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-46 NSA 45: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.30 NSA 47

A noise barrier was evaluated for the twenty-three impacted residences (Receptors 6,7, 14 through 26, and 18 through 35) along April Lane, Laurie Lane, and Fisher Road. The barrier was evaluated five feet inside of the FDOT ROW line.

The results of the evaluation are provided in **Table 3-47**. As shown, at a barrier height of 10 to 16 feet, at least 19 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Notably, at 18 feet and higher the noise barrier is no longer cost reasonable because the additional height of the barrier does not add a sufficient number of benefited receivers.

Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier will be evaluated further. A summary of the additional barrier considerations is provided in **Table 3-48**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA 47.

Table 3-47 NSA 47: Barrier Results for Residences west of I-275 between Fletcher Avenue and Bearss Avenue

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	1,845	7	0	1	8	0	8	\$442,800	\$55,350	No
10	2,178	12	6	1	19	0	19	\$653,400	\$34,389	Yes
12	1,768	12	5	3	20	0	20	\$636,480	\$31,824	Yes
14	1,668	7	7	6	20	0	20	\$700,560	\$35,028	Yes
16	1,768	6	8	8	22	1	23	\$848,640	\$36,897	Yes
18	2,178	3	2	18	23	1	24	\$1,176,120	\$49,005	No
20	2,178	3	1	19	23	1	24	\$1,306,800	\$54,450	No
22	1,768	5	2	16	23	2	25	\$1,166,880	\$46,675	No

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

Table 3-48 NSA 47: Additional Barrier Considerations

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located within the FDOT's ROW for I-275 and would not block ingress or egress to any property.
	ROW	No acquisition of ROW or easements for construction/maintenance would be necessary to construct a barrier within the FDOT's ROW.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be design so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Notably, should a final determination be made that a noise barrier is a feasible and reasonable abatement measure during the project's design phase, and depending on the final length of the barrier, there is a potential for an outdoor advertising sign to be visually blocked.

3.4.4.31 NSA 49

A noise barrier was evaluated for the three impacted residences ((Receptors 1 through 3) along Clear Lane. The barrier was evaluated five feet inside of the FDOT ROW line. The results of the evaluation are provided in **Table 3-49**. As shown, at barrier heights between 16 and 22 feet, at least three of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more and the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT's cost reasonable limit, a barrier five feet within the FDOT's ROW is not considered a reasonable noise abatement measure.

Table 3-49 NSA 49: Barrier Results for Residences east of I-275 along Clear Lane

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 - 5.9	6 - 6.9	≥7	Impacted	Not Impacted	Total			
8	NA ^{5,6}	0	0	1	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	\$61,920	\$61,920	NA ^{5,6}
10	NA ⁵	1	0	1	2	0	2	\$107,400	\$53,700	No
12	358	1	0	1	2	0	2	\$128,880	\$64,440	No
14	358	0	1	1	2	0	2	\$150,360	\$75,180	No
16	955	1	0	2	3	0	3	\$458,400	\$152,800	No
18	855	1	0	2	3	0	3	\$461,700	\$153,900	No
20	755	1	0	2	3	0	3	\$453,000	\$151,000	No
22	755	1	0	2	3	0	3	\$498,300	\$166,100	No

¹ Receptors with a predicted noise level of 66 dB(A) or greater.

² Receptors with a predicted reduction of five dB(A) or more are considered benefited.

³ Based on a unit cost of \$30 per square foot.

⁴ FDOT cost reasonable criterion is \$42,000 per benefited receptor.

⁵ 7 dB(A) reduction not achieved at any receptor.

⁶ 5 dB(A) reduction or greater was not achieved at two or more receptors.

4.0 CONCLUSIONS

As previously stated, future traffic noise levels with the proposed improvements are predicted to approach, meet, or exceed the NAC at 697 properties with noise sensitive uses. The results of the evaluation indicate that construction of noise barriers is a potentially reasonable and feasible noise abatement method to reduce predicted traffic noise for up to 622 of the 697 properties. These properties are located at:

- NSA 1: Residences east of I-275 between Osborne Avenue and Giddens Avenue
- NSA 3: Residences west of I-275 between Osborne Avenue and Seminole Presbyterian Church
- NSA 5: Residences west of I-275 between the Seminole Presbyterian Church and Hillsborough Avenue
- NSA 6: Residences east of I-275 between Hillsborough Avenue and Kingsway Road
- NSA 7: Residences east of I-275 between Idlewild Avenue to E Hanna Avenue
- NSA 8: Residences west of I-275 between Hillsborough Avenue and E Paris Street
- NSA 9: Residences west of I-275 between E Hanna Avenue to Sligh Avenue
- NSA 11: Residences west of I-275 between E Fern Street to Sligh Avenue
- NSA 12: Residences east of I-275 between Sligh Avenue and Broad Street
- NSA 14: Residences east of I-275 between Broad Street and the Hillsborough River
- NSA 16: Residences west of I-275 between to Sligh Avenue and Broad Street
- NSA 17: Residences west of I-275 between Broad Street and the Hillsborough River
- NSA 19: Residences between Waters Avenue and E Yukon Street on the east side of I-275 (see Sheet 6 in Appendix B)
- NSA 20: Residences west of I-275 between Waters Avenue and E Yukon Street
- NSA 42 & 46: Residences east of I-275 between 145th Avenue and Bearss Avenue
- NSA 43: Residences west of I-275 between Fletcher Avenue and Gateway Christian Center
- NSA 45: Residences west of I-275 between Gateway Christian Center and 145th Avenue
- NSA 45: Residences west of I-275 between Gateway Christian Center and 145th Avenue
- NSA 47: Residences west of I-275 between Fletcher Avenue and Bearss Avenue

The estimated cost to construct the noise barriers ranges from \$98,000 to \$1,790,000 depending on barrier length and height.

Notably, the noise barriers for the impacted properties in NSAs 3, 6, 7, 8, 9, 12, 14, 16, 19, 20, 45, and 47 have the potential to visually block outdoor advertising signs. Should the barriers at these locations remain a feasible and reasonable abatement measure after the detailed noise analysis during the final design process and the signs are determined to be conforming and legally permitted signs, a notice of the possible screening will be provided to the affected sign permit holder(s) and the appropriate local sign regulating agency and a public hearing will be held to receive input on the proposed noise barrier/sign conflict.

4.1 Statement of Likelihood

The FDOT is committed to the construction noise barriers at the locations in the bullet list above, contingent upon the following:

- Detailed noise analysis during the final design process continues to support the need for, and the feasibility and reasonableness of providing the barriers as abatement;
- The detailed analysis demonstrates that the cost of the noise barrier will not exceed the cost effective limit;
- The residents/property owners benefitted by the noise barrier desire that a noise barrier be constructed; and
- All safety and engineering conflicts or issues related to construction of a noise barrier are resolved.

5.0 NOISE CONTOURS

Land uses such as residences and recreational areas are considered incompatible with highway noise levels that approach or exceed the NAC. To reduce the possibility of additional traffic noise-related impacts, noise level contours were developed for the future improved roadway facility. These noise contours delineate the extent of the predicted traffic noise impact area from the improved roadway's edge-of-pavement for each of the land use Activity Categories (**Table 3-1**). **Table 5-1** provides the distance from the edge-of-pavement at which traffic noise levels are predicted to be 56 dB(A)—the NAC for land uses classified as Activity Category A, to 66 dB(A)—the NAC for land uses classified as Activity Category B and C, and to 71 dB(A)—the NAC for land uses classified as Activity Category E.

Local officials will be provided a copy of the Final NSR to promote compatibility between any future land developments in this area and the proposed project.

Table 5-1 Noise Contour Limits

	Distance from Improved Roadway's Edge-of-Pavement (ft)*		
	Activity Category A 56 dB(A)	Activity Category B/C 66 dB(A)	Activity Category E 71 dB(A)
I-275 Roadway Segment			
N of MLK Jr. Boulevard to Hillsborough Avenue	1,040	430	220
Hillsborough Avenue to Sligh Avenue	1,070	440	220
Sligh Avenue to Busch Boulevard	1,040	430	220
Busch Boulevard to N of Bearss Avenue	1,040	440	220

* See Table 3-1 for a description of the activities that occur within each category. Distances do not reflect any reduction in noise levels that would occur from existing structures (shielding) and should be used for planning purposes only.

6.0 CONSTRUCTION NOISE AND VIBRATION

Some land uses adjacent I-275 are identified on the FDOT listing of noise- and vibration-sensitive sites (e.g., residential use). Construction of the proposed roadway improvements is not expected to have a significant noise or vibration effect. Additionally, the application of the FDOT Standard Specifications for Road and Bridge Construction may minimize or eliminate potential issues. Should unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in coordination with the District Noise Specialist and the Contractor, will investigate additional methods of controlling these impacts.

7.0 COMMUNITY COORDINATION

A project-related public hearing is planned. Details regarding the hearing (i.e., date and location) and any traffic noise-related issues raised at the hearing will be documented in the final NSR.

8.0 REFERENCES

- Federal Highway Administration. U.S. Department of Transportation. July 13, 2010. Title 23 CFR, Part 772. *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.
- Federal Highway Administration. February 2004. *Traffic Noise Model, Version 2.5*.
- Federal Highway Administration. December 2011. *Highway Traffic Noise: Analysis and Abatement Guidance*.
- Federal Highway Administration. May 1996. *Measurement of Highway-Related Noise*. FHWA-PD-96-046.
- Florida Department of Transportation. May 24, 2011. *Project Development and Environment Manual*, Part 2, Chapter 17 – Noise.
- Florida Department of Transportation. July 1, 2013. *Plans Preparation Manual*, Volume 1, Chapter 32 – Sound Barriers.
- Florida Department of Transportation. 2014. *Standard Specifications for Road and Bridge Construction*.
- California Department of Transportation. September 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*.

APPENDIX A

Traffic Data

Traffic Data for Noise Modeling (Sheet 1 of 4)

Roadway/ Roadway Segment	Direction	Number of Through Lanes	Level of Service "C" Volume*	Volume Used In TNM	Cars	Medium Trucks	Heavy Trucks	Buses	Motorcycles	Speed (Miles per Hour)
I-275 General Use Lanes - Existing Conditions and 2040 No-Build Alternative										
I-275 from Martin Luther King Interchange to the Hillsborough Avenue Interchanges	Northbound	3	4,580	4,580	4,461	49	56	9	5	55
	Southbound	3	4,580	4,580	4,461	49	56	9	5	
I-275 between the Hillsborough Avenue Interchange Ramps	Northbound (South of Westbound Off Ramp)	3	4,580	4,580	4,461	49	56	9	5	55
	Northbound (North of Westbound Off Ramp)	3	4,580	4,580	4,461	49	56	9	5	
	Southbound	3	4,580	4,580	4,461	49	56	9	5	
I-275 from Hillsborough Avenue Interchange and Sligh Avenue Interchange	Northbound	3	4,580	4,580	4,475	44	49	8	5	55
	Southbound	3	4,580	4,580	4,475	44	49	8	5	
I-275 between the Sligh Avenue Interchange Ramps	Northbound	3	4,580	4,580	4,475	44	49	8	5	55
	Southbound	3	4,580	4,580	4,475	44	49	8	5	
I-275 from Sligh Avenue to the Bird Street Interchange	Northbound	3	4,580	4,580	4,466	48	54	9	5	55
	Southbound	3	4,580	4,580	4,466	48	54	9	5	
I-275 between the Bird Street and the Busch Boulevard Interchanges	Northbound	3	4,580	4,580	4,477	43	48	8	5	55
	Southbound	3	4,580	4,580	4,477	43	48	8	5	
I-275 between the Busch Boulevard Interchange Ramps	Northbound	3	4,580	4,580	4,477	43	48	8	5	55
	Southbound	3	4,580	4,580	4,477	43	48	8	5	
I-275 between Busch Boulevard and Fowler Avenue Interchanges	Northbound	3	4,580	4,580	4,461	49	56	9	5	55
	Southbound	3	4,580	4,580	4,461	49	56	9	5	
I-275 between the Fowler Avenue Interchange Ramps	Northbound	3	4,580	4,580	4,461	49	56	9	5	55
	Southbound	3	4,580	4,580	4,461	49	56	9	5	
I-275 between Fowler Avenue and Fletcher Avenue Interchanges	Northbound	3	4,580	4,580	4,454	55	58	8	5	55
	Southbound	3	4,580	4,580	4,454	55	58	8	5	
I-275 between the Fletcher Avenue Interchange Ramps	Northbound	3	4,580	4,580	4,454	55	58	8	5	55
	Southbound	3	4,580	4,580	4,454	55	58	8	5	
I-275 from the Fletcher Avenue and Bearss Avenue Interchanges	Northbound	3	4,580	4,580	4,456	55	57	8	5	55
	Southbound	3	4,580	4,580	4,456	55	57	8	5	
I-275 between the Bearss Avenue Interchange Ramps	Northbound	3	4,580	4,580	4,456	55	57	8	5	55
	Southbound	3	4,580	4,580	4,456	55	57	8	5	
I-275 North of the Bearss Avenue Interchange Ramps	Northbound	3	4,580	4,580	4,456	55	57	8	5	55
	Southbound	3	4,580	4,580	4,456	55	57	8	5	

Traffic Data for Noise Modeling (Sheet 2 of 4)

Roadway/ Roadway Segment	Direction	Number of Through Lanes	Level of Service "C" Volume*	Volume Used In TNM	Cars	Medium Trucks	Heavy Trucks	Buses	Motorcycle s	Speed (Miles per Hour)
Arterial Roads- Existing Conditions and 2040 No-Build Alternative										
Hillsborough Avenue West of SB Ramps	Eastbound	2	1,910	1,910	1,869	24	11	4	2	45
	Westbound	2	1,910	1,910	1,869	24	11	4	2	
Hillsborough Avenue from SB Ramps to NB Ramps	Eastbound	2	1,910	1,910	1,869	24	11	4	2	45
	Westbound	2	1,910	1,910	1,869	24	11	4	2	
Hillsborough Avenue East of NB Ramps	Eastbound	3	2,940	2,940	2,877	37	17	6	3	45
	Westbound	3	2,940	2,940	2,877	37	17	6	3	
Sligh Avenue West of SB Ramps	Eastbound	2	730	730	703	18	7	1	0	35
	Westbound	2	730	730	703	18	7	1	0	
Sligh Avenue from SB Ramps to NB Ramps	Eastbound	2	730	730	703	18	7	1	0	35
	Westbound	2	730	730	703	18	7	1	0	
Sligh Avenue East of NB Ramps	Eastbound	1	730	730	703	18	7	1	0	35
	Westbound	1	730	730	703	18	7	1	0	
Broad Street West of SB Ramps	Eastbound	1	370	370	356	9	4	1	0	30
	Westbound	1	370	370	356	9	4	1	0	
Broad Street West of SB Ramps	Eastbound	1	370	370	356	9	4	1	0	30
	Westbound	1	370	370	356	9	4	1	0	
Broad Street West of SB Ramps	Eastbound	1	370	370	356	9	4	1	0	30
	Westbound	1	370	370	356	9	4	1	0	
Bird Street West of SB Ramps	Eastbound	2	730	730	703	18	7	1	0	30
	Westbound	2	730	730	703	18	7	1	0	
Bird Street from SB Ramps to NB Ramps	Eastbound	2	730	730	703	18	7	1	0	30
	Westbound	2	730	730	703	18	7	1	0	
Bird Street East of NB Ramps	Eastbound	2	730	730	703	18	7	1	0	30
	Westbound	2	730	730	703	18	7	1	0	

Traffic Data for Noise Modeling (Sheet 2 of 4 cont'd)

Waters Avenue	Eastbound	2	1,910	1,910	1,839	46	19	4	2	45
	Westbound	2	1,910	1,910	1,839	46	19	4	2	
Busch Boulevard West of SB Ramps	Eastbound	3	2,940	2,940	2,879	38	14	6	3	45
	Westbound	3	2,940	2,940	2,879	38	14	6	3	
Busch Boulevard from SB Ramps to NB Ramps	Eastbound	3	2,940	2,940	2,903	21	7	6	3	45
	Westbound	3	2,940	2,940	2,903	21	7	6	3	
Busch Boulevard East of NB Ramps	Eastbound	3	2,940	2,940	2,903	21	7	6	3	45
	Westbound	3	2,940	2,940	2,903	21	7	6	3	
Fowler Avenue West of SB Ramps	Eastbound	2	1,910	1,910	1,906	15	5	3	2	40
	Westbound	2	1,910	1,910	1,906	15	5	3	2	
Fowler Avenue East of NB Ramps	Eastbound	3	2,940	2,940	2,933	31	9	5	3	40
	Westbound	3	2,940	2,940	2,933	31	9	5	3	
Fletcher Avenue West of SB Ramps	Eastbound	2	1,910	1,910	1,877	23	5	3	2	40
	Westbound	2	1,910	1,910	1,877	23	5	3	2	
Fletcher Avenue East of NB Ramps	Eastbound	2	1,910	1,910	1,866	32	7	3	2	40
	Westbound	2	1,910	1,910	1,866	32	7	3	2	
Bearss Avenue West of SB Ramps	Eastbound	3	2,940	2,940	2,873	49	11	5	3	45
	Westbound	3	2,940	2,940	2,873	49	11	5	3	
Bearss Avenue East of NB Ramps	Eastbound	2	1,910	1,910	1,880	14	11	3	2	45
	Westbound	2	1,910	1,910	1,880	14	11	3	2	
	Westbound	3	2,940	2,940	2,894	21	18	5	3	

Traffic Data for Noise Modeling (Sheet 3 of 4)

Roadway/ Roadway Segment	Direction	Number of Lanes	Peak Hour Demand Volume		Level of Service "C" Volume*	Volume Used In TNM	Cars	Medium Trucks	Heavy Trucks	Buses	Motorcycl es	Speed (Miles per Hour)
			(AM)	(PM)								
Existing Condition - I-275 Interchange Ramps												
I-275 and Hillsborough Avenue	Off Ramp NB I-275 to EB Hillsborough Avenue	1	258	200	1,340	258	251	3	3	1	0	40
	Off Ramp NB I-275 to WB Hillsborough Avenue	1	483	245	1,100	483	470	5	6	1	0	25
	On Ramp from Hillsborough Avenue to NB I-275	1	665	1,114	1,340	1,114	1,088	11	12	2	1	50
	Off Ramp from SB I-275 to Hillsborough Avenue	1	730	674	1,340	730	713	7	8	1	1	40
	On Ramp from Hillsborough Avenue to SB I-275	1	473	616	1,340	616	600	7	8	1	1	50
I-275 and Sligh Avenue	Off Ramp NB I-275 to Sligh Avenue	1	463	360	1,340	463	452	4	5	1	0	40
	On Ramp from Sligh Avenue to NB I-275	1	502	619	1,340	619	604	6	7	1	1	50
	Off Ramp from SB I-275 to Sligh Avenue	1	450	458	1,340	458	447	5	5	1	0	40
	On Ramp from Sligh Avenue to SB I-275	1	446	459	1,340	459	448	4	5	1	0	50
I-275 and Bird Street	Off Ramp NB I-275 to Bird Street	1	520	505	1,340	520	507	5	6	1	1	40
	On Ramp from Bird Street to SB I-275	1	530	692	1,340	692	675	7	8	1	1	40
I-275 and Busch Boulevard	Off Ramp NB I-275 to Busch Boulevard	1	906	729	1,100	906	886	8	10	2	1	25
	On Ramp from Busch Boulevard to NB I-275	1	345	667	1,340	667	650	7	8	1	1	50
	Off Ramp from SB I-275 to Busch Boulevard	1	500	567	1,340	567	552	6	7	1	1	35
	On Ramp from Busch Boulevard to SB I-275	1	1,000	1,036	1,100	1,036	1,013	10	11	2	1	25
I-275 and Fowler Avenue	Off Ramp NB I-275 to Fowler Avenue	1	1,550	1,073	1,340	1,340	1,305	14	16	3	1	40
	On Ramp from Fowler Avenue to NB I-275	1	235	704	1,340	704	685	9	9	1	1	50
	Off Ramp from SB I-275 to Fowler Avenue	1	702	267	1,340	702	683	8	9	1	1	40
	On Ramp from Fowler Avenue to SB I-275	1	763	1,634	1,340	1,340	1,305	14	16	3	1	50
I-275 and Fletcher Avenue	Off Ramp NB I-275 to Fletcher Avenue	1	735	1,102	1,340	1,102	1,072	13	14	2	1	40
	On Ramp from Fletcher Avenue to NB I-275	1	134	336	1,340	336	327	4	4	1	0	50
	Off Ramp from SB I-275 to Fletcher Avenue	1	1,045	185	1,340	1,045	1,017	12	13	2	1	40
	On Ramp from Fletcher Avenue to SB I-275	1	816	948	1,340	948	922	11	12	2	1	50
I-275 and Bearss Avenue	Off Ramp NB I-275 to Bearss Avenue	2	1,015	2,532	2,680	2,532	2,464	30	31	4	3	40
	On Ramp from Bearss Avenue to NB I-275	1	200	412	1,340	412	401	5	5	1	0	50
	Off Ramp from SB I-275 to Bearss Avenue	1	473	262	1,340	473	460	6	6	1	0	40
	On Ramp from Bearss Avenue to SB I-275	1	1,708	1,268	1,340	1,340	1,304	16	17	2	1	50

Traffic Data for Noise Modeling (Sheet 4 of 4)

Roadway/ Roadway Segment	Direction	Number of Lanes	Peak Hour Demand Volume		Level of Service "C" Volume*	Volume Used In TNM	Cars	Medium Trucks	Heavy Trucks	Buses	Motorcycle s	Speed (Miles per Hour)
			(AM)	(PM)								
No-Build Alternative (2040) - I-275 Interchange Ramps												
I-275 and Hillsborough Avenue	Off Ramp NB I-275 to EB Hillsborough Avenue	1	420	370	1,340	420	409	5	5	1	0	40
	Off Ramp NB I-275 to WB Hillsborough Avenue	1	750	480	1,100	750	731	8	9	2	1	25
	On Ramp from Hillsborough Avenue to NB I-275	1	1,190	2,090	1,340	1,340	1,309	13	14	2	1	50
	Off Ramp from SB I-275 to Hillsborough Avenue	1	1,250	1,270	1,340	1,270	1,241	12	14	2	1	40
	On Ramp from Hillsborough Avenue to SB I-275	1	750	1,080	1,340	1,080	1,052	12	13	2	1	50
I-275 and Sligh Avenue	Off Ramp NB I-275 to Sligh Avenue	1	790	560	1,340	790	772	8	8	1	1	40
	On Ramp from Sligh Avenue to NB I-275	1	840	1,160	1,340	1,160	1,131	12	14	2	1	50
	Off Ramp from SB I-275 to Sligh Avenue	1	800	1,250	1,340	1,250	1,219	13	15	2	1	40
	On Ramp from Sligh Avenue to SB I-275	1	750	920	1,340	920	899	9	10	2	1	50
I-275 and Bird Street	Off Ramp NB I-275 to Bird Street	1	1,020	940	1,340	1,020	995	11	12	2	1	40
	On Ramp from Bird Street to SB I-275	1	910	1,180	1,340	1,180	1,151	12	14	2	1	40
I-275 and Busch Boulevard	Off Ramp NB I-275 to Busch Boulevard	1	1,430	1,600	1,100	1,100	1,075	10	12	2	1	25
	On Ramp from Busch Boulevard to NB I-275	1	1,100	1,200	1,340	1,200	1,169	13	15	2	1	50
	Off Ramp from SB I-275 to Busch Boulevard	2	910	1,130	1,340	1,130	1,101	12	14	2	1	35
	On Ramp from Busch Boulevard to SB I-275	1	1,650	1,880	1,100	1,100	1,075	10	12	2	1	25
I-275 and Fowler Avenue	Off Ramp NB I-275 to Fowler Avenue	1	2,350	1,570	1,340	1,340	1,305	14	16	3	1	40
	On Ramp from Fowler Avenue to NB I-275	1	560	1,150	1,340	1,150	1,118	14	15	2	1	50
	Off Ramp from SB I-275 to Fowler Avenue	1	1,130	600	1,340	1,130	1,099	14	14	2	1	40
	On Ramp from Fowler Avenue to SB I-275	1	1,350	2,400	1,340	1,340	1,305	14	16	3	1	50
I-275 and Fletcher Avenue	Off Ramp NB I-275 to Fletcher Avenue	1	1,300	1,900	1,340	1,340	1,303	16	17	2	1	40
	On Ramp from Fletcher Avenue to NB I-275	1	390	550	1,340	550	535	7	7	1	1	50
	Off Ramp from SB I-275 to Fletcher Avenue	1	1,740	390	1,340	1,340	1,304	16	17	2	1	40
	On Ramp from Fletcher Avenue to SB I-275	1	1,590	1,550	1,340	1,340	1,303	16	17	2	1	50
I-275 and Bearss Avenue	Off Ramp NB I-275 to Bearss Avenue	2	1,720	3,650	2,680	2,680	2,608	32	33	5	3	40
	On Ramp from Bearss Avenue to NB I-275	1	630	1,180	1,340	1,180	1,148	14	15	2	1	50
	Off Ramp from SB I-275 to Bearss Avenue	1	840	690	1,340	840	817	10	10	1	1	40
	On Ramp from Bearss Avenue to SB I-275	1	2,850	2,310	1,340	1,340	1,304	16	17	2	1	50

Northbound I-275 GUL Mainline - AM Peak Hour

Segment No:	1	2	3	4
From/To:	North of MLK Jr Boulevard	Hillsborough Avenue - Sligh Avenue	Sligh Avenue - Bird Street	Bird Street - Busch Boulevard
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3 + 1 Aux	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	57600	47600	47600
Speed: (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	5,058	6,120	5,058	5,058
DDHV (Demand)	5,950	5,940	5,980	4,930
Stamina/TNM Input	LOS (C)	Demand	LOS (C)	Demand
LOS (C)				
Autos	4,928	5,963	4,928	4,928
Med Trucks	69	83	69	69
Hvy Trucks	58	70	58	58
Buses	11	13	11	11
Motorcycles	3	4	3	3
Total	6,747	7,652	6,747	6,747
Demand				
Autos	5,798	5,788	5,827	4,804
Med Trucks	81	81	81	67
Hvy Trucks	68	68	68	56
Buses	13	13	13	11
Motorcycles	4	4	4	3
Total	5,951	5,941	5,980	4,930

Segment No:	5	6	7	8
From/To:	Busch Boulevard - Fowler Avenue	Fowler Avenue - Fletcher Avenue	Fletcher Avenue - Bearss Avenue	North of Bearss Avenue
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	47600	47600	47600
Speed: (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.0%	5.8%	5.3%	5.2%
DHT =	2.5%	2.9%	2.7%	2.6%
% Medium Trucks DHV	1.36%	1.58%	1.06%	0.72%
% Heavy Trucks DHV	1.14%	1.32%	1.59%	1.88%
% Buses DHV	0.22%	0.25%	0.06%	0.03%
% Motorcycles DHV	0.06%	0.07%	0.18%	0.18%
DDHV LOS (C)	5,058	5,058	5,058	5,058
DDHV (Demand)	4,970	3,120	2,180	2,120
Stamina/TNM Input	Demand	Demand	Demand	Demand
LOS (C)				
Autos	4,928	4,907	4,914	4,917
Med Trucks	69	80	54	36
Hvy Trucks	58	67	80	95
Buses	11	13	3	2
Motorcycles	3	4	9	9
Total	6,747	6,747	6,741	6,740
Demand				
Autos	4,843	3,027	2,118	2,061
Med Trucks	68	49	23	15
Hvy Trucks	57	41	35	40
Buses	11	8	1	1
Motorcycles	3	2	4	4
Total	4,971	3,119	2,180	2,120

Southbound I-275 GUL Mainline - AM Peak Hour

Segment No:	1	2	3	4
From/To:	North of Bearss Avenue	Bearss Avenue - Fletcher Avenue	Fletcher Avenue - Fowler Avenue	Fowler Avenue - Busch Boulevard
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	47600	47600	47600
Speed (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.2%	5.3%	5.8%	5.0%
DHT =	2.6%	2.7%	2.9%	2.5%
% Medium Trucks DHV	0.72%	1.06%	1.58%	1.36%
% Heavy Trucks DHV	1.88%	1.59%	1.32%	1.14%
% Buses DHV	0.03%	0.06%	0.25%	0.22%
% Motorcycles DHV	0.18%	0.18%	0.07%	0.06%
DDHV LOS (C)	5,058	5,058	5,058	5,058
DDHV (Demand)	5,600	5,980	5,850	6,260
Stamina/TNM Input	LOS (C)	LOS (C)	LOS (C)	LOS (C)
LOS (C)				
Autos	4,917	4,914	4,907	4,928
Med Trucks	36	54	80	69
Hvy Trucks	95	80	67	58
Buses	2	3	13	11
Motorcycles	9	9	4	3
Total	6,740	6,741	6,747	6,747
Demand				
Autos	5,444	5,811	5,676	6,100
Med Trucks	40	63	92	85
Hvy Trucks	105	95	77	71
Buses	2	4	15	13
Motorcycles	10	11	4	4
Total	5,599	5,980	5,849	6,260

Segment No:	5	6	7	8
From/To:	Busch Boulevard - Bird Street	Bird Street - Sligh Avenue	Sligh Avenue - Hillsborough Avenue	North of MLK Jr Boulevard
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	47600	47600	47600
Speed (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	5,058	5,058	5,058	5,058
DDHV (Demand)	7,550	8,320	8,290	7,830
Stamina/TNM Input	LOS (C)	LOS (C)	LOS (C)	LOS (C)
LOS (C)				
Autos	4,928	4,928	4,928	4,928
Med Trucks	69	69	69	69
Hvy Trucks	58	58	58	58
Buses	11	11	11	11
Motorcycles	3	3	3	3
Total	6,747	6,747	6,747	6,747
Demand				
Autos	7,357	8,107	8,078	7,630
Med Trucks	103	113	113	107
Hvy Trucks	86	95	94	89
Buses	16	18	18	17
Motorcycles	5	5	5	5
Total	7,551	8,320	8,290	7,831

Northbound I-275 GUL Mainline - PM Peak Hour

Segment No:	1	2	3	4
From/To:	North of MLK Jr Boulevard	Hillsborough Avenue - Sligh Avenue	Sligh Avenue - Bird Street	Bird Street - Busch Boulevard
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3 + 1 Aux	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	57600	47600	47600
Speed: (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	5,058	6,120	5,058	5,058
DDHV (Demand)	7,890	9,130	9,730	8,790
Stamina/TNM Input	LOS (C)	LOS (C)	LOS (C)	LOS (C)
LOS (C)				
Autos	4,928	5,963	4,928	4,928
Med Trucks	69	83	69	69
Hvy Trucks	58	70	58	58
Buses	11	13	11	11
Motorcycles	3	4	3	3
Total	5,058	6,120	5,058	5,058
Demand				
Autos	7,688	8,896	9,481	8,565
Med Trucks	107	124	133	120
Hvy Trucks	90	104	111	100
Buses	17	20	21	19
Motorcycles	5	6	6	5
Total	7,890	9,130	9,731	8,790

Segment No:	5	6	7	8
From/To:	Busch Boulevard - Fowler Avenue	Fowler Avenue - Fletcher Avenue	Fletcher Avenue - Bearss Avenue	North of Bearss Avenue
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	47600	47600	47600
Speed: (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.0%	5.8%	5.3%	5.2%
DHT =	2.5%	2.9%	2.7%	2.6%
% Medium Trucks DHV	1.36%	1.58%	1.06%	0.72%
% Heavy Trucks DHV	1.14%	1.32%	1.59%	1.88%
% Buses DHV	0.22%	0.25%	0.06%	0.03%
% Motorcycles DHV	0.06%	0.07%	0.18%	0.18%
DDHV LOS (C)	5,058	5,058	5,058	5,058
DDHV (Demand)	8,520	8,100	6,750	5,800
Stamina/TNM Input	LOS (C)	LOS (C)	LOS (C)	LOS (C)
LOS (C)				
Autos	4,928	4,907	4,914	4,917
Med Trucks	69	80	54	36
Hvy Trucks	58	67	80	95
Buses	11	13	3	2
Motorcycles	3	4	9	9
Total	5,058	5,058	5,057	5,057
Demand				
Autos	8,302	7,859	6,559	5,639
Med Trucks	116	128	72	42
Hvy Trucks	97	107	107	109
Buses	18	20	4	2
Motorcycles	5	6	12	10
Total	8,520	8,100	6,750	5,800

Southbound I-275 GUL Mainline - PM Peak Hour

Segment No:	1	2	3	4
From/To:	North of Bearss Avenue	Bearss Avenue - Fletcher Avenue	Fletcher Avenue - Fowler Avenue	Fowler Avenue - Busch Boulevard
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	47600	47600	47600
Speed (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.2%	5.3%	5.8%	5.0%
DHT =	2.6%	2.7%	2.9%	2.5%
% Medium Trucks DHV	0.72%	1.06%	1.58%	1.36%
% Heavy Trucks DHV	1.88%	1.59%	1.32%	1.14%
% Buses DHV	0.03%	0.06%	0.25%	0.22%
% Motorcycles DHV	0.18%	0.18%	0.07%	0.06%
DDHV LOS (C)	5,058	5,058	5,058	5,058
DDHV (Demand)	2,650	3,090	4,250	6,050
Stamina/TNM Input	Demand	Demand	Demand	LOS (C)
LOS (C)				
Autos	4,917	4,914	4,907	4,928
Med Trucks	36	54	80	69
Hvy Trucks	95	80	67	58
Buses	2	3	13	11
Motorcycles	9	9	4	3
Total	5,057	5,057	5,058	5,058
Demand				
Autos	2,576	3,003	4,124	5,895
Med Trucks	19	33	67	82
Hvy Trucks	50	49	56	69
Buses	1	2	11	13
Motorcycles	5	6	3	4
Total	2,650	3,091	4,250	6,050

Segment No:	5	6	7	8
From/To:	Busch Boulevard - Bird Street	Bird Street - Sligh Avenue	Sligh Avenue - Hillsborough Avenue	North of MLK Jr Boulevard
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	3	3	3
Year:	2040	2040	2040	2040
ADT: LOS (C)	47600	47600	47600	47600
Speed (mph)	55	55	55	55
(kmh)	89	89	89	89
K =	8.50%	8.50%	8.50%	8.50%
D =	62.50%	62.50%	62.50%	62.50%
T24 =	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	5,058	5,058	5,058	5,058
DDHV (Demand)	6,430	7,610	7,280	7,090
Stamina/TNM Input	LOS (C)	LOS (C)	LOS (C)	LOS (C)
LOS (C)				
Autos	4,928	4,928	4,928	4,928
Med Trucks	69	69	69	69
Hvy Trucks	58	58	58	58
Buses	11	11	11	11
Motorcycles	3	3	3	3
Total	5,058	5,058	5,058	5,058
Demand				
Autos	6,265	7,415	7,094	6,909
Med Trucks	88	104	99	97
Hvy Trucks	73	87	83	81
Buses	14	16	16	15
Motorcycles	4	5	4	4
Total	6,430	7,611	7,280	7,091

Northbound I-275 Express Lanes - AM Peak Hour

Southbound I-275 Express Lanes - AM Peak Hour

Segment No:	1	2	Segment No:	1	2
From/To:	North of MLK Jr. Boulevard - North of Busch Boulevard	North of Busch Boulevard - North of Bearss Avenue	From/To:	North of Bearss Avenue - North of Busch Boulevard	North of Busch Boulevard - North of MLK Jr. Boulevard
Model:	Build (Design Year)	Build (Design Year)	Model:	Build (Design Year)	Build (Design Year)
Dir Lanes:	1	1	Dir Lanes:	1	1
Year:	2040	2040	Year:	2040	2040
Speed: (mph)	60	60	Speed (mph)	60	60
(kmh)	97	97	(kmh)	97	97
T24 =	0.4%	0.4%	T24 =	0.1%	0.4%
DHT =	0.2%	0.2%	DHT =	0.0%	0.2%
% Medium Trucks DHV	0.22%	0.22%	% Medium Trucks DHV	0.03%	0.22%
% Heavy Trucks DHV	0.00%	0.00%	% Heavy Trucks DHV	0.00%	0.00%
% Buses DHV	0.22%	0.22%	% Buses DHV	0.03%	0.22%
% Motorcycles DHV	0.00%	0.00%	% Motorcycles DHV	0.00%	0.00%
DDHV LOS (C)	1,510	1,510	DDHV LOS (C)	1,510	1,510
DDHV (Demand)	1,400	870	DDHV (Demand)	1,650	1,410
Stamina/TNM Input	Demand	Demand	Stamina/TNM Input	LOS (C)	Demand
LOS (C)			LOS (C)		
Autos	1,507	1,507	Autos	1,510	1,507
Med Trucks	3	3	Med Trucks	0	3
Hvy Trucks	0	0	Hvy Trucks	0	0
Buses	3	3	Buses	0	3
Motorcycles	0	0	Motorcycles	0	0
Total	1,510	1,510	Total	1,510	1,510
Demand			Demand		
Autos	1,397	868	Autos	1,650	1,407
Med Trucks	3	2	Med Trucks	0	3
Hvy Trucks	0	0	Hvy Trucks	0	0
Buses	3	2	Buses	0	3
Motorcycles	0	0	Motorcycles	0	0
Total	1,400	870	Total	1,650	1,410

Northbound I-275 Express Lanes - PM Peak Hour

Southbound I-275 Express Lanes - PM Peak Hour

Segment No:	1	2	Segment No:	1	2
From/To:	North of MLK Jr. Boulevard - North of Busch Boulevard	North of Busch Boulevard - North of Bearss Avenue	From/To:	North of Bearss Avenue - North of Busch Boulevard	North of Busch Boulevard - North of MLK Jr. Boulevard
Model:	Build (Design Year)	Build (Design Year)	Model:	Build (Design Year)	Build (Design Year)
Dir Lanes:	1	1	Dir Lanes:	1	1
Year:	2040	2040	Year:	2040	2040
Speed: (mph)	60	60	Speed (mph)	60	60
(kmh)	97	97	(kmh)	97	97
T24 =	0.4%	0.4%	T24 =	0.1%	0.4%
DHT =	0.2%	0.2%	DHT =	0.0%	0.2%
% Medium Trucks DHV	0.22%	0.22%	% Medium Trucks DHV	0.03%	0.22%
% Heavy Trucks DHV	0.00%	0.00%	% Heavy Trucks DHV	0.00%	0.00%
% Buses DHV	0.22%	0.22%	% Buses DHV	0.03%	0.22%
% Motorcycles DHV	0.00%	0.00%	% Motorcycles DHV	0.00%	0.00%
DDHV LOS (C)	1,600	1,600	DDHV LOS (C)	1,600	1,600
DDHV (Demand)	1,650	1,520	DDHV (Demand)	1,180	1,550
Stamina/TNM Input	LOS (C)	Demand	Stamina/TNM Input	Demand	Demand
LOS (C)			LOS (C)		
Autos	1,597	1,597	Autos	1,600	1,597
Med Trucks	3	3	Med Trucks	0	3
Hvy Trucks	0	0	Hvy Trucks	0	0
Buses	3	3	Buses	0	3
Motorcycles	0	0	Motorcycles	0	0
Total	1,600	1,600	Total	1,600	1,600
Demand			Demand		
Autos	1,646	1,517	Autos	1,180	1,547
Med Trucks	4	3	Med Trucks	0	3
Hvy Trucks	0	0	Hvy Trucks	0	0
Buses	4	3	Buses	0	3
Motorcycles	0	0	Motorcycles	0	0
Total	1,650	1,520	Total	1,180	1,550

Northbound I-275 Ramps - AM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Hillsborough Avenue EB Off Ramp	Hillsborough Avenue WB Off Ramp	Hillsborough Avenue WB On Ramp	Sligh Avenue Off Ramp	Sligh Avenue On Ramp	Bird Street Off Ramp	Busch Boulevard WB Off Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	1	1	1	1	1	1
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	15,900	15,900	15,900	15,900	15,900	15,900
Speed: (mph)	45	25	45	45	45	45	25
(kmh)	72	40	72	72	72	72	40
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	1,431	1,431	1,431	1,431	1,431	1,431
DDHV (Demand)	430	770	1,190	800	840	1,050	1,470
Stamina/TNM Input	Demand	Demand	Demand	Demand	Demand	Demand	LOS (C)
LOS (C)							
Autos	1,394	1,394	1,394	1,394	1,394	1,394	1,394
Med Trucks	19	19	19	19	19	19	19
Hvy Trucks	16	16	16	16	16	16	16
Buses	3	3	3	3	3	3	3
Motorcycles	1	1	1	1	1	1	1
Total	1,430	1,430	1,430	1,430	1,430	1,430	1,430
Demand							
Autos	419	750	1,160	780	819	1,023	1,432
Med Trucks	6	10	16	11	11	14	20
Hvy Trucks	5	9	14	9	10	12	17
Buses	1	2	3	2	2	2	3
Motorcycles	0	0	1	0	1	1	1
Total	430	769	1,191	800	841	1,050	1,470

Segment No:	8	9	10	11	12	13	14
From/To:	Busch Boulevard On Ramp	Fowler Avenue Off Ramp	Fowler Avenue On Ramp	Fletcher Avenue Off Ramp	Fletcher Avenue On Ramp	Bearss Avenue Off Ramp	Bearss Avenue On Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	2	1	1	1	2	1
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	31,800	15,900	15,900	15,900	31,800	15,900
Speed: (mph)	45	45	45	45	45	45	45
(kmh)	72	72	72	72	72	72	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	2,862	1,431	1,431	1,431	2,862	1,431
DDHV (Demand)	980	2,410	560	1,330	390	1,560	630
Stamina/TNM Input	Demand	Demand	Demand	Demand	Demand	Demand	Demand
LOS (C)							
Autos	1,394	2,789	1,394	1,394	1,394	2,789	1,394
Med Trucks	19	39	19	19	19	39	19
Hvy Trucks	16	33	16	16	16	33	16
Buses	3	6	3	3	3	6	3
Motorcycles	1	2	1	1	1	2	1
Total	1,430	2,863	1,430	1,430	1,430	2,863	1,430
Demand							
Autos	955	2,348	546	1,296	380	1,520	614
Med Trucks	13	33	8	18	5	21	9
Hvy Trucks	11	27	6	15	4	18	7
Buses	2	5	1	3	1	3	1
Motorcycles	1	1	0	1	0	1	0
Total	980	2,409	560	1,330	389	1,560	630

Southbound I-275 Ramps - AM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Bearss Avenue Off Ramp	Bearss Avenue On Ramp	Fletcher Avenue Off Ramp	Fletcher Avenue On Ramp	Fowler Avenue Off Ramp	Fowler Avenue On Ramp	Busch Boulevard Off Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	1	1	1	1	1	1
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	15,900	15,900	15,900	15,900	15,900	15,900
Speed: (mph)	45	45	45	45	45	45	45
(kmh)	72	72	72	72	72	72	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	1,431	1,431	1,431	1,431	1,431	1,431
DDHV (Demand)	840	2,870	1,740	1,610	1,130	1,540	910
Stamina/TNM Input	Demand	LOS (C)	LOS (C)	LOS (C)	Demand	LOS (C)	Demand
LOS (C)							
Autos	1,394	1,394	1,394	1,394	1,394	1,394	1,394
Med Trucks	19	19	19	19	19	19	19
Hvy Trucks	16	16	16	16	16	16	16
Buses	3	3	3	3	3	3	3
Motorcycles	1	1	1	1	1	1	1
Total	1,430	1,430	1,430	1,430	1,430	1,430	1,430
Demand							
Autos	819	2,797	1,696	1,569	1,101	1,501	887
Med Trucks	11	39	24	22	15	21	12
Hvy Trucks	10	33	20	18	13	18	10
Buses	2	6	4	3	2	3	2
Motorcycles	1	2	1	1	1	1	1
Total	841	2,871	1,741	1,610	1,130	1,541	910

Segment No:	8	9	10	11	12	13
From/To:	Busch Boulevard WB On Ramp	Bird Street On Ramp	Sligh Avenue Off Ramp	Sligh Avenue On Ramp	Hillsborough Avenue Off Ramp	Hillsborough Avenue On Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	1	1	1	1	1
Year:	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	15,900	15,900	15,900	15,900	15,900
Speed: (mph)	25	45	45	45	45	45
(kmh)	40	72	72	72	72	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	1,431	1,431	1,431	1,431	1,431
DDHV (Demand)	1,960	770	800	770	1,260	800
Stamina/TNM Input	LOS (C)	Demand	Demand	Demand	Demand	Demand
LOS (C)						
Autos	1,394	1,394	1,394	1,394	1,394	1,394
Med Trucks	19	19	19	19	19	19
Hvy Trucks	16	16	16	16	16	16
Buses	3	3	3	3	3	3
Motorcycles	1	1	1	1	1	1
Total	1,430	1,430	1,430	1,430	1,430	1,430
Demand						
Autos	1,910	750	780	750	1,228	780
Med Trucks	27	10	11	10	17	11
Hvy Trucks	22	9	9	9	14	9
Buses	4	2	2	2	3	2
Motorcycles	1	0	0	0	1	0
Total	1,960	769	800	769	1,260	800

Northbound I-275 Ramps - PM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Hillsborough Avenue EB Off Ramp	Hillsborough Avenue WB Off Ramp	Hillsborough Avenue WB On Ramp	Sligh Avenue Off Ramp	Sligh Avenue On Ramp	Bird Street Off Ramp	Busch Boulevard WB Off Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	1	1	1	1	1	1
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	15,900	15,900	15,900	15,900	15,900	15,900
Speed: (mph)	45	25	45	45	45	45	25
(kmh)	72	40	72	72	72	72	40
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	1,431	1,431	1,431	1,431	1,431	1,431
DDHV (Demand)	370	480	2,090	560	1,160	940	1,600
Stamina/TNM Input	Demand	Demand	LOS (C)	Demand	Demand	Demand	LOS (C)
LOS (C)							
Autos	1,394	1,394	1,394	1,394	1,394	1,394	1,394
Med Trucks	19	19	19	19	19	19	19
Hvy Trucks	16	16	16	16	16	16	16
Buses	3	3	3	3	3	3	3
Motorcycles	1	1	1	1	1	1	1
Total	1,430	1,430	1,430	1,430	1,430	1,430	1,430
Demand							
Autos	361	468	2,037	546	1,130	916	1,559
Med Trucks	5	7	28	8	16	13	22
Hvy Trucks	4	5	24	6	13	11	18
Buses	1	1	5	1	3	2	3
Motorcycles	0	0	1	0	1	1	1
Total	370	480	2,090	560	1,160	941	1,600

Segment No:	8	9	10	11	12	13	14
From/To:	Busch Boulevard On Ramp	Fowler Avenue Off Ramp	Fowler Avenue On Ramp	Fletcher Avenue Off Ramp	Fletcher Avenue On Ramp	Bearss Avenue Off Ramp	Bearss Avenue On Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	2	1	1	1	2	1
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	31,800	15,900	15,900	15,900	31,800	15,900
Speed: (mph)	45	45	45	45	45	45	45
(kmh)	72	72	72	72	72	72	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	2,862	1,431	1,431	1,431	2,862	1,431
DDHV (Demand)	1,200	1,570	1,150	1,900	550	3,650	1,180
Stamina/TNM Input	Demand	Demand	Demand	LOS (C)	Demand	LOS (C)	Demand
LOS (C)							
Autos	1,394	2,789	1,394	1,394	1,394	2,789	1,394
Med Trucks	19	39	19	19	19	39	19
Hvy Trucks	16	33	16	16	16	33	16
Buses	3	6	3	3	3	6	3
Motorcycles	1	2	1	1	1	2	1
Total	1,430	2,863	1,430	1,430	1,430	2,863	1,430
Demand							
Autos	1,169	1,530	1,121	1,851	536	3,557	1,150
Med Trucks	16	21	16	26	7	50	16
Hvy Trucks	14	18	13	22	6	42	13
Buses	3	3	2	4	1	8	3
Motorcycles	1	1	1	1	0	2	1
Total	1,200	1,570	1,151	1,900	549	3,651	1,180

Southbound I-275 Ramps - PM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Bearss Avenue Off Ramp	Bearss Avenue On Ramp	Fletcher Avenue Off Ramp	Fletcher Avenue On Ramp	Fowler Avenue Off Ramp	Fowler Avenue On Ramp	Busch Boulevard Off Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	1	1	1	1	1	1
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	15,900	15,900	15,900	15,900	15,900	15,900
Speed: (mph)	45	45	45	45	45	45	45
(kmh)	72	72	72	72	72	72	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	1,431	1,431	1,431	1,431	1,431	1,431
DDHV (Demand)	690	2,310	390	1,550	600	2,400	1,130
Stamina/TNM Input	Demand	LOS (C)	Demand	LOS (C)	Demand	LOS (C)	Demand
LOS (C)							
Autos	1,394	1,394	1,394	1,394	1,394	1,394	1,394
Med Trucks	19	19	19	19	19	19	19
Hvy Trucks	16	16	16	16	16	16	16
Buses	3	3	3	3	3	3	3
Motorcycles	1	1	1	1	1	1	1
Total	1,430	1,430	1,430	1,430	1,430	1,430	1,430
Demand							
Autos	672	2,251	380	1,510	585	2,339	1,101
Med Trucks	9	31	5	21	8	33	15
Hvy Trucks	8	26	4	18	7	27	13
Buses	1	5	1	3	1	5	2
Motorcycles	0	1	0	1	0	1	1
Total	689	2,309	389	1,550	600	2,400	1,130

Segment No:	8	9	10	11	12	13
From/To:	Busch Boulevard WB On Ramp	Bird Street On Ramp	Sligh Avenue Off Ramp	Sligh Avenue On Ramp	Hillsborough Avenue Off Ramp	Hillsborough Avenue On Ramp
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Lanes:	1	1	1	1	1	1
Year:	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	15,900	15,900	15,900	15,900	15,900	15,900
Speed: (mph)	25	45	45	45	45	45
(kmh)	40	72	72	72	72	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
T24 =	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
DHT =	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
% Medium Trucks DHV	1.36%	1.36%	1.36%	1.36%	1.36%	1.36%
% Heavy Trucks DHV	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%
% Buses DHV	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	1,431	1,431	1,431	1,431	1,431	1,431
DDHV (Demand)	1,880	1,180	1,250	920	1,270	1,080
Stamina/TNM Input	LOS (C)	Demand	Demand	Demand	Demand	Demand
LOS (C)						
Autos	1,394	1,394	1,394	1,394	1,394	1,394
Med Trucks	19	19	19	19	19	19
Hvy Trucks	16	16	16	16	16	16
Buses	3	3	3	3	3	3
Motorcycles	1	1	1	1	1	1
Total	1,430	1,430	1,430	1,430	1,430	1,430
Demand						
Autos	1,832	1,150	1,218	896	1,238	1,052
Med Trucks	26	16	17	13	17	15
Hvy Trucks	21	13	14	10	14	12
Buses	4	3	3	2	3	2
Motorcycles	1	1	1	1	1	1
Total	1,880	1,180	1,250	920	1,270	1,080

I-275 Major Cross Road West of I-275- AM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Hillsborough Avenue	Sligh Avenue	Bird Street	Busch Boulevard	Fowler Avenue	Fletcher Avenue	Bearss Avenue
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	2	2	3	2	2	3
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	29200	6500	6500	29200	19000	19000	29200
Speed: (mph)	40	35	30	40	40	40	45
(kmh)	64	56	48	64	64	64	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%
T24 =	5.7%	9.1%	9.1%	4.0%	3.1%	4.4%	3.1%
DHT =	2.9%	4.6%	4.6%	2.0%	1.6%	2.2%	1.6%
% Medium Trucks DHV	1.55%	2.48%	2.48%	1.09%	0.84%	1.20%	0.84%
% Heavy Trucks DHV	1.30%	2.07%	2.07%	0.91%	0.71%	1.00%	0.71%
% Buses DHV	0.25%	0.39%	0.39%	0.17%	0.13%	0.19%	0.13%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	3,080	686	686	3,080	2,004	2,004	3,080
DDHV (Demand)	1,765	1,287	298	2,760	1,276	2,575	2,114
Stamina/TNM Input	Demand	LOS (C)	Demand	Demand	Demand	LOS (C)	Demand
LOS (C)							
Autos	2,990	654	654	3,017	1,972	1,959	3,030
per lane	997	327	327	1,006	986	980	1,010
Med Trucks	48	17	17	34	17	24	26
per lane	16	9	9	11	9	12	9
Hvy Trucks	40	14	14	28	14	20	22
per lane	13	7	7	9	7	10	7
Buses	8	3	3	5	3	4	4
per lane	3	2	2	2	2	2	1
Motorcycles	2	0	0	2	1	1	2
per lane	1	0	0	1	1	1	1
Total	4,109	1,029	1,029	4,109	3,007	3,008	4,107
Demand							
Autos	1,714	1,228	284	2,703	1,256	2,517	2,080
Med Trucks	27	32	7	30	11	31	18
Hvy Trucks	23	27	6	25	9	26	15
Buses	4	5	1	5	2	5	3
Motorcycles	1	1	0	2	1	2	1
Total	1,765	1,288	297	2,760	1,277	2,576	2,114

I-275 Major Cross Road East of I-275- AM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Hillsborough Avenue	Sligh Avenue	Bird Street	Busch Boulevard	Fowler Avenue	Fletcher Avenue	Bearss Avenue
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	2	2	3	3	2	2
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	29200	6500	6500	29200	29200	19000	19000
Speed: (mph)	40	35	30	40	40	40	45
(kmh)	64	56	48	64	64	64	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%
T24 =	4.5%	9.1%	9.1%	5.7%	2.4%	3.2%	3.3%
DHT =	2.3%	4.6%	4.6%	2.9%	1.2%	1.6%	1.7%
% Medium Trucks DHV	1.23%	2.48%	2.48%	1.55%	0.65%	0.87%	0.90%
% Heavy Trucks DHV	1.02%	2.07%	2.07%	1.30%	0.55%	0.73%	0.75%
% Buses DHV	0.19%	0.39%	0.39%	0.25%	0.10%	0.14%	0.14%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	3,080	686	686	3,080	3,080	2,004	2,004
DDHV (Demand)	1,721	717	222	2,233	2,627	2,347	1,936
Stamina/TNM Input	Demand	LOS (C)	Demand	Demand	Demand	LOS (C)	Demand
LOS (C)							
Autos	3,030	654	654	2,990	3,041	1,971	1,970
per lane	1,010	327	327	997	1,014	986	985
Med Trucks	38	17	17	48	20	17	18
per lane	13	9	9	16	7	9	9
Hvy Trucks	32	14	14	40	17	15	15
per lane	11	7	7	13	6	8	8
Buses	6	3	3	8	3	3	3
per lane	2	2	2	3	1	2	2
Motorcycles	2	0	0	2	2	1	1
per lane	1	0	0	1	1	1	1
Total	4,137	1,029	1,029	4,109	4,107	3,007	3,007
Demand							
Autos	2,080	684	212	2,168	2,594	2,308	1,903
Med Trucks	26	18	6	35	17	20	17
Hvy Trucks	22	15	5	29	14	17	15
Buses	4	3	1	5	3	3	3
Motorcycles	1	0	0	1	2	1	1
Total	2,129	717	223	2,233	2,627	2,346	1,936

I-275 Major Cross Road West of I-275- PM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Hillsborough Avenue	Sligh Avenue	Bird Street	Busch Boulevard	Fowler Avenue	Fletcher Avenue	Bearss Avenue
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	2	2	3	2	2	3
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	29200	6500	6500	29200	19000	19000	29200
Speed: (mph)	40	35	30	40	40	40	45
(kmh)	64	56	48	64	64	64	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%
T24 =	5.7%	9.1%	9.1%	4.0%	3.1%	4.4%	3.1%
DHT =	2.9%	4.6%	4.6%	2.0%	1.6%	2.2%	1.6%
% Medium Trucks DHV	1.55%	2.48%	2.48%	1.09%	0.84%	1.20%	0.84%
% Heavy Trucks DHV	1.30%	2.07%	2.07%	0.91%	0.71%	1.00%	0.71%
% Buses DHV	0.25%	0.39%	0.39%	0.17%	0.13%	0.19%	0.13%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	3,080	686	686	3,080	2,004	2,004	3,080
DDHV (Demand)	2,835	1,912	875	3,208	1,058	2,376	3,013
Stamina/TNM Input	Demand	LOS (C)	LOS (C)	LOS (C)	Demand	LOS (C)	Demand
LOS (C)							
Autos	2,990	654	654	3,017	1,972	1,959	3,030
Med Trucks	48	17	17	34	17	24	26
Hvy Trucks	40	14	14	28	14	20	22
Buses	8	3	3	5	3	4	4
Motorcycles	2	0	0	2	1	1	2
Total	3,080	685	685	3,081	2,004	2,004	3,080
Demand							
Autos	2,753	1,824	835	3,142	1,041	2,322	2,965
Med Trucks	44	47	22	35	9	28	25
Hvy Trucks	37	40	18	29	7	24	21
Buses	7	7	3	6	1	5	4
Motorcycles	2	1	1	2	1	1	2
Total	2,836	1,912	876	3,208	1,058	2,375	3,013

I-275 Major Cross Road East of I-275- PM Peak Hour

Segment No:	1	2	3	4	5	6	7
From/To:	Hillsborough Avenue	Sligh Avenue	Bird Street	Busch Boulevard	Fowler Avenue	Fletcher Avenue	Bearss Avenue
Model:	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)	Build (Design Year)
Dir Lanes:	3	2	2	3	3	2	2
Year:	2040	2040	2040	2040	2040	2040	2040
ADT: LOS (C)	29200	6500	6500	29200	29200	19000	19000
Speed: (mph)	40	35	30	40	40	40	45
(kmh)	64	56	48	64	64	64	72
K =	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
D =	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%	58.60%
T24 =	4.5%	9.1%	9.1%	5.7%	2.4%	3.2%	3.3%
DHT =	2.3%	4.6%	4.6%	2.9%	1.2%	1.6%	1.7%
% Medium Trucks DHV	1.23%	2.48%	2.48%	1.55%	0.65%	0.87%	0.90%
% Heavy Trucks DHV	1.02%	2.07%	2.07%	1.30%	0.55%	0.73%	0.75%
% Buses DHV	0.19%	0.39%	0.39%	0.25%	0.10%	0.14%	0.14%
% Motorcycles DHV	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
DDHV LOS (C)	3,080	686	686	3,080	3,080	2,004	2,004
DDHV (Demand)	2,077	986	757	2,847	2,621	2,508	1,893
Stamina/TNM Input	Demand	LOS (C)	LOS (C)	Demand	Demand	LOS (C)	Demand
LOS (C)							
Autos	3,030	654	654	2,990	3,041	1,971	1,970
Med Trucks	38	17	17	48	20	17	18
Hvy Trucks	32	14	14	40	17	15	15
Buses	6	3	3	8	3	3	3
Motorcycles	2	0	0	2	2	1	1
Total	3,102	685	685	3,080	3,080	2,004	2,004
Demand							
Autos	2,965	941	722	2,764	2,588	2,466	1,861
Med Trucks	37	24	19	44	17	22	17
Hvy Trucks	31	20	16	37	14	18	14
Buses	6	4	3	7	3	3	3
Motorcycles	2	1	0	2	2	2	1
Total	3,035	986	757	2,847	2,621	2,508	1,893

APPENDIX B

Noise Sensitive Receptors

APPENDIX C

Validation Documentation

NOISE MEASUREMENT DATA SHEET

Measurements taken by: Jim Mykytka Date: 05-07-2015
 Time Study Started: 12:16 PM Time Study Ended: 12:46 PM
 Project Identification:
 Financial Project ID: 431821-1
 Project Location: I-275 Express Lane Project

Site Identification: South of West Bearss Avenue and West of I-275: Site MS1-1 First Row Residence (143 East 143rd Avenue), 180 feet West of I-275 Nearest Travel Lane, Station 2109+20, State Plane Coordinates - 509,296, 1,360,942; Site MS1-2 Second Row Residence (138 East 143rd Avenue) 250 feet West of I-275 Nearest Travel Lane, Station 2109+50; State Plane Coordinates - 509,220, 1,360,973

Weather Conditions:
 Sky: Clear Partly Cloudy ___ Cloudy ___ Other ___
 Temperature 83° F Wind Speed 3 mph Wind Direction W NW Humidity 48%

Equipment:
 Sound Level Meter:
 Type: Larson-Davis Model 870 Serial Numbers: 0155 & 1019
 Did you check the battery? Yes No ___
 Calibration Readings: Start 114.0/114.0 End 114.0/113.8
 Response Settings: Fast ___ Slow
 Weightings: A Other ___

Calibrator:
 Type: Larson-Davis Model CA 250 Serial Number: 0702
 Did you check the battery? Yes No ___

TRAFFIC DATA

Roadway Identification	Northbound I-275		Southbound I-275	
	Run 1-Run 2-Run 3		Run 1-Run 2-Run 3	
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	344-356-360	66-66-65	374-379-369	59-63-63
Medium Trucks	11-8-9	66-63-62	12-7-8	58-60-61
Heavy Trucks	22-23-21	63-62-66	27-10-10	59-60-63
Buses	0-1-0	66-63-64	0-1-0	58-56-61
Motorcycles	0-0-2	63-60-65	0-1-1	62-65-63
Duration	10 minutes per run		10 minutes per run	

RESULTS [dB(A)]

Site MS1-1: L_{eq} 66.6-65.6-65.7 L_{max} 77.0-70.8-75.0
 Site MS1-2: L_{eq} 62.2-61.5-61.8 L_{max} 74.6-67.6-74.2
 Major Sources: I-275
 Background Noise: _____
 Unusual Events: _____

NOISE MEASUREMENT DATA SHEET

Measurements taken by: Jim Mykytka

Date: 05-07-
2015

Time Study Started: 2:45 PM

Time Study Ended: 3:15
PM

Project Identification:

Financial Project ID: 431821-1

Project Location: I-275 Express Lane Project

Site Identification:

South of East Broad Street and East of I-275: **Site MS2-1** First Row Residence (7307 North Huntley Avenue), 180 feet East of I-275 Nearest Travel Lane, Station 1884+00, State Plane Coordinates - 509,620, 1,338,503; **Site MS2-2** Second Row - Word of Life Tabernacle (7309 North Huntley Avenue) 315 feet East of I-275 Nearest Travel Lane, Station 1884+20; State Plane Coordinates - 509,755, 1,338,496

Weather Conditions:

Sky: Clear Partly Cloudy Cloudy Other
Temperature 86.5° F Wind Speed 4.4 mph Wind Direction W Humidity 36.5%

Equipment:

Sound Level Meter:

Type: Larson-Davis Model 870 Serial Numbers: 0155 & 1019
Did you check the battery? Yes No

Calibration Readings: Start 114.0/113.7 End 114.1/113.9

Response Settings: Fast Slow

Weightings: A Other

Calibrator:

Type: Larson-Davis Model CA 250 Serial Number: 0702
Did you check the battery? Yes No

TRAFFIC DATA

Roadway Identification	Northbound I-275		Southbound I-275	
	Run 1-Run 2-Run 3		Run 1-Run 2-Run 3	
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	819-932-889	61-61-61	738-732-737	64-66-65
Medium Trucks	10-8-4	57-57-56	12-12-8	63-64-63
Heavy Trucks	15-15-19	60-60-54	9-16-23	62-66-59
Buses	3-6-10	55-60-59	2-2-0	62-64-62
Motorcycles	1-1-2	60-58-60	3-2-1	64-66-65
Duration	10 minutes per run		10 minutes per run	

RESULTS [dB(A)]

Site MS2-1: Leq 68.6-68.9-69.7 Lmax 72.9-76.0-81.3

Site MS2-2: Leq 62.9-63.0-63.7 Lmax 67.9-71.4-75.6

Major Sources: I-275

Background Noise: _____

Unusual Events: _____

APPENDIX D

Predicted Traffic Noise Levels at Individual Receptors

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
1-1	B	Residential	1		66.9	66.9	68.1	1.2	Yes
1-2	B	Residential	1		65.8	65.8	67.1	1.3	Yes
1-3	B	Residential	1		64.4	64.4	65.8	1.4	
1-4	B	Residential	1		63.0	63.0	64.5	1.5	
1-5	B	Residential	1		60.3	60.3	62.0	1.7	
1-6	B	Residential	1		67.1	67.1	68.3	1.2	Yes
1-7	B	Residential	1		65.6	65.6	67.0	1.4	Yes
1-8	B	Residential	1		63.9	63.9	65.3	1.4	
1-9	B	Residential	1		62.7	62.7	64.2	1.5	
1-10	B	Residential	1		61.3	61.3	63.0	1.7	
1-11	B	Residential	1		60.6	60.6	62.3	1.7	
1-12	B	Residential	1		67.8	67.8	69.2	1.4	Yes
1-13	B	Residential	1		66.4	66.4	67.8	1.4	Yes
1-14	B	Residential	1		64.6	64.6	66.1	1.5	Yes
1-15	B	Residential	1		63.6	63.6	65.3	1.7	
1-16	B	Residential	1		62.0	62.0	63.6	1.6	
1-17	B	Residential	1		60.5	60.5	62.3	1.8	
1-18	B	Residential	1		69.0	69.0	70.5	1.5	Yes
1-19	B	Residential	1		68.5	68.5	69.9	1.4	Yes
1-20	B	Residential	1		65.2	65.2	66.8	1.6	Yes
1-21	B	Residential	1		64.2	64.3	66.3	2.1	Yes
1-22	B	Residential	1		62.9	62.9	65.0	2.1	
1-23	B	Residential	1		61.6	61.6	63.9	2.3	
1-24	B	Residential	1		59.8	59.8	62.1	2.3	
1-25	B	Residential	1		70.7	70.7	72.4	1.7	Yes
1-26	B	Residential	1		67.2	67.2	69.1	1.9	Yes
1-27	B	Residential	1		64.9	64.9	66.9	2.0	Yes
1-28	B	Residential	1		62.5	62.5	64.8	2.3	
1-29	B	Residential	4		60.1	60.1	62.3	2.2	
1-30	B	Residential	1		72.3	72.3	74.2	1.9	Yes
1-31	B	Residential	1		68.1	68.1	70.2	2.1	Yes
1-32	B	Residential	1		64.6	64.6	66.9	2.3	Yes
1-33	B	Residential	1		61.5	61.5	64.1	2.6	
1-34	B	Residential	1		59.2	59.2	61.6	2.4	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
1-35	B	Residential	1		71.0	71.0	72.9	1.9	Yes
1-36	B	Residential	1		67.9	67.9	70.0	2.1	Yes
1-37	B	Residential	1		65.8	65.8	68.0	2.2	Yes
1-38	B	Residential	1		63.3	63.3	65.7	2.4	
1-39	B	Residential	1		61.6	61.6	64.0	2.4	
1-40	B	Residential	1		60.1	60.1	62.5	2.4	
1-41	B	Residential	1		71.2	71.2	73.1	1.9	Yes
1-42	B	Residential	1		68.4	68.4	70.5	2.1	Yes
1-43	B	Residential	1		65.6	65.6	67.8	2.2	Yes
1-44	B	Residential	1		64.2	64.2	66.7	2.5	Yes
1-45	B	Residential	1		62.3	62.3	64.9	2.6	
1-46	B	Residential	1		69.9	69.9	71.8	1.9	Yes
1-47	B	Residential	1		65.8	65.8	68.0	2.2	Yes
1-48	B	Residential	1		62.5	62.5	65.0	2.5	
1-49	B	Residential	1		60.7	60.7	63.1	2.4	
1-50	B	Residential	1		71.2	71.2	73.1	1.9	Yes
1-51	B	Residential	1		64.4	64.4	66.8	2.4	Yes
1-52	B	Residential	1		61.9	61.9	64.3	2.4	
1-53	B	Residential	1		60.6	60.6	62.8	2.2	
1-54	B	Residential	1		59.3	59.3	61.3	2.0	
1-55	B	Residential	1		69.0	69.1	71.1	2.1	Yes
1-56	B	Residential	1		64.8	64.8	67.1	2.3	Yes
1-57	B	Residential	1		60.8	60.8	62.9	2.1	
1-58	B	Residential	1		59.7	59.7	61.6	1.9	
1-59	B	Residential	1		70.5	70.5	72.4	1.9	Yes
1-60	B	Residential	1		67.4	67.4	69.5	2.1	Yes
1-61	B	Residential	1		64.3	64.4	66.7	2.4	Yes
1-62	B	Residential	1		62.9	62.9	65.2	2.3	
1-63	B	Residential	1		60.2	60.3	62.3	2.1	
1-64	B	Residential	1		68.7	68.8	70.7	2.0	Yes
1-65	B	Residential	1		70.6	70.6	72.5	1.9	Yes
1-66	B	Residential	1		67.9	68.0	69.9	2.0	Yes
1-67	B	Residential	1		64.8	64.9	66.7	1.9	Yes
1-68	B	Residential	1		64.2	64.2	66.0	1.8	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
1-69	B	Residential	1		63.4	63.4	65.0	1.6	
1-70	B	Residential	1		70.1	70.2	72.0	1.9	Yes
1-71	B	Residential	1		68.1	68.1	70.0	1.9	Yes
1-72	B	Residential	1		66.6	66.6	68.5	1.9	Yes
1-73	B	Residential	1		65.3	65.3	67.1	1.8	Yes
1-74	B	Residential	1		64.2	64.2	65.6	1.4	
1-75	B	Residential	1		68.2	68.4	69.8	1.6	Yes
1-76	B	Residential	1		66.8	67.0	68.2	1.4	Yes
1-77	B	Residential	1		66.0	66.1	67.2	1.2	Yes
1-78	B	Residential	1		65.0	65.0	65.8	0.8	
1-79	B	Residential	1		64.8	64.8	65.6	0.8	
2-1	C	Place of Worship (Exterior)	1		67.6	68.0	69.2	1.6	Yes
2-2	C	Place of Worship (Exterior)	1		65.2	65.3	66.6	1.4	Yes
3-1	B	Residential	1		66.9	66.9	68.1	1.2	Yes
3-2	B	Residential	1		66.2	66.2	67.5	1.3	Yes
3-3	B	Residential	1		64.5	64.5	66.0	1.5	Yes
3-4	B	Residential	1		62.1	62.1	63.7	1.6	
3-5	B	Residential	1		67.6	67.6	68.9	1.3	Yes
3-6	B	Residential	1		66.5	66.5	67.9	1.4	Yes
3-7	B	Residential	4		65.3	65.3	66.8	1.5	Yes
3-8	B	Residential	1		65.4	65.4	67.0	1.6	Yes
3-9	B	Residential	1		62.9	62.9	64.7	1.8	
3-10	B	Residential	1		63.1	63.1	64.9	1.8	
3-11	B	Residential	1		63.5	63.5	65.1	1.6	
3-12	B	Residential	1		68.1	68.1	69.4	1.3	Yes
3-13	B	Residential	1		67.2	67.2	68.7	1.5	Yes
3-14	B	Residential	1		67.2	67.2	68.8	1.6	Yes
3-15	B	Residential	1		65.8	65.8	67.4	1.6	Yes
3-16	B	Residential	1		71.6	71.6	73.5	1.9	Yes
3-17	B	Residential	1		69.8	69.8	71.2	1.4	Yes
3-18	B	Residential	1		67.3	67.3	68.9	1.6	Yes
3-19	B	Residential	1		65.6	65.6	67.5	1.9	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
3-20	B	Residential	1		63.9	63.9	66.1	2.2	Yes
3-21	B	Residential	1		63.1	63.1	65.4	2.3	
3-22	B	Residential	1		72.4	72.4	74.2	1.8	Yes
3-23	B	Residential	1		70.0	70.0	71.8	1.8	Yes
3-24	B	Residential	1		67.5	67.5	69.4	1.9	Yes
3-25	B	Residential	4		62.6	62.6	65.0	2.4	
3-26	B	Residential	4		62.4	62.5	64.8	2.4	
3-27	B	Residential	1		72.7	72.7	74.5	1.8	Yes
3-28	B	Residential	1		62.6	62.6	63.9	1.3	
3-29	B	Residential	1		67.0	67.0	69.1	2.1	Yes
3-30	B	Residential	1		64.5	64.5	66.7	2.2	Yes
3-31	B	Residential	1		63.2	63.2	65.6	2.4	
3-32	B	Residential	1		72.2	72.2	74.1	1.9	Yes
3-33	B	Residential	1		69.7	69.7	71.6	1.9	Yes
3-34	B	Residential	1		67.8	67.8	69.9	2.1	Yes
3-35	B	Residential	1		66.0	66.0	68.2	2.2	Yes
3-36	B	Residential	1		71.1	71.1	73.0	1.9	Yes
3-37	B	Residential	1		67.5	67.5	69.6	2.1	Yes
3-38	B	Residential	4		65.6	65.7	67.8	2.2	Yes
3-39	B	Residential	1		62.4	62.4	64.9	2.5	
3-40	B	Residential	1		62.2	62.2	64.6	2.4	
3-41	B	Residential	1		62.9	62.9	65.4	2.5	
3-42	B	Residential	1		70.2	70.2	72.2	2.0	Yes
3-43	B	Residential	1		66.5	66.5	68.7	2.2	Yes
3-44	B	Residential	1		61.3	61.3	63.8	2.5	
4-1	D	Place of Worship (Interior)	1		45.7	45.7	47.7	2.0	
4-2	C	Place of Worship (Exterior)	1		64.3	64.4	66.2	1.9	Yes
4-3	C	Place of Worship (Exterior)	1		64.6	64.6	66.6	2.0	Yes
5-1	B	Residential	2		71.3	71.4	73.3	2.0	Yes
5-2	B	Residential	1		66.9	67.0	69.1	2.2	Yes
5-3.1	B	Residential	1		72.0	72.2	73.9	1.9	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
5-3.2	B	Residential	2		70.1	70.3	72.0	1.9	Yes
5-3.3	B	Residential	2		67.2	67.3	69.3	2.1	Yes
5.3.4	B	Residential	1		63.9	64.0	66.0	2.1	Yes
5-3.5	B	Residential	1		68.1	68.2	70.1	2.0	Yes
5-3.6	B	Residential	1		65.3	65.4	67.3	2.0	Yes
5-4.1	B	Residential	1		72.2	72.4	74.1	1.9	Yes
5-4	B	Residential	1		70.9	71.2	72.9	2.0	Yes
5-5	B	Residential	1		67.5	67.6	69.5	2.0	Yes
5-6	B	Residential	1		64.0	64.1	65.7	1.7	
5-7	B	Residential	1		71.5	71.8	73.4	1.9	Yes
5-8	B	Residential	1		68.2	68.4	70.2	2.0	Yes
5-9	B	Residential	1		65.9	66.0	67.9	2.0	Yes
5-10	B	Residential	1		65.2	65.3	66.8	1.6	Yes
5-11	B	Residential	1		70.4	71.1	72.1	1.7	Yes
5-12	B	Residential	1		67.6	67.9	69.1	1.5	Yes
5-13	B	Residential	1		66.6	66.7	67.8	1.2	Yes
5-14	B	Residential	1		65.4	65.5	66.7	1.3	Yes
5-15	B	Residential	1		65.5	65.6	66.8	1.3	Yes
5-16	B	Residential	1		65.4	65.5	66.2	0.8	Yes
5-17	B	Residential	1		68.4	69.2	69.5	1.1	Yes
5-18	B	Residential	1		66.2	66.5	67.2	1.0	Yes
5-19	B	Residential	1		65.4	65.5	65.6	0.2	
5-20	B	Residential	1		66.3	66.3	65.4	-0.9	
6-1	B	Residential	1		69.4	70.6	71.9	2.5	Yes
6-2	B	Residential	1		64.9	65.2	66.7	1.8	Yes
6-3	B	Residential	1		63.9	64.1	65.7	1.8	
6-4	B	Residential	1		68.8	69.7	71.2	2.4	Yes
6-5	B	Residential	1		62.6	62.6	64.4	1.8	
6-6	B	Residential	1		66.2	66.6	68.2	2.0	Yes
6-7	B	Residential	1		62.9	62.9	64.8	1.9	
6-8	B	Residential	1		72.3	72.7	74.5	2.2	Yes
6-9	B	Residential	1		66.0	66.2	68.0	2.0	Yes
6-10	B	Residential	1		62.6	62.6	64.5	1.9	
6-11	B	Residential	1		70.9	70.9	72.8	1.9	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
6-12	B	Residential	1		65.5	65.5	67.6	2.1	Yes
6-13	B	Residential	1		61.8	61.8	63.9	2.1	
6-14	B	Residential	1		61.5	61.5	63.6	2.1	
6-15	B	Residential	1		70.8	70.8	72.7	1.9	Yes
6-16	B	Residential	1		71.0	71.0	72.9	1.9	Yes
6-17	B	Residential	1		65.4	65.5	67.6	2.2	Yes
6-18	B	Residential	1		71.1	71.2	73.0	1.9	Yes
6-19	B	Residential	1		65.6	65.6	67.7	2.1	Yes
6-20	B	Residential	1		61.0	61.0	63.3	2.3	
6-21	B	Residential	1		71.3	71.3	73.2	1.9	Yes
6-22	B	Residential	1		65.3	65.3	67.5	2.2	Yes
6-23	B	Residential	1		61.1	61.1	63.4	2.3	
6-24	B	Residential	2		71.2	71.2	73.2	2.0	Yes
6-25	B	Residential	1		64.8	64.8	67.1	2.3	Yes
6-26	B	Residential	1		64.6	64.6	67.0	2.4	Yes
6-27	B	Residential	1		60.4	60.4	62.8	2.4	
6-28	B	Residential	1		60.4	60.4	62.9	2.5	
6-29	B	Residential	1		70.9	71.0	73.2	2.3	Yes
6-30	B	Residential	1		64.8	64.8	67.1	2.3	Yes
6-31	B	Residential	1		60.0	60.0	62.6	2.6	
6-32	B	Residential	1		59.9	59.9	62.6	2.7	
6-33	B	Residential	1		70.6	70.6	73.0	2.4	Yes
6-34	B	Residential	1		70.8	70.8	73.2	2.4	Yes
6-35	B	Residential	1		64.9	64.9	67.4	2.5	Yes
6-36	B	Residential	1		59.9	59.9	62.6	2.7	
6-37	B	Residential	1		71.4	71.4	73.8	2.4	Yes
6-38	B	Residential	1		66.0	66.0	68.4	2.4	Yes
6-39	B	Residential	1		62.6	62.6	65.4	2.8	
6-40	B	Residential	3		62.1	62.2	64.9	2.8	
6-41	B	Residential	1		71.4	71.4	73.7	2.3	Yes
6-42	B	Residential	1		66.1	66.1	68.6	2.5	Yes
6-43	B	Residential	1		62.1	62.1	64.9	2.8	
6-44	B	Residential	5		58.6	58.6	61.5	2.9	
6-45	B	Residential	1		70.9	70.9	73.1	2.2	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
6-46	B	Residential	1		65.9	65.9	68.3	2.4	Yes
6-47	B	Residential	1		62.0	62.0	64.9	2.9	
6-48	B	Residential	1		71.2	71.2	73.5	2.3	Yes
6-49	B	Residential	1		71.2	71.2	73.5	2.3	Yes
6-50	B	Residential	1		66.7	66.7	69.0	2.3	Yes
6-51	B	Residential	1		62.4	62.4	65.3	2.9	
7-1	B	Residential	2		71.0	71.0	73.4	2.4	Yes
7-2	B	Residential	2		68.3	68.3	70.5	2.2	Yes
7-3	B	Residential	1		66.2	66.2	68.5	2.3	Yes
7-4	B	Residential	6		71.7	71.7	74.3	2.6	Yes
7-5	B	Residential	1		66.5	66.5	68.7	2.2	Yes
7-6	B	Residential	1		68.1	68.1	70.2	2.1	Yes
7-7	B	Residential	1		66.4	66.4	68.6	2.2	Yes
7-8	B	Residential	1		64.8	64.8	66.9	2.1	Yes
7-9	B	Residential	1		63.1	63.1	65.3	2.2	
7-10	B	Residential	1		61.5	61.6	64.0	2.5	
7-11	B	Residential	1		66.0	66.0	68.3	2.3	Yes
7-12	B	Residential	1		64.8	64.8	67.0	2.2	Yes
7-13	B	Residential	1		63.8	63.8	66.0	2.2	Yes
7-14	B	Residential	1		62.6	62.6	64.9	2.3	
7-15	B	Residential	1		61.8	61.8	64.2	2.4	
7-16	B	Residential	2		66.2	66.2	68.0	1.8	Yes
7-17	B	Residential	1		65.1	65.1	67.2	2.1	Yes
7-18	B	Residential	1		62.5	62.5	64.8	2.3	
7-19	B	Residential	1		61.8	61.8	64.1	2.3	
8-1	B	Residential	2		65.5	65.6	67.8	2.3	Yes
8-2	B	Residential	1		63.4	63.4	65.7	2.3	
8-3	B	Residential	1		65.3	65.3	67.5	2.2	Yes
8-4	B	Residential	1		66.5	66.5	68.8	2.3	Yes
8-5	B	Residential	2		64.9	64.9	67.2	2.3	Yes
8-6	B	Residential	1		68.0	68.0	70.1	2.1	Yes
8-7	B	Residential	1		70.7	70.7	72.8	2.1	Yes
8-8	B	Residential	1		71.3	71.3	73.7	2.4	Yes
8-9	B	Residential	1		70.4	70.4	72.7	2.3	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
8-10	B	Residential	1		70.2	70.2	72.6	2.4	Yes
8-11	B	Residential	1		68.1	68.1	70.4	2.3	Yes
8-12	B	Residential	1		66.0	66.0	68.4	2.4	Yes
8-13	B	Residential	1		62.5	62.5	65.3	2.8	
8-14	B	Residential	1		72.6	72.6	75.2	2.6	Yes
8-15	B	Residential	1		70.2	70.2	72.6	2.4	Yes
8-16	B	Residential	1		67.7	67.7	70.2	2.5	Yes
8-17	B	Residential	1		65.9	66.0	68.4	2.5	Yes
8-18	B	Residential	1		71.8	71.8	74.3	2.5	Yes
8-19	B	Residential	1		68.0	68.0	70.5	2.5	Yes
8-20	B	Residential	1		65.7	65.7	68.3	2.6	Yes
8-21	B	Residential	1		62.5	62.5	65.5	3.0	
8-22	B	Residential	1		72.4	72.4	75.1	2.7	Yes
8-23	B	Residential	1		69.9	69.9	72.8	2.9	Yes
8-24	B	Residential	1		67.3	67.3	70.0	2.7	Yes
8-25	B	Residential	1		65.5	65.5	68.2	2.7	Yes
8-26	B	Residential	1		67.8	67.8	71.7	3.9	Yes
8-27	B	Residential	1		64.1	64.1	67.3	3.2	Yes
8-28	B	Residential	1		68.4	68.4	72.4	4.0	Yes
8-29	B	Residential	1		68.0	68.1	72.1	4.1	Yes
8-30	B	Residential	1		73.2	73.2	75.9	2.7	Yes
8-31	B	Residential	2		68.1	68.1	72.2	4.1	Yes
8-32	B	Residential	1		66.0	66.1	70.3	4.3	Yes
8-33	B	Residential	1		64.3	64.3	68.0	3.7	Yes
8-34	B	Residential	1		62.5	62.5	65.5	3.0	
8-35	B	Residential	1		71.9	72.0	74.8	2.9	Yes
8-36	B	Residential	1		71.1	71.2	73.5	2.4	Yes
8-37	B	Residential	1		70.3	70.4	72.6	2.3	Yes
8-38	B	Residential	1		70.0	70.2	72.3	2.3	Yes
8-39	B	Residential	1		69.9	70.0	72.1	2.2	Yes
8-40	B	Residential	1		69.2	69.3	71.4	2.2	Yes
8-41	B	Residential	1		71.1	71.3	72.9	1.8	Yes
8-42	B	Residential	1		63.8	63.9	65.9	2.1	
8-43	B	Residential	2		70.7	70.9	72.6	1.9	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
8-44	B	Residential	1		70.4	70.8	72.5	2.1	Yes
8-45	B	Residential	1		64.0	64.1	66.2	2.2	Yes
8-46	B	Residential	1		61.4	61.5	63.4	2.0	
8-47	B	Residential	1		69.0	69.6	71.5	2.5	Yes
8-48	B	Residential	1		68.2	68.5	70.3	2.1	Yes
8-49	B	Residential	1		67.0	67.2	68.7	1.7	Yes
8-50	B	Residential	1		64.6	64.7	66.5	1.9	Yes
8-51	B	Residential	1		63.4	63.5	65.3	1.9	
9-1	B	Residential	1		67.5	68.2	69.6	2.1	Yes
9-2	B	Residential	1		67.2	67.6	69.2	2.0	Yes
9-3	B	Residential	1		67.9	68.3	70.3	2.4	Yes
9-4	B	Residential	1		65.3	65.3	67.2	1.9	Yes
9-5	B	Residential	1		69.8	70.1	72.0	2.2	Yes
9-6	B	Residential	1		67.0	67.1	69.0	2.0	Yes
9-7	B	Residential	1		65.6	65.7	67.5	1.9	Yes
9-8	B	Residential	1		69.9	70.1	71.8	1.9	Yes
9-9	B	Residential	1		65.1	65.2	66.7	1.6	Yes
9-10	B	Residential	1		69.7	69.9	71.7	2.0	Yes
9-11	B	Residential	1		69.9	70.1	71.8	1.9	Yes
9-12	B	Residential	1		64.6	64.7	66.5	1.9	Yes
9-13	B	Residential	1		69.3	69.4	71.5	2.2	Yes
9-14	B	Residential	1		63.9	63.9	66.1	2.2	Yes
9-15	B	Residential	1		69.6	69.7	71.7	2.1	Yes
9-16	B	Residential	1		64.1	64.2	66.3	2.2	Yes
9-17	B	Residential	1		69.4	69.5	71.5	2.1	Yes
9-18	B	Residential	1		63.6	63.7	65.8	2.2	
9-19	B	Residential	1		69.4	69.5	71.5	2.1	Yes
9-20	B	Residential	1		65.2	65.3	67.4	2.2	Yes
9-21	B	Residential	1		69.1	69.1	71.1	2.0	Yes
9-22	B	Residential	1		63.3	63.4	65.6	2.3	
9-23	B	Residential	1		69.4	69.4	71.5	2.1	Yes
9-24	B	Residential	1		63.3	63.4	65.6	2.3	
9-25	B	Residential	1		69.2	69.2	71.3	2.1	Yes
9-26	B	Residential	1		63.1	63.2	65.6	2.5	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
9-27	B	Residential	1		72.2	72.2	74.3	2.1	Yes
9-28	B	Residential	1		67.7	67.8	69.9	2.2	Yes
9-29	B	Residential	1		62.9	62.9	65.4	2.5	
9-30	B	Residential	1		72.2	72.2	74.2	2.0	Yes
9-31	B	Residential	1		62.4	62.4	65.0	2.6	
9-32	B	Residential	1		71.8	71.8	73.8	2.0	Yes
9-33	B	Residential	1		66.9	66.9	69.2	2.3	Yes
9-34	B	Residential	1		62.0	62.1	64.6	2.6	
9-35	B	Residential	1		61.6	61.6	63.9	2.3	
9-36	B	Residential	1		72.6	72.6	74.6	2.0	Yes
9-37	B	Residential	1		71.5	71.5	73.6	2.1	Yes
9-38	B	Residential	1		67.0	67.0	69.2	2.2	Yes
9-39	B	Residential	1		61.7	61.8	64.1	2.4	
9-40	B	Residential	1		72.4	72.4	74.4	2.0	Yes
9-41	B	Residential	1		66.3	66.4	68.7	2.4	Yes
9-42	B	Residential	1		74.3	74.3	76.2	1.9	Yes
9-43	B	Residential	1		66.0	66.0	68.1	2.1	Yes
9-44	B	Residential	1		70.5	70.5	72.6	2.1	Yes
9-45	B	Residential	2		68.8	68.8	70.5	1.7	Yes
9-46	B	Residential	4		65.0	65.0	67.0	2.0	Yes
9-47	B	Residential	4		69.3	69.4	71.1	1.8	Yes
9-48	B	Residential	1		64.7	64.7	66.7	2.0	Yes
9-49	B	Residential	1		64.2	64.2	66.1	1.9	Yes
9-50	B	Residential	1		69.1	69.2	71.4	2.3	Yes
9-51	B	Residential	1		68.9	68.9	71.0	2.1	Yes
9-52	B	Residential	1		63.9	64.0	66.0	2.1	Yes
9-53	B	Residential	1		62.0	62.0	64.1	2.1	
9-54	B	Residential	8		60.0	60.0	62.2	2.2	
9-55	B	Residential	1		68.9	68.9	70.9	2.0	Yes
9-56	B	Residential	1		66.6	66.6	68.7	2.1	Yes
9-57	B	Residential	1		64.6	64.6	66.5	1.9	Yes
9-58	B	Residential	1		63.5	63.5	65.7	2.2	
9-59	B	Residential	1		66.9	66.9	68.7	1.8	Yes
9-60	B	Residential	1		65.6	65.6	67.9	2.3	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
9-61	B	Residential	1		64.5	64.5	66.3	1.8	Yes
9-62	B	Residential	1		62.0	62.0	63.9	1.9	
9-63	B	Residential	1		60.5	60.5	62.5	2.0	
10A-1	C	Place of Worship (Exterior)	1		67.5	67.5	68.8	1.3	Yes
10A-2	C	Place of Worship (Exterior)	1		67.0	67.0	68.6	1.6	Yes
10A-3	C	Place of Worship (Exterior)	1		66.4	66.4	68.1	1.7	Yes
10A-4	C	Place of Worship (Exterior)	1		65.6	65.6	67.3	1.7	Yes
10A-5	C	Place of Worship (Exterior)	1		65.2	65.2	67.0	1.8	Yes
10A-6	C	Place of Worship (Exterior)	1		67.0	67.0	68.4	1.4	Yes
10A-7	C	Place of Worship (Exterior)	1		66.6	66.6	68.2	1.6	Yes
10A-8	C	Place of Worship (Exterior)	1		66.1	66.1	67.8	1.7	Yes
10A-9	C	Place of Worship (Exterior)	1		65.4	65.4	67.0	1.6	Yes
10A-10	C	Place of Worship (Exterior)	1		65.0	65.0	66.7	1.7	Yes
10B-1	C	School (Exterior)	1		65.3	65.3	67.1	1.8	Yes
10B-2	C	School (Exterior)	1		65.0	65.0	66.8	1.8	Yes
10B-3	C	School (Exterior)	1		64.7	64.7	66.6	1.9	Yes
10B-4	C	School (Exterior)	1		64.8	64.8	66.9	2.1	Yes
10B-5	C	School (Exterior)	1		64.7	64.7	66.6	1.9	Yes
10B-6	C	School (Exterior)	1		65.7	65.7	67.4	1.7	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
10B-7	C	School (Exterior)	1		65.2	65.2	67.1	1.9	Yes
10B-8	C	School (Exterior)	1		65.0	65.0	67.0	2.0	Yes
10B-9	C	School (Exterior)	1		65.2	65.2	67.3	2.1	Yes
10B-10	C	School (Exterior)	1		65.0	65.0	67.1	2.1	Yes
10B-11	C	School (Exterior)	1		64.5	64.5	66.5	2.0	Yes
10B-12	C	School (Exterior)	1		64.6	64.6	67.0	2.4	Yes
10C-1	D	Place of Worship (Interior)	1		47.5	47.5	49.5	2.0	
11-1	B	Residential	1		68.1	68.1	69.9	1.8	Yes
11-2	B	Residential	1		65.8	65.8	68.1	2.3	Yes
11-3	B	Residential	1		63.4	63.4	65.9	2.5	
11-4	B	Residential	1		60.5	60.5	63.2	2.7	
11-5	B	Residential	1		67.8	67.8	70.1	2.3	Yes
11-6	B	Residential	1		66.0	66.0	68.4	2.4	Yes
11-7	B	Residential	1		64.3	64.3	66.8	2.5	Yes
11-8	B	Residential	2		62.6	62.6	65.3	2.7	
11-9	B	Residential	1		61.3	61.3	64.1	2.8	
11-10	B	Residential	1		68.0	68.0	70.1	2.1	Yes
11-11	B	Residential	1		65.6	65.6	68.0	2.4	Yes
11-12	B	Residential	1		64.1	64.1	66.6	2.5	Yes
11-13	B	Residential	1		62.1	62.1	64.8	2.7	
11-14	B	Residential	1		60.9	61.0	63.6	2.7	
11-15	B	Residential	1		69.6	69.6	71.4	1.8	Yes
11-16	B	Residential	1		72.1	72.1	74.1	2.0	Yes
11-17	B	Residential	1		69.0	69.0	71.1	2.1	Yes
11-18	B	Residential	1		66.8	66.8	69.1	2.3	Yes
11-19	B	Residential	1		64.7	64.7	67.1	2.4	Yes
11-20	B	Residential	2		63.0	63.0	65.6	2.6	
11-21	B	Residential	5		62.3	62.3	65.1	2.8	
11-22	B	Residential	1		71.6	71.6	73.6	2.0	Yes
11-23	B	Residential	1		68.6	68.6	70.7	2.1	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
11-24	B	Residential	1		67.3	67.3	69.5	2.2	Yes
11-25	B	Residential	1		64.9	64.9	67.3	2.4	Yes
11-26	B	Residential	1		63.7	63.7	66.3	2.6	Yes
11-27	B	Residential	1		62.1	62.1	64.9	2.8	
11-28	B	Residential	1		71.0	71.0	73.0	2.0	Yes
11-29	B	Residential	1		66.4	66.4	68.7	2.3	Yes
11-30	B	Residential	1		64.8	64.8	67.1	2.3	Yes
11-31	B	Residential	1		71.8	71.8	73.8	2.0	Yes
11-32	B	Residential	1		65.2	65.2	67.4	2.2	Yes
11-33	B	Residential	1		71.9	71.9	73.9	2.0	Yes
11-34	B	Residential	2		66.9	66.9	69.1	2.2	Yes
11-35	B	Residential	1		72.3	72.3	74.2	1.9	Yes
11-36	B	Residential	4		64.8	64.8	67.0	2.2	Yes
11-37	B	Residential	1		72.4	72.4	74.3	1.9	Yes
11-38	B	Residential	1		65.0	65.0	67.1	2.1	Yes
11-39	B	Residential	1		72.3	72.3	74.2	1.9	Yes
11-40	B	Residential	1		64.8	64.9	67.1	2.3	Yes
11-41	B	Residential	2		72.0	72.1	74.1	2.1	Yes
11-42	B	Residential	1		64.6	64.7	66.9	2.3	Yes
11-43	B	Residential	1		61.2	61.2	63.6	2.4	
11-44	B	Residential	1		72.5	72.7	74.6	2.1	Yes
11-45	B	Residential	1		65.1	65.2	67.4	2.3	Yes
11-46	B	Residential	1		73.6	74.0	75.7	2.1	Yes
11-47	B	Residential	1		66.0	66.1	68.3	2.3	Yes
11-48	B	Residential	1		67.4	67.6	69.7	2.3	Yes
11-49	B	Residential	1		73.6	74.2	75.7	2.1	Yes
11-50	B	Residential	1		70.7	71.1	72.7	2.0	Yes
11-51	B	Residential	1		68.6	68.8	70.7	2.1	Yes
11-52	B	Residential	1		65.1	65.3	67.4	2.3	Yes
11-53	B	Residential	1		70.4	70.8	72.4	2.0	Yes
11-54	B	Residential	1		68.9	69.2	70.7	1.8	Yes
11-55	B	Residential	1		67.4	67.7	69.1	1.7	Yes
11-56	B	Residential	1		65.1	65.3	66.9	1.8	Yes
11-57	B	Residential	1		64.3	64.5	66.1	1.8	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
11-58	B	Residential	1		62.8	63.0	64.6	1.8	
11-59	B	Residential	1		68.4	69.2	70.4	2.0	Yes
11-60	B	Residential	1		65.8	66.1	67.6	1.8	Yes
11-61	B	Residential	1		64.6	64.9	66.4	1.8	Yes
11-62	B	Residential	1		68.3	69.4	70.4	2.1	Yes
11-63	B	Residential	1		65.6	66.0	67.4	1.8	Yes
11-64	B	Residential	1		63.9	64.1	65.4	1.5	
12-1	B	Residential	1		69.0	70.3	71.0	2.0	Yes
12-2	B	Residential	1		63.5	63.9	65.4	1.9	
12-3	B	Residential	1		62.9	63.2	64.8	1.9	
12-4	B	Residential	1		61.6	61.9	63.5	1.9	
12-5	B	Residential	1		68.5	69.5	70.5	2.0	Yes
12-6	B	Residential	1		67.0	67.4	68.9	1.9	Yes
12-7	B	Residential	1		65.7	66.0	67.6	1.9	Yes
12-8	B	Residential	1		65.0	65.3	66.9	1.9	Yes
12-9	B	Residential	1		63.2	63.4	65.2	2.0	
12-10	B	Residential	1		61.9	62.1	63.9	2.0	
12-11	B	Residential	1		71.7	72.3	73.3	1.6	Yes
12-12	B	Residential	1		69.5	69.8	71.1	1.6	Yes
12-13	B	Residential	1		67.9	68.1	69.6	1.7	Yes
12-14	B	Residential	1		65.5	65.7	67.3	1.8	Yes
12-15	B	Residential	1		64.4	64.5	66.3	1.9	Yes
12-16	B	Residential	1		64.0	64.2	65.9	1.9	
12-17	B	Residential	1		73.3	73.9	75.1	1.8	Yes
12-18	B	Residential	2		68.3	68.6	70.2	1.9	Yes
12-19	B	Residential	1		64.2	64.3	66.1	1.9	Yes
12-20	B	Residential	1		62.8	63.0	64.9	2.1	
12-21	B	Residential	1		72.1	72.5	74.0	1.9	Yes
12-22	B	Residential	1		67.7	67.9	69.6	1.9	Yes
12-23	B	Residential	1		71.1	71.4	72.9	1.8	Yes
12-24	B	Residential	1		67.0	67.2	69.1	2.1	Yes
12-25	B	Residential	1		71.6	71.9	73.4	1.8	Yes
12-26	B	Residential	1		66.9	67.1	69.0	2.1	Yes
12-27	B	Residential	1		71.6	71.9	73.4	1.8	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
12-28	B	Residential	1		66.7	66.9	68.8	2.1	Yes
12-29	B	Residential	1		71.4	71.6	73.2	1.8	Yes
12-30	B	Residential	1		66.5	66.6	68.5	2.0	Yes
12-31	B	Residential	1		71.3	71.5	73.0	1.7	Yes
12-32	B	Residential	1		66.9	67.0	68.8	1.9	Yes
12-33	B	Residential	1		66.8	66.9	68.7	1.9	Yes
12-34	B	Residential	1		71.3	71.4	72.8	1.5	Yes
12-35	B	Residential	1		66.5	66.6	68.5	2.0	Yes
12-36	B	Residential	1		70.5	70.6	72.1	1.6	Yes
12-37	B	Residential	1		66.5	66.6	68.5	2.0	Yes
12-38	B	Residential	1		71.8	71.9	73.3	1.5	Yes
12-39	B	Residential	1		70.2	70.2	71.7	1.5	Yes
12-41	B	Residential	1		66.1	66.2	68.1	2.0	Yes
12-42	B	Residential	1		65.8	65.8	67.8	2.0	Yes
12-43	B	Residential	1		63.3	63.4	65.5	2.2	
12-44	B	Residential	1		70.4	70.5	71.9	1.5	Yes
12-45	B	Residential	1		69.7	69.7	71.2	1.5	Yes
12-46	B	Residential	1		62.8	62.8	64.7	1.9	
12-47	B	Residential	1		69.6	69.6	71.2	1.6	Yes
12-48	B	Residential	1		62.7	62.7	64.7	2.0	
12-49	B	Residential	1		69.1	69.1	70.4	1.3	Yes
12-50	B	Residential	7		58.5	58.5	60.2	1.7	
12-51	B	Residential	1		64.5	64.6	66.2	1.7	Yes
12-52	B	Residential	1		64.5	64.5	66.2	1.7	Yes
12-53	B	Residential	1		66.5	66.6	68.1	1.6	Yes
12-54	B	Residential	1		63.1	63.1	64.7	1.6	
12-55	B	Residential	1		66.4	66.5	68.0	1.6	Yes
12-56	B	Residential	1		65.8	65.8	66.5	0.7	Yes
12-57	B	Residential	1		64.6	64.6	65.3	0.7	
12-58	B	Residential	4		64.1	64.1	64.5	0.4	
12-59	B	Residential	1		63.8	63.8	64.0	0.2	
13-1	D	Place of Worship	1		39.5	39.6	41.4	1.9	
14-1	B	Residential	1		68.6	68.6	66.1	-2.5	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
14-2	B	Residential	1		66.0	66.0	65.2	-0.8	
14-3	B	Residential	1		64.6	64.6	64.1	-0.5	
14-4	B	Residential	1		63.2	63.2	63.5	0.3	
14-5	B	Residential	1		62.4	62.4	62.8	0.4	
14-6	B	Residential	1		61.9	61.9	62.2	0.3	
14-7	B	Residential	1		67.4	67.4	65.5	-1.9	
14-8	B	Residential	1		65.3	65.3	65.0	-0.3	
14-9	B	Residential	1		64.4	64.4	64.2	-0.2	
14-10	B	Residential	1		63.4	63.4	63.3	-0.1	
14-11	B	Residential	1		61.0	61.0	61.6	0.6	
14-12	B	Residential	1		65.9	65.9	65.4	-0.5	
14-13	B	Residential	1		64.3	64.3	64.7	0.4	
14-14	B	Residential	1		63.2	63.2	63.7	0.5	
14-15	B	Residential	1		62.4	62.4	62.9	0.5	
14-16	B	Residential	1		59.9	59.9	61.0	1.1	
14-17	B	Residential	1		59.6	59.6	61.0	1.4	
14-18	B	Residential	1		65.0	65.0	65.5	0.5	
14-19	B	Residential	1		63.9	63.9	64.6	0.7	
14-20	B	Residential	1		62.6	62.7	63.3	0.7	
14-21	B	Residential	1		61.4	61.4	62.1	0.7	
14-22	B	Residential	1		60.2	60.2	61.4	1.2	
14-23	B	Residential	1		59.8	59.8	61.1	1.3	
14-24	B	Residential	1		65.1	65.1	66.0	0.9	Yes
14-25	B	Residential	1		63.8	63.8	64.8	1.0	
14-26	B	Residential	1		62.1	62.1	63.0	0.9	
14-27	B	Residential	1		61.6	61.6	62.7	1.1	
14-28	B	Residential	1		60.4	60.4	61.5	1.1	
14-29	B	Residential	1		60.4	60.4	61.8	1.4	
14-30	B	Residential	1		66.3	66.3	67.6	1.3	Yes
14-31	B	Residential	1		61.1	61.1	62.5	1.4	
14-32	B	Residential	1		66.9	66.9	68.2	1.3	Yes
14-33	B	Residential	1		63.9	63.9	65.3	1.4	
14-34	B	Residential	1		60.9	60.9	62.3	1.4	
14-35	B	Residential	1		67.3	67.4	68.5	1.2	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
14-36	B	Residential	1		67.8	67.8	69.3	1.5	Yes
14-37	B	Residential	7		65.0	65.0	66.5	1.5	Yes
14-38	B	Residential	1		60.7	60.7	62.2	1.5	
14-39	B	Residential	1		68.2	68.2	69.5	1.3	Yes
14-40	B	Residential	1		64.6	64.6	66.2	1.6	Yes
14-41	B	Residential	1		64.5	64.5	66.1	1.6	Yes
14-42	B	Residential	4		65.1	65.1	66.8	1.7	Yes
14-43	B	Residential	1		61.3	61.3	62.9	1.6	
14-44	B	Residential	1		67.0	67.0	68.4	1.4	Yes
14-45	B	Residential	1		65.4	65.4	67.0	1.6	Yes
14-46	B	Residential	1		63.1	63.1	64.7	1.6	
14-47	B	Residential	1		63.2	63.3	64.7	1.5	
14-48	B	Residential	1		61.9	61.9	63.4	1.5	
14-49	B	Residential	1		60.8	60.8	62.4	1.6	
14-50	B	Residential	1		65.3	65.3	66.7	1.4	Yes
14-51	B	Residential	1		63.7	63.8	65.2	1.5	
14-52	B	Residential	5		62.2	62.2	63.7	1.5	
14-53	B	Residential	2		61.1	61.1	62.7	1.6	
15-1	C	Park	1		63.3	63.4	65.1	1.8	
15-2	C	Park	1		62.3	62.3	64.1	1.8	
15-3	C	Park	1		62.2	62.2	63.8	1.6	
15-4	C	Park	1		61.0	61.1	62.7	1.7	
16-1	B	Residential	1		65.0	65.5	66.9	1.9	Yes
16-2	B	Residential	1		62.2	62.3	63.6	1.4	
16-3	B	Residential	1		65.9	66.4	67.9	2.0	Yes
16-4	B	Residential	1		62.6	62.8	64.1	1.5	
16-5	B	Residential	1		62.5	62.7	64.0	1.5	
16-6	B	Residential	1		62.6	62.8	64.2	1.6	
16-7	B	Residential	2		62.9	63.1	64.5	1.6	
16-8	B	Residential	1		63.5	63.7	65.1	1.6	
16-9	B	Residential	1		64.0	64.2	65.6	1.6	
16-10	B	Residential	9		61.0	61.2	62.8	1.8	
16-11	B	Residential	1		64.3	64.5	66.0	1.7	Yes
16-12	B	Residential	1		65.5	65.7	67.6	2.1	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
16-13	B	Residential	1		63.0	63.2	65.1	2.1	
16-14	B	Residential	1		65.8	66.0	67.8	2.0	Yes
16-15	B	Residential	1		60.7	60.8	62.7	2.0	
16-16	B	Residential	1		66.9	67.0	68.9	2.0	Yes
16-17	B	Residential	1		61.0	61.1	63.1	2.1	
16-18	B	Residential	1		67.2	67.4	69.3	2.1	Yes
16-19	B	Residential	1		62.6	62.7	64.8	2.2	
16-20	B	Residential	1		61.6	61.7	63.9	2.3	
16-21	B	Residential	1		60.6	60.7	62.8	2.2	
16-22	B	Residential	1		58.9	59.0	61.0	2.1	
16-23	B	Residential	1		67.8	67.9	69.9	2.1	Yes
16-24	B	Residential	1		62.3	62.4	64.6	2.3	
16-25	B	Residential	1		61.2	61.4	63.6	2.4	
16-26	B	Residential	1		68.7	68.7	70.7	2.0	Yes
16-27	B	Residential	1		64.2	64.2	66.6	2.4	Yes
16-28	B	Residential	1		69.0	69.0	71.0	2.0	Yes
16-29	B	Residential	1		64.5	64.6	66.8	2.3	Yes
16-30	B	Residential	1		69.5	69.5	71.4	1.9	Yes
16-31	B	Residential	5		61.1	61.2	63.5	2.4	
16-32	B	Residential	1		69.7	69.8	71.7	2.0	Yes
16-33	B	Residential	1		64.4	64.5	66.8	2.4	Yes
16-34	B	Residential	1		64.6	64.6	66.9	2.3	Yes
16-35	B	Residential	1		69.1	69.2	71.2	2.1	Yes
16-36	B	Residential	1		63.4	63.5	65.9	2.5	
16-37	B	Residential	1		62.0	62.0	63.9	1.9	
16-38	B	Residential	1		60.5	60.6	62.6	2.1	
16-39	B	Residential	1		68.3	68.3	70.0	1.7	Yes
16-40	B	Residential	1		68.2	68.2	69.9	1.7	Yes
16-41	B	Residential	1		63.2	63.3	65.1	1.9	
16-42	B	Residential	1		62.2	62.2	64.1	1.9	
16-43	B	Residential	1		61.0	61.0	62.8	1.8	
16-44	B	Residential	1		66.5	66.5	67.8	1.3	Yes
16-45	B	Residential	1		63.2	63.2	64.8	1.6	
16-46	B	Residential	1		62.1	62.2	63.9	1.8	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
16-47	B	Residential	1		61.2	61.2	62.8	1.6	
16-48	B	Residential	1		66.4	66.4	67.5	1.1	Yes
16-49	B	Residential	1		66.6	66.6	67.7	1.1	Yes
16-50	B	Residential	1		67.0	67.1	68.1	1.1	Yes
16-51	B	Residential	2		67.3	67.3	68.3	1.0	Yes
16-52	B	Residential	1		66.0	66.0	65.1	-0.9	
16-53	B	Residential	1		64.8	64.8	63.8	-1.0	
16-54	B	Residential	1		65.1	65.1	63.5	-1.6	
16-55	B	Residential	1		64.4	64.4	62.7	-1.7	
17-1	B	Residential	1		67.8	67.8	66.6	-1.2	Yes
17-2	B	Residential	1		66.8	66.8	65.7	-1.1	
17-3	B	Residential	1		64.8	64.8	65.1	0.3	
17-4	B	Residential	1		63.8	63.8	64.3	0.5	
17-5	B	Residential	3		66.2	66.2	66.5	0.3	Yes
17-6	B	Residential	1		63.6	63.6	64.8	1.2	
17-7	B	Residential	4		63.5	63.6	64.7	1.2	
17-8	B	Residential	1		62.0	62.0	63.6	1.6	
17-9	B	Residential	1		65.9	65.9	66.7	0.8	Yes
17-10	B	Residential	1		65.1	65.1	65.9	0.8	
17-11	B	Residential	1		64.0	64.0	65.3	1.3	
17-12	B	Residential	1		63.1	63.1	64.6	1.5	
17-13	B	Residential	12		62.0	62.0	63.7	1.7	
17-14	B	Residential	1		65.9	65.9	66.8	0.9	Yes
17-15	B	Residential	1		65.2	65.2	66.2	1.0	Yes
17-16	B	Residential	1		64.3	64.4	65.6	1.3	
17-17	B	Residential	1		63.5	63.5	64.9	1.4	
17-18	B	Residential	1		66.3	66.3	67.4	1.1	Yes
17-19	B	Residential	1		64.6	64.6	66.0	1.4	Yes
17-20	B	Residential	4		62.3	62.3	64.3	2.0	
17-21	B	Residential	1		66.7	66.7	67.8	1.1	Yes
17-22	B	Residential	1		67.0	67.0	68.3	1.3	Yes
17-23	B	Residential	1		65.2	65.2	66.8	1.6	Yes
17-24	B	Residential	1		62.8	62.8	64.7	1.9	
17-25	B	Residential	1		67.2	67.2	68.7	1.5	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
17-26	B	Residential	1		66.7	66.7	68.2	1.5	Yes
17-27	B	Residential	1		66.1	66.1	68.4	2.3	Yes
17-28	B	Residential	1		65.8	65.8	67.5	1.7	Yes
17-29	B	Residential	1		63.1	63.1	65.3	2.2	
17-30	B	Residential	1		68.1	68.1	69.7	1.6	Yes
17-31	B	Residential	1		68.1	68.1	70.1	2.0	Yes
17-32	B	Residential	1		66.9	66.9	68.7	1.8	Yes
17-33	B	Residential	1		66.1	66.1	67.9	1.8	Yes
17-34	B	Residential	1		63.4	63.4	65.6	2.2	
17-35	B	Residential	1		69.4	69.4	71.1	1.7	Yes
17-36	B	Residential	1		67.2	67.2	69.1	1.9	Yes
17-37	B	Residential	1		63.4	63.4	65.6	2.2	
17-38	B	Residential	1		69.8	69.8	71.4	1.6	Yes
17-39	B	Residential	1		66.9	66.9	68.9	2.0	Yes
17-40	B	Residential	1		63.6	63.6	65.8	2.2	
17-41	B	Residential	1		70.7	70.7	72.6	1.9	Yes
17-42	B	Residential	1		67.0	67.0	69.1	2.1	Yes
17-43	B	Residential	1		63.8	63.8	66.0	2.2	Yes
17-44	B	Residential	1		72.4	72.4	74.4	2.0	Yes
17-45	B	Residential	1		67.7	67.7	69.7	2.0	Yes
17-46	B	Residential	1		64.1	64.1	66.3	2.2	Yes
17-47	B	Residential	1		73.2	73.2	75.0	1.8	Yes
17-48	B	Residential	1		70.6	70.6	72.5	1.9	Yes
17-49	B	Residential	1		68.7	68.7	70.7	2.0	Yes
17-50	B	Residential	1		67.4	67.4	69.4	2.0	Yes
17-51	B	Residential	1		64.3	64.3	66.5	2.2	Yes
17-52	B	Residential	1		70.8	70.8	72.6	1.8	Yes
17-53	B	Residential	1		69.1	69.1	71.1	2.0	Yes
17-54	B	Residential	1		67.3	67.4	69.3	2.0	Yes
17-55	B	Residential	1		65.0	65.0	67.1	2.1	Yes
17-56	B	Residential	1		67.7	67.7	69.3	1.6	Yes
17-57	B	Residential	1		65.7	65.7	67.5	1.8	Yes
17-58	B	Residential	1		65.3	65.4	67.1	1.8	Yes
17-59	B	Residential	1		62.1	62.2	63.8	1.7	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
17-60	B	Residential	1		64.8	64.9	66.3	1.5	Yes
17-61	B	Residential	1		62.5	62.6	64.2	1.7	
18-1	C	Park	1		64.6	64.8	65.9	1.3	
18-2	C	Park	1		63.9	64.1	65.3	1.4	
18-3	C	Park	1		62.8	62.9	64.3	1.5	
18-4	C	Park	1		61.3	61.4	62.9	1.6	
18-5	C	Park	1		63.7	64.3	65.1	1.4	
18-6	C	Park	1		63.9	64.2	65.1	1.2	
18-7	C	Park	1		62.6	62.8	64.0	1.4	
18-8	C	Park	1		61.5	61.7	63.1	1.6	
18-9	C	Park	1		66.4	67.1	67.2	0.8	Yes
18-10	C	Park	1		63.8	64.2	65.0	1.2	
18-11	C	Park	1		62.3	62.6	64.0	1.7	
18-12	C	Park	1		61.2	61.4	62.9	1.7	
18-13	C	Park	1		66.8	67.2	68.0	1.2	Yes
18-14	C	Park	1		65.4	65.6	66.8	1.4	Yes
18-15	C	Park	1		64.2	64.3	65.5	1.3	
18-16	C	Park	1		63.2	63.3	64.5	1.3	
19-1	B	Residential	1		68.3	68.3	68.1	-0.2	Yes
19-2	B	Residential	1		66.6	66.6	66.3	-0.3	Yes
19-3	B	Residential	1		67.4	67.4	68.4	1.0	Yes
19-4	B	Residential	1		66.3	66.3	66.8	0.5	Yes
19-5	B	Residential	4		64.8	64.8	64.6	-0.2	
19-6	B	Residential	5		63.8	63.8	63.0	-0.8	
19-7	B	Residential	1		66.2	66.2	67.1	0.9	Yes
19-8	B	Residential	1		65.0	65.0	65.3	0.3	
19-9	B	Residential	4		62.1	62.1	61.5	-0.6	
19-10	B	Residential	1		65.8	65.8	66.8	1.0	Yes
19-11	B	Residential	1		60.6	60.6	60.6	0.0	
19-12	B	Residential	1		66.2	66.2	67.3	1.1	Yes
19-13	B	Residential	1		65.8	65.8	66.5	0.7	Yes
19-14	B	Residential	1		67.1	67.1	68.1	1.0	Yes
19-15	B	Residential	1		65.5	65.5	66.1	0.6	Yes
19-16	B	Residential	1		67.4	67.5	68.3	0.9	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
19-17	B	Residential	1		65.7	65.7	66.3	0.6	Yes
19-18	B	Residential	4		60.7	60.7	61.2	0.5	
19-19	B	Residential	1		67.8	67.8	69.1	1.3	Yes
19-20	B	Residential	1		66.2	66.2	66.9	0.7	Yes
19-21	B	Residential	1		65.7	65.7	66.9	1.2	Yes
19-22	B	Residential	1		62.1	62.2	62.8	0.7	
19-23	B	Residential	1		62.3	62.3	63.2	0.9	
19-24	B	Residential	1		67.0	67.0	68.7	1.7	Yes
19-25	B	Residential	3		64.7	64.8	66.2	1.5	Yes
19-26	B	Residential	1		62.5	62.5	63.5	1.0	
19-27	B	Residential	1		61.5	61.5	62.5	1.0	
19-28	B	Residential	1		60.3	60.3	61.3	1.0	
19-29	B	Residential	1		62.1	62.1	63.5	1.4	
19-30	B	Residential	1		62.2	62.2	63.6	1.4	
19-31	B	Residential	1		66.9	66.9	68.3	1.4	Yes
19-32	B	Residential	1		64.7	64.7	66.1	1.4	Yes
19-33	B	Residential	1		62.4	62.4	63.6	1.2	
19-34	B	Residential	1		59.0	59.1	59.8	0.8	
19-35	B	Residential	1		64.6	64.6	66.0	1.4	Yes
19-36	B	Residential	1		62.0	62.0	63.2	1.2	
19-37	B	Residential	1		59.5	59.5	60.3	0.8	
19-38	B	Residential	5		57.4	57.4	57.9	0.5	
19-39	B	Residential	1		65.1	65.1	66.2	1.1	Yes
19-40	B	Residential	1		61.9	61.9	63.1	1.2	
19-41	B	Residential	1		59.6	59.6	60.3	0.7	
19-42	B	Residential	1		64.9	64.9	66.1	1.2	Yes
19-43	B	Residential	1		61.7	61.7	62.9	1.2	
19-44	B	Residential	1		59.1	59.1	59.8	0.7	
19-45	B	Residential	1		65.2	65.2	66.4	1.2	Yes
19.1-1	C	Park	1		64.8	64.8	66.0	1.2	Yes
19.1-2	C	Park	1		63.2	63.2	64.4	1.2	
19.1-3	C	Park	1		61.5	61.5	62.6	1.1	
19.1-4	C	Park	1		61.3	61.3	62.3	1.0	
19.1-5	C	Park	1		59.9	59.9	60.6	0.7	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
19.1-6	C	Park	1		58.8	58.9	59.5	0.7	
19.1-7	C	Park	1		58.0	58.0	58.5	0.5	
20-1	B	Residential	1		66.3	66.3	66.3	0.0	Yes
20-2	B	Residential	1		65.3	65.3	64.1	-1.2	
20-3	B	Residential	1		66.6	66.6	67.4	0.8	Yes
20-4	B	Residential	1		65.5	65.5	66.4	0.9	Yes
20-5	B	Residential	1		64.5	64.6	64.6	0.1	
20-6	B	Residential	2		66.8	66.8	67.9	1.1	Yes
20-7	B	Residential	1		65.9	65.9	66.7	0.8	Yes
20-8	B	Residential	1		64.8	64.8	65.1	0.3	
20-9	B	Residential	1		65.9	65.9	66.5	0.6	Yes
20-10	B	Residential	1		64.1	64.1	64.5	0.4	
20-11	B	Residential	1		67.6	67.6	69.2	1.6	Yes
20-12	B	Residential	1		64.3	64.3	64.8	0.5	
20-13	B	Residential	1		63.5	63.5	64.0	0.5	
20-14	B	Residential	12		61.8	61.8	62.2	0.4	
20-15	B	Residential	1		68.5	68.5	69.8	1.3	Yes
20-16	B	Residential	1		66.1	66.1	66.8	0.7	Yes
20-17	B	Residential	1		68.7	68.7	69.5	0.8	Yes
20-18	B	Residential	1		69.5	69.5	70.0	0.5	Yes
20-19	B	Residential	2		65.4	65.4	66.0	0.6	Yes
20-20	B	Residential	1		63.0	63.0	63.5	0.5	
20-21	B	Residential	1		69.5	69.5	69.9	0.4	Yes
20-22	B	Residential	1		65.5	65.5	66.0	0.5	Yes
20-23	B	Residential	1		62.2	62.2	62.5	0.3	
20-24	B	Residential	1		69.7	69.7	70.2	0.5	Yes
20-25	B	Residential	1		69.6	69.6	70.1	0.5	Yes
20-26	B	Residential	1		69.2	69.2	69.7	0.5	Yes
20-27	B	Residential	1		64.7	64.8	65.1	0.4	
20-28	B	Residential	1		62.2	62.2	62.4	0.2	
20-29	B	Residential	1		62.3	62.3	62.6	0.3	
20-30	B	Residential	1		66.7	66.7	67.1	0.4	Yes
20-31	B	Residential	1		64.2	64.2	64.5	0.3	
20-32	B	Residential	1		66.7	66.7	68.0	1.3	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
20-33	B	Residential	1		66.7	66.7	68.0	1.3	Yes
20-34	B	Residential	1		64.5	64.5	64.8	0.3	
20-35	B	Residential	3		62.6	62.6	62.9	0.3	
20-36	B	Residential	1		66.5	66.5	67.7	1.2	Yes
20-37	B	Residential	1		66.2	66.3	66.9	0.7	Yes
20-38	B	Residential	1		64.5	64.6	64.8	0.3	
20-39	B	Residential	1		66.1	66.1	66.3	0.2	Yes
20-40	B	Residential	1		66.3	66.3	66.6	0.3	Yes
21-1	B	Residential	1		63.5	63.5	64.5	1.0	
21-2	B	Residential	1		63.7	63.8	64.6	0.9	
21-3	B	Residential	3		58.1	58.2	59.1	1.0	
21-4	B	Residential	1		61.3	61.4	62.3	1.0	
22-1	D	Place of Worship (Interior)	1		33.9	34.0	35.0	1.1	
23-1	C	Recreational Area	1		65.0	65.0	65.8	0.8	
23-2	C	Recreational Area	1		64.7	64.7	65.5	0.8	
23-3	C	Recreational Area	1		65.3	65.4	65.5	0.2	
23-4	C	Recreational Area	1		65.1	65.1	65.6	0.5	
24-1	B	Residential	1		63.5	64.0	65.5	2.0	
24-2	B	Residential	1		69.3	71.3	71.0	1.7	Yes
24-3	B	Residential	1		65.8	66.8	67.9	2.1	Yes
24-4	B	Residential	1		64.5	65.0	66.6	2.1	Yes
24-5	B	Residential	1		70.2	72.1	72.1	1.9	Yes
24-6	B	Residential	1		66.2	67.0	68.3	2.1	Yes
24-7	B	Residential	1		64.8	65.3	67.0	2.2	Yes
24-9	B	Residential	1		70.8	71.9	73.0	2.2	Yes
24-8	B	Residential	1		63.4	63.8	65.6	2.2	
24-10	B	Residential	1		68.0	68.7	70.3	2.3	Yes
24-11	B	Residential	1		66.0	66.4	68.3	2.3	Yes
24-12	B	Residential	1		64.6	64.9	66.8	2.2	Yes
24-13	B	Residential	1		63.5	63.8	65.7	2.2	
24-14	B	Residential	1		71.3	71.9	73.5	2.2	Yes

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					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
24-15	B	Residential	1		65.3	65.5	67.6	2.3	Yes
24-16	B	Residential	1		63.5	63.7	65.8	2.3	
24-17	B	Residential	1		62.1	62.3	64.4	2.3	
24-18	B	Residential	1		72.4	73.1	74.6	2.2	Yes
24-19	B	Residential	1		68.2	68.5	70.4	2.2	Yes
24-20	B	Residential	1		65.4	65.6	67.7	2.3	Yes
24-21	B	Residential	1		63.4	63.7	65.8	2.4	
24-22	B	Residential	1		62.0	62.2	64.4	2.4	
24-23	B	Residential	1		60.9	61.1	63.3	2.4	
24-24	B	Residential	1		57.8	58.2	59.6	1.8	
24-25	B	Residential	1		59.4	59.7	61.2	1.8	
24-26	B	Residential	1		59.2	59.4	60.9	1.7	
24-27	B	Residential	1		57.9	58.2	59.7	1.8	
24-28	B	Residential	1		58.7	58.9	60.8	2.1	
24-29	B	Residential	1		57.5	57.9	59.2	1.7	
24-30	B	Residential	1		59.3	59.5	61.2	1.9	
24-31	B	Residential	1		58.6	58.8	60.6	2.0	
24-32	B	Residential	1		58.4	58.6	60.4	2.0	
24-33	B	Residential	1		58.8	59.1	60.3	1.5	
24-34	B	Residential	1		59.2	59.4	60.9	1.7	
24-35	B	Residential	1		58.0	58.2	59.7	1.7	
24-36	B	Residential	1		57.6	57.8	59.4	1.8	
24-37	B	Residential	1		56.5	56.7	58.1	1.6	
24-38	B	Residential	1		57.9	58.2	59.3	1.4	
24-39	B	Residential	1		59.1	59.4	60.6	1.5	
24-40	B	Residential	1		58.9	59.1	60.3	1.4	
24-41	B	Residential	1		59.4	59.6	60.6	1.2	
24-42	B	Residential	1		57.0	57.2	58.6	1.6	
24-43	B	Residential	1		59.2	59.3	59.7	0.5	
24-44	B	Residential	1		58.1	58.4	59.6	1.5	
24-45	B	Residential	1		58.2	58.4	59.6	1.4	
24-46	B	Residential	1		57.5	57.7	58.9	1.4	
24-47	B	Residential	1		56.6	56.8	58.0	1.4	
24-48	B	Residential	1		56.7	56.8	57.9	1.2	

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					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
24-49	B	Residential	1		57.3	57.6	58.8	1.5	
24-50	B	Residential	1		58.7	58.9	60.1	1.4	
24-51	B	Residential	1		58.0	58.2	59.4	1.4	
24-52	B	Residential	1		56.4	56.6	57.9	1.5	
24-53	B	Residential	1		56.4	56.6	57.8	1.4	
24-54	B	Residential	1		56.1	56.2	57.4	1.3	
24-55	B	Residential	1		58.3	58.4	59.7	1.4	
24-56	B	Residential	1		59.2	59.4	60.4	1.2	
24-57	B	Residential	1		58.2	58.3	59.4	1.2	
24-58	B	Residential	1		57.9	58.0	59.1	1.2	
24-59	B	Residential	1		57.4	57.5	58.6	1.2	
24-60	B	Residential	1		57.1	57.2	58.3	1.2	
24-61	B	Residential	1		58.1	58.2	59.4	1.3	
24-62	B	Residential	1		59.8	59.9	60.9	1.1	
24-63	B	Residential	1		59.0	59.0	59.9	0.9	
24-64	B	Residential	1		58.5	58.5	59.5	1.0	
24-65	B	Residential	1		57.8	57.8	58.9	1.1	
24-66	B	Residential	1		59.6	59.6	60.6	1.0	
24-67	B	Residential	1		59.0	59.0	60.1	1.1	
24-68	B	Residential	1		58.3	58.4	59.4	1.1	
24-69	B	Residential	1		63.3	63.3	63.9	0.6	
24-70	B	Residential	1		60.9	60.9	61.9	1.0	
24-71	B	Residential	2		59.0	59.0	60.1	1.1	
24-72	B	Residential	1		62.0	62.0	62.9	0.9	
24-73	B	Residential	1		61.3	61.3	62.3	1.0	
24-74	B	Residential	1		60.5	60.5	61.6	1.1	
24-75	B	Residential	3		59.3	59.3	60.4	1.1	
24-76	B	Residential	1		61.1	61.1	62.1	1.0	
24-77	B	Residential	1		60.5	60.5	61.5	1.0	
24-78	B	Residential	3		59.4	59.5	60.4	1.0	
24-79	B	Residential	1		59.9	59.9	60.8	0.9	
24-80	B	Residential	1		61.3	61.3	62.3	1.0	
24-81	B	Residential	1		60.7	60.7	61.8	1.1	
24-82	B	Residential	1		60.0	60.1	60.8	0.8	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
24-83	B	Residential	1		61.1	61.2	62.2	1.1	
24-84	B	Residential	1		61.2	61.2	62.3	1.1	
24-85	B	Residential	1		61.1	61.1	62.1	1.0	
24-86	B	Residential	1		60.0	60.0	60.8	0.8	
24-87	B	Residential	1		60.0	60.0	60.8	0.8	
24-88	B	Residential	1		61.2	61.2	62.3	1.1	
24-89	B	Residential	1		61.0	61.0	62.0	1.0	
24-90	B	Residential	1		59.9	59.9	60.7	0.8	
24-91	B	Residential	1		61.2	61.2	62.3	1.1	
24-92	B	Residential	2		60.9	60.9	61.9	1.0	
24-93	B	Residential	1		60.2	60.2	61.0	0.8	
24-94	B	Residential	1		61.0	61.0	62.1	1.1	
24-95	B	Residential	1		61.0	61.0	62.0	1.0	
24-96	B	Residential	1		59.8	59.8	60.5	0.7	
24-97	B	Residential	1		59.9	59.9	60.6	0.7	
24-98	B	Residential	1		61.3	61.3	62.4	1.1	
24-99	B	Residential	1		60.9	60.9	61.9	1.0	
24-100	B	Residential	1		61.2	61.2	62.2	1.0	
24-101	B	Residential	1		59.8	59.8	60.6	0.8	
24-102	B	Residential	1		59.6	59.6	60.4	0.8	
24-103	B	Residential	1		61.3	61.3	62.3	1.0	
24-104	B	Residential	1		60.8	60.9	62.0	1.2	
24-105	B	Residential	1		59.6	59.6	60.8	1.2	
24-106	B	Residential	1		59.9	59.9	60.7	0.8	
24-107	B	Residential	1		59.3	59.3	60.1	0.8	
24-108	B	Residential	1		61.4	61.4	62.5	1.1	
24-109	B	Residential	1		61.7	61.7	62.7	1.0	
24-110	B	Residential	1		60.4	60.4	61.3	0.9	
24-111	B	Residential	1		62.3	62.3	63.3	1.0	
24-112	B	Residential	1		62.6	62.6	63.6	1.0	
24-113	B	Residential	1		60.5	60.5	61.4	0.9	
24-114	B	Residential	1		63.4	63.4	64.1	0.7	
24-115	B	Residential	1		66.6	66.6	66.6	0.0	Yes
24-116	B	Residential	1		62.6	62.6	63.5	0.9	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
24-117	B	Residential	1		62.8	62.8	63.7	0.9	
24-118	B	Residential	1		63.5	63.5	64.3	0.8	
24-119	B	Residential	1		60.8	60.8	61.8	1.0	
24-120	B	Residential	1		60.9	60.9	61.9	1.0	
25-1	B	Residential	1		60.6	60.9	62.4	1.8	
25-2	B	Residential	1		61.4	61.6	63.2	1.8	
25-3	B	Residential	1		62.0	62.2	63.8	1.8	
25-4	B	Residential	1		62.0	62.2	63.9	1.9	
25-5	B	Residential	1		61.9	62.1	63.9	2.0	
25-6	B	Residential	1		60.1	60.4	61.8	1.7	
25-7	B	Residential	1		60.6	60.8	62.3	1.7	
25-8	B	Residential	1		60.9	61.1	62.6	1.7	
25-9	B	Residential	1		60.0	60.2	61.6	1.6	
25-10	B	Residential	1		60.1	60.2	61.7	1.6	
25-11	B	Residential	1		60.0	60.1	61.7	1.7	
25-12	B	Residential	1		59.6	59.8	61.2	1.6	
25-13	B	Residential	1		59.8	60.0	61.2	1.4	
25-14	B	Residential	1		59.1	59.3	60.7	1.6	
25-15	B	Residential	1		59.1	59.3	60.7	1.6	
25-16	B	Residential	1		59.1	59.3	60.7	1.6	
25-17	B	Residential	1		59.0	59.2	60.6	1.6	
25-18	B	Residential	1		59.7	59.9	61.2	1.5	
25-19	B	Residential	1		59.7	59.8	61.1	1.4	
25-20	B	Residential	1		60.9	61.0	62.5	1.6	
25-21	B	Residential	1		58.5	58.7	60.1	1.6	
25-22	B	Residential	1		58.3	58.5	59.9	1.6	
25-23	B	Residential	1		58.0	58.2	59.6	1.6	
25-24	B	Residential	1		59.4	59.5	60.8	1.4	
25-25	B	Residential	1		60.8	60.9	63.2	2.4	
25-26	B	Residential	1		58.5	58.7	59.9	1.4	
25-27	B	Residential	1		59.4	59.5	61.0	1.6	
25-28	B	Residential	1		57.3	57.5	58.8	1.5	
25-29	B	Residential	1		57.2	57.3	58.7	1.5	
25-30	B	Residential	1		59.6	59.7	61.1	1.5	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
25-31	B	Residential	2		57.9	58.0	59.3	1.4	
25-32	B	Residential	1		59.7	59.8	61.2	1.5	
25-33	B	Residential	1		57.8	57.9	59.2	1.4	
25-34	B	Residential	1		59.9	60.0	61.4	1.5	
25-35	B	Residential	1		58.1	58.3	59.6	1.5	
25-36	B	Residential	1		59.9	60.0	61.4	1.5	
25-37	B	Residential	1		58.5	58.6	59.9	1.4	
25-38	B	Residential	1		58.9	59.0	60.3	1.4	
25-39	B	Residential	1		59.8	59.9	61.3	1.5	
25-40	B	Residential	1		58.9	59.0	60.5	1.6	
25-41	B	Residential	1		59.6	59.6	61.0	1.4	
25-42	B	Residential	1		58.7	58.7	60.1	1.4	
25-43	B	Residential	1		59.3	59.4	60.7	1.4	
25-44	B	Residential	1		58.5	58.5	60.0	1.5	
25-45	B	Residential	1		59.2	59.3	60.5	1.3	
25-46	B	Residential	2		58.8	58.9	60.4	1.6	
25-47	B	Residential	1		59.4	59.5	60.6	1.2	
25-48	B	Residential	1		58.8	58.9	60.2	1.4	
25-49	B	Residential	1		60.2	60.2	61.3	1.1	
25-50	B	Residential	1		59.4	59.4	60.5	1.1	
25-51	B	Residential	1		58.9	58.9	60.1	1.2	
25-52	B	Residential	5		56.8	56.9	58.1	1.3	
25-53	B	Residential	3		58.2	58.2	59.3	1.1	
26-1	C	School (Exterior)	1		60.3	60.4	61.4	1.1	
26-2	C	School (Exterior)	1		59.2	59.2	60.4	1.2	
26-3	C	School (Exterior)	1		58.3	58.3	59.4	1.1	
26-4	C	School (Exterior)	1		57.3	57.3	58.3	1.0	
26-5	C	School (Exterior)	1		56.9	56.9	57.9	1.0	
26-6	C	School (Exterior)	1		60.2	60.2	61.3	1.1	
26-7	C	School (Exterior)	1		59.2	59.2	60.3	1.1	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
26-8	C	School (Exterior)	1		58.3	58.4	59.4	1.1	
26-9	C	School (Exterior)	1		57.4	57.5	58.5	1.1	
26-10	C	School (Exterior)	1		56.8	56.9	57.8	1.0	
26-11	C	School (Exterior)	1		60.2	60.2	61.2	1.0	
26-12	C	School (Exterior)	1		59.2	59.2	60.2	1.0	
26-13	C	School (Exterior)	1		58.4	58.4	59.4	1.0	
26-14	C	School (Exterior)	1		57.5	57.5	58.5	1.0	
26-15	C	School (Exterior)	1		56.8	56.9	57.8	1.0	
26-16	C	School (Exterior)	1		59.9	59.9	61.0	1.1	
26-17	C	School (Exterior)	1		59.4	59.4	60.4	1.0	
26-18	C	School (Exterior)	1		58.7	58.7	59.7	1.0	
26-19	C	School (Exterior)	1		60.1	60.1	61.2	1.1	
26-20	C	School (Exterior)	1		59.1	59.1	60.1	1.0	
26-21	C	School (Exterior)	1		58.8	58.8	59.8	1.0	
27-1	B	Residential	1		59.8	59.8	60.9	1.1	
27-2	B	Residential	1		58.0	58.0	59.1	1.1	
27-3	B	Residential	1		57.7	57.7	58.7	1.0	
27-4	B	Residential	1		56.7	56.8	57.7	1.0	
27-5	B	Residential	1		56.0	56.0	56.9	0.9	
27-6	B	Residential	1		59.8	59.8	60.9	1.1	
27-7	B	Residential	1		58.4	58.4	59.5	1.1	
27-8	B	Residential	1		57.0	57.0	58.0	1.0	
27-9	B	Residential	1		56.2	56.2	57.2	1.0	
27-10	B	Residential	1		56.0	56.0	56.9	0.9	
27-11	B	Residential	1		59.9	59.9	60.9	1.0	
27-12	B	Residential	1		58.0	58.0	59.0	1.0	
27-13	B	Residential	1		57.1	57.1	58.1	1.0	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
27-14	B	Residential	1		56.5	56.5	57.4	0.9	
27-15	B	Residential	1		56.1	56.1	56.9	0.8	
27-16	B	Residential	1		60.0	60.0	61.0	1.0	
27-17	B	Residential	1		58.8	58.8	59.8	1.0	
27-18	B	Residential	1		58.1	58.1	58.7	0.6	
27-19	B	Residential	1		56.8	56.8	57.5	0.7	
27-20	B	Residential	1		56.7	56.7	57.3	0.6	
27-21	B	Residential	1		61.1	61.2	61.5	0.4	
27-22	B	Residential	1		59.3	59.3	59.8	0.5	
27-23	B	Residential	1		58.0	58.0	58.7	0.7	
27-24	B	Residential	1		57.0	57.0	57.8	0.8	
27-25	B	Residential	1		56.3	56.3	57.0	0.7	
27-26	B	Residential	1		60.5	60.5	61.6	1.1	
27-27	B	Residential	1		59.6	59.6	60.6	1.0	
27-28	B	Residential	1		58.9	58.9	59.9	1.0	
27-29	B	Residential	1		57.9	57.9	58.7	0.8	
27-30	B	Residential	1		60.3	60.3	61.5	1.2	
27-31	B	Residential	1		59.8	59.8	61.5	1.7	
27-32	B	Residential	1		59.9	59.9	61.6	1.7	
27-33	B	Residential	1		59.5	59.5	60.6	1.1	
27-34	B	Residential	1		58.9	58.9	59.9	1.0	
27-35	B	Residential	1		58.5	58.5	59.4	0.9	
27-36	B	Residential	1		60.1	60.1	61.7	1.6	
27-37	B	Residential	1		59.2	59.2	60.3	1.1	
27-38	B	Residential	1		58.8	58.8	59.9	1.1	
27-39	B	Residential	1		58.1	58.1	59.0	0.9	
27-40	B	Residential	1		60.1	60.2	61.6	1.5	
27-41	B	Residential	1		59.8	59.8	61.3	1.5	
27-42	B	Residential	1		59.9	59.9	61.3	1.4	
27-43	B	Residential	1		58.9	58.9	60.3	1.4	
27-44	B	Residential	1		59.4	59.4	60.5	1.1	
27-45	B	Residential	1		58.9	58.9	60.0	1.1	
27-46	B	Residential	1		58.3	58.3	59.4	1.1	
27-47	B	Residential	1		58.0	58.0	59.2	1.2	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
27-48	B	Residential	1		60.2	60.2	61.6	1.4	
27-49	B	Residential	1		59.7	59.7	61.0	1.3	
27-50	B	Residential	1		58.0	58.0	59.2	1.2	
27-51	B	Residential	1		60.2	60.2	61.6	1.4	
27-52	B	Residential	1		60.1	60.1	61.2	1.1	
27-53	B	Residential	1		57.7	57.7	58.9	1.2	
27-54	B	Residential	1		60.2	60.2	61.6	1.4	
27-55	B	Residential	1		59.4	59.5	60.7	1.3	
27-56	B	Residential	1		57.5	57.5	58.8	1.3	
27-57	B	Residential	9		56.2	56.2	57.4	1.2	
27-58	B	Residential	1		60.1	60.2	61.5	1.4	
27-59	B	Residential	1		59.4	59.4	60.7	1.3	
27-60	B	Residential	2		60.2	60.2	61.6	1.4	
27-61	B	Residential	1		58.8	58.8	60.2	1.4	
27-62	B	Residential	1		57.8	57.8	59.1	1.3	
27-63	B	Residential	1		58.9	58.9	60.3	1.4	
27-64	B	Residential	1		57.4	57.4	58.8	1.4	
27-65	B	Residential	1		60.5	60.5	61.9	1.4	
27-66	B	Residential	1		59.5	59.5	61.0	1.5	
27-67	B	Residential	1		57.6	57.6	59.1	1.5	
27-68	B	Residential	1		60.7	60.7	62.2	1.5	
27-69	B	Residential	1		59.6	59.6	61.2	1.6	
27-70	B	Residential	1		57.6	57.6	59.1	1.5	
27-71	B	Residential	1		60.9	60.9	62.5	1.6	
27-72	B	Residential	1		61.2	61.2	62.2	1.0	
27-73	B	Residential	1		58.0	58.0	59.5	1.5	
27-74	B	Residential	3		59.7	59.7	61.5	1.8	
27-75	B	Residential	1		58.7	58.7	60.5	1.8	
27-76	B	Residential	1		56.7	56.7	58.3	1.6	
27-77	B	Residential	1		57.1	57.1	58.8	1.7	
27-78	B	Residential	1		57.2	57.2	58.9	1.7	
27-79	B	Residential	1		57.8	57.8	59.4	1.6	
27-80	B	Residential	1		57.3	57.3	58.8	1.5	
27-81	B	Residential	1		56.3	56.3	57.6	1.3	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
27-82	B	Residential	1		57.9	57.9	59.5	1.6	
27-83	B	Residential	1		59.5	59.5	61.3	1.8	
27-84	B	Residential	1		60.1	60.1	61.9	1.8	
27-85	B	Residential	1		60.1	60.1	62.0	1.9	
27-86	B	Residential	1		60.5	60.5	62.5	2.0	
27-87	B	Residential	1		59.3	59.3	61.2	1.9	
27-88	B	Residential	1		59.2	59.2	61.0	1.8	
27-89	B	Residential	1		59.6	59.6	61.3	1.7	
27-90	B	Residential	1		60.1	60.1	61.9	1.8	
27-91	B	Residential	1		60.1	60.2	61.9	1.8	
27-92	B	Residential	1		60.5	60.5	62.2	1.7	
27-93	B	Residential	1		61.0	61.0	62.7	1.7	
27-94	B	Residential	1		61.2	61.2	63.1	1.9	
27-95	B	Residential	1		60.1	60.1	61.8	1.7	
28-1	B	Residential	1		61.1	61.1	62.1	1.0	
28-2	B	Residential	2		59.5	59.5	60.4	0.9	
28-3	B	Residential	1		61.0	61.0	62.1	1.1	
28-4	B	Residential	2		59.4	59.4	60.3	0.9	
28-5	B	Residential	2		59.3	59.3	60.2	0.9	
28-6	B	Residential	2		59.1	59.1	60.0	0.9	
28-7	B	Residential	1		60.9	60.9	61.7	0.8	
28-8	B	Residential	1		60.9	60.9	61.6	0.7	
28-9	B	Residential	1		60.4	60.4	61.1	0.7	
28-10	B	Residential	1		60.1	60.1	60.9	0.8	
28-11	B	Residential	1		59.7	59.7	60.4	0.7	
28-12	B	Residential	1		61.5	61.5	62.4	0.9	
28-13	B	Residential	1		61.2	61.2	61.9	0.7	
28-14	B	Residential	1		58.9	58.9	59.6	0.7	
28-15	B	Residential	1		61.3	61.3	62.3	1.0	
28-16	B	Residential	1		61.2	61.2	62.2	1.0	
28-17	B	Residential	1		60.3	60.3	61.1	0.8	
28-18	B	Residential	1		58.6	58.6	59.5	0.9	
28-19	B	Residential	1		58.5	58.5	59.7	1.2	
28-20	B	Residential	1		61.0	61.0	62.0	1.0	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
28-21	B	Residential	1		59.3	59.3	60.1	0.8	
28-22	B	Residential	1		58.2	58.2	59.3	1.1	
28-23	B	Residential	1		60.9	60.9	61.9	1.0	
28-24	B	Residential	1		59.9	59.9	60.8	0.9	
28-25	B	Residential	1		58.3	58.4	59.5	1.2	
28-26	B	Residential	1		60.9	60.9	61.9	1.0	
28-27	B	Residential	1		59.6	59.6	60.6	1.0	
28-28	B	Residential	1		57.6	57.6	58.6	1.0	
28-29	B	Residential	1		60.8	60.8	61.9	1.1	
28-30	B	Residential	1		59.0	59.0	60.0	1.0	
28-31	B	Residential	1		57.2	57.2	58.4	1.2	
28-32	B	Residential	1		60.7	60.7	61.8	1.1	
28-33	B	Residential	1		59.6	59.6	60.7	1.1	
28-34	B	Residential	1		59.3	59.3	60.3	1.0	
28-35	B	Residential	1		58.2	58.2	59.3	1.1	
28-36	B	Residential	1		57.2	57.2	58.3	1.1	
28-37	B	Residential	1		61.1	61.1	62.1	1.0	
28-38	B	Residential	1		59.3	59.3	60.4	1.1	
28-39	B	Residential	1		57.2	57.2	58.3	1.1	
28-40	B	Residential	1		61.1	61.1	62.1	1.0	
28-41	B	Residential	1		59.3	59.3	60.4	1.1	
28-42	B	Residential	1		57.2	57.2	58.4	1.2	
28-43	B	Residential	1		61.1	61.1	62.2	1.1	
28-44	B	Residential	1		59.0	59.0	60.1	1.1	
28-45	B	Residential	1		57.1	57.1	58.2	1.1	
28-46	B	Residential	1		61.1	61.1	62.2	1.1	
28-47	B	Residential	1		59.3	59.3	60.3	1.0	
28-48	B	Residential	1		57.6	57.6	58.7	1.1	
28-49	B	Residential	1		61.1	61.1	62.2	1.1	
28-50	B	Residential	1		59.9	59.9	61.0	1.1	
28-51	B	Residential	1		57.9	57.9	59.0	1.1	
28-52	B	Residential	1		61.0	61.0	62.1	1.1	
28-53	B	Residential	1		59.8	59.8	60.9	1.1	
28-54	B	Residential	1		57.8	57.9	59.0	1.2	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
28-55	B	Residential	1		60.9	60.9	61.9	1.0	
28-56	B	Residential	1		59.5	59.5	60.5	1.0	
28-57	B	Residential	1		57.2	57.2	58.4	1.2	
28-58	B	Residential	1		60.8	60.8	61.8	1.0	
28-59	B	Residential	1		59.6	59.6	60.7	1.1	
28-60	B	Residential	1		57.2	57.2	58.2	1.0	
28-61	B	Residential	1		60.8	60.8	61.8	1.0	
28-62	B	Residential	1		59.6	59.6	60.7	1.1	
28-63	B	Residential	1		57.0	57.0	58.0	1.0	
28-64	B	Residential	1		60.7	60.7	61.8	1.1	
28-65	B	Residential	1		58.8	58.8	59.9	1.1	
28-66	B	Residential	1		56.6	56.6	57.7	1.1	
28-67	B	Residential	1		60.8	60.8	61.8	1.0	
28-68	B	Residential	1		58.7	58.7	59.7	1.0	
28-69	B	Residential	1		56.5	56.5	57.5	1.0	
28-70	B	Residential	1		60.8	60.8	61.8	1.0	
28-71	B	Residential	1		58.5	58.5	59.6	1.1	
28-72	B	Residential	1		56.6	56.6	57.6	1.0	
28-73	B	Residential	19		55.2	55.3	56.3	1.1	
28-74	B	Residential	1		60.9	60.9	62.1	1.2	
28-75	B	Residential	1		58.7	58.7	59.7	1.0	
28-76	B	Residential	1		57.2	57.2	58.2	1.0	
28-77	B	Residential	1		60.8	60.8	61.8	1.0	
28-78	B	Residential	1		58.6	58.6	59.7	1.1	
28-79	B	Residential	1		56.7	56.7	57.7	1.0	
28-80	B	Residential	1		61.0	61.0	62.0	1.0	
28-81	B	Residential	1		62.6	62.6	63.2	0.6	
28-82	B	Residential	1		59.8	59.8	60.6	0.8	
28-83	B	Residential	1		56.7	56.7	57.7	1.0	
28-84	B	Residential	1		56.8	56.8	57.8	1.0	
28-85	B	Residential	1		61.1	61.1	62.1	1.0	
28-86	B	Residential	1		58.5	58.5	59.6	1.1	
28-87	B	Residential	1		56.7	56.8	57.8	1.1	
28-88	B	Residential	1		61.1	61.1	62.1	1.0	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
28-89	B	Residential	1		58.5	58.5	59.6	1.1	
28-90	B	Residential	1		57.4	57.4	58.3	0.9	
28-91	B	Residential	1		61.0	61.0	62.0	1.0	
28-92	B	Residential	1		58.5	58.5	59.6	1.1	
28-93	B	Residential	1		55.9	55.9	56.9	1.0	
28-94	B	Residential	1		61.6	61.6	62.8	1.2	
28-95	B	Residential	1		60.0	60.0	61.0	1.0	
28-96	B	Residential	1		58.9	58.9	60.0	1.1	
28-97	B	Residential	1		57.9	57.9	59.1	1.2	
28-98	B	Residential	1		57.9	57.9	59.0	1.1	
28-99	B	Residential	1		57.5	57.5	58.6	1.1	
28-100	B	Residential	1		58.1	58.1	59.5	1.4	
28-101	B	Residential	1		58.0	58.0	59.2	1.2	
28-102	B	Residential	1		57.2	57.2	58.5	1.3	
28-103	B	Residential	1		57.2	57.2	58.2	1.0	
28-104	B	Residential	1		55.9	55.9	56.9	1.0	
28-105	B	Residential	1		55.8	55.8	56.8	1.0	
28-106	B	Residential	1		55.6	55.6	56.5	0.9	
28-107	B	Residential	1		55.4	55.4	56.4	1.0	
28-108	B	Residential	1		55.2	55.2	56.1	0.9	
28-109	B	Residential	1		55.0	55.0	55.9	0.9	
28-110	B	Residential	1		54.9	54.9	55.8	0.9	
28-111	B	Residential	1		54.8	54.8	55.7	0.9	
28-112	B	Residential	1		54.6	54.6	55.6	1.0	
28-113	B	Residential	1		54.6	54.6	55.5	0.9	
28-114	B	Residential	1		54.5	54.5	55.4	0.9	
28-115	B	Residential	1		54.4	54.4	55.3	0.9	
28-116	B	Residential	1		59.4	59.4	60.6	1.2	
28-117	B	Residential	1		60.1	60.1	61.2	1.1	
28-118	B	Residential	1		58.2	58.2	59.2	1.0	
28-119	B	Residential	1		57.3	57.3	58.3	1.0	
28-120	B	Residential	1		57.0	57.0	57.9	0.9	
28-121	B	Residential	1		58.3	58.3	59.2	0.9	
28-122	B	Residential	1		60.4	60.4	61.6	1.2	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
28-123	B	Residential	1		59.1	59.1	60.2	1.1	
28-124	B	Residential	1		59.4	59.4	60.4	1.0	
28-125	B	Residential	1		61.2	61.2	62.0	0.8	
28-126	B	Residential	1		60.1	60.1	60.9	0.8	
28-127	B	Residential	1		58.2	58.2	59.1	0.9	
28-128	B	Residential	1		59.7	59.7	60.9	1.2	
28-129	B	Residential	1		59.6	59.7	60.7	1.1	
28-130	B	Residential	1		59.4	59.4	60.4	1.0	
28-131	B	Residential	1		63.8	63.8	64.7	0.9	
28-132	B	Residential	1		58.9	58.9	59.9	1.0	
28-133	B	Residential	1		58.4	58.4	59.3	0.9	
28-134	B	Residential	1		58.8	58.8	60.1	1.3	
28-135	B	Residential	1		61.3	61.3	62.4	1.1	
28-136	B	Residential	1		61.2	61.2	61.8	0.6	
28-137	B	Residential	1		59.8	59.9	61.3	1.5	
28-138	B	Residential	1		59.0	59.0	60.2	1.2	
28-139	B	Residential	1		58.6	58.7	59.6	1.0	
29-1	C	School (Exterior)	1		71.0	71.0	73.0	2.0	Yes
29-2	C	School (Exterior)	1		68.1	68.1	70.2	2.1	Yes
29-3	C	School (Exterior)	1		67.0	67.0	69.2	2.2	Yes
29-4	C	School (Exterior)	1		64.3	64.3	66.5	2.2	Yes
29-5	C	School (Exterior)	1		71.3	71.3	73.1	1.8	Yes
29-6	C	School (Exterior)	1		68.2	68.2	70.3	2.1	Yes
29-7	C	School (Exterior)	1		67.2	67.2	69.4	2.2	Yes
29-8	C	School (Exterior)	1		64.3	64.3	66.5	2.2	Yes
29-9	C	School (Exterior)	1		71.2	71.2	73.1	1.9	Yes
29-10	C	School (Exterior)	1		68.0	68.0	70.2	2.2	Yes
29-11	C	School (Exterior)	1		67.1	67.1	69.4	2.3	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
29-12	C	School (Exterior)	1		64.7	64.7	66.9	2.2	Yes
30-1	B	Residential	1		66.9	67.1	67.9	1.0	Yes
30-2	B	Residential	1		65.9	65.9	66.8	0.9	Yes
30-3	B	Residential	1		66.5	66.6	67.3	0.8	Yes
30-4	B	Residential	1		69.6	70.7	71.5	1.9	Yes
30-5	B	Residential	1		67.5	68.0	69.0	1.5	Yes
30-6	B	Residential	1		67.1	67.4	68.1	1.0	Yes
30-7	B	Residential	1		64.9	65.1	66.2	1.3	Yes
30-8	B	Residential	4		62.6	62.7	64.8	2.2	
30-9	B	Residential	1		69.8	70.6	71.3	1.5	Yes
30-10	B	Residential	1		66.7	67.1	68.4	1.7	Yes
30-11	B	Residential	1		66.5	66.7	68.0	1.5	Yes
30-12	B	Residential	1		65.6	65.8	67.4	1.8	Yes
30-13	B	Residential	5		62.2	62.3	64.5	2.3	
30-14	B	Residential	1		70.8	71.5	73.2	2.4	Yes
30-15	B	Residential	1		67.4	67.6	69.8	2.4	Yes
30-16	B	Residential	1		65.5	65.7	68.0	2.5	Yes
30-17	B	Residential	1		62.0	62.1	64.3	2.3	
30-18	B	Residential	1		73.3	73.8	75.6	2.3	Yes
30-19	B	Residential	1		70.5	70.8	72.9	2.4	Yes
30-20	B	Residential	1		68.4	68.6	70.8	2.4	Yes
30-21	B	Residential	1		66.7	66.9	69.3	2.6	Yes
30-22	B	Residential	1		64.9	65.0	67.4	2.5	Yes
30-23	B	Residential	1		61.7	61.9	64.1	2.4	
30-24	B	Residential	1		73.1	73.5	75.7	2.6	Yes
30-25	B	Residential	1		69.0	69.2	71.6	2.6	Yes
30-26	B	Residential	1		66.8	66.9	69.3	2.5	Yes
30-27	B	Residential	1		64.6	64.8	67.0	2.4	Yes
30-28	B	Residential	1		61.5	61.6	63.7	2.2	
30-29	B	Residential	1		73.6	73.9	76.0	2.4	Yes
30-30	B	Residential	1		66.6	66.8	68.9	2.3	Yes
30-31	B	Residential	1		64.0	64.1	66.3	2.3	Yes
30-32	B	Residential	1		61.2	61.4	63.4	2.2	
30-33	B	Residential	1		73.4	73.6	75.2	1.8	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
30-34	B	Residential	1		70.5	70.6	72.2	1.7	Yes
30-35	B	Residential	1		60.0	60.1	62.1	2.1	
30-36	B	Residential	1		59.3	59.4	61.3	2.0	
30-37	B	Residential	1		64.1	64.2	66.0	1.9	Yes
30-38	B	Residential	1		63.6	63.7	65.4	1.8	
30-39	B	Residential	1		63.1	63.2	64.9	1.8	
30-40	B	Residential	1		61.1	61.2	63.0	1.9	
30-41	B	Residential	1		59.0	59.1	60.9	1.9	
30-42	B	Residential	1		60.9	61.0	63.0	2.1	
30-43	B	Residential	1		60.3	60.4	62.2	1.9	
30-44	B	Residential	1		58.6	58.7	60.5	1.9	
30-45	B	Residential	1		58.5	58.6	60.4	1.9	
30-46	B	Residential	1		58.3	58.4	60.2	1.9	
30-47	B	Residential	1		58.3	58.3	60.1	1.8	
30-48	B	Residential	1		59.6	59.6	61.4	1.8	
30-49	B	Residential	1		60.5	60.6	62.5	2.0	
30-50	B	Residential	1		59.9	59.9	61.8	1.9	
30-51	B	Residential	1		58.9	58.9	60.7	1.8	
30-52	B	Residential	1		58.7	58.7	60.6	1.9	
30-53	B	Residential	1		60.3	60.3	62.2	1.9	
30-54	B	Residential	1		59.7	59.8	61.6	1.9	
30-55	B	Residential	1		60.4	60.5	62.4	2.0	
30-56	B	Residential	1		60.2	60.2	62.0	1.8	
30-57	B	Residential	1		55.9	56.0	58.0	2.1	
30-58	B	Residential	1		60.0	60.0	61.9	1.9	
30-59	B	Residential	1		60.6	60.7	62.6	2.0	
30-60	B	Residential	1		60.1	60.1	61.9	1.8	
30-61	B	Residential	1		59.4	59.4	61.3	1.9	
30-62	B	Residential	1		60.5	60.5	62.5	2.0	
30-63	B	Residential	1		60.8	60.8	62.7	1.9	
30-64	B	Residential	1		60.1	60.1	61.9	1.8	
30-65	B	Residential	1		57.1	57.1	58.9	1.8	
30-66	B	Residential	1		60.2	60.2	62.3	2.1	
30-67	B	Residential	1		61.0	61.0	63.0	2.0	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
30-68	B	Residential	1		60.9	60.9	62.8	1.9	
30-69	B	Residential	1		59.9	59.9	61.6	1.7	
30-70	B	Residential	1		59.0	59.0	60.7	1.7	
30-71	B	Residential	1		62.9	63.0	64.7	1.8	
30-72	B	Residential	1		61.4	61.4	63.2	1.8	
30-73	B	Residential	1		60.2	60.2	61.9	1.7	
30-74	B	Residential	1		59.1	59.1	60.9	1.8	
31-1	B	Residential	1		68.2	68.7	70.5	2.3	Yes
31-2	B	Residential	1		66.2	66.3	67.9	1.7	Yes
31-3	B	Residential	1		65.4	65.5	66.6	1.2	Yes
31-4	B	Residential	1		64.0	64.0	65.2	1.2	
31-5	B	Residential	1		62.7	62.8	64.3	1.6	
31-6	B	Residential	1		68.1	68.6	69.8	1.7	Yes
31-7	B	Residential	1		67.0	67.1	68.0	1.0	Yes
31-8	B	Residential	1		65.9	66.0	67.2	1.3	Yes
31-9	B	Residential	1		64.8	64.8	66.4	1.6	Yes
31-10	B	Residential	1		63.5	63.6	65.4	1.9	
31-11	B	Residential	1		62.3	62.3	64.2	1.9	
31-12	B	Residential	1		66.0	66.1	66.9	0.9	Yes
31-13	B	Residential	1		64.4	64.5	66.2	1.8	Yes
31-14	B	Residential	1		62.9	63.0	64.8	1.9	
31-15	B	Residential	1		61.1	61.1	63.1	2.0	
31-16	B	Residential	1		62.7	62.8	64.6	1.9	
31-17	B	Residential	1		62.7	62.8	64.5	1.8	
31-18	B	Residential	1		61.6	61.7	63.5	1.9	
31-19	B	Residential	1		60.8	60.9	62.7	1.9	
31-20	B	Residential	1		62.3	62.4	64.2	1.9	
31-21	B	Residential	1		61.1	61.2	62.9	1.8	
31-22	B	Residential	1		59.8	59.9	61.7	1.9	
31-23	B	Residential	1		59.1	59.2	61.0	1.9	
31-24	B	Residential	1		62.3	62.5	64.3	2.0	
31-25	B	Residential	1		63.3	63.4	65.3	2.0	
31-26	B	Residential	1		60.9	61.0	62.9	2.0	
31-27	B	Residential	1		59.0	59.1	61.2	2.2	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
31-28	B	Residential	1		57.6	57.7	59.9	2.3	
31-29	B	Residential	1		56.7	56.8	59.0	2.3	
31-30	B	Residential	1		62.5	62.6	64.5	2.0	
31-31	B	Residential	1		61.6	61.7	63.7	2.1	
31-32	B	Residential	1		61.1	61.2	63.3	2.2	
31-33	B	Residential	1		59.7	59.8	62.0	2.3	
31-34	B	Residential	1		59.6	59.7	62.0	2.4	
31-35	B	Residential	1		58.9	59.0	61.3	2.4	
32-1.1	D	School (Interior)	1		41.8	41.8	43.9	2.1	
32-1.2	C	School (Exterior)	1		64.9	64.9	67.0	2.1	Yes
32-1.3	C	School (Exterior)	1		63.4	63.5	65.6	2.2	
32-1.4	C	School (Exterior)	1		62.5	62.6	64.8	2.3	
32-1.5	C	School (Exterior)	1		61.6	61.7	63.9	2.3	
32-1.6	C	School (Exterior)	1		61.7	61.8	64.1	2.4	
32-1.7	C	School (Exterior)	1		60.9	61.0	63.3	2.4	
32-1.8	C	School (Exterior)	1		60.8	60.9	63.4	2.6	
32-1.9	C	School (Exterior)	1		60.2	60.2	62.6	2.4	
32-2	D	Medical Facility (Interior)	1		38.0	38.0	40.7	2.7	
32-3	D	School (Interior)	1		33.6	33.6	36.4	2.8	
33-1	B	Residential	10		62.5	62.5	64.8	2.3	
33-2	B	Residential	10		66.5	66.5	68.5	2.0	Yes
34-1	B	Residential	1		59.0	59.0	60.9	1.9	
34-2	B	Residential	1		61.1	61.1	63.1	2.0	
34-3	B	Residential	1		61.0	61.0	62.8	1.8	
34-4	B	Residential	1		59.6	59.6	61.3	1.7	
34-5	B	Residential	1		57.0	57.0	59.1	2.1	
34-6	B	Residential	1		60.6	60.7	62.6	2.0	
34-7	B	Residential	1		60.7	60.7	62.6	1.9	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
34-8	B	Residential	1		60.3	60.3	62.1	1.8	
34-9	B	Residential	1		58.6	58.6	60.3	1.7	
34-10	B	Residential	1		57.1	57.1	59.2	2.1	
34-11	B	Residential	1		60.0	60.0	62.0	2.0	
34-12	B	Residential	1		59.0	59.0	60.6	1.6	
34-13	B	Residential	1		58.1	58.1	59.8	1.7	
34-14	B	Residential	1		58.0	58.1	60.0	2.0	
34-15	B	Residential	1		60.0	60.0	61.9	1.9	
34-16	B	Residential	1		59.3	59.4	61.1	1.8	
34-17	B	Residential	1		57.7	57.7	59.4	1.7	
34-18	B	Residential	1		59.7	59.7	61.5	1.8	
34-19	B	Residential	1		59.9	59.9	61.7	1.8	
34-20	B	Residential	1		59.9	60.0	61.8	1.9	
34-21	B	Residential	1		59.3	59.3	61.1	1.8	
34-22	B	Residential	1		58.9	58.9	60.7	1.8	
34-23	B	Residential	1		58.3	58.3	59.9	1.6	
34-24	B	Residential	1		57.9	57.9	59.5	1.6	
34-25	B	Residential	1		58.5	58.5	60.3	1.8	
34-26	B	Residential	1		57.9	57.9	59.7	1.8	
34-27	B	Residential	1		57.3	57.3	59.1	1.8	
34-28	B	Residential	1		56.8	56.8	58.7	1.9	
34-29	B	Residential	1		59.1	59.2	61.2	2.1	
34-30	B	Residential	1		60.3	60.4	62.2	1.9	
34-31	B	Residential	1		59.8	59.8	61.7	1.9	
34-32	B	Residential	1		59.3	59.3	61.1	1.8	
34-33	B	Residential	1		58.3	58.3	60.1	1.8	
34-34	B	Residential	1		59.0	59.1	61.1	2.1	
34-35	B	Residential	1		60.5	60.5	62.3	1.8	
34-36	B	Residential	1		58.5	58.5	60.3	1.8	
34-37	B	Residential	1		58.5	58.5	60.4	1.9	
34-38	B	Residential	1		60.5	60.6	62.4	1.9	
34-39	B	Residential	1		59.6	59.7	61.5	1.9	
34-40	B	Residential	4		57.8	57.9	59.8	2.0	
34-41	B	Residential	1		60.2	60.3	62.2	2.0	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
34-42	B	Residential	1		61.3	61.4	63.2	1.9	
34-43	B	Residential	1		60.8	60.8	62.7	1.9	
34-44	B	Residential	1		58.3	58.4	60.4	2.1	
34-45	B	Residential	1		62.0	62.1	64.0	2.0	
34-46	B	Residential	1		62.1	62.1	64.0	1.9	
34-47	B	Residential	1		61.4	61.5	63.5	2.1	
34-48	B	Residential	1		62.6	62.7	64.8	2.2	
34-49	B	Residential	1		61.1	61.2	63.3	2.2	
34-50	B	Residential	1		61.3	61.4	63.6	2.3	
34-51	B	Residential	1		59.3	59.4	61.6	2.3	
34-52	B	Residential	1		60.7	60.8	63.1	2.4	
34-53	B	Residential	7		59.6	59.6	61.9	2.3	
34-54	B	Residential	1		57.5	57.6	59.1	1.6	
34-55	B	Residential	1		58.2	58.3	59.9	1.7	
35-1	D	Place of Worship (Interior)	1		33.9	33.9	36.0	2.1	
36-1	E	Hotel Pool	1		66.6	66.7	69.3	2.7	
36-2	E	Hotel Pool	1		63.9	64.0	65.7	1.8	
37-1	D	Place of Worship (Interior)	1		33.3	33.3	35.1	1.8	
38-1	B	Residential	1		61.7	61.7	63.6	1.9	
38-2	B	Residential	1		61.6	61.6	63.5	1.9	
38-3	B	Residential	1		59.9	59.9	61.8	1.9	
38-4	B	Residential	1		60.0	60.0	61.8	1.8	
38-5	B	Residential	1		59.7	59.7	61.6	1.9	
38-6	B	Residential	1		59.2	59.2	61.0	1.8	
38-7	B	Residential	1		58.3	58.3	60.1	1.8	
38-8	B	Residential	1		59.6	59.6	61.5	1.9	
38-9	B	Residential	1		58.8	58.8	60.7	1.9	
38-10	B	Residential	1		58.9	58.9	60.6	1.7	
38-11	B	Residential	1		58.3	58.3	60.0	1.7	
38-12	B	Residential	1		57.5	57.5	59.2	1.7	
38-13	B	Residential	1		59.6	59.6	61.5	1.9	
38-14	B	Residential	1		59.6	59.6	61.5	1.9	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
38-15	B	Residential	1		59.6	59.6	61.5	1.9	
38-16	B	Residential	1		59.7	59.7	61.5	1.8	
38-17	B	Residential	1		59.1	59.1	60.9	1.8	
38-18	B	Residential	1		58.2	58.2	60.0	1.8	
38-19	B	Residential	1		57.6	57.6	59.4	1.8	
38-20	B	Residential	1		60.0	60.0	61.8	1.8	
38-21	B	Residential	1		58.5	58.5	60.3	1.8	
38-22	B	Residential	1		58.0	57.9	59.8	1.8	
38-23	B	Residential	1		57.6	57.5	59.3	1.7	
38-24	B	Residential	1		60.0	60.0	61.8	1.8	
38-25	B	Residential	1		59.5	59.5	61.2	1.7	
38-26	B	Residential	1		58.3	58.4	60.1	1.8	
38-27	B	Residential	1		57.7	57.7	59.4	1.7	
38-28	B	Residential	1		60.1	60.1	61.9	1.8	
38-29	B	Residential	1		62.4	62.5	63.9	1.5	
38-30	B	Residential	1		61.7	61.8	63.1	1.4	
38-31	B	Residential	1		58.6	58.7	60.2	1.6	
38-32	B	Residential	1		58.7	58.5	60.2	1.5	
38-33	B	Residential	1		60.3	60.4	62.1	1.8	
38-34	B	Residential	1		60.8	60.8	62.6	1.8	
38-35	B	Residential	1		60.2	60.2	62.0	1.8	
38-36	B	Residential	1		59.6	59.5	61.4	1.8	
38-37	B	Residential	1		61.1	61.1	62.9	1.8	
38-38	B	Residential	1		61.3	61.3	63.2	1.9	
38-39	B	Residential	1		60.3	60.3	62.2	1.9	
38-40	B	Residential	1		63.4	63.5	65.4	2.0	
38-41	B	Residential	1		62.6	62.6	64.5	1.9	
38-42	B	Residential	1		61.5	61.4	63.5	2.0	
39-1	E	Hotel Pool	1		68.4	68.8	69.5	1.1	
39-2	E	Hotel Pool	1		67.4	67.7	68.8	1.4	
40-1	B	Residential	1		64.4	64.4	65.5	1.1	
40-2	B	Residential	1		61.2	61.3	62.8	1.6	
40-3	B	Residential	1		62.2	62.3	63.6	1.4	
40-4	B	Residential	1		61.3	61.3	62.7	1.4	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
40-5	B	Residential	1		60.7	60.7	62.0	1.3	
40-6	B	Residential	4		60.3	60.4	62.0	1.7	
40-7	B	Residential	1		61.2	61.3	62.7	1.5	
40-8	B	Residential	1		60.4	60.5	62.1	1.7	
40-9	B	Residential	4		60.3	60.4	62.0	1.7	
40-10	B	Residential	1		59.9	60.0	61.4	1.5	
40-11	B	Residential	1		58.9	59.0	60.5	1.6	
40-12	B	Residential	1		59.2	59.3	60.9	1.7	
40-13	B	Residential	1		59.8	59.9	61.6	1.8	
40-14	B	Residential	1		59.0	59.1	60.6	1.6	
40-15	B	Residential	1		58.6	58.6	60.2	1.6	
40-16	B	Residential	4		57.9	58.1	59.8	1.9	
40-17	B	Residential	1		59.9	60.0	61.8	1.9	
40-18	B	Residential	1		59.7	59.8	61.5	1.8	
40-19	B	Residential	1		58.7	58.7	60.5	1.8	
40-20	B	Residential	4		60.1	60.2	62.0	1.9	
40-21	B	Residential	4		60.3	60.4	62.2	1.9	
40-22	B	Residential	1		59.5	59.6	61.4	1.9	
40-23	B	Residential	1		58.3	58.4	60.2	1.9	
40-24	B	Residential	1		57.6	57.7	59.5	1.9	
40-25	B	Residential	1		60.8	60.9	62.8	2.0	
40-26	B	Residential	2		60.7	60.8	62.7	2.0	
40-27	B	Residential	1		60.0	60.1	62.1	2.1	
40-28	B	Residential	1		57.7	57.9	59.7	2.0	
40-29	B	Residential	1		61.2	61.3	63.2	2.0	
40-30	B	Residential	1		60.5	60.6	62.5	2.0	
40-31	B	Residential	1		60.3	60.4	62.4	2.1	
40-32	B	Residential	1		59.5	59.7	61.5	2.0	
40-33	B	Residential	1		61.6	61.6	63.5	1.9	
40-34	B	Residential	1		57.8	58.0	59.8	2.0	
40-35	B	Residential	1		58.5	58.6	60.6	2.1	
40-36	B	Residential	1		62.4	62.5	64.4	2.0	
40-37	B	Residential	1		58.8	58.9	61.0	2.2	
40-38	B	Residential	1		63.1	63.1	65.1	2.0	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
40-39	B	Residential	1		61.7	61.8	63.8	2.1	
40-40	B	Residential	1		60.2	60.3	62.4	2.2	
40-41	B	Residential	1		63.9	64.0	66.0	2.1	Yes
40-42	B	Residential	1		62.0	62.1	64.2	2.2	
40-43	B	Residential	1		62.4	62.5	64.7	2.3	
40-44	B	Residential	1		70.3	70.4	72.4	2.1	Yes
41-1	D	Place of Worship (Interior)	1		43.1	43.1	45.5	2.4	
41-2.1	C	Recreational Area	1		74.0	74.0	77.2	3.2	Yes
41-2.2	C	Recreational Area	1		73.9	73.9	77.0	3.1	Yes
41-2.3	C	Recreational Area	1		72.7	72.7	75.8	3.1	Yes
41-2.4	C	Recreational Area	1		69.5	69.5	72.2	2.7	Yes
41-2.5	C	Recreational Area	1		69.1	69.1	71.7	2.6	Yes
41-2.6	C	Recreational Area	1		67.8	67.8	70.5	2.7	Yes
41-2.7	C	Recreational Area	1		66.0	66.0	68.7	2.7	Yes
41-2.8	C	Recreational Area	1		65.5	65.5	68.2	2.7	Yes
41-2.9	C	Recreational Area	1		64.4	64.4	67.1	2.7	Yes
41-2.10	C	Recreational Area	1		62.7	62.7	65.7	3.0	
41-2.11	C	Recreational Area	1		62.4	62.4	65.4	3.0	
41-2.12	C	Recreational Area	1		61.9	61.9	64.8	2.9	
41-2.13	C	Recreational Area	1		59.8	59.8	62.8	3.0	
41-2.14	C	Recreational Area	1		59.9	59.9	62.9	3.0	
41-2.15	C	Recreational Area	1		59.4	59.5	62.4	3.0	
42-1	B	Residential	1		62.8	62.8	65.8	3.0	
42-2	B	Residential	1		64.3	64.3	67.0	2.7	Yes
42-3	B	Residential	1		63.3	63.3	66.0	2.7	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
42-4	B	Residential	1		62.0	62.0	64.8	2.8	
42-5	B	Residential	1		60.7	60.7	63.6	2.9	
42-6	B	Residential	1		62.1	62.1	65.0	2.9	
42-7	B	Residential	1		62.8	62.8	65.5	2.7	
42-8	B	Residential	1		61.9	61.9	64.5	2.6	
42-9	B	Residential	1		60.8	60.8	63.6	2.8	
42-10	B	Residential	1		59.8	59.8	62.6	2.8	
43-1	B	Residential	1		67.6	67.6	69.7	2.1	Yes
43-2	B	Residential	1		64.4	64.5	66.7	2.3	Yes
43-3	B	Residential	1		62.8	62.9	65.2	2.4	
43-4	B	Residential	1		61.5	61.5	63.9	2.4	
43-5	B	Residential	1		59.8	59.8	62.2	2.4	
43-6	B	Residential	1		68.6	68.7	70.8	2.2	Yes
43-7	B	Residential	1		65.7	65.8	67.9	2.2	Yes
43-8	B	Residential	1		63.8	63.9	66.1	2.3	Yes
43-9	B	Residential	1		62.3	62.4	64.7	2.4	
43-10	B	Residential	1		60.5	60.5	62.9	2.4	
43-11	B	Residential	1		59.0	59.1	61.4	2.4	
43-12	B	Residential	4		67.0	67.1	69.3	2.3	Yes
43-13	B	Residential	4		66.9	67.0	69.3	2.4	Yes
43-14	B	Residential	4		62.9	62.9	65.4	2.5	
43-15	B	Residential	4		62.7	62.7	65.3	2.6	
43-16	B	Residential	4		69.1	69.2	71.4	2.3	Yes
43-17	B	Residential	4		68.6	68.6	70.9	2.3	Yes
43-18	B	Residential	4		63.9	64.0	66.5	2.6	Yes
43-19	B	Residential	4		61.8	61.8	64.5	2.7	
43-20	B	Residential	4		59.6	59.6	62.3	2.7	
43-21	B	Residential	4		57.9	58.0	60.5	2.6	
43-22	B	Residential	1		67.9	68.0	70.4	2.5	Yes
44-1	D	Place of Worship (Interior)	1		39.6	39.6	42.5	2.9	
44-2	C	Place of Worship (Exterior)	1		61.6	61.6	64.6	3.0	
45-1	B	Residential	1		68.8	68.8	71.4	2.6	Yes

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
45-2	B	Residential	1		66.5	66.5	69.2	2.7	Yes
45-3	B	Residential	1		63.9	63.9	67.0	3.1	Yes
45-4	B	Residential	1		61.1	61.1	64.2	3.1	
45-5	B	Residential	1		59.1	59.1	62.0	2.9	
45-6	B	Residential	1		58.1	58.1	61.0	2.9	
45-7	B	Residential	1		68.8	68.8	71.6	2.8	Yes
45-8	B	Residential	1		65.3	65.3	68.2	2.9	Yes
45-9	B	Residential	1		62.9	62.9	65.8	2.9	
45-10	B	Residential	1		60.6	60.7	63.7	3.1	
45-11	B	Residential	1		58.9	58.9	61.7	2.8	
45-12	B	Residential	1		57.3	57.3	60.1	2.8	
45-13	B	Residential	1		67.8	67.8	70.7	2.9	Yes
45-14	B	Residential	1		64.3	64.3	67.5	3.2	Yes
45-15	B	Residential	1		61.8	61.8	65.2	3.4	
45-16	B	Residential	1		60.0	60.0	63.2	3.2	
45-17	B	Residential	1		57.6	57.6	60.4	2.8	
45-18	B	Residential	1		67.8	67.8	70.8	3.0	Yes
45-19	B	Residential	1		63.4	63.4	66.8	3.4	Yes
45-20	B	Residential	1		59.0	59.0	62.3	3.3	
45-21	B	Residential	1		57.5	57.5	60.7	3.2	
45-22	B	Residential	1		64.0	64.0	67.4	3.4	Yes
45-23	B	Residential	1		62.1	62.1	65.7	3.6	
45-24	B	Residential	1		61.0	61.0	64.5	3.5	
45-25	B	Residential	1		59.4	59.4	62.8	3.4	
45-26	B	Residential	1		72.5	72.5	75.5	3.0	Yes
45-27	B	Residential	1		69.2	69.2	72.2	3.0	Yes
45-28	B	Residential	1		65.4	65.4	68.7	3.3	Yes
45-29	B	Residential	1		63.5	63.6	67.1	3.6	Yes
45-30	B	Residential	1		61.4	61.5	65.0	3.6	
45-31	B	Residential	1		60.1	60.1	63.3	3.2	
45-32	B	Residential	1		58.4	58.4	61.4	3.0	
46-1	B	Residential	4		61.8	61.8	64.7	2.9	
46-2	B	Residential	4		61.2	61.2	64.1	2.9	
46-3	B	Residential	4		59.8	59.8	62.6	2.8	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
46-4	B	Residential	4		58.4	58.4	61.2	2.8	
46-5	B	Residential	4		57.4	57.4	60.1	2.7	
46-6	B	Residential	4		55.7	55.7	58.4	2.7	
46-7	B	Residential	4		56.9	56.9	59.6	2.7	
46-8	B	Residential	4		56.1	56.1	58.8	2.7	
46-9	B	Residential	1		60.7	60.7	63.1	2.4	
46-10	B	Residential	1		61.7	61.7	64.1	2.4	
46-11	B	Residential	1		59.5	59.5	62.1	2.6	
46-12	B	Residential	1		61.8	61.8	64.1	2.3	
46-13	B	Residential	1		61.4	61.4	63.7	2.3	
46-14	B	Residential	1		60.7	60.8	63.2	2.5	
46-15	B	Residential	1		60.4	60.4	62.8	2.4	
46-16	B	Residential	1		59.7	59.8	62.3	2.6	
46-17	B	Residential	1		59.3	59.3	61.8	2.5	
46-18	B	Residential	1		61.7	61.7	64.2	2.5	
46-19	B	Residential	1		61.8	61.8	64.3	2.5	
46-20	B	Residential	1		61.4	61.4	63.9	2.5	
46-21	B	Residential	1		61.2	61.2	63.6	2.4	
46-22	B	Residential	1		60.7	60.7	63.1	2.4	
46-23	B	Residential	1		60.1	60.1	62.6	2.5	
46-24	B	Residential	1		62.4	62.4	65.0	2.6	
46-25	B	Residential	1		62.4	62.4	65.0	2.6	
46-26	B	Residential	1		62.1	62.1	64.7	2.6	
46-27	B	Residential	1		61.5	61.5	64.0	2.5	
46-28	B	Residential	1		61.1	61.1	63.6	2.5	
46-29	B	Residential	1		66.0	66.0	68.7	2.7	Yes
46-30	B	Residential	1		64.3	64.3	66.8	2.5	Yes
46-31	B	Residential	1		61.9	61.9	64.5	2.6	
46-32	B	Residential	1		60.1	60.1	62.9	2.8	
46-33	B	Residential	1		58.2	58.2	61.0	2.8	
46-34	B	Residential	1		56.8	56.8	59.5	2.7	
47-1	B	Residential	1		59.1	59.2	63.0	3.9	
47-2	B	Residential	1		56.0	56.0	59.4	3.4	
47-3	B	Residential	1		59.5	59.5	63.5	4.0	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
47-4	B	Residential	1		57.7	57.7	61.4	3.7	
47-5	B	Residential	1		56.2	56.2	59.7	3.5	
47-6	B	Residential	1		72.3	72.3	76.0	3.7	Yes
47-7	B	Residential	1		67.9	67.9	71.1	3.2	Yes
47-8	B	Residential	1		60.7	60.7	64.6	3.9	
47-9	B	Residential	1		57.0	57.0	60.5	3.5	
47-10	B	Residential	1		57.3	57.3	60.8	3.5	
47-11	B	Residential	1		57.3	57.3	60.7	3.4	
47-12	B	Residential	1		57.0	57.0	60.3	3.3	
47-13	B	Residential	1		56.0	56.0	59.1	3.1	
47-14	B	Residential	1		66.7	66.7	69.4	2.7	Yes
47-15	B	Residential	1		67.2	67.3	70.1	2.9	Yes
47-16	B	Residential	1		64.2	64.2	67.1	2.9	Yes
47-17	B	Residential	1		67.1	67.1	70.0	2.9	Yes
47-18	B	Residential	1		67.2	67.2	70.1	2.9	Yes
47-19	B	Residential	1		67.5	67.5	70.3	2.8	Yes
47-20	B	Residential	1		64.0	64.0	66.8	2.8	Yes
47-21	B	Residential	1		67.5	67.5	70.2	2.7	Yes
47-22	B	Residential	1		64.0	64.0	66.7	2.7	Yes
47-23	B	Residential	1		67.7	67.7	70.0	2.3	Yes
47-24	B	Residential	1		64.3	64.3	66.9	2.6	Yes
47-25	B	Residential	1		67.7	67.7	69.5	1.8	Yes
47-26	B	Residential	1		64.4	64.4	66.9	2.5	Yes
47-27	B	Residential	1		62.1	62.1	64.7	2.6	
47-28	B	Residential	1		67.6	67.6	69.3	1.7	Yes
47-29	B	Residential	1		64.8	64.8	67.1	2.3	Yes
47-30	B	Residential	1		67.6	67.6	69.0	1.4	Yes
47-31	B	Residential	1		64.8	64.8	66.7	1.9	Yes
47-32	B	Residential	1		64.4	64.4	66.2	1.8	Yes
47-33	B	Residential	1		67.5	67.5	68.8	1.3	Yes
47-34	B	Residential	1		64.2	64.2	66.0	1.8	Yes
47-35	B	Residential	1		67.1	67.1	68.5	1.4	Yes
47-36	B	Residential	1		64.3	64.3	65.9	1.6	
47-37	B	Residential	1		64.3	64.3	65.7	1.4	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
48-1	D	Place of Worship (Interior)	1		43.4	43.4	47.2	3.8	
48-2	D	Place of Worship (Interior)	1		41.9	41.9	45.5	3.6	
49-1	B	Residential	1		73.6	73.6	76.3	2.7	Yes
49-2	B	Residential	1		69.4	69.4	71.4	2.0	Yes
49-3	B	Residential	1		64.0	64.0	66.5	2.5	Yes
49-4	B	Residential	1		62.3	62.3	65.0	2.7	
49-5	B	Residential	1		60.7	60.8	63.3	2.6	
50-1	B	Residential	1		59.0	59.3	61.3	2.3	
50-2	B	Residential	1		59.7	60.0	61.3	1.6	
50-3	B	Residential	1		59.6	59.8	61.5	1.9	
50-4	B	Residential	1		59.7	60.0	62.0	2.3	
50-5	B	Residential	1		60.1	60.4	61.8	1.7	
50-6	B	Residential	1		60.2	60.4	61.7	1.5	
50-7	B	Residential	1		59.0	59.3	60.6	1.6	
50-8	B	Residential	1		58.7	58.9	60.5	1.8	
50-9	B	Residential	1		59.2	59.4	61.0	1.8	
50-10	B	Residential	1		60.1	60.4	62.2	2.1	
50-11	B	Residential	1		58.5	58.8	60.3	1.8	
50-12	B	Residential	1		58.3	58.6	59.9	1.6	
50-13	B	Residential	1		58.0	58.2	59.7	1.7	
50-14	B	Residential	1		59.6	59.9	61.8	2.2	
50-15	B	Residential	1		57.9	58.2	59.7	1.8	
50-16	B	Residential	1		59.5	59.8	61.8	2.3	
50-17	B	Residential	1		57.9	58.1	59.7	1.8	
50-18	B	Residential	1		59.5	59.8	61.8	2.3	
50-19	B	Residential	1		57.7	57.9	59.5	1.8	
50-20	B	Residential	1		59.7	60.0	62.0	2.3	
50-21	B	Residential	1		57.6	57.8	59.7	2.1	
50-22	B	Residential	1		59.4	59.6	61.7	2.3	
50-23	B	Residential	1		57.5	57.7	59.4	1.9	
50-24	B	Residential	1		59.4	59.6	61.8	2.4	
50-25	B	Residential	1		57.5	57.6	59.3	1.8	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
50-26	B	Residential	1		56.4	56.6	58.1	1.7	
50-27	B	Residential	1		59.3	59.5	61.7	2.4	
50-28	B	Residential	1		57.4	57.5	59.2	1.8	
50-29	B	Residential	1		57.3	57.5	59.2	1.9	
50-30	B	Residential	1		59.6	59.7	62.0	2.4	
50-31	B	Residential	1		57.3	57.4	59.1	1.8	
50-32	B	Residential	1		59.3	59.4	61.7	2.4	
50-33	B	Residential	1		57.1	57.3	59.1	2.0	
50-34	B	Residential	1		59.4	59.5	61.7	2.3	
50-35	B	Residential	1		57.0	57.1	59.0	2.0	
50-36	B	Residential	1		59.5	59.5	61.7	2.2	
50-37	B	Residential	1		57.1	57.2	59.0	1.9	
50-38	B	Residential	1		59.4	59.5	61.6	2.2	
50-39	B	Residential	1		59.4	59.4	61.6	2.2	
50-40	B	Residential	1		57.0	57.1	58.9	1.9	
50-41	B	Residential	1		56.7	56.8	58.5	1.8	
50-42	B	Residential	1		56.3	56.4	58.0	1.7	
50-43	B	Residential	1		59.4	59.4	61.5	2.1	
50-44	B	Residential	1		57.3	57.4	59.3	2.0	
50-45	B	Residential	1		59.3	59.3	61.5	2.2	
50-46	B	Residential	1		59.3	59.3	61.5	2.2	
50-47	B	Residential	1		57.5	57.6	59.4	1.9	
50-48	B	Residential	1		57.2	57.3	58.9	1.7	
50-49	B	Residential	1		58.9	59.0	61.1	2.2	
50-50	B	Residential	1		58.6	58.7	60.8	2.2	
50-51	B	Residential	1		57.8	57.9	59.7	1.9	
50-52	B	Residential	1		57.6	57.7	59.4	1.8	
50-53	B	Residential	1		57.2	57.3	58.9	1.7	
50-54	B	Residential	1		58.6	58.6	60.7	2.1	
50-55	B	Residential	1		57.9	57.9	60.2	2.3	
50-56	B	Residential	1		58.2	58.2	60.0	1.8	
50-57	B	Residential	1		59.4	59.4	61.5	2.1	
50-58	B	Residential	1		58.9	58.9	60.7	1.8	
50-59	B	Residential	1		60.0	60.1	62.1	2.1	

Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix E)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				
					Existing (2012)	No-Build (2040)	Build (2040)	Increase from Existing	Build Approaches, Meets, or Exceeds the NAC?
50-60	B	Residential	1		59.2	59.2	61.1	1.9	
50-61	B	Residential	1		58.7	58.8	60.6	1.9	
50-62	B	Residential	1		58.2	58.2	59.9	1.7	
50-63	B	Residential	1		60.2	60.2	62.2	2.0	
50-64	B	Residential	1		59.5	59.5	61.3	1.8	
50-65	B	Residential	1		59.0	59.1	60.8	1.8	
50-66	B	Residential	1		58.4	58.4	60.1	1.7	
50-67	B	Residential	1		60.5	60.5	62.4	1.9	
50-68	B	Residential	1		60.6	60.6	62.5	1.9	
50-69	B	Residential	1		59.2	59.3	61.0	1.8	
50-70	B	Residential	1		58.7	58.7	60.4	1.7	
50-71	B	Residential	1		58.1	58.1	59.7	1.6	
50-72	B	Residential	1		60.5	60.5	62.3	1.8	
50-73	B	Residential	1		60.5	60.6	62.4	1.9	
50-74	B	Residential	1		59.2	59.2	60.9	1.7	
50-75	B	Residential	1		60.3	60.3	62.1	1.8	
50-76	B	Residential	1		58.4	58.4	60.0	1.6	