# NOISE STUDY REPORT

## FLORIDA DEPARTMENT OF TRANSPORTATION

## District 2

I-95 PD&E Study

# Limits of Project: I-295 (SR 9A) to SR 202 (J. Turner Butler Boulevard)

Duval County, Florida

Financial Project ID Number: 435577-1

ETDM Number: 14278

Submitted by: RS&H 1715 N. Westshore Blvd, Suite 600 Tampa, FL 33607

## December 2021

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated December 14, 2016 and executed by the Federal Highway Administration and FDOT.

ТА	BLE (	OF CONTENTS	i
LIS	ST OF	TABLES	ii
LIS	ST OF	FIGURES	iii
LIS	ST OF	APPENDICES	iii
1.0	Intro	oduction	
11	Pr	oject Description	1-1
1.1	11		
2.0	Metl	nodology	
2.1	No	pise Metrics	2-2
2.2	Tr	affic Data	2-3
2.3	No	oise Abatement Criteria	2-3
2.4	No	ise Abatement Measures	2-5
3.0	Traf	fic Noise Analysis	
3.1	M	odel Validation	3-1
3.2	Pr	edicted Noise Levels and Impact Analysis	
3.3	No	ise Abatement Analysis	
3	3.3.1	Southpoint Community Church - CNE E1	
3	3.3.2	Canopy at Belfort Park Apartments - CNE E2	3-26
3	8.3.3	Concourse Business Park - CNE E3	3-27
3	3.3.4	Baymeadows Islamic Center - CNE W1	
3	3.3.5	Jacksonville Operations Center - CNE W2	
3	8.3.6	JP Morgan Chase South Building - CNE W3	3-30
3	3.3.7	JP Morgan Chase North Building - CNE W4	3-31
3	8.3.8	Bright Horizons School - CNE SE1	3-31
3	3.3.9	Bentley Green Apartments - CNE SE2	3-33
3	8.3.10	Jacksonville School of Autism - CNE NE1	3-34
1	8.3.11	Lakeside and Bay Club Apartment Homes - CNE SBW1	3 <b>-</b> 34
3	3.3.12	Park Potenza Apartment Homes - CNE SBE1	3-39
4.0	Cond	lusions	
5.0	Cons	struction Noise and Vibration	
6.0	Com	munity Coordination	
7.0	Refe	rences	
Noise	Study	Report	57

## TABLE OF CONTENTS

LIST O	F TA	BLES
--------	------	------

Table	Title	Page
Table 2.1-1: 8	Sound Levels of Typical Noise Sources and Environments	2-2
Table 2.3-1: 1	Noise Abatement Criteria [Hourly A-Weighted Sound	
]	Level-decibels (dB(A))]	2-4
Table 3.1-1: 1	Noise Monitoring Data and TNM 2.5 Validation Results	3-2
Table 3.2-1: 1	Noise Study Areas	3-15
Table 3.2-2: 7	FNM Predicted Noise Levels	3-18
Table 3.3.1-1:	Noise Barrier Analyses for Southpoint Community Church	3-41
Table 3.3.1-2:	Conceptual Noise Barrier Design - Usage Analysis for South Point	
	Community Church	3-42
Table 3.3.2-1:	Noise Barrier Analyses for Canopy at Belfort Park Apartments	
	(Multi-Family Residential Community)	3-43
Table 3.3.3-1:	Noise Barrier Analyses for Concourse Business Park	3-44
Table 3.3.3-2:	Conceptual Noise Barrier Design - Usage Analysis for Concourse	
	Business Park	3-45
Table 3.3.4-1:	Noise Barrier Analyses for Baymeadows Islamic Center	3-46
Table 3.3.4-2:	Conceptual Noise Barrier Design - Usage Analysis for Baymeadows	
	Islamic Center	3-47
Table 3.3.5-1:	Noise Barrier Analyses for Jacksonville Operations Center	3-48
Table 3.3.5-2:	Conceptual Noise Barrier Design - Usage Analysis for Jacksonville	
	Operations Center	3-49
Table 3.3.6-1:	Noise Barrier Analyses for JP Morgan Chase South Building	3-50
Table 3.3.6-2:	Conceptual Noise Barrier Design - Usage Analysis for JP Morgan Ch	nase
	South Building	3-51
Table 3.3.7-1:	Noise Barrier Analyses for JP Morgan Chase North Building	3-52
Table 3.3.7-2:	Conceptual Noise Barrier Design - Usage Analysis for JP Morgan Ch	nase
	North Building	3-53
Table 3.3.8-1:	Noise Barrier Analyses for Bright Horizons School	3-54
Table 3.3.8-2:	Conceptual Noise Barrier Design - Usage Analysis for Bright Horizo	ns
	School	3-55
Table 3.3.9-1:	Noise Barrier Analyses for Bentley Green Apartments (Multi-Family	7
	Residential Community)	3-56
Table 3.3.10-1	1: Noise Barrier Analyses for Jacksonville School of Autism	3-57
Table 3.3.11-1	1: Noise Barrier Analyses for Lakeside and Bay Club Apartment Hom	es
	(Multi-Family Residential Communities)	3-58
Table 3.3.12-1	1: Noise Barrier Analyses for Park Potenza Apartment Homes	
	(Multi-Family Residential Community)	3-59
Table 4-1: No	bise Barrier Evaluation Summary and Recommendations	4-2
Table 6-1: De	esign Year (2045) Noise Impact Contour Distances	6-1



## LIST OF FIGURES

Figure	Title	Page
Figure 1-1	Project Location Map	1-2
Figure 3-1	Noise Analysis Map	3-5

## LIST OF APPENDICES

**APPENDIX A** Traffic Data for I-95 PD&E Noise Study (Tables 2.2-1 through 2.2-8)

**APPENDIX B** Build Alternative Concept Plan and Existing and Proposed Lane Configurations



# 1.0 Introduction

# 1.1 Project Description

The Florida Department of Transportation (FDOT) conducted a traffic noise study for I-95 Project Development and Environment (PD&E) Study. This PD&E Study is evaluating improvements along I-95 from I-295 to J. Turner Butler Boulevard (JTB), Baymeadows Road, and Southside Boulevard in Duval County (see **Figure 1-1**). The proposed improvements are described in the I-95 from International Golf Parkway to Atlantic Boulevard Systems Interchange Modification Report (SIMR) Re-evaluation (February 2021). The SIMR identifies the Design Year 2045 Modified Build Alternative as the recommended alternative. The concept plan for the Design Year 2045 Modified Build Alternative between I-295 and JTB is depicted in **Figure 6-6** and has been included in **Appendix B** for reference. Also included for reference in **Appendix B** are the existing and proposed lane configurations (**Figures 3-1** and **6-5**, respectively) from the SIMR.

As described in the SIMR and shown in the Design Year 2045 Modified Build Alternative Concept Plan in Appendix B (see Figure 6-6), the project improvements include the addition of two general purpose lanes (i.e., one lane in each direction) to I-95 between I-295 and JTB. In addition, the proposed improvements include a southbound auxiliary lane between Philips Highway and Southside Boulevard that will result in an 11-lane highway (see **Figure 6-5** in Appendix B) and include northbound and southbound auxiliary lanes between Baymeadows Road and JTB that will result in a 10-lane highway. With the two additional general purpose lanes, I-95 between Southside Boulevard and Baymeadows Road will be an 8-lane highway. The project also includes interchange and ramp improvements at Philips Highway, Southside Boulevard, and Baymeadows Road; and intersection safety improvements along Baymeadows Road at Western Way and Baymeadows Circle West and an additional eastbound lane between Western Way and Old Baymeadows Road. The ramp improvements at Philips Highway will increase the number of southbound off-ramp lanes from one to two. Along Southside Boulevard, improvements are proposed at Western Lake Drive and Bell Rive Boulevard intersections to improve overall efficiency and operations. Currently, the posted speed along I-95 is 65 mph and 45 mph along Baymeadows Road, and Southside Boulevard. The posted speeds are expected to remain the same for these roadways with the proposed improvements.





Figure 1-1 Project Location Map

Noise Study Report I-95 PD&E Study I-295 to SR 202 (JTB)



# 2.0 Methodology

This traffic noise study was conducted based on the methodology described in the FDOT's PD&E Manual, Part 2, Chapter 18, *Highway Traffic Noise* (July 1, 2020), the FDOT's *Traffic Noise Modeling and Analysis Practitioners Handbook* (December 31, 2018), and in accordance with Title 23 of the Code of Federal Regulations, Part 772 (23 CFR 772), *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (July 13, 2010). The noise study involved the following procedures:

- Field Measurement of Noise Levels and Noise Model Validation (see Section 3.1);
- Identification of Noise Sensitive Receptor Sites (see Section 3.2);
- Prediction of Existing and Future Noise Levels (see Section 3.2);
- Assessment of Traffic Noise Impacts (see Section 3.2); and
- Consideration of Noise Barriers as a Noise Abatement Measure at sites exceeding FDOT's Noise Abatement Criteria (see Section 3.3).

Federal Highway Administration's (FHWA) Traffic Noise Model (TNM) Version 2.5 (February 2004) was used to predict future traffic noise levels and to analyze the effectiveness of noise barriers, where warranted. This model estimates the acoustic intensity at noise sensitive receptor sites from a series of roadway segments (the source). Model-predicted noise levels are influenced by several factors, such as vehicle speed and distribution of vehicle types. Noise levels are also affected by characteristics of the source-to-receptor site path, including the effects of intervening barriers, structures (houses, trees, etc.), ground surface type (hard or soft), and topography.

Representative receptor sites were used as inputs to the TNM 2.5 to estimate noise levels associated with existing and future conditions within the project limits. These sites were chosen based on noise sensitivity, roadway proximity, anticipated impacts from the proposed project, and homogeneity (i.e., the site is representative of other nearby sites). For single-family residences, traffic noise levels were predicted at the edge of the dwelling unit closest to the nearest primary roadway. For other noise sensitive sites, traffic noise levels were predicted where the exterior activity occurs. For the prediction of interior noise levels, receptor sites were placed approximately ten feet inside the building at the edge closest to the roadway. Building noise reduction factors and window conditions identified in Table 18.3 in Part 2, Chapter 18 of the PD&E Manual (July 1, 2020) were used to estimate noise reduction due to the physical structure.



The following sections describe the noise metrics, traffic data, and noise abatement criteria used in this study.

# 2.1 Noise Metrics

Noise levels documented in this report represent the hourly equivalent sound level [Leq(h)]. Leq(h) is the steady-state sound level, which contains the same amount of acoustic energy as the actual time-varying sound level over a 1-hour period. Leq(h) is measured in A-weighted decibels [dB(A)], which closely approximate the human frequency response. Sound levels of typical noise sources and environments are provided in **Table 2.1-1** as a frame of reference.

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL dB(A)	COMMON INDOOR ACTIVITIES
	110	Rock Band
Jet Fly-over at 1000 ft		
	100	
Gas Lawn Mower at 3 ft		
	90	
Diesel Truck at 50 ft, at 50 mph		Food Blender at 1 m (3 ft)
	80	Garbage Disposal at 1 m (3 ft)
Noise Urban Area (Daytime)		
Gas Lawn Mower at 100 ft	70	Vacuum Cleaner at 10 ft
Commercial Area		Normal Speech at 3 ft
Heavy Traffic at 300 ft	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
	30	Bedroom at Night, Concert Hall (Background)
Quiet Rural Nighttime	•	
	20	
	10	
	10	I amount Thread and a filleneous Hanning
Lowest Thus held of Human Human		Lowest Infestion of Human Hearing
Lowest Threshold of Human Hearing		ment Oct 1000 Dage 10
Source. California Dept. or Transportation Tec	chinical Noise Supple	ment, Oct. 1998, Page 18.

 Table 2.1-1: Sound Levels of Typical Noise Sources and Environments



## 2.2 Traffic Data

The traffic data used in the noise analysis is from two traffic reports. The Existing Conditions and Build Alternative traffic volumes are from the I-95 from International Golf Parkway to Atlantic Boulevard Systems Interchange Modification Report (SIMR) Re-evaluation dated February 2021. The No-Build Alternative traffic volumes are from the I-95 Express Lane Analysis: I-295 to Atlantic Boulevard Systems Interchange Modification Report dated September 2018. The traffic data used in the noise modeling to predict traffic noise levels for the Existing Conditions, the No-Build Alternative, and the recommended Build Alternative are presented in **Tables 2.2-1** through **2.2-8** in **Appendix A**. The traffic data for I-95 including ramps is included in **Tables 2.2-1** through **2.2-3**. The traffic data for arterial roadways (i.e., Baymeadows Road, JTB, and Southside Boulevard) are included in **Tables 2.2-4** through 2.2-8. These traffic data tables include peak hour traffic volumes, Level of Service (LOS) C volumes, and speeds for interstate highways, ramps, and arterial roadways and summarizes the traffic data used in the prediction of traffic noise levels by vehicle type (cars, medium trucks, heavy trucks, buses, and motorcycles). According to Part 2 Chapter 18 of the PD&E Manual, "Maximum peak-hourly traffic representing Level of Service (LOS) "C" or demand traffic will be used (unless analysis shows that other conditions create a "worst-case" level)". In cases where traffic volumes on project roadways were predicted to operate at worse than LOS C or for locations where traffic data was available (e.g., existing and no-build traffic for Southside Boulevard), the LOS C project data were used. LOS C volumes were also used for locations where traffic data was not available (e.g., existing and no-build traffic volumes for Southside Boulevard). In overcapacity situations, LOS C volumes represent the highest traffic volume traveling at the highest average speed, which typically generates the highest noise levels at a given site.

## 2.3 Noise Abatement Criteria

The FHWA has established Noise Abatement Criteria (NAC) for land use activity categories, presented in **Table 2.3-1**. Maximum noise threshold levels, or criteria levels, have been established for five of the seven activity categories. These criteria determine when an impact occurs and when consideration of noise abatement is required. Noise abatement measures must be considered when predicted noise levels approach or exceed the NAC levels or when a substantial noise increase occurs. A substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 dB(A) or more as a result of the transportation improvement project. The FDOT defines "approach" as within 1.0 dB(A) of the FHWA criteria.

Noise Study Report I-95 PD&E Study I-295 to SR 202 (JTB)



Noise sensitive receptor sites include properties where frequent exterior human use occurs and where a lowered noise level would be of benefit. This includes lands where serenity and

Activity	Activity	r Leq(h)1	Evaluation	Description of Activity Category
Category	FHWA	FDOT	Location	Description of Activity Category
А	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
$B^2$	67	66	Exterior	Residential
$\mathrm{C}^2$	67	66	Exterior	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.
D	52	51	Interior	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.
$\mathrm{E}^2$	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
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.

Table 2.3-1: Noise Abatement Criteria [Hourly A-Weighted Sound Level-decibels (dB(A))]

(Based on Table 1 of 23 CFR Part 772)

 $^{\rm 1}$  The Leq(h) Activity Criteria values are for impact determination only, and are not a design standard for noise abatement measures.

 $^{\rm 2}$  Includes undeveloped lands permitted for this activity category.

*Note:* FDOT defines that a substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels or more as a result of the transportation improvement project. When this occurs, the requirement for abatement consideration will be followed.



quiet are of extraordinary significance such as The Tomb of the Unknown Soldier at Arlington National Cemetery (NAC Category A); residential land use (NAC Activity Category B); a variety of nonresidential land uses not specifically covered in Category A or B including parks and recreational areas, medical facilities, schools, and places of worship (Activity Category C); and commercial and developed properties including offices, hotels, and restaurants with exterior areas of use (Activity Category E). Noise sensitive sites also include interior use areas where no exterior activities occur for facilities such as auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, recording studios, schools, and television studios (Activity Category D). Categories F and G, which include commercial and developed properties without exterior areas of use, do not have noise abatement criteria levels. Category F includes land uses such as industrial and retail facilities that are not considered noise sensitive. Category G includes undeveloped lands.

## 2.4 Noise Abatement Measures

When traffic noise associated with a proposed project is predicted to approach or exceed the NAC at a noise sensitive site, noise abatement measures must be considered in accordance with 23 CFR Part 772. The most common and effective noise abatement measure for projects such as this is the construction of noise barriers. Noise barriers reduce noise by blocking the sound path between a roadway and a noise sensitive area. To be effective, noise barriers must be long, continuous (i.e., no intermittent openings), and have sufficient height to block the path between the noise source and the receptor site. The FHWA's Analysis and Abatement Guidance (January 2011) indicates the ends of the noise barriers should, in general, extend in each direction four times as far as the distance from the receptor site to the noise barrier.

Other abatement measures that were considered but were determined not to be feasible or reasonable for this project, include traffic management, alignment modification, and property acquisition. Traffic management measures such as traffic control devices, prohibition of certain vehicle types, time-use restriction for certain vehicle types, modified speed limits, and exclusive lane designation applied for the purpose of reducing traffic noise levels would impede the operational characteristics of I-95, Baymeadows Road, and Southside Bouevard. The project area includes existing commercial and residential development on both sides of I-95, Baymeadows Road, and Southside Bouevard. Shifting the alignments or modifications to the proposed alignments would directly impact these areas and result in substantial socio-economic effects and additional project costs. Acquisition of right-of-way from the noise sensitive properties impacted by the project would be more expensive and disruptive than the other noise abatement measures.

Noise Study Report I-95 PD&E Study I-295 to SR 202 (JTB)



For noise abatement measures to be recommended for further consideration in the design phase of the project, they must be determined to be both feasible and reasonable. A wide range of factors are used to evaluate the feasibility and reasonableness of noise abatement measures. Feasibility deals with engineering considerations, including the ability to construct a noise barrier using standard construction methods and techniques as well as with the ability to provide a reduction of at least 5 dB(A) to the impacted receptor sites. For example, given the topography of a location, can the minimum noise reduction [5 dB(A)] be achieved given certain access, drainage, utility, safety, and maintenance requirements? In addition, for a noise barrier to be considered acoustically feasible, at least two impacted receptor sites must achieve at least a 5 dB(A) reduction (i.e., benefited). A benefited receptor site is defined as a noise sensitive site that will obtain a minimum of 5 dB(A) of noise reduction from a specific noise abatement measure regardless of whether or not they are identified as impacted.

Reasonableness implies that common sense and good judgment were applied in a decision related to noise abatement. Reasonableness includes the consideration of the cost of abatement, the amount of noise abatement benefit, and the consideration of the viewpoints of the impacted and benefited property owners and tenants. To be deemed reasonable, the estimated cost of the noise barrier, or other noise abatement measure, needs to be equal to or below FDOT's reasonable cost criteria (described below), must attain FDOT's noise reduction design goal of 7 dB(A) at one or more benefited receptor sites, and must be supported by a majority of the property owners and tenants benefited by the proposed abatement measure.

The cost reasonableness evaluation of noise barriers for impacted residential (Activity Category B) and non-residential areas (Activity Categories A, C, D, and E) is based on different methods and are evaluated separately. When determining the cost reasonableness of a conceptual noise barrier design for a residential area, an estimated cost of \$42,000 per benefited receptor is considered the upper limit, using the FDOT's current standard construction cost of \$30.00 per square foot. Only benefited receptor sites are included in the calculation of reasonable cost for a particular noise abatement measure.

Noise barriers for non-residential areas are assessed using FDOT's "A Method to Determine Reasonableness and Feasibility of Noise Abatement at Special Use Locations" (July 22, 2009). The cost reasonableness of this method is based on the number of people (i.e., person-hours per day) benefited by a noise barrier under consideration. Using this methodology, to be



considered cost reasonable, the cost of the noise barrier must have an Abatement Cost Factor less than \$995,935 per person-hour per square foot. The derivation of the Abatement Cost Factor is based on the FDOT's reasonable cost criteria of equal to or less than \$42,000 per benefited receptor site.

If the noise abatement measure has been determined to be reasonable and feasible, the viewpoint of the impacted and benefited property owners must be considered. During project development, the viewpoint of potentially benefited receptors (property owners/tenants) regarding noise abatement is gathered during workshops, public outreach, or at the Public Hearing, if required by the project. During the design phase of the project, a more detailed process is implemented to include noise abatement workshops and/or public surveys, to determine the wishes of the benefited receptor sites. Each benefited receptor, including both the owner and resident, is given the opportunity to provide input through a noise barrier survey regarding their desires to have the recommended noise abatement measure implemented. It is the desire of FDOT to obtain a response for or against the noise barrier from a numerical majority (greater than 50%) of the benefited receptors (owners and residents) that respond to the noise barrier survey used. If not supported by a majority of the survey regardings, a noise barrier or abatement measure will not be deemed reasonable.

For this project, ground mounted noise barriers were evaluated to determine their effectiveness in providing noise abatement to the impacted noise sensitive receptor sites. Ground mounted noise barriers, which are also referred to as concrete post-and-panel noise barriers, are usually constructed in the vicinity of the right-of-way line. Ground mounted noise barrier heights ranging from 14 to 22 feet that were effective in maximizing noise reduction at impacted receptor sites were analyzed and are presented in the noise barrier analysis summary tables.



# 3.0 Traffic Noise Analysis

# 3.1 Model Validation

Noise measurements were collected at seven sites at three representative locations (MS1, MS2, and MS3) within the project area to verify that TNM-predicted existing levels are representative of actual levels along I-95 and Baymeadows Road and to confirm that traffic noise is the main, or dominant, noise source. Noise measurements at these sites were taken on either January 14, 2020 or January 15, 2020. The locations of these monitoring sites are described in **Table 3.1-1** and depicted in **Figure 3-1**.

The noise level monitoring was completed using Larson-Davis Model 870 sound-level analyzers, in accordance with the methodology established by the FHWA and documented in Report Number FHWA-HEP-18-065, Noise Measurement Handbook - Final Report, June 2018. The A-weighted frequency scale was used and the sound meter was calibrated to 114 dB(A) using a Larson-Davis Model CA250 sound-level calibrator. Monitoring was conducted for three 10-minute intervals at each site with the microphone approximately five feet above the ground surface. Weather conditions during the noise measurements were within acceptable ranges based on FHWA's established methodology. No precipitation occurred during the noise measurements and the pavement was dry. Temperatures ranged from 70.0 to 78.1 degrees with calm winds. The cloud cover ranged from ~70% on January 14, 2020 and the sky was clear on January 15, 2020.

Traffic information, such as the number of passenger cars and trucks, as well as, average speeds, were collected at the time of noise monitoring. A K15-K Doppler Radar Gun was used to obtain average operating speeds for cars, medium trucks, heavy trucks, buses, and motorcycles. Since all noise levels in this report are based on a 1-hour period, the field-recorded traffic volumes were adjusted upward to reflect hourly volumes. The dates, times, traffic data, and the measured noise levels are presented in **Table 3.1-1**.

Traffic noise was the dominant noise source at each of the monitoring sites. To verify the computer noise model, the TNM-predicted noise levels for Monitoring Sites MS1-1 through MS3-2 were compared to measured noise levels. The differences between the TNM predicted levels and monitored levels ranged from 2.1 dB(A) higher to 2.2 dB(A) lower than the monitored noise levels. When measured noise levels are within +/- 3.0 dB(A) of the computer-



Table 3.1-1: Noise Monitoring Data and TNM 2.5 Validation Results (Sheet 1 of 3)

General Information						Ca	ars	Medium	n Trucks	Heavy	Trucks	Bu	ses	Motor	cycles		TNM			
Monitor Site Identification Number	Monitoring Location / Station (Date)	Begin Time	End Time	Travel Lanes	Distance to Nearest Traffic Lane (feet)	Vehicles per Hour	Speed (mph)	Monitored Leq (h) dB(A)	$\begin{array}{c} Predicted \\ Leq (h) \\ dB(A) with \\ Existing \\ Pavement^1 \end{array}$	Difference Leq (h) dB(A)	Predicted Levels Within +/- 3 dB(A) of Monitored Levels?									
				I-95 Northbound		4,014	58	48	52	180	47	6	45	24	51					
				Salisbury Road Northbound		192	35													
		5:00 PM	5:10 PM -	I-95 Southbound	-	5,658	49	54	43	162	42	12	42			72.1	72.7	0.6	YES	
				Salisbury Road Southbound		96	40													
	The Colony at Deerwood			I-95 Northbound		4,734	49	54	46	168	47			12	47					
	Apartments - 10010 Skinner Lake Drive :			Salisbury Road Northbound	- 182	102	38							6	49	-	51.0			
MS1-1	Sidewalk; East of I 95 / Station 1404+70	5:10 PM	5:20 PM -	I-95 Southbound		6,018	47	36	43	204	36			6	47	71.8	71.6	-0.2	YES	
Station 1404+70 (January 14, 2020)	(January 14, 2020)			Salisbury Road Southbound	-	60	40					6	35			-				
			I-95 Northbound	hbound	4,044	50	42	46	174	47	18	45	18	43						
		5:20 PM		Salisbury Road Northbound	•	60	35	6	35			6	31			-	70.0	-0.7	YES	
			5:30 PM -	I-95 Southbound	-	4,992	27	42	27	54	19	6	27	24	27	70.7				
				Salisbury Road Southbound	-	42	39	6	39			6	38			-				
		5:00 PM		I-95 Northbound		4,014	58	48	52	180	47	6	45	24	51					
				Salisbury Road Northbound	-	192	35									-				
			5:10 PM -	I-95 Southbound		5,658	49	54	43	162	42	12	42			68.9	68.9	0.0	YES	
			-	Salisbury Road Southbound		96	40									-				
	The Colony at Deerwood			I-95 Northbound	-	4,734	49	54	46	168	47			12	47				+	
	Apartments - 10010 Skinner Lake Drive :			Salisbury Road Northbound	-	102	38							6	49	-				
MS1-2	Apartment #517; East	5:10 PM	5:20 PM -	I-95 Southbound	- 296	6,018	47	36	43	204	36			6	47	- 68.5	67.9	-0.6	YES	
	(January 14, 2020)			Salisbury Road Southbound	-	60	40					6	35			-				
				I-95 Northbound	-	4,044	50	42	46	174	47	18	45	18	43					
				Salisbury Road Northbound	-	60	35	6	35			6	31			-				
		5:20 PM	5:30 PM -	I-95 Southbound	-	4,992	27	42	27	54	19	6	27	24	27	- 66.9	66.2	-0.7	YES	
				Salisbury Road Southbound	-	42	39	6	39			6	38			-				
	The Colony at			I-95 Northbound		4,044	50	42	46	174	47	18	45	18	43					
	Deerwood Apartments - 10010 Skinner Lake			Salisbury Road Northbound	326	l	60	35	6	35			6	31			-			
MS1-3	Drive ; Second Story Walkway; East of I 95 /	5:20 PM	5:30 PM -	I-95 Southbound		4,992	27	42	27	54	19	6	27	24	27	67.7	69.8	2.1	YES	
	Station 1404+70 (January 14, 2020)			Salisbury Road Southbound		42	39	6	39			6	38							

Table 3.1-1: Noise Monitoring Data and TNM 2.5 Validation Results (Sheet 2 of 3)

General	Information				Distance to	Ca	irs	Medium	Trucks	Heavy	Trucks	Bu	ses	Motor	cycles		TNM Predicted		Predicted Levels
Monitor Site Identification Number	Monitoring Location / Station (Date)	Begin Time	End Time	Travel Lanes	Nearest Traffic Lane (feet)	Vehicles per Hour	Speed (mph)	Monitored Leq (h) dB(A)	Leq (h) dB(A) with Existing Pavement <sup>1</sup>	Difference Leq (h) dB(A)	Within +/- 3 dB(A) of Monitored Levels?								
				Baymeadows Road		822	42	12	34	12	35	6	29	6	45				
	Baymeadows Road at	9:40 AM	4 9:50 AM	Baymeadows Road		1.080	33	36	26	6	32	6	23	6	27	66.0	66.2	0.2	YES
				Baymeadows Road		618	40	54	32	12	31	12	30	6	31				4
MS2-1	Baymeadows Road;	9:50 AM	50 AM 10:00 AM	Eastbound Baymeadows Road	50	804	20	10	20	 C	14					65.3	66.3	1.0	YES
50+60 (Januar 2020)	50+60 (January 15,			Westbound Baymeadows Road		894	50	12	29	0	14								
	2020)	10:00 AM	10:10 AM	Eastbound Baymoadows Road	-	882	41	24	38	6	35					66.4	65.5	-0.9	YES
				Westbound		822	30	12	25			6	23						
		9:40 AM	9:50 AM	Baymeadows Road Eastbound		822	42	12	34	12	35	6	29	6	45	63.5	62.3	-1.2	VES
	MS2-2 MS2-2 Baymeadows Road at SunTrust - 9250 Baymeadows Road; Property Line / Station 50+60 (January 15, 2020)	0 10 1111	0 00 1111	Baymeadows Road Westbound		1,080	33	36	26	6	32	6	23	6	27	00.0	02.0	1.2	110
MS2-2				Baymeadows Road Eastbound		618	40	54	32	12	31	12	30	6	31				YES
		9:50 AM	10:00 AM	Baymeadows Road Westhound	100	894	30	12	29	6	14					62.3	61.7	-0.6	YES
				Baymeadows Road		882	41	24	38	6	35								
		10:00 AM	10:10 AM	Baymeadows Road		822	30	12	25			6	23			63.5	61.3	-2.2	YES
			1:20 AM 11:30 AM	Vestbound I-95 Northbound		2 718	60	162	49	156	53	6	52	24	59	+	62.2	-1.4	YES
				Salisbury Road		108	91	102		100			02	21	02				
		11:20 AM		Northbound	-	198	51									63.6			
				1-95 Southbound Salishury Road		3,348	49	126	48	72	42	6	49	6	49	-			
				Southbound	-	180	38	6	38										
	Portiva Apartments -			I-95 Northbound	-	2,946	59	150	48	192	55			12	50	-			
MS3-1	Second Floor Walkway;	11:30 AM	11:40 AM	Salisbury Road Northbound	665	162	31									63.9	62.9	-1.0	VES
MIGO I	2024+00 (January 15,	11.00 1101	11.40 / 1141	I-95 Southbound	000	3,168	60	6	58	12	56			6	52	00.5	02.0	1.0	YES
	2020)			Salisbury Road Southbound		174	40							6	26				
				I-95 Northbound		2,592	57	144	51	90	58			6	57				
				Salisbury Road Northbound		138	35									-			YES
		11:40 AM	11:50 AM	I-95 Southbound		3,234	60	204	55	48	59	12	62	18	60	63.7	62.8	-0.9	
				Salisbury Road Southbound	-	186	34									1			

Genera	l Information				Distance to	Ca	ırs	Medium	Trucks	Heavy	Trucks	Bu	ses	Motor	cycles		TNM Predicted		Predicted Levels Within +/- 3 dB(A) of Monitored Levels?
Monitor Site Identification Number	Monitoring Location / Station (Date)	Begin Time	End Time	Travel Lanes	Nearest Traffic Lane (feet)	Vehicles per Hour	Speed (mph)	Monitored Leq (h) dB(A)	$\begin{array}{c} Leq (h) \\ dB(A) with \\ Existing \\ Pavement^{1} \end{array}$	Difference Leq (h) dB(A)									
				I-95 Northbound		2,718	60	162	49	156	53	6	52	24	52				
		11.90 AM	11:30 AM	Salisbury Road Northbound		198	31									65.1	63.9	-1.0	VES
		11-20 AW	11.30 AW	I-95 Southbound		3,348	49	126	48	72	42	6	49	6	49	05.1	63.2	-1.7	YES
				Salisbury Road Southbound		180	38	6	38							-			
				I-95 Northbound Salisbury Road Northbound	- 665	2,946	59	150	48	192	55			12	50		64.0		YES
MS3-2	Fast of L 95 / Station	11:30 AM	11:40 AM			162	31									65.7			
W100 2	2024+00 (January 15,		11.40 /401	I-95 Southbound		3,168	60	6	58	12	56			6	52	05.1			
	2020)			Salisbury Road Southbound		174	40							6	26	-			
				I-95 Northbound		2,592	57	144	51	90	58			6	57				
		11:40 AM	11:50 AM	Salisbury Road Northbound		138	35									65.2	63.8	-1.4	VES
		11.40 /10	11.50 AW	I-95 Southbound		3,234	60	204	55	48	59	12	62	18	60	09.2	05.0	1.4	YES
				Salisbury Road Southbound		186	34												

Table 3.1-1: Noise Monitoring Data and TNM 2.5 Validation Results (Sheet 3 of 3)

Minimum	62.3	61.3	-2.2
Maximum	72.1	72.7	2.1
Average Difference Between TNM 2.5 Predicted	Levels and Mor	itored Levels	-0.6













FPID: 435577-1



February 2021

F: Non-Sensitive Developed, N/A

G: Vacant

3-8







FPID: 435577-1

Allstate Electrical Contractors, Inc.

F: Non-Sensitive Developed, N/A

G: Vacant

OCCI-1

Concorde Career Institute

> Cintas First Aid and Safety

7

28.4

FIGURE 3-1 SHEET 7 OF 9 NOISE ANALYSIS MAP

February 2021

Feet

 $\mathbf{P}$ 

500

3-11





December 2021

predicted levels, the model is considered validated. The measured noise levels at the seven monitoring sites were within +/- 3.0 dB(A) of the TNM-predicted levels (see **Table 3.1-1**). The average difference between TNM-predicted levels were 0.6 dB(A) lower than the monitored levels. Because the TNM-predicted noise levels are within +/- 3.0 dB(A) of the measured noise levels, the model has been validated and is considered acceptable for predicting existing and future traffic noise levels along I-95 and Baymeadows Road.

# 3.2 Predicted Noise Levels and Impact Analysis

Based on a review of the existing land uses, there are noise sensitive areas between Southside Boulevard and JTB potentially impacted by design year (2045) traffic noise associated with the proposed I-95 PD&E Study improvements. The noise sensitive land uses within the project area include multi-family residences, institutional/education facilities, places of worship, medical buildings, office buildings, hotels, and restaurants with outdoor seating. To facilitate the assessment of traffic noise impacts at these noise sensitive land uses, the project area was divided into nine Noise Study Areas (NSAs). The location of these NSAs are listed in **Table 3.2-1** and are depicted in **Figure 3-1**. No noise sensitive sites potentially impacted by traffic noise are located along I-95 between I-295 to Southside Boulevard.

Two hundred fifty one receptor sites were used to represent the noise sensitive sites within the project area (see **Figure 3-1**), which include:

- Residential areas (Bentley Green Apartments, Canopy at Belfort Park, Portiva Apartments, Paradise Island Apartment Homes, Southside Villas, Elements of Belle Rive Apartments, Lakeside Apartment Homes, Bay Club Apartment Homes, and Park Potenza Apartment Homes) - Activity Category B;
- Institutional (Bright Horizons School, The Ogburn School, Concord Career Institute, Stayer University, Florida Coastal School of Law, Jacksonville School of Autism, and La Petite Academy) – Activity Categories C (Exterior) and D (Interior);
- Places of worship (e.g., Baymeadows Islamic Center, Southpoint Community Church, and St. Philip Neri Ecumenical Church) – Activity Categories C (Exterior) and D (Interior);
- Medical buildings (Florida Surgical Physicians, Great Expressions Dental Center and Baymeadows Professional Building) Activity Category D (Interior);
- Office buildings with exterior areas of use (Concourse Business Park, CD Smith and RP Funding, Jacksonville Operations Center, JP Morgan Chase, and Spring Lake Business Canter) Activity Category E;



Noise Study Area Number	General Location
1	East of I-95 between Philips Highway and Baymeadows Road (see Figure 3-1 Sheets 2 through 6)
2	East of I-95 between Baymeadows Road and Belfort Road (see Figure 3-1 Sheets 5 through 8)
3	East of I-95 between and Belfort Road and South of J. Turner Butler Boulevard (see Figure 3-1 Sheet 8)
4	West of I-95 and between Southside Boulevard and Baymeadows Road (see Figure 3-1 Sheets 3, 4 and 5)
5	West of I-95 between Baymeadows Road and Baymeadows Way West (see Figure 3-1 Sheets 5 and 7)
6	West of I-95 between Baymeadows Way West and J. Turner Butler Boulevard (see Figure 3-1 Sheets 7 and 8)
7	East of Southside Boulevard between Paradise Island Boulevard and Belle Rive Boulevard (see Figure 3-1 Sheet 9)
8	West of Southside Boulevard between Paradise Island Boulevard and Belle Rive Boulevard (see Figure 3-1 Sheet 9)
9	East of Southside Boulevard and North of Belle Rive Boulevard (see Figure 3-1 Sheet 9)

## Table 3.2-1: Noise Study Areas

- Hotels with exterior areas of use pools (Country Inn & Suites, Premiere Best Western, and Studio 6 Hotel) Activity Category E; and
- Restaurants with outdoor seating (4 Rivers Smokehouse, Chili's, and 5th Element Taste of India) Activity Category E.

The type, description, and general location of these receptor sites are summarized in **Table 3.2-2**. In addition, the locations of the receptor sites are shown in **Figure 3-1**. Each of the representative receptor sites was given a unique designation (e.g., LPA-1). The first alphanumeric characters represent the name or type of receptor (e.g., LPA represents La Petite Academy). The numerical value represents the unique/sequential receptor site JC-1 number for that location (e.g., for Jacksonville Operations Center, Receptors Sites JC-1



through JC-5). In addition, for the multistory residential developments, the floor (i.e., first through fourth) of the receptor site was also used in the receptor site designations (e.g., Receptor Site C-1.3 represents a third floor balcony of a dwelling unit at Canopy at Belfort Park Apartments). **Table 3.2-2** also includes the TNM predicted existing and future design year (2045) No-Build and Build Alternative noise levels. It should be noted that the existing noise levels are representative of the no-build conditions along the roadway segments where LOS C traffic volumes were used.

Predicted design year (2045) noise levels for the Build Alternative were compared to the NAC and to the predicted existing conditions noise levels to assess potential noise impacts associated with the project. As identified in **Table 3.2-2** traffic noise impacts occur and will require consideration of noise abatement measures (i.e., noise barriers). With the recommended Build Alternative, design year (2045) traffic noise levels will approach, meet, or exceed the NAC at six residential communities (i.e., NAC B) and eight nonresidential/special land use sites (i.e., NACs C and E). The six impacted residential communities include four residences within Bentley Green Apartments, 30 residences within Canopy at Belfort Park Apartments, one residence (NAC B) within Portiva Apartments, 25 residences within Lakeside Apartment Homes, 21 residences within Bay Club Apartment Homes, and 18 residences within Park Potenza Apartment Homes. The seven impacted special land use sites include outdoor use areas associated with the Bright Horizons School, Jacksonville School of Autism, Southpoint Community Church; Concourse Business Park, Baymeadows Islamic Center; Jacksonville Operations Center; and JP Morgan Chase South and North Buildings. The impacted receptor sites are also shown as red dots on Figure 3-1.

Although a number of sites approach, meet, or exceed the NAC, the proposed improvements do not result in any substantial noise increases [i.e., greater than 15 dB(A) over existing levels]. The maximum increase in design year (2045) noise levels over existing levels is 2.9 dB(A) at Receptor Site SL-1. The increases in traffic noise levels are associated with future increases in traffic volumes along I-95, Baymeadows Road, and intersection improvements along Southside Boulevard, and the shift of the I-95 travel lanes closer to some of these sites as a result of the proposed widening to ten lanes. Some of the  $3^{rd}$  and  $4^{th}$  floor balconies (e.g., Receptor Sites P-7.4 and P-8.4) are predicted to experience a decrease in noise levels from 0.2 to 0.5 dB(A) compared to existing noise levels. The decrease is attributed to the proposed 3-foot-tall concrete median barrier wall that will block some of the traffic noise in reaching these residences.



No other noise sensitive sites, including Activity Category D sites, within the project corridor are predicted to experience traffic noise levels that will approach, meet, or exceed the NAC. It should be noted that some developed areas were not evaluated since they do not represent noise sensitive areas or were located beyond the expected area of traffic noise impacts (e.g., Ramada, Days Inn, and Hawthorn Suites, Gramercy Woods Office Park, Olive Garden). Restaurants without outdoor seating (e.g., Veterans United Brewery) do not represent sensitive commercial land uses; therefore, these were not evaluated.



### Table 3.2-2: TNM Predicted Noise Levels (Sheet 1 of 6)

							· · ·	,	Difforence	Noiso	TNIM Deadisted Puil	d Altermative Desim
		Representative No	ise Receptor Sit	es		TNM 1	Predicted Noise Le	vels dB(A)	Between	Abatement	Year (2045) No:	ise Levels dB(A)
Name of Noise Sensitive Areas/Sites	Representative Noise Receptor Site Designation	Description (Noise Activity Category)	Number of Sites Represented	Noise Abatement Criteria	Station Number	Existing Conditions	No Build Alternative (Design Year 2045)	Build Alternative (Design Year 2045)	Existing and Build Alternative Design Year (2045) Noise	Criteria Status for Build Alternative (Impacted Sitee)	With Recommended Noise Barrier	Noise Reduction with Recommended Noise Barrier
Noise Study Area	1 (Non-Residenti	al - Special Land Use) - Eas	t of I-95 betwe	en Southsie	le Bouleva	rd and Baymeau	dows Road (See F	igure 3-1 Sheets 2 :	through 6)		1	<u> </u>
10100 0000 1100	BH-1	Institutional - Recreational		66.0	837+30	72.5	72.5	74.8	23	Exceeds		
	DIL 1 DIL 9	Area/Basketball Court (C) Institutional - Recreational		66.0	827+20	71.0	71.0	79.4	2.0	Excoods		
	DH-9	Area/Basketball Court (C) Institutional - Outdoor Use		00.0	897190	70.0	70.0	79.4	2.4	Erocoda		
	DIL (	Area/Picnic Table (C) Institutional - Outdoor Use		66.0	007+00	70.0	70.0	72.4	2.4	Exceeds		
D. L. H. S	BH-4	Area/Picnic Table (C) Institutional - Outdoor Use		66.0	837+30	69.0	69.0	71.4	2.4	Exceeds		
School (see Figure	BH-5	Area/Picnic Table (C) Institutional - Recreational	1 (Special Land Use)	66.0	839+00	75.2	75.2	77.4	2.2	Exceeds		
3-1 Sheet 2)	BH-6	Area/School Playground (C)		66.0	840+00	74.7	74.7	76.7	2.0	Exceeds		
	BH-7	Area/School Playground (C)		66.0	840+00	68.7	68.7	70.8	2.1	Exceeds		
	BH-8	Area/School Playground (C)		66.0	840+00	65.3	65.3	67.5	2.2	Exceeds		
	BH-9	Area/School Playground (C)		66.0	840+00	62.8	62.8	65.0	2.2	Below		
	BH-10	(D)		51.0	841+00	40.2	40.2	42.0	1.8	Below		
(see Figure 3-1	OS-1	Institutional - Interior Use (D)	1 (Special Land Use)	51.0	905+00	44.9	44.9	47.0	2.1	Below		
4 Rivers			. (7									
Smokehouse (see Figure 3-1 Sheets 5	4RS-1	Restaurant - Outdoor Seating (E)	1 (Special Land Use)	71.0	56+00	63.6	64.0	65.3	1.7	Below		
and 6) Chili's (see		Restaurant - Outdoor	1 (Special				22.1					
Figure 3-1 Sheet 6)	CH-1	Seating (E)	Land Use)	71.0	74+20	65.6	66.1	66.7	1.1	Below		
Noise Study Area	1 (Residential La	and Use) - East of I-95 betwe	een Southside	Boulevard a	nd Bayme	adows Road (Se	e Figure 3-1 Shee	ets 2 through 6)			- 11	
	BG-1.1	Porch (B)	1	66.0	73+20	62.7	63.3	63.3	0.6	Below		
	BG-1.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	73+20	70.5	71.1	71.0	0.5	Exceeds		
	BG-2.1	Multi-Family Residence Porch (B)	1	66.0	73+30	62.8	63.4	63.4	0.6	Below		
Bentley Green	BG-2.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	73+30	70.5	71.1	70.9	0.4	Exceeds		
Figure 3-1 Sheet 6)	BG-3.1	Multi-Family Residence Porch (B)	1	66.0	73+40	62.9	63.5	63.4	0.5	Below		
	BG-3.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	73+40	70.5	71.1	70.9	0.4	Exceeds		
	BG-4.1	Multi-Family Residence Porch (B)	1	66.0	73+50	62.6	63.2	63.2	0.6	Below		
	BG-4.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	73+50	70.4	71.0	70.8	0.4	Exceeds		
	•				Minimum	62.6	63.2	63.2	0.4			
				I	Maximum	70.5	71.1	71.0	0.6			
					Average	66.6	67.2	67.1	0.5			
						Total Number of	f Residential Sites A	Approaching or Excee	ding the NAC	4		
Noise Study Area	2 (Non-Resident	ial - Special Land Uses) - Ea	ast of I-95 bety	ween Bavme	adows Roa	ad and Belfort R	oad (See Figure S	3.1 Sheets 5 throug	h 8)	I		
5th Element Taste	5E-1	Restaurant - Outdoor		71.0	73+40	63.8	64.4	64.3	0.5	Below		
of India (see Figure 3-1 Sheet 6)	5E-2	Seating/Bench (E) Restaurant - Outdoor	1 (Special Land Use)	71.0	73+40	62.1	62.8	62.7	0.6	Below		
Florida Surgical	0112	Seating/Bench (E)		11.0	10.10	02.1	02.0		0.0	Delet		
Physicians (see Figure 3-1 Sheet 6)	FSP-1	Medical Building - Interior Use (D)	1 (Special Land Use)	51.0	66+20	40.6	41.2	41.3	0.7	Below		
La Petite Academy (see Figure 3-1 Sheets 5 and 6)	LPA-1	Institutional - Recreational Area/School Playground (C)	1 (Special Land Use)	66.0	52+10	62.7	63.2	64.0	1.3	Below		
Baymeadows Professional Building (see Figure 3-1 Sheets 5 and 6)	BP-1	Medical Building - Interior Use (D)	1 (Special Land Use)	51.0	46+00	43.9	44.5	45.6	1.7	Below		
Great Expressions Dental Center (see Figure 3-1 Sheets 5 and 6)	GE-1N	Medical Building - Interior Use (D)	1 (Special Land Use)	51.0	959+00	44.5	44.9	46.7	2.2	Below		
St. Philip Neri Ecumenical Church (see Figure 3-1 Sheets 5 and 6)	SPC-1	Place of Worship - Interior Use (D)	1 (Special Land Use)	51.0	964+00	42.1	42.1	43.5	1.4	Below		
Jacksonville School of Autism (see	JSA-1	Institutional - Recreational Area/School Playground (C)	1 (Special	66.0	968+10	65.5	65.5	67.4	1.9	Exceeds		
Figure 3-1 Sheets 5 and 6)	JSA-2	Institutional - Recreational Area/School Playground (C)	Land Use)	66.0	968+10	63.2	63.2	65.1	1.9	Below		
	SC-1	Place of Worship - Outdoor		66.0	1001+00	64.2	64.9	65.2	1.0	Below		
Southpoint Community Church	SC-2	Use Area/Gazebo (C) Place of Worship - Interior	1 (Special	51.0	1007+00	46.7	46.7	49.0	9.2	Bolow		
(see Figure 3-1 Sheet 7)	SC-3	Use (D) Place of Worship - Outdoor	Land Use)	66.0	1008±10	67.0	67.0	40.0 60.7	9.7	Evende		
Noise Study Anos	9 (Peridential La	Use Area/Bench (C)	roon Bormood	Bood or	d Dalfant	Baad (Saa Firmur	o 2 1 Sheets 5 th	05.7	2.1	Exceeds		
Ivoise Study Area		Multi-Family Residence	Jacen Daymead	ows noad ar	1041100	au (See Figur	con oneets o thi	00 F	0.7	Frage J.	00.0	0.0
	0.1.0	Porch (B) Multi-Family Residence 2nd	1	66.0	1041+90	66.8	66.8	69.5	2.7	Exceeds	60.3	9.2
	U-1.2	Floor Balcony (B) Multi-Family Residence 3rd	1	66.0	1041+90	70.6	70.6	71.9	1.3	Exceeds	62.5	9.4
	C-1.3	Floor Balcony (B) Multi-Family Residence	1	66.0	1041+90	71.3	71.3	72.5	1.2	Exceeds	64.2	8.3
	C-2.1	Porch (B) Multi-Family Residence 2:1	1	66.0	1041+80	66.4	66.4	69.1	2.7	Exceeds	60.1	9.0
Canony at Polfant	C-2.2	Floor Balcony (B)	1	66.0	1041+80	70.4	70.4	71.7	1.3	Exceeds	62.5	9.2
Park Apartments	C-2.3	Floor Balcony (B)	1	66.0	1041+80	71.1	71.1	72.3	1.2	Exceeds	64.1	8.2
Sheet 8)	C-3.1	Porch (B)	1	66.0	1041+60	65.3	65.3	68.0	2.7	Exceeds	60.1	7.9
	C-3.2	Floor Balcony (B)	1	66.0	1041+60	69.6	69.6	71.0	1.4	Exceeds	62.7	8.3
	C-3.3	Floor Balcony (B)	1	66.0	1041+60	70.3	70.3	71.6	1.3	Exceeds	64.0	7.6
	C-4.1	Porch (B)	1	66.0	1041+30	65.3	65.3	67.8	2.5	Exceeds	60.4	7.4
	C-4.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1041+30	69.4	69.4	70.8	1.4	Exceeds	62.8	8.0
	C-4.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1041+30	70.1	70.1	71.3	1.2	Exceeds	64.0	7.3

		Representative Noi	se Receptor Sit	ев		TNM I	Predicted Noise Le	vels dB(A)	Difference Noise Between Abatement Existing and Criteria		TNM Predicted Buil Year (2045) No:	Build Alternative Design Noise Levels dB(A)	
Name of Noise Sensitive Areas/Sites	Representative Noise Receptor Site Designation	Description (Noise Activity Category)	Number of Sites Represented	Noise Abatement Criteria	Station Number	Existing Conditions	No Build Alternative (Design Year 2045)	Build Alternative (Design Year 2045)	Build Alternative Design Year (2045) Noise Levels	Criteria Status for Build Alternative (Impacted Sites)	With Recommended Noise Barrier	Noise Reduction with Recommended Noise Barrier	
	C-5.1	Multi-Family Residence Porch (B)	1	66.0	1041+00	63.4	63.4	65.5	2.1	Below	59.5	6.0	
	C-5.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1041+00	65.7	65.7	66.6	0.9	Approaches	60.5	6.1	
	C-5.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1041+00	66.6	66.6	67.5	0.9	Exceeds	61.8	5.7	
	C-6.1	Multi-Family Residence Porch (B)	1	66.0	1041+90	62.3	62.3	64.3	2.0	Below	59.1	5.2	
	C-6.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1041+90	64.5	64.5	65.4	0.9	Below	59.9	5.5	
	C-6.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1041+90	65.4	65.4	66.2	0.8	Approaches	61.2	5.0	
	C-7.1	Multi-Family Residence Porch (B)	1	66.0	1041+60	61.2	61.2	63.1	1.9	Below	58.5	4.6	
	C-7.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1041+60	63.2	63.2	64.0	0.8	Below	59.1	4.9	
	C-7.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1041+60	64.0	64.0	64.9	0.9	Below	60.2	4.7	
	C-8.1	Multi-Family Residence Porch (B)	1	66.0	1041+30	61.0	61.0	62.7	1.7	Below	58.2	4.5	
	C-8.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1041+30	62.7	62.7	63.6	0.9	Below	58.7	4.9	
	C-8.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1041+30	63.6	63.6	64.4	0.8	Below	59.8	4.6	
	C-9.1	Multi-Family Residence Porch (B)	1	66.0	1041+00	64.3	64.3	66.9	2.6	Approaches	60.7	6.2	
	C-9.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1041+00	68.5	68.5	70.0	1.5	Exceeds	63.0	7.0	
	C-9.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1041+00	69.3	69.3	70.6	1.3	Exceeds	64.0	6.6	
	C-10.1	Multi-Family Residence Porch (B)	1	66.0	1040+20	64.0	64.0	66.4	2.4	Approaches	60.6	5.8	
	C-10.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1040+20	68.0	68.0	69.6	1.6	Exceeds	63.1	6.5	
	C-10.3	Multi-Family Residence 3rd	1	66.0	1040+20	68.8	68.8	70.2	1.4	Exceeds	64.1	6.1	
	C-11.1	Multi-Family Residence	1	66.0	1040+00	63.3	63.3	65.4	2.1	Below	60.6	4.8	
	C-11.2	Multi-Family Residence 2nd	1	66.0	1040+00	66.9	66.9	68.7	1.8	Exceeds	63.2	5.5	
	C-11.3	Multi-Family Residence 3rd	1	66.0	1040+00	68.0	68.0	69.4	1.4	Exceeds	64.1	5.3	
	C-12.1	Floor Balcony (B) Multi-Family Residence	1	66.0	1039+90	62.9	62.9	65.0	2.1	Below	60.3	4.7	
	C-12.2	Porch (B) Multi-Family Residence 2nd	1	66.0	1039+90	66.5	66.5	68.3	1.8	Exceeds	63.2	5.1	
Canopy at Belfort	C-12.3	Floor Balcony (B) Multi-Family Residence 3rd	1	66.0	1039+90	67.7	67.7	69.1	1.4	Exceeds	64.1	5.0	
Park Apartments (Continued) (see	C-13.1	Floor Balcony (B) Multi-Family Residence	1	66.0	1041+00	60.6	60.6	62.1	1.5	Below	57.6	4.5	
Figure 3-1 Sheet 8)	C-13.2	Porch (B) Multi-Family Residence 2nd	1	66.0	1041+00	62.0	62.0	62.9	0.9	Below	58.1	4.8	
	C-13.3	Floor Balcony (B) Multi-Family Residence 3rd	1	66.0	1041+00	63.0	63.0	63.7	0.7	Below	59.1	4.6	
	C-14.1	Floor Balcony (B) Multi-Family Residence	1	66.0	1040+20	60.2	60.2	61.6	1.4	Bolow	57.3	4.9	
	C-14.1	Porch (B) Multi-Family Residence 2nd	1	66.0	1040+20	61.5	61.5	69.5	1.4	Bolow	57.7	4.9	
	0.14.2	Floor Balcony (B) Multi-Family Residence 3rd	1	00.0 CC 0	1040+20	01.5 C2 =	01.5 C2 5	62.0	0.8	Below	51.1	4.0	
	0.17.1	Floor Balcony (B) Multi-Family Residence	1	66.0	1040+20	62.5	62.5	63.3	0.8	Below	58.7	4.6	
	0.17.0	Porch (B) Multi-Family Residence 2nd	1	66.0	1040+00	60.1	60.1	61.1	1.0	Below	56.1	5.0	
	C-15.2	Floor Balcony (B) Multi-Family Residence 3rd	1	66.0	1040+00	58.9	58.9	60.3	1.4	Below	55.9	4.4	
	C-15.3	Floor Balcony (B) Multi-Family Residence	1	66.0	1040+00	61.2	61.2	61.8	0.6	Below	57.0	4.8	
	C-16.1	Porch (B) Multi-Family Residence 2nd	1	66.0	1039+90	58.3	58.3	59.7	1.4	Below	54.7	5.0	
	C-16.2	Floor Balcony (B) Multi-Family Residence 3rd	1	66.0	1039+90	59.5	59.5	60.5	1.0	Below	55.0	5.5	
	C-16.3 C-17.1	Floor Balcony (B) Multi-Family Residence Porch (B)	1	66.0 66.0	1039+90 1041+00	60.6 64.7	60.6 64.7	61.2 66.4	0.6	Below Approaches	55.9	5.3 6.5	
	C-17.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1041+00	67.0	67.0	67.8	0.8	Exceeds	60.9	6.9	
	C-17.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1041+00	67.9	67.9	68.5	0.6	Exceeds	62.0	6.5	
	C-18.1	Multi-Family Residence Porch (B)	1	66.0	1041+90	60.3	60.4	62.8	2.5	Below	54.4	8.4	
	C-18.2	Multi-Family Residence 2nd	1	66.0	1041+90	62.5	62.5	63.7	1.2	Below	54.3	9.4	
	C-18.3	Multi-Family Residence 3rd	1	66.0	1041+90	63.4	63.4	64.3	0.9	Below	55.7	8.6	
	C-19.1	Multi-Family Residence	1	66.0	1041+70	63.6	63.6	64.9	1.3	Below	59.2	5.7	
	C-19.2	Multi-Family Residence 2nd	1	66.0	1041+70	65.7	65.7	66.6	0.9	Approaches	60.1	6.5	
	C-19.3	Multi-Family Residence 3rd	1	66.0	1041+70	66.7	66.7	67.3	0.6	Exceeds	61.1	6.2	
	C-20.1	Multi-Family Residence	1	66.0	1041+80	58.0	58.0	60.5	2.5	Below	53.7	6.8	
	C-20.2	Porch (B) Multi-Family Residence 2nd	- 1	66.0	1041+80	60.0	60.0	61.3	1.3	Below	52.8	8.5	
	C-20.3	Floor Balcony (B) Multi-Family Residence 3rd	1	66.0	1041+80	61.1	61.1	62.1	1.0	Below	54.4	7.7	
		Floor Balcony (B)	Ĩ	50.0	Minimum	58.0	58.0	59.7	0.6		59.8	4.3	
				,	Maximum	71.9	71.3	72.5	2.7		64.9	9.4	
				1	Avoraco	64.6	64.6	66.0	1.4		50.8	6.2	
					age	Total Number of	Residential Sites	Approaching or Frees	ding the NAC	30		44	
Noise Study Area	3 (Non-Resident	ial - Special Land Hees) - Fo	st of I-95 betw	veen and Bo	lfort Read	and South of J	Turner Butler P.	ulevard (See Figure	e 3.1 Sheet 2			4.4	
Concord Career Institute (see Figure 3-1 Sheet 7)	CCI-1	Institutional - Interior Use (D)	1 (Special Land Use)	51.0	1030+00	44.5	44.5	46.5	2.0	Below			
Concourse Business Back (	CB-1	Office Building - Outdoor	1 (Special	71.0	1052+00	72.1	72.1	73.4	1.3	Exceeds			
Figure 3-1 Sheet 8)	CB-2	Use Area/Picnic Tables (E)	Land Use)	71.0	1051+00	68.3	68.3	69.9	1.6	Below			
Premiere Best Western (see Figure 3-1 Sheet 8)	PWB-P	Hotel - Recreational Area/Pool (E)	1 (Special Land Use)	71.0	1066+30	53.3	53.6	53.9	0.6	Below			
Country Inn & Suites (see Figure 3- 1 Sheet 8)	CIS-P	Hotel - Recreational Area/Pool (E)	1 (Special Land Use)	71.0	1068+00	67.5	67.8	67.7	0.2	Below			

## Table 3.2-2: TNM Predicted Noise Levels (Sheet 2 of 6)

		Representative Noise Receptor Sites				TNM I	Predicted Noise Le	vels dB(A)	Difference Between Evisting and	Noise Abatement Criteria	TNM Predicted Buil Year (2045) No:	d Alternative Design ise Levels dB(A)
Name of Noise Sensitive Areas/Sites	Representative Noise Receptor Site Designation	Description (Noise Activity Category)	Number of Sites Represented	Noise Abatement Criteria	Station Number	Existing Conditions	No Build Alternative (Design Year 2045)	Build Alternative (Design Year 2045)	Build Alternative Design Year (2045) Noise Levels	Status for Build Alternative (Impacted Sites)	With Recommended Noise Barrier	Noise Reduction with Recommended Noise Barrier
Noise Study Area	3 (Residential La	and Uses) - East of I-95 betw	veen and Belfo	rt Road and	South of a	J. Turner Butler	Boulevard (See	Figure 3.1 Sheet 8)	-		-	
	P-1.1	Multi-Family Residence Porch (B)	1	66.0	1063+00	61.1	61.3	61.7	0.6	Below		
	P-1.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1063+01	60.9	61.1	61.2	0.3	Below		
	P-1.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1063+02	62.4	62.6	62.4	0.0	Below		
	P-1.4	Multi-Family Residence 4th Floor Balcony (B)	1	66.0	1063+03	63.3	63.5	63.0	-0.3	Below		
	P-2.1	Multi-Family Residence Porch (B)	1	66.0	1063+00	61.2	61.4	61.9	0.7	Below		
	P-2.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1063+01	61.4	61.6	61.7	0.3	Below		
	P-2.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1063+02	62.9	63.1	62.8	-0.1	Below		
	P-2.4	Multi-Family Residence 4th Floor Balcony (B)	1	66.0	1063+03	63.7	63.9	63.4	-0.3	Below		
	P-3.1	Multi-Family Residence	1	66.0	1062+80	61.5	61.7	62.2	0.7	Below		
	P-3.2	Multi-Family Residence 2nd	1	66.0	1062+81	61.9	62.1	62.2	0.3	Below		
	P-3.3	Multi-Family Residence 3rd	1	66.0	1062+82	63.4	63.6	63.3	-0.1	Below		
	P-3.4	Floor Balcony (B) Multi-Family Residence	1	66.0	1062+83	64.2	64.4	63.9	-0.3	Below		
	P-4 1	4th Floor Balcony (B) Multi-Family Residence	1	66.0	1063+80	61 7	61.9	62.3	0.6	Below		
	P-4.9	Porch (B) Multi-Family Residence 2nd	1	66.0	1063+81	62.3	62.5	62.6	0.3	Bolow		
	D-4.9	Floor Balcony (B) Multi-Family Residence 3rd	1	CC 0	1003101	62.0	64.0	62.0	-0.1	Balam		
Portiva Apartments	F-4.3	Floor Balcony (B) Multi-Family Residence	1	66.0	1060+62	03.0	64.0	65.7	-0.1	Delow		
(see Figure 3-1 Sheet 8)	P-4.4	4th Floor Balcony (B) Multi-Family Residence	1	66.0	1063+83	64.5	64.7	64.3	-0.2	Below		
	P-5.1	Porch (B) Multi-Family Residence 2nd	1	66.0	1062+40	62.0	62.2	62.6	0.6	Below		
	P-5.2	Floor Balcony (B)	1	66.0	1062+41	62.8	63.0	63.1	0.3	Below		
	P-5.3	Floor Balcony (B)	1	66.0	1062+42	64.3	64.5	64.2	-0.1	Below		
	P-5.4	4th Floor Balcony (B)	1	66.0	1062+43	65.0	65.2	64.7	-0.3	Below		
	P-6.1	Multi-Family Residence Porch (B)	1	66.0	1061+00	62.5	62.7	62.9	0.4	Below		
	P-6.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1061+01	63.6	63.8	63.9	0.3	Below		
	P-6.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	1061+02	65.1	65.3	64.9	-0.2	Below		
	P-6.4	Multi-Family Residence 4th Floor Balcony (B)	1	66.0	1061+03	65.7	65.9	65.5	-0.2	Below		
	P-7.1	Multi-Family Residence Porch (B)	1	66.0	1061+80	62.9	63.1	63.1	0.2	Below		
	P-7.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	1061+81	64.2	64.4	64.4	0.2	Below		
	P-7.3	Multi-Family Residence 3rd	1	66.0	1061+82	65.6	65.9	65.4	-0.2	Below		
	P-7.4	Multi-Family Residence	1	66.0	1061+83	66.7	66.9	66.3	-0.4	Approaches		
	P-8.2	4th Floor Balcony (B) Multi-Family Residence 2nd	1	66.0	1061+20	62.5	62.7	62.7	0.2	Below		
	P-8.3	Floor Balcony (B) Multi-Family Residence 3rd	1	66.0	1061+21	64.0	64.2	63.8	-0.2	Below		
	P-8.4	Floor Balcony (B) Multi-Family Residence	1	66.0	1061+22	65.5	65.7	65.0	-0.5	Bolow		
	1 0.4	4th Floor Balcony (B)	1	00.0	Minimum	60.0	61.1	61.9	-0.5			
					Jovimum	00.5	01.1 CC 0	66.2	0.5			
				1	A	00.7	00.9	00.3	0.7			
					Average	63.3	63.0	63.4	0.1			
Nuine Studie Arres	4 (No. 10. 11. 10. 11		-+ - 6T OF 1-+				demo Deed (Ore	Figure 0.1 Chaste 0	the work (	1		
Noise Study Area	4 (Non-Residenti	L	st of 1.39 Deta	een Souths	lde Boulev	ard and Baymes	dows Road (See	Figure 3-1 Sheets 3	through 5)		1	
Stayer University, CD Smith and RP	SU-1	- Interior Use (D)	1 (Special	51.0	933+00	48.8	48.8	49.7	0.9	Below		
Funding (see Figure 3-1 Sheet 4)	SU-2	Use Area/Picnic Tables (E)	Land Use)	71.0	936+00	68.0	68.0	69.1	1.1	Below		
Baymeadows	SU-3	Use Area/Picnic Tables ( E) Place of Worship -	1 (0	71.0	939+00	66.3	66.3	67.4	1.1	Below		
Islamic Center (see Figure 3-1 Sheet 5)	BIC-1	Recreational Area/ Basketball Court (C)	I (Special Land Use)	66.0	957+00	68.0	68.2	69.2	1.2	Exceeds		
Noise Study Area	5 (Non-Residenti	ial - Special Land Uses) - We	est of I-95 betw	veen Bayme	adows Ros	ad and Baymead	ows Way West (S	See Figure 3.1 Sheet	ts 5 and 7)	I		
Studio 6 Hotel (see Figure 3-1 Sheet 5)	S6-P	Hotel - Recreational Area/Pool (E)	1 (Special Land Use)	71.0	969+00	69.5	69.5	71.0	1.5	Approaches		
	JC-1			71.0	979+00	70.3	70.4	71.6	1.3	Approaches		
Jacksonville	JC-2	Office Building - Outdoor Use Area/Small Pavilions		71.0	981+00	76.5	76.5	77.3	0.8	Exceeds		
Operations Center (see Figure 3-1 Sheet 5)	JC-3	(E)	1 (Special Land Use)	71.0	985+90	76.3	76.3	77.2	0.9	Exceeds		
	JC-4	Office Building - Outdoor		71.0	987+10	74.9	75.0	76.0	1.1	Exceeds		
Spring Lake	JC-5	Use Area/Picnic Table Pavilions (E)		71.0	985+00	69.8	69.8	71.5	1.7	Approaches		
Business Center (see Figure 3-1 Sheet 7)	SL-1	Office Building - Outdoor Use Area/Picnic Tables (E)	1 (Special Land Use)	71.0	995+00	68.0	68.0	70.9	2.9	Below		
Florida Coastal School of Law (see Figure 3-1 Sheet 7)	FC-1	Institutional - Interior Use (D)	1 (Special Land Use)	51.0	1009+80	47.2	47.2	49.1	1.9	Below		
Noise Study Area	6 (Non-Residenti	ial - Special Land Uses) - W	est of I-95 bet	ween Bayme	eadows Wa	ay West and J. I	urner Butler Bo	ulevard (See Figure	3.1 Sheets 7 a	und 8)		
	JPC-1	South Office Building - Outdoor Use Area/Small	1 (Special	71.0	1042+80	73.3	73.3	74.8	1.5	Exceeds		
	JPC-2	Pavilion (E)	Land Use)	71.0	1049+00	69.3	69.3	70.9	1.6	Below		
JP Morgan Chase (see Figure 3-1 Sheet 8)	JPC-3	North Office Building - Outdoor Use Area/Pionic	1 (Special	71.0	1050+00	76.0	76.0	77.9	1.0	Evceeds		
	JPC-4	Tables (E)	Land Use)	71.0	1051+00	69 1	70.U 69.2	70.9	1.3	Below		
				. 1.0		00.1	00.2	10.0	1.0	2010 W		

## Table 3.2-2: TNM Predicted Noise Levels (Sheet 3 of 6)

		Representative Noise Receptor Sites				TNM	Predicted Noise Le	ovels dB(A)	Difference Between Evicting and	Noise Abatement Critoria	TNM Predicted Buil Year (2045) No	d Alternative Design ise Levels dB(A)
Name of Noise Sensitive Areas/Sites	Representative Noise Receptor Site Designation	Description (Noise Activity Category)	Number of Sites Represented	Noise Abatement Criteria	Station Number	Existing Conditions	No Build Alternative (Design Year 2045)	Build Alternative (Design Year 2045)	Build Alternative Design Year (2045) Noise Levels	Status for Build Alternative (Impacted Sites)	With Recommended Noise Barrier	Noise Reduction with Recommended Noise Barrier
Noise Study Area	7 (Non-Residenti	al - Special Land Uses) - Ea	st of Southsid	le Boulevard	l between 3	Paradise Island	Boulevard and B	elle Rive Boulevard	Figure 3.1 Sh	ueet 9)		
Paradise Island Apartment Homes	PIA-1 (Pool)	Community Pool - Outdoor Use Area (C)	1 (Special Land Use)	66.0	110+10	55.3	55.4	55.5	0.2	Below		
Southside Villas, and Elements of Belle Rive	SV-1 Picnic Tables	Community Picnic Tables - Outdoor Use Area (C)	1 (Special Land Use)	66.0	114+90	56.4	56.5	56.6	0.2	Below		
Apartments	EBR-4 Dog Park	Community Dog Park - Outdoor Use Area (C)	1 (Special Land Use)	66.0	132+90	64.0	64.0	63.9	-0.1	Below		
Noise Study Area	7 (Residential La	nd Uses) - East of Southsid	e Boulevard b	etween Para	adise Islan	d Boulevard and	l Belle Rive Boul	evard Figure 3.1 Sh	eet 9)			
	SV-2.1	Multi-Family Residence Porch (B)	1	66.0	115+90	56.6	56.9	56.9	0.3	Below		
	SV-2.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	115+90	60.0	60.2	60.2	0.2	Below		
	SV-3.1	Multi-Family Residence	1	66.0	116+00	54.1	54.3	54.3	0.2	Below		
	SV-3.2	Multi-Family Residence 2nd	1	66.0	116+00	57.5	57.7	57.7	0.2	Below		
	SV-3.3	Multi-Family Residence 3rd	1	66.0	116+00	60.4	60.8	60.8	0.4	Below		
	SV-4.1	Multi-Family Residence	2	66.0	117+50	57.6	57.7	57.7	0.1	Below		
	SV-4.2	Multi-Family Residence 2nd	2	66.0	117+50	61.8	62.0	62.0	0.2	Below		
	SV-5.1	Multi-Family Residence	2	66.0	118+10	57.8	58.0	58.0	0.2	Below		
	SV-5.2	Multi-Family Residence 2nd	2	66.0	118+10	62.1	62.4	62.4	0.3	Below		
	SV-5.3	Multi-Family Residence 3rd	2	66.0	118+10	63.5	63.7	63.7	0.2	Below		
	SV-6.1	Floor Balcony (B) Multi-Family Residence	2	66.0	119+50	57.1	57.2	57.2	0.1	Below		
	SV-6.2	Porch (B) Multi-Family Residence 2nd	2	66.0	119+50	61.6	61.8	61.8	0.2	Below		
	SV-7.1	Multi-Family Residence	2	66.0	120+00	57.3	57.4	57.4	0.1	Below		
Southside Villas and	SV-7.2	Multi-Family Residence 2nd	2	66.0	120+00	61.7	61.9	61.9	0.2	Below		
Elements of Belle Rive Apartments (see	SV-7.3	Floor Balcony (B) Multi-Family Residence 3rd	2	66.0	120+00	63.2	63.4	63.4	0.2	Below		
Figure 3-1 Sheet 9)	EBR-1.1	Floor Balcony (B) Multi-Family Residence	1	66.0	129+50	58.9	58.9	58.9	0.0	Below		
	EBR-1 2	Porch (B) Multi-Family Residence 2nd	1	66.0	129+50	64.6	64.6	64.6	0.0	Below		
	FBR-2 1	Floor Balcony (B) Multi-Family Residence	1	66.0	130+50	58.8	58.8	58.7	-0.1	Bolow		
	EDR 2.1	Porch (B) Multi-Family Residence 2nd	1	66.0	120+50	64.5	64.5	64.5	0.1	Bolow		
	EDR 2.2	Floor Balcony (B) Multi-Family Residence	1	00.0 CC 0	120+50	50.0	50.0	59.1	-0.9	Below		
	EDR-0.1	Porch (B) Multi-Family Residence 2nd	1	66.0	122+50	00.0	00.0	38.1	-0.2	Below		
	EBR*3.2	Floor Balcony (B) Multi-Family Residence	1	66.0	132+50	62.4	62.4	62.4	0.0	Below		
	EBR-5.1	Porch (B) Multi-Family Residence 2nd	1	66.0	135+20	62.2	62.2	62.0	-0.2	Below		
	EBR-5.2	Floor Balcony (B) Multi-Family Residence	1	66.0	135+20	65.5	65.5	65.5	0.0	Below		
	EBR-6.1	Porch (B) Multi-Family Residence 2nd	1	66.0	136+10	61.7	61.7	61.5	-0.2	Below		
	EBR-6.2	Floor Balcony (B)	1	66.0	136+10	64.9	64.9	64.9	0.0	Below		
	EBR-7.1	Porch (B)	1	66.0	139+70	61.7	61.7	61.4	-0.3	Below		
	EBR-8.1	Porch (B)	1	66.0	139+90	62.6	62.6	62.3	-0.3	Below		
	EBR-8.2	Floor Balcony (B)	1	66.0	139+90	64.8	64.8	64.8	0.0	Below		
					Minimum	54.1	54.3	54.3	-0.3			
				1	Maximum	65.5	65.5	65.5	0.4			
				Average	60.8	60.9	60.9	0.1				

Total Number of Residential Sites Approaching or Exceeding the NAC

0

----

----

## Table 3.2-2: TNM Predicted Noise Levels (Sheet 4 of 6)

3-21

	Representative Noise Receptor Site Designation	Representative Noise Receptor Sites				TNM I	Predicted Noise Le	vels dB(A)	Difference Between	Noise Abatement	TNM Predicted Build Alternative Design Year (2045) Noise Levels dB(A)	
Name of Noise Sensitive Areas/Sites		Description (Noise Activity Category)	Number of Sites Represented	Noise Abatement Criteria	Station Number	Existing Conditions	No Build Alternative (Design Year 2045)	Build Alternative (Design Year 2045)	) Build Alternative Design Year (2045) Noise Levels	Status for Build Alternative (Impacted Sites)	With Recommended Noise Barrier	Noise Reduction with Recommended Noise Barrier
Noise Study Area	8 (Residential La	and Uses) - West of Southsid	le Boulevard b	etween Para	adise Islar	d Boulevard and	d Belle Rive Boul	evard Figure 3.1 Sl	neet 9)			
	LA-1.1	Multi-Family Residence Porch (B)	1	66.0	118+60	64.5	65.0	65.3	0.8	Below	53.0	12.3
	LA-1.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	118+60	67.9	68.5	68.8	0.9	Exceeds	55.6	13.2
	LA-1.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	118+60	68.7	69.2	69.4	0.7	Exceeds	64.5	4.9
	LA-2.1	Multi-Family Residence Porch (B)	2	66.0	118+20	65.0	65.4	65.7	0.7	Below	52.3	13.4
	LA-2.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	118+21	68.2	68.7	69.0	0.8	Exceeds	55.1	13.9
	LA-2.3	Multi-Family Residence 3rd Floor Balcony (B)	2	66.0	118+22	68.8	69.3	69.5	0.7	Exceeds	65.2	4.3
	LA-3.1	Multi-Family Residence Porch (B)	1	66.0	118+90	65.5	65.8	66.1	0.6	Approaches	52.6	13.5
	LA-3.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	118+91	68.5	68.9	69.3	0.8	Exceeds	55.8	13.5
	LA-3.3	Multi-Family Residence 3rd Floor Balcony (B)	1	66.0	118+92	69.1	69.4	69.6	0.5	Exceeds	67.1	2.5
	LA-4.1	Multi-Family Residence	2	66.0	118+30	65.4	65.6	65.8	0.4	Below	52.5	13.3
	LA-4.2	Multi-Family Residence 2nd	2	66.0	118+31	68.4	68.7	69.0	0.6	Exceeds	54.9	14.1
	LA-4.3	Multi-Family Residence 3rd	2	66.0	118+32	69.0	69.2	69.4	0.4	Exceeds	63.6	5.8
	LA-5.1	Multi-Family Residence	2	66.0	120+50	65.3	65.4	65.5	0.2	Below	52.7	12.8
	LA-5.2	Porch (B) Multi-Family Residence 2nd	2	66.0	120+51	68.2	68.3	68.6	0.4	Exceeds	54.9	13.7
	LA-5.3	Floor Balcony (B) Multi-Family Residence 3rd	2	66.0	120+52	68.8	68.9	69.0	0.2	Exceeds	65.7	3.3
	LA-6 1	Floor Balcony (B) Multi-Family Residence	2	66.0	120:02	65.0	65.1	65.1	0.1	Below	53.2	11.9
	LA 0.1	Porch (B) Multi-Family Residence 2nd	2	66.0	121+00	69.1	69.9	69.5	0.1	Excoods	55.1	19.4
	LA-0.2	Floor Balcony (B) Multi-Family Residence 3rd	2	66.0	121+01	60.1	66.2	66.0 C0.0	0.4	Exceeds	62.9	10.4
	LA-0.5	Floor Balcony (B) Multi-Family Residence	2	66.0	121+02	65.7	00.0	65.0	0.5	Dalam	53.0	10.5
	LA-7.1	Porch (B) Multi-Family Residence 2nd	2	66.0	122+00	65.2	65.2	65.1	-0.1	Below	52.6	12.5
	LA-7.2	Floor Balcony (B) Multi-Family Residence 3rd	2	66.0	122+01	68.1	68.2	68.4	0.3	Exceeds	54.5	13.9
	LA-7.3	Floor Balcony (B) Multi-Family Residence	2	66.0	122+02	68.7	68.7	68.9	0.2	Exceeds	62.4	6.5
	LA-8.1	Porch (B) Multi-Family Residence 2nd	1	66.0	125+80	58.2	58.2	58.3	0.1	Below	57.5	0.8
	LA-8.2	Floor Balcony (B)	1	66.0	125+81	60.0	60.0	60.1	0.1	Below	58.7	1.4
	BC-1.1	Porch (B)	2	66.0	127+40	64.3	64.3	64.4	0.1	Below		
	BC-1.2A	Floor Balcony (B)	1	66.0	127+40	63.0	63.0	63.1	0.1	Below		
	BC-1.2B	Floor Balcony (B)	1	66.0	127+10	61.1	61.1	61.2	0.1	Below		
	BC-1.2C	Floor Balcony (B)	2	66.0	127+10	66.3	66.2	66.4	0.1	Approaches		
	BC-2.1	Porch (B)	2	66.0	127+80	64.1	64.1	64.1	0.0	Below		
	BC-2.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	127+80	66.1	66.1	66.3	0.2	Approaches		
Lakeside and Bay Club Apartment	BC-3.1	Multi-Family Residence Porch (B)	3	66.0	128+20	63.9	63.9	64.0	0.1	Below		
Homes (see Figure 3- 1 Sheet 9)	BC-3.2	Multi-Family Residence 2nd Floor Balcony (B)	3	66.0	128+20	66.0	66.0	66.2	0.2	Approaches		
	BC-4.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	129+50	66.0	66.0	66.2	0.2	Approaches		
	BC-5.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	129+90	61.9	61.9	62.0	0.1	Below		
	BC-6.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	130+40	65.9	65.9	66.1	0.2	Approaches		
	BC-7.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	131+70	66.2	66.2	66.4	0.2	Approaches		
	BC-8.1	Multi-Family Residence Porch (B)	1	66.0	132+30	61.2	61.2	61.2	0.0	Below		
	BC-8.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	132+30	64.8	64.8	64.9	0.1	Below		
	BC-9.1	Multi-Family Residence Porch (B)	1	66.0	132+00	60.2	60.2	60.2	0.0	Below		
	BC-9.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	132+00	63.3	63.3	63.4	0.1	Below		
	BC-10.1	Multi-Family Residence Porch (B)	1	66.0	133+00	62.4	62.4	62.4	0.0	Below		
	BC-10.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	133+00	65.9	65.9	66.1	0.2	Approaches		
	BC-11.1	Multi-Family Residence Porch (B)	1	66.0	133+30	56.8	56.8	57.0	0.2	Below		
	BC-11.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	133+30	61.1	61.1	61.2	0.1	Below		
	BC-12.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	133+70	66.7	66.7	66.9	0.2	Approaches		
	BC-13.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	134+90	66.7	66.7	66.8	0.1	Approaches		
	BC-14.1	Multi-Family Residence Porch (B)	2	66.0	135+60	59.6	59.6	59.5	-0.1	Below		
	BC-14.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	135+60	62.8	62.8	62.7	-0.1	Below		
	BC-15.1	Multi-Family Residence Porch (B)	2	66.0	136+70	60.1	60.1	59.8	-0.3	Below		

## Table 3.2-2: TNM Predicted Noise Levels (Sheet 5 of 6)

BC-15.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	136+70	63.1	63.1	63.0	-0.1	Below		
BC-16.1	Multi-Family Residence Porch (B)	2	66.0	137+40	63.9	63.9	63.7	-0.2	Below		
BC-16.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	137+40	66.2	66.2	66.3	0.1	Approaches		
BC-17.1	Multi-Family Residence Porch (B)	2	66.0	138+40	64.3	64.3	64.2	-0.1	Below		
BC-17.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	138+40	66.5	66.5	66.6	0.1	Approaches		
BC-18.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	139+00	58.6	58.6	58.3	-0.3	Below		
BC-19.1	Multi-Family Residence Porch (B)	2	66.0	139+90	64.3	64.3	64.3	0.0	Below		
BC-19.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	139+90	66.4	66.4	66.5	0.1	Approaches		
BC-20.1	Multi-Family Residence Porch (B)	1	66.0	140+20	64.3	64.3	64.3	0.0	Below		
BC-20.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	140+20	66.4	66.4	66.5	0.1	Approaches		
BC-21.1	Multi-Family Residence Porch (B)	1	66.0	140+50	64.3	64.3	64.3	0.0	Below		
BC-21.2	Multi-Family Residence 2nd Floor Balcony (B)	1	66.0	140+50	66.4	66.4	66.5	0.1	Approaches		
				Minimum	56.8	56.8	57.0	-0.3		52.3	0.8
Maximum						69.4	69.6	0.9		67.1	14.1
Average						65.0	65.1	0.2		57.5	9.6
					Total Number of	Residential Sites A	Approaching or Exceed	ling the NAC	46		30

	Representative Noise Receptor Site Designation	Representative Noise Receptor Sites				TNM I	Predicted Noise Le	evels dB(A)	Difference Noise Between Abatement		TNM Predicted Build Alternative Design Year (2045) Noise Levels dB(A)	
Name of Noise Sensitive Areas/Sites		Description (Noise Activity Category)	Number of Sites Represented	Noise Abatement Criteria	Station Number	Existing Conditions	No Build Alternative (Design Year 2045)	Build Alternative (Design Year 2045)	Existing and Build Alternative Design Year (2045) Noise Levels	Criteria Status for Build Alternative (Impacted Sites)	With Recommended Noise Barrier	Noise Reduction with Recommended Noise Barrier
Noise Study Area	9 (Residential La	nd Uses) - East of Southsid	e Boulevard a	nd North of	Belle Rive	Boulevard Figu	re 3.1 Sheet 9)					
	PPA-1.1	Multi-Family Residence Porch (B)	2	66.0	143+30	63.5	63.5	63.6	0.1	Below	54.2	9.4
	PPA-1.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	143+30	66.0	66.0	66.1	0.1	Approaches	56.8	9.3
	PPA-1.3	Multi-Family Residence 3rd Floor Balcony (B)	2	66.0	143+30	67.0	67.0	67.1	0.1	Exceeds	63.3	3.8
	PPA-2.1	Multi-Family Residence Porch (B)	2	66.0	144+20	62.9	62.9	63.0	0.1	Below	53.6	9.4
	PPA-2.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	144+20	65.8	65.8	65.9	0.1	Below	55.7	10.2
	PPA-2.3	Multi-Family Residence 3rd Floor Balcony (B)	2	66.0	144+20	66.9	66.9	67.0	0.1	Exceeds	60.5	6.5
Park Potenza	PPA-3.1	Multi-Family Residence Porch (B)	4	66.0	145 + 10	62.5	62.5	62.6	0.1	Below	53.5	9.1
Apartment Homes (see Figure 3-1 Sheet	PPA-3.2	Multi-Family Residence 2nd Floor Balcony (B)	4	66.0	145 + 10	65.6	65.6	65.7	0.1	Below	55.4	10.3
9)	PPA-3.3	Multi-Family Residence 3rd Floor Balcony (B)	4	66.0	145 + 10	66.7	66.7	66.8	0.1	Approaches	59.1	7.7
	PPA-4.1	Multi-Family Residence Porch (B)	2	66.0	146+00	63.0	63.0	62.9	-0.1	Below	53.7	9.2
	PPA-4.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	146+00	66.1	66.1	66.2	0.1	Approaches	55.5	10.7
	PPA-4.3	Multi-Family Residence 3rd Floor Balcony (B)	2	66.0	146+00	67.1	67.1	67.2	0.1	Exceeds	58.8	8.4
	PPA-5.1	Multi-Family Residence Porch (B)	2	66.0	147+00	62.9	62.9	62.8	-0.1	Below	54.3	8.5
	PPA-5.2	Multi-Family Residence 2nd Floor Balcony (B)	2	66.0	147+00	66.0	66.0	66.1	0.1	Approaches	56.8	9.3
	PPA-5.3	Multi-Family Residence 3rd Floor Balcony (B)	2	66.0	147+00	67.0	67.0	67.1	0.1	Exceeds	59.4	7.7
				1	Minimum	62.5	62.5	62.6	-0.1		53.5	3.8
				Ν	Maximum	67.1	67.1	67.2	0.1		63.3	10.7
					Average	65.3	65.3	65.3	0.1		56.7	8.6
X:\P\Noise_Studies\I-95_JTBtoI-295	D2\Noise Study Report 10L Rev\	Tables\[Table_3_2-2_PNLs_1-295_2-11-2020.xlsxl[Table	s 3.3.1_I-295 JTB			Total Number of	Residential Sites	Approaching or Excee	ding the NAC	18	18	34

Table 3.2-2: TNM Predicted Noise Levels (Sheet 6 of 6)

3 - 23
# 3.3 Noise Abatement Analysis

The FDOT noise policy requires that the reasonableness and feasibility of noise abatement be considered when the FHWA NAC is approached, met, or exceeded at a noise sensitive site. The most common and effective noise abatement measure for projects such as this is the construction of noise barriers. As described in **Section 3.2** predicted design year traffic noise levels for the Build Alternative will approach, meet, or exceed the NAC at 99 residences within six residential areas and at eight special land uses. Therefore, the feasibility and reasonableness of noise barriers were considered for those noise sensitive sites predicted to be impacted by traffic noise except for the one impacted residence at Portiva Apartments (i.e., Receptor Site P-7.4). Noise abatement for the isolated impacted receptor at Portiva Apartments is not considered to be acoustically feasible. Noise barriers are not considered acoustically feasible at isolated residences. For a noise barrier to be considered an acoustically feasible abatement measure, it must benefit at least two impacted receptor sites. Therefore, noise barriers are not considered a feasible noise abatement option and are not recommended for further consideration or public input at this location (Portiva Apartments).

The 12 locations where noise abatement was considered are listed below by residential community or special land use names and by Common Noise Environment (CNE). A CNE represents a group of impacted receptor sites of the same Activity Category that would benefit from the same noise barrier or noise barrier system (i.e., overlapping/continuous noise barriers) that are exposed to similar noise sources and levels, traffic volumes, traffic mix, and speeds, and topographic features. Generally, CNEs occur between two secondary noise sources, such as interchanges, intersections and/or crossroads or where defined by ground features such as canals or rivers. In addition, the primary method for determining the cost of noise abatement involves a review of the cost per benefited receptor site for the construction of a noise barrier benefiting a single location or CNE (e.g., a subdivision or contiguous impact area).

Sections **3.3.1 through 3.3.12** describe the predicted noise levels, impacts, and consideration of noise barriers for each of the 12 CNEs. The noise barrier analysis tables referenced in these sections are located at the end of **Section 3.3.12**. The location of the 12 CNEs are depicted on Figure 3-1 and include:

• Southpoint Community Church - CNE E1 (East of I-95 and North of Baymeadows Road - NSA 2; see Section 3.3-1 and Figure 3-1 Sheet 7);



- Canopy at Belfort Park Apartments CNE E2 (East of I-95 and South of Belfort Road - NSA 2; see Section 3.3.2 and Figure 3-1 Sheet 8);
- Concourse Business Park CNE E3 (East of I-95 and North of Belfort Road NSA 3; see Section 3.3.3 and Figure 3-1 Sheet 8);
- Baymeadows Islamic Center CNE W1 (West of I-95 and South of Baymeadows Road
   NSA 4; see Section 3.3.4 and Figure 3-1 Sheet 5);
- Jacksonville Operations Center CNE W2 (West of I-95 and North of Baymeadows Road - NSA 5; see Section 3.3.5 and Figure 3-1 Sheet 5);
- JP Morgan Chase South Building CNE W3 (West of I-95 and South of JTB NSA 6; see Section 3.3.6 and Figure 3-1 Sheet 8);
- JP Morgan Chase North Building CNE W4 (West of I-95 and South of JTB NSA 6; see Section 3.3.7 and Figure 3-1 Sheet 8);
- Bright Horizons School CNE SE1 (East of I-95 and North of Southpoint Drive NSA 1; see Section 3.3.8 and Figure 3-1 Sheet 2);
- Bentley Green Apartments CNE SE2 (East of I-95 and South of Baymeadows Road NSA 1; see Section 3.3.9 and Figure 3-1 Sheet 6); and
- Jacksonville School of Autism CNE NE1 (East of I-95 and North of Baymeadows Road – NSA 1; see Section 3.3.10 and Figure 3-1 Sheets 5 & 6);
- Lakeside and Bay Club Apartment Homes CNE SBW1 (West of Southside Boulevard between Paradise Island Boulevard and Belle Rive Boulevard – NSA 8; see Section 3.3.11 and Figure 3-1 Sheet 9); and
- Park Potenza Apartment Homes CNE SBE1(East of Southside Boulevard and North of Belle Rive Boulevard NSA 9; see Section 3.3.12 and Figure 3-1 Sheet 9).

# 3.3.1 Southpoint Community Church - CNE E1

Common Noise Environment E1 represents an exterior area of use (i.e., park bench) associated with the Southpoint Community Church located on the east side of I-95 between Baymeadows Road and Belfort Road (see **Figure 3-1 Sheet 7**). Design year noise levels associated with the Build Alternative are predicted to approach, meet, or exceed the NAC of 67 dB(A) at Receptor Site SC-3 (i.e., park bench); therefore, a noise barrier was considered as a noise abatement measure at this location. The predicted design year noise level with the proposed improvements at this site of 69.7 dB(A) is 2.7 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**).

Four ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the eastern right-of-way line of I-95 to reduce traffic noise levels at this site. The results



of the noise barrier analysis are summarized in **Table 3.3.1-1**. All four conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. Of the four conceptual barrier designs evaluated, SC-CD1 is the lowest cost conceptual barrier design. Barrier design SC-CD1 represents a 16-foot-tall ground mounted noise barrier that extends approximately 640 feet, from Station 1006+80 to Station 1013+20. This barrier would benefit 100 percent of the impacted area, providing a maximum noise reduction of 7.0 dB(A). The estimated construction cost of this conceptual barrier design is 307,200.

The FDOT's special land use methodology was used to determine if the cost of conceptual design SC-CD1 would be reasonable, based on the level of activity expected at this facility. The required daily usage rate (i.e., person-hours per day) for SC-CD1 is 432 persons per day, each spending a minimum of one hour at this bench to meet the cost criteria (see **Table 3.3.1**-2). Due to the limited size and use of a park bench, it is not reasonable to assume that this area would experience this level of use on a typical day. Based on the noise barrier analysis performed, noise barriers are not considered reasonable at this location since they do not meet FDOT's required cost criteria. Therefore, noise barriers are not recommended for further consideration at this location.

# 3.3.2 Canopy at Belfort Park Apartments - CNE E2

Common Noise Environment E2 encompasses the multi-family residences within the Canopy at Belfort Park Apartments located on the east side of I-95 between Baymeadows Road and Belfort Road (see **Figure 3-1 Sheet 8**). The multi-story buildings (i.e., three stories) associated with this rental community have patios and balconies that are exposed to I-95 traffic noise. Within this residential community, the predicted design year (2045) noise levels with the proposed improvements ranged from 59.7 dB(A) to 72.5 dB(A), an average of approximately 1.4 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**). With the Build Alternative, 30 residences are predicted to be impacted by design year (2045) traffic noise. Since the design year noise levels at these sites approached, met, or exceeded the NAC of 67 dB(A), noise barriers were considered as a noise abatement measure at this location.

The results of the noise barrier analysis for this area are summarized in **Table 3.3.2-1**. Five conceptual ground mounted noise barrier designs were evaluated along the eastern right-ofway line of I-95 to reduce traffic noise levels at the 30 impacted residences. All five conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site and meet the reasonable cost criteria of equal to or less than \$42,000 per



benefited receptor site. Of the conceptual noise barrier designs evaluated, CBP-CD5 represents the optimal noise barrier design at this location since it maximizes the amount of noise reduction to this community. The optimal noise barrier would benefit 44 residences, including all 30 impacted residences, and would provide an average noise reduction of 6.9 dB(A) at benefited receptor sites with a maximum noise reduction of 9.4 dB(A). The estimated construction cost of this conceptual noise barrier design is \$785,400 or \$17,850 per benefited residence. Therefore, Conceptual Noise Barrier Design CBP-CD5 meets the reasonable cost criteria of equal to or less than \$42,000 per benefited receptor site.

Conceptual Noise Barrier Design CBP-CD5 represents a 22-foot-tall ground mounted noise barrier starting at Station 1036+40 and continues to Station 1048+20 for a length of 1,190 feet. Conceptual Noise Barrier Design CBP-CD5 is recommended for further consideration and public input during the project's design phase. This conceptual noise barrier design satisfies the reasonableness and feasibility factors considered in the evaluation of noise abatement measures including safety and constructability during a PD&E Study. There are no outdoor advertising signs located in the vicinity of the noise barriers recommended for further consideration in the design phase. The location of the existing outdoor advertising signs within the project study limits are shown in **Figure 3-1**. The final decisions on noise barrier dimensions are made during the project's design phase. During the design phase, an engineering constructability review is conducted to confirm that the noise barrier is feasible and support for noise barriers from the benefited noise sensitive sites is determined.

## 3.3.3 Concourse Business Park - CNE E3

Common Noise Environment E3 represents an exterior area of use (i.e., several picnic tables) associated with the Concourse Business Park located on the east side of I-95 between Belfort Road and south of JTB (see **Figure 3-1 Sheet 8**). Design year noise levels associated with the Build Alternative are predicted to approach, meet, or exceed the NAC of 67 dB(A) at Receptor Site CB-1 (i.e., picnic tables); therefore, a noise barrier was considered as a noise abatement measure at this location. The predicted design year noise level with the proposed improvements at this site of 73.4 dB(A) is 1.3 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**).

Four ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the eastern right-of-way line of I-95 to reduce traffic noise levels at this site. The results of the noise barrier analysis are summarized in **Table 3.3.3-1**. All four conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one



benefited site. Of the four conceptual barrier designs evaluated, CB-CD1 is the lowest cost conceptual barrier design. Barrier design CB-CD1 represents a 16-foot-tall ground mounted noise barrier that extends approximately 560 feet, from Station 1049+40 to Station 1055+60. This barrier would benefit 100 percent of the impacted area, providing a maximum noise reduction of 7.0 dB(A). The estimated construction cost of this conceptual barrier design is \$268,800.

The FDOT's special land use methodology was used to determine if the cost of conceptual design CB-CD1 would be reasonable, based on the level of activity expected at this facility. The required daily usage rate (i.e., person-hours per day) for CB-CD1 is 378 persons per day, each spending a minimum of one hour at this bench to meet the cost criteria (see **Table 3.3.3**-2). Due to the limited number and size of the picnic tables, it is not reasonable to assume that this area would experience this level of use on a typical day. Based on the noise barrier analysis performed, noise barriers are not considered reasonable at this location since they do not meet FDOT's required cost criteria. Therefore, noise barriers are not recommended for further consideration at this location.

# 3.3.4 Baymeadows Islamic Center - CNE W1

Common Noise Environment W1 represents an exterior area of use (i.e., basketball court) associated with the Baymeadows Islamic Center located on the west side of I-95 and south of Baymeadows Road (see **Figure 3-1 Sheet 5**). Design year noise levels associated with the Build Alternative are predicted to approach, meet, or exceed the NAC of 67 dB(A) at Receptor Site BIC-1 (i.e., basketball court); therefore, a noise barrier was considered as a noise abatement measure at this location. The predicted design year noise level with the proposed improvements at this site of 69.2 dB(A) is 1.2 dB(A) higher than the existing and 1.0 dB(A) higher than the no-build levels (see **Table 3.2-2**).

Four ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the western right-of-way line of I-95 to reduce traffic noise levels at this site. The results of the noise barrier analysis are summarized in **Table 3.3.4-1**. One of the four conceptual noise barrier designs (BIC-CD4) met the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. Barrier design BIC-CD4 represents a 22-foot-tall ground mounted noise barrier that extends approximately 560 feet, from Station 954+00 to Station 959+00. This barrier would benefit 100 percent of the impacted area, providing a maximum noise reduction of 7.0 dB(A). The estimated construction cost of this conceptual barrier design is 3369,600.



The FDOT's special land use methodology was used to determine if the cost of conceptual design BIC-CD4 would be reasonable, based on the level of activity expected at this facility. The required daily usage rate (i.e., person-hours per day) for BIC-CD4 is 520 persons per day, each spending a minimum of one hour at this basketball court to meet the cost criteria (see **Table 3.3.4-2**). Due to the type of recreation facility, it is not reasonable to assume that this area would experience this level of use on a typical day. Based on the noise barrier analysis performed, noise barriers are not considered reasonable at this location since they do not meet FDOT's required cost criteria. Therefore, noise barriers are not recommended for further consideration at this location.

## 3.3.5 Jacksonville Operations Center - CNE W2

Common Noise Environment W2 represents exterior areas of use (i.e., four pavilions and a picnic table) associated with the Jacksonville Operations Center located on the west side of I-95 between Baymeadows Road and Baymeadows Way West (see **Figure 3-1 Sheet 5**). Design year noise levels associated with the Build Alternative are predicted to approach, meet, or exceed the NAC of 67 dB(A) at the five receptor sites modeled at this location (i.e., JC-1 through JC-5); therefore, a noise barrier was considered as a noise abatement measure at this location. The predicted design year noise levels with the proposed improvements at these sites ranged from 71.5 dB(A) to 77.3 dB(A), an average of approximately 1.2 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**).

Four ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the western right-of-way line of I-95 to reduce traffic noise levels at these sites. The results of the noise barrier analysis are summarized in **Table 3.3.5-1**. All four conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. Of the four conceptual barrier designs evaluated, JC-CD1 is the lowest cost conceptual barrier design. Barrier design JC-CD1 represents a 16-foot-tall ground mounted noise barrier that extends approximately 1,080 feet, from Station 976+80 to Station 987+60. This barrier would benefit 100 percent of the impacted area, providing an average noise reduction of 8.2 dB(A) and a maximum noise reduction of 13.4 dB(A). The estimated construction cost of this conceptual barrier design is \$518,400.

The FDOT's special land use methodology was used to determine if the cost of conceptual design JC-CD1 would be reasonable, based on the level of activity expected at this facility. The required daily usage rate (i.e., person-hours per day) for JC-CD1 is 729 persons per day, each spending a minimum of one hour at one of the four small pavilions or the picnic table to



meet the cost criteria (see **Table 3.3.5-2**). Due to the limited number and size of pavilions and picnic tables, it is not reasonable to assume that this area would experience this level of use on a typical day. Based on the noise barrier analysis performed, noise barriers are not considered reasonable at this location since they do not meet FDOT's required cost criteria. Therefore, noise barriers are not recommended for further consideration at this location.

## 3.3.6 JP Morgan Chase South Building - CNE W3

Common Noise Environment W3 represents an exterior area of use (i.e., small pavilion) associated with the JP Morgan Chase southern building located on the west side of I-95 and south of JTB (see **Figure 3-1 Sheet 8**). Design year noise levels associated with the Build Alternative are predicted to approach, meet, or exceed the NAC of 67 dB(A) at Receptor Site JPC-1 (i.e., small pavilion); therefore, a noise barrier was considered as a noise abatement measure at this location. The predicted design year noise level with the proposed improvements at this site of 74.8 dB(A) is 1.5 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**).

Five ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the western right-of-way line of I-95 to reduce traffic noise levels at this site. The results of the noise barrier analysis are summarized in **Table 3.3.6-1**. All five conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. Of the five conceptual barrier designs evaluated, JP1-CD2 is the lowest cost conceptual barrier design. Barrier design JP1-CD2 represents a 16-foot-tall ground mounted noise barrier that extends approximately 560 feet, from Station 1040+00 to Station 1045+60. This barrier would benefit 100 percent of the impacted area, providing a maximum noise reduction of 7.0 dB(A). The estimated construction cost of this conceptual barrier design is \$268,800.

The FDOT's special land use methodology was used to determine if the cost of conceptual design JP1-CD2 would be reasonable, based on the level of activity expected at this facility. The required daily usage rate (i.e., person-hours per day) for JP1-CD2 is 378 persons per day, each spending a minimum of one hour at this small pavilion to meet the cost criteria (see **Table 3.3.6-2**). Due to the small size of the pavilion, it is not reasonable to assume that this area would experience this level of use on a typical day. Based on the noise barrier analysis performed, noise barriers are not considered reasonable at this location since they do not meet FDOT's required cost criteria. Therefore, noise barriers are not recommended for further consideration at this location.



## 3.3.7 JP Morgan Chase North Building - CNE W4

Common Noise Environment W4 represents an exterior area of use (i.e., four picnic tables) associated with the JP Morgan Chase northern building located on the west side of I-95 and south of JTB (see **Figure 3-1 Sheet 8**). Design year noise levels associated with the Build Alternative are predicted to approach, meet, or exceed the NAC of 67 dB(A) at Receptor Site JPC-3 (i.e., picnic tables); therefore, a noise barrier was considered as a noise abatement measure at this location. The predicted design year noise level with the proposed improvements at this site of 77.3 dB(A) is 1.3 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**).

Five ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the western right-of-way line of I-95 to reduce traffic noise levels at this site. The results of the noise barrier analysis are summarized in **Table 3.3.7-1**. All five conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. Of the five conceptual barrier designs evaluated, JP3-CD1 is the lowest cost conceptual barrier design. Barrier design JP3-CD1 represents a 14-foot-tall ground mounted noise barrier that extends approximately 180 feet, from Station 1049+60 to Station 1051+40. This barrier would benefit 100 percent of the impacted area, providing a maximum noise reduction of 7.0 dB(A). The estimated construction cost of this conceptual barrier design is \$75,600.

The FDOT's special land use methodology was used to determine if the cost of conceptual design JP3-CD1 would be reasonable, based on the level of activity expected at this facility. The required daily usage rate (i.e., person-hours per day) for JP3-CD1 is 106 persons per day, each spending a minimum of one hour at one of the four picnic tables to meet the cost criteria (see **Table 3.3.7-2**). Due to the limited number and size of the picnic tables, it is not reasonable to assume that this area would experience this level of use on a typical day. Based on the noise barrier analysis performed, noise barriers are not considered reasonable at this location since they do not meet FDOT's required cost criteria. Therefore, noise barriers are not recommended for further consideration at this location.

## 3.3.8 Bright Horizons School - CNE SE1

Common Noise Environment SE1 represents interior and exterior areas of use (i.e., playground, basketball court, and three picnic tables) associated with the Bright Horizons School located on the east side of I-95 between Philips Highway and Southside Boulevard



Ramps (see **Figure 3-1 Sheet 2**). Design year noise levels associated with the Build Alternative (see **Table 3.2-2**) are predicted to approach, meet, or exceed the NAC of 67 dB(A) at eight of the nine exterior receptor sites modeled at this location (i.e., BH-1 through BH-8) and to be below the NAC of 52 dB(A) at the interior receptor site (i.e., BH-10). Since the predicted noise levels at the exterior areas of use are predicted to approach, meet, or exceed the NAC, noise barriers were considered as a noise abatement measure at this location. The predicted design year noise levels with the proposed improvements at the exterior receptor sites ranged from 65.0 dB(A) to 77.4 dB(A), an average of approximately 2.2 dB(A) higher than the existing and no-build levels. The predicted design year noise levels with the proposed improvements at the interior receptor site modeled (i.e., BH-10) was 42.0 dB(A), 1.8 dB(A) higher than the existing and no-build levels (see Table 3.2-2).

Five ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the eastern right-of-way line of I-95 to reduce traffic noise levels at the impacted receptor sites. The results of the noise barrier analysis are summarized in **Table 3.3.8-1**. All five conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. Of the five conceptual barrier designs evaluated, BH1-CD2 is the lowest cost conceptual barrier design. Barrier design BH1-CD2 represents a 16-foot-tall ground mounted noise barrier that extends approximately 570 feet, from Station 835+00 to Station 840+60. This barrier would benefit 100 percent of the impacted area, providing an average noise reduction of 7.1 dB(A) and a maximum noise reduction of 9.6 dB(A). The estimated construction cost of this conceptual barrier design is \$273,600.

The FDOT's special land use methodology was used to determine if the cost of conceptual design BH1-CD2 would be reasonable, based on the level of activity expected at this facility. The required daily usage rate (i.e., person-hours per day) for BH1-CD2 is 385 persons per day, each spending a minimum of one hour at the playground, basketball court, or the three picnic tables to meet the cost criteria (**see Table 3.3.8-2**). Due to the limited area of the playground impacted, the limited potential use of a basketball court, and the low number of impacted picnic tables (i.e., three), it is not reasonable to assume that the exterior area would experience this level of use on a typical day. Based on the noise barrier analysis performed, noise barriers are not considered reasonable at this location since they do not meet FDOT's required cost criteria. Therefore, noise barriers are not recommended for further consideration at this location.



## 3.3.9 Bentley Green Apartments - CNE SE2

Common Noise Environment SE2 encompasses the multi-family residences within the Bentley Green Apartments located on the east side of I-95 and south of Baymeadows Road between Princeton Square Boulevard to the east and the eastern entrance road to Baywood Center to the west (see Figure 3-1 Sheet 6). An existing  $\sim 5.5$ -foot tall brick privacy wall is located between these residences and Baymeadows Road. The residences in the closest multistory building (i.e., two stories) associated with this rental community have patios and balconies that are exposed to Baymeadows Road traffic noise. The predicted design year (2045) noise levels with the proposed improvements at these residences ranged from 63.2 dB(A) to 71.0 dB(A), an average of approximately 0.5 dB(A) higher than the existing and 0.1 dB(A) lower than the no-build levels. (see **Table 3.2-2**). The proposed third eastbound travel lane along this segment of Baymeadows Road shift some of the traffic towards the median that minimizes the increase in traffic noise levels at this residential community. With the Build Alternative, balconies of four second floor residences are predicted to be impacted by design year (2045) traffic noise. Since the design year noise levels at these sites (i.e., BG-1.2, BG-2.2, BG-3.2, and BG-4.2) approached, met, or exceeded the NAC of 67 dB(A), noise barriers were considered as a noise abatement measure at this location.

The results of the noise barrier analysis for this area are summarized in **Table 3.3.9-1**. Four conceptual ground mounted noise barrier designs were evaluated along the eastern right-ofway line of Baymeadows Road to reduce traffic noise levels at the four impacted residences. All four conceptual noise barrier designs meet the reasonable cost criteria of equal to or less than \$42,000 per benefited receptor site. However, none of these conceptual designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. The maximum reduction of 6.7 dB(A) is associated with Conceptual Noise Barrier Design BG-CD4. Based on the noise barrier analysis performed, noise barriers are not considered reasonable abatement measure at this location since they do not meet FDOT's required noise abatement design goal. Therefore, noise barriers are not recommended for further consideration at this location.

The adjacent cross street on either side of this residential building (i.e., Princeton Square Boulevard and an entrance road to Baywood Center) limit the length of the noise barrier to 200 feet and the ability to have a long continuous effective noise barrier at this location without blocking access. The effectiveness of noise barriers at this location is also reduced due to the height of the impacted second floor receptor sites (i.e., 15 feet) relative to



Baymeadows Road. In addition, the existing 5.5-foot tall brick privacy wall between the first and second floor residences is blocking some of the Baymeadows Road traffic noise.

## 3.3.10 Jacksonville School of Autism - CNE NE1

Common Noise Environment NE1 represents a recreational area (playground) associated with the Jacksonville School of Autism located on the east side of I-95 between Baymeadows Road and Belfort Road (**see Figure 3-1 Sheet 5**). Design year noise levels associated with the Build Alternative are predicted to approach, meet, or exceed the NAC of 67 dB(A) at Receptor Site JSA-1 (i.e., playground); therefore, a noise barrier was considered as a noise abatement measure at this location. The predicted design year noise level with the proposed improvements at this site of 67.4 dB(A) is 1.9 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**).

Four ground mounted conceptual noise barrier designs of varying dimensions were evaluated along the eastern right-of-way line of I-95 to reduce traffic noise levels at this site. The results of the noise barrier analysis are summarized in **Table 3.3.10-1**. None of the conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site. Of the four conceptual barrier designs evaluated, JSA-CD4 is the optimal conceptual barrier design. Barrier design JSA-CD4 represents a 22-foot-tall ground mounted noise barrier that extends approximately 2,330 feet, from Station 957+00 to Station 980+00 with a maximum reduction of 6.4 dB(A). The effectiveness of noise barriers at this location is reduced due to the distance the playground is from the potential noise barrier (i.e., greater than 400 feet). Noise barriers are most effective when noise sensitive receptor sites are within 200 feet of a noise barrier. Based on the noise barrier analysis performed, noise barriers are not considered feasible at this location since they do not meet FDOT's required noise abatement design goal. Therefore, noise barriers are not recommended for further consideration at this location.

# 3.3.11 Lakeside and Bay Club Apartment Homes - CNE SBW1

Common Noise Environment SBW1 encompasses two multi-family residential communities (Lakeside and Bay Club Apartment Homes) located west of Southside Boulevard. Lakeside Apartment Homes community is located south of Western Lake Drive. Bay Club Apartment Homes are located between Western Lake Drive and Belle Rive Boulevard (see Figure 3-1 Sheet 9). The residences in the closest multi-story building (i.e., two and three stories) associated with this rental community have patios and balconies that are exposed to traffic



noise from Southside Boulevard and Southside Boulevard Service Road (see **Photographs 1** and 2 at the end of Section 3.3.11). The predicted design year (2045) noise levels with the proposed improvements at these residences ranged from 57.0 dB(A) to 69.6 dB(A), an average of approximately 0.2 dB(A) higher than the existing and 0.1 dB(A) higher than the no-build noise levels (see **Table 3.2-2**). With the Build Alternative, balconies of 46 residences are predicted to be impacted by design year (2045) traffic noise. This includes 25 residences within Lakeside Apartment Homes and 21 residences within Bay Club Apartment Homes. Since the design year noise levels at these sites approached, met, or exceeded the NAC of 67 dB(A), noise barriers were considered as a noise abatement measure for each of these communities.

Site features affecting the conceptual design of noise barriers at this location and construction costs include the cross streets (i.e., Western Lake Drive, Belle Rive Boulevard, and Bay Club entrance road). There are overhead electric lines located along the Southside Boulevard western right-of-way line north and south of Western Lake Drive (see Photograph **3** at the end of **Section 3.3.11**). Also, a small stormwater pond and an existing pedestrian railing are located on the west side of the sidewalk along the western side of the Southside Boulevard Service Road between Western Lake Drive and Belle Rive Boulevard in the vicinity of the Bay Club Apartment Homes community (see **Photograph 4** at the end of **Section 3.3.11**). The west side of the sidewalk also represents the western limits of the existing rightof way along the west side of the Southside Boulevard Service Road. Therefore, there is insufficient right-of-way to construct noise barriers between Western Lake Drive and Belle Rive Boulevard in the vicinity of the Bay Club Apartment Homes community. Additional right-of-way would be required to construct the noise barrier at this location. Also, there would be constructability issues with constructing a noise barrier due to the existing overhead utilities, stormwater pond, and sidewalk. Due to the increases in construction costs and right-of-way acquisition costs, noise barriers are not considered a feasible noise abatement measure at this location. Therefore, noise barriers are not recommended for further consideration and public input during the project's design phase for the 21 impacted residences of Bay Club Apartment Homes.

The results of the noise barrier analysis for the 25 impacted Lakeside Apartment Homes residences are summarized in **Table 3.3.11-1**. Five conceptual ground mounted noise barrier designs were evaluated along the western right-of-way line of Southside Boulevard (i.e., west of Southside Boulevard Service Road) to reduce traffic noise levels at the 25 impacted residences. All five conceptual noise barrier designs meet the minimum noise reduction



design goal of 7 dB(A) for at least one benefited site and meet the reasonable cost criteria of equal to or less than 42,000 per benefited receptor site.

Of the conceptual noise barrier designs evaluated for the impacted residences of Lakeside Apartment Homes, LA-CD5 represents the optimal noise barrier design since it maximizes the amount of noise reduction. Conceptual Noise Barrier Design LA-CD5 represents a 22-foot-tall ground mounted noise barrier that extends approximately 1,060 feet, from Station 115+50 to Station 126+10 (see Figure 3-1 Sheet 9 of 9). This conceptual noise barrier design would benefit 30 residences, including 19 of the 25 impacted residences, and would provide an average noise reduction of 11.9 dB(A) at benefited receptor sites with a maximum noise reduction of 14.1 dB(A). The maximum barrier height of 22 feet limits the ability to provide at least 5 dB(A) to some of the third floor balconies. The estimated construction cost of this conceptual noise barrier design is \$699,600 or \$23,320 per benefited receptor site. Therefore, Conceptual Noise Barrier Design LA-CD5 meets the reasonable cost criteria of equal to or less than \$42,000 per benefited receptor site and is recommended for further consideration and public input during the project's design phase.

Conceptual Noise Barrier Design LA-CD5 does satisfy the reasonableness and feasibility factors considered in the evaluation of noise abatement measures during a PD&E Study and is recommended for further consideration and public input during the project's design phase. However, there are potential noise barrier constructability issues associated with existing overhead electric lines. Therefore, further evaluation of the feasibility and reasonableness of noise barriers at this location is recommended to be performed during the design phase when more detailed engineering design is available and the potential for utility conflicts can be further evaluated. There are no outdoor advertising signs located in the vicinity of the recommended noise barrier limits that would be affected. A final decision to construct a noise barrier at this location will be dependent upon the results of the constructability review and support for noise barriers from the benefited noise sensitive sites.





**Photograph No. 1 -** Lakeside Apartment Homes (Patio and Balconies facing East towards Southside Boulevard).



**Photograph No. 2** - Bay Club Apartment Homes (Patios and Balconies facing East towards Southside Boulevard).





**Photograph No. 3** - Facing North along Southside Boulevard Service Road and North of Western Lake Drive (Sidewalk and Overhead Electric Lines Located along Western Right-of-way Line).



**Photograph No. 4** - Facing South along Southside Boulevard Service Road and South of Belle Rive Boulevard (Pedestrian Railing and Stormwater Pond Located along Western Right-ofway Line).



## 3.3.12 Park Potenza Apartment Homes - CNE SBE1

Common Noise Environment SBW1 encompasses the multi-family residences within the Park Potenza Apartment Homes located on the east side of Southside Boulevard and north of Belle Rive Boulevard (see **Figure 3-1 Sheet 9**). The multi-story buildings (i.e., three stories) associated with this rental community have patios and balconies that are exposed to Southside Boulevard traffic noise (see **Photograph 5** at the end of **Section 3.3.12**). Within this residential community, the predicted design year (2045) noise levels with the proposed improvements ranged from 62.6 dB(A) to 67.2 dB(A), an average of approximately 0.1 dB(A) higher than the existing and no-build levels (see **Table 3.2-2**). With the Build Alternative, 18 residences are predicted to be impacted by design year (2045) traffic noise. Since the design year noise levels at these sites approached, met, or exceeded the NAC of 67 dB(A), noise barriers were considered as a noise abatement measure at this location.

The results of the noise barrier analysis for this area are summarized in **Table 3.3.12-1**. Five conceptual ground mounted noise barrier designs were evaluated along the eastern right-ofway line of Southside Boulevard to reduce traffic noise levels at the 18 impacted residences. Four of the five conceptual noise barrier designs meet the minimum noise reduction design goal of 7 dB(A) for at least one benefited site and all five meet the reasonable cost criteria of equal to or less than \$42,000 per benefited receptor site. Of the conceptual noise barrier designs evaluated, PPA-CD5 represents the optimal noise barrier design at this location since it maximizes the amount of noise reduction to this community. The optimal noise barrier would benefit 34 residences, including 16 of the 18 impacted residences, and would provide an average noise reduction of 9.0 dB(A) at benefited receptor sites with a maximum noise reduction of 10.7 dB(A). The existing cross street in this area (i.e., Belle Rive Boulevard) limits the ability to construct a longer and continuous noise barrier that would provide benefit to all the impacted residences. The estimated construction cost of this conceptual noise barrier design is \$462,000 or \$13,588 per benefited receptor site. Therefore, Conceptual Noise Barrier Design PPA-CD5 meets the reasonable cost criteria of equal to or less than \$42,000 per benefited receptor site.

Conceptual Noise Barrier Design PPA-CD5 represents a 22-foot-tall ground mounted noise barrier starting at Station 142+00 and continues to Station 149+00 for a length of 700 feet. Conceptual Noise Barrier Design PPA-CD5 is recommended for further consideration and public input during the project's design phase. This conceptual noise barrier design satisfies the reasonableness and feasibility factors considered in the evaluation of noise abatement measures including safety and constructability during a PD&E Study. There are no outdoor



advertising signs located in the vicinity of the noise barriers recommended for further consideration in the design phase. The final decisions on noise barrier dimensions are made during the project's design phase. During the design phase, an engineering constructability review is conducted to confirm that the noise barrier is feasible and support for noise barriers from the benefited noise sensitive sites is determined.



**Photograph No. 5 -** Park Potenza Apartment Homes (Patios and Balconies facing West towards Southside Boulevard).



	Noise Barrier	Description	S				Maximum	Average	Percent of	Does Barrier Design	Does Barrier Design	Usage Required to be	Actual Usage Likelv	Does Barrier Design	Conceptual Noise
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Reduction dB(A)	Impacted Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Provide 5 dB(A) Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Meet FDOT's Noise Reduction and Cost Reasonableness Criteria?	Barrier Design Recommended for further Consideration and Public Input?
Noise Study A	rea 2 (Non-Residential/Special L	and Use) - E	East of I-95	between Bay	meadows Ro	ad and Belfort Ro	oad / Commo	n Noise Envir	onment E1 (	Outdoor Use Area - Pai	k Bench) - See Figure 3	3-1 Sheet 7			
SC-CD1	Ground Mounted (I-95 Eastern Right-of-Way Line)	16	640	1006+80	1013+20	\$307,200	7.0	7.0	100%	YES	YES	432	NO	NO	NO
SC-CD2	Ground Mounted (I-95 Eastern Right-of-Way Line)	18	600	1006+80	1012+80	\$324,000	7.0	7.0	100%	YES	YES	455	NO	NO	NO
SC-CD3	Ground Mounted (I-95 Eastern Right-of-Way Line)	20	580	1006+80	1012+60	\$348,000	7.0	7.0	100%	YES	YES	489	NO	NO	NO
SC-CD4	Ground Mounted (I-95 Eastern Right-of-Way Line)	22	560	1006+80	1012+40	\$369,600	7.0	7.0	100%	YES	YES	520	NO	NO	NO

## Table 3.3.1-1: Noise Barrier Analyses for Southpoint Community Church

X:P\Noise\_Studies\I-95\_JTBtoI-295\_D2\Noise Study Report 10L\Tables\ITable\_3\_3\_1-1\_SLU\_BarrierAnalysisSummary\_I-295\_6-15-2020.xlsxJJSA1\_SLU

			Minimum Reas	Usage Requir onableness C	ed to Meet FE Criteria (Input	OT's Cost Data)	
ltem	Criteria	Actual Usage	Concep	otual Noise Ba	arrier Design I	Number	Units
			SC-CD1	SC-CD2	SC-CD3	SC-CD4	
1	Enter Length of Proposed Noise Barrier		640	600	580	560	feet
2	Enter Height of Proposed Noise Barrier		16	18	20	22	feet
3	Total Square Feet of Proposed Noise Barrier (Multiply item 1 by Item 2)		10,240	10,800	11,600	12,320	feet <sup>2</sup>
4	Enter the average amount of time that a person stays at the site per visit	Unavailable					hours
5	Enter the average number of people that use this site per day that will receive at least 5 dB(A) benefit from abatement at the site	Unavailable					persons
6	Total Person Hours per Day Benefited by Noise Barrier (Multiply Item 4 by Item 5 - N/A) - Minimum Usage Required to Meet FDOT's Cost Reasonableness Criteria (Divide Item 3 by 7)		432	455	489	520	person-hours
7	Average Square Foot of Noise Barrier per Person Hour (Divide Item 3 by Item 6)		23.71	23.71	23.71	23.71	feet <sup>2</sup> /person-hours
8	Cost per Person Hour per Square Foot of Noise Barrier (Multiply Item 7 by \$42,000)	N/A	\$995,935	\$995,935	\$995,935	\$995,935	\$/person-hours/ft <sup>2</sup>
9	Does item 8 exceed the "abatement cost factor" of: \$995,935/person-hour/tt <sup>2</sup> ?	N/A	N/A	N/A	N/A	N/A	Yes/No
10	If item 9 is no, abatement is cost reasonable.	N/A	N/A	N/A	N/A	N/A	
11	If item 9 is yes, abatement is not cost reasonable.	N/A	N/A	N/A	N/A	N/A	

#### Table 3.3.1-2: Conceptual Noise Barrier Design - Usage Analysis for South Point Community Church

Conceptual Ground Mounted Noise Barrier Design Number	Noise Barrier Type (Location)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Average (Maximum) Noise Reduction for Impacted Receptor Sites dB(A)	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Cost (\$30 per square foot)	Average Cost/Site Benefited	Comments
Noise Study Area 3 (R	esidential Land Use) - East of I-95	between and	d Belfort Road	and South of J	. Turner Butle	r Boulevard / Co	mmon Noise Environme	nt E2 - See Figure	e 3-1 Sheet 8)					
CBP-CD1	Ground Mounted (I-95 Eastern Right-of-Way Line)	14	1,815	1032+00	1050+00	30	5.7 (7.1)	20	10	30	5.6	\$762,300	\$25,410	
CBP-CD2	Ground Mounted (I-95 Eastern Right-of-Way Line)	16	1,540	1034+20	1049+40	30	6.1 (8.1)	26	19	45	5.9	\$739,200	\$16,427	
CBP-CD3	Ground Mounted (I-95 Eastern Right-of-Way Line)	18	1,450	1035+40	1049+80	30	6.7 (8.5)	30	29	59	6.3	\$783,000	\$13,271	
CBP-CD4	Ground Mounted (I-95 Eastern Right-of-Way Line)	20	1,270	1036+00	1480+60	30	6.8 (9.1)	30	20	50	6.4	\$762,000	\$15,240	
CBP-CD5	Ground Mounted (I-95 Eastern Right-of-Way Line)	22	1,190	1036+40	1048+20	30	6.9 (9.4)	30	14	44	6.8	\$785,400	\$17,850	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase

Conceptual noise barrier design that meets both FDOT's reasonable cost criteria of \$42,000 per benefited receptor site and the design goal of at least a 7.0 dB(A) of noise reduction for at least one impacted receptor site; Noise barrier recommended for further consideration and public input during the project's design phase.

## mmunity)

	Noise Barrier	Description	S				Maximum	Average	Percent of	Does Barrier Design	Does Barrier Design	Usage Required to be	Actual Usage Likely	Does Barrier Design	Conceptual Noise
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Reduction dB(A)	Impacted Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Reduction and Cost Reasonableness Criteria?	Barrier Design Recommended for further Consideration and Public Input?
Noise Study A	rea 3 (Non-Residential/Special La	and Use) - E	ast of I-95 b	petween and	Belfort Road	and South of J. T	urner Butler E	Boulevard / C	ommon Noise	e Environment E3 (Outo	loor Use Area - Picnic 1	ables) - See Figure 3-1	Sheet 8)		
CB-CD1	Ground Mounted (I-95 Eastern Right-of-Way Line)	16	560	1049+40	1055+60	\$268,800	7.0	7.0	100%	YES	YES	378	NO	NO	NO
CB-CD2	Ground Mounted (I-95 Eastern Right-of-Way Line)	18	520	1049+80	1055+00	\$280,800	7.0	7.0	100%	YES	YES	395	NO	NO	NO
CB-CD3	Ground Mounted (I-95 Eastern Right-of-Way Line)	20	500	1050+00	1055+00	\$300,000	7.0	7.0	100%	YES	YES	422	NO	NO	NO
CB-CD4	Ground Mounted (I-95 Eastern Right-of-Way Line)	22	480	1050+00	1054+80	\$316,800	7.0	7.0	100%	YES	YES	445	NO	NO	NO

#### Table 3.3.3-1: Noise Barrier Analyses for Concourse Business Park

X:P\Noise\_Studies\I-95\_JTBtol-295\_D2\Noise Study Report 10L\Tables\Table\_3\_3\_1-1\_SLU\_BarrierAnalysisSummary\_1-295\_6-15-2020.xlsxJJSA1\_SLU

			Minimum Reas	Usage Requir onableness C	ed to Meet FE Criteria (Input	OT's Cost Data)	
Item	Criteria	Actual Usage	Concep	otual Noise Ba	arrier Design I	Number	Units
			CB-CD1	CB-CD2	CB-CD3	CB-CD4	
1	Enter Length of Proposed Noise Barrier		560	520	500	480	feet
2	Enter Height of Proposed Noise Barrier		16	18	20	22	feet
3	Total Square Feet of Proposed Noise Barrier (Multiply item 1 by Item 2)		8,960	9,360	10,000	10,560	feet <sup>2</sup>
4	Enter the average amount of time that a person stays at the site per visit	Unavailable					hours
5	Enter the average number of people that use this site per day that will receive at least 5 dB(A) benefit from abatement at the site	Unavailable					persons
6	Total Person Hours per Day Benefited by Noise Barrier (Multiply Item 4 by Item 5 - N/A) - Minimum Usage Required to Meet FDOT's Cost Reasonableness Criteria (Divide Item 3 by 7)		378	395	422	445	person-hours
7	Average Square Foot of Noise Barrier per Person Hour (Divide Item 3 by Item 6)		23.71	23.71	23.71	23.71	feet <sup>2</sup> /person-hours
8	Cost per Person Hour per Square Foot of Noise Barrier (Multiply Item 7 by \$42,000)	N/A	\$995,935	\$995,935	\$995,935	\$995,935	\$/person-hours/ft <sup>2</sup>
9	Does item 8 exceed the "abatement cost factor" of: \$995,935/person-hour/tt <sup>2</sup> ?	N/A	N/A	N/A	N/A	N/A	Yes/No
10	If item 9 is no, abatement is cost reasonable.	N/A	N/A	N/A	N/A	N/A	
11	If item 9 is yes, abatement is not cost reasonable.	N/A	N/A	N/A	N/A	N/A	

#### Table 3.3.3-2: Conceptual Noise Barrier Design - Usage Analysis for Concourse Business Park

	Noise Barrier	Description	S				Maximum	Average	Percent of	Does Barrier Design	Does Barrier Design	Usage Required to be	Actual Usage Likely	Does Barrier Design	Conceptual Noise
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Reduction dB(A)	Impacted Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Provide 5 dB(A) Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Meet FDO1's Noise Reduction and Cost Reasonableness Criteria?	Barrier Design Recommended for further Consideration and Public Input?
Noise Study A	rea 4 (Non-Residential/Special La	and Use) - V	/est of I-95	and South of	f Baymeadow	rs Road / Commo	n Noise Envir	onment W1 (F	Recreational	Area - Basketball Court	) - See Figure 3-1 Shee	et 5			
BIC-CD1	Ground Mounted (I-95 Western Right-of-Way Line)	16	810	953+00	960+00	\$388,800	5.3	5.3	100%	NO	YES	547	NO	NO	NO
BIC-CD2	Ground Mounted (I-95 Western Right-of-Way Line)	18	810	953+00	960+00	\$437,400	5.9	5.9	100%	NO	YES	615	NO	NO	NO
BIC-CD3	Ground Mounted (I-95 Western Right-of-Way Line)	20	810	953+00	960+00	\$486,000	6.5	6.5	100%	NO	YES	683	NO	NO	NO
BIC-CD4	Ground Mounted (I-95 Western Right-of-Way Line)	22	560	954+00	959+00	\$369,600	7.0	7.0	100%	YES	YES	520	NO	NO	NO

#### Table 3.3.4-1: Noise Barrier Analyses for Baymeadows Islamic Center

X:P\Noise\_Studies\I-95\_JTBtoI-295\_D2\Noise Study Report 10L\Tables\|Table\_3\_3\_1-1\_SLU\_BarrierAnalysisSummary\_I-295\_6-15-2020.xlsxJJSA1\_SLU

			Minimum Reas	Usage Requir onableness C	ed to Meet FD Criteria (Input	OOT's Cost Data)	
Item	Criteria	Actual Usage	Concep	otual Noise Ba	arrier Design I	Number	Units
			BIC-CD1	BIC-CD2	BIC-CD3	BIC-CD4	
1	Enter Length of Proposed Noise Barrier		810	810	810	560	feet
2	Enter Height of Proposed Noise Barrier		16	18	20	22	feet
3	Total Square Feet of Proposed Noise Barrier (Multiply item 1 by Item 2)		12,960	14,580	16,200	12,320	feet <sup>2</sup>
4	Enter the average amount of time that a person stays at the site per visit	Unavailable					hours
5	Enter the average number of people that use this site per day that will receive at least 5 dB(A) benefit from abatement at the site required to be cost reasonable	Unavailable					persons
6	Total Person Hours per Day Benefited by Noise Barrier (Multiply Item 4 by Item 5 - N/A) - Minimum Usage Required to Meet FDOT's Cost Reasonableness Criteria (Divide Item 3 by 7)		547	615	683	520	person-hours
7	Average Square Foot of Noise Barrier per Person Hour (Divide Item 3 by Item 6)		23.71	23.71	23.71	23.71	feet <sup>2</sup> /person-hours
8	Cost per Person Hour per Square Foot of Noise Barrier (Multiply Item 7 by \$42,000)	N/A	\$995,935	\$995,935	\$995,935	\$995,935	\$/person-hours/ft <sup>2</sup>
9	Does item 8 exceed the "abatement cost factor" of: \$995,935/person-hour/tt <sup>2</sup> ?	N/A	N/A	N/A	N/A	N/A	Yes/No
10	If item 9 is no, abatement is cost reasonable.	N/A	N/A	N/A	N/A	N/A	
11	If item 9 is yes, abatement is not cost reasonable.	N/A	N/A	N/A	N/A	N/A	

#### Table 3.3.4-2: Conceptual Noise Barrier Design - Usage Analysis for Baymeadows Islamic Center

X\P\Noise\_Studies\I-95\_JTBtoI-295\_D2\Noise Study Report 10L\Tables\[Table\_3\_3\_1-2\_SLU Worksheet\_I-295\_7-3-2020.xlsx]Chase\_JPC3

	Noise Barrier	Description	IS				Maximum	Average	Percent of	Does Barrier Design	Does Barrier Design	Usage Required to be	Actual Usage Likelv	Does Barrier Design	Conceptual Noise
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Reduction dB(A)	Impacted Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Provide 5 dB(A) Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Meet FDO1's Noise Reduction and Cost Reasonableness Criteria?	Barrier Design Recommended for further Consideration and Public Input?
Noise Study A	rea 5 (Non-Residential/Special La	and Use) - V	Vest of I-95	between Bay	/meadows Ro	oad and Baymead	lows Way We	st / Common	Noise Enviro	nment W2 (Outdoor Us	e Areas - Small Pavillio	ns) - See Figure 3-1 Sh	neet 5		
JC-CD1	Ground Mounted (I-95 Western Right-of-Way Line)	16	1,080	976+80	987+60	\$518,400	13.4	8.2	100%	YES	YES	729	NO	NO	NO
JC-CD2	Ground Mounted (I-95 Western Right-of-Way Line)	18	1,060	977+00	987+60	\$572,400	14.1	8.6	100%	YES	YES	805	NO	NO	NO
JC-CD3	Ground Mounted (I-95 Western Right-of-Way Line)	20	1,040	977+20	987+60	\$624,000	14.9	8.9	100%	YES	YES	877	NO	NO	NO
JC-CD4	Ground Mounted (I-95 Western Right-of-Way Line)	22	1,040	977+20	987+60	\$686,400	15.7	9.2	100%	YES	YES	965	NO	NO	NO

#### Table 3.3.5-1: Noise Barrier Analyses for Jacksonville Operations Center

X:P\Noise\_Studies\I-95\_JTBtol-295\_D2\Noise Study Report 10L\Tables\Table\_3\_3\_1-1\_SLU\_BarrierAnalysisSummary\_1-295\_6-15-2020.xlsxJJSA1\_SLU

			Minimum Reas	Usage Requir onableness C	ed to Meet FD Criteria (Input	OT's Cost Data)	
Item	Criteria	Actual Usage	Concep	otual Noise Ba	arrier Design I	Number	Units
			JC-CD1	JC-CD2	JC-CD3	JC-CD4	
1	Enter Length of Proposed Noise Barrier		1,080	1,060	1,040	1,040	feet
2	Enter Height of Proposed Noise Barrier		16	18	20	22	feet
3	Total Square Feet of Proposed Noise Barrier (Multiply item 1 by Item 2)		17,280	19,080	20,800	22,880	feet <sup>2</sup>
4	Enter the average amount of time that a person stays at the site per visit	Unavailable					hours
5	Enter the average number of people that use this site per day that will receive at least 5 dB(A) benefit from abatement at the site	Unavailable					persons
6	Total Person Hours per Day Benefited by Noise Barrier (Multiply Item 4 by Item 5 - N/A) - Minimum Usage Required to Meet FDOT's Cost Reasonableness Criteria (Divide Item 3 by 7)		729	805	877	965	person-hours
7	Average Square Foot of Noise Barrier per Person Hour (Divide Item 3 by Item 6)		23.71	23.71	23.71	23.71	feet <sup>2</sup> /person-hours
8	Cost per Person Hour per Square Foot of Noise Barrier (Multiply Item 7 by \$42,000)	N/A	\$995,935	\$995,935	\$995,935	\$995,935	\$/person-hours/ft <sup>2</sup>
9	Does item 8 exceed the "abatement cost factor" of: \$995,935/person- hour/ft <sup>2</sup> ?	N/A	No	No	No	No	Yes/No
10	If item 9 is no, abatement is cost reasonable.	N/A	N/A	N/A	N/A	N/A	
11	If item 9 is yes, abatement is not cost reasonable.	N/A	N/A	N/A	N/A	N/A	

#### Table 3.3.5-2: Conceptual Noise Barrier Design - Usage Analysis for Jacksonville Operations Center

	Noise Barrier	Description	S				Maximum	Average	Percent of	Does Barrier Design	Does Barrier Design	Usage Required to be	Actual Usage Likely	Does Barrier Design	Conceptual Noise
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Reduction dB(A)	Impacted Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Provide 5 dB(A) Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Meet FDOT's Noise Reduction and Cost Reasonableness Criteria?	Barrier Design Recommended for further Consideration and Public Input?
Noise Study A	rea 6 (Non-Residential/Special La	ınd Use) - W	Vest of I-95	and South o	f J. Turner Bu	itler Boulevard / C	Common Noise	e Environmen	it W3 (Outdoo	r Use Area - Small Pav	villion) - See Figure 3-1	Sheet 8			
JP1-CD1	Ground Mounted (I-95 Western Right-of-Way Line)	14	680	1039+20	1046+00	\$285,600	7.0	7.0	100%	YES	YES	401	NO	NO	NO
JP1-CD2	Ground Mounted (I-95 Western Right-of-Way Line)	16	560	1040+00	1045+60	\$268,800	7.0	7.0	100%	YES	YES	378	NO	NO	NO
JP1-CD3	Ground Mounted (I-95 Western Right-of-Way Line)	18	520	1040+20	1045+20	\$280,800	7.0	7.0	100%	YES	YES	395	NO	NO	NO
JP1-CD4	Ground Mounted (I-95 Western Right-of-Way Line)	20	480	1040+20	1045+00	\$288,000	7.1	7.1	100%	YES	YES	405	NO	NO	NO
JP1-CD5	Ground Mounted (I-95 Western Right-of-Way Line)	22	460	1040+20	1044+80	\$303,600	7.1	7.1	100%	YES	YES	427	NO	NO	NO

Table 3.3.6-1: Noise Barrier Analyses for JP Morgan Chase South Building

			Minimum Us	age Required Cri	l to Meet FDC teria (Input D	)T's Cost Rea ata)	sonableness	
Item	Criteria	Actual Usage		Conceptual N	oise Barrier D	esign Numbe	er	Units
			JP1-CD1	JP1-CD2	JP1-CD3	JP1-CD4	JP1-CD5	
1	Enter Length of Proposed Noise Barrier		680	560	520	480	460	feet
2	Enter Height of Proposed Noise Barrier		14	16	18	20	22	feet
3	Total Square Feet of Proposed Noise Barrier (Multiply item 1 by Item 2)		9,520	8,960	9,360	9,600	10,120	feet <sup>2</sup>
4	Enter the average amount of time that a person stays at the site per visit	Unavailable						hours
5	Enter the average number of people that use this site per day that will receive at least 5 dB(A) benefit from abatement at the site	Unavailable						persons
6	Total Person Hours per Day Benefited by Noise Barrier (Multiply Item 4 by Item 5 - N/A) - Minimum Usage Required to Meet FDOT's Cost Reasonableness Criteria (Divide Item 3 by 7)		401	378	395	405	427	person-hours
7	Average Square Foot of Noise Barrier per Person Hour (Divide Item 3 by Item 6)		23.71	23.71	23.71	23.71	23.71	feet <sup>2</sup> /person-hours
8	Cost per Person Hour per Square Foot of Noise Barrier (Multiply Item 7 by \$42,000)	N/A	\$995,935	\$995,935	\$995,935	\$995,935	\$995,935	\$/person-hours/ft <sup>2</sup>
9	Does item 8 exceed the "abatement cost factor" of: \$995,935/person- hour/ft <sup>2</sup> ?	N/A	No	No	No	No	No	Yes/No
10	If item 9 is no, abatement is cost reasonable.	N/A	N/A	N/A	N/A	N/A	N/A	
11	If item 9 is yes, abatement is not cost reasonable.	N/A	N/A	N/A	N/A	N/A	N/A	
X:\P\Noise_Studies	s\I-95_JTBtoI-295_D2\Noise Study Report 10L\Tables\[Table_3_3_1-2_SLU Worksheet_I-295_7-3-2020.xlsx]Chase_JPC3							

#### Table 3.3.6-2: Conceptual Noise Barrier Design - Usage Analysis for JP Morgan Chase South Building

	Noise Barrier			Maximum	Average	Percent of	Does Barrier Design	Does Barrier Design	Usage Required to be	Actual Usage Likelv	Does Barrier Design	n Conceptual Noise e Barrier Design			
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Noise Reduction dB(A) dB(A)	Impacted Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Provide 5 dB(A) Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Meet FDOT's Noise Reduction and Cost Reasonableness Criteria?	Recommended for further Consideration and Public Input?
Noise Study Area 6 (Non-Residential/Special Land Use) - West of I-95 and South of J. Turner Butler Boulevard / Common Noise Environment W4 (Outdoor Use Area - Picnic Tables) - See Figure 3-1 Sheet 8															
JP3-CD1	Ground Mounted (I-95 Western Right-of-Way Line)	14	180	1049+60	1051+40	\$75,600	7.0	7.0	100%	YES	YES	106	NO	NO	NO
JP3-CD2	Ground Mounted (I-95 Western Right-of-Way Line)	16	180	1049+60	1051+40	\$86,400	7.3	7.3	100%	YES	YES	121	NO	NO	NO
JP3-CD3	Ground Mounted (I-95 Western Right-of-Way Line)	18	180	1049+20	1051+00	\$97,200	7.4	7.4	100%	YES	YES	137	NO	NO	NO
JP3-CD4	Ground Mounted (I-95 Western Right-of-Way Line)	20	160	1049+20	1050+80	\$96,000	7.1	7.1	100%	YES	YES	135	NO	NO	NO
JP3-CD5	Ground Mounted (I-95 Western Right-of-Way Line)	22	160	1049+20	1050+80	\$105,600	7.2	7.2	100%	YES	YES	148	NO	NO	NO

Table 3.3.7-1: Noise Barrier Analyses for JP Morgan Chase North Building

			Minimum Us					
Item	Criteria	Actual Usage		Units				
			JP3-CD1	JP3-CD2	JP3-CD3	JP3-CD3	JP3-CD4	
1	Enter Length of Proposed Noise Barrier		180	180	180	160	160	feet
2	Enter Height of Proposed Noise Barrier		14	16	18	20	22	feet
3	Total Square Feet of Proposed Noise Barrier (Multiply item 1 by Item 2)		2,520	2,880	3,240	3,200	3,520	feet <sup>2</sup>
4	Enter the average amount of time that a person stays at the site per visit	Unavailable						hours
5	Enter the average number of people that use this site per day that will receive at least 5 dB(A) benefit from abatement at the site	Unavailable						persons
6	Total Person Hours per Day Benefited by Noise Barrier (Multiply Item 4 by Item 5 - N/A) - Minimum Usage Required to Meet FDOT's Cost Reasonableness Criteria (Divide Item 3 by 7)		106	121	137	135	148	person-hours
7	Average Square Foot of Noise Barrier per Person Hour (Divide Item 3 by Item 6)		23.71	23.71	23.71	23.71	23.71	feet <sup>2</sup> /person-hours
8	Cost per Person Hour per Square Foot of Noise Barrier (Multiply Item 7 by \$42,000)	N/A	\$995,935	\$995,935	\$995,935	\$995,935	\$995,935	\$/person-hours/ft <sup>2</sup>
9	Does item 8 exceed the "abatement cost factor" of: \$995,935/person- hour/ft <sup>2</sup> ?	N/A	No	No	No	No	No	Yes/No
10	If item 9 is no, abatement is cost reasonable.	N/A	N/A	N/A	N/A	N/A	N/A	
11	If item 9 is yes, abatement is not cost reasonable.	N/A	N/A	N/A	N/A	N/A	N/A	
11 X:\P\Noise_Studies	IT ITEM 9 IS YES, ADATEMENT IS NOT COST FEASONADIE.	N/A	N/A	N/A	N/A	N/A	N/A	

#### Table 3.3.7-2: Conceptual Noise Barrier Design - Usage Analysis for JP Morgan Chase North Building

	Noise Barrier			Maximum	Average	Percent of	Does Barrier Design	Does Barrier Design	Usage Required to be	Actual Usage Likelv	Does Barrier Design	In Conceptual Noise Barrier Design			
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Reduction dB(A) Noise Reduction dB(A)	Impacted Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Provide 5 dB(A) Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Meet FDOT's Noise Reduction and Cost Reasonableness Criteria?	Barrier Design Recommended for further Consideration and Public Input?
Noise Study Area 1 (Non-Residential/Special Land Use) - East of I-95 between Philips Highway and Baymeadows Road / Common Noise Environment SE1 (Indoor and Outdoor Use Areas - Playground and Picnic Tables) - See Figure 3-1 Sheet 2															
BH1-CD1	Ground Mounted (I-95 Eastern Right-of-Way Line)	14	660	834+00	840+60	\$277,200	8.2	6.6	100%	YES	YES	390	NO	NO	NO
BH1-CD2	Ground Mounted (I-95 Eastern Right-of-Way Line)	16	570	835+00	840+60	\$273,600	9.6	7.1	100%	YES	YES	385	NO	NO	NO
BH1-CD3	Ground Mounted (I-95 Eastern Right-of-Way Line)	18	550	835+20	840+60	\$297,000	10.6	7.5	100%	YES	YES	417	NO	NO	NO
BH1-CD4	Ground Mounted (I-95 EAstern Right-of-Way Line)	20	530	835+40	840+60	\$318,000	11.6	7.9	100%	YES	YES	447	NO	NO	NO
BH1-CD5	Ground Mounted (I-95 Eastern Right-of-Way Line)	22	530	835+40	840+60	\$349,800	12.3	8.2	100%	YES	YES	492	NO	NO	NO

## Table 3.3.8-1: Noise Barrier Analyses for Bright Horizons School

			Minimum Us	age Requirec Cri	l to Meet FDC teria (Input D	)T's Cost Rea ata)	sonableness	
Item	Criteria	Actual Usage		Units				
			BH1-CD1	BH1-CD2	BH1-CD3	BH1-CD4	BH1-CD5	
1	Enter Length of Proposed Noise Barrier		660	570	550	530	530	feet
2	Enter Height of Proposed Noise Barrier		14	16	18	20	22	feet
3	Total Square Feet of Proposed Noise Barrier (Multiply item 1 by Item 2)		9,240	9,120	9,900	10,600	11,660	feet <sup>2</sup>
4	Enter the average amount of time that a person stays at the site per visit	Unavailable						hours
5	Enter the average number of people that use this site per day that will receive at least 5 dB(A) benefit from abatement at the site	Unavailable						persons
6	Total Person Hours per Day Benefited by Noise Barrier (Multiply Item 4 by Item 5 - N/A) - Minimum Usage Required to Meet FDOT's Cost Reasonableness Criteria (Divide Item 3 by 7)		390	385	417	447	492	person-hours
7	Average Square Foot of Noise Barrier per Person Hour (Divide Item 3 by Item 6)		23.71	23.71	23.71	23.71	23.71	feet <sup>2</sup> /person-hours
8	Cost per Person Hour per Square Foot of Noise Barrier (Multiply Item 7 by \$42,000)	N/A	\$995,935	\$995,935	\$995,935	\$995,935	\$995,935	\$/person-hours/ft <sup>2</sup>
9	Does item 8 exceed the "abatement cost factor" of: \$995,935/person-hour/tt <sup>2</sup> ?	N/A	No	No	No	No	No	Yes/No
10	If item 9 is no, abatement is cost reasonable.	N/A	N/A	N/A	N/A	N/A	N/A	
11	If item 9 is yes, abatement is not cost reasonable.	N/A	N/A	N/A	N/A	N/A	N/A	

#### Table 3.3.8-2: Conceptual Noise Barrier Design - Usage Analysis for Bright Horizons School

## Table 3.3.9-1: Noise Barrier Analyses for Bentley Green Apartments (Multi-Family Residential Community)

Conceptual Ground Mounted Noise Barrier Design Number	Noise Barrier Type (Location)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Average (Maximum) Noise Reduction for Impacted Receptor Sites dB(A)	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Cost (\$30 per square foot)	Average Cost/Site Benefited	Comments
Noise Study Area 1 (Residential Land Use) - East of I-95 between Philips Highway and Baymeadows Road / Common Noise Environment SE2 - See Figure 3-1 Sheet 6														
BG-CD1	Ground Mounted (Baymeadows Road Southern Right-of-way Line)	16	200	72+80	74+80	4	5.6 (6.4)	3	0	3	5.9	\$96,000	\$32,000	
BG-CD2	Ground Mounted (Baymeadows Road Southern Right-of-way Line)	18	200	72+80	74+80	4	5.7 (6.6)	3	0	3	6.1	\$108,000	\$36,000	None of the conceptual barrier designs are not recommended for further consideration or public input during the project's design
BG-CD3	Ground Mounted (Baymeadows Road Southern Right-of-way Line)	20	200	72+80	74+80	4	5.8 (6.7)	3	1	4	5.9	\$120,000	\$30,000	phase since the minimum noise reduction design goal of 7 dB(A) for at least one impacted residence is not met.
BG-CD4	Ground Mounted (Baymeadows Road Southern Right-of-way Line)	22	200	72+80	74+80	4	5.9 (6.7)	3	2	5	5.8	\$132,000	\$26,400	



Conceptual noise barrier design that meets both FDOT's reasonable cost criteria of \$42,000 per benefited receptor site and the design goal of at least a 7.0 dB(A) of noise reduction for at least one impacted receptor site; Noise barrier recommended for further consideration and public input during the project's design phase.

	Noise Barrier	IS				Maximum	Average	Percent of	Does Barrier Design	gn Does Barrier Design Provide 5 dB(A)	Usage Required to be	Actual Usage Likely		Conceptual Noise	
Noise Barrier Conceptual Design	Noise Barrie Type (Location)	Height (Feet)	Length (feet)	Begin Station	End Station	Total Estimated Cost	Noise Reduction dB(A)	Noise Reduction dB(A)	n Area Benefited	Meet 7 dB(A) Reduction Goal At Any Site?	Reduction For Entire Exterior Area of Use Impacted?	Cost Reasonable (Person Hours per Day)	to Exceed Required Usage to be Cost Reasonable	Meet FDOT's Noise Reduction Criteria?	Recommended for further Consideration and Public Input?
Noise Study Area 2 (Non-Residential/Special Land Use) - East of I-95 between Baymeadows Road and Belfort Road / Common Noise Environment NE1 (Outdoor Use Area - Playground) - See Figure 3-1 Sheet 5															
JSA-CD1	Ground Mounted (I-95 Eastern Right-of-Way Line)	16	2,330	957+00	980+00	\$1,118,400	3.9	3.9	100%	NO	NO			NO	NO
JSA-CD2	Ground Mounted (I-95 Eastern Right-of-Way Line)	18	2,330	957+00	980+00	\$1,258,200	4.8	4.8	100%	NO	NO			NO	NO
JSA-CD3	Ground Mounted (I-95 Eastern Right-of-Way Line)	20	2,330	957+00	980+00	\$1,398,000	5.6	5.6	100%	NO	YES			NO	NO
JSA-CD4	Ground Mounted (I-95 Eastern Right-of-Way Line)	22	2,330	957+00	980+00	\$1,537,800	6.4	6.4	100%	NO	YES			NO	NO

#### Table 3.3.10-1: Noise Barrier Analyses for Jacksonville School of Autism

X:P\Noise\_Studies\I-95\_JTBtoI-295\_D2\Noise Study Report 10L\Tables\Table\_3\_3\_1-1\_SLU\_BarrierAnalysisSummary\_I-295\_6-15-2020.xlsxJ3SA1\_SLU

Conceptual Ground Mounted Noise Barrier Design Number	Ground Mounted Noise Barrier Location / Southside Boulevard Western Right-of-Way Line	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Average (Maximum) Noise Reduction for Impacted Receptor Sites dB(A)	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Cost (\$30 per square foot)	Average Cost/Site Benefited	Comments
Noise Study Area 8 (Residential Land Use) - West of Southside Boulevard between Paradise Island Boulevard and Belle Rive Boulevard / Common Noise Environment SBW1 - See Figure 3-1 Sheet 9														
LA-CD1	South of Western Lake Drive	14	1,060	115+50	126+10	25	3.5 (10.1)	12	11	23	8.1	\$445,200	\$19,357	
LA-CD12	South of Western Lake Drive	16	1,060	115+50	126+10	25	5.0 (10.9)	13	11	24	9.8	\$508,800	\$21,200	
LA-CD3	South of Western Lake Drive	18	1,060	115+50	126+10	25	6.0 (11.8)	13	11	24	11.2	\$572,400	\$23,850	
LA-CD4	South of Western Lake Drive	20	1,060	115+50	126+10	25	7.3 (13.1)	13	11	24	12.3	\$636,000	\$26,500	
LA-CD5	South of Western Lake Drive	22	1,060	115+50	126+10	25	9.4 (14.1)	19	11	30	11.9	\$699,600	\$23,320	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase

Table 3.3.11-1: Noise Barrier Analyses for Lakeside Apartment Homes (Multi-Family Residential Community)

X:|P|Noise\_Studies|I-95\_JTBtoI-295\_D2|Noise Study Report 10L\_Rev|Tables[[Tables\_3\_3\_2-1\_Rev\_Barrier\_Analysis\_I-95&JTB\_S\_12-7-2021.xlsx]10L\_Table LA\_S1 12-5-21

Conceptual noise barrier design that meets both FDOT's reasonable cost criteria of \$42,000 per benefited receptor site and the design goal of at least a 7.0 dB(A) of noise reduction for at least one impacted receptor site; Noise barrier recommended for further consideration and public input during the project's design phase.

Conceptual Ground Mounted Noise Barrier Design Number	Ground Mounted Noise Barrier Location / Southside Boulevard Eastern Right-of-Way Line	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Average (Maximum) Noise Reduction for Impacted Receptor Sites dB(A)	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Cost (\$30 per square foot)	Average Cost/Site Benefited	Comments
Noise Study Area 9 (R	Residential Land Use) - East of Sou	thside Boule	vard and North	of Belle Rive	Boulevard / C	ommon Noise E	nvironment SBE1 - See I	Figure 3-1 Sheet	9					
PPA-CD1	North of Belle Rive Boulevard	14	700	142+00	149+00	18	2.5 (6.2)	4	18	22	6.2	\$294,000	\$13,364	
PPA-CD2	North of Belle Rive Boulevard	16	700	142+00	149+00	18	3.9 (7.5)	4	18	22	7.0	\$336,000	\$15,273	
PPA-CD3	North of Belle Rive Boulevard	18	700	142+00	149+00	18	5.4 (8.7)	12	18	30	7.3	\$378,000	\$12,600	
PPA-CD4	North of Belle Rive Boulevard	20	700	142+00	149+00	18	6.7 (9.6)	16	18	34	7.9	\$420,000	\$12,353	
PPA-CD5	North of Belle Rive Boulevard	22	700	142+00	149+00	18	7.9 (10.7)	16	18	34	9.0	\$462,000	\$13,588	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase

Table 3.3.12-1: Noise Barrier Analyses for Park Potenza Apartment Homes (Multi-Family Residential Community)

Conceptual noise barrier design that meets both FDOT's reasonable cost criteria of \$42,000 per benefited receptor site and the design goal of at least a 7.0 dB(A) of noise reduction for at least one impacted receptor site; Noise barrier recommended for further consideration and public input during the project's design phase.
# 4.0 Conclusions

A traffic noise study was performed in accordance with 23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010), the FDOT's PD&E Manual, Part 2, Chapter 18, Highway Traffic Noise (July 1, 2020), and FDOT's Traffic Noise Modeling and Analysis Practitioners Handbook (December 31, 2018).

Design year (2045) traffic noise levels for the Build Alternative will approach, meet, or exceed the NAC at 99 residences within six residential areas (i.e., NAC B) and at eight special land uses (i.e., NACs C and E). The six impacted residential communities include four residences within Bentley Green Apartments, 30 residences within Canopy at Belfort Park Apartments, one residence (NAC B) within Portiva Apartments, 25 residences within Lakeside Apartment Homes, 21 residences within Bay Club Apartment Homes, and 18 residences within Park Potenza Apartment Homes. The eight impacted special land use sites include outdoor use areas associated with the Bright Horizons School, Jacksonville School of Autism, Southpoint Community Church, Concourse Business Park, Baymeadows Islamic Center, Jacksonville Operations Center, and JP Morgan Chase South and North Buildings. In accordance with FHWA and FDOT policies, the feasibility and reasonableness of noise barriers were considered for these impacted noise sensitive sites.

Noise barriers were not considered a feasible noise abatement measure at the one impacted residence at Portiva Apartments because the impacted site represents an isolated residence. For a noise barrier to be considered an acoustically feasible abatement measure, it must benefit at least two impacted receptor sites.

Noise barriers were also not found to be a feasible abatement measure at Bay Club Apartment Homes. There is insufficient right-of-way to construct noise barriers between Western Lake Drive and Belle Rive Boulevard in the vicinity of the Bay Club Apartment Homes residences. Additional right-of-way would be required to construct the noise barrier at this location. Also, there would be constructability issues with constructing a noise barrier due to the existing overhead utilities, stormwater pond, and sidewalk. Therefore, noise barriers are not recommended for further consideration at this location.

Noise barriers were evaluated for the impacted residences associated with Bentley Green Apartments (i.e., CNE SE2), Canopy at Belfort Apartments (i.e., CNE E2), Lakeside



 Table 4-1: Noise Barrier Evaluation Summary and Recommendations (Sheet 1 of 2)

Noise Sensitive Area (Common Noise Environment) Noise Study Area 1 - Ea	Type of Noise Sensitive Site (Noise Abatement Criteria Activity Category) ast of I-95 between 1	Conceptual Ground Mounted Noise Barrier Design Number (Location) Philips Highway and B	Height (feet) Baymeadow	Length (feet)	Begin Station Number ee Figure 3-	End Station Number 1 Sheets 2	Number of Impacted Receptor Sites through 6)	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Maximum Noise Reduction for all Benefited Receptor Sites dB(A)	Cost (\$30 per square foot)	Average Cost/Site Benefited	Does Optimal Barrier Design Meet FDOT's Reasonable Noise Abatement Criteria of \$42,000 per Benefited Receptor Site and 7.0 dB(A) Noise Reduction Design Goal?	Noise Barrier Recommended for Further Consideration and Public Input?	Comments
Bright Horizons Daycare (CNE SE1) - See Figure 3-1 Sheet 2	Institutional - Interior (D) & Outdoor Use Areas/Picnic Tables & Playground (C)	BH-CD2 (I-95 Eastern Right-of-Way Line)	16	570	835+00	840+60	Special Land Use				7.1	9.6	\$273,600		NO	NO	The conceptual design meets FJOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria for special uses. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Bentley Green Apartments (CNE SE2) - See Figure 3-1 Sheet 6	Multi-Family Residential (B)	BG-CD5 (Baymeadows Road Southern Right-of- Way Line)	22	200	72+80	74+80	4	4	1	5	5.9	6.7	\$132,000	\$26,400	NO	NO	Represents the optimal conceptual noise barrier design but not recommended for further consideration or public input during the project's design phase at this location. The conceputal design meets FDOT's Reasonable Cost Criteria but does not meet the 7.0 dB(A) Noise Reduction Design Goal.
Noise Study Area 2 - Ea	ast of I-95 between l	Baymeadows Road and	l Belfort Ro	oad (See Fi	igure 3-1 Sh	neets 5 thro	ough 8)										
Jacksonville School of Autisn (CNE NE1) - See Figure 3-1 Sheets 5	n Institutional - Outdoor Use Area/Playground (C)	JSA-CD4 (I-95 Eastern Right-of-Way Line)	22	2,330	957+00	980+00	Special Land Use				6.4	6.4	\$1,537,800		NO	NO	The conceptual design does not meet the 7.0 dB(A) Noise Reduction Design Goal. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Southpoint Community Church (CNE E1) - See Figure 3-1 Sheet 7	Place of Worship - Outdoor Use Area/Park Bench (C)	SC-CD1 (I-95 Eastern Right-of-Way Line)	16	640	1006+80	1013+20	Special Land Use				7.0	7.0	\$307,200		NO	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria for special uses. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Canopy at Belfort Park Apartments (CNE E2) - See Figure 3-1 Sheet 8	Multi-Family Residential (B)	CBP-CD5 (I-95 Eastern Right-of-Way Line)	22	1,190	1036+40	1048+20	30	30	14	44	6.9	9.4	\$785,400	\$17,850	YES	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase. Meets both FDOT's 7.0 dB(A) Noise Reduction Goal and Reasonable Cost Criteria.
Noise Study Area 3 - Ea	ast of I-95 between a	nd Belfort Road and So	outh of J. 7	Turner Bu	tler Bouleva	ard (Figure	3-1 Sheet 8)										
Concourse Business Park (CNE E3) · See Figure 3·1 Sheet 8	Office Building - Outdoor Use Area/Picnic Tables (E)	CB-CD1 (I-95 Eastern Right-of-Way Line)	16	560	1049+40	1055+60	Special Land Use				7.0	7.0	\$268,800		NO	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria for special uses. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Noise Study Area 4 - We	est of I-95 and South	n of Baymeadows Road	(See Figu	re 3-1 She	ets 2 throug	gh 5)											
Baymeadows Islamic Center (CNE W1) - See Figure 3-1 Sheet 5	Place of Worship - Recreational Area/ Basketball Court (C)	BIC-CD4 (I-95 Western Right-of-Way Line)	22	560	954+00	959+00	Special Land Use				7.0	7.0	\$369,600		NO	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Noise Study Area 5 - We	est of I-95 between I	Baymeadows Road and	Baymeado	ows Way W	Vest (See Fi	gure 3-1 Sh	neets 5 throug	gh 7)									
Jacksonville Operations Center (CNE W2) - See Figure 3-1 Sheet 5	Office Building - Outdoor Use Areas/Small Pavilions (E)	JC-CD1 (I-95 Western Right-of-Way Line)	16	1,080	976+80	987+60	Special Land Use				8.2	13.4	\$518,400		NO	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Noise Study Area 6 - We	est of I-95 and South	n of J. Turner Butler B	oulevard (	See Figure	3-1 Sheet 8	8)											
JP Morgan Chase South Building (CNE W3) - See Figure 3-1 Sheet 8	Office Building - Outdoor Use Area/Small Pavilion (E)	JP1-CD2 (I-95 Western Right-of-Way Line)	16	560	1040+00	1045+60	Special Land Use				7.0	7.0	\$268,800		NO	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
JP Morgan Chase North Building (CNE W4) · See Figure 3-1 Sheet 8	Office Building - Outdoor Use Area/ Picnic Tables (E)	JP3-CD1 (I -95 Western Right-of-Way Line)	14	180	1049+60	1051+40	Special Land Use				7.0	7.0	\$75,600		NO	NO	The conceptual design meets FDOT's 7.0 dB(A) Noise Reduction Design Goal, but does not meet the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.

#### Table 4-1: Noise Barrier Evaluation Summary and Recommendations (Sheet 2 of 2)

Noise Sensitive Area (Common Noise Environment)	Type of Noise Sensitive Site (Noise Abatement Criteria Activity Category)	Conceptual Ground Mounted Noise Barrier Design Number (Location)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Maximum Noise Reduction for all Benefited Receptor Sites dB(A)	Cost (\$30 per square foot)	Average Cost/Site Benefited	Does Optimal Barrier Design Meet FDOT's Reasonable Noise Abatement Criteria of \$42,000 per Benefited Receptor Site and 7.0 dB(A) Noise Reduction Design Goal?	Noise Barrier Recommended for Further Consideration and Public Input?	Comments
Noise Study Area 8 - Wes	st of Southside Bou	llevard between Paradi	se Island I	Boulevard	and Belle F	tive Boulev	ard (See Figu	ure 3-1 Sheet 9)									
Lakeside Apartment Homes (CNE SBW1) · See Figure 3·1 Sheet 9	Multi-Family Residential (B)	LA-CD5 (Southside Boulevard Western Right- of-Way Line/South of Western Lake Drive)	22	1,060	115+50	126+10	25	19	11	30	11.9	14.1	\$699,600	\$23,320	YES	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase. Meets both FDOT's 7.0 dB(A) Noise Reduction Goal and Reasonable Cost Criteria.
Bay Club Apartment Homes	Multi-Family	(Southside Boulevard Western Right-of-Way	14 - 22	530	127+00	132+30									NO (Not Feasible - Insufficient Right	NO	Not considered a feasible noise abatment measure due to
(CNE SBW1) - See Figure 3-1 Sheet 9	Residential (B)	Line/North of Western Lake Drive)	14 - 22	820	132+80	141+00	21								of Way to Contruct Noise Barrier)	NO	insumcent right of way to accommodate a noise barrier at this location.
Noise Study Area 9 - Eas	t of Southside Bou	levard and North of Be	lle Rive Bo	oulevard (S	See Figure a	3-1 Sheet 9	)										
Park Potenza Apartment Homes (CNE SBE1) - See Figure 3-1 Sheet 9	Multi-Family Residential (B)	PPA-CD5 (Southside Boulevard Eastern Right- of-Way Line/North of Belle Rive Boulevard)	22	700	142+00	149+00	18	16	18	34	7.0	7.0	\$462,000	\$13,588	YES	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase. Meets both FDOT's 7.0 dB(A) Noise Reduction Goal and Reasonable Cost Criteria.

Notes:

Conceptual noise barrier design that meets both FDOT's reasonable cost criteria of \$42,000 per benefited receptor site and the design goal of at least a 7.0 dB(A) of noise reduction for at least one impacted receptor site. Noise barrier recommended for further consideration and public input during the project's design phase.

Apartment Homes (i.e., CNE SBW1), and the Park Potenza Apartment Homes (i.e., CNE SBE1) and the eight special land use sites that approach, meet, or exceed the NAC (CNE SE1, NE1, E1, E3, and W1 through W4). The results of the noise barrier analysis for each of these locations/CNEs are summarized in **Table 4-1**. The locations of the noise barriers (both recommended and not recommended) are depicted on **Figure 3-1**.

Noise barriers are recommended for further consideration at three residential communities including Canopy at Belfort Park Apartments (CNE E2), Lakeside Apartment Homes (CNE SBW1), and the Park Potenza Apartment Homes (CNE SBE1). The recommended conceptual noise barrier designs at these locations meet FDOT's noise abatement cost criteria (i.e., equal to or less than \$42,000 per benefited receptor site) and noise reduction reasonableness criteria of 7 dB(A) at one or more impacted sites.

For Canopy at Belfort Park Apartments, the recommended conceptual noise barrier design at this location (CBP-CD5) represents a 22-foot-tall ground mounted noise barrier starting at Station 1036+40 and continues to Station 1048+20 for a length of 1,190 feet (**see Figure 3-1 Sheet 8 of 9**). The recommended noise barrier is expected to reduce traffic noise by at least 5 dB(A) at 44 residences including all 30 impacted residences. The estimated cost of the recommended barrier is \$785,400 or \$17,850 per benefited receptor site.

For Lakeside Apartments, the recommended conceptual noise barrier at this location (LA-CD5) represents a 22-foot-tall ground mounted noise barrier that extends approximately 1,060 feet, from Station 115+50 to Station 126+10 (see Figure 3-1 Sheet 9 of 9). The recommended noise barrier is expected to reduce traffic noise by at least 5 dB(A) at 30 residences, including 19 of the 25 impacted residences. The estimated cost of the recommended barrier is \$699,600 or \$23,320 per benefited receptor site. During the design phase, there are potential noise barrier constructability issues associated with existing overhead electric lines that will need to be evaluated prior to making a decision to construct a noise barrier at this location.

For Park Potenza Apartment Homes, the recommended conceptual noise barrier at this location (PPA-CD5) represents a 22-foot-tall ground mounted noise barrier starting at Station 142+00 and continues to Station 149+00 for a length of 700 feet (see Figure 3-1 Sheet 9 of 9). The recommended noise barrier system is expected to reduce traffic noise by at least 5 dB(A) at 34 residences, including 16 of the 18 impacted residences. The estimated cost of the recommended barrier is \$462,000 or \$13,588 per benefited receptor site.



Noise barriers were not found to be a reasonable abatement measure at Bentley Green Apartments (i.e., CNE SE2). Therefore, noise barriers are not recommended for further consideration at this location. The optimal conceptual noise barrier design did not meet the minimum noise reduction design goal of 7 dB(A) for at least one impacted residence. The adjacent cross street on either side of this residential building limits the length of the noise barrier to 200 feet and the ability to have a long continuous effective noise barrier at this location without blocking access. The effectiveness of noise barriers at this location is also reduced due to the height of the impacted second floor receptor sites (i.e., 15 feet) relative to Baymeadows Road.

Noise barriers are not recommended for further consideration at the eight special land use locations (i.e., CNE SE1, NE1, E1, E3, and CNE-W1 through CNE W4). Noise barriers at these special land use sites are unable to meet the minimum required daily usage rate (i.e., person-hours per day) needed for the conceptual noise barrier designs to be considered cost reasonable or meet the minimum noise reduction design goal of 7 dB(A). There are no existing, conforming or legally permitted outdoor advertising signs in the vicinity of the recommended noise barriers that need to be considered in the design phase.

Based on the noise analyses performed to date, there appears to be no apparent solutions available to mitigate the noise impacts at 14 residences including four associated with Bentley Green Apartments (CNE SE2), one associated with the Portiva Apartments, six associated with Lakeside Apartment Homes, 21 associated with the Bay Club Apartment Homes, two associated with Park Potenza Apartment Homes, and at eight special land uses [i.e., Bright Horizons School (CNE SE1), Jacksonville School of Autism (CNE NE1) Southpoint Community Church (CNE E1); Concourse Business Park (CNE E3), Baymeadows Islamic Center (CNE W1); Jacksonville Operations Center (CNE W2); and JP Morgan Chase South (CNE W3) and North Buildings (CNE W4)]. Therefore, the traffic noise impacts to these noise sensitive sites are an unavoidable consequence of the project.

### Statement of Likelihood

FDOT is committed to the construction of feasible noise abatement measures (i.e., a noise barrier) at the noise impacted sites associated with the Canopy at Belfort Park Apartments, Lakeside Apartment Homes, and Potenza Apartment Homes as identified in **Table 4.1** and **Figure 3-1** contingent upon the following conditions:



- Final recommendations on the construction of abatement measures is determined during the project's design and through the public involvement process;
- Detailed noise analyses during the final design process support the need, feasibility, and reasonableness of providing abatement;
- Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
- Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and
- Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

It is likely that the noise abatement measures for the identified locations will be constructed if found feasible based on the contingencies listed above. If, during the project's design phase, any of the contingency conditions listed above cause abatement to no longer be considered reasonable or feasible for a given location(s), such determination(s) will be made prior to requesting approval for construction advertisement. Commitments regarding the exact abatement measure locations, heights, and type (or approved alternatives) will be made during project reevaluation and at a time before the construction advertisement is approved.



# 5.0 Construction Noise and Vibration

During construction of the project, there is the potential for noise impacts to be substantially greater than those resulting from normal traffic operations because heavy equipment is typically used to build roadways. In addition, construction activities may result in vibration impacts. Therefore, early identification of potential noise/vibration sensitive sites along the project corridor is important in minimizing noise and vibration impacts. The project area does include residential, institutional, and commercial land uses. Construction noise and vibration impacts to these sites will be minimized by adherence to the controls listed in the latest edition of the FDOT's Standard Specifications for Road and Bridge Construction. Vibration sensitive facilities within the project construction limits could include medical or laboratory facilities, eye clinics, sound recording studios and television stations, residences, museums, and historic buildings. A reassessment of the project area for sites particularly sensitive to construction noise and/or vibration will be performed during design to ensure that impacts to such sites are minimized.



# 6.0 Community Coordination

To aid in promoting land use compatibility, a copy of this Noise Study Report, which provides information that can be used to protect future land development from becoming incompatible with anticipated traffic noise levels, will be provided to the City of Jacksonville. In addition, generalized future noise impact contours for the properties in the immediate vicinity of the project have been developed for Noise Abatement Activity Categories B/C and E (i.e., residential and other sensitive land uses and sensitive commercial land uses, respectively). These contours represent the approximate distance from the edge of the nearest proposed travel lane of I-95 and Baymeadows Road to the limits of the area predicted to approach [i.e., within 1 dB(A)], meet, or exceed the NAC in the design year (2045). The contours do not consider any shielding of noise provided by structures between the receiver and the proposed travel lane and the contour at various locations are presented in **Table 6-1**. To minimize the potential for incompatible land use, noise sensitive land uses should be located beyond this distance.

	Speed	Distance from Proposed N Conto	Vearest Travel Lane to Noise ur (Feet)
Roadway Segment	(mph)	66 dB(A) - Activity Category B/C	71 dB(A) - Activity Category E
I-95 North of I-295 to Southside Boulevard Ramps	65	640	340
I-95 Southside Boulevard Ramps to Baymeadows Road	65	450	235
I-95 Baymeadows Road to J. Turner Butler Boulevard	65	640	340
Baymeadows Road West of I- 95 and West of Western Way	45	85	40
Southside Boulevard North of Paradise Island Boulevard to North of Belle Rive Boulevard	45	115	50

Table 6-1: Design Year (2045) Noise Impact Contour Distances



- 23 CFR Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise", Federal Register, Vol. 75, No. 133, Tuesday, July 13, 2010; pages 39834-39839.
- Federal Highway Administration Report FHWA-HEP-10-025, "Highway Traffic Noise: Analysis and Abatement Guidance", June 2010 (revised December 2010); 76 pages.
- Federal Highway Administration Report FHWA-PD-96-009, "FHWA Traffic Noise Model, Version 1.0 User's Guide", January 1998; 192 pages + supplements.
- Federal Highway Administration Report FHWA-HEP-18-065, "Noise Measurement Handbook - Final Report", June 2018; 205 pages.
- A Method to Determine Reasonableness and Feasibility of Noise Abatement at Special Use Locations, Roger L. Wayson and John M. MacDonald, University of Central Florida; Updated July 22, 2009; 64 pp.
- Florida Department of Transportation. "Design Manual, Topic No. 625-000-002", Part 2, Section 264, Noise Walls and Perimeter Walls, 2018.
- Florida Department of Transportation. "Highway Traffic Noise", Part 2, Chapter 18. Project Development and Environment Manual, Florida Department of Transportation, Tallahassee, July 1, 2020.
- Florida Department of Transportation "Standard Specifications for Road and Bridge Construction", August 2019.
- Florida Department of Transportation "Traffic Noise Modeling and Analysis Practitioners Handbook", December 31, 2018.



# APPENDIX A I-95 PD&E Noise Study Traffic Data (Tables 2.2-1 through 2.2-8)





#### **FPID NUMBER: 435577-1**

#### Table 2.2-1: Traffic Data for Noise Modeling - Existing Conditions: I-95 and Ramps

Ro	adway Segment	Speed Limit	2019	Existing Traffic (vph)	Number	LOS C	Highest Peak	Volume used	Percent Heavy	Percent Medium	Percent	Percent	Volume used	Cars	Heavy Trucks	Medium Trucks	Buses	Motorcycles
	aaway ooginent	opeed Islint	AM	PM	of Lanes	Volume*	Volume	in TNM	Trucks <sup>1</sup>	Trucks <sup>1</sup>	Buses <sup>1</sup>	Motorcycles <sup>1</sup>	in TNM	per lane	per lane	per Lane	per lane	per lane
	1	T		T	Γ	I	Northb	ound		1	I	I	I	Γ	1	Γ		
	I-95 - Between Philips Highway and Southside Blvd	65	7,458	5,925	4	6,080	7,458	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	Combined Off-Ramp to Southside Blvd	45	2,104	1,106	2	-	2,104	2,104	0.61%	0.36%	0.04%	0.12%	2,104	1,038	7	4	1	2
	I-95 - Between Southside Blvd and Baymeadows Road	65	5,354	4,819	3	4,580	5,354	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	Off-Ramp to Baymeadows Road	45	773	556	1	-	773	773	0.61%	0.36%	0.04%	0.12%	773	764	5	3	0	1
	I-95 - Between Ramps at Baymeadows Road	65	4,581	4,263	3	4,580	4,581	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	On-Ramp from Baymeadows Road	45	1,049	1,137	2	-	1,137	1,137	0.61%	0.36%	0.04%	0.12%	1,137	562	4	2	0	1
Northbound I-95	I-95 - Between Baymeadows Road and JTB	65	5,630	5,400	4	6,080	5,630	5,630	4.25%	2.49%	0.25%	0.12%	5,630	1,307	60	35	4	2
	Combined Off-Ramp to JTB	45	1,876	1,298	1	-	1,876	1,876	0.61%	0.36%	0.04%	0.12%	1,876	1,855	11	7	1	2
	Off-Ramp to Channelized Right onto JTB	45	1,536	892	1	-	1,536	1,536	0.61%	0.36%	0.04%	0.12%	1,536	1,519	9	5	1	2
	Off-Ramp to Intersection at JTB	45	340	406	1	-	406	406	0.61%	0.36%	0.04%	0.12%	406	403	2	1	0	0
	I-95 - Between Combined Off- Ramp to JTB and Loop On- Ramp from EB JTB	65	3,754	4,102	3	4,580	4,102	4,102	4.25%	2.49%	0.25%	0.12%	4,102	1,270	58	34	3	2
	Loop On-Ramp from EB JTB	25	250	391	1	-	391	391	0.61%	0.36%	0.04%	0.12%	391	388	2	1	0	0
C 1 1 f	I-95 - Between Loop On-Ramp from EB JTB and Diagonal On- Ramp from WB JTB	65	4,004	4,493	3	4,580	4,493	4,493	4.25%	2.49%	0.25%	0.12%	4,493	1,391	64	37	4	2
		<u>.</u>		·			Southb	ound										
	I-95 - Between Ramps at JTB	65	3,497	4,408	3	4,580	4,408	4,408	4.25%	2.49%	0.25%	0.12%	4,408	1,363	63	37	4	2
	Loop On-Ramp from WB JTB	25	935	2,021	2	-	2,021	2,021	0.61%	0.36%	0.04%	0.12%	2,021	999	6	4	1	1
C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Diagonal On-Ramp from EB JTB	45	131	246	1	-	246	246	0.61%	0.36%	0.04%	0.12%	246	244	1	1	0	0
	Combined On-Ramp from JTB	45	1,066	2,267	2	-	2,267	2,267	0.61%	0.36%	0.04%	0.12%	2,267	1,120	7	4	1	2
	I-95 - Between JTB and Baymeadows Road	65	4,563	6,675	3	4,580	6,675	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
S. db	Off-Ramp to Baymeadows Road	45	1,643	783	2	-	1,643	1,643	0.61%	0.36%	0.04%	0.12%	1,643	812	5	3	1	1
Southbound 1-95	I-95 - Between Ramps at Baymeadows Road	65	2,920	5,892	3	4,580	5,892	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	On-Ramp from Baymeadows Road	45	349	1,038	2	-	1,038	1,038	0.61%	0.36%	0.04%	0.12%	1,038	513	3	2	0	1
	I-95 - Between Baymeadows Road and Southside Blvd (I)	65	3,269	6,930	4	6,080	6,930	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	I-95 - Between Baymeadows Road and Southside Blvd (II)	65	3,269	6,930	3	4,580	6,930	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	On-Ramp from SB Southside Blvd	45	778	1,392	2	-	1,392	1,392	0.61%	0.36%	0.04%	0.12%	1,392	687	4	3	1	1
	I-95 - Between Southside Blvd and Philips Highway	65	4,047	8,322	4	6,080	8,322	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate) 720171

<sup>1</sup> Vehicle split percentages based on Annual Vehicle Classification Counts from FDOT count stations:

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Shawn Birst, P.E.

Print Name

Date: 7/7/2020

#### FPID NUMBER: 435577-1

#### Table 2.2-2: Traffic Data for Noise Modeling - Future (2045) No-Build Conditions: I-95 and Ramps

Ro	adway Sooment	Speed Limit	2045	No Build Traffic (vph)	Number	LOS C	Highest Peak	Volume	Percent Heavy	Percent Medium	Percent	Percent	Volume used	Cars	Heavy	Medium Trucks	Buses	Motorcycles
	idway Segmeni	Speed Lana	AM	PM	of Lanes	Volume*	Volume	in TNM	Trucks <sup>1</sup>	Trucks <sup>1</sup>	Buses <sup>1</sup>	Motorcycles <sup>1</sup>	in TNM	per lane	per lane	per Lane	per lane	per lane
							Northbe	ound	_	_								
	I-95 - Between Philips Highway and Southside Blvd	65	8,340	5,570	4	6,080	8,340	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	Combined Off-Ramp to Southside Blvd	45	2,050	1,140	2	-	2,050	2,050	0.61%	0.36%	0.04%	0.12%	2,050	1,013	6	4	1	1
	I-95 - Between Southside Blvd and Baymeadows Road	65	6,290	4,430	3	4,580	6,290	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	Off-Ramp to Baymeadows Road	45	900	730	1	-	900	900	0.61%	0.36%	0.04%	0.12%	900	891	5	3	0	1
	I-95 - Between Ramps at Baymeadows Road	65	5,390	3,700	3	4,580	5,390	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	On-Ramp from Baymeadows Road	45	1,450	1,580	1	-	1,580	1,580	0.61%	0.36%	0.04%	0.12%	1,580	1,561	10	6	1	2
Northbound I-95	I-95 - Between Baymeadows Road and JTB	65	6,840	5,280	3	4,580	6,840	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	Combined Off-Ramp to JTB	45	2,060	1,360	1	-	2,060	2,060	0.61%	0.36%	0.04%	0.12%	2,060	2,037	13	7	1	2
	Off-Ramp to Channelized Right onto JTB	45	1,220	780	1		1,220	1,220	0.61%	0.36%	0.04%	0.12%	1,220	1,208	7	4	0	1
	Off-Ramp to Intersection at JTB	45	840	580	1	-	840	840	0.61%	0.36%	0.04%	0.12%	840	831	5	3	0	1
	I-95 - Between Combined Off- Ramp to JTB and Loop On- Ramp from EB JTB	65	4,780	3,920	3	4,580	4,780	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	Loop On-Ramp from EB JTB	25	360	290	1	-	360	360	0.61%	0.36%	0.04%	0.12%	360	357	2	1	0	0
 	I-95 - Between Loop On-Ramp from EB JTB and Diagonal On- Ramp from WB JTB	65	5,140	4,210	3	4,580	5,140	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
							Southbo	ound										
	I-95 - Between Ramps at JTB	65	3,920	4,780	3	4,580	4,780	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	Loop On-Ramp from WB JTB	25	1,110	1,750	2	-	1,750	1,750	0.61%	0.36%	0.04%	0.12%	1,750	864	6	3	1	1
	Diagonal On-Ramp from EB JTB	45	250	310	1	-	310	310	0.61%	0.36%	0.04%	0.12%	310	307	2	1	0	0
	Combined On-Ramp from JTB	45	1,360	2,060	2	-	2,060	2,060	0.61%	0.36%	0.04%	0.12%	2,060	1,017	7	4	1	1
Southbound I-95	I-95 - Between JTB and Baymeadows Road	65	5,280	6,840	4	6,080	6,840	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	Off-Ramp to Baymeadows Road	45	1,580	1,450	2	-	1,580	1,580	0.61%	0.36%	0.04%	0.12%	1,580	780	5	3	1	1
oounoone	I-95 - Between Ramps at Baymeadows Road	65	3,700	5,390	3	4,580	5,390	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	On-Ramp from Baymeadows Road	45	730	900	2	-	900	900	0.61%	0.36%	0.04%	0.12%	900	444	3	2	0	1
	I-95 - Between Baymeadows Road and Southside Blvd (I)	65	4,430	6,290	4	6,080	6,290	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	I-95 - Between Baymeadows Road and Southside Blvd (II)	65	4,430	6,290	3	4,580	6,290	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	On-Ramp from SB Southside Blvd	45	1,140	2,050	2	-	2,050	2,050	0.61%	0.36%	0.04%	0.12%	2,050	1,013	6	4	1	1
	I-95 - Between Southside Blvd and Philips Highway	65	5,570	8,340	4	6,080	8,340	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate) 720171

<sup>1</sup> Vehicle split percentages based on Annual Vehicle Classification Counts from FDOT count stations:

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Shawn Birst, P.E.

Print Name

Date: 7/7/2020

#### **FPID NUMBER: 435577-1**

#### Table 2.2-3: Traffic Data for Noise Modeling - Future (2045) Build Conditions: I-95 and Ramps

P	C	Second Limits	2045	Build Traffic (vph)	Number	LOS C	Highest	Volume	Percent	Percent	Percent	Percent	Volume used	Cars	Heavy	Medium	Buses	Motorcycles
Ko	adway Segment	Speed Limit	AM	РМ	of Lanes	Volume*	Volume	in TNM	Trucks <sup>1</sup>	Trucks <sup>1</sup>	Buses <sup>1</sup>	Motorcycles <sup>1</sup>	in TNM	per lane				
	1		1		1		Northbo	ound					1	1		1		
	I-95 - Between Ramps at Philips Highway	65	8,470	5,730	5	7,680	8,470	7,680	4.25%	2.49%	0.25%	0.12%	7,680	1,427	65	38	4	2
	On-Ramp from Philips Highway	45	1,050	1,030	1	-	1,050	1,050	0.61%	0.36%	0.04%	0.12%	1,050	1,039	6	4	0	1
	I-95 - Between Philips Highway and Southside Blvd	65	9,520	6,760	5	7,680	9,520	7,680	4.25%	2.49%	0.25%	0.12%	7,680	1,427	65	38	4	2
	Combined Off-Ramp to Southside Boulevard (Southbound and Northbound)	45	2,140	1,310	2	-	2,140	2,140	0.61%	0.36%	0.04%	0.12%	2,140	1,056	7	4	1	2
	I-95 - Between Southside Boulevard and Baymeadows Road	65	7,380	5,450	4	6,080	7,380	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	I-95 Off-Ramp to Baymeadows Road	45	1,170	770	2	-	1,170	1,170	0.61%	0.36%	0.04%	0.12%	1,170	578	4	2	0	1
Northbound I-95	I-95 - Between Ramps at Baymeadows Road	65	6,210	4,680	4	6,080	6,210	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	I-95 On-Ramp from Baymeadows Road	45	1,470	1,860	2	-	1,860	1,860	0.61%	0.36%	0.04%	0.12%	1,860	918	6	4	1	1
	I-95 - Between Baymeadows Road and JTB (4-GUL & 1-Aux Lane)	65	7,680	6,540	5	7,680	7,680	7,680	4.25%	2.49%	0.25%	0.12%	7,680	1,427	65	38	4	2
	I-95 Off-Ramp to J'I'B	45	2,560	1,480	2	-	2,560	2,560	0.61%	0.36%	0.04%	0.12%	2,560	1,264	8	5	1	2
	I-95 - Between Off-Ramp to JTB and Loop On-Ramp from Eastbound JTB	65	5,120	5,060	4	6,080	5,120	5,120	4.25%	2.49%	0.25%	0.12%	5,120	1,188	55	32	3	2
	Loop On-Ramp from Eastbound JTB	25	460	460	1	-	460	460	0.61%	0.36%	0.04%	0.12%	460	454	3	2	0	1
Southbound I-95	I-95 - Between Loop On-Ramp from Eastbound JTB and On- Ramp from Westbound JTB	65	5,580	5,520	4	6,080	5,580	5,580	4.25%	2.49%	0.25%	0.12%	5,580	1,295	59	35	4	2
							Southbo	ound										
	I-95 - Between Ramps at JTB	65	5,060	5,120	3	4,580	5,120	4,580	4.25%	2.49%	0.25%	0.12%	4,580	1,418	65	38	4	2
	Loop On-Ramp from Westbound JTB	25	1,250	2,280	2	-	2,280	2,280	0.61%	0.36%	0.04%	0.12%	2,280	1,126	7	4	1	2
	On-Ramp from Eastbound JTB	45	230	280	1	-	280	280	0.61%	0.36%	0.04%	0.12%	280	277	2	1	0	0
	Combined On-Ramps from JTB	45	1,480	2,560	2	-	2,560	2,560	0.61%	0.36%	0.04%	0.12%	2,560	1,264	8	5	1	2
	I-95 - Between JTB and Baymeadows Road	65	6,540	7,680	5	7,680	7,680	7,680	4.25%	2.49%	0.25%	0.12%	7,680	1,427	65	38	4	2
	I-95 Off-Ramp to Baymeadows Road	45	1,860	1,470	2	-	1,860	1,860	0.61%	0.36%	0.04%	0.12%	1,860	918	6	4	1	1
Southbound I-95	I-95 - Between Ramps at Baymeadows Road	65	4,680	6,210	4	6,080	6,210	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	I-95 On-Ramp from Baymeadows Road	45	770	1,170	1	-	1,170	1,170	0.61%	0.36%	0.04%	0.12%	1,170	1,158	7	4	0	1
	I-95 - Between Southside Boulevard and Baymeadows Road	65	5,450	7,380	4	6,080	7,380	6,080	4.25%	2.49%	0.25%	0.12%	6,080	1,411	65	38	4	2
	On-Ramp from Southbound Southside Boulevard	45	1,310	2,140	2	-	2,140	2,140	0.61%	0.36%	0.04%	0.12%	2,140	1,056	7	4	1	2
	I-95 - Between Southside Boulevard and Philips Highway	65	6,760	9,520	6	10,320	9,520	9,520	4.25%	2.49%	0.25%	0.12%	9,520	1,473	68	40	4	2
	Diagonal Off-Ramp to Philips Highway	45	1,030	1,050	1	-	1,050	1,050	0.61%	0.36%	0.04%	0.12%	1,050	1,039	6	4	0	1
	I-95 - Between Diagonal Off- Ramp and Loop On-Ramp at Philips Highway	65	5,730	8,470	5	7,680	8,470	7,680	4.25%	2.49%	0.25%	0.12%	7,680	1,427	65	38	4	2

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate)

<sup>1</sup> Vehicle split percentages based on Annual Vehicle Classification Counts from FDOT count stations:

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Shawn Birst, P.E.

Date: 7/7/2020

Print Name

720171

#### **FPID NUMBER: 435577-1**

#### Table 2.2-4: Traffic Data for Noise Modeling - Existing Conditions for Arterial Roadways

Po	adway Saamant	Speed Limit	2019	Existing Traffic (vph)	Number	LOS C	Highest	Volume	Percent	Percent	Percent	Percent	Volume used	Cars	Heavy	Medium	Buses	Motorcycles
10.	adway segment	Speed Linit	AM	PM	of Lanes	Volume*	Volume	in TNM	Trucks <sup>1</sup>	Trucks <sup>1</sup>	Buses <sup>1</sup>	Motorcycles <sup>1</sup>	in TNM	per lane				
	T		1	1	1	1	Eastbou	ınd	1	1	1	1	1	1	1	1		1
	EB Approach toward Baymeadows Way	45	1,180	1,277	2	1,910	1,277	1,277	0.61%	0.36%	0.04%	0.12%	1,277	631	4	3	0	1
	Baymeadows Way to Freedom Commerce Parkway	45	1,397	2,323	3	3,087	2,323	2,323	0.61%	0.36%	0.04%	0.12%	2,323	765	5	3	0	1
Eastbound	Freedom Commerce Parkway to I-95 SB Ramp Terminal Intersection	45	1,436	2,713	3	3,087	2,713	2,713	0.61%	0.36%	0.04%	0.12%	2,713	895	5	3	0	1
Baymeadows Rd	I-95 SB Ramp Terminal Intersection to I-95 NB Ramp Terminal Intersection	45	1,772	2,353	3	2,940	2,353	2,353	0.61%	0.36%	0.04%	0.12%	2,353	775	5	3	0	1
	I-95 NB Ramp Terminal Intersection to Western Way	45	1,694	2,085	2	2,006	2,085	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
	East of Western Way	45	1,223	1,696	2	1,910	1,696	1,696	0.61%	0.36%	0.04%	0.12%	1,696	838	5	3	1	1
	West of JTB	45	741	1,276	3	2,940	1,276	1,276	0.61%	0.36%	0.04%	0.12%	1,276	419	3	2	0	1
	Bonneval Rd to I-95 SB Ramp Terminal Intersection	45	1,063	2,224	2	2,006	2,224	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
J. Turner Butler Blvd	I-95 SB Ramp Terminal Intersection I-95 NB Ramp Terminal Intersection	45	1,265	1,841	2	1,910	1,841	1,841	0.61%	0.36%	0.04%	0.12%	1,841	909	6	4	1	1
	I-95 NB Ramp Terminal Intersection to Salisbury Rd Intersection	45	2,978	3,050	3	3,087	3,050	3,050	0.61%	0.36%	0.04%	0.12%	3,050	1,006	6	4	0	1
	JTB East of Salisbury Rd	45	2,459	2,778	2	2,006	2,778	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
							Westbo	ınd										
	JTB West of Southpoint Blvd	45	2,821	3,501	4	3,970	3,501	3,501	0.61%	0.36%	0.04%	0.12%	3,501	866	5	3	0	1
	Off-Ramp from Belfort Rd to I- 95 On-Ramp <sup>2</sup>	45	5,316	5,819	7	10,320	5,819	5,819	0.61%	0.36%	0.04%	0.12%	5,819	822	5	3	0	1
J. Turner Butler Blvd	I-95 On-Ramp to I-95 SB Ramp Terminal Intersection	45	2,883	3,414	3	3,087	3,414	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
	I-95 SB Ramp Terminal Intersection to Bonneval Road	45	2,495	1,603	3	3,087	2,495	2,495	0.61%	0.36%	0.04%	0.12%	2,495	823	5	3	0	1
	West of JTB	45	1,571	1,175	1	872	1,571	872	0.61%	0.36%	0.04%	0.12%	872	863	5	3	0	1
	East of Western Way	45	1,622	1,298	2	1,910	1,622	1,622	0.61%	0.36%	0.04%	0.12%	1,622	801	5	3	1	1
	Western Way to I-95 NB Ramp Terminal Intersection	45	2,020	1,611	4	4,169	2,020	2,020	0.61%	0.36%	0.04%	0.12%	2,020	499	3	2	0	1
Westbound	I-95 NB Ramp Terminal Intersection to I-95 SB Ramp Terminal Intersection	45	1,822	1,298	3	2,940	1,822	1,822	0.61%	0.36%	0.04%	0.12%	1,822	600	4	2	0	1
Baymeadows Rd	I-95 SB Ramp Terminal Intersection to Freedom Commerce Parkway	45	2,780	1,403	4	3,970	2,780	2,780	0.61%	0.36%	0.04%	0.12%	2,780	687	4	3	0	1
	Freedom Commerce Parkway to Baymeadows Way	45	2,440	1,351	2	2,006	2,440	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
	West of Baymeadows Way	45	1,233	1,170	2	1,910	1,233	1,233	0.61%	0.36%	0.04%	0.12%	1,233	610	4	2	0	1
							Northbo	und										
Western Way S	outh of Baymeadows Road	40	492	428	1	872	492	492	0.61%	0.36%	0.04%	0.12%	492	486	3	2	0	1
							Southbo	und										
Western Way S	outh of Baymeadows Road	40	513	459	1	872	513	513	0.61%	0.36%	0.04%	0.12%	513	507	3	2	0	1

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate) 720171

<sup>1</sup> Vehicle split percenta es based on Annual Vehicle Classification Counts from FDOT count st

 $^2$  No LOS C Volume for a 7 lane highway, using 6 lane for a freeway

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Shawn Birst, P.E.

Date: 7/7/2020

Print Name

#### FPID NUMBER: 435577-1

#### Table 2.2-5: Traffic Data for Noise Modeling - Future (2045) No-Build Conditions for Arterial Roadways

Ro	adway Segment	Speed Limit	2045	No-Build Traffic (vph)	Number of Lanes	LOS C Volume*	Highest Peak	Volume used	Percent Heavy	Percent Medium	Percent Buses <sup>1</sup>	Percent Motorcycles <sup>1</sup>	Volume used in TNM	Cars per lane	Heavy Trucks	Medium Trucks	Buses per lane	Motorcycles per lane
			AM	PM			Easthou	in INM	Trucks	Trucks				<u> </u>	per lane	per Lane		
	ER Annual toward																	
	Baymeadows Way	45	1,470	1,790	2	1,910	1,790	1,790	0.61%	0.36%	0.04%	0.12%	1,790	884	6	3	1	1
	Baymeadows Way to Freedom Commerce Parkway	45	1,620	3,160	3	3,087	3,160	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
Eastbound	Freedom Commerce Parkway to I-95 SB Ramp Terminal Intersection	45	1,730	3,580	3	3,087	3,580	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
Baymeadows Rd	I-95 SB Ramp Terminal Intersection to I-95 NB Ramp Terminal Intersection	45	1,850	3,790	3	2,940	3,790	2,940	0.61%	0.36%	0.04%	0.12%	2,940	970	6	3	0	1
	I-95 NB Ramp Terminal Intersection to Western Way	45	1,740	3,310	2	2,006	3,310	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
	East of Western Way	45	1,350	2,840	2	1,910	2,840	1,910	0.61%	0.36%	0.04%	0.12%	1,910	943	6	4	1	1
	West of JTB	45	2,030	620	3	2,940	2,030	2,030	0.61%	0.36%	0.04%	0.12%	2,030	670	4	2	0	1
	Bonneval Rd to I-95 SB Ramp Terminal Intersection	45	2,860	1,700	2	2,006	2,860	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
J. Turner Butler Blvd	I-95 SB Ramp Terminal Intersection I-95 NB Ramp Terminal Intersection	45	2,730	2,020	2	1,910	2,730	1,910	0.61%	0.36%	0.04%	0.12%	1,910	943	6	4	1	1
	I-95 NB Ramp Terminal Intersection to Salisbury Rd Intersection	45	4,480	3,130	3	3,087	4,480	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
	JTB East of Salisbury Rd	45	4,140	3,470	2	2,006	4,140	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
							Westbo	und	•	•		•		•	•	•		
	JTB West of Southpoint Blvd	45	4,200	5,330	4	3,970	5,330	3,970	0.61%	0.36%	0.04%	0.12%	3,970	982	6	4	0	1
	Off-Ramp from Belfort Rd to I- 95 On-Ramp <sup>2</sup>	45	6,440	7,160	7	10,320	7,160	7,160	0.61%	0.36%	0.04%	0.12%	7,160	1,012	6	4	0	1
J. Turner Butler Blvd	I-95 On-Ramp to I-95 SB Ramp Terminal Intersection	45	3,700	4,920	3	3,087	4,920	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
	I-95 SB Ramp Terminal Intersection to Bonneval Rd	45	3,060	3,420	3	3,087	3,420	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
	West of JTB	45	1,750	2,650	1	872	2,650	872	0.61%	0.36%	0.04%	0.12%	872	863	5	3	0	1
	East of Western Way	45	2,480	2,000	2	1,910	2,480	1,910	0.61%	0.36%	0.04%	0.12%	1,910	943	6	4	1	1
	Western Way to I-95 NB Ramp Terminal Intersection	45	2,840	2,290	4	4,169	2,840	2,840	0.61%	0.36%	0.04%	0.12%	2,840	702	4	3	0	1
Westbound	I-95 NB Ramp Terminal Intersection to I-95 SB Ramp Terminal Intersection	45	2,400	1,920	3	2,940	2,400	2,400	0.61%	0.36%	0.04%	0.12%	2,400	791	5	3	0	1
Baymeadows Rd	I-95 SB Ramp Terminal Intersection to Freedom Commerce Parkway	45	3,130	2,260	4	3,970	3,130	3,130	0.61%	0.36%	0.04%	0.12%	3,130	774	5	3	0	1
	Freedom Commerce Parkway to Baymeadows Way	45	2,950	2,130	2	2,006	2,950	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
	West of Baymeadows Way	45	1,480	1,860	2	1,910	1,860	1,860	0.61%	0.36%	0.04%	0.12%	1,860	918	6	4	1	1
							Northbo	und										
Western Way S	outh of Baymeadows Road	40	480	430	1	872	480	480	0.61%	0.36%	0.04%	0.12%	480	474	3	2	0	1
				Southbo	und													
Western Way S	outh of Baymeadows Road	40	470	550	1	872	550	550	0.61%	0.36%	0.04%	0.12%	550	544	3	2	0	1

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate) 720171

<sup>1</sup> Vehicle split percentages based on Annual Vehicle Classification Counts from FDOT count s

 $^2$  No LOS C Volume for a 7 lane highway, using 6 lane for a freeway

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Shawn Birst, P.E.

Date: 7/7/2020

Print Name

#### **FPID NUMBER: 435577-1**

#### Table 2.2-6: Traffic Data for Noise Modeling - Future (2045) Build Conditions for Arterial Roadways

Roz	adway Segment	Speed Limit	2045	Build Traffic (vph)	Number of Lanes	LOS C Volume*	Highest Peak	Volume used	Percent Heavy	Percent Medium	Percent	Percent Motorgyclas <sup>1</sup>	Volume used	Cars	Heavy Trucks	Medium Trucks	Buses per lane	Motorcycles per lane
			AM	PM	OI LAIRS	Volune	Volume	in TNM	Trucks <sup>1</sup>	Trucks <sup>1</sup>	Duses	Motorcycies	111 1 1 1 1 1 1	per iane	per lane	per Lane	per tanc	per inic
	EB Approach toward	45	1.670	1.615	2	1.910	1.670	1.670	0.61%	0.36%	0.04%	0.12%	1.670	825	5	3	1	1
	Baymeadows Way Baymeadows Way to Freedom	45	2.010	2 920	3	3.087	2 920	2 920	0.61%	0.36%	0.04%	0.12%	2 920	963	6	3	0	1
	Commerce Parkway Freedom Commerce Parkway to	45	2,010	2,00		4.140	2,020	2,020	0.619/	0.30%	0.04%	0.1270	2,020	941	5			
	I-95 SB On Ramp	45	2,085	3,400	4	4,169	5,400	5,400	0.61%	0.36%	0.04%	0.12%	3,400	841	5	3	0	
Eastbound Baymeadows Rd	Ramp	45	1,595	2,430	4	3,970	2,430	2,430	0.61%	0.36%	0.04%	0.12%	2,430	601	4	2	0	1
	Off Ramp	45	1,830	2,440	3	2,940	2,440	2,440	0.61%	0.36%	0.04%	0.12%	2,440	804	5	3	0	1
	EB Left Turn Lane to I-95 NB On Ramp	45	400	935	1	872	935	872	0.61%	0.36%	0.04%	0.12%	872	863	5	3	0	1
	I-95 NB On Ramp/Left Turn Lane to Western Way	45	2,145	2,860	3	3,087	2,860	2,860	0.61%	0.36%	0.04%	0.12%	2,860	943	6	3	0	1
	East of Western Way	45	1,690	2,450	3	2,940	2,450	2,450	0.61%	0.36%	0.04%	0.12%	2,450	808	5	3	0	1
	West of JTB	45	1,900	1,615	3	2,940	1,900	1,900	0.61%	0.36%	0.04%	0.12%	1,900	626	4	2	0	1
	Bonneval Rd to I-95 SB Ramp Terminal Intersection	45	2,880	2,805	2	2,006	2,880	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
J. Turner Butler Blvd	I-95 SB Ramp Terminal Intersection I-95 NB Ramp Terminal Intersection	45	2,860	2,705	2	1,910	2,860	1,910	0.61%	0.36%	0.04%	0.12%	1,910	943	6	4	1	1
	I-95 NB Ramp Terminal Intersection to Salisbury Rd Intersection	45	5,150	4,035	3	3,087	5,150	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
	JTB East of Salisbury Rd	45	4,470	3,680	2	2,006	4,470	2,006	0.61%	0.36%	0.04%	0.12%	2,006	991	6	4	1	1
							Westboy	und		1				1	1			
	JTB West of Southpoint Blvd	45	3,670	4,520	4	3,970	4,520	3,970	0.61%	0.36%	0.04%	0.12%	3,970	982	6	4	0	1
	Off-Ramp from Belfort Rd to I- 95 On-Ramp <sup>2</sup>	45	6,490	7,140	7	10,320	7,140	7,140	0.61%	0.36%	0.04%	0.12%	7,140	1,009	6	4	0	1
J. Turner Butler Blvd	I-95 On-Ramp to I-95 SB Ramp Terminal Intersection	45	3,240	3,780	3	3,087	3,780	3,087	0.61%	0.36%	0.04%	0.12%	3,087	1,018	6	4	0	1
	I-95 SB Ramp Terminal Intersection to Bonneval Road	45	2,620	2,030	3	3,087	2,620	2,620	0.61%	0.36%	0.04%	0.12%	2,620	864	5	3	0	1
	West of JTB	45	1,675	1,490	1	872	1,675	872	0.61%	0.36%	0.04%	0.12%	872	863	5	3	0	1
	East of Western Way	45	2,255	1,895	3	2,940	2,255	2,255	0.61%	0.36%	0.04%	0.12%	2,255	743	5	3	0	1
	Western Way to WB Baymeadows Right Turn Lane/I- 95 NB On-Ramp	45	2,720	2,300	3	3,087	2,720	2,720	0.61%	0.36%	0.04%	0.12%	2,720	897	6	3	0	1
	WB Baymeadows Right Turn Lane/I-95 NB On-Ramp	45	1,070	925	1	872	1,070	872	0.61%	0.36%	0.04%	0.12%	872	863	5	3	0	1
	WB Baymeadows Right Turn Lane/I-95 NB On-Ramp to I-95 SB Off Ramp	45	1,650	1,375	4	3,970	1,650	1,650	0.61%	0.36%	0.04%	0.12%	1,650	407	3	2	0	1
	I-95 SB Off Ramp to I-95 SB On Ramp	45	2,505	1,725	4	3,970	2,505	2,505	0.61%	0.36%	0.04%	0.12%	2,505	619	4	2	0	1
Westbound Baymeadows Rd	I-95 SB On Ramp to I-95 SB Off Ramp	. 45	2,225	1,525	4	3,970	2,225	2,225	0.61%	0.36%	0.04%	0.12%	2,225	549	4	2	0	1
	I-95 SB Off Ramp to Freedom Commerce Parkway	45	3,450	2,050	4	3,970	3,450	3,450	0.61%	0.36%	0.04%	0.12%	3,450	854	5	3	0	1
	Right Turn Lane to Baymeadows Way	45	1,485	310	2	2,006	1,485	1,485	0.61%	0.36%	0.04%	0.12%	1,485	733	5	3	1	1
	Freedom Commerce Parkway to	45	1,555	1,660	2	2,006	1,660	1,660	0.61%	0.36%	0.04%	0.12%	1,660	820	5	3	1	1
	West of Baymeadows Way	45	1,545	1,690	2	1,910	1,690	1,690	0.61%	0.36%	0.04%	0.12%	1,690	835	5	3	1	1
							Northbe	ound										1
Western Way S	Western Way South of Baymeadows Road		665	600	1	872	665	665	0.61%	0.36%	0.04%	0.12%	665	658	4	2	0	1
							Northbo	ound				l						1
Western Way S	outh of Baymeadows Road	40	665	635	1	872	665	665	0.61%	0.36%	0.04%	0.12%	665	658	4	2	0	1

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate)

<sup>1</sup> Vehicle split percentages based on Annual Vehicle Classification Counts from FDOT count stations: 720171

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Shawn Birst, P.E.

Date: 3/30/2021

Print Name

#### **FPID NUMBER: 435577-1**

#### Table 2.2-7: Traffic Data for Noise Modeling - Existing and Design Year (2045) No-Build Conditions for Southside Boulevard Project Area

D		0 11 5	Existing/N	lo Build Traffic (vph)	Number	LOS C	Highest	Volume	Percent	Percent	Percent	Percent	Volume used	Cars	Heavy	Medium	Buses	Motorcycles
KOZ	idway segment	Speed Limit	AM	PM	of Lanes	Volume*	Volume	in TNM	Trucks <sup>1</sup>	Trucks <sup>1</sup>	Buses <sup>1</sup>	Motorcycles <sup>1</sup>	in TNM	per lane				
					•	North	bound South	side Boulevar	d									
	Approach to Square Lake Blvd Intersection	45			2	2,006		2,006	0.63%	0.26%	0.11%	0.42%	2,006	988	7	3	1	4
	Square Lake Blvd to Paradise Island Entrance	45			2	2,006		2,006	0.63%	0.26%	0.11%	0.42%	2,006	988	7	3	1	4
Northbound Southside	Paradise Island Entrance to Western Lake Dr	45			2	1,910		1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
Boulevard	Western Lake Dr to I-95 NB Ramp	45			2	1,910		1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	I-95 NB Ramp to Belle Rive Blvd	45			3	3,087		3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
	North of Belle Rive Blvd	45			3	2,940		3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
						South	bound South	side Boulevar	1									
	Approach to Belle Rive Blvd Intersection	45			3	3,087		3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
	Belle Rive Blvd to Western Lake Dr	45			3	3,087		3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
Southbound Southside 1 Boulevard	Western Lake Dr to I-95 SB Ramp	45			3	3,087		3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
Southbound Southside Boulevard	I-95 SB Ramp to Paradise Island Entrance	45			2	1,910		1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	Paradise Island Entrance to I-95 NB Ramp	45			2	2,006		2,006	0.63%	0.26%	0.11%	0.42%	2,006	988	7	3	1	4
	I-95 NB Ramp to Square Lake Blvd	45			2	2,006		2,006	0.63%	0.26%	0.11%	0.42%	2,006	988	7	3	1	4
	South of Square Lake Blvd	45			2	2,006		2,006	0.63%	0.26%	0.11%	0.42%	2,006	988	7	3	1	4
							Local Ro	oads										
Belle Rive Boulevard	Easthound/Westhound	30			1	333		333	0.63%	0.26%	0.11%	0.42%	333	329	2	1	0	1
		30			2	657		657	0.63%	0.26%	0.11%	0.42%	657	323	2	1	1	2
Western Lake Drive	Eastbound/Westbound	30			1	333		333	0.63%	0.26%	0.11%	0.42%	333	329	2	1	0	1
Southside Boulevard Service Road	Northbound/Southbound	30			1	333		333	0.63%	0.26%	0.11%	0.42%	333	329	2	1	0	1
							I-95 Rat	nps										
L-05 Ramos	I-95 NB to Southside Blvd NB	45			1	830		1,340	0.63%	0.26%	0.11%	0.42%	1,340	1,321	8	3	2	6
1-25 Kallps	Southside Blvd to I-95 SB	45			2	1,910		2,680	0.63%	0.26%	0.11%	0.42%	2,680	1,319	9	4	2	6

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate) <sup>1</sup> Vehicle split percentages based on Annual Vehicle Classification Counts from FDOT count stations: 720594

<sup>2</sup> No LOS C Volume for a 7 lane highway, using 6 lane for a freeway

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Ashley Finley, P.E. Print Name

\_\_\_\_\_

Date: 3/30/2021

#### **FPID NUMBER: 435577-1**

### Table 2.2-8: Traffic Data for Noise Modeling - Design Year (2045) Build Conditions for Southside Boulevard Project Area

Roz	dway Segment	Speed Limit	2045	Build Traffic (vph)	Number	LOS C	Highest Peak	Volume used	Percent Heavy	Percent Medium	Percent	Percent	Volume used	Cars	Heavy Trucks	Medium Trucks	Buses	Motorcycles
			AM	PM	or Lanes	v olume*	Volume	in TNM	Trucks <sup>1</sup>	Trucks <sup>1</sup>	Buses	Motorcycles	in TINM	per lane	per lane	per Lane	per lane	per lane
		T		1	r	North	bound South	side Boulevare	1	T				r				
	Approach to Square Lake Blvd Intersection	45	1,055	2,005	2	2,006	2,005	2,005	0.63%	0.26%	0.11%	0.42%	2,005	988	7	3	1	4
	Square Lake Blvd to Paradise Island Entrance	45	1,165	2,365	2	2,006	2,365	2,006	0.63%	0.26%	0.11%	0.42%	2,006	988	7	3	1	4
	Paradise Island Entrance to Proposed U-Turn	45	1,640	2,445	2	1,910	2,445	1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	Proposed U-Turn	45	300	410	1	872	410	410	0.63%	0.26%	0.11%	0.42%	410	404	3	1	0	2
Northbound Southside Boulevard	Segment South of U-Turn	45	1,340	2,035	2	1,910	2,035	1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	U-Turn to Western Lake Dr	45	1,340	2,035	2	1,910	2,035	1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	Western Lake Dr to I-95 NB Off Ramp	45	1,020	1,815	2	1,910	1,815	1,815	0.63%	0.26%	0.11%	0.42%	1,815	894	6	3	1	4
	I-95 NB Off Ramp to Belle Rive Blvd	45	2,560	2,805	3	3,087	2,805	2,805	0.63%	0.26%	0.11%	0.42%	2,805	922	6	2	1	4
	North of Belle Rive Blvd	45	3,010	3,140	3	2,940	3,140	2,940	0.63%	0.26%	0.11%	0.42%	2,940	966	6	3	1	4
		1		1	<u> </u>	South	bound Souths	ide Boulevard	1	1				1	<u> </u>	<u> </u>		<u> </u>
	Approach to Belle Rive Blvd Intersection	45	2,360	3,715	3	3,087	3,715	3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
	Belle Rive Blvd to Western Lake Dr	45	2,420	3,470	3	3,087	3,470	3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
	Western Lake Dr to U-Turn	45	2,460	3,720	3	3,087	3,720	3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
Southbound C	U-Turn to I-95 SB On Ramp	45	2,760	4,130	3	3,087	4,130	3,087	0.63%	0.26%	0.11%	0.42%	3,087	1,015	6	3	1	4
Boulevard	I-95 SB On Ramp to Paradise Island Entrance	45	1,450	1,990	2	1,910	1,990	1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	Paradise Island Entrance to I-95 NB Off Ramp	45	1,830	1,960	2	1,910	1,960	1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	I-95 NB Off Ramp to Square	45	1,920	2,075	2	1,910	2,075	1,910	0.63%	0.26%	0.11%	0.42%	1,910	941	6	3	1	4
	South of Square Lake Blvd	45	1,430	1,595	2	1,910	1,595	1,595	0.63%	0.26%	0.11%	0.42%	1,595	786	5	2	1	4
	-					,	I-95 Ran	nps										
	I-95 NB Off Ramp to Southside	45	1,540	990	1	9,999	1,476	1,476	0.63%	0.26%	0.11%	0.42%	1,476	1,455	9	4	2	6
I-95 Ramps	Blvd NB Southside Blvd to I-95 SB On	45	1.310	2.140	2	9,999	2.140	2.140	0.63%	0.26%	0.11%	0.42%	2.140	1.054	7	3	1	5
	Ramp		1,010	_,		.,	Belle Rive Bo	oulevard					_,	-,		, î	-	
	EB East of Southside Blvd	30	120	435	2	657	435	435	0.63%	0.26%	0.11%	0.42%	435	214	2	1	0	1
	WB East of Southside Blvd	30	420	325	1	333	420	333	0.63%	0.26%	0.11%	0.42%	333	320	2	1	0	1
	WB East of Southside Blvd Right	30	420	325	2	657	420	420	0.63%	0.26%	0.11%	0.42%	420	206	2	1	0	1
	Turn Lane WB East of Southside Blvd Left	30	420	225	1	222	420	420	0.63%	0.26%	0.11%	0.42%	420	200	2	1	0	1
Belle Rive Boulevard	Turn Lane	30	140	255	1	222	140	140	0.03%	0.20%	0.1170	0.42%	140	120		1	0	1
	ED West of Southside Divd	50	140	90	1	333	140	140	0.03%	0.20%	0.11%	0.42%	140	158	1	0	0	1
	EB West of Southside Blvd	30	240	2/5	1	333	2/5	2/5	0.63%	0.26%	0.11%	0.42%	2/5	2/1	2	1	0	1
	Service Road WB West of Southside Blyd	30	135	100	1	333	135	135	0.63%	0.26%	0.11%	0.42%	135	133	1	0	0	1
	Service Road	30	50	120	1	333	120	120	0.63%	0.26%	0.11%	0.42%	120	118	1	0	0	1
	EB West of Southside Blvd						Western Lak	e Drive										
	Service Road	30	455	705	1	333	705	333	0.63%	0.26%	0.11%	0.42%	333	329	2	1	0	1
Western Lake Drive	Service Road and Southside Blvd	30	300	500	1	333	500	333	0.63%	0.26%	0.11%	0.42%	333	329	2	1	0	1
	WB Between Southside Blvd and Southside Blvd Service Road	30	580	470	1	333	580	333	0.63%	0.26%	0.11%	0.42%	333	329	2	1	0	1
	WB West of Southside Blvd Service Road	30	609	455	1	333	609	333	0.63%	0.26%	0.11%	0.42%	333	329	2	1	0	1
						Souths	side Boulevard	l Service Road	1									
	NB North of Western Lake Drive to SB Service Road U- Turn	30	170	240	1	333	240	240	0.63%	0.26%	0.11%	0.42%	240	236	2	1	0	1
Southside Boulevard	NB North of SB Service Road U- Turn to Belle Rive Blvd	30	260	315	2	657	315	315	0.63%	0.26%	0.11%	0.42%	315	155	1	1	0	1
Service Road	SB South of Belle Rive Blvd to Service Road U-Turn	30	135	100	1	333	135	135	0.63%	0.26%	0.11%	0.42%	135	133	1	0	0	1
	SB South of Service Road U- Turn to Western Lake Drive	30	45	20	1	333	45	45	0.63%	0.26%	0.11%	0.42%	45	45	0	0	0	0

\* LOS "C" volumes obtained from Table 7 of FDOT's Level of Service Handbook (2013) and HCM 2000 (Volume adjustments have been applied as appropriate)

<sup>1</sup> Vehicle split percentages based on Annual Vehicle Classification Counts from FDOT count stations:

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By:

Ashley Finley, P.E.

Date: 3/30/2021

Print Name

720594

# APPENDIX B Build Alternative Concept Plan and Existing and Proposed Lane Configurations

















2/2/2021 8:55:58 PM Defau

1012733001 D2 I-95 ML\TWO 11

-95 ML\TWO\_11 I-95 EL-2\Build Concepts\RS&H Concepts\2019\Concept Plans\planrd31.dg















X:\P\1012733001\_D2 I-95 ML\TWO\_11 I-95 EL-2\Build Concepts\R5&H Concepts\2019\Concept Plans\planrd34.dgi



X:\P\1012733001\_D2 I-95 ML\TWO\_11 I-95 EL-2\Build Concepts\R5&H Concepts\2019\Concept Plans\planrd35.dgi







X:\P\1012733001\_D2 I-95 ML\TWO\_11 I-95 EL-2\Build Concepts\RS&H Concepts\2019\Concept Plans\planrd36.dgn













X:\P\1012733001\_D2 I-95 ML\TWO\_11 I-95 EL-2\Build Concepts\R5&H Concepts\2019\Concept Plans\planrd38.dgr







X:\P\1012733001\_D2 I-95 ML\TWO\_11 I-95 EL-2\Build Concepts\RS&H Concepts\2019\Concept Plans\planrd39.dgi







X:\P\1012733001\_D2 I-95 ML\TWO\_11 I-95 EL-2\Build Concepts\R5&H Concepts\2019\Concept Plans\planrd40.dgr







I-95 ML\TWO\_11 I-95 EL-2\Build Concepts\RS&H Concepts\2019\Concept Plans\planrd41.dgr

















1/29/2021 2:47:26 PM Defaul

\\rsandh.com\files\Transportation\P\1012733001\_D2

ML\TWO\_11 I-95 EL-2\Build Concepts\RS&H Concepts\2019\Concept Plans\planrd67.dgr
## SYSTEMS INTERCHANGE MODIFICATION REPORT (SIMR) RE-EVALUATION

## I-95 from International Golf Parkway to Atlantic Boulevard

## **Financial Project Identification Numbers**

432259-1: I-95 Corridor Planning between International Golf Parkway and Atlantic Boulevard 422938-9: I-95 between International Golf Parkway and First Coast Expressway 422938-8: SR 23 (First Coast Expressway) from I-95 to East of CR 16A 424026-4: I-95 between First Coast Expressway and Duval/St. Johns County Line 424026-5: I-95 between St. Johns County/Duval County Line to I-295 435577-2: I-95 between I-295 and SR 152/Baymeadows Road 446153-1: I-95 between SR 152/Baymeadows Road and SR 202/Butler Boulevard 432259-2: I-95 between SR 202/Butler Boulevard and Atlantic Boulevard 446386-1: SR 202/Butler Boulevard at Belfort Road

Duval and St. Johns Counties, Florida

Prepared for



Florida Department of Transportation District Two

DRAFT REPORT

February 2021













