NOISE STUDY REPORT

Florida Department of Transportation
District Five

I-75 (S.R.93)
from South of S.R. 44 to S.R. 200
Sumter and Marion County, Florida

Financial Management Number: 452074-2

ETDM Number: 14541

July 2024

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 USC § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

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FDOT

Executive Summary

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) study for proposed operational improvements to the Interstate 75 (I-75) corridor in Sumter and Marion County, Florida. These interim improvements were identified as part of Phase 1 of a master planning effort for the I-75 corridor between Florida's Turnpike and County Road (C.R.) 234.

The purpose of this project is to evaluate short-term operational improvements on the mainline of I-75 from south of State Road (S.R.) 44 to S.R. 200. No interchange improvements will be evaluated with this PD&E. The primary needs for this project are to enhance current transportation safety and modal interrelationships while providing additional capacity between existing interchanges.

Noise levels for this project were predicted using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM), version 2.5. A total of 309 receptor locations representing 367 residential and 38 nonresidential "special land use (SLU)" noise sensitive sites were included in the TNM. Noise levels at 185 residences and thirteen special land use sites are predicted to approach or exceed the Noise Abatement Criteria (NAC) for the year 2040 Build Alternative and are therefore considered "impacted."

Analyses of the impacted locations were performed to determine if noise abatement was feasible and reasonable under FDOT policy. The PD&E study phase analysis indicates that noise barriers are potentially feasible and reasonable at two locations within the project corridor. These two noise barriers could potentially provide reasonable and feasible noise abatement for 51 of the 185 impacted residences, and one impacted SLU site. Noise abatement was not determined feasible and reasonable for the remaining twelve impacted SLU sites.

The potentially feasible and reasonable noise barriers meet the FDOT's cost-per-benefit criteria with a preliminary cost of under the $42,000 per benefited receptor criterion. Noise barriers at these two locations will be carried forward for further consideration in this project's design phase; note that the dimensions of the noise walls are subject to change during design. The results of the noise barrier evaluations where noise abatement was determined to be feasible and reasonable are summarized in **Table 4-3**.

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ACRONYMS AND ABBREVIATIONS

AADT	Average Annual Daily Traffic
C.R.	County Road
CFR	Code of Federal Regulations
CNE	Common Noise Environment
EOP	Edge of Pavement
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
ILC	Intermodal Logistic Centers
LOS	Level of Service
LRTP	Long Range Transportation Plan
MSE	Mechanically Stabilized Earth
MPH	Miles Per Hour
NAC	Noise Abatement Criteria
NB	Northbound
NEPA	National Environmental Policy Act
NRDG	Noise Reduction Design Goal
NSA	Noise Study Area
PD&E	Project Development and Environment
PTAR	Project Traffic Analysis Report
ROW	Right-of-Way
SB	Southbound
SIS	Strategic Intermodal System
S.R.	State Road
U.S.C.	United States Code

1.0 Introduction

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study for proposed operational improvements to the Interstate 75 (I-75) corridor in Sumter and Marion County, Florida. These interim improvements were identified as part of Phase 1 of a master planning effort for the I-75 corridor between Florida's Turnpike and County Road (C.R.) 234. The operational improvements evaluated by this PD&E Study include the construction of auxiliary lanes between interchanges for a 22.5-mile segment of I-75 from south of State Road (S.R). 44 to S.R. 200. The limits of the project are shown in **Figure 1-1**. The Marion County Northbound (NB) and Ocala Southbound (SB) weigh stations are located within the study limits, as well as a rest area north of C.R. 484 and south of S.R. 200.

Within the study limits, I-75 is an urban principal arterial interstate that runs in a north and south direction with a posted speed of 70 miles per hour (MPH). I-75 is part of the Florida Intrastate Highway System, the Florida Strategic Intermodal System (SIS), and is designated by the Florida Department of Emergency Management (FDEM) as a critical link evacuation route. Within the study limits, I-75 is a six-lane limited access facility situated within approximately 300 feet of right-of-way (ROW). No transit facilities, frontage roads, or managed lanes are currently provided.

1.1 Project Purpose and Need

1.1.1 Project Purpose

The purpose of this project is to evaluate short-term operational improvements on the mainline of I-75 from south of S.R. 44 to S.R. 200. No interchange improvements will be evaluated with this PD&E.

1.1.2 Project Need

The primary needs for this project are to enhance current transportation safety and modal interrelationships while providing additional capacity between existing interchanges.

1.1.2.1 Capacity/Transportation Demand

Existing annual average daily traffic (AADT) on I-75 within the study limits ranges from 81,000 vehicles per day (vpd) to 97,000 vpd, with the highest volume of traffic occurring between C.R. 484 and S.R. 200. The AADT along I-75 between S.R. 44 and C.R. 484 is 81,000 vpd. I-75 northbound and southbound operate at a level of service (LOS) C or better during the average weekday AM and PM peak hours. The LOS target for I-75 is D; as early as 2030, I-75 northbound and southbound between C.R. 484 and S.R. 200 is expected to operate at LOS F.

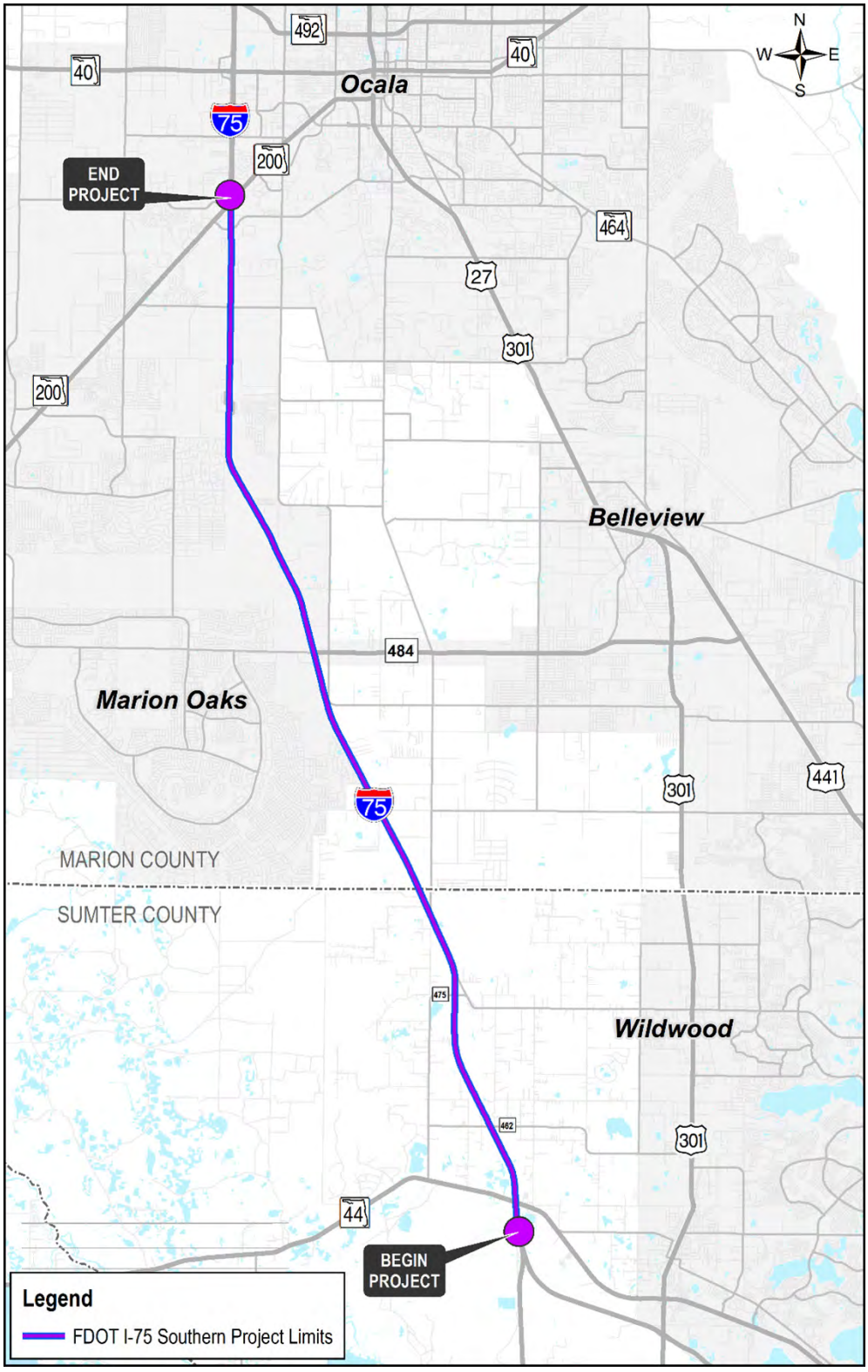


Figure 1-1 | Project Limits

By 2040, the Design Year, AADTs within the study limits will range between 102,000 and 143,000, with the highest volumes of traffic continuing to occur between C.R. 484 and S.R. 200 (**Table 1-1**). The traffic growth and reduction in LOS is related to two factors, forecast increases in population and employment, and continued growth in tourism in Central and South Florida. I-75 and Florida's Turnpike are critical transportation links serving these markets.

I-75 is a unique corridor that experiences substantial increases in traffic during holidays, peak tourism seasons, weekends, and special events and experiences frequent closures because of incidents leading to non-recurring congestion. I-75 is part of the emergency evacuation route network designated by the FDEM.

Table 1-1 | Existing and Forecast Traffic Volumes

Segment	Existing (2019) AADT	Opening Year (2030)	Design Year (2040) AADT
S. R. 44 and C.R. 484	81,000	102,000	121,000
C.R. 484 and S.R. 200	97,000	121,000	143,000

1.1.2.2 Safety

Historical crash data along I-75 was obtained from the Signal 4 crash database. Crash data analyzed between 2018 and 2022 indicates there was a total of 2,590 vehicle crashes between Florida's Turnpike and S.R. 200. Of these, 707 resulted in at least one injury, and 11 resulted in a fatality, five of which involved a commercial motor vehicle. The number of crashes decreased from 2018 (592) to 2020 (378) but then increased to 559 crashes in 2022. Crashes occurring between Friday and Sunday comprised approximately 55 percent of the total crashes in this analysis period.

I-75 through the project limits, experiences crash rates (1.8 - Rural, 1.66 - Urban) greater than the corresponding statewide averages (0.45 - Rural, 1.00 - Urban) for similar facilities. This is 4 times higher than the statewide rural rate and 66% higher than the statewide urban rate.

I-75 is designated as a primary hurricane evacuation route by the FDEM. Due to the regional transportation system having few alternative routes, a crash, incident, or even a planned special event can result in severe delays. This issue increases in significance during emergency events. Recent studies estimate that nearly 313,000 people in Marion, Alachua, and Sumter counties to the south would need to evacuate during a major hurricane. An additional 2.2 million people from the Tampa Bay Area would also utilize I-75 during a major hurricane evacuation. It would take

approximately 56 hours for the Tampa Bay region to completely clear during a hurricane, with Marion County taking approximately 39 hours and Alachua County taking 14 hours.

1.1.2.3 Modal Interrelationships

Truck traffic on I-75 is substantial and accounts for over 20 percent of all daily vehicle trips within the study limits based on the FDOT Traffic Characteristics Inventory. The segment of I-75 between SR 44 and CR 484 experiences the highest volume of trucks, with more than 25 percent of the total trips made by trucks. Multiple existing and planned Intermodal Logistic Centers (ILC) and freight activity centers in Ocala contribute to the growth in truck volumes. These facilities include the Ocala/Marion County Commerce Park (Ocala 489), Ocala 275 ILC, and the Ocala International Airport and Business Park. The interaction between heavy freight vehicles and passenger vehicles between interchanges contributes to both operational congestion and safety concerns.

1.2 Alternatives

1.2.1 No-Build Alternative

The No-Build Alternative is defined as the scenario in which the proposed activity would not take place. The existing six-lane I-75 facility and interchange configurations are considered the No-Build Alternative. The No-Build Alternative does not address the purpose and need for this project; however, it serves as the baseline against which the build alternative is evaluated.

1.2.2 Auxiliary Lanes Alternative

The Auxiliary Lanes Alternative is the sole build alternative evaluated in this PD&E study and is based on recommendations from previous master planning activities. The Auxiliary Lanes Alternative proposes to add one 12-foot auxiliary lane (additional lane between interchanges) to the outside of the general-purpose lanes in each direction. The auxiliary lanes would not impact the interchange bridges. The typical section is shown in **Figure 1-2**.

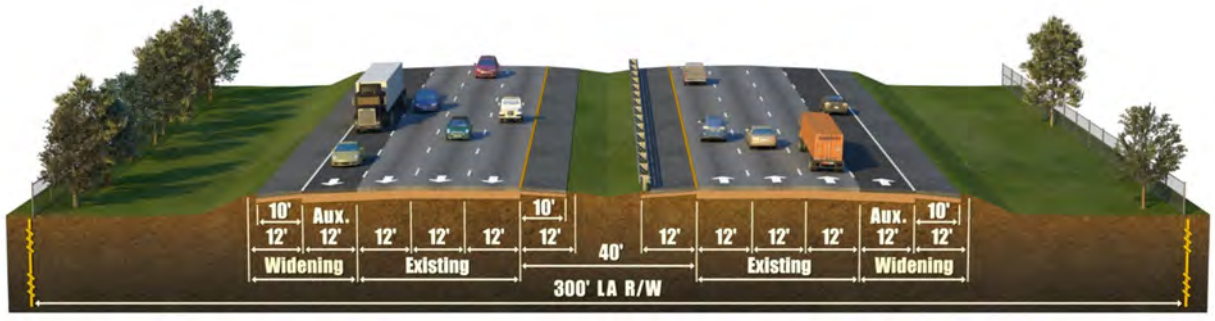


Figure 1-2 | Auxiliary Lanes Alternative Typical Section

2.0 Methodology

The traffic noise impact analysis conducted for this project is consistent with Title 23, *Code of Federal Regulations* (C.F.R.), § 772, Part II, Chapter 18 of the FDOT *Project Development and Environment Manual*, and Chapter 335, Section 335.17, *Florida Statutes*. This assessment also adheres to current Federal Highway Administration (FHWA) traffic noise analysis guidelines contained in *FHWA-HEP-10-025*. The FHWA Traffic Noise Model (TNM) - version 2.5 was used to predict traffic noise levels for this project, following guidelines set forth in the FDOT *Traffic Noise Modeling and Analysis Practitioners Handbook*. The analysis evaluated noise levels for the 2019 Existing Condition and the 2040 No-Build and Build Alternatives.

Noise receptor coordinates used in the TNM correlate to exterior areas where frequent human use may occur, usually at the edge of the residential structure closest to the project roadways, unless the analyst's professional judgment determines otherwise.

The project design files (State Plane West) were used to determine the location of the Build Alternative for input into TNM. Vertical elevations (existing and proposed) for I-75 and analyzed receptors were derived from as-built plans (previous widening). Vertical elevations for noise receptors and cross/side streets were obtained from the United States Geological Survey digital elevation models.

2.1 Noise Metrics

Sound levels for this analysis are expressed in decibels (dB) using an "A"-scale weighting expressed as dB(A). This scale most closely approximates the response characteristics of the human ear to typical traffic sound levels. All reported sound levels are hourly equivalent noise levels [L_{eq}]. The L_{eq} is defined as the equivalent steady-state sound level that, in a given hourly period, contains the same acoustic energy as the time-varying sound level for the same hourly period.

2.2 Traffic Data

Traffic noise is heavily dependent on traffic volume and speed, with the amount of noise generated by traffic increasing as the vehicle speed and number of vehicles increase. Characteristics contributing to the highest traffic noise levels were used to predict project noise levels. Worst-case noise conditions occur with the maximum traffic traveling at the posted speed and represent a LOS C operating condition. However, if the traffic analysis indicates the roadway will operate below LOS C, the project's demand peak-hour directional traffic volumes are used per Chapter 18 of the FDOT PD&E Manual. Traffic volumes and speeds used in the analysis are included in **Appendix A**.

2.3 Noise Abatement Criteria

Land use plays an important role in traffic noise analyses. To determine which land uses are "noise sensitive," this noise impact analysis used the FHWA Noise Abatement Criteria (NAC) shown in **Table 2-1.** The FDOT has established noise levels for each land use activity category at which noise abatement must be considered. In Florida, noise levels that meet or exceed 66.0 dB(A) at Activity Category B and C land uses require noise abatement consideration. A 71.0 dB(A) noise level is required for an Activity Category E land use to be considered impacted by traffic noise. Another criterion for determining when project impacts warrant abatement consideration occurs when project noise levels are below the NAC but show a substantial increase (15.0 dB(A) or more) over existing levels. A substantial increase typically occurs in areas where traffic noise is a minor component of the existing noise environment but would become a major component after the project is constructed (e.g., a new alignment project).

Table 2-1 | Noise Abatement Criteria

Hourly A-Weighted Sound Level-decibels (dB(A))				Description of Activity Category
Activity Category	Activity Leq(h) [1]		Evaluation Location	
	FHWA	FDOT		
A	57.0	56.0	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]	67.0	66.0	Exterior	Residential.
C[2]	67.0	66.0	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, golf courses, places of worship, playgrounds, public meeting rooms, public/nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52.0	51.0	Interior	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public/nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[2]	72.0	71.0	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.

(Based on Table 1 of 23 CFR Part 772)

[1] The Leq(h) Activity Criteria values are for impact determination only and are not design standards for noise abatement measures.

[2] Includes undeveloped lands permitted for this activity category.

For comparison purposes, typical noise levels for common indoor and outdoor activities are provided in **Table 2-2**.

Table 2-2 | Comparative Sound Levels

Common Outdoor Activities	dB(A)	Common Inside Activities
Jet Flyover at 1,000 ft.	-110-	Rock Band
Gas Lawn Mower at 3 ft.	-100-	
Diesel Truck at 50 ft. (at 50 mph)	-90-	
		Food Blender at 3 ft.
Busy Urban Area Daytime	-80-	Garbage Disposal at 3 ft.
Gas Mower at 100 ft. Commercial Area	-70-	Vacuum Cleaner at 10 ft. Normal Speech at 3 ft.
Heavy Traffic at 300 ft.	-60-	Large Business Office
Quiet Urban Daytime	-50-	Dishwasher Next Room
Quiet Urban Nighttime Quiet Suburban Nighttime	-40-	Theater, Large Conference Room (Background)
Quiet Rural Nighttime	-30-	Library
	-20-	
	-10-	
Lowest Threshold of Human Hearing	-0-	Lowest Threshold of Human Hearing
Source: California Dept. of Transportation Technical Noise Supplement, Oct. 1998, Page 18.		

2.4 Noise Abatement Measures

When traffic noise impacts are identified as part of the traffic noise analysis, noise abatement must be considered. The potential abatement alternatives considered during the PD&E included traffic management, alternative roadway alignments, buffer zones, and noise barriers.

2.4.1 Traffic Management

Traffic management measures that limit motor vehicle speeds and reduce volumes can be effective as a noise mitigation option; however, these measures may also negate a project's ability to meet the facility's needs. For example, if the posted speed on I-75 were reduced, the capacity of the roadway to handle the forecasted motor vehicle demand would also be reduced. Therefore, reducing traffic speeds or volumes is inconsistent with improving the roadway's

ability to handle the forecasted volumes. As such, although feasible, traffic management measures beyond the existing heavy truck restrictions in the left (inside) general-purpose lanes, are not considered a reasonable noise mitigation measure for the project.

2.4.2 Alignment Modifications

Alignment modification involves orienting or siting the roadway at sufficient distances from noise sensitive sites to minimize traffic noise. Based on the noise contours developed for this project and shown in **Section 6** of this NSR**,** any alignment shift that would avoid traffic-related noise impacts of the proposed project would introduce noise impacts to other noise sensitive sites, and no net benefit would result. Therefore, alignment modifications are not considered a reasonable noise mitigation measure.

2.4.3 Buffer Zones & Land Use Controls

Noise buffer zones that separate the roadway and noise sensitive land uses can minimize or eliminate noise impacts to areas of future development. This measure requires local land use planning not currently in place within the project corridor. Because the noise impact analysis applies to existing land uses, buffer zones are not an applicable abatement measure. However, for any new development or redevelopment occurring in the future, local officials can use the noise contour information provided in **Section 6** of this NSR to establish buffer zones, thereby minimizing or avoiding noise impacts on future sensitive land uses.

2.4.4 Noise Barriers

The most common type of noise abatement measure is constructing a noise barrier. Due to the limited right-of-way (ROW) and proposed typical sections, noise barriers are the only measure considered for this project. The following feasibility and reasonableness factors must be evaluated when considering noise barriers for abatement.

2.4.4.1 Feasibility Factors

The FDOT PD&E Manual stipulates that a noise barrier must meet acoustic and engineering criteria to be considered feasible, as summarized below:

- Acoustic feasibility: The barrier must provide a minimum of 5.0 dB(A) reduction in traffic noise for at least two impacted receptors. Consequently, noise barriers are not evaluated for isolated and single-impacted receptors.
- Engineering feasibility: The engineering review identifies whether other factors must be evaluated for the barrier to be considered feasible.
- Safety: If a noise barrier and safety conflict exist, primary consideration must be given to safety. An example of such a conflict would be the loss of a safe sight distance (line of sight) at an intersection or driveway resulting from a noise barrier placement.

- Accessibility to adjacent properties: The noise barrier placement cannot block ingress and egress on non-limited access roadways. Other access issues to be considered include access to a local sidewalk or normal travel routes. Neither applies to noise barriers on limited-access roadways.
- Right-of-way needs: Does the noise barrier require additional land, access rights, or easements for construction and maintenance?
- Maintenance: Maintenance crews must have reasonable access to both sides of the barrier for personnel and equipment using standard practices.
- Drainage: Does the barrier impact existing or planned drainage?
- Utilities: Does the barrier impact existing utilities?

2.4.4.2 Reasonableness Factors

If a noise barrier meets the feasibility criteria, the following reasonableness factors must collectively be achieved for the noise abatement measure to be deemed reasonable.

- Acoustic reasonableness: The barrier must attain the FDOT noise reduction design goal (NRDG) of 7.0 dB(A) for at least one benefited receptor. (Note: to be considered "benefited," the receptor must receive a minimum of 5.0 dB(A) in traffic noise reduction from the barrier.) Failure to achieve the NRDG results in the noise abatement measure being deemed not reasonable.
- Cost-effectiveness: Using the current $30.00 per square foot statewide average, $42,000 per benefited receptor is the upper limit for a cost-reasonable noise barrier.
- Benefited property owner and resident viewpoints: During project development, FDOT solicits the opinion of benefited owners and residents regarding noise abatement. Affected owners and residents are given the opportunity to provide input regarding their desires to have the proposed noise abatement measure constructed. This process aims to obtain a response for or against the noise barrier from a majority of respondents to the survey. The noise barrier is not deemed reasonable if a majority consensus is not obtained in favor of the barrier.

2.4.5 Nonresidential Barrier Analysis

The methodology used to evaluate noise barrier systems for nonresidential sites differs from those used for residential locations. The standard procedure for determining the feasibility and reasonableness of a noise barrier for a special land use (SLU) site is documented in *Methodology to Evaluate Traffic Noise at Special Land Uses* (FDOT 2023). This SLU evaluation is a multi-step process.

- If an impacted SLU receptor is not adjacent to impacted residences or other impacted SLUs such that a single noise barrier would not be a practical form of abatement for all

impacted properties, it is considered isolated. It must go through a Preliminary Screening analysis to determine if it has enough person-hour usage to equate to at least two residences to be found feasible for noise abatement. To meet the feasibility requirement, the isolated SLU must have at least 45,026 person-hours of use per year in the benefited area for a noise barrier to be found as a feasible form of noise abatement.

- A noise barrier is evaluated if the Preliminary Screening results indicate that a full analysis is warranted or if the impacted SLU is adjacent to other impacted SLUs or residences.
- Once it is determined that impacted SLUs benefit from the analyzed noise barrier, the FDOT SLU Worksheet is utilized to assess whether a noise barrier is a reasonable and feasible form of abatement. The SLU Worksheet (and therefore cost reasonable calculation) includes all residences and SLUs that would receive a benefit from the noise barrier. This methodology allows the combined evaluation of land use NAC-B, A, C, D, and E for a single noise barrier system that would potentially benefit all land use types evaluated.

3.0 Traffic Noise Analysis and Abatement Evaluation

3.1 Model Validation

Existing noise levels are measured in the project corridor to confirm if traffic is the primary noise source. These field measurements are also required to verify the accuracy of the TNM before it can be used to predict noise levels. A series of three 10-minute measurements were taken on February 9, 2024, using an Extech Instruments Model 407780 Type 2 Integrating Sound Level Meter. The sound level meter, calibrated at 114.0 dB(A) with an Extech Instruments Model 407766 calibrator, was adjusted to the A-weighted frequency scale, which approximates the frequency sensitivity of the human ear. Traffic data, including vehicle volumes, speeds by type, and meteorological conditions, were recorded during each measurement session. The data collection effort also recorded the travel speed for each type of vehicle using a Bushnell Speedster handheld radar gun.

One location within the study corridor was selected to undergo a series of three 10-minute measurements. The validation site, illustrated on page **D-27** in **Appendix D**, was selected for measurement because it presented a clear view of traffic conditions on I-75. Though some traffic slow-downs were evidenced in the NB direction, no unusual noise occurred during the three 10-minute monitoring sessions. During the monitoring sessions, the weather was 60° with 82% humidity under clear skies with mild east-southeast breezes ranging from 3 to 4 m.p.h.

Validation of TNM occurs when the model-predicted noise levels are within three decibels of the field-measured levels. **Table 3-1** shows that TNM predicted within the 3.0-decibel acceptance

range for each 10-minute session. Consequently, the model is validated and acceptable for predicting noise levels for this project.

Table 3-1 | TNM Validation Results Summary

Location	Validation Session	Field Measured (dB(A))	TNM Predicted (dB(A))	Variance (dB(A))
VS-1	Session 1	73.6	74.8	1.2
	Session 2	75.3	76.0	0.7
	Session 3	75.7	76.6	0.9

3.2 Noise Sensitive Receptors

Within the project limits, TNM receptor points representing residences are located in accordance with the FDOT PD&E Manual as follows:

- Residential receptor points are located at areas of frequent outdoor use or the corner of the residential building closest to the major traffic noise source.
- Where residences are clustered together, single receptor points are analyzed as representative of a group of residences with similar characteristics.
- Ground floor receptor points are assumed to be 5 feet above the ground elevation, and all receptors are assumed to be at ground level unless otherwise noted.
- Higher floor receptors are assumed to increase in elevation in 10-foot increments above the ground floor receptor.
- Nonresidential receptor points are located at the edge of the outdoor use area closest to the major traffic noise source.

Using **Table 2-1** as a guide, most noise sensitive land uses within the study corridor fall under NAC-B - Residential. The NAC-C land uses within the study corridor include religious facilities, equestrian complexes, the Don Garlits Museum of Drag Racing, the Alphabet Land Learning Center, and the Summer Glen golf course. The NAC-E land uses include several motels with on-site swimming pools, businesses with outdoor benches, and restaurants with outdoor tables.

The remainder of the corridor is NAC G undeveloped land. A permit search of those areas was conducted to identify any active building permits for noise sensitive land uses. As of February 2, 2024, no such permits were discovered adjacent to the corridor. If a future noise sensitive land use receives a building permit before the project's Date of Public Knowledge (the date FDOT approves the project's environmental document), they will be assessed for traffic noise impacts during the project's final design phase of development.

This project does not require analysis of interior noise levels (NAC-D) as all NAC-C locations have areas of exterior use. No land uses in the study corridor warrant an NAC-A analysis. While NAC-F land uses are in the project corridor, this is not considered a noise sensitive activity and is not included in the analysis.

3.3 Predicted Noise Levels and Abatement Analysis

Traffic noise levels were predicted at 309 noise sensitive sites representing 367 residences (NAC-B), 17 SLU NAC-C receptors, and 21 SLU NAC-E receptors. Due to the number of receptors, the analysis divided the study corridor into Noise Study Areas (NSA) based on geographical dividers such as roads or environmental areas. The reporting of project noise levels was further simplified by using receptors representing similar adjacent noise sensitive sites. The grouping within a representative receptor is referred to as a Common Noise Environment (CNE). There may be several CNEs within one NSA.

Receptor points are labeled according to the NSA within which they are located. NSAs are named as follows:

- The first two letters (i.e., SB, NB) describe on which side of the I-75 mainline the NSA is located (e.g., "NB" indicates the receptor is in an NSA on the northbound side of the mainline travel lanes).
- The number following the first two letters is a numeric sequencing number (e.g., NB2 is the 2nd NSA on the northbound side of the I-75 mainline).
- The final two characters are the individual receptor number and are separated from the first string of characters with a dash (e.g., NB2-07 is the 7th receptor in the 2nd NSA on the northbound side of the I-75 mainline).
- Where there are multi-family residential apartment complexes in the study corridor, the letter "a" represents ground-floor units, "b" represents 2nd-floor units, and "c" represents 3rd-floor units, etc. (e.g., NB2-07a).
- The letters “SLU” follow the NSA identifier for nonresidential receptors and before the numerical SLU number (e.g., NB2-SLU1 is the first nonresidential receptor in NSA NB2).

The 2019 existing condition, the 2040 No-Build Alternative, and the 2040 Build Alternative noise analysis results discussed in this section are also summarized in a predicted noise level comparison matrix provided in **Appendix B**. When discussing noise level increases, the general rule that applies to perception is:

- A 3 dB(A) increase is barely perceptible to most people.
- A 5 dB(A) increase is noticeable to most people.
- A 10 dB(A) increase is perceived as twice as loud and is considered a doubling of noise.

Overall, 81 noise receptors are currently affected by I-75 traffic noise. Under the No-Build Alternative, noise levels are predicted to meet or exceed the NAC for 153 noise receptors. By comparison, predicted noise levels for the Build Alternative meet or exceed the NAC at 198 noise receptors with an average 3.1 dB(A) increase in noise levels over the existing condition. The greatest increase, 4.8 dB(A), occurs in NSA SB3 at receptors SB3-01 and SB3-02. None of the project noise increases in the study corridor are considered substantial (defined as 15 dB(A) or higher).

3.3.1 Noise Study Area NB1

NSA NB1, shown on page **D1** in the project aerials **Appendix D**, is located east of I-75 and spans from the project's southern limits to S.R. 44. Noise sensitive land uses in this NSA consists of one SLU NAC-E land use, the M&M Smokehouse BBQ restaurant identified in this report as NB1-SLU1. One receptor point representing the outdoor tables was evaluated for traffic noise impacts.

The average noise level is 67.4 dB(A), and predicted noise levels with the No-Build Alternative are 69.9 dB(A). Neither of these noise levels meets or exceeds the FDOT 71.0 dB(A) NAC-E. Similarly, the Build Alternative's predicted noise level of 70.9 dB(A) does not meet or exceed the NAC; therefore, this receptor is not impacted by traffic noise with the construction of the Build Alternative, and noise abatement consideration is not warranted. The predicted noise levels are shown in **Appendix B**.

3.3.2 Noise Study Areas NB2 and NB3

NSA NB2, shown on pages **D1 through D3** in the project aerials **Appendix D**, is located east of I-75 and spans from S.R. 44 to C.R. 462. NSA NB3 continues north from C.R. 462 to C.R. 475 and is illustrated on pages **D3 through D7** in **Appendix D**. Noise sensitive land uses in these two NSAs consist of NAC-B and NAC-C land uses in the community of Royal and the surrounding area. Eighteen NAC-B receptor points were evaluated for traffic noise impacts, representing 19 residences, identified as NB2-01 through NB2-08 and NB3-01 through NB3-09. The Ebenezer AME Church (NB3-SLU1), a NAC-C land use, was also evaluated.

In NSA NB2, the average noise level is currently 62.6 dB(A), with one residence exceeding the FDOT 66.0 dB(A) NAC-B. Predicted noise levels with the No-Build Alternative average 65.0 dB(A), with two residences meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 66.6 dB(A), with four of the eight analyzed residences meeting or exceeding the NAC.

In NSA NB3, the average noise level is currently 61.6 dB(A), with one residence exceeding the NAC. Predicted noise levels with the No-Build Alternative average 63.9 dB(A), with the same residence meeting or exceeding the NAC. The Build Alternative's average predicted noise level is

65.5 dB(A), with three of the ten analyzed residences meeting or exceeding the NAC. The Ebenezer AME Church is not predicted to have a project noise level that meets or exceeds the FDOT 66.0 dB(A) NAC-C. As a result of the traffic noise analysis, four NSA NB2 residential receptors and three NSA NB3 residential receptors require abatement consideration. The predicted noise levels are shown in **Appendix B**.

Because impacted receptor NB2-02 is considered an isolated impact where a potential noise barrier cannot achieve the minimum acoustic feasibility requirement of 5.0 dB(A) reduction at two impacted sites, a noise barrier was not evaluated for this impact, as outlined in the Feasibility Factors discussed in **Section 2.4.4.1**.

3.3.2.1 Noise Barrier NB-A1 Evaluation

Noise barrier NB-A1 was evaluated approximately 10 feet inside the I-75 NB ROW to reduce traffic noise for six of the seven impacted residences within NSAs NB2 and NB3. The C.R. 462 overpass limits the ability to construct a continuous noise barrier; therefore, two segments were analyzed as a barrier system. As summarized in **Table 3-2**, the NB-A1 barrier system meets all FDOT acoustic requirements at heights above 18 feet but fails to meet the cost-reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Lowering the barrier segment heights to 18 feet no longer achieves the Noise Reduction Design Goal (NRDG) of 7.0 dB(A) at a minimum of one benefited receptor. Reducing the barrier segment lengths reduces the effectiveness of the barrier system, resulting in fewer benefits while still exceeding the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for the four impacted residences in NSA NB2 and the three impacted residences in NSA NB3. **Appendix C** illustrates Barrier NB-A1 Evaluation Option 2 on pages **C1 and C2**.

Table 3-2 | Noise Barrier NB-A1 Evaluation (NSAs NB2 & NB3)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	1,878	6	2	3	1	6	7	13	6.0	0	$3,404,940	$261,918	No [6]
	ROW [7]	22	3,281												
2 *	ROW [7]	20	1,578	6	3	2	1	6	5	11	5.8	0	$2,915,400	$265,036	No [6]
	ROW [7]	20	3,281												
3	ROW [7]	20	1,578	6	3	1	1	5	5	10	5.6	1	$2,557,200	$255,720	No [6]
	ROW [7]	20	2,684												
4	ROW [7]	18	1,578	6	3	1	0	4	4	8	5.4	2	$2,408,400	$301,050	No [1,6]
	ROW [7]	18	2,882												

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

3.3.3 Noise Study Area NB4

NSA NB4, shown on pages **D7 through D13** in the project aerials **Appendix D**, is located east of I-75 and spans from C.R. 475 to the I-75 NB Weigh Station. Noise sensitive land uses in this NSA consist of NAC-B and SLU NAC-C land uses. Twenty-six NAC-B receptor points, identified as NB4-01 through NB4-26, representing 27 residences, were evaluated for traffic noise impacts. The stables and paddock area of Kickstart Farm, NB4-SLU1, was also included in the evaluation.

Currently, the average noise level is 63.7 dB(A), with seven residences meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 66.1 dB(A), with ten residential receptors meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 67.4 dB(A), with 13 of the 27 analyzed residences meeting or exceeding the NAC. The Kickstart Farm receptor is not predicted to have a project noise level that meets or exceeds the NAC-C. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.3.1 Noise Barrier NB-A2 Evaluation

Two noise barriers were evaluated as an abatement measure for NSA NB4. The first barrier, noise barrier NB-A2, was evaluated approximately 10 feet inside the NB I-75 ROW to reduce traffic noise for four impacted residences, NB4-02 through NB4-05, in the southern section of NSA NB4. As summarized in **Table 3-3**, Barrier NB-A2 meets all FDOT acoustic requirements but fails to meet the cost-reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Reducing the barrier's height and length reduces the effectiveness of the barrier, resulting in fewer benefits while still exceeding the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these four impacted residences in NSA NB4. **Appendix C** illustrates Barrier NB-A2 Evaluation Option 1 on page **C4**.

3.3.3.2 Noise Barrier NB-A3 Evaluation

The second barrier analyzed for NSA NB4, noise barrier NB-A3, was evaluated approximately 10 feet inside the NB I-75 ROW to reduce traffic noise for nine impacted residences, NB4-10 through NB4-23 in the northern section of NSA NB4. As summarized in **Table 3-4**, Barrier NB-A3 meets all FDOT acoustic requirements at heights 10 feet and higher but fails to meet the cost reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Reducing the barrier's height to 10 feet and below reduces the effectiveness of the barrier, resulting in fewer benefits while still exceeding the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these nine impacted residences in NSA NB4. **Appendix C** illustrates Barrier NB-A3 Evaluation Option 5 on pages **C5 and C6**.

Table 3-3 | Noise Barrier NB-A2 Evaluation (NSA NB4 -South)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1*	ROW [7]	22	2,794	4	1	1	2	4	3	7	6.8	0	$1,844,040	$263,434	No [6]
2	ROW [7]	22	2,595	4	1	1	2	4	2	6	6.9	0	$1,712,700	$285,450	No [6]
3	ROW [7]	20	2,995	4	1	1	2	4	2	6	7.0	0	$1,797,000	$299,500	No [6]
4	ROW [7]	18	2,599	4	1	0	2	3	0	3	7.5	1	$1,403,460	$467,820	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

Table 3-4 | Noise Barrier NB-A3 Evaluation (NSA NB4 - North)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	5,701	9	1	1	7	9	8	17	7.8	0	$3,762,660	$221,333	No [6]
2	ROW [7]	20	5,701	9	1	1	7	9	8	17	7.4	0	$3,420,600	$201,212	No [6]
3	ROW [7]	18	5,401	9	0	4	5	9	7	16	7.1	0	$2,916,540	$182,284	No [6]
4	ROW [7]	16	5,200	9	1	3	5	9	5	14	6.8	0	$2,496,000	$178,286	No [6]
5*	ROW [7]	14	5,200	9	3	4	2	9	4	13	6.3	0	$2,184,000	$168,000	No [6]
6	ROW [7]	10	4,401	9	2	0	2	4	0	4	6.9	5	$1,320,300	$330,075	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

3.3.4 Noise Study Area NB5

NSA NB5, shown on pages **D13 through D16** in the project aerials **Appendix D**, is located east of I-75 and spans from the I-75 NB Weigh Station to C.R. 484. Noise sensitive land uses in this NSA consist of NAC-B, NAC-C, and NAC-E land uses. Nineteen NAC-B receptor points, identified as NB5-01 through NB5-19, representing 19 residences, were evaluated for traffic noise impacts. The two SLU-C land uses are the Shree Swaminarayan Temple front entrance patio (NB5-SLU1) and the Don Garlits Museum of Drag Racing outdoor tables (NB5-SLU2). The two SLU-E land uses are the Sleep Inn pool (NB5-SLU3) and the outdoor tables at Tom's Cuban restaurant (NB5-SLU4).

Currently, the average noise level is 63.6 dB(A), with three residences and one SLU-C receptor meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 65.9 dB(A), with seven residential receptors and one SLU-C receptor meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 67.2 dB(A), with 10 of the 19 analyzed residences meeting or exceeding the NAC. The two SLU-C receptors are also predicted to have project noise levels that meet or exceed the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

Because impacted receptor NB5-01 is considered an isolated impact, a noise barrier was not evaluated for this impact, as outlined in the Feasibility Factors discussed in **Section 2.4.4.1.**

3.3.4.1 Noise Barrier NB-A4 Evaluation

Noise barrier NB-A4 was evaluated approximately 10 feet inside the NB I-75 ROW to reduce traffic noise for nine impacted residences. As summarized in **Table 3-5**, Barrier NB-A4 meets all FDOT acoustic requirements but fails to meet the cost criterion due to the low number of benefited receptors compared to the required barrier dimensions. Reducing the barrier's height reduces the effectiveness of the barrier, resulting in fewer benefits while still exceeding the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these nine impacted residences in NSA NB4. **Appendix C** illustrates Barrier NB-A5 Evaluation Option 4 on pages **C7 and C8**.

The impacted Shree Swaminarayan Temple (NB5-SLU1) benefited from the analyzed residential barrier NB-A4, but the residential barrier was not found to be cost-reasonable. Using the FDOT SLU methodology discussed in **Section 2.4.5**, the FDOT SLU Worksheet was used to assess whether combining Activity Categories B and C land uses for a single noise barrier system would potentially benefit all land use types evaluated and meet the cost criterion.

Table 3-5 | Noise Barrier NB-A4 Evaluation (NSA NB5)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	6,061	9	0	1	8	9	6	15	7.8	0	$4,000,260	$266,684	No [6]
2	ROW [7]	20	5,076	9	2	0	7	9	3	12	7.4	0	$3,045,600	$253,800	No [6]
3	ROW [7]	18	5,176	9	2	2	5	9	3	12	7.0	0	$2,795,040	$232,920	No [6]
4*	ROW [7]	16	5,373	9	2	3	4	9	3	12	6.6	0	$2,579,040	$214,920	No [6]
5	ROW [7]	14	5,172	9	4	2	2	8	2	10	5.9	1	$2,172,240	$217,224	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

Usage data for the Temple patio is unavailable, so a conservative estimate was used of 150 daily users who would spend up to one hour on the patio, based on the size of the patio and the event industry standard of 6 sf per person. **Table 3-6** shows that the calculated Equivalent Residential Value (ERV) for NB5-SLU1 is 2.38 (rounded to 2.4).

Table 3-6 | Noise Barrier NB-A4 Receptor NB5-SLU1 Residential Equivalent Evaluation

SLU NAME		**Shree Swaminarayan Temple (NB5-SLU1)**					
SLU DESCRIPTION		**Front Entrance Stair and Patio**					
NAC		**C**					
SLU Equivalent Residential Value (ERV) IDENTIFICATION							
Step	**Sub-Step**	**Description**					**Value**
Average Single-Family Residence in Florida - Person Hours per Year							
A1	a	Average number of people in a single-family residence in Florida					2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)					8,760
	c	**Residential Person-Hours per Year Available for Use**					22,951
SLU Person Hours per Year							
A2	a	Average number of users per day *in the area evaluated* at the SLU					150
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU					1
	c	Number of days per week the SLU is operational					7
	d	Number of weeks per year the SLU is operational					52
	e	**Person-Hours per Year Available for Use at the SLU**					54,600
SLU Area Evaluated Equivalent Residential Value (ERV)							
A3	a	**Equivalent Residential Value (ERV)**					**2.38**
	b	Identify the number of receptors evaluated at the SLU					1
	c	Individual Receptor Equivalent Residential Value					2.379
Barrier Evaluation for SLU #1							
Barrier ID	**Barrier Location**	**Barrier Height**	**Barrier Length**	**Number of Benefited Receptors at SLU #1**	**Number of Impacted and Benefited Receptors at SLU #1**	**SLU BERV**	**SLU Impacted BERV**
NB-A4	ROW	16	5,373	1	1	2.4	2.4
	Shoulder	-	-				
	Structure	-	-				
Note: Grey cells have embedded formulas. White cells are SLU-specific data.							

When the 2.4 SLU Barrier Equivalent Residential Value (BERV) is combined with the adjacent NSA NB5 benefited residences, Barrier NB-A4 remains not cost reasonable as summarized in **Table 3-7**. An additional 2,991 person-hours (47 BERV) are needed for the barrier to meet the cost criterion. This is not plausible, given the size of the patio. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for impacted SLU receptor NB5-SLU1.

Table 3-7 | Noise Barrier NB-A4 Combined Residential and SLU Evaluation (NSA NB5)

SLU Name(s)	Shree Swaminarayan Temple (NB5-SLU1)
SLU Description(s)	Front Entrance Stair and Patio

					Residences		ALL SLUs						
Barrier ID	Barrier Location	Barrier Height	Barrier Length [1]	Barrier Total Cost [2]	Benefited Residences	Impacted and Benefited Residences	Total SLU BERV	Total BERV (Residences and SLUs)	Total Impacted BERV (Residences and SLUs) [3]	Average Reduction dB(A)	Maximum Reduction dB(A) [4]	Cost per Benefited Equivalent Residence	Cost Reasonable?
NB-A4	ROW	16	5,373	$ 2,579,040	12	9	2.4	14	13.0	6.6	9.2	$ 179,362	**NOT REASONABLE**

[1] Barrier length refers to the total length at the ROW, Shoulder, or on Structure.
[2] Assumes $30 per square foot.
[3] If total Impacted BERV is less than 2, the noise barrier is not considered feasible.
[4] Maximum Reduction refers to the maximum reduction at any receptor (residential or SLU) evaluated for the noise barrier. If 7 dB(A) or greater, the Noise Reduction Design Goal (NRDG) is met.

Predicted traffic noise also impacts the Don Garlits Museum of Drag Racing (NB5-SLU2). Since this SLU is not in proximity to another impacted SLU or residence, a single noise barrier cannot serve as an abatement measure for two or more impacted SLUs/residences and meet the FDOT feasibility requirement discussed in **Section 2.4.5**. Therefore, it is considered isolated.

The special land use Noise Barrier Screening was to determine if the museum's covered patio with tables has enough person-hour usage to equate to at least two residences to be found feasible for noise abatement. To meet the feasibility requirement, the isolated SLU must have at least 45,026 person-hours of use per year (an ERV of 2.0) in the benefited area for a noise barrier to be found as a feasible form of noise abatement.

Current usage data for the 12 tables on the museum's covered patio was unavailable. However, a 2002 news interview listed the annual visitation rate of 50,000 for the entire museum. With the museum closed on Thanksgiving and Christmas, daily visitation equals an average of 138 visitors and an ERV of 1.114. This is below the 2.0 ERV needed to make an isolated SLU eligible for a noise barrier evaluation, as shown in **Table 3-8.** For a noise barrier evaluation to be warranted and for the SLU to achieve an ER of 2.0, 248 people would need to use the patio daily. That number equates to 31 people per hour/day and is unlikely considering the limited seating. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for impacted SLU receptor NB5-SLU2.

Table 3-8 | Receptor NB5-SLU2 Noise Abatement Preliminary Screening

NSA NB5: Don Garlits Museum of Racing covered patio (NB5-SLU2) Special Land Use Noise Barrier Screening	
Average Single-Family Residence in Florida - Person Hours per Year	
Average number of people in a single-family residence in Florida (US CENSUS, 2017-2021 data)	2.57
Hours a single-family residence is available for use (24 hours x 365 days)	8,760
Residential Person-Hours per Year Available for Use	22,513
Isolated SLU Person-Hours per Year	
Average number of users per day at the SLU	138
Approximate daily hourly usage by each person at the SLU	0.50
Number of Days per week the SLU is operational	7
Number of weeks per year the SLU is operational	52
Person-Hours per Year SLU is available for use	25,069
Equivalent Residential Value (ERV)	**1.114**
Isolated SLU Eligible for Noise Barrier Evaluation?	**NOT ELIGIBLE**
Note: Grey cells have embedded formulas. White cells are SLU-specific data.	

3.3.5 Noise Study Area NB6

NSA NB6, shown on pages **D16 through D17** in the project aerials **Appendix D**, is located east of I-75 and spans from C.R. 484 to the Marjorie Harris Carr Cross Field Greenway. Noise sensitive land uses in this NSA consist of two NAC-B residences, identified as NB6-01 and NB6-02, and the NAC-E receptor, Microtel Hotel pool (NB6-SLU1).

Currently, the average noise level is 63.7 dB(A), with no receptor meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 65.4 dB(A), with NB6-01 exceeding the NAC. The Build Alternative's average predicted noise level is 66.3 dB(A), with NB6-01 exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for this impact is required. However, because impacted receptor NB6-01 is considered an isolated impact, a noise barrier was not evaluated for this impact, as outlined in the Feasibility Factors discussed in **Section 2.4.4.1.** No potentially feasible and reasonable methods are available to abate traffic-related noise for this impacted residence. The predicted noise levels are shown in **Appendix B**.

3.3.6 Noise Study Area NB7

NSA NB7, shown on pages **D17 through D23** in the project aerials **Appendix D**, is located east of I-75 and spans from the Marjorie Harris Carr Cross Field Greenway to the I-75 NB Rest Area. The only noise sensitive land use in this NSA is NAC-B. Forty NAC-B receptor points were evaluated for traffic noise impacts, identified as NB7-01 through NB7-40, representing 94 residences in the Oak Bend manufactured home development and surrounding area. The Oak Bend development has an existing 10-foot masonry wall along the property line with I-75. This wall was included in the TNM analysis.

Currently, the average noise level is 63.6 dB(A), with 14 residences meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 65.3 dB(A), with 42 residences meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 66.4 dB(A), with 58 of the 94 analyzed residences meeting or exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.6.1 Feasible and Reasonable Noise Barrier NB-1 Evaluation

Noise barrier NB1 was first evaluated approximately 10 feet inside the NB I-75 ROW to reduce traffic noise for the 58 impacted residences. With the 22-foot maximum allowed height, the ROW barrier evaluation meets all FDOT acoustic requirements but fails to meet the cost reasonableness criterion. As summarized in **Table 3-9**, reducing the height still exceeds the cost criterion. The evaluation shifted the noise barrier to the outside shoulder of NB I-75. Shoulder-mounted noise barriers are limited to a maximum height of 14 feet but may still provide effective noise abatement because it is closer to the noise source. The shoulder-mounted Barrier

NB-1 meets all FDOT requirements and is a potentially feasible and reasonable method to abate traffic-related noise for 53 residences (33 impacted and 20 non-impacted) in NSA NB7. Seventeen impacted residences are not benefited due to their distance from the barrier.

Appendix C illustrates Barrier NB1 Evaluation Option 4 on pages **C10 and C11**. The barrier warrants further consideration in the project's Final Design phase. The final design evaluation may change this potential noise barrier's length, height, or viability.

Table 3-9 | Noise Barrier NB1 Evaluation (NSA NB7)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	5,701	50	22	9	12	43	16	59	6.7	7	$3,762,660	$63,774	No [6]
2	ROW [7]	20	4,901	50	26	6	9	41	12	53	6.2	9	$2,940,600	$55,483	No [6]
3	ROW [7]	18	3,501	50	7	5	5	17	0	17	6.2	33	$1,890,540	$111,208	No [6]
4*	SH [8]	14	5,112	50	15	8	10	33	20	53	6.6	17	$2,147,040	$40,510	Yes
5	SH [8]	14	5,533	50	15	8	10	33	21	54	6.6	17	$2,323,860	$43,034	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.
[8] SH - Noise barrier constructed at the outside shoulder of I-75. Maximum-allowed height is 14 feet. Any required tapers in height at a shoulder noise barrier termination would be in addition to the length indicated.

3.3.7 Noise Study Area NB8

NSA NB8, shown on pages **D23 through D25** in the project aerials **Appendix D**, is located east of I-75 and spans from the I-75 NB Rest Area to the SW 66th Street overpass. The only noise sensitive land use in this NSA is residential NAC-B. Eight NAC-B receptor points, identified as NB8-01 through NB8-08, representing 14 residences, were evaluated for traffic noise impacts.

Currently, the average noise level is 65.0 dB(A), with three residences meeting or exceeding the NAC. The No-Build and Build Alternative analyses include FDOT's planned 9-foot tall perimeter wall, which will be constructed along a portion of the NB Rest Area ROW. Predicted noise levels with the No-Build Alternative average 66.0 dB(A), with four receptors meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 67.3 dB(A), with four of the 14 analyzed residences meeting or exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. However, because receptor NB8-08 is considered an isolated impact, a noise barrier was not evaluated for this receptor, as outlined in the Feasibility Factors discussed in **Section 2.4.4.1.** The predicted noise levels are shown in **Appendix B**.

3.3.7.1 Noise Barrier NB-A5 Evaluation

Noise barrier NB-A5 was evaluated approximately 10 feet inside the NB I-75 ROW to reduce traffic noise for three impacted residences. As summarized in **Table 3-10**, Barrier NB-A4 meets all FDOT acoustic requirements but fails to meet the cost-reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Reducing the barrier's height reduces the effectiveness of the barrier, resulting in fewer benefits while still exceeding the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these four impacted residences in NSA NB8. Barrier NB-A5 Evaluation Option 3 is illustrated on page **C14** in **Appendix C**.

Table 3-10 | Noise Barrier NB-A5 Evaluation (NSA NB8)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1*	ROW [7]	22	1,539	3	0	1	2	3	1	4	7.9	0	$1,015,740	$253,935	No [6]
2	ROW [7]	20	1,739	3	0	1	2	3	1	4	7.6	0	$1,043,400	$260,850	No [6]
3	ROW [7]	16	1,338	3	2	0	1	3	0	3	6.8	0	$642,240	$214,080	No [6]
4	ROW [7]	14	1,939	3	1	0	1	2	0	2	6.7	1	$814,380	$407,190	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

3.3.8 Noise Study Area NB9

NSA NB9, shown on pages **D25 through D27** in the project aerials **Appendix D**, is located east of I-75 and spans from the SW 66th Street overpass to SW 43rd Street Road. Noise sensitive land uses in this NSA consist of NAC-B and SLU NAC-C land uses. Seven NAC-B receptor points, identified as NB9-01 through NB9-07, representing eight residences, were evaluated for traffic noise impacts. The two SLU-C land uses are equestrian complexes (NB9-SLU1 and SLU2).

Currently, the average noise level is 64.8 dB(A), with one residence and both SLU receptors meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 66.4 dB(A), with three residential and both SLU receptors meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 68.0 dB(A), with five of the eight analyzed residences and both SLUs meeting or exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.8.1 Noise Barrier NB-A6 Evaluation

Noise barrier NB-A6 was evaluated approximately 10 feet inside the NB I-75 ROW to reduce traffic noise for the five impacted residences. As summarized in **Table 3-11**, Barrier NB-A6 meets all FDOT acoustic requirements but fails to meet the cost-reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Lowering the barrier height to 18 feet no longer achieves the 7.0 dB(A) NRDG. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these five impacted residences in NSA NB9. **Appendix C** illustrates Barrier NB-A6 Evaluation Option 2 on page **C16**.

Table 3-11 | Noise Barrier NB-A6 Evaluation (NSA NB9)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	3,599	5	4	0	1	5	1	6	6.6	0	$2,375,340	$395,890	No [6]
2*	ROW [7]	20	3,800	5	4	0	1	5	1	6	6.3	0	$2,280,000	$380,000	No [6]
3	ROW [7]	18	4,400	5	4	1	0	5	0	5	6.0	0	$2,376,000	$475,200	No [1, 6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

The two impacted equestrian complexes (NB9-SLU1 and SLU2) are benefited from the analyzed residential barrier NB-A6, but the residential barrier was not found to be cost-reasonable. Using the FDOT SLU methodology discussed in **Section 2.4.5**, the FDOT SLU Worksheet was used to assess whether combining Activity Categories B and C land uses for a single noise barrier system would potentially benefit all evaluated land use types and meet the cost criterion.

Usage data for the equestrian complexes is unavailable, so a conservative estimate was used of 40 daily users who would spend up to four hours at each facility. **Table 3-12** and **Table 3-13** show that the calculated ERV for each SLU is 2.54.

Table 3-12 | Noise Barrier NB-A6 Receptor NB9-SLU1 Residential Equivalent Evaluation

SLU NAME		**Equestrian Complex (NB9-SLU1)**					
SLU DESCRIPTION		**Paddock/Stable Area**					
NAC		**C**					
SLU Equivalent Residential Value (ERV) IDENTIFICATION							
Step	**Sub-Step**	**Description**					**Value**
Average Single-Family Residence in Florida - Person Hours per Year							
A1	a	Average number of people in a single-family residence in Florida					2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)					8,760
	c	**Residential Person-Hours per Year Available for Use**					22,951
SLU Person Hours per Year							
A2	a	Average number of users per day *in the area evaluated* at the SLU					40
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU					4
	c	Number of days per week the SLU is operational					7
	d	Number of weeks per year the SLU is operational					52
	e	**Person-Hours per Year Available for Use at the SLU**					58,240
SLU Area Evaluated Equivalent Residential Value (ERV)							
A3	a	**Equivalent Residential Value (ERV)**					**2.54**
	b	Identify the number of receptors evaluated at the SLU					1
	c	Individual Receptor Equivalent Residential Value					2.538
SLU Weighted Residential Vote Value							
A4	a	Number of votes Assigned to SLU in Barrier Voting Process (if applicable)					3
Barrier Evaluation for SLU #1							
Barrier ID	**Barrier Location**	**Barrier Height**	**Barrier Length**	**Number of Benefited Receptors at SLU #1**	**Number of Impacted and Benefited Receptors at SLU #1**	**SLU BERV**	**SLU Impacted BERV**
NB-A6	ROW	20	3,800	1	1	2.5	2.5
	Shoulder	-	-				
	Structure	-	-				
Note: Grey cells have embedded formulas. White cells are SLU-specific data.							

Table 3-13 | Noise Barrier NB-A6 Receptor NB9-SLU2 Residential Equivalent Evaluation

SLU NAME		**Equestrian Complex (NB9-SLU2)**	
SLU DESCRIPTION		**Paddock/Stable Area**	
NAC		**C**	
SLU Equivalent Residential Value (ERV) IDENTIFICATION			
Step	**Sub-Step**	**Description**	**Value**
		Average Single-Family Residence in Florida - Person Hours per Year	
A1	a	Average number of people in a single-family residence in Florida	2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)	8,760
	c	**Residential Person-Hours per Year Available for Use**	22,951
		SLU Person Hours per Year	
A2	a	Average number of users per day *in the area evaluated* at the SLU	40
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU	4
	c	Number of days per week the SLU is operational	7
	d	Number of weeks per year the SLU is operational	52
	e	**Person-Hours per Year Available for Use at the SLU**	58,240
		SLU Area Evaluated Equivalent Residential Value (ERV)	
A3	a	**Equivalent Residential Value (ERV)**	**2.54**
	b	Identify the number of receptors evaluated at the SLU	1
	c	Individual Receptor Equivalent Residential Value	2.538
		SLU Weighted Residential Vote Value	
A4	a	Number of votes Assigned to SLU in Barrier Voting Process (if applicable)	3

Barrier Evaluation for SLU #2

Barrier ID	Barrier Location	Barrier Height	Barrier Length	Number of Benefited Receptors at SLU #1	Number of Impacted and Benefited Receptors at SLU #1	SLU BERV	SLU Impacted BERV
NB-A6	ROW	20	3,800	1	1	2.5	2.5
	Shoulder	-	-				
	Structure	-	-				

Note: Grey cells have embedded formulas. White cells are SLU-specific data.

When the SLU BERVs are combined with the adjacent NSA NB9 residential benefits, Barrier NB-A6 does not meet the cost criterion, as summarized in **Table 3-14**. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for the two impacted SLU receptors, NB9-SLU1 and NB9-SLU2.

Table 3-14 | Noise Barrier NB-A6 Combined Residential and SLU Evaluation (NSA NB9)

SLU Name(s)	Equestrian Complexes - NB9-SLU1 and NB9-SLU2												
SLU Description(s)	Paddock and Stable Areas												
					Residences		ALL SLUs						
Barrier ID	Barrier Location	Barrier Height	Barrier Length [1]	Barrier Total Cost [2]	Benefited Residences	Impacted and Benefited Residences	Total SLU BERV	Total BERV (Residences and SLUs)	Total Impacted BERV (Residences and SLUs) [3]	Average Reduction dB(A)	Maximum Reduction dB(A) [4]	Cost per Benefited Equivalent Residence	Cost Reasonable?
NB-A6	ROW	20	3,800	$ 2,280,000	6	5	5.1	11	10.1	6.3	9.7	$ 205,867	**NOT REASONABLE**

[1] Barrier length refers to the total length at the ROW, Shoulder, or on Structure.
[2] Assumes $30 per square foot.
[3] If total Impacted BERV is less than 2, the noise barrier is not considered feasible.
[4] Maximum Reduction refers to the maximum reduction at any receptor (residential or SLU) evaluated for the noise barrier. If 7 dB(A) or greater, the Noise Reduction Design Goal (NRDG) is met.

3.3.9 Noise Study Area NB10

NSA NB10, shown on pages **D27 through D28** in the project aerials **Appendix D**, is located east of I-75 and spans from SW 43rd Street Road to S.R. 200. Noise sensitive land uses in this NSA consist of one NAC-B residence (NB10-01) and two SLU NAC-E land uses. The SLU-E land uses are the Hilton Hotel pool (NB10-SLU1) and the La Quinta Hotel pool (NB10-SLU2).

Currently, the average noise level at the analyzed receptors is 63.6 dB(A), with no receptor meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 65.2 dB(A), with residential receptor NB10-01 exceeding the NAC. The Build Alternative's average predicted noise level is 65.9 dB(A), with the residential receptor continuing to exceed the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. However, because impacted receptor NB10-01 is considered an isolated impact, a noise barrier was not evaluated for this receptor, as outlined in the Feasibility Factors discussed in **Section 2.4.4.1.** Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for the one impacted residence in NSA NB10. The predicted noise levels are shown in **Appendix B**.

3.3.10 Noise Study Area NB11

NSA NB11, shown on page **D28** in the project aerials **Appendix D**, is located east of I-75 and spans from S.R. 200 to the project's northern terminus. There are no noise sensitive land uses in this NSA.

3.3.11 Noise Study Area SB1

NSA NB1, shown on page **D1** in the project aerials **Appendix D**, is located west of I-75 and spans from the project's southern limits to S.R. 44. Noise sensitive land uses in this NSA consists of one SLU NAC-E land use, the Days Inn Hotel (SB1-SLU1). One receptor point representing the pool area was evaluated for traffic noise impacts.

The average noise level is 62.7 dB(A), and predicted noise levels with the No-Build Alternative are 65.4 dB(A). Neither of these noise levels meets or exceeds the FDOT 71.0 dB(A) NAC-E. Similarly, the Build Alternative's predicted noise level of 67.3 dB(A) does not meet or exceed the NAC; therefore, this receptor is not impacted by traffic noise with construction of the Build Alternative, and noise abatement consideration is not warranted. The predicted noise levels are shown in **Appendix B**.

3.3.12 Noise Study Area SB2

NSA SB2, shown on pages **D1 through D3** in the project aerials **Appendix D**, is located west of I-75 and spans from S.R. 44 to C.R. 462. Noise sensitive land uses in this NSA consist solely of NAC-B land uses in the community of Royal. Two NAC-B receptor points were evaluated for traffic noise impacts, representing two residences, identified as SB2-01 and SB2-02.

The average noise level is currently 60.1 dB(A), and predicted noise levels with the No-Build Alternative average 62.4 dB(A). The Build Alternative's average predicted noise level is 63.7 dB(A). No sites meet or exceed the NAC for any analyzed scenario. Therefore, noise abatement is not warranted for NSA SB2. The predicted noise levels are shown in **Appendix B**.

3.3.13 Noise Study Area SB3

NSA SB3 continues north from C.R. 462 to C.R. 475 and is illustrated on pages **D3 through D7** in **Appendix D**. Noise sensitive land uses in this NSA consist of NAC-B land uses in the community of Royal and the surrounding area, and the NAC-C land use, Champagne Farms (SB3-SLU1). Seventeen NAC-B receptor points were evaluated for traffic noise impacts, representing 17 residences, identified as SB3-01 through SB3-17.

The average noise level is currently 63.9 dB(A), with three residences and the SLU exceeding the NAC. Predicted noise levels with the No-Build Alternative average 66.4 dB(A), with nine residences and the SLU meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 68.0 dB(A), with 11 of the 17 analyzed residences and the SLU meeting or exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. Because impacted receptor SB3-17, located at the northern end of NSA SB3, is considered an isolated impact, a noise barrier was not evaluated for this impact, as outlined in the Feasibility Factors discussed in **Section 2.4.4.1**. The predicted noise levels are shown in **Appendix B**.

Because of the distance between impacted receptors, two noise barriers were evaluated for NSA SB3. The first barrier is for the southern section of the NSA. Noise barrier SB-A1 was evaluated approximately 10 feet inside the I-75 SB ROW to reduce traffic noise for six impacted residences SB3-01 through SB3-03 and SB3-06 through SB3-08. The C.R. 462 overpass limits the ability to construct a continuous noise barrier; therefore, two segments were analyzed as a barrier system.

3.3.13.1 Noise Barrier SB-A1 Evaluation

As summarized in **Table 3-15**, the SB-A1 barrier system meets all FDOT acoustic requirements at heights above 16 feet but fails to meet the cost-reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Lowering the barrier segment heights to 16 feet no longer achieves the 7.0 dB(A) NRDG. Reducing the barrier segment lengths reduces the effectiveness of the barrier system, resulting in fewer benefits while still exceeding the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for the six impacted residences in the southern section of NSA SB3. **Appendix C** illustrates Barrier SB-A1 Evaluation Option 2 on pages **C1 and C2**.

3.3.13.2 Noise Barrier SB-A2 Evaluation

The second barrier analyzed for NSA SB3, noise barrier NB-A2, was evaluated approximately 10 feet inside the SB I-75 ROW to reduce traffic noise for four impacted residences in the northern section of NSA SB3, SB3-11, and SB3-14 through SB3-16. As summarized in **Table 3-16**, Barrier SB-A2 meets all FDOT acoustic requirements but fails to meet the cost-reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Reducing the barrier's height to 12 feet reduces the effectiveness of the barrier, resulting in fewer benefits while still exceeding the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these four impacted residences in the northern section of NSA SB3. **Appendix C** illustrates Barrier SB-A2 Evaluation Option 4 on page **C3**.

Table 3-15 | Noise Barrier SB-A1 Evaluation (NSA SB3- South)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	905	6	1	2	3	6	2	8	6.5	0	$2,398,440	$299,805	No [6]
	ROW [7]	22	2,729												
2 *	ROW [7]	20	905	6	2	3	1	6	1	7	6.3	0	$1,939,800	$277,114	No [6]
	ROW [7]	20	2,328												
3	ROW [7]	18	905	6	2	3	1	6	0	6	6.1	0	$1,799,820	$299,970	No [6]
	ROW [7]	18	2,428												
4	ROW [7]	16	905	6	3	2	0	5	0	5	5.8	1	$1,744,320	$348,864	No [1,6]
	ROW [7]	16	2,729												

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

Table 3-16 | Noise Barrier SB-A2 Evaluation (NSA SB3 - North)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	2,231	4	1	0	3	4	1	5	7.5	0	$1,472,460	$294,492	No [6]
2	ROW [7]	20	2,231	4	1	0	3	4	0	4	7.7	0	$1,338,600	$334,650	No [6]
3	ROW [7]	18	2,020	4	2	0	2	4	0	4	7.0	0	$1,090,800	$272,700	No [6]
4*	ROW [7]	16	2,220	4	2	0	2	4	0	4	6.7	0	$1,065,600	$266,400	No [6]
5	ROW [7]	14	2,826	4	2	0	2	4	0	4	6.4	0	$1,186,920	$296,730	No [6]
6	ROW [7]	12	3,737	4	2	0	1	3	0	3	6.0	1	$1,345,320	$448,440	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

Predicted traffic noise in NSA SB3 also impacts the Champagne Farms Stables (SB3-SLU1). Since this SLU is not in proximity to another impacted SLU or residence, a single noise barrier cannot serve as an abatement measure for two or more impacted SLUs/residences and meet the FDOT feasibility requirement discussed in **Section 2.4.5**. Therefore, it is considered isolated.

The special land use Noise Barrier Screening was used to determine if the stable area has enough person-hour usage to equate to at least two residences to be found feasible for noise abatement. Usage data for the stables was unavailable. However, the screening, shown in **Table 3-17,** allows a determination of the number of people that would need to use the facility each day throughout the year for it to be eligible for a noise barrier evaluation. For a noise barrier evaluation to be warranted and for the SLU to achieve an ER of 2.0, 61 people would need to use the stables daily. That number is not plausible, considering the size of the stable area. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for impacted SLU receptor SB3-SLU1.

Table 3-17 | Receptor SB3-SLU1 Noise Abatement Preliminary Screening

NSA SB3: Champagne Farm Stables (SB3-SLU1) Special Land Use Noise Barrier Screening	
Average Single-Family Residence in Florida - Person Hours per Year	
Average number of people in a single-family residence in Florida (US CENSUS, 2017-2021 data)	2.57
Hours a single-family residence is available for use (24 hours x 365 days)	8,760
Residential Person-Hours per Year Available for Use	22,513
Isolated SLU Person-Hours per Year	
Average number of users per day at the SLU	61
Approximate daily hourly usage by each person at the SLU	2
Number of Days per week the SLU is operational	7
Number of weeks per year the SLU is operational	52
Person-Hours per Year SLU is available for use	44,408
Equivalent Residential Value (ERV)	**1.97**
Isolated SLU Eligible for Noise Barrier Evaluation?	**NOT ELIGIBLE**
Note: Grey cells have embedded formulas. White cells are SLU-specific data.	

3.3.14 Noise Study Area SB4

NSA SB4, shown on pages **D7 through D13** in the project aerials **Appendix D**, is located west of I-75 and spans from C.R. 475 to the I-75 SB Weigh Station. Noise sensitive land uses in this NSA consist of NAC-B residences. Nine receptor points, identified as SB4-01 through SB4-09, representing nine residences, were evaluated for traffic noise impacts.

Currently, the average noise level is 65.1 dB(A), with two residences meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 67.6 dB(A), with eight

residential receptors meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 68.6 dB(A), with all nine analyzed residences meeting or exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. However, because impacted receptors SB4-01 and SB4-02 are each considered an isolated impact, a noise barrier was not evaluated for these receptors, as outlined in the Feasibility Factors discussed in **Section 2.4.4.1.** The predicted noise levels are shown in **Appendix B**.

3.3.14.1 Noise Barrier SB-A3 Evaluation

Noise barrier SB-A3 was evaluated approximately 10 feet inside the SB I-75 ROW to reduce traffic noise for seven impacted residences. As summarized in **Table 3-18**, Barrier SB-A3 meets all FDOT acoustic requirements but fails to meet the cost-reasonable criterion due to the low number of benefited receptors compared to the required barrier dimensions. Lowering the barrier height to 16 feet no longer achieves the 7.0 dB(A) NRDG. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these seven impacted residences in NSA SB4. **Appendix C** illustrates Barrier SB-A3 Evaluation Option 4 on pages **C5 and C6**.

Table 3-18 | Noise Barrier SB-A3 Evaluation (NSA SB4)

Evaluation Option * *Illustrated in Appendix C*	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	4,435	7	1	1	4	6	1	7	7.2	1	$2,927,100	$418,157	No [6]
2	ROW [7]	22	3,958	7	1	2	3	6	0	6	7.2	1	$2,612,280	$435,380	No [6]
3	ROW [7]	20	3,958	7	2	2	2	6	0	6	6.7	1	$2,374,800	$395,800	No [6]
4*	ROW [7]	18	4,161	7	2	3	1	6	0	6	6.2	1	$2,246,940	$374,490	No [6]
5	ROW [7]	16	4,741	7	2	3	0	5	0	5	6.0	2	$2,275,680	$455,136	No [1,6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

3.3.15 Noise Study Area SB5

NSA SB5, shown on pages **D13 through D16** in the project aerials **Appendix D**, is located west of I-75 and spans from the I-75 SB Weigh Station to C.R. 484. Noise sensitive land uses in this NSA consist of NAC-B, NAC-C, and NAC-E land uses. Twenty-four NAC-B receptor points, identified as SB5-01 through SB5-24, representing 43 residences, were evaluated for traffic noise impacts. All but three residences are located in the Summer Glen subdivision. The SLU-C land use represents four tee boxes and four holes at the Summer Glen golf course (receptors SB5-SLU1.1 through SB5-SLU1.8). The SLU-E land use is the Wendy's restaurant outdoor tables (SB5-SLU2).

The Summer Glen community has two earthen berms along its eastern property line and entrance ranging from 6 feet to 18 feet. The berms were included in the TNM. Currently, the average noise level is 58.6 dB(A), with no receptor meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 61.0 dB(A), with one tee box (SB5-SLU1.8) exceeding the NAC-C. The Build Alternative's average predicted noise level is 61.8 dB(A), with the same tee box meeting or exceeding the NAC. The SLU-E receptor, SB5-SLU2, is also predicted to have project noise levels exceeding NAC-E. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

Since the impacted SLUs are not in proximity to another impacted SLU or residence, a single noise barrier cannot serve as an abatement measure for two or more impacted SLUs/residences and meet the FDOT feasibility requirement discussed in **Section 2.4.5**. Therefore, each SLU is considered isolated.

The special land use Noise Barrier Screening was to determine if the 13th tee box (SB5-SLU1.8) has enough person-hour usage to equate to at least two residences to be found feasible for noise abatement. Usage data for the golf course was unavailable; however, the standard golf statistics can be used. It was assumed that the daily maximum number of golfers using the #13 tee box is 136, based on 34 tee times and a maximum grouping of 4 golfers. It takes an average of 4 hours to play 18 holes (13 minutes per hole). The 13th hole is a 3 par, equating to about 3.25 minutes at the tee box. **Table 3-19** shows that the SLU does not have enough person-hour usage to equate to at least two residences and warrant a noise barrier evaluation. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for impacted SLU receptor SB5-SLU1.8.

Table 3-19 | Receptor SB5-SLU1.8 Noise Abatement Preliminary Screening

NSA SB5: Summer Glen Golf Club (SB5-SLU1.8) Special Land Use Noise Barrier Screening	
Average Single-Family Residence in Florida - Person Hours per Year	
Average number of people in a single-family residence in Florida (US CENSUS, 2017-2021 data)	2.57
Hours a single-family residence is available for use (24 hours x 365 days)	8,760
Residential Person-Hours per Year Available for Use	22,513
Isolated SLU Person-Hours per Year	
Average number of users per day at the SLU	136
Approximate daily hourly usage by each person at the SLU	0.054166667
Number of Days per week the SLU is operational	7
Number of weeks per year the SLU is operational	52
Person-Hours per Year SLU is available for use	2,681
Equivalent Residential Value (ERV)	**0.12**
Isolated SLU Eligible for Noise Barrier Evaluation?	**NOT ELIGIBLE**
Note: Grey cells have embedded formulas. White cells are SLU-specific data.	

The special land use Preliminary Screening was also used for impacted SLU E receptor SB5-SLU2. Usage data for the outdoor tables was unavailable; however, as shown in **Table 3-20**, for a noise barrier evaluation to be warranted and for the SLU to achieve an ER of 2.0, 248 people would need to use the three tables daily. That number is not plausible, considering that the maximum number of diners using the tables at one time is 12 people. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for impacted SLU receptor SB5-SLU2.

Table 3-20 | Receptor SB5-SLU2 Noise Abatement Preliminary Screening

NSA SB5: Wendy's Outside Dining Tables (SB5-SLU2) Special Land Use Noise Barrier Screening	
Average Single-Family Residence in Florida - Person Hours per Year	
Average number of people in a single-family residence in Florida (US CENSUS, 2017-2021 data)	2.57
Hours a single-family residence is available for use (24 hours x 365 days)	8,760
Residential Person-Hours per Year Available for Use	22,513
Isolated SLU Person-Hours per Year	
Average number of users per day at the SLU	247
Approximate daily hourly usage by each person at the SLU	0.50
Number of Days per week the SLU is operational	7
Number of weeks per year the SLU is operational	52
Person-Hours per Year SLU is available for use	44,954
Equivalent Residential Value (ERV)	**2.00**
Isolated SLU Eligible for Noise Barrier Evaluation?	**NOT ELIGIBLE**
Note: Grey cells have embedded formulas. White cells are SLU-specific data.	

3.3.16 Noise Study Area SB6

NSA SB6, shown on pages **D16 through D17** in the project aerials **Appendix D**, is located west of I-75 and spans from C.R. 484 to the Marjorie Harris Carr Cross Field Greenway. Noise sensitive land uses in this NSA consist of one NAC-C land use, the Alphabet Land Learning Center playground, identified as SB6-SLU2, and one NAC-E receptor, the Hampton Inn Hotel pool (SB6-SLU1).

Currently, the average noise level is 67.8 dB(A), with the playground (SB6-SLU2) exceeding the NAC-C. Predicted noise levels with the No-Build Alternative average 69.5 dB(A), with the playground exceeding the NAC. The Build Alternative's average predicted noise level is 70.4 dB(A), and both SLUs meet or exceed their respective NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.16.1 Noise Barrier SB-A4 Evaluation

Noise barrier SB-A4 was evaluated approximately 10 feet inside the SB I-75 ROW to reduce traffic noise for the two impacted SLUs. The noise barrier dimensions were optimized to provide effective noise abatement for both SLUs and the required 7.0 dB(A) NRDG for at least one. With a length of 1,953 feet and height of 20 feet, Barrier SB-A6 meets all FDOT acoustic requirements. Using the FDOT SLU methodology discussed in **Section 2.4.5**, the FDOT SLU Worksheet was used to assess whether combining Activity Categories C and E land uses for a single noise barrier system would meet the cost-reasonable criterion.

Usage data for both SLUs is unavailable, so conservative estimates were made. For the Hampton Inn pool (SB6-SLU1), it was assumed that people would stay in the pool area for an hour. Given the approximate 1,000 sf size of the pool, a maximum of 67 people would use the area at one time (based on the industry standard of 15 sf of bathing capacity per person). If the pool is open 10 hours per day, 670 people could use it daily, and the BERV equates to 10.63, as shown in **Table 3-21**.

Table 3-21 | Noise Barrier SB-A4 Receptor SB6-SLU1 Residential Equivalent Evaluation

SLU NAME		**Hampton Inn (SB6-SLU1)**	
SLU DESCRIPTION		**Pool**	
NAC		**E**	
SLU Equivalent Residential Value (ERV) IDENTIFICATION			
Step	**Sub-Step**	**Description**	**Value**
Average Single-Family Residence in Florida - Person Hours per Year			
A1	a	Average number of people in a single-family residence in Florida	2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)	8,760
	c	**Residential Person-Hours per Year Available for Use**	22,951
SLU Person Hours per Year			
A2	a	Average number of users per day *in the area evaluated* at the SLU	670
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU	1
	c	Number of days per week the SLU is operational	7
	d	Number of weeks per year the SLU is operational	52
	e	**Person-Hours per Year Available for Use at the SLU**	243,880
SLU Area Evaluated Equivalent Residential Value (ERV)			
A3	a	**Equivalent Residential Value (ERV)**	**10.63**
	b	Identify the number of receptors evaluated at the SLU	1
	c	Individual Receptor Equivalent Residential Value	10.626
SLU Weighted Residential Vote Value			
A4	a	Number of votes Assigned to SLU in Barrier Voting Process (if applicable)	11

Barrier Evaluation for SLU #1

Barrier ID	Barrier Location	Barrier Height	Barrier Length	Number of Benefited Receptors at SLU #1	Number of Impacted and Benefited Receptors at SLU #1	SLU BERV	SLU Impacted BERV
SB-A4	ROW	20	1,953	1	1	10.6	10.6
	Shoulder	-	-				
	Structure	-	-				

Note: Grey cells have embedded formulas. White cells are SLU-specific data.

For the Alphabet Land Learning Center playground (SB6-SLU2), it was assumed that users would stay at the playground for an hour. The reported enrollment capacity of the facility is 134 students. Assuming there are six supervisory adults, that equates to 140 potential daily playground users. The school is not open on weekends but was assumed to operate 52 weeks/year. **Table 3-22** shows that the calculated BERV for the Learning Center's playground is 1.59.

Table 3-22 | Noise Barrier SB-A4 Receptor SB6-SLU2 Residential Equivalent Evaluation

SLU NAME		Alphabet Land Learning Center (SB6-SLU2)	
SLU DESCRIPTION		Playground	
NAC		C	
SLU Equivalent Residential Value (ERV) IDENTIFICATION			
Step	**Sub-Step**	**Description**	**Value**
		Average Single-Family Residence in Florida - Person Hours per Year	
A1	a	Average number of people in a single-family residence in Florida	2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)	8,760
	c	**Residential Person-Hours per Year Available for Use**	22,951
		SLU Person Hours per Year	
A2	a	Average number of users per day *in the area evaluated* at the SLU	140
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU	1
	c	Number of days per week the SLU is operational	5
	d	Number of weeks per year the SLU is operational	52
	e	**Person-Hours per Year Available for Use at the SLU**	36,400
		SLU Area Evaluated Equivalent Residential Value (ERV)	
A3	a	**Equivalent Residential Value (ERV)**	**1.59**
	b	Identify the number of receptors evaluated at the SLU	1
	c	Individual Receptor Equivalent Residential Value	1.586
		SLU Weighted Residential Vote Value	
A4	a	Number of votes Assigned to SLU in Barrier Voting Process (if applicable)	2

Barrier Evaluation for SLU #2

Barrier ID	Barrier Location	Barrier Height	Barrier Length	Number of Benefited Receptors at SLU #2	Number of Impacted and Benefited Receptors at SLU #2	SLU BERV	SLU Impacted BERV
SB-A4	ROW	20	1,953	1	1	1.6	1.6
	Shoulder	-	-				
	Structure	-	-				

Note: Grey cells have embedded formulas. White cells are SLU-specific data.

When the SLU BERVs are combined, Barrier SB-A4 does not meet the reasonable cost criterion, as summarized in **Table 3-23**. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for the two impacted SLU receptors, SB6-SLU1 and SB6-SLU2. Barrier SB-A4 is illustrated on page **C9** in **Appendix C**.

Table 3-23 | Noise Barrier SB-A4 Combined SLU Evaluation (NSA SB6)

SLU Name(s)	Hampton Inn (SB6-SLU1) and Alphabet Land Learning Center (SB6-SLU2)												
SLU Description(s)	Pool (SLU1) and Playground (SLU2)												
					Residences		ALL SLUs						
Barrier ID	Barrier Location	Barrier Height	Barrier Length [1]	Barrier Total Cost [2]	Benefited Residences	Impacted and Benefited Residences	Total SLU BERV	Total BERV (Residences and SLUs)	Total Impacted BERV (Residences and SLUs) [3]	Average Reduction dB(A)	Maximum Reduction dB(A) [4]	Cost per Benefited Equivalent Residence	Cost Reasonable?
SB-A4	ROW	20	1,953	$ 1,171,800	0	0	12.2	12	12.2	8.2	9.6	$ 95,955	**NOT REASONABLE**

[1] Barrier length refers to the total length at the ROW, Shoulder, or on Structure.
[2] Assumes $30 per square foot.
[3] If total Impacted BERV is less than 2, the noise barrier is not considered feasible.
[4] Maximum Reduction refers to the maximum reduction at any receptor (residential or SLU) evaluated for the noise barrier. If 7 dB(A) or greater, the Noise Reduction Design Goal (NRDG) is met.

3.3.17 Noise Study Area SB7

NSA SB7, shown on pages **D17 through D23** in the project aerials **Appendix D**, is located west of I-75 and spans from the Marjorie Harris Carr Cross Field Greenway to the I-75 SB Rest Area. The only noise sensitive land use in this NSA is residential. Sixty-one NAC-B receptor points, identified as SB7-01 through SB7-61, representing 61 residences, were evaluated for traffic noise impacts.

Currently, the average noise level is 64.6 dB(A), with 21 residences meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 66.3 dB(A), with 28 residences meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 67.4 dB(A), with 37 of the 61 analyzed residences meeting or exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.17.1 Noise Barrier SB-A5 Evaluation

Noise barrier SB-A5 was first evaluated approximately 10 feet inside the SB I-75 ROW to reduce traffic noise for the 61 impacted residences. At heights above 16 feet, the ROW barrier evaluation meets all FDOT acoustic requirements but fails to meet the cost-reasonable criterion. As summarized in **Table 3-24**, reducing the height further reduces the number of benefited receptors and still exceeds the cost criterion.

Subsequently, the evaluation shifted the noise barrier to the outside shoulder of SB I-75. Shoulder-mounted noise barriers are limited to a maximum height of 14 feet, but the barrier may still provide effective noise abatement because it is closer to the noise source. The shoulder-mounted Barrier SB-A5 meets all FDOT acoustic requirements but fails to meet the cost criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these 37 impacted residences in NSA SB7. **Appendix C** illustrates barrier SB-A5 Evaluation Option 5 on pages **C12 through C13**.

Table 3-24 | Noise Barrier SB-A5 Evaluation (NSA SB7)

Evaluation Option *Illustrated in Appendix C	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1	ROW [7]	22	6,632	37	3	5	28	36	18	54	7.6	1	$4,377,120	$81,058	No [6]
2	ROW [7]	20	6,732	37	3	8	24	35	18	53	7.1	2	$4,039,200	$76,211	No [6]
3	ROW [7]	18	6,833	37	9	7	19	35	9	44	6.8	2	$3,689,820	$83,860	No [6]
4	ROW [7]	16	7,340	37	4	8	14	26	2	28	6.8	11	$3,523,200	$125,829	No [6]
5*	SH [8]	14	6,544	37	5	9	20	34	17	51	7.0	3	$2,748,480	$53,892	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.
[8] SH - Noise barrier constructed at the outside shoulder of I-75. Maximum-allowed height is 14 feet. Any required tapers in height at a shoulder noise barrier termination would be in addition to the length indicated.

3.3.18 Noise Study Area SB8

NSA SB8, shown on pages **D23 through D25** in the project aerials **Appendix D**, is located west of I-75 and spans from the I-75 SB Rest Area to the SW 66th Street overpass. Noise sensitive land uses in this NSA consist of NAC-B and SLU NAC-C land uses. Seventeen NAC-B receptor points, identified as SB8-01 through SB8-17, representing 24 residences, were evaluated for traffic noise impacts. The sole SLU-C land use is the Ocala Korean Baptist church front entrance (SB8-SLU1).

Currently, the average noise level is 65.4 dB(A), with eight residences meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 67.1 dB(A), with ten receptors meeting or exceeding the NAC. The Build Alternative's average predicted noise level is 68.5dB(A), with 11 of the 24 analyzed residences meeting or exceeding the NAC. Receptor SB8-SLU1 is also predicted to experience noise levels that exceed the NAC-C criteria. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.18.1 Noise Barrier SB-A6 Evaluation

Noise barrier SB-A6 was evaluated approximately 10 feet inside the SB I-75 ROW to reduce traffic noise for 11 impacted residences. The analysis began by evaluating the noise barrier as a two-segment system to avoid barrier coverage of vacant land, reducing the cost. As summarized in **Table 3-25**, Barrier SB-A6 meets all FDOT acoustic requirements as a two-segment system with heights of 22 and 20 feet but fails to meet the cost-reasonable criterion. Reducing the barrier segment heights to 18 feet reduces the effectiveness of the barrier, resulting in fewer benefits while still exceeding the cost criterion. When the barrier gap is closed (Evaluation Option 4), the noise reduction results for the residences are comparable to the two-segment options; however, the SLU now receives a benefit from the barrier. The cost of the residential noise barrier exceeds the criterion. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for these eleven impacted residences in NSA SB8. **Appendix C** illustrates Barrier SB-A6 Evaluation Option 1 on pages **C14 through C15**.

Table 3-25 | Noise Barrier NB-A5 Evaluation (NSA NB8)

Evaluation Option *Illustrated in Appendix C	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1 *	ROW [7]	22	4,108	11	2	3	6	11	1	12	7.1	0	$3,305,280	$275,440	No [6]
	ROW [7]	22	900												
2	ROW [7]	20	4,109	11	5	1	4	10	0	10	6.4	1	$2,765,400	$276,540	No [6]
	ROW [7]	20	500												
3	ROW [7]	18	3,208	11	3	2	1	6	0	6	6.2	5	$2,056,320	$342,720	No [6]
	ROW [7]	18	600												
4	ROW [7]	20	6,010	11	3	2	5	10	0	10	6.7	1	$3,606,000	$360,600	No [6]

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

The impacted church (SB8-SLU1) is benefited from the analyzed residential barrier SB-A8 under Evaluation Option 4 (refer to **Table 3-25**), but the residential barrier was not found to be cost-reasonable. Using the FDOT SLU methodology discussed in **Section 2.4.5**, the FDOT SLU Worksheet was used to assess whether combining Activity Categories B and C land uses for a single noise barrier system would potentially benefit all evaluated land use types and be cost reasonable.

Usage data for the church is unavailable, so a conservative estimate was used of 100 daily users spending 30 minutes at the church entrance and bench daily. **Table 3-26** shows that the calculated BERV for the SLU is 0.79. When the SLU BERV is combined with the adjacent NSA SB98 residential benefits, Barrier SB-A6 remains not cost-reasonable, as summarized in **Table 3-27**. An additional 4,774 person-hours (75 BERV) are needed for the barrier to meet the cost criterion. This is not plausible, given the size of the front entrance and two benches. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for the impacted SLU receptor, SB8-SLU1.

Table 3-26 | Noise Barrier SB-A6 Receptor SB8-SLU1 Residential Equivalent Evaluation

SLU NAME		**Ocala Korean Baptist Church (SB8-SLU1)**					
SLU DESCRIPTION		**Front Entrance and Bench**					
NAC		**C**					
SLU Equivalent Residential Value (ERV) IDENTIFICATION							
Step	**Sub-Step**	**Description**					**Value**
Average Single-Family Residence in Florida - Person Hours per Year							
A1	a	Average number of people in a single-family residence in Florida					2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)					8,760
	c	**Residential Person-Hours per Year Available for Use**					22,951
SLU Person Hours per Year							
A2	a	Average number of users per day *in the area evaluated* at the SLU					100
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU					0.5
	c	Number of days per week the SLU is operational					7
	d	Number of weeks per year the SLU is operational					52
	e	**Person-Hours per Year Available for Use at the SLU**					18,200
SLU Area Evaluated Equivalent Residential Value (ERV)							
A3	a	**Equivalent Residential Value (ERV)**					**0.79**
	b	Identify the number of receptors evaluated at the SLU					1
	c	Individual Receptor Equivalent Residential Value					0.793
SLU Weighted Residential Vote Value							
A4	a	Number of votes Assigned to SLU in Barrier Voting Process (if applicable)					1
Barrier Evaluation for SLU #1							
Barrier ID	**Barrier Location**	**Barrier Height**	**Barrier Length**	**Number of Benefited Receptors at SLU #1**	**Number of Impacted and Benefited Receptors at SLU #1**	**SLU BERV**	**SLU Impacted BERV**
SB-A8	ROW	16	1,206	1	1	0.8	0.8
	Shoulder	-	-				
	Structure	-	-				

Note: Grey cells have embedded formulas. White cells are SLU-specific data.

Table 3-27 | Noise Barrier SB-A6 Combined Residential and SLU Evaluation (NSA SB8)

SLU Name(s)	Ocala Korean Baptist Church (SB8-SLU1)												
SLU Description(s)	Front Entrance and Bench												
					Residences		ALL SLUs						
Barrier ID	Barrier Location	Barrier Height	Barrier Length [1]	Barrier Total Cost [2]	Benefited Residences	Impacted and Benefited Residences	Total SLU BERV	Total BERV (Residences and SLUs)	Total Impacted BERV (Residences and SLUs) [3]	Average Reduction dB(A)	Maximum Reduction dB(A) [4]	Cost per Benefited Equivalent Residence	Cost Reasonable?
SB-A6	ROW	20	6,010	$ 3,606,000	10	10	0.8	11	10.8	0.0	9.4	$ 334,106	NOT REASONABLE

[1] Barrier length refers to the total length at the ROW, Shoulder, or on Structure.
[2] Assumes $30 per square foot.
[3] If total Impacted BERV is less than 2, the noise barrier is not considered feasible.
[4] Maximum Reduction refers to the maximum reduction at any receptor (residential or SLU) evaluated for the noise barrier. If 7 dB(A) or greater, the Noise Reduction Design Goal (NRDG) is met.

3.3.19 Noise Study Area SB9

NSA SB9, shown on pages **D25 through D27** in the project aerials **Appendix D**, is located west of I-75 and spans from the SW 66th Street overpass to SW 43rd Street Road. There is one noise sensitive land use in this NSA. The NAC-E land use, a gazebo on the SPXFLOW complex (SB9-SLU1), was evaluated for traffic noise impacts.

Currently, the noise level at this receptor is 64.7 dB(A) and is predicted to be 66.0 dB(A) with the No-Build Alternative and 66.4 dB(A) with the Build Alternative. None of these noise levels meet or exceed the 71.0 dB(A) NAC-E. Therefore, this receptor is not impacted by traffic noise with construction of the Build Alternative, and noise abatement consideration is not warranted. The predicted noise levels are shown in **Appendix B**.

3.3.20 Noise Study Area SB10

NSA SB10, shown on pages **D27 through D28** in the project aerials **Appendix D**, is located west of I-75 and spans from SW 43rd Street Road to S.R. 200. Noise sensitive land uses in this NSA are all NAC-E sites. Five receptors were modeled to represent two benches in the shopping center parking lot (SB10-SLU1 and SLU1.1), the Gator Dockside outdoor tables (SB10-SLU2), the Fairfield Inn Hotel pool (SB10-SLU3), and the Steak and Shake outdoor tables (SB10-SLU4).

Currently, the average noise level is 69.4 dB(A), with the predicted No-Build Alternative average noise level of 70.8 dB(A). Three SLUs exceed the NAC: one of the shopping center benches (SB10-SLU1.1), the Fairfield Inn pool (SB10-SLU3), and the tables at Steak and Shake (SB10-SLU4). The Build Alternative's average predicted noise level is 71.5 dB(A), with the same three SLUs exceeding the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.20.1 Noise Barrier SB-A7 Evaluation

Noise barrier SB-A7 was evaluated approximately 10 feet inside the SB I-75 ROW to reduce traffic noise for the three impacted SLUs. The noise barrier dimensions were optimized to provide effective noise abatement for the impacted SLUs and meet the required 7.0 dB(A) NRDG for at least one. With a length of 1,206 feet and height of 16 feet, Barrier SB-A7 meets all FDOT acoustic requirements but only provides effective noise abatement for two of the three impacted SLUs. The tables at Steak and Shake (SB10-SLU4) do not receive a benefit from the noise barrier due to traffic noise from S.R. 200. Consequently, noise abatement is not feasible or reasonable for this receptor.

Using the FDOT SLU methodology discussed in **Section 2.4.5**, the FDOT SLU Worksheet was used to assess whether combining the two benefited Activity Category E land uses for a single noise barrier system would be cost-reasonable. Usage data for the SLUs is unavailable, so conservative estimates were made.

For the shopping center bench (SB10-SLU1.1), it was assumed that users would sit on the bench for 30 minutes. The bench seats two persons. Assuming it is consistently used throughout the daylight hours, a maximum of 24 people use the bench daily. Since the barrier analysis identified that the non-impacted bench, SB10-SLU1.2, would benefit from the noise barrier, the receptor was added to the ERV worksheet. **Table 3-28** shows that the calculated BERV for the shopping center benches is 0.4.

Table 3-28 | Noise Barrier SB-A7 Receptor SB10-SLU1.1 Residential Equivalent Evaluation

SLU NAME		**Shopping Center (Impacted SB10-SLU1.1) (Not Impacted SB10-SLU1.2)**					
SLU DESCRIPTION		**Benches**					
NAC		**E**					
SLU Equivalent Residential Value (ERV) IDENTIFICATION							
Step	**Sub-Step**	**Description**					**Value**
Average Single-Family Residence in Florida - Person Hours per Year							
A1	a	Average number of people in a single-family residence in Florida					2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)					8,760
	c	**Residential Person-Hours per Year Available for Use**					22,951
SLU Person Hours per Year							
A2	a	Average number of users per day *in the area evaluated* at the SLU					48
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU					0.5
	c	Number of days per week the SLU is operational					7
	d	Number of weeks per year the SLU is operational					52
	e	**Person-Hours per Year Available for Use at the SLU**					8,736
SLU Area Evaluated Equivalent Residential Value (ERV)							
A3	a	**Equivalent Residential Value (ERV)**					**0.38**
	b	Identify the number of receptors evaluated at the SLU					2
	c	Individual Receptor Equivalent Residential Value					0.190
SLU Weighted Residential Vote Value							
A4	a	Number of votes Assigned to SLU in Barrier Voting Process (if applicable)					1
Barrier Evaluation for SLU #1							
Barrier ID	**Barrier Location**	**Barrier Height**	**Barrier Length**	**Number of Benefited Receptors at SLU #1**	**Number of Impacted and Benefited Receptors at SLU #1**	**SLU BERV**	**SLU Impacted BERV**
SB-A7	ROW	16	1,206	2	1	0.4	0.2
	Shoulder	-	-				
	Structure	-	-				
Note: Grey cells have embedded formulas. White cells are SLU-specific data.							

For the Fairfield Inn pool (SB10-SLU3), it was assumed that people would stay in the pool area for an hour. Given the approximate 1,000 sf size of the pool, a maximum of 67 people would use the area at one time (based on the industry standard of 15 sf of bathing capacity per person). If the pool is open 10 hours per day, 670 people could use it daily, and the BERV equates to 10.63, as shown in **Table 3-29**.

Table 3-29 | Noise Barrier SB-A7 Receptor SB10-SLU3 Residential Equivalent Evaluation

SLU NAME		**Fairfield Inn (SB10-SLU3)**	
SLU DESCRIPTION		**Pool**	
NAC		**E**	
SLU Equivalent Residential Value (ERV) IDENTIFICATION			
Step	**Sub-Step**	**Description**	**Value**
Average Single-Family Residence in Florida - Person Hours per Year			
A1	a	Average number of people in a single-family residence in Florida	2.62
	b	Hours a single-family residence is available for use (24 hours x 365 days)	8,760
	c	**Residential Person-Hours per Year Available for Use**	22,951
SLU Person Hours per Year			
A2	a	Average number of users per day *in the area evaluated* at the SLU	670
	b	Approximate daily hourly usage by each person *in the area evaluated* at the SLU	1
	c	Number of days per week the SLU is operational	7
	d	Number of weeks per year the SLU is operational	52
	e	**Person-Hours per Year Available for Use at the SLU**	243,880
SLU Area Evaluated Equivalent Residential Value (ERV)			
A3	a	**Equivalent Residential Value (ERV)**	**10.63**
	b	Identify the number of receptors evaluated at the SLU	1
	c	Individual Receptor Equivalent Residential Value	10.626
SLU Weighted Residential Vote Value			
A4	a	Number of votes Assigned to SLU in Barrier Voting Process (if applicable)	11

Barrier Evaluation for SLU #2

Barrier ID	Barrier Location	Barrier Height	Barrier Length	Number of Benefited Receptors at SLU #2	Number of Impacted and Benefited Receptors at SLU #2	SLU BERV	SLU Impacted BERV
SB-A7	ROW	16	1,206	1	1	10.6	10.6
	Shoulder	-	-				
	Structure	-	-				

Note: Grey cells have embedded formulas. White cells are SLU-specific data.

When the SLU BERVs are combined, Barrier SB-A7 is not cost reasonable, as summarized in **Table 3-30**. An additional 176.6 person-hours (2.8 BERV) are needed for the barrier to meet the cost criterion. This is not plausible, given the size of the pool area. Consequently, no potentially feasible and reasonable methods are available to abate traffic-related noise for the three impacted SLU receptors, SB10-SLU1.1, SB10-SLU3, and SB10-SLU4. Barrier SB-A7 is illustrated on page **C17** in **Appendix C**.

Table 3-30 | Noise Barrier SB-A4 Combined SLU Evaluation (NSA SB6)

SLU Name(s)	Shopping Center (SB10-SLU1.1); Fairfield Inn (SB10-SLU3)												
SLU Description(s)	Bench; Pool												
					Residences		ALL SLUs						
Barrier ID	Barrier Location	Barrier Height	Barrier Length [1]	Barrier Total Cost [2]	Benefited Residences	Impacted and Benefited Residences	Total SLU BERV	Total BERV (Residences and SLUs)	Total Impacted BERV (Residences and SLUs) [3]	Average Reduction dB(A)	Maximum Reduction dB(A) [4]	Cost per Benefited Equivalent Residence	Cost Reasonable?
SB-A7	ROW	16	1,206	$ 578,880	0	0	11.0	11	10.8	6.6	9.4	$ 52,594	**NOT REASONABLE**

[1] Barrier length refers to the total length at the ROW, Shoulder, or on Structure.
[2] Assumes $30 per square foot.
[3] If total Impacted BERV is less than 2, the noise barrier is not considered feasible.
[4] Maximum Reduction refers to the maximum reduction at any receptor (residential or SLU) evaluated for the noise barrier. If 7 dB(A) or greater, the Noise Reduction Design Goal (NRDG) is met.

3.3.21 Noise Study Area SB11

NSA SB11, shown on page **D28** in the project aerials **Appendix D**, is located west of I-75 and spans from S.R. 200 to the project's northern terminus. Noise sensitive land uses in this NSA are NAC-B and NAC-E sites. Nineteen NAC-B receptor points representing 34 units with patios in the 3-story Canterbury Apartments complex, identified as receptors NB11-01A through NB11-08B, were evaluated for traffic noise impacts. The seven NAC-E SLUs are listed below:

- Burger King tables (SB11-SLU1)
- Best Western pool (SB11-SLU2)
- Hampton Inn pool (SB11-SLU3)
- Residence Inn tennis court and pool (SB11-SLU4)
- Holiday Inn pool (SB11-SLU5)
- Holiday Inn Express pool (SB11-SLU6)
- Home 2 Suites pool (SB11-SLU7) – *Under construction*

Currently, the average noise level is 63.9 dB(A), with 9 apartments meeting or exceeding the NAC. Predicted noise levels with the No-Build Alternative average 65.6 dB(A), with 18 apartments and the Home 2 Suites pool meeting or exceeding their respective NAC. The Build Alternative's average predicted noise level is 66.4 dB(A), with 18 of the 34 analyzed apartments meeting or exceeding the NAC. The Home 2 Suites pool is the only SLU that meets or exceeds the NAC. As a result of the traffic noise analysis, noise abatement consideration for these impacts is required. The predicted noise levels are shown in **Appendix B**.

3.3.21.1 Feasible and Reasonable Noise Barrier SB-1 Evaluation

Noise barrier SB1 was evaluated approximately 10 feet inside the SB I-75 ROW to reduce traffic noise for the 18 impacted apartments. With the 22-foot maximum allowed height, the ROW barrier evaluation meets all FDOT acoustic requirements and the $42,000 per benefited receptor cost reasonable criterion. **Table 3-9** summarizes that Barrier SB1 is a potentially feasible and reasonable method to abate traffic-related noise for 32 residences (18 impacted and 14 non-impacted) in NSA SB11.

The impacted SLU, SB11-SLU7, will receive a 9.9 dB(A) noise reduction benefit from the residential barrier; thus, no further noise barrier evaluation was conducted for this receptor.

Appendix C illustrates Barrier SB1 on page **C18**. The barrier warrants further consideration in the project's Final Design phase. The final design evaluation may change this potential noise barrier's length, height, or viability.

Table 3-31 | Noise Barrier SB1 Evaluation (NSA SB11)

Evaluation Option *Illustrated in Appendix C	Barrier Location	Barrier Height (feet)	Barrier Length (feet)	No. of Residential Impacts	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Res. Not Benefited [4]	Total Estimated Cost [5]	Cost per Benefited Residence	Warrants Further Consideration In Final Design?
					5-5.9 dB(A)	6-6.9 dB(A)	≥ 7.0 dB(A) [1]	Impacted [2]	Not Impacted [3]	Total	Avg. Reduction dB(A)				
1*	ROW [7]	22	1,621	18	8	8	2	18	14	32	6.1	0	$1,069,860	$33,433	Yes

[1] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.
[2] Benefited residences with predicted noise levels that approach or exceed the NAC.
[3] Benefited residences with predicted noise levels that do not approach the NAC.
[4] Impacted residences that do not receive a minimum 5 dB(A) reduction from analyzed noise barrier.
[5] Unit cost of $30/ft^2.
[6] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.
[7] ROW – Right-of-way noise barrier constructed on I-75. Maximum-allowed height is 22 feet.

4.0 Conclusions

Noise levels at 185 residences and 13 special-use sites are predicted to approach or exceed the NAC for the design year 2040 Build Alternative. Except for seven residential and five special land use (SLU) receptors determined to be isolated, noise barriers were considered for all impacted sites identified in the noise modeling.

Thirteen noise barriers were evaluated to reduce traffic noise for 178 impacted residential receptors. Eleven analyzed noise barriers meet FDOT acoustic criteria but could not meet the cost reasonableness criterion of $42,000 per benefited receptor. Based on the analyses performed to date, there appear to be no feasible and reasonable solutions available to mitigate the noise impacts for these 101 residential receptors (see **Table 4-1**.)

Five special land use barrier analyses determined that noise abatement was not cost reasonable for the impacted sites (refer to **Table 4-2**.)

The PD&E noise analysis indicates that two noise barriers could potentially provide feasible and reasonable noise abatement for 51 of the 68 impacted residences in NSAs NB7 and SB11 and provide a benefit to 34 non-impacted residences. One impacted SLU isolated site is also incidentally benefitted. These two potentially feasible and reasonable barriers are summarized in **Table 4-3**.

Table 4-1 | Not Feasible and Reasonable Residential Noise Barrier Evaluation Summary

Noise Study Area	Barrier ID	Number of Impacted Residences	Analyzed Noise Barrier Height (ft)[1]	Analyzed Noise Barrier Length (ft)[1]	Analyzed Noise Barrier Location[2]	Total Noise Barrier System Cost[3]	Number of Residences Potentially Benefited by a Noise Barrier[4]		Does the Barrier Satisfy the Noise Reduction Design Goal[6]	Total Noise Barrier System Cost Per Benefited Residence[7]
							Impacted	Total[5]		
RESIDENTIAL NOISE BARRIERS EVALUATED ON NORTHBOUND SIDE OF I-75										
NB2,NB3	**NB-A1**	6	20	4,859	ROW	$2,915,400	6	11	Yes	$265,036
NB4	**NB-A2**	4	22	2,794	ROW	$1,844,040	4	7	Yes	$263,434
NB4	**NB-A3**	9	14	5,200	ROW	$2,184,000	9	13	Yes	$168,000
NB5	**NB-A4**	9	16	5,373	ROW	$2,579,040	9	12	Yes	$214,920
NB8	**NB-A5**	3	16	1,338	ROW	$642,240	3	3	Yes	$214,080
NB9	**NB-A6**	5	20	4,859	ROW	$2,280,000	5	6	Yes	$380,000
RESIDENTIAL NOISE BARRIERS EVALUATED ON SOUTHBOUND SIDE OF I-75										
SB3	**SB-A1**	6	20	3,233	ROW	$1,939,800	6	7	Yes	$277,114
SB3	**SB-A2**	4	16	2,220	ROW	$1,065,600	4	4	Yes	$266,400
SB3	**SB-A3**	7	18	4,161	ROW	$2,246,940	6	6	Yes	$374,490
SB7	**SB-A5**	37	14	6,544	SH	$2,748,480	34	51	Yes	$53,892
SB8	**SB-A6**	11	20	4,609	ROW	$2,765,400	10	10	Yes	$276,540

[1] Full height is for length indicated.

[2] ROW (within Right of Way); SH (on road shoulder).

[3] Unit cost of $30/ft^2 for all noise barriers.

[4] Residences that receive a minimum 5 dB(A) reduction from analyzed noise barrier.

[5] Total includes impacted/benefited residences and residences with a predicted noise level that does not approach or exceed the NAC but are incidentally benefited.

[6] FDOT Noise Reduction Design Goal is 7.0 dB(A) at a minimum of 1 benefited receptor. Analysis ends if goal is not achieved.

[7] FDOT Reasonable Cost Guideline is $42,000 per benefited residence.

Table 4-2 | Not Feasible and Reasonable SLU Noise Barrier Evaluation Summary

Noise Study Area	Barrier ID	SLU Description	Analyzed Noise Barrier Height (ft)[1]	Analyzed Noise Barrier Length (ft) [1]	Analyzed Noise Barrier Location [2]	Does the Barrier Satisfy the Noise Reduction Design Goal [3]	Did the Barrier Pass the Reasonable Cost Guidelines Calculation?	Additional Daily Usage Required to be Cost Reasonable (Persons/Hour)
SLU NOISE BARRIERS EVALUATED ON NORTHBOUND SIDE OF I-75								
NB5	**NB-A4**	Shree Swaminarayan Temple Front Patio	16	5,373	ROW	Yes	No	2,991
NB9	**NB-A6**	Equestrian Complexes Paddock and Barn Areas	20	3,800	ROW	Yes	No	2,748
SLU NOISE BARRIERS EVALUATED ON SOUTHBOUND SIDE OF I-75								
SB6	**SB-A4**	Hampton Inn Pool & Alphabet Land Learning Center Playground	20	1,953	ROW	Yes	No	998
SB8	**SB8-SLU1**	Ocala Korean Baptist Church Front Entrance and Benches	20	6,010	ROW	Yes	No	4,774
SB10	**SB-A7**	Shopping Center Bench; Fairfield Inn Pool; Steak and Shake Tables	16	1,206	ROW	Yes	No	177

Table 4-3 | Potentially Feasible and Reasonable Noise Barrier Evaluation Summary

Noise Study Area	Barrier ID	Number of Impacted Residences	Approximate Noise Barrier Stationing		Preliminary Noise Barrier Height (ft)[1]	Preliminary Noise Barrier Length (ft) [1]	Preliminary Noise Barrier Location	Total Noise Barrier System Cost [2]	Number of Residences Potentially Benefited by a Noise Barrier [3]		Total Noise Barrier System Cost Per Benefited Residence [3]
			Begin Station	End Station					Impacted	Total	
NOISE BARRIERS ON NORTHBOUND SIDE OF I-75											
NB7	**NB1**	50	1807+20	1858+80	14	5,112	SH [4]	$2,147,040	33	53	$40,510
NOISE BARRIERS ON SOUTHBOUND SIDE OF I-75											
SB11	**SB1** [6]	18	2166+87	2183+00	22	1,621	ROW [5]	$1,069,860	18	32	$33,433

[1] Full height is for length indicated.

[2] Unit cost of $30/ft2 for all noise barriers.

[3] Total includes impacted/benefited residences and residences with a predicted noise level that does not approach or exceed the NAC but are incidentally benefited.

[4] SH - Noise barrier constructed at the shoulder of the roadway. Any required tapers in height at a shoulder noise barrier termination would be in addition to the length indicated.

[5] ROW - Noise barrier constructed at the I-75 Right of Way with 10-foot offset unless otherwise noted.

[6] Residential noise barrier incidentally benefits an impacted SLU receptor.

4.1 Statement of Likelihood

The FDOT is committed to the construction of feasible and reasonable noise abatement measures. Three potentially feasible and reasonable barriers have been identified for this project (see **Table 4-3** for more detail on the noise barriers and their locations in the maps in **Appendix C**), contingent upon the following conditions:

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

The date that FDOT approves the project's environmental document will be the Date of Public Knowledge. During the design phase, a land use review will be performed to identify all noise sensitive sites that may have received a building permit between the time the PD&E noise study is finalized and prior to the project's Date of Public Knowledge. If the review identifies noise sensitive sites that have been permitted prior to the Date of Public Knowledge, then those noise sensitive sites will be evaluated for traffic noise impacts and abatement considerations.

5.0 Construction Noise and Vibration

Based on the existing land use within the limits of this project, the construction of the proposed roadway improvements will have temporary noise and vibration impacts. Construction noise sensitive sites include all sites detailed in **Section 3.0** of this report. Vibration-sensitive sites on the project include residences and medical offices. Trucks, compaction equipment, earth-moving equipment, pumps, and generators are sources of construction noise and vibration. During the construction phase of the proposed project, short-term noise and vibration may be generated by stationary and mobile construction equipment. The construction noise and vibration will be temporary at any location and controlled by adherence to the most recent edition of the *FDOT Standard Specifications for Road and Bridge Construction*.

6.0 Public Coordination

Coordination with the public and local agencies and officials was accomplished during the PD&E study. Local officials and the public were offered the opportunity to comment on the proposed project at the project's Public Hearing, held in-person on June 26, 2024, at 5:30 p.m. at the Wildwood Community Center, 6500 Powell Road, Wildwood, FL 34785. The facility opened at 5:30 p.m. to allow attendees to view the hearing materials before the 6 p.m. presentation, followed by a formal public comment period.

A virtual Public Hearing option was provided on Thursday, June 27, 2024, at 5:30 p.m. For this option, advance registration to attend the virtual meeting was required. The virtual hearing began at 5:30 p.m. as an open house to allow attendees to view the hearing materials before the 6 p.m. presentation, followed by a formal public comment period.

Copies of the draft project documents are available on the project website at https://www.cflroads.com/project/452074-2 and were available for public review from June 5, 2024, to July 8, 2024, at the following locations.

- Marion Oaks Public Library, 294 Marion Oaks Lane, Ocala, FL 34473, from 10 a.m. to 6 p.m. Monday through Friday and Saturday from 10 a.m. to 4 p.m.
- The Villages Public Library at Pinellas Park, 7375 Powell Road, Suite 100, Wildwood, FL 34785, from 9 a.m. to 7 p.m. Monday through Thursday, Friday from 9 a.m. to 5 p.m., and Saturday from 9 a.m. to 6 p.m.

The public comments received during the public involvement process and FDOT's responses are summarized in **Appendix E**.

6.1 Noise Impact Contours

To promote compatibility between land development planning and I-75, the distance between the edge of the outside travel lane and the point where the roadway-related noise is predicted to reach the NAC for each activity category was estimated. These estimates are referred to as noise contours and are shown in **Figures 6-1 and 6-2**. These estimates provide the general distance at which the traffic noise meets or exceeds the FDOT NAC for each activity type. These contours represent the approximate distance from the nearest edge of pavement to the limits of the area predicted to meet or exceed the NAC in the 2040 Design Year. These contours do not consider any shielding of noise provided by structures or vegetation between the receptor site and the proposed travel lanes.

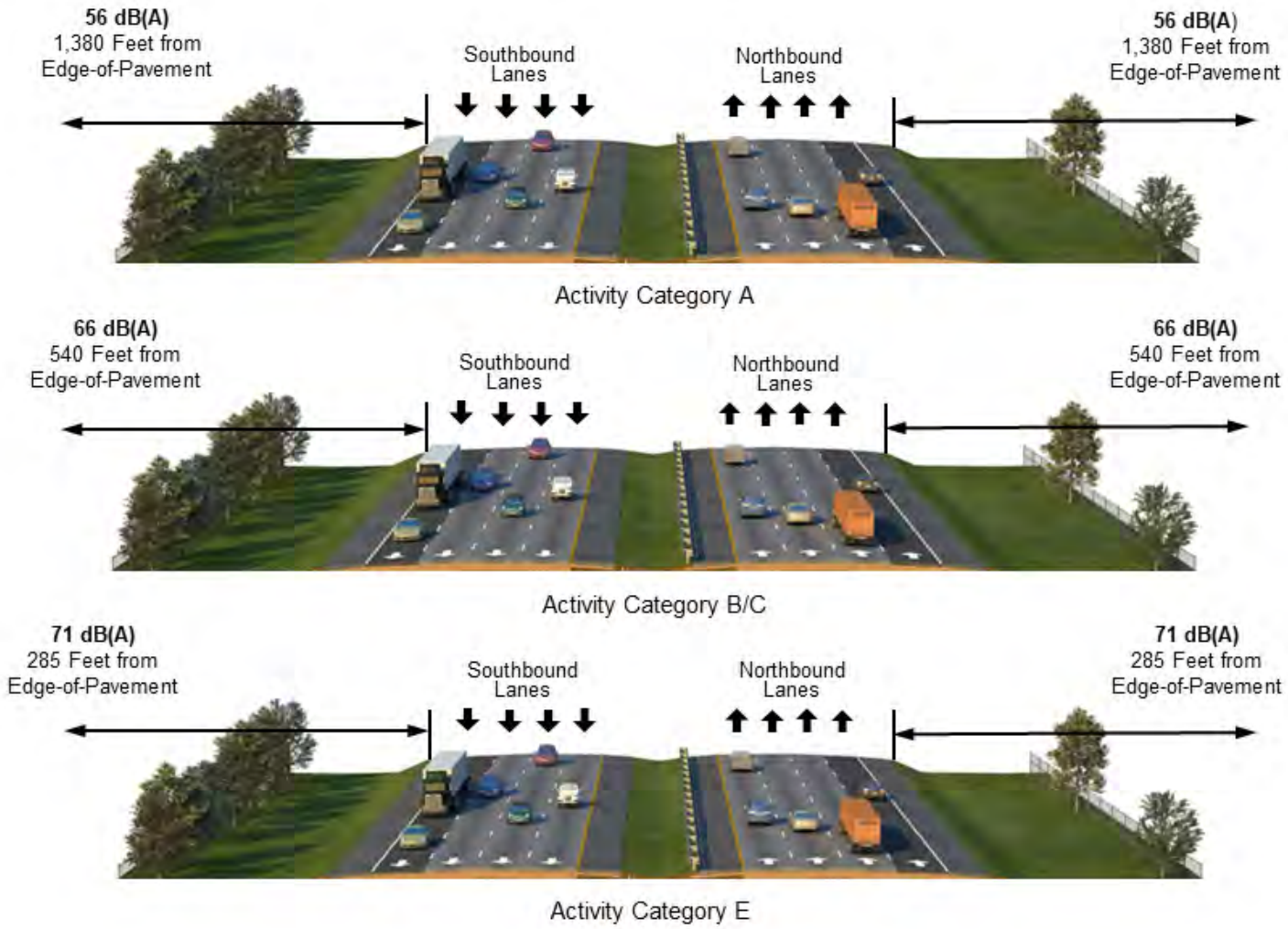


Figure 6-1 | Project Noise Contours South of S.R. 44

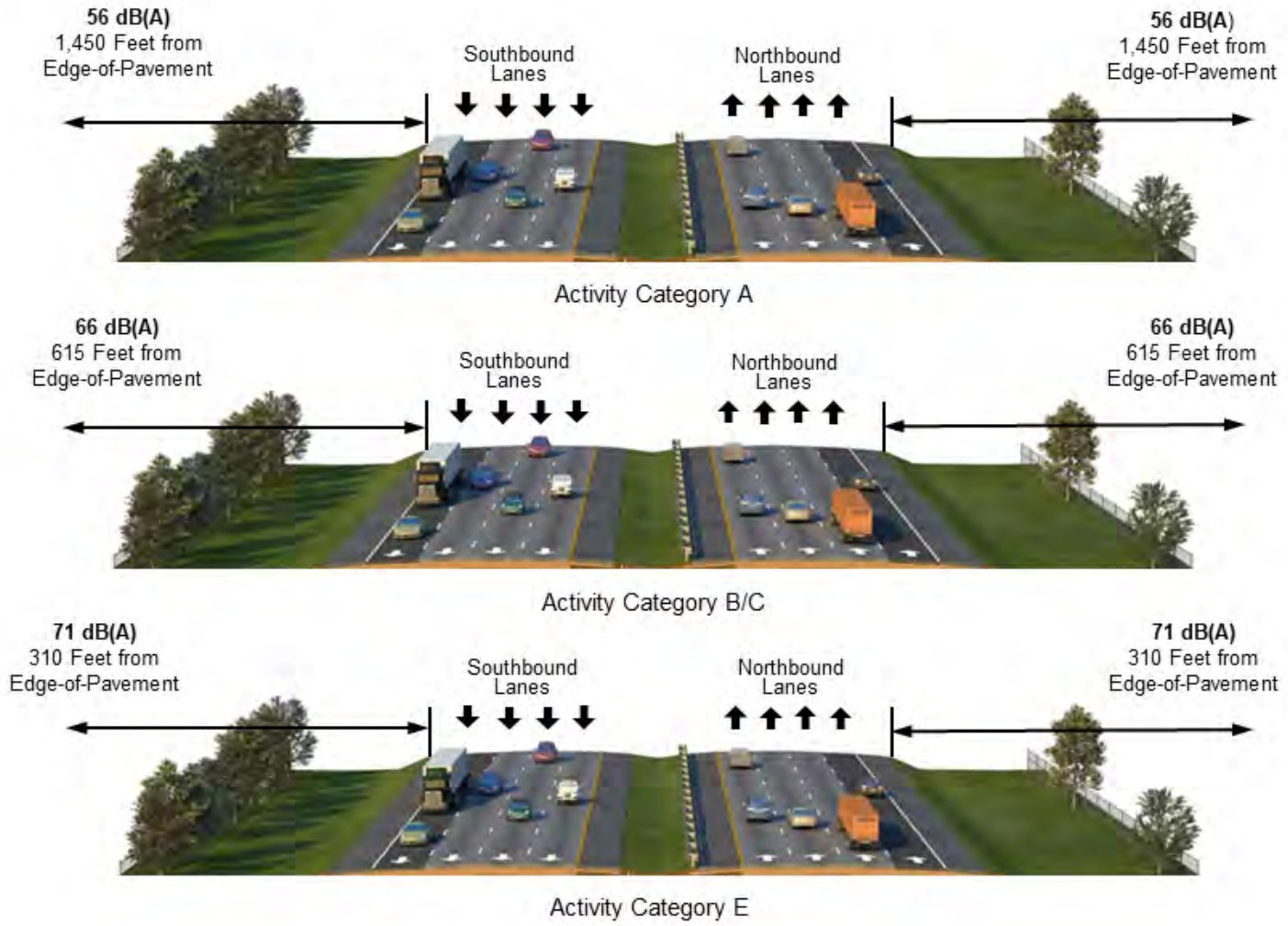


Figure 6-2 | Project Noise Contours from S.R. 44 to North of S.R. 200

7.0 References

1. 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise Federal Register, Vol. 75, No. 133, July 2010.
2. *Project Development and Environment Manual*; FDOT. July 1, 2023.
3. Section 335.17, *Florida Statutes. State Highway Construction; Means Of Noise Abatement.* 2012.
4. *Highway Traffic Noise: Analysis and Abatement Guidance, FHWA-HEP-10-025;* FHWA. December 2011.
5. *Traffic Noise Modeling and Analysis Practitioners Handbook*; FDOT. January 2016.
6. *Methodology to Evaluate Highway Traffic Noise at Special Land Uses;* FDOT. December 2023.
7. Noise Measurement Handbook; FHWA. June 2018.
8. Standard Specifications for Road and Bridge Construction; FDOT. 2023.

Appendix A Project Noise Traffic Data

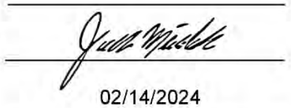
Noise Analysis Traffic Data - I-75 Master Plan/PD&E (South Section)
2019 Existing Weekday Conditions

Freeway Mainline													
I-75 Mainline Segments	Number of Lanes	Two-Way AADT	Two-Way LOS C AADT	PM Peak Hour Peak Direction	LOS C Peak Hour Peak Direction	Design Hr. % T	Design Hr. % MT	Design Hr. % HT	Design Hr. % Buses	Design Hr. % Motorcycles	Standard K-factor	PM D-factor	Posted Speed (mph)
I-75													
South of SR 44	6	89,000	69,000	2,623	3,990	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
Between SR 44 and SW 484	6	81,000	99,000	3,024	4,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
Between SW 484 and SR 200	6	97,000	99,000	3,598	4,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
North of SR 200	6	97,500	99,000	3,648	4,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
I-75 Ramps													
I-75 Ramps	Number of Lanes	One-Way AADT	One-Way LOS C AADT	PM Peak Hour Peak Direction	Peak Hour Peak Direction	Design Hr. % T	PM Design Hr. % MT	PM Design Hr. % HT	PM Design Hr. % Buses	PM Design Hr. % Motorcycles	K-factor	PM D-factor	Operational Speed (mph)
I-75 at SR 44													
Northbound off	1	6,900	*	462	*	9.70%	3.50%	6.20%	0.63%	4.29%	9.0%	100.0%	50
Southbound on	1	7,100	*	523	*	14.90%	6.03%	8.88%	1.69%	2.45%	9.0%	100.0%	45
Northbound on	2	5,900	*	422	*	13.10%	3.66%	9.37%	1.14%	2.96%	9.0%	100.0%	45
Southbound off	2	6,600	*	401	*	11.20%	2.43%	8.81%	0.38%	0.42%	9.0%	100.0%	35
I-75 at SW 484													
Northbound off	1	6,000	*	547	*	7.30%	3.44%	3.87%	0.44%	0.03%	9.0%	100.0%	35
Southbound on	1	5,300	*	282	*	9.20%	4.18%	4.84%	0.72%	0.05%	9.0%	100.0%	45
Northbound on	1	9,500	*	503	*	6.40%	3.14%	3.26%	0.49%	0.08%	9.0%	100.0%	45
Southbound off	1	8,400	*	856	*	8.30%	4.27%	4.10%	0.69%	0.15%	9.0%	100.0%	35
I-75 at SR 200													
Northbound off	1	7,900	*	536	*	5.20%	3.16%	2.02%	0.47%	0.07%	9.0%	100.0%	35
Southbound on	1	7,600	*	657	*	6.20%	4.11%	2.13%	0.47%	0.04%	9.0%	100.0%	45
Northbound on	1	8,000	*	624	*	3.40%	2.21%	1.22%	0.25%	0.14%	9.0%	100.0%	45
Southbound off	1	7,800	*	707	*	5.10%	3.61%	1.52%	0.39%	0.93%	9.0%	100.0%	35
Arterials and Cross Streets													
Arterial Segment	Number of Lanes	Two-Way AADT	Two-Way LOS C AADT	PM Peak Hour Peak Direction	LOS C Peak Hour Peak Direction	Design Hr. % T	Design Hr. % MT	Design Hr. % HT	Design Hr. % Buses	Design Hr. % Motorcycles	K-factor	PM D-factor	Posted Speed (mph)
SR 44													
West of I-75	4	11,500	45,800	800	2,390	8.40%	5.10%	3.30%	0.59%	0.77%	9.0%	62.3%	45
East of I-75	4	20,000	45,800	1,056	2,390	9.20%	4.47%	4.75%	0.71%	0.82%	9.0%	62.5%	45
SW 43rd St													
East of SR 200	4	18,500	30,700	1,717	1,520	2.90%	1.84%	1.05%	0.18%	0.42%	9.0%	58.7%	40
SR 200													
West of I-75	6	36,500	47,700	2,262	2,360	4.40%	3.01%	1.68%	1.21%	1.10%	9.0%	55.2%	45
East of I-75	6	43,500	47,700	2,228	2,360	4.90%	3.25%	1.76%	0.32%	0.17%	9.0%	54.1%	45

AADT: Annual Average Daily Traffic *MT: Medium Trucks* *HT: Heavy Trucks*

NOTES:
(1) Number of lanes were obtained from field observations and aerial maps. Noise analysis to consider correct laneage per guidelines.
(2) Traffic data is obtained from the operational analysis for the I-75 Master Plan (South Section) study.
(3) Peak hour demand and LOS C peak hour maximum service volumes are provided directionally.
(4) LOS C targets are based on the FDOT 2023 Quality/Level of Service Handbook tables and adjusted for local conditions.
(5) LOS C AADTs are estimated using K and D factors and the design hour peak direction LOS C maximum service volumes.
(6) The vehicle classification factors are obtained from Florida Traffic Online and 2019 vehicle classification counts.
(7) Posted speed data are obtained by field observations.
(8) Context classifications for 2023 QLOS methodologies were determined based on FDOT Straight Line Diagrams (SLDs).
(9) No QLOS Generalized Service Volume or HCM thresholds are available for ramp LOS C AADTs.

Engineer: Jacob Mirabella

Signature: 

Date: 02/14/2024

Noise Analysis Traffic Data - I-75 Master Plan/PD&E (South Section)
2040 No Build Weekday Conditions

Freeway Mainline

I-75 Mainline Segments	Number of Lanes	Two-Way AADT	Two-Way LOS C AADT	PM Peak Hour Peak Direction	LOS C Peak Hour Peak Direction	Design Hr. % T	Design Hr. % MT	Design Hr. % HT	Design Hr. % Buses	Design Hr. % Motorcycles	Standard K-factor	PM D-factor	Posted Speed (mph)
I-75													
South of SR 44	6	139,800	69,000	7,078	3,990	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
Between SR 44 and SW 484	6	157,100	99,000	7,843	4,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
Between SW 484 and SR 200	6	164,000	99,000	8,679	4,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
North of SR 200	6	163,500	99,000	8,566	4,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70

I-75 Ramps

I-75 Ramps	Number of Lanes	One-Way AADT	One-Way LOS C AADT	PM Peak Hour Peak Direction	Peak Hour Peak Direction	Design Hr. % T	PM Design Hr. % MT	PM Design Hr. % HT	PM Design Hr. % Buses	PM Design Hr. % Motorcycles	K-factor	PM D-factor	Operational Speed (mph)
I-75 at SR 44													
Northbound off	1	11,500	*	1,139	*	9.70%	3.50%	6.20%	0.63%	4.29%	9.0%	100.0%	50
Southbound on	1	15,000	*	1,240	*	14.90%	6.03%	8.88%	1.69%	2.45%	9.0%	100.0%	45
Northbound on	2	8,700	*	806	*	13.10%	3.66%	9.37%	1.14%	2.96%	9.0%	100.0%	45
Southbound off	2	8,600	*	765	*	11.20%	2.43%	8.81%	0.38%	0.42%	9.0%	100.0%	35
I-75 at SW 484													
Northbound off	1	8,700	*	1,001	*	7.30%	3.44%	3.87%	0.44%	0.03%	9.0%	100.0%	35
Southbound on	1	8,400	*	529	*	9.20%	4.18%	4.84%	0.72%	0.05%	9.0%	100.0%	45
Northbound on	1	12,500	*	795	*	6.40%	3.14%	3.26%	0.49%	0.08%	9.0%	100.0%	45
Southbound off	1	11,500	*	1,365	*	8.30%	4.27%	4.10%	0.69%	0.15%	9.0%	100.0%	35
I-75 at SR 200													
Northbound off	1	12,000	*	909	*	5.20%	3.16%	2.02%	0.47%	0.07%	9.0%	100.0%	35
Southbound on	1	11,500	*	1,206	*	6.20%	4.11%	2.13%	0.47%	0.04%	9.0%	100.0%	45
Northbound on	1	12,000	*	977	*	3.40%	2.21%	1.22%	0.25%	0.14%	9.0%	100.0%	45
Southbound off	1	11,000	*	1,093	*	5.10%	3.61%	1.52%	0.39%	0.93%	9.0%	100.0%	35

Arterials and Cross Streets

Arterial Segment	Number of Lanes	Two-Way AADT	Two-Way LOS C AADT	PM Peak Hour Peak Direction	LOS C Peak Hour Peak Direction	Design Hr. % T	Design Hr. % MT	Design Hr. % HT	Design Hr. % Buses	Design Hr. % Motorcycles	K-factor	PM D-factor	Posted Speed (mph)
SR 44													
West of I-75	4	20,000	45,800	1,322	2,390	8.40%	5.10%	3.30%	0.59%	0.77%	9.0%	62.3%	45
East of I-75	4	26,500	45,800	1,683	2,390	9.20%	4.47%	4.75%	0.71%	0.82%	9.0%	62.5%	45
SW 43rd St													
East of SR 200	4	22,500	30,700	2,010	1,520	2.90%	1.84%	1.05%	0.18%	0.42%	9.0%	58.7%	40
SR 200													
West of I-75	6	45,000	47,700	2,815	2,360	4.40%	3.01%	1.68%	1.21%	1.10%	9.0%	55.2%	45
East of I-75	6	53,500	47,700	2,776	2,360	4.90%	3.25%	1.76%	0.32%	0.17%	9.0%	54.1%	45

AADT: Annual Average Daily Traffic *MT: Medium Trucks* *HT: Heavy Trucks*

NOTES:
(1) Number of lanes were obtained from field observations and aerial maps. Noise analysis to consider correct laneage per guidelines.
(2) Traffic data is obtained from the operational analysis for the I-75 Master Plan (South Section) study.
(3) Peak hour demand and LOS C peak hour maximum service volumes are provided directionally.
(4) LOS C targets are based on the FDOT 2023 Quality/Level of Service Handbook tables and adjusted for local conditions.
(5) LOS C AADTs are estimated using K and D factors and the design hour peak direction LOS C maximum service volumes.
(6) The vehicle classification factors are obtained from Florida Traffic Online and 2019 vehicle classification counts.
(7) Posted speed data are obtained by field observations.
(8) Context classifications for 2023 QLOS methodologies were determined based on FDOT Straight Line Diagrams (SLDs).
(9) No QLOS Generalized Service Volume or HCM thresholds are available for ramp LOS C AADTs.
(10) No vehicle classification forecasts are available. This summary assumes that future vehicle classification percentages of overall traffic will be the same as existing conditions.

Engineer: Jacob Mirabella

Signature:

Date: 02/14/2024

Noise Analysis Traffic Data - I-75 Master Plan/PD&E (South Section)
2040 Build Weekday Conditions

Freeway Mainline													
I-75 Mainline Segments	**Number of Lanes**	**Two-Way AADT**	**Two-Way LOS C AADT**	**PM Peak Hour Peak Direction**	**LOS C Peak Hour Peak Direction**	**Design Hr. % T**	**Design Hr. % MT**	**Design Hr. % HT**	**Design Hr. % Buses**	**Design Hr. % Motorcycles**	**Standard K-factor**	**PM D-factor**	**Posted Speed (mph)**
I-75													
South of SR 44	6	139,800	69,000	7,078	3,990	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
Between SR 44 and SW 484	8	157,100	119,000	7,843	5,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
Between SW 484 and SR 200	8	164,000	119,000	8,679	5,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
North of SR 200	8	163,500	119,000	8,566	5,900	10.30%	1.91%	7.98%	0.19%	0.09%	9.0%	55.5%	70
I-75 Ramps													
I-75 Ramps	**Number of Lanes**	**One-Way AADT**	**One-Way LOS C AADT**	**PM Peak Hour Peak Direction**	**Peak Hour Peak Direction**	**Design Hr. % T**	**PM Design Hr. % MT**	**PM Design Hr. % HT**	**PM Design Hr. % Buses**	**PM Design Hr. % Motorcycles**	**K-factor**	**PM D-factor**	**Operational Speed (mph)**
I-75 at SR 44													
Northbound off	1	11,500	*	1,139	*	9.70%	3.50%	6.20%	0.63%	4.29%	9.0%	100.0%	50
Southbound on	1	15,000	*	1,240	*	14.90%	6.03%	8.88%	1.69%	2.45%	9.0%	100.0%	45
Northbound on	2	8,700	*	806	*	13.10%	3.66%	9.37%	1.14%	2.96%	9.0%	100.0%	45
Southbound off	2	8,600	*	765	*	11.20%	2.43%	8.81%	0.38%	0.42%	9.0%	100.0%	35
I-75 at SW 484													
Northbound off	1	8,700	*	1,001	*	7.30%	3.44%	3.87%	0.44%	0.03%	9.0%	100.0%	35
Southbound on	1	8,400	*	529	*	9.20%	4.18%	4.84%	0.72%	0.05%	9.0%	100.0%	45
Northbound on	1	12,500	*	795	*	6.40%	3.14%	3.26%	0.49%	0.08%	9.0%	100.0%	45
Southbound off	1	11,500	*	1,365	*	8.30%	4.27%	4.10%	0.69%	0.15%	9.0%	100.0%	35
I-75 at SR 200													
Northbound off	1	12,000	*	909	*	5.20%	3.16%	2.02%	0.47%	0.07%	9.0%	100.0%	35
Southbound on	1	11,500	*	1,206	*	6.20%	4.11%	2.13%	0.47%	0.04%	9.0%	100.0%	45
Northbound on	1	12,000	*	977	*	3.40%	2.21%	1.22%	0.25%	0.14%	9.0%	100.0%	45
Southbound off	1	11,000	*	1,093	*	5.10%	3.61%	1.52%	0.39%	0.93%	9.0%	100.0%	35
Arterials and Cross Streets													
Arterial Segment	**Number of Lanes**	**Two-Way AADT**	**Two-Way LOS C AADT**	**PM Peak Hour Peak Direction**	**LOS C Peak Hour Peak Direction**	**Design Hr. % T**	**Design Hr. % MT**	**Design Hr. % HT**	**Design Hr. % Buses**	**Design Hr. % Motorcycles**	**K-factor**	**PM D-factor**	**Posted Speed (mph)**
SR 44													
West of I-75	4	20,000	45,800	1,322	2,390	8.40%	5.10%	3.30%	0.59%	0.77%	9.0%	62.3%	45
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SW 43rd St													
East of SR 200	4	22,500	30,700	2,010	1,520	2.90%	1.84%	1.05%	0.18%	0.42%	9.0%	58.7%	40
SR 200													
West of I-75	6	45,000	47,700	2,815	2,360	4.40%	3.01%	1.68%	1.21%	1.10%	9.0%	55.2%	45
East of I-75	6	53,500	47,700	2,776	2,360	4.90%	3.25%	1.76%	0.32%	0.17%	9.0%	54.1%	45

AADT: Annual Average Daily Traffic *MT: Medium Trucks* *HT: Heavy Trucks*

NOTES:
(1) Number of lanes were obtained from field observations and aerial maps. Noise analysis to consider correct laneage per guidelines.
(2) Traffic data is obtained from the operational analysis for the I-75 Master Plan (South Section) study.
(3) Peak hour demand and LOS C peak hour maximum service volumes are provided directionally.
(4) LOS C targets are based on the FDOT 2023 Quality/Level of Service Handbook tables and adjusted for local conditions.
(5) LOS C AADTs are estimated using K and D factors and the design hour peak direction LOS C maximum service volumes.
(6) The vehicle classification factors are obtained from Florida Traffic Online and 2019 vehicle classification counts.
(7) Posted speed data are obtained by field observations.
(8) Context classifications for 2023 QLOS methodologies were determined based on FDOT Straight Line Diagrams (SLDs).
(9) No QLOS Generalized Service Volume or HCM thresholds are available for ramp LOS C AADTs.
(10) No vehicle classification forecasts are available. This summary assumes that future vehicle classification percentages of overall traffic will be the same as existing conditions.

Engineer: Jacob Mirabella

Signature: Jacob Mirabella

Date: 02/14/2024

Appendix B Predicted Noise Levels

Predicted Noise Levels										
Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
XX.X	Impacted Receptor									
NB1	NB1-SLU1	1	E	72.0	71.0	67.4	69.9	70.9	No	M&M Smokehouse BBQ outdoor seating
NB2	NB2-01	1	B	67.0	66.0	61.6	64.1	65.8	No	Royal residence
NB2	NB2-02	1	B	67.0	66.0	62.1	64.6	**66.1**	Yes	Royal residence
NB2	NB2-03	1	B	67.0	66.0	61.4	63.9	65.4	No	Royal residence
NB2	NB2-04	1	B	67.0	66.0	60.4	62.9	64.4	No	Royal residence
NB2	NB2-05	1	B	67.0	66.0	67.0	69.5	**71.5**	Yes	Royal residence
NB2	NB2-06	1	B	67.0	66.0	64.2	66.6	**68.2**	Yes	Royal residence
NB2	NB2-07	1	B	67.0	66.0	63.1	65.5	**66.9**	Yes	Royal residence
NB2	NB2-08	1	B	67.0	66.0	60.7	63.0	64.8	No	Royal residence
NB3	NB3-01	1	B	67.0	66.0	63.0	65.4	**66.8**	Yes	Royal residence
NB3	NB3-02	1	B	67.0	66.0	61.1	63.4	65.1	No	Royal residence
NB3	NB3-03	1	B	67.0	66.0	60.3	62.6	64.3	No	Royal residence
NB3	NB3-04	1	B	67.0	66.0	61.3	63.6	65.0	No	Royal residence
NB3	NB3-05	1	B	67.0	66.0	60.2	62.5	64.2	No	Royal residence
NB3	NB3-06	1	B	67.0	66.0	62.7	65.0	**66.4**	Yes	Royal residence
NB3	NB3-07	2	B	67.0	66.0	59.9	62.2	63.9	No	Royal residence
NB3	NB3-08	1	B	67.0	66.0	60.3	62.7	64.2	No	Royal residence
NB3	NB3-09	1	B	67.0	66.0	68.5	70.9	**72.4**	Yes	Royal residence
NB3	NB3-SLU1	1	C	67.0	66.0	58.2	60.6	62.7	No	Ebenezer AME Church - back yard
NB4	NB4-01	1	B	67.0	66.0	61.2	63.6	64.8	No	Residence
NB4	NB4-02	1	B	67.0	66.0	70.2	72.6	**74.3**	Yes	Residence
NB4	NB4-03	1	B	67.0	66.0	67.2	69.6	**70.8**	Yes	Residence
NB4	NB4-04	1	B	67.0	66.0	63.4	65.9	**67.5**	Yes	Residence
NB4	NB4-05	1	B	67.0	66.0	64.8	67.3	**68.6**	Yes	Residence
NB4	NB4-06	1	B	67.0	66.0	62.8	65.1	65.5	No	Residence
NB4	NB4-07	2	B	67.0	66.0	61.0	63.4	64.5	No	Residence
NB4	NB4-08	1	B	67.0	66.0	58.7	61.0	62.9	No	Residence
NB4	NB4-09	1	B	67.0	66.0	61.4	63.7	63.6	No	Residence
NB4	NB4-10	1	B	67.0	66.0	69.6	72.0	**73.5**	Yes	Residence

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
NB4	NB4-11	1	B	67.0	66.0	70.1	72.5	**74.0**	Yes	Residence
NB4	NB4-12	1	B	67.0	66.0	71.0	73.4	**74.9**	Yes	Residence
NB4	NB4-13	1	B	67.0	66.0	58.4	60.8	62.5	No	Residence
NB4	NB4-14	1	B	67.0	66.0	63.3	65.7	**67.3**	Yes	Residence
NB4	NB4-15	1	B	67.0	66.0	64.4	66.9	**68.8**	Yes	Residence
NB4	NB4-16	1	B	67.0	66.0	61.8	64.1	65.4	No	Residence
NB4	NB4-17	1	B	67.0	66.0	59.9	62.2	63.7	No	Residence
NB4	NB4-18	1	B	67.0	66.0	67.4	69.9	**71.8**	Yes	Residence
NB4	NB4-19	1	B	67.0	66.0	63.2	65.5	**66.8**	Yes	Residence
NB4	NB4-20	1	B	67.0	66.0	60.9	63.2	64.5	No	Residence
NB4	NB4-21	1	B	67.0	66.0	66.4	69.0	**70.8**	Yes	Residence
NB4	NB4-22	1	B	67.0	66.0	61.4	63.7	64.9	No	Residence
NB4	NB4-23	1	B	67.0	66.0	63.8	66.3	**67.6**	Yes	Residence
NB4	NB4-24	1	B	67.0	66.0	62.5	64.9	65.9	No	Residence
NB4	NB4-25	1	B	67.0	66.0	61.5	63.9	64.8	No	Residence
NB4	NB4-26	1	B	67.0	66.0	62.1	64.5	65.7	No	Residence
NB4	NB4-SLU1	1	C	67.0	66.0	61.7	64.1	65.2	No	Kickstart Farm Stables
NB5	NB5-01	1	B	67.0	66.0	62.7	65.1	**66.2**	Yes	Residence
NB5	NB5-02	1	B	67.0	66.0	60.6	62.9	63.9	No	Residence
NB5	NB5-03	1	B	67.0	66.0	61.5	63.8	64.8	No	Residence
NB5	NB5-04	1	B	67.0	66.0	62.2	64.5	65.3	No	Residence
NB5	NB5-05	1	B	67.0	66.0	64.9	67.4	**68.9**	Yes	Residence
NB5	NB5-06	1	B	67.0	66.0	63.0	65.6	**66.9**	Yes	Residence
NB5	NB5-07	1	B	67.0	66.0	59.7	62.1	63.3	No	Residence
NB5	NB5-08	1	B	67.0	66.0	59.1	61.5	62.6	No	Residence
NB5	NB5-09	1	B	67.0	66.0	66.8	69.1	**71.0**	Yes	Residence
NB5	NB5-10	1	B	67.0	66.0	67.8	70.1	**72.0**	Yes	Residence
NB5	NB5-11	1	B	67.0	66.0	61.3	63.7	65.2	No	Residence
NB5	NB5-12	1	B	67.0	66.0	69.1	71.4	**73.1**	Yes	Residence
NB5	NB5-13	1	B	67.0	66.0	59.5	61.9	64.0	No	Residence
NB5	NB5-14	1	B	67.0	66.0	62.6	65.1	**66.8**	Yes	Residence
NB5	NB5-15	1	B	67.0	66.0	64.8	67.2	**69.0**	Yes	Residence
NB5	NB5-16	1	B	67.0	66.0	61.3	63.6	64.6	No	Residence
NB5	NB5-17	1	B	67.0	66.0	64.9	67.3	**68.8**	Yes	Residence
NB5	NB5-18	1	B	67.0	66.0	64.4	66.9	**68.4**	Yes	Residence

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
NB5	NB5-19	1	B	67.0	66.0	62.1	64.4	65.3	No	Residence
NB5	NB5-SLU1	1	C	67.0	66.0	62.6	64.9	**66.1**	Yes	Shree Swaminarayan Temple patio
NB5	NB5-SLU2	1	C	67.0	66.0	66.9	68.7	**69.5**	Yes	Don Garlits Drag Racing Museum tables
NB5	NB5-SLU3	1	E	72.0	71.0	65.9	67.0	67.8	No	Sleep Inn pool
NB5	NB5-SLU4	1	E	72.0	71.0	67.3	69.0	69.7	No	Tom's Cuban tables 3 6-tops
NB6	NB6-01	1	B	67.0	66.0	65.5	67.3	**68.0**	Yes	Residence
NB6	NB6-02	1	B	67.0	66.0	60.1	61.8	63.0	No	Residence
NB6	NB6-SLU1	1	E	72.0	71.0	65.1	66.7	67.6	No	Microtel pool
NB7	NB7-01	1	B	67.0	66.0	67.9	69.6	**71.5**	Yes	Residence
NB7	NB7-02	1	B	67.0	66.0	65.4	67.1	**68.9**	Yes	Residence
NB7	NB7-03	1	B	67.0	66.0	64.3	66.0	**67.2**	Yes	Residence
NB7	NB7-04	1	B	67.0	66.0	66.0	67.7	**69.2**	Yes	Residence
NB7	NB7-05	1	B	67.0	66.0	64.8	66.5	**67.3**	Yes	Residence
NB7	NB7-06	1	B	67.0	66.0	69.0	70.7	**72.2**	Yes	Residence
NB7	NB7-07	1	B	67.0	66.0	66.8	68.5	**69.7**	Yes	Residence
NB7	NB7-08	6	B	67.0	66.0	69.2	70.8	**72.0**	Yes	Oak Bend residence
NB7	NB7-09	4	B	67.0	66.0	66.7	68.4	**69.4**	Yes	Oak Bend residence
NB7	NB7-10	11	B	67.0	66.0	65.6	67.3	**68.3**	Yes	Oak Bend residence
NB7	NB7-11	1	B	67.0	66.0	60.3	62.0	63.1	No	Oak Bend residence
NB7	NB7-12	1	B	67.0	66.0	60.3	62.1	63.1	No	Residence
NB7	NB7-13	1	B	67.0	66.0	62.2	63.9	65.2	No	Residence
NB7	NB7-14	1	B	67.0	66.0	65.9	67.6	**68.6**	Yes	Residence
NB7	NB7-15	4	B	67.0	66.0	65.3	67.0	**68.0**	Yes	Residence
NB7	NB7-16	2	B	67.0	66.0	64.2	65.9	**66.9**	Yes	Residence
NB7	NB7-17	6	B	67.0	66.0	60.1	61.8	62.8	No	Residence
NB7	NB7-18	1	B	67.0	66.0	60.1	61.8	62.8	No	Residence
NB7	NB719	1	B	67.0	66.0	59.6	61.3	62.3	No	Residence
NB7	NB7-20	1	B	67.0	66.0	65.4	67.1	**68.2**	Yes	Residence
NB7	NB7-21	3	B	67.0	66.0	65.0	66.7	**67.5**	Yes	Residence
NB7	NB7-22	3	B	67.0	66.0	64.5	66.2	**67.1**	Yes	Residence
NB7	NB7-23	3	B	67.0	66.0	62.9	64.6	65.7	No	Residence
NB7	NB7-24	1	B	67.0	66.0	64.0	65.7	**66.8**	Yes	Residence
NB7	NB7-25	1	B	67.0	66.0	61.1	62.8	64.1	No	Residence

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
NB7	NB7-26	1	B	67.0	66.0	64.8	66.6	**67.6**	Yes	Residence
NB7	NB7-27	4	B	67.0	66.0	64.1	65.8	**66.6**	Yes	Residence
NB7	NB7-28	5	B	67.0	66.0	63.5	65.1	**66.1**	Yes	Residence
NB7	NB7-29	2	B	67.0	66.0	59.8	61.6	62.6	No	Residence
NB7	NB7-30	1	B	67.0	66.0	60.4	62.2	63.0	No	Residence
NB7	NB7-31	1	B	67.0	66.0	60.9	62.6	63.6	No	Residence
NB7	NB7-32	1	B	67.0	66.0	64.3	66.1	**67.1**	Yes	Residence
NB7	NB7-33	3	B	67.0	66.0	63.5	65.2	**66.1**	Yes	Residence
NB7	NB7-34	3	B	67.0	66.0	63.1	64.8	65.7	No	Residence
NB7	NB7-35	3	B	67.0	66.0	63.2	64.9	65.8	No	Residence
NB7	NB7-36	1	B	67.0	66.0	63.8	65.6	**66.5**	Yes	Residence
NB7	NB7-37	4	B	67.0	66.0	62.6	64.4	65.2	No	Residence
NB7	NB7-38	3	B	67.0	66.0	62.6	64.3	65.2	No	Residence
NB7	NB7-39	3	B	67.0	66.0	59.6	61.3	62.3	No	Residence
NB7	NB7-40	1	B	67.0	66.0	60.1	61.8	63.0	No	Residence
NB8	NB8-01	7	B	67.0	66.0	58.5	56.6	57.7	No	Residence
NB8	NB8-02	1	B	67.0	66.0	70.7	72.2	**72.4**	Yes	Residence
NB8	NB8-03	1	B	67.0	66.0	74.0	75.6	**77.2**	Yes	Residence
NB8	NB8-04	1	B	67.0	66.0	65.8	67.4	**69.1**	Yes	Residence
NB8	NB8-05	1	B	67.0	66.0	62.7	64.3	65.9	No	Residence
NB8	NB8-06	1	B	67.0	66.0	61.5	62.1	63.2	No	Residence
NB8	NB8-07	1	B	67.0	66.0	60.3	61.6	63.2	No	Residence
NB8	NB8-08	1	B	67.0	66.0	66.2	67.9	**69.6**	Yes	Residence
NB9	NB9-01	1	B	67.0	66.0	63.9	65.6	**67.1**	Yes	Residence
NB9	NB9-02	1	B	67.0	66.0	65.5	67.3	**69.1**	Yes	Residence
NB9	NB9-03	1	B	67.0	66.0	64.6	66.3	**67.8**	Yes	Residence
NB9	NB9-04	1	B	67.0	66.0	66.0	67.7	**69.7**	Yes	Residence
NB9	NB9-05	1	B	67.0	66.0	63.5	65.2	**66.5**	Yes	Residence
NB9	NB9-06	2	B	67.0	66.0	60.0	61.6	63.2	No	Residence
NB9	NB9-07	1	B	67.0	66.0	63.3	64.3	65.1	No	Red Oak Farm residence
NB9	NB9-SLU1	1	C	67.0	66.0	70.4	72.1	**73.9**	Yes	Equestrian Complex stables
NB9	NB9-SLU2	1	C	67.0	66.0	66.0	67.8	**69.9**	Yes	Equestrian Complex stables
NB10	NB10-01	1	B	67.0	66.0	64.7	66.4	**67.3**	Yes	Residence
NB10	NB10-SLU1	1	E	72.0	71.0	60.5	62.2	63.0	No	Hilton Hotel pool
NB10	NB10-SLU2	1	E	72.0	71.0	65.6	66.9	67.5	No	La Quinta Hotel pool

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
SB1	SB1-SLU1	1	E	72.0	71.0	62.7	65.4	67.3	No	Days Inn Hotel pool
SB2	SB2-01	1	B	67.0	66.0	59.5	61.8	63.1	No	Royal residence
SB2	SB2-02	1	B	67.0	66.0	60.6	62.9	64.2	No	Royal residence
SB3	SB3-01	1	B	67.0	66.0	66.6	69.1	**71.4**	Yes	Royal residence
SB3	SB3-02	1	B	67.0	66.0	64.6	67.1	**69.4**	Yes	Royal residence
SB3	SB3-03	1	B	67.0	66.0	63.6	66.1	**67.8**	Yes	Royal residence
SB3	SB3-04	1	B	67.0	66.0	61.0	63.3	64.0	No	Royal residence
SB3	SB3-05	1	B	67.0	66.0	62.2	64.6	65.3	No	Royal residence
SB3	SB3-06	1	B	67.0	66.0	62.9	65.4	**66.7**	Yes	Royal residence
SB3	SB3-07	1	B	67.0	66.0	64.9	67.4	**69.2**	Yes	Royal residence
SB3	SB3-08	1	B	67.0	66.0	65.9	68.5	**70.2**	Yes	Royal residence
SB3	SB3-09	1	B	67.0	66.0	59.7	62.1	63.2	No	Royal residence
SB3	SB3-10	1	B	67.0	66.0	60.1	62.5	63.9	No	Royal residence
SB3	SB3-11	1	B	67.0	66.0	65.9	68.2	**70.1**	Yes	Royal residence
SB3	SB3-12	1	B	67.0	66.0	61.5	63.9	65.6	No	Royal residence
SB3	SB3-13	1	B	67.0	66.0	58.3	60.7	62.0	No	Royal residence
SB3	SB3-14	1	B	67.0	66.0	69.6	71.9	**73.4**	Yes	Royal residence
SB3	SB3-15	1	B	67.0	66.0	66.9	69.6	**71.4**	Yes	Royal residence
SB3	SB3-16	1	B	67.0	66.0	62.4	64.9	**66.6**	Yes	Royal residence
SB3	SB3-17	1	B	67.0	66.0	64.2	66.7	**68.5**		Royal residence
SB3	SB3-SLU1	1	C	67.0	66.0	70.6	73.1	**74.6**	Yes	Champagne Farm stables
SB4	SB4-01	1	B	67.0	66.0	63.8	66.3	**67.8**	Yes	Residence
SB4	SB4-02	1	B	67.0	66.0	65.8	68.2	**69.8**	Yes	Residence
SB4	SB4-03	1	B	67.0	66.0	64.8	67.3	**68.5**	Yes	Residence
SB4	SB4-04	1	B	67.0	66.0	66.8	69.3	**70.3**	Yes	Residence
SB4	SB4-05	1	B	67.0	66.0	63.3	65.7	**66.5**	Yes	Residence
SB4	SB4-06	1	B	67.0	66.0	68.1	70.6	**71.9**	Yes	Residence
SB4	SB4-07	1	B	67.0	66.0	64.5	67.0	**67.4**	Yes	Residence
SB4	SB4-08	1	B	67.0	66.0	65.5	68.0	**68.7**	Yes	Residence
SB4	SB4-09	1	B	67.0	66.0	63.5	66.0	**66.7**	Yes	Residence
SB5	SB5-01	2	B	67.0	66.0	62.4	64.8	65.8	No	Residence
SB5	SB5-02	1	B	67.0	66.0	55.7	58.2	59.1	No	Summer Glen residence
SB5	SB5-03	1	B	67.0	66.0	55.4	57.8	58.6	No	Summer Glen residence
SB5	SB5-04	1	B	67.0	66.0	55.4	57.8	58.6	No	Summer Glen residence
SB5	SB5-05	1	B	67.0	66.0	55.9	58.4	59.1	No	Summer Glen residence

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
SB5	SB5-06	1	B	67.0	66.0	56.1	58.6	59.3	No	Summer Glen residence
SB5	SB5-07	1	B	67.0	66.0	56.5	58.9	59.7	No	Summer Glen residence
SB5	SB5-08	1	B	67.0	66.0	56.4	58.9	59.6	No	Summer Glen residence
SB5	SB5-09	1	B	67.0	66.0	56.7	59.1	59.9	No	Summer Glen residence
SB5	SB5-10	1	B	67.0	66.0	56.3	58.8	59.5	No	Summer Glen residence
SB5	SB5-11	1	B	67.0	66.0	55.9	58.4	59.1	No	Summer Glen residence
SB5	SB5-12	1	B	67.0	66.0	58.7	61.1	61.9	No	Summer Glen residence
SB5	SB5-13	1	B	67.0	66.0	58.8	61.2	62.0	No	Summer Glen residence
SB5	SB5-14	1	B	67.0	66.0	58.7	61.2	62.0	No	Summer Glen residence
SB5	SB5-15	1	B	67.0	66.0	58.4	60.9	61.7	No	Summer Glen residence
SB5	SB5-16	1	B	67.0	66.0	58.1	60.5	61.3	No	Summer Glen residence
SB5	SB5-17	1	B	67.0	66.0	57.9	60.3	61.1	No	Summer Glen residence
SB5	SB5-18	19	B	67.0	66.0	58.8	61.2	62.1	No	Summer Glen residence
SB5	SB5-19	1	B	67.0	66.0	61.3	63.8	64.7	No	Summer Glen residence
SB5	SB5-20	1	B	67.0	66.0	60.8	63.3	64.2	No	Summer Glen residence
SB5	SB5-21	1	B	67.0	66.0	59.8	62.3	63.3	No	Summer Glen residence
SB5	SB5-22	1	B	67.0	66.0	58.6	61.1	62.1	No	Summer Glen residence
SB5	SB5-23	1	B	67.0	66.0	57.6	60.0	60.8	No	Summer Glen residence
SB5	SB5-24	1	B	67.0	66.0	61.4	63.9	65.6	No	Residence
SB5	SB5-SLU1.1	1	C	67.0	66.0	55.3	57.7	58.6	No	Summer Glen Golf Course tee box #4
SB5	SB5-SLU1.2	1	C	67.0	66.0	55.8	58.2	58.9	No	Summer Glen hole #3
SB5	SB5-SLU1.3	1	C	67.0	66.0	58.0	60.5	61.3	No	Summer Glen tee box #3
SB5	SB5-SLU1.4	1	C	67.0	66.0	57.0	59.4	60.2	No	Summer Glen hole #2
SB5	SB5-SLU1.5	1	C	67.0	66.0	59.2	61.6	62.5	No	Summer Glen hole #11
SB5	SB5-SLU1.6	1	C	67.0	66.0	59.5	61.9	62.7	No	Summer Glen tee box #12
SB5	SB5-SLU1.7	1	C	67.0	66.0	62.2	64.6	65.6	No	Summer Glen hole #12
SB5	SB5-SLU1.8	1	C	67.0	66.0	65.2	67.6	**68.7**	Yes	Summer Glen tee box #13
SB5	SB5-SLU2	1	E	72.0	71.0	69.1	70.8	**71.4**	Yes	Wendy's outdoor tables
SB6	SB6-SLU1	1	E	72.0	71.0	68.6	70.3	**71.0**	Yes	Hampton Inn Hotel pool
SB6	SB6-SLU2	1	C	67.0	66.0	67.0	68.7	**69.8**	Yes	Alphabet Land Learning Center playground
SB7	SB7-01	1	B	67.0	66.0	60.1	61.8	63.1	No	Ocala Waterways Estates Residence
SB7	SB7-02	1	B	67.0	66.0	60.5	62.2	63.5	No	Ocala Waterways Estates Residence
SB7	SB7-03	1	B	67.0	66.0	61.0	62.8	64.2	No	Ocala Waterways Estates Residence

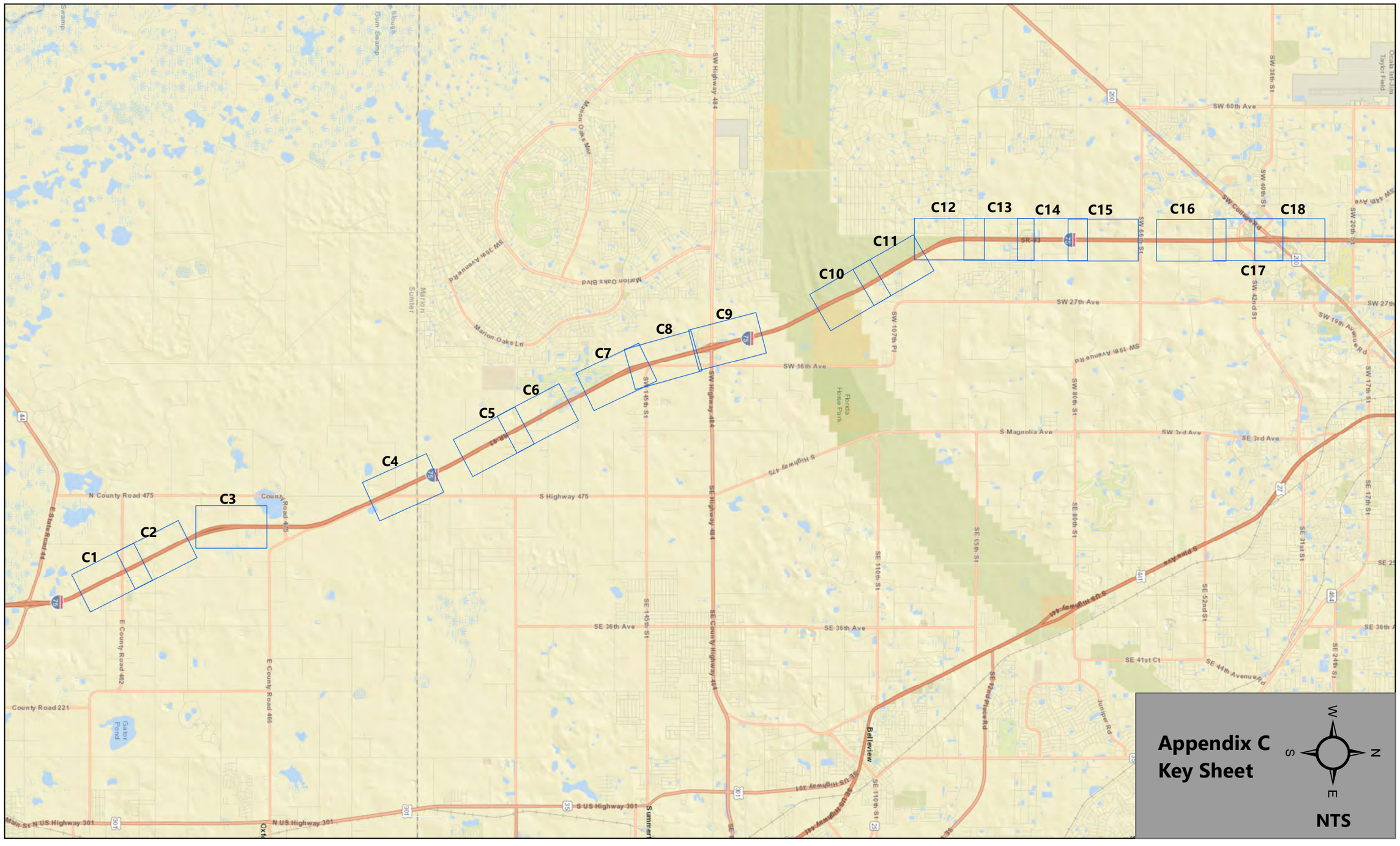
Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
SB7	SB7-04	1	B	67.0	66.0	63.0	64.7	**66.2**	Yes	Ocala Waterways Estates Residence
SB7	SB7-05	1	B	67.0	66.0	63.6	65.3	**66.8**	Yes	Ocala Waterways Estates Residence
SB7	SB7-06	1	B	67.0	66.0	64.3	65.9	**67.3**	Yes	Ocala Waterways Estates Residence
SB7	SB7-07	1	B	67.0	66.0	66.0	67.6	**69.0**	Yes	Ocala Waterways Estates Residence
SB7	SB7-08	1	B	67.0	66.0	68.3	69.9	**70.9**	Yes	Ocala Waterways Estates Residence
SB7	SB7-09	1	B	67.0	66.0	65.9	67.5	**68.8**	Yes	Ocala Waterways Estates Residence
SB7	SB7-10	1	B	67.0	66.0	67.0	68.6	**69.7**	Yes	Ocala Waterways Estates Residence
SB7	SB7-11	1	B	67.0	66.0	67.7	69.3	**70.4**	Yes	Ocala Waterways Estates Residence
SB7	SB7-12	1	B	67.0	66.0	68.4	70.0	**71.2**	Yes	Ocala Waterways Estates Residence
SB7	SB7-13	1	B	67.0	66.0	68.5	70.1	**71.3**	Yes	Ocala Waterways Estates Residence
SB7	SB7-14	1	B	67.0	66.0	68.3	70.0	**71.2**	Yes	Ocala Waterways Estates Residence
SB7	SB7-15	1	B	67.0	66.0	67.0	68.8	**70.1**	Yes	Ocala Waterways Estates Residence
SB7	SB7-16	1	B	67.0	66.0	69.0	70.7	**71.9**	Yes	Ocala Waterways Estates Residence
SB7	SB7-17	1	B	67.0	66.0	71.1	72.8	**74.0**	Yes	Ocala Waterways Estates Residence
SB7	SB7-18	1	B	67.0	66.0	66.3	68.0	**69.3**	Yes	Ocala Waterways Estates Residence
SB7	SB7-19	1	B	67.0	66.0	59.3	61.1	62.3	No	Ocala Waterways Estates Residence
SB7	SB7-20	1	B	67.0	66.0	59.7	61.5	62.8	No	Ocala Waterways Estates Residence
SB7	SB7-21	1	B	67.0	66.0	61.1	62.8	64.2	No	Ocala Waterways Estates Residence
SB7	SB7-22	1	B	67.0	66.0	62.1	63.8	65.1	No	Ocala Waterways Estates Residence
SB7	SB7-23	1	B	67.0	66.0	62.9	64.5	65.8	No	Ocala Waterways Estates Residence
SB7	SB7-24	1	B	67.0	66.0	63.9	65.6	**66.8**	Yes	Ocala Waterways Estates Residence
SB7	SB7-25	1	B	67.0	66.0	64.6	66.3	**67.5**	Yes	Ocala Waterways Estates Residence
SB7	SB7-26	1	B	67.0	66.0	64.0	65.7	**66.9**	Yes	Ocala Waterways Estates Residence
SB7	SB7-27	1	B	67.0	66.0	63.8	65.5	**66.8**	Yes	Ocala Waterways Estates Residence

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
SB7	SB7-28	1	B	67.0	66.0	63.6	65.4	**66.5**	Yes	Kingsland Country Estates residence
SB7	SB7-29	1	B	67.0	66.0	63.5	65.3	**66.5**	Yes	Kingsland Country Estates residence
SB7	SB7-30	1	B	67.0	66.0	64.5	66.3	**67.4**	Yes	Kingsland Country Estates residence
SB7	SB7-31	1	B	67.0	66.0	67.8	69.5	**71.0**	Yes	Kingsland Country Estates residence
SB7	SB7-32	1	B	67.0	66.0	70.3	71.9	**72.7**	Yes	Kingsland Country Estates residence
SB7	SB7-33	1	B	67.0	66.0	64.8	66.6	**67.7**	Yes	Kingsland Country Estates residence
SB7	SB7-34	1	B	67.0	66.0	61.8	63.6	64.8	No	Ocala Waterways Estates Residence
SB7	SB7-35	1	B	67.0	66.0	61.5	63.3	64.5	No	Kingsland Country Estates residence
SB7	SB7-36	1	B	67.0	66.0	61.7	63.4	64.6	No	Kingsland Country Estates residence
SB7	SB7-37	1	B	67.0	66.0	61.2	63.0	63.9	No	Kingsland Country Estates residence
SB7	SB7-38	1	B	67.0	66.0	61.9	63.6	64.5	No	Kingsland Country Estates residence
SB7	SB7-39	1	B	67.0	66.0	61.5	63.3	64.3	No	Kingsland Country Estates residence
SB7	SB7-40	1	B	67.0	66.0	61.7	63.5	64.3	No	Kingsland Country Estates residence
SB7	SB7-41	1	B	67.0	66.0	61.5	63.2	64.1	No	Kingsland Country Estates residence
SB7	SB7-42	1	B	67.0	66.0	60.2	62.0	62.8	No	Kingsland Country Estates residence
SB7	SB7-43	1	B	67.0	66.0	60.0	61.7	62.5	No	Kingsland Country Estates residence
SB7	SB7-44	1	B	67.0	66.0	61.6	63.3	64.1	No	Residence
SB7	SB7-45	1	B	67.0	66.0	65.6	67.4	**68.4**	Yes	Residence
SB7	SB7-46	1	B	67.0	66.0	69.3	71.0	**72.1**	Yes	Residence
SB7	SB7-47	1	B	67.0	66.0	61.3	62.9	63.8	No	Residence
SB7	SB7-48	1	B	67.0	66.0	61.3	63.0	63.8	No	Residence
SB7	SB7-49	1	B	67.0	66.0	68.5	70.1	**71.0**	Yes	Residence
SB7	SB7-50	1	B	67.0	66.0	61.6	63.3	64.0	No	Residence
SB7	SB7-51	1	B	67.0	66.0	65.1	66.9	**67.8**	Yes	Residence
SB7	SB7-52	1	B	67.0	66.0	62.6	64.3	65.1	No	Residence
SB7	SB7-53	1	B	67.0	66.0	61.7	63.4	64.2	No	Residence
SB7	SB7-54	1	B	67.0	66.0	71.6	73.2	**73.9**	Yes	Residence
SB7	SB7-55	1	B	67.0	66.0	71.0	72.7	**73.5**	Yes	Residence
SB7	SB7-56	1	B	67.0	66.0	69.6	71.2	**72.1**	Yes	Residence

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
SB7	SB7-57	1	B	67.0	66.0	70.4	72.1	**73.1**	Yes	Residence
SB7	SB7-58	1	B	67.0	66.0	71.2	72.9	**74.0**	Yes	Residence
SB7	SB7-59	1	B	67.0	66.0	66.4	68.2	**69.2**	Yes	Residence
SB7	SB7-60	1	B	67.0	66.0	63.4	65.2	**66.3**	Yes	Residence
SB7	SB7-61	1	B	67.0	66.0	60.8	62.4	63.3	No	Residence
SB8	SB8-01	8	B	67.0	66.0	59.7	61.4	62.4	No	Residence
SB8	SB8-02	1	B	67.0	66.0	67.9	69.6	**70.8**	Yes	Residence
SB8	SB8-03	1	B	67.0	66.0	63.2	64.9	**66.0**	Yes	Residence
SB8	SB8-04	1	B	67.0	66.0	66.2	67.9	**69.7**	Yes	Residence
SB8	SB8-05	1	B	67.0	66.0	70.7	72.4	**74.3**	Yes	Residence
SB8	SB8-06	1	B	67.0	66.0	65.5	67.2	**68.9**	Yes	Residence
SB8	SB8-07	1	B	67.0	66.0	62.7	64.3	65.6	No	Residence
SB8	SB8-08	1	B	67.0	66.0	67.7	69.5	**71.5**	Yes	Residence
SB8	SB8-09	1	B	67.0	66.0	65.3	67.1	**68.7**	Yes	Residence
SB8	SB8-10	1	B	67.0	66.0	62.9	64.5	65.8	No	Residence
SB8	SB8-11	1	B	67.0	66.0	69.2	70.9	**72.0**	Yes	Residence
SB8	SB8-12	1	B	67.0	66.0	66.6	68.3	**69.6**	Yes	Residence
SB8	SB8-13	1	B	67.0	66.0	62.9	64.6	65.9	No	Residence
SB8	SB8-14	1	B	67.0	66.0	63.8	65.5	**66.7**	Yes	Residence
SB8	SB8-15	1	B	67.0	66.0	60.3	62.0	63.5	No	Residence
SB8	SB8-16	1	B	67.0	66.0	69.7	71.5	**73.2**	Yes	Residence
SB8	SB8-17	1	B	67.0	66.0	70.0	71.7	**73.3**	Yes	Residence
SB8	SB8-SLU1	1	C	67.0	66.0	62.5	64.3	65.1	No	Ocala Korean Baptist Church front portico benches
SB9	SB9-SLU1	1	E	72.0	71.0	64.7	66.0	66.4	No	SPXFLOW employee gazebo
SB10	SB10-SLU1.1	1	E	72.0	71.0	74.3	75.9	**76.9**	Yes	Shopping center bench
SB10	SB10-SLU1.2	1	E	72.0	71.0	68.0	69.6	**70.9**	No	Shopping center bench
SB10	SB10-SLU2	1	E	72.0	71.0	59.7	60.7	61.1	No	Gator Dockside outdoor tables
SB10	SB10-SLU3	1	E	72.0	71.0	73.6	75.2	**76.0**	Yes	Fairfield Inn Hotel pool
SB10	SB10-SLU4	1	E	72.0	71.0	71.5	72.7	**72.6**	Yes	Steak and Shake outdoor tables
SB11	SB11-01A	1	B	67.0	66.0	61.9	63.6	64.4	No	Canterbury Apts. ground floor unit
SB11	SB11-01B	1	B	67.0	66.0	64.6	66.2	**67.0**	Yes	Canterbury Apts. 2nd-floor unit

Noise Study Area (NSA)	Receptor Name	No. of Units	NAC	NAC Criterion (dB(A))	FDOT Criterion (dB(A))	2019 Existing LAeq1h (dB(A))	2040 No-Build LAeq1h (dB(A))	2040 Build LAeq1h (dB(A))	NAC Approach or Exceeded	Description
SB11	SB11-02A	2	B	67.0	66.0	63.1	64.8	65.6	No	Canterbury Apts. ground floor unit
SB11	SB11-02B	2	B	67.0	66.0	65.7	67.4	**68.2**	Yes	Canterbury Apts. 2nd-floor unit
SB11	SB11-02C	2	B	67.0	66.0	66.7	68.3	**69.1**	Yes	Canterbury Apts. 3rd-floor unit
SB11	SB11-03A	4	B	67.0	66.0	63.0	64.7	65.5	No	Canterbury Apts. ground floor unit
SB11	SB11-03B	4	B	67.0	66.0	65.5	67.2	**68.0**	Yes	Canterbury Apts. 2nd-floor unit
SB11	SB11-04A	2	B	67.0	66.0	63.0	64.7	65.5	No	Canterbury Apts. ground floor unit
SB11	SB11-04B	2	B	67.0	66.0	65.7	67.3	**68.1**	Yes	Canterbury Apts. 2nd-floor unit
SB11	SB11-04C	2	B	67.0	66.0	66.8	68.4	**69.2**	Yes	Canterbury Apts. 3rd-floor unit
SB11	SB11-05A	2	B	67.0	66.0	63.3	64.9	65.7	No	Canterbury Apts. ground floor unit
SB11	SB11-05B	2	B	67.0	66.0	66.2	67.8	**68.6**	Yes	Canterbury Apts. 2nd-floor unit
SB11	SB11-05C	2	B	67.0	66.0	67.4	69.0	**69.8**	Yes	Canterbury Apts. 3rd-floor unit
SB11	SB11-06A	1	B	67.0	66.0	63.3	64.9	65.7	No	Canterbury Apts. ground floor unit
SB11	SB11-06B	1	B	67.0	66.0	66.2	67.9	**68.7**	Yes	Canterbury Apts. 2nd-floor unit
SB11	SB11-07A	1	B	67.0	66.0	58.8	60.3	61.1	No	Canterbury Apts. ground floor unit
SB11	SB11-07B	1	B	67.0	66.0	61.2	62.8	63.6	No	Canterbury Apts. 2nd-floor unit
SB11	SB11-08A	1	B	67.0	66.0	59.9	61.5	62.3	No	Canterbury Apts. ground floor unit
SB11	SB11-08B	1	B	67.0	66.0	62.5	64.1	64.9	No	Canterbury Apts. 2nd-floor unit
SB11	SB11-SLU1	1	E	72.0	71.0	70.0	70.9	70.9	No	Burger King outdoor tables
SB11	SB11-SLU2	1	E	72.0	71.0	68.6	70.1	70.9	No	Best Western Hotel pool
SB11	SB11-SLU3	1	E	72.0	71.0	68.5	70.1	70.8	No	Hampton Inn Hotel pool
SB11	SB11-SLU4	1	E	72.0	71.0	60.0	61.6	62.3	No	Residence Inn Hotel tennis & pool
SB11	SB11-SLU5	1	E	72.0	71.0	64.6	66.2	67.0	No	Holiday Inn Hotel pool
SB11	SB11-SLU6	1	E	72.0	71.0	62.0	63.7	64.5	No	Holiday Inn Express Hotel pool
SB11	SB11-SLU7	1	E	72.0	71.0	71.2	72.7	**73.6**	Yes	Home 2 Suites Hotel pool

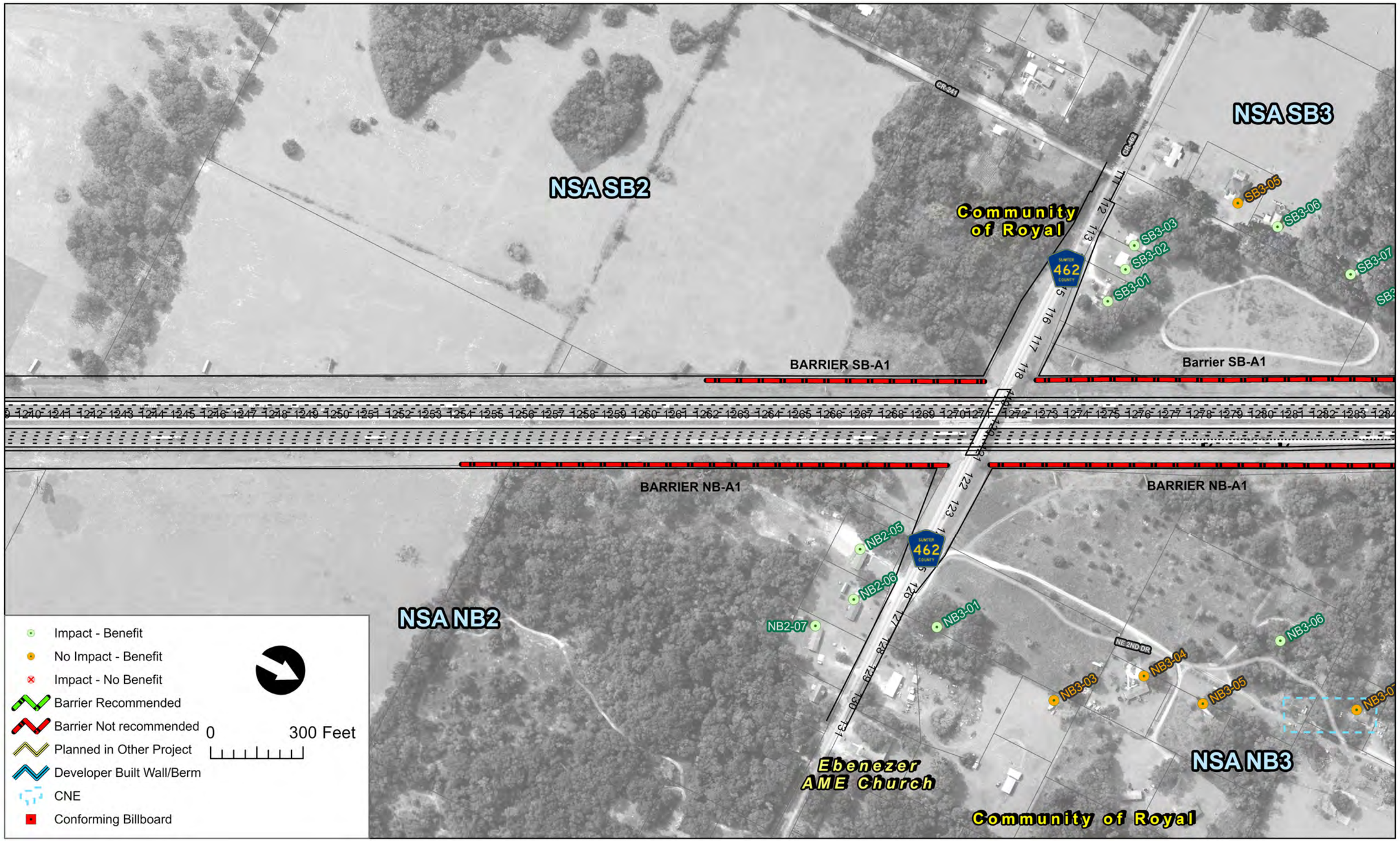
Appendix C Noise Barrier Location Maps

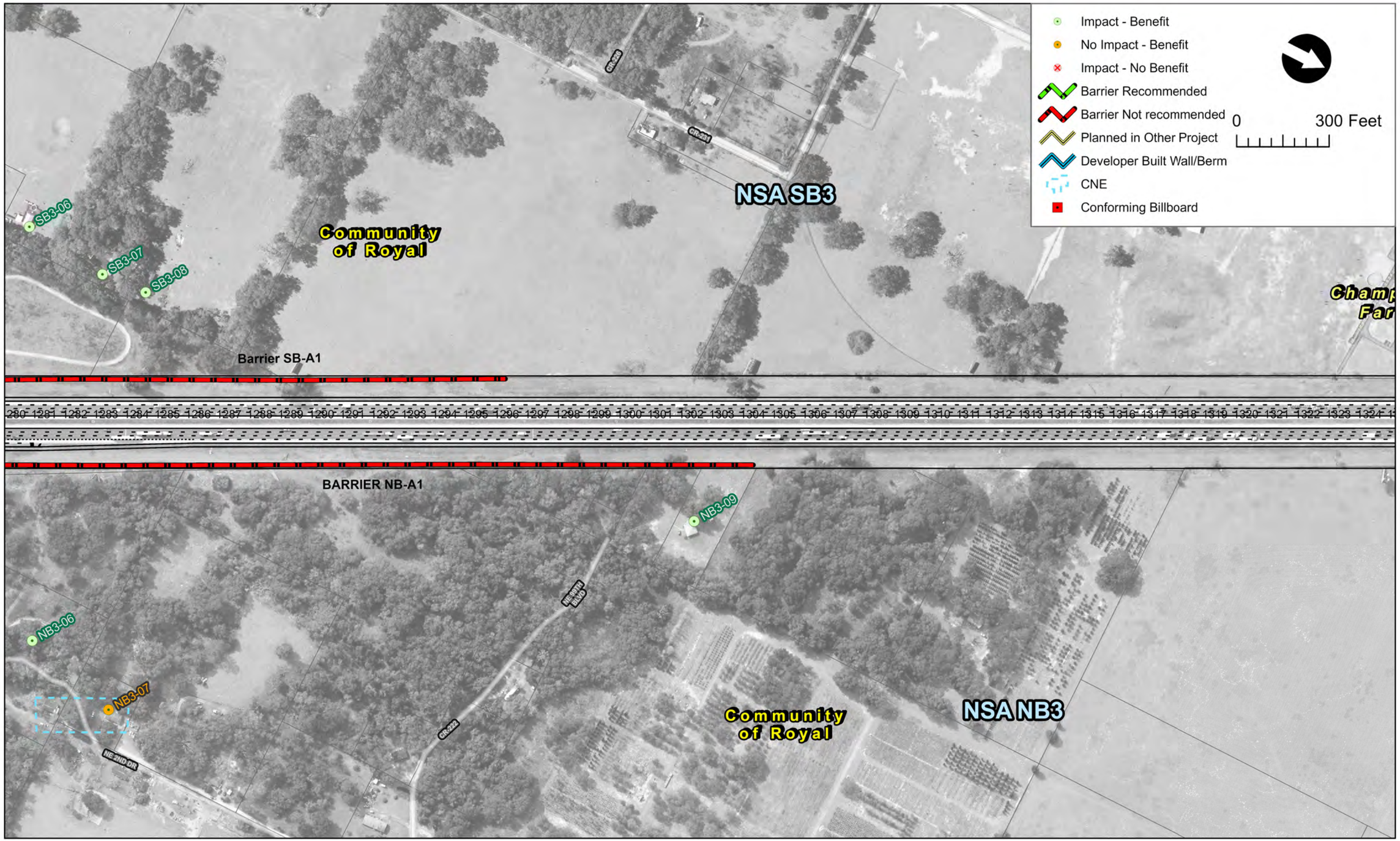


Appendix C
Key Sheet

W S N E

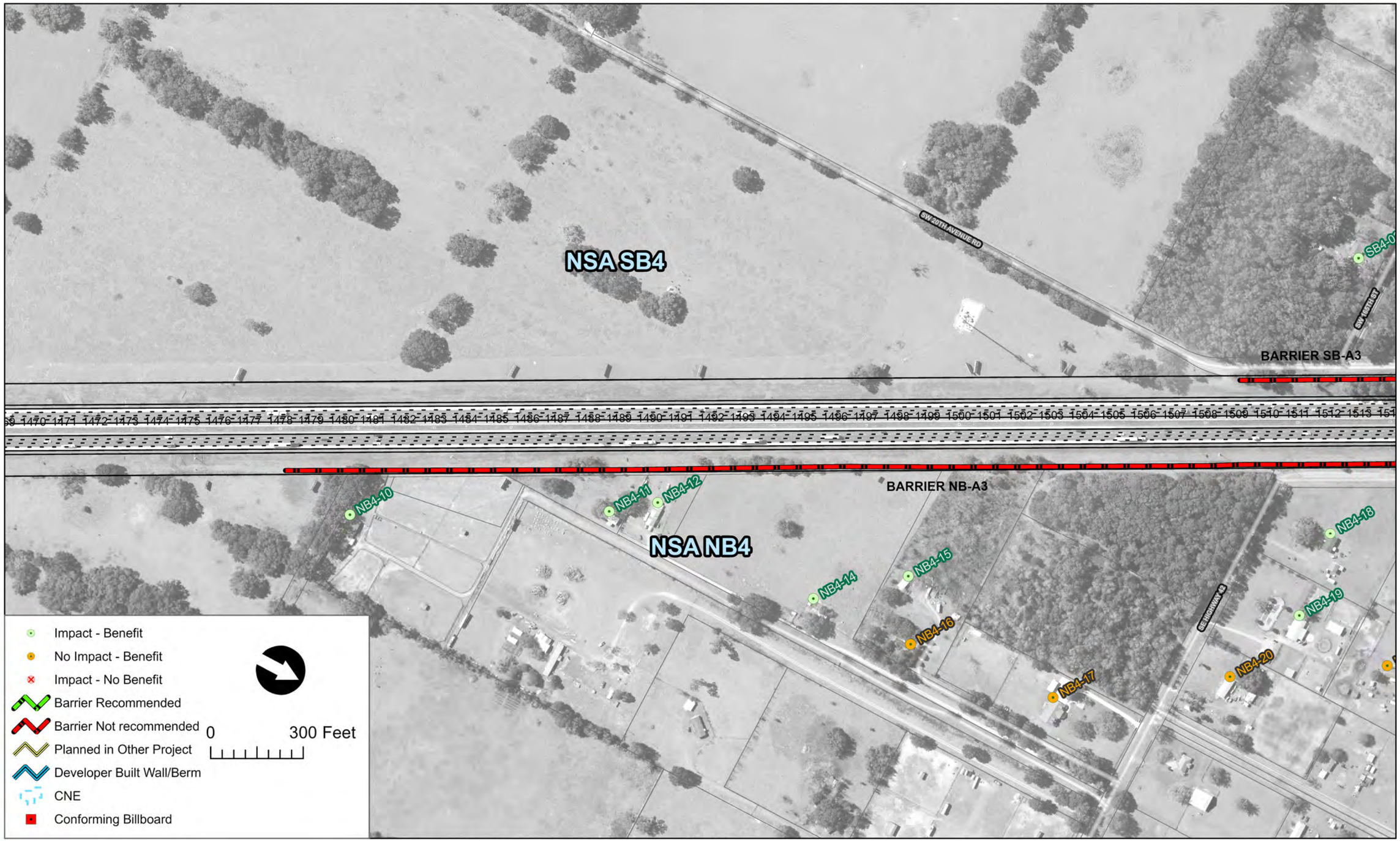
NTS


NSA SB2
NSA SB3
Community of Royal
CR-241
CR-462
SB3-05
SB3-06
SB3-03
SB3-02
SB3-01
SB3-07
BARRIER SB-A1
Barrier SB-A1
BARRIER NB-A1
BARRIER NB-A1
NB2-05
NB2-06
NB2-07
NB3-01
NB3-06
NB3-04
NB3-03
NB3-05
NSA NB2
NSA NB3
Ebenezer AME Church
Community of Royal
NE 2ND DR
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

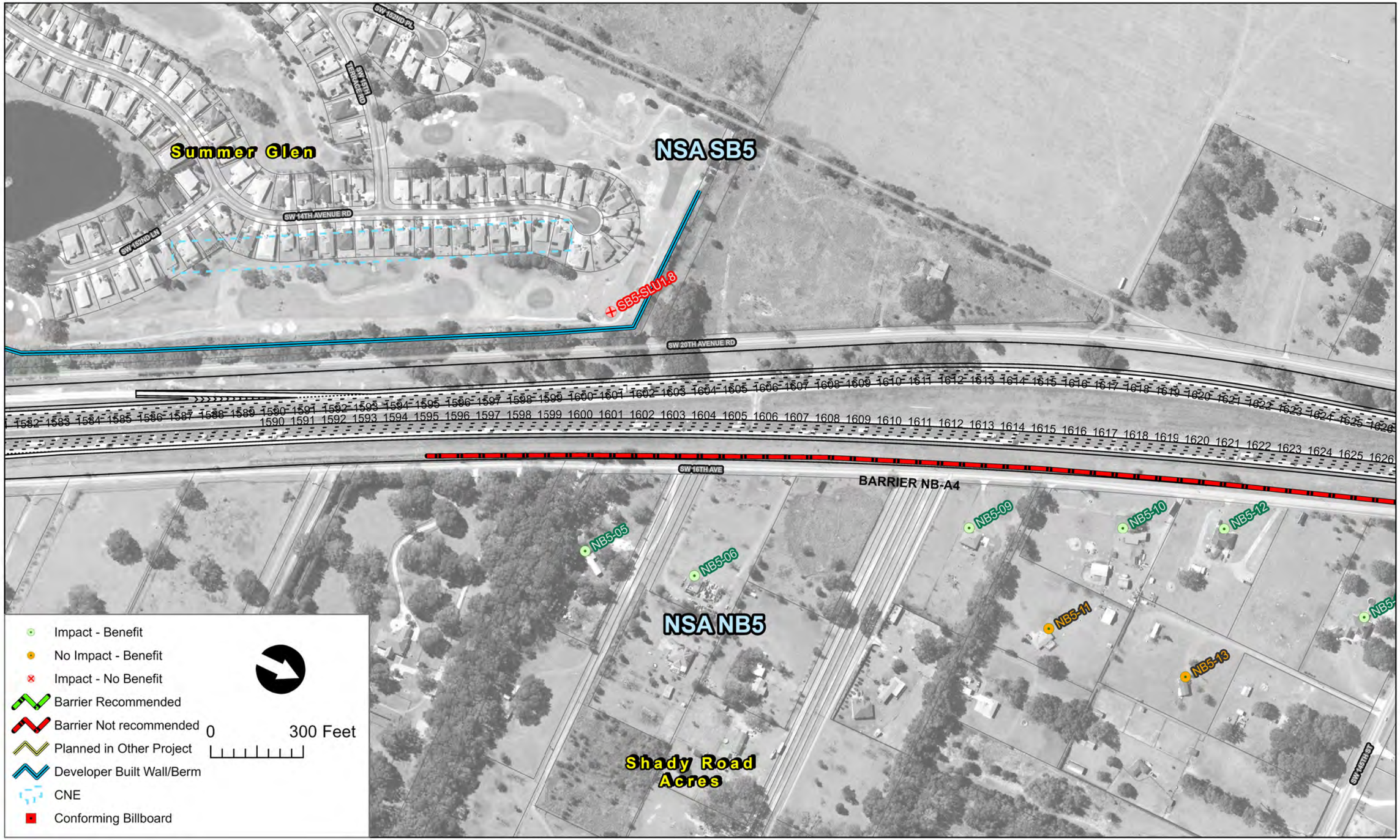

Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet
NSA SB3
Community of Royal
SB3-06
SB3-07
SB3-08
Barrier SB-A1
BARRIER NB-A1
NB3-09
NB3-06
NB3-07
NE 2ND DR
NE 3RD BLVD
Community of Royal
NSA NB3

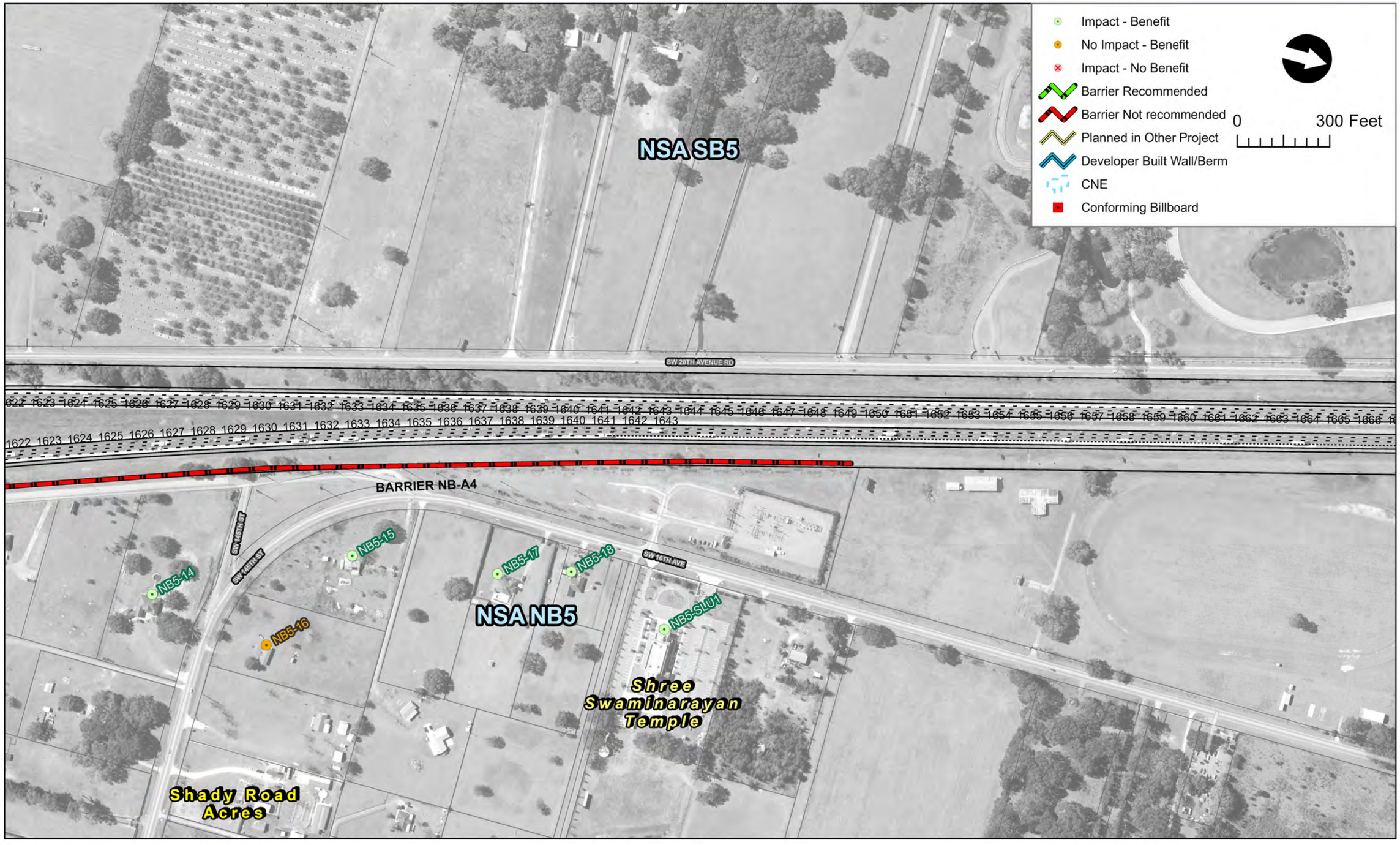

Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet
NSA SB3
NSA NB3
BARRIER SB-A2
SB3-11
SB3-14
SB3-15
SB3-16

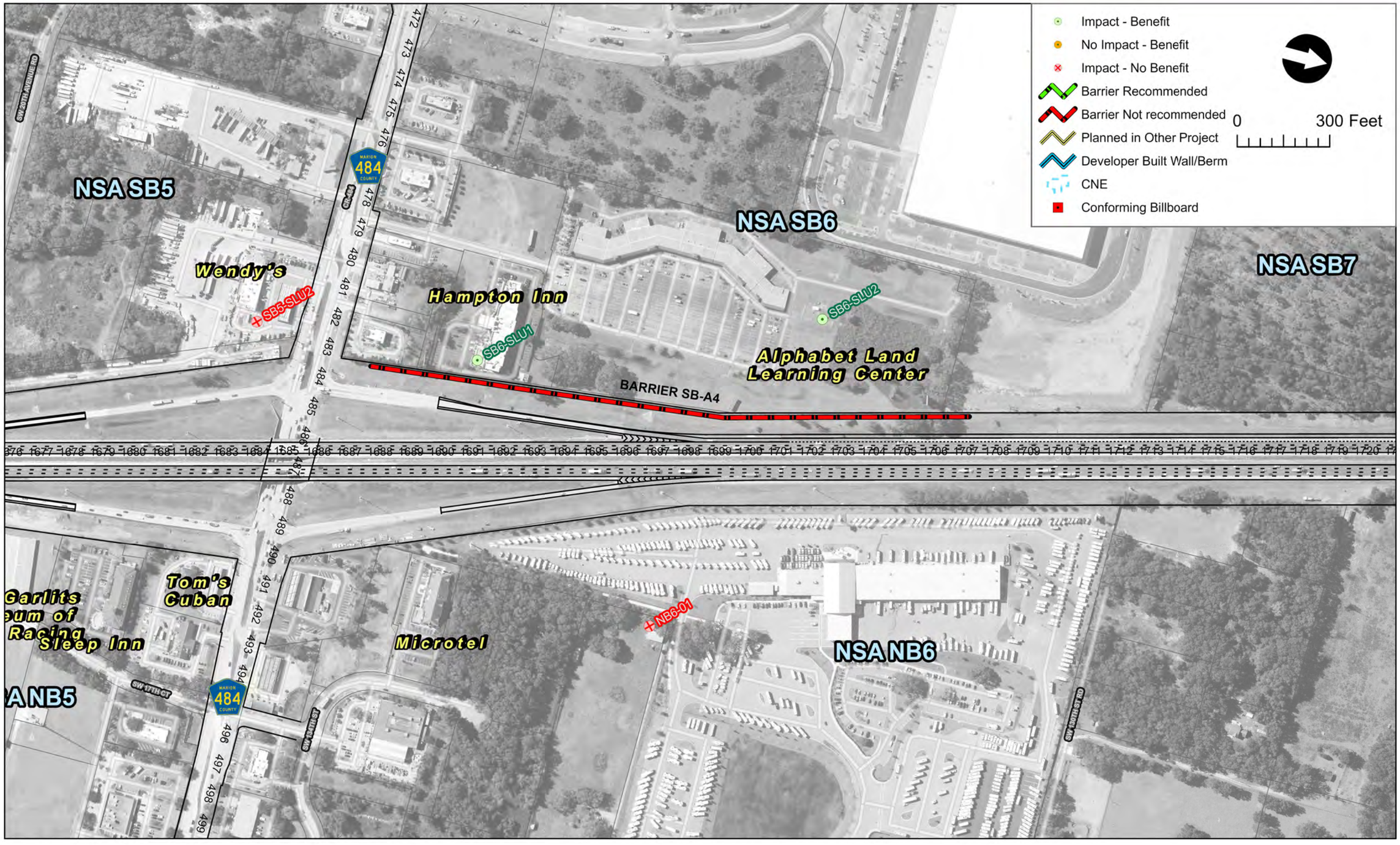

NW 11TH DR
CR-245E
SB4-02
NSA SB4
Sumter County
Marion County
CR-245N
BARRIER NB-A2
NB4-02
NB4-03
NB4-04
NB4-05
NB4-06
NB4-07
NSA NB4
Kickstart Farm
CR-475
S HIGHWAY 475
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

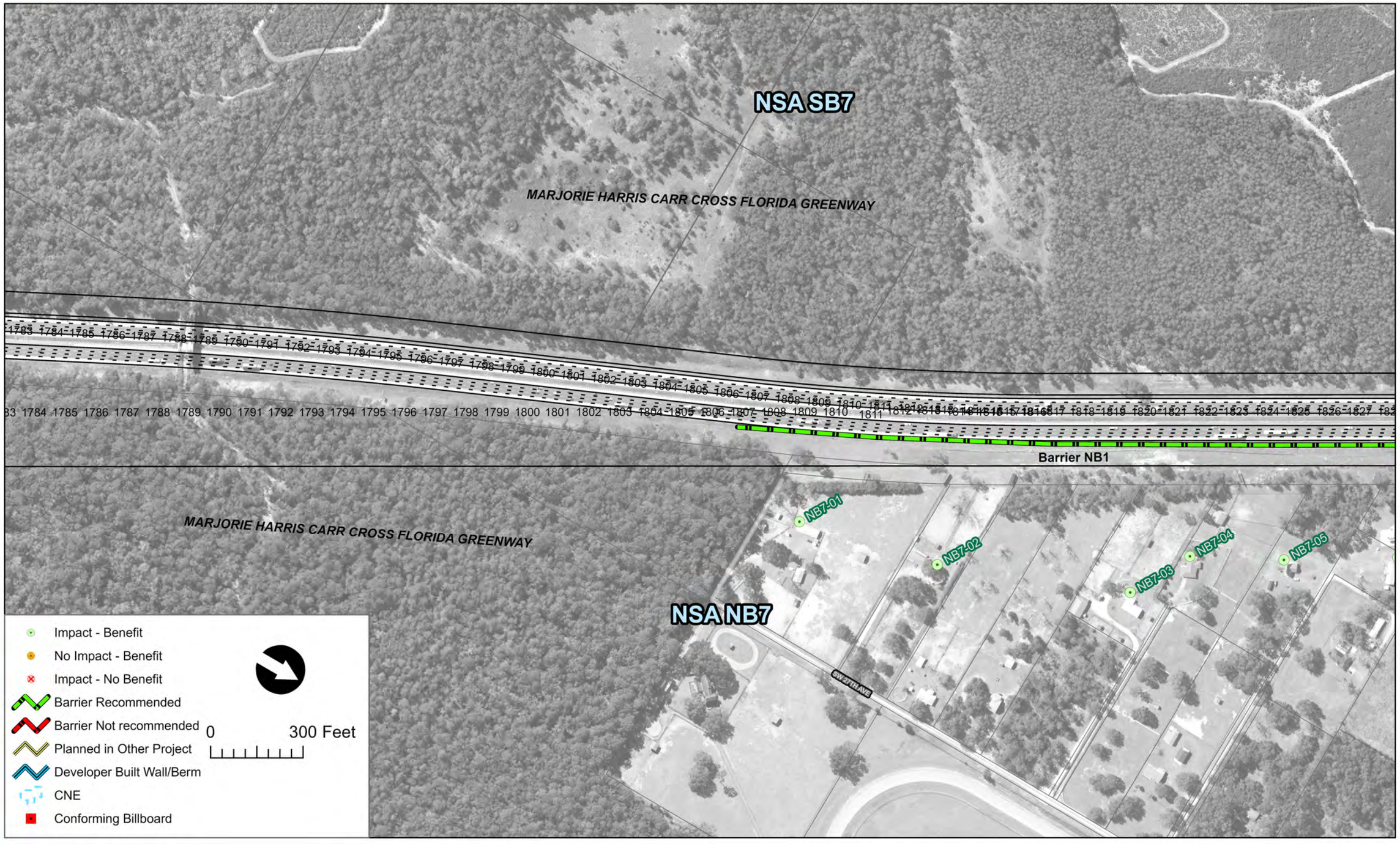

NSA SB4
SW 20TH AVENUE RD
SB4-0
SW 49TH ST
BARRIER SB-A3
1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513
BARRIER NB-A3
NB4-10
NB4-11
NB4-12
NSA NB4
NB4-14
NB4-15
NB4-16
NB4-17
NB4-18
NB4-19
NB4-20
SE 16TH AVE
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet


NSA SB4
SB4-03
SB4-04
SB4-05
SW 16TH ST
SB4-06
BARRIER SB-A3
SW 20TH AVENUE RD
SB4-07
SB4-08
SB4-09
SW 16TH ST
SW 17TH ST
SW 9TH AVE
Summer Glen
NSA SB5
SB WEIGH STATION
1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554
SE HIGHWAY 42
BARRIER NB-A3
NB4-18
NB4-21
NB4-23
NB4-19
NB4-22
NSA NB4
S MAGNOLIA AVE
SE 10TH ST
CC261
CC260
NB WEIGH STATION
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

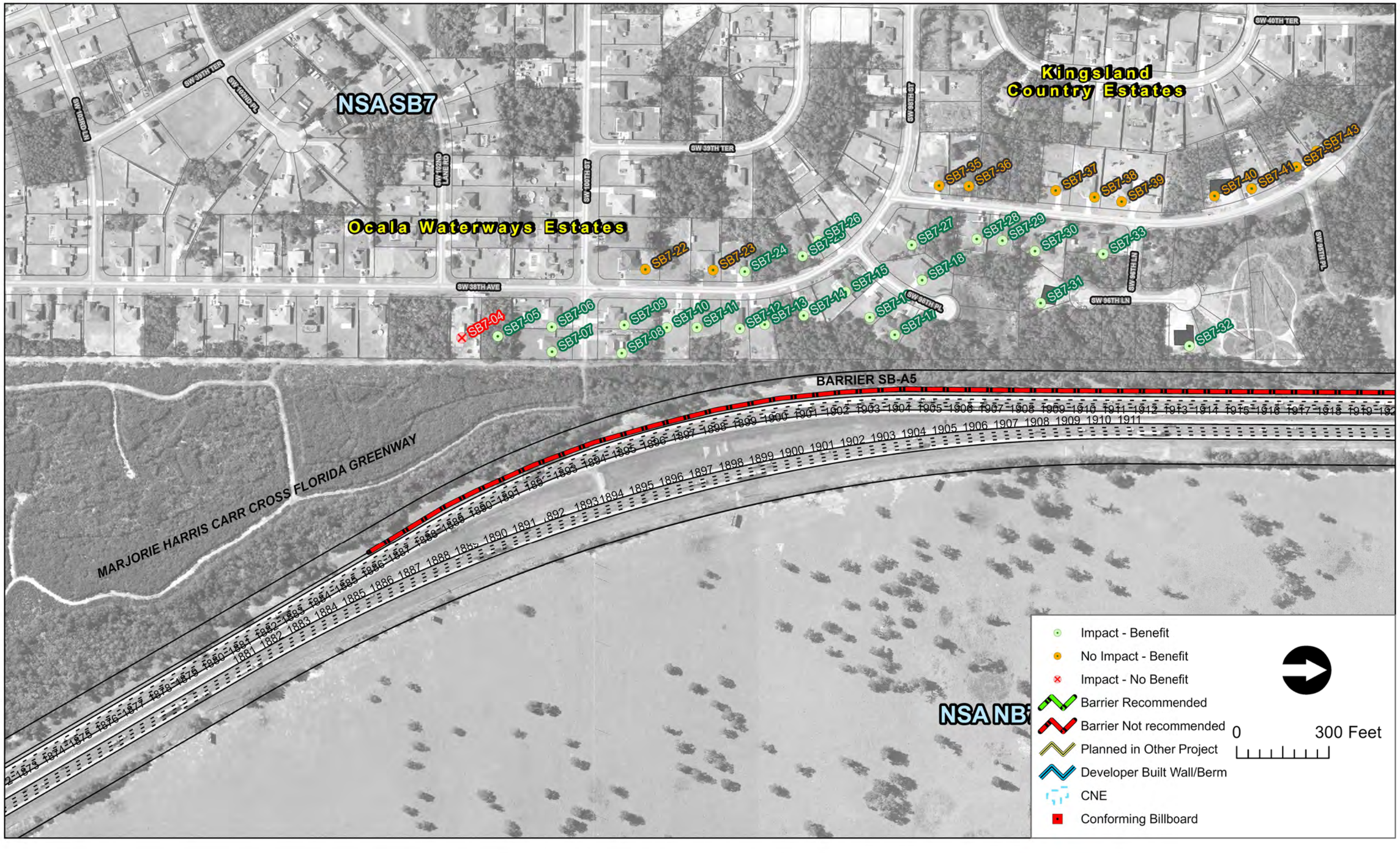

Summer Glen
NSA SB5
SB5-SLU1.8
SW 152ND PL
SW 15TH TERRACE RD
SW 14TH AVENUE RD
SW 152ND LN
SW 20TH AVENUE RD
1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626
SW 16TH AVE
BARRIER NB-A4
NB5-05
NB5-06
NB5-09
NB5-10
NB5-11
NB5-12
NB5-13
NSA NB5
Shady Road Acres
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

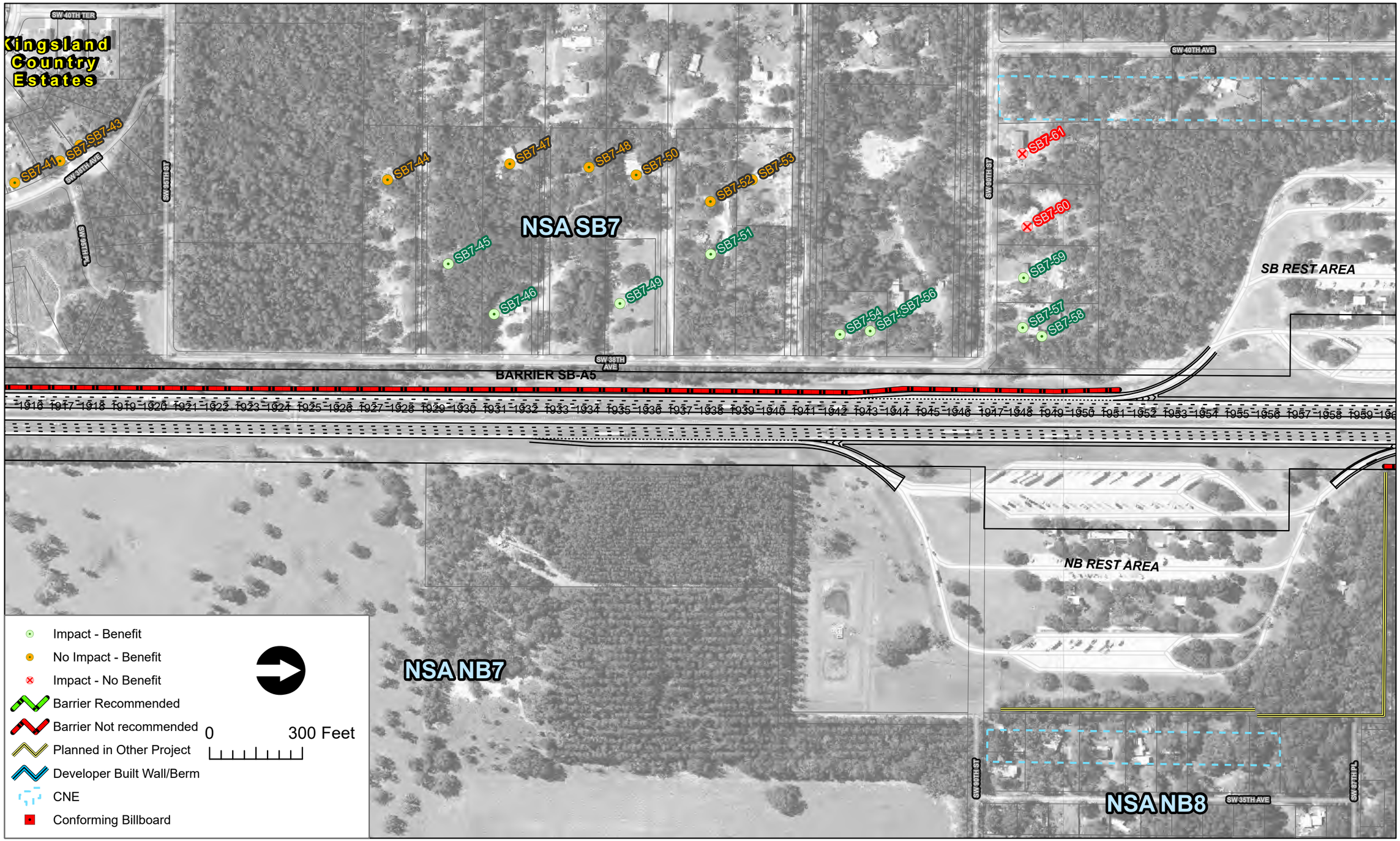

NSA SB5
SW 20TH AVENUE RD
1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643
BARRIER NB-A4
SW 165TH ST
SW 166TH ST
NB5-14
NB5-15
NB5-16
NB5-17
NB5-18
SW 16TH AVE
NB5-SLU1
NSA NB5
Shree Swaminarayan Temple
Shady Road Acres
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

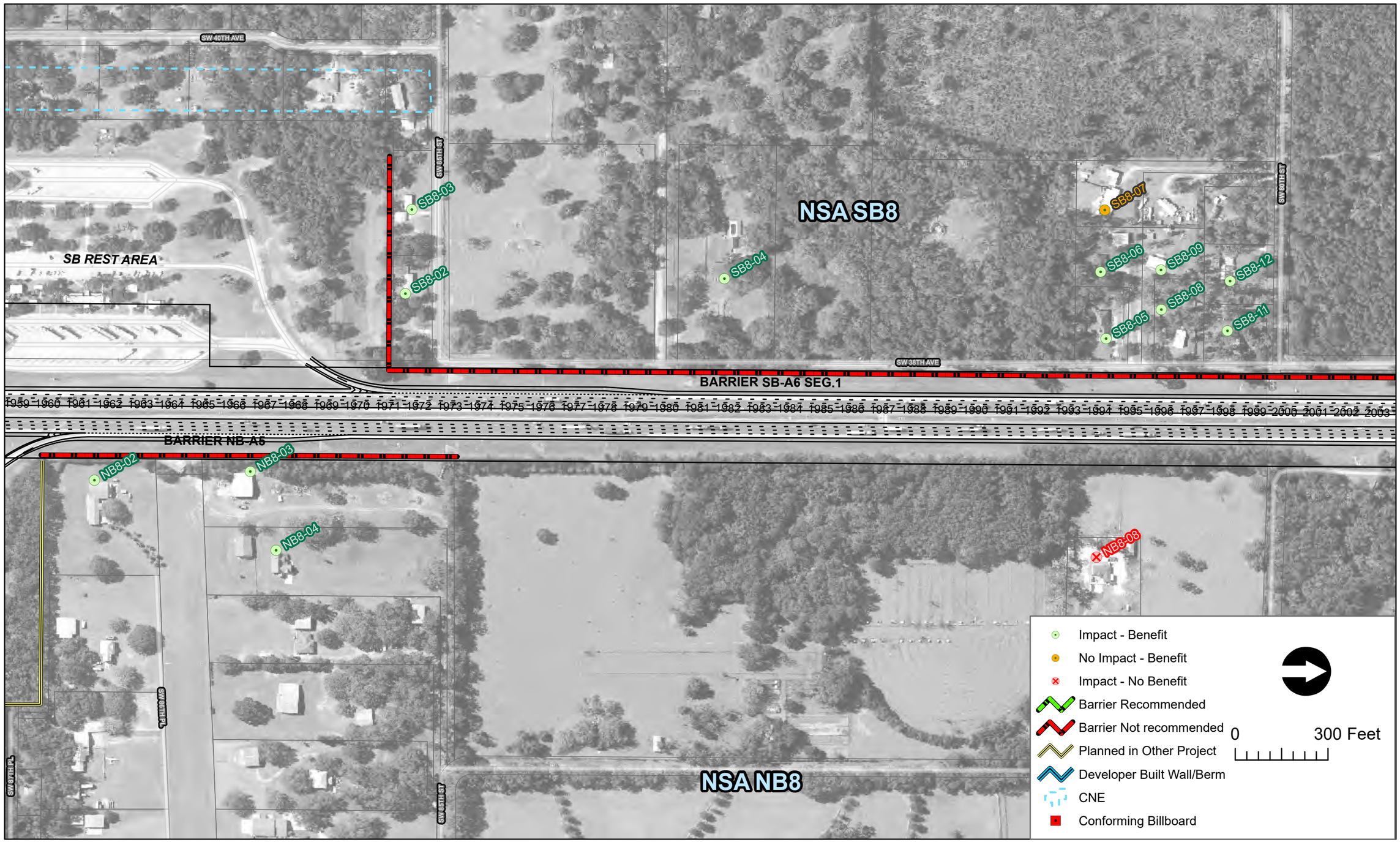

Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet
NSA SB5
NSA SB6
NSA SB7
NSA NB5
NSA NB6
Wendy's
Hampton Inn
Alphabet Land Learning Center
Tom's Cuban
Garlits eum of Racing
Sleep Inn
Microtel
SB5-SLU2
SB6-SLU1
SB6-SLU2
NB6-01
BARRIER SB-A4
SW 40TH AVENUE RD
SW 44TH AVE
SW 17TH CT
SW 44TH ST
SW 44TH ST RD
MARION 484 COUNTY


NSA SB7
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811
Barrier NB1
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
NB7-01
NB7-02
NB7-03
NB7-04
NB7-05
NSA NB7
SW 27TH AVE
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

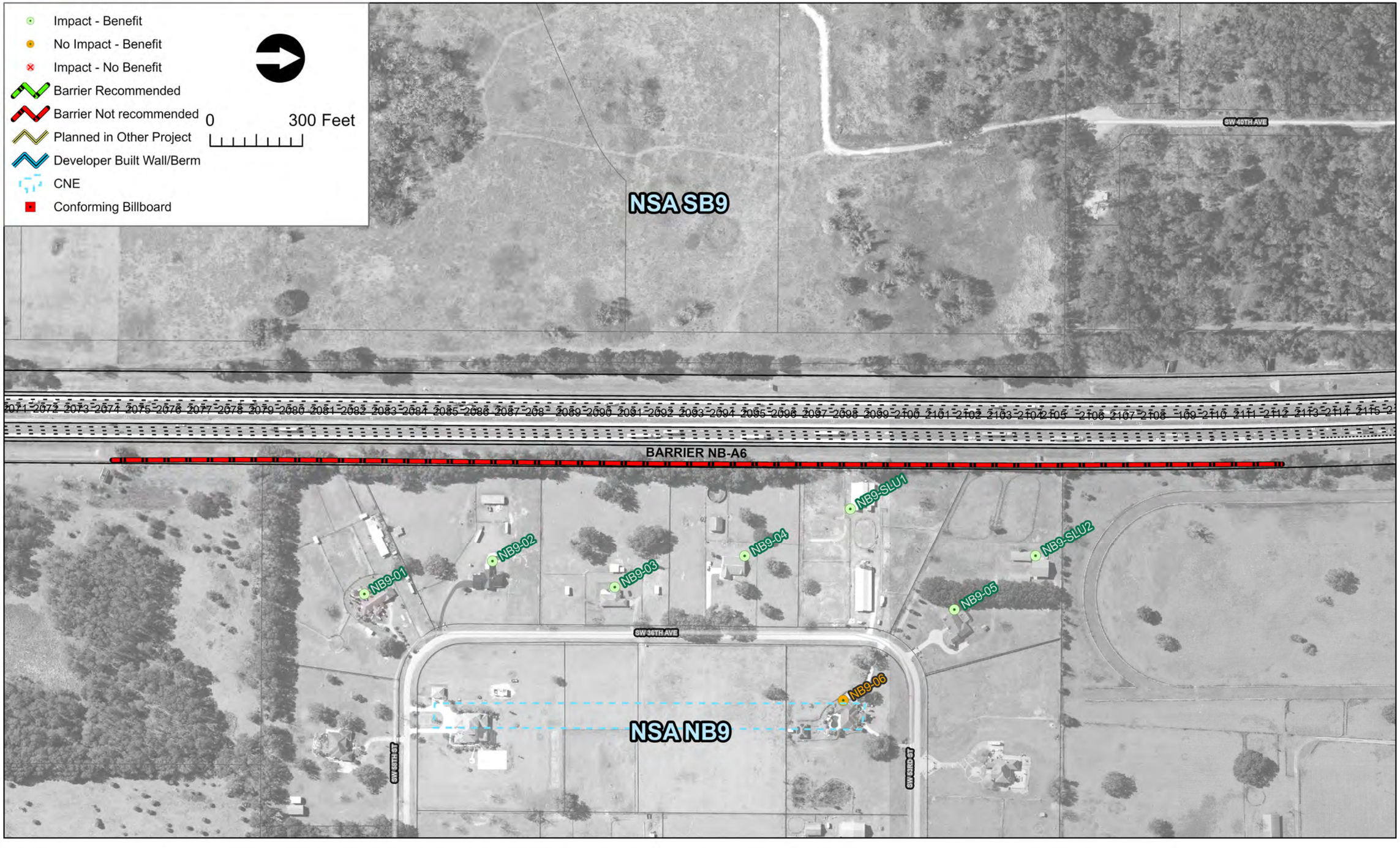

Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet
NSA SB7
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
Barrier NB1
NB7-08
NB7-09
NB7-10.1
NB7-10
NB7-11
NB7-12
NB7-06
NB7-14
NB7-15
NB7-22
NB7-16
NB7-19
NB7-05
NB7-07
NB7-20
NB7-21
NB7-27
NB7-17
NB7-28
NB7-26
NB7-33
NB7-18
NB7-24
NB7-32
NB7-36
NB7-37.1
Oak Bend
NSA NB7
BLUEBERRY HILL
CLARICE AVE
JANICE PL
BERRY OAK DR
CROOKED PINE DR
REDBERRY DR
PENDLETON WAY

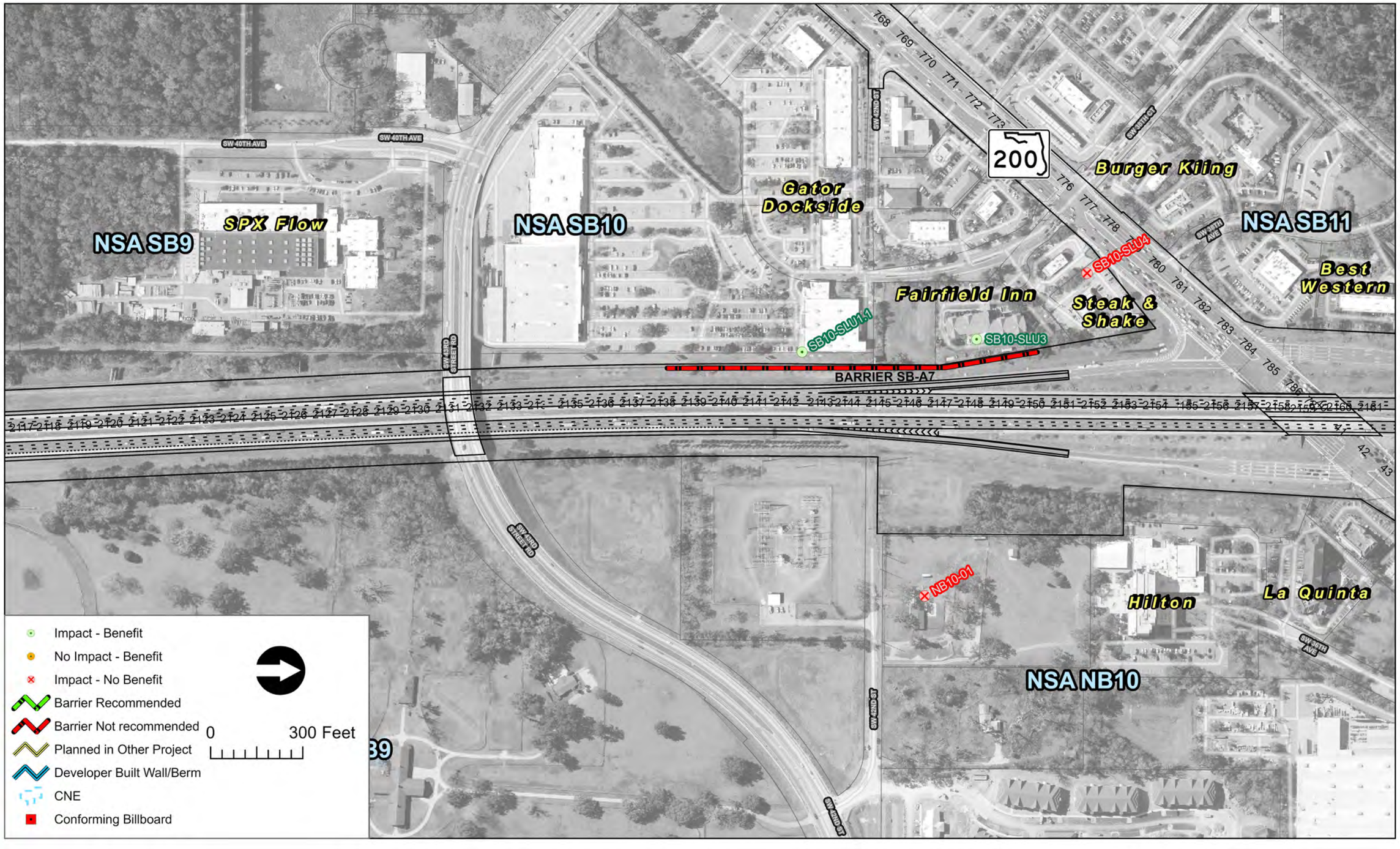

NSA SB7
Ocala Waterways Estates
Kingsland
Country Estates
SW 39TH TER
SW 38TH AVE
SW 96TH LN
SW 96TH PL
SW 40TH TER
SW 100TH ST
SW 102ND LANE RD
SW 103RD LN
SW 103RD PL
BARRIER SB-A5
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
SB7-04
SB7-05
SB7-06
SB7-07
SB7-08
SB7-09
SB7-10
SB7-11
SB7-12
SB7-13
SB7-14
SB7-15
SB7-16
SB7-17
SB7-18
SB7-22
SB7-23
SB7-24
SB7-25
SB7-26
SB7-27
SB7-28
SB7-29
SB7-30
SB7-31
SB7-32
SB7-33
SB7-35
SB7-36
SB7-37
SB7-38
SB7-39
SB7-40
SB7-41
SB7-43
NSA NB
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

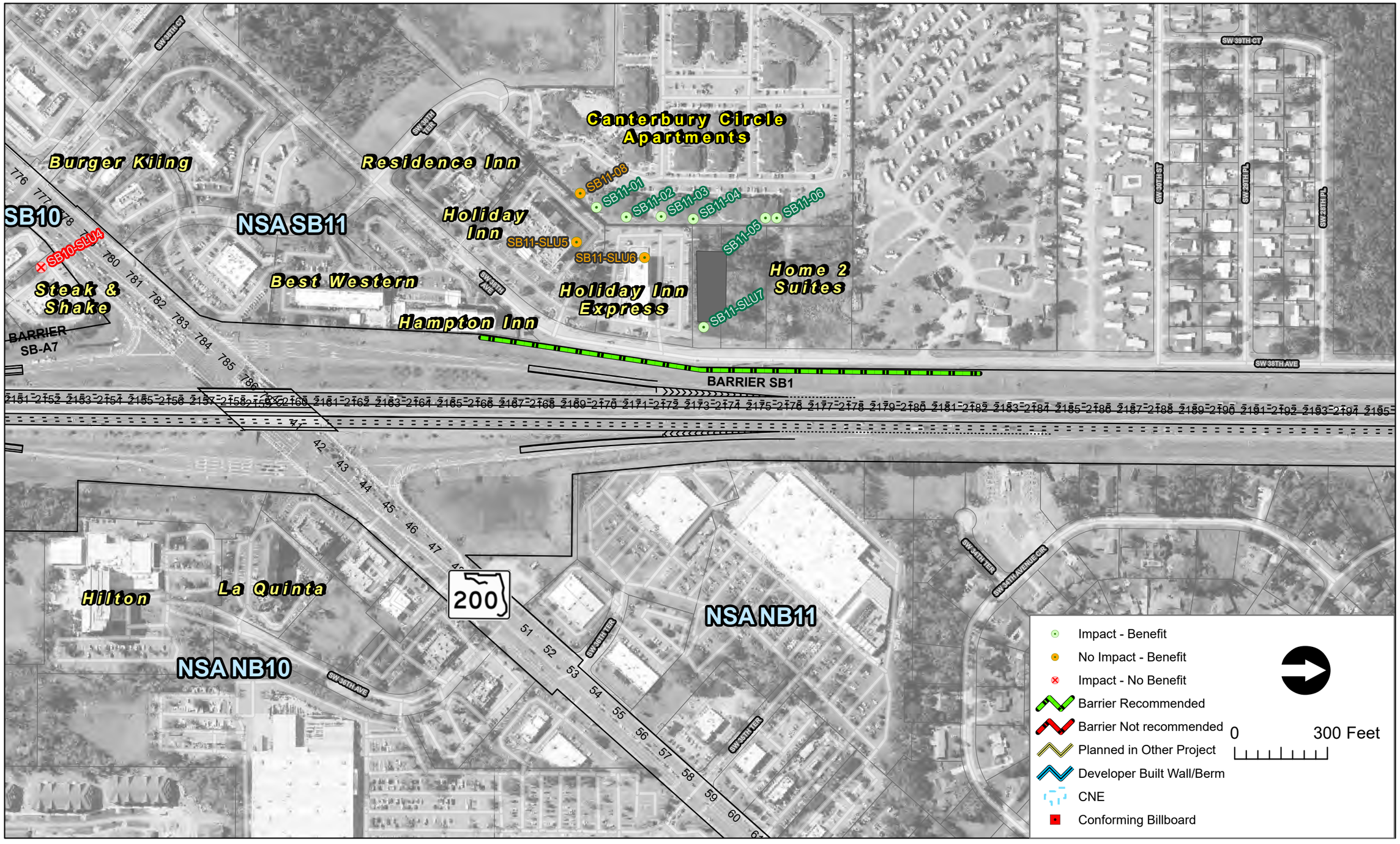

Kingsland Country Estates
SW 40TH TER
SW 40TH AVE
SW 91ST ST
SW 90TH PL
SW 90TH ST
SB7-41
SB7-42
SB7-43
SB7-44
SB7-45
SB7-46
SB7-47
SB7-48
SB7-49
SB7-50
SB7-51
SB7-52
SB7-53
SB7-54
SB7-55
SB7-56
SB7-57
SB7-58
SB7-59
SB7-60
SB7-61
NSA SB7
SW 38TH AVE
BARRIER SB-A5
SB REST AREA
NB REST AREA
NSA NB7
NSA NB8
SW 35TH AVE
SW 87TH PL
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet


SW 40TH AVE
SW 85TH ST
SB8-03
SB8-02
SB REST AREA
NSA SB8
SB8-04
SB8-07
SB8-06
SB8-09
SB8-12
SB8-08
SB8-05
SB8-11
SW 88TH ST
SW 88TH AVE
BARRIER SB-A6 SEG.1
BARRIER NB-A5
NB8-02
NB8-03
NB8-04
NB8-08
SW 87TH PL
SW 85TH ST
NSA NB8
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

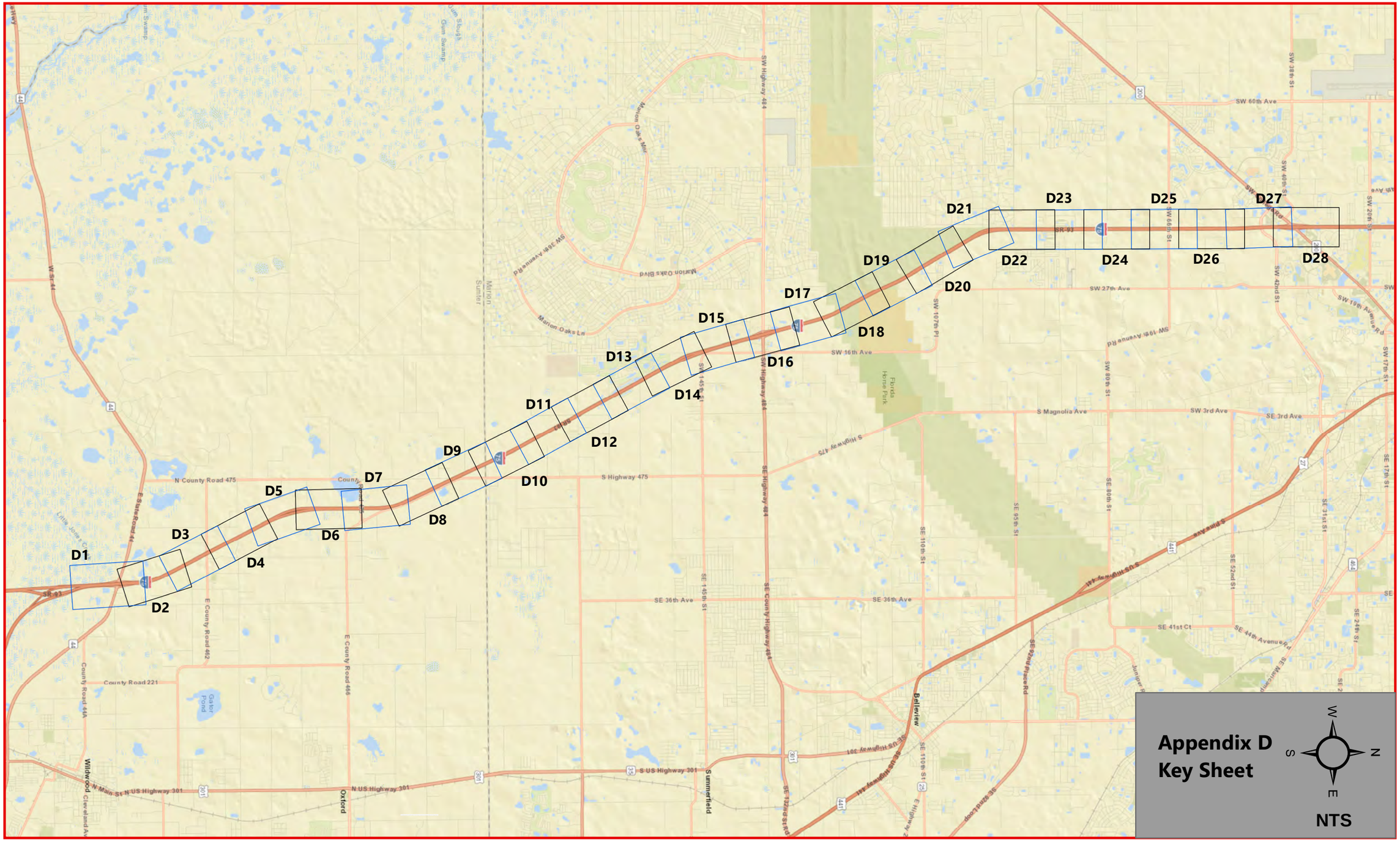

Ocala Korean Baptist Church
SB8-SLU1
NSA SB8
SB8-15
SB8-16
SW 80TH ST
SW 38TH AVE
BARRIER SB-A6 SEG.1
BARRIER SB-A6 SEG.2
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044
SW 35TH AVE
NSA NB8
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet


Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet
NSA SB9
SW 40TH AVE
BARRIER NB-A6
NB9-01
NB9-02
NB9-03
NB9-04
NB9-SLU1
NB9-SLU2
NB9-05
NB9-06
SW 36TH AVE
NSA NB9
SW 58TH ST
SW 63RD ST


NSA SB9
SPX Flow
NSA SB10
Gator Dockside
Fairfield Inn
Steak & Shake
Burger King
NSA SB11
Best Western
SB10-SLU1-1
SB10-SLU3
SB10-SLU4
BARRIER SB-A7
SW 40TH AVE
SW 43RD STREET RD
SW 42ND ST
SW 36TH AVE
200
NB10-01
Hilton
La Quinta
NSA NB10
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet


Burger King
Residence Inn
Canterbury Circle Apartments
SB10
NSA SB11
Holiday Inn
SB11-SLU5
SB11-SLU6
SB11-01
SB11-02
SB11-03
SB11-04
SB11-05
SB11-06
SB11-07
SB11-08
SB10-SLU4
Steak & Shake
Best Western
Holiday Inn Express
Home 2 Suites
Hampton Inn
BARRIER SB-A7
BARRIER SB1
SW 38TH AVE
SW 39TH CT
SW 39TH TER
SW 38TH AVE
SW 37TH ST
SW 37TH PL
SW 36TH PL
Hilton
La Quinta
NSA NB10
NSA NB11
200
SW 36TH AVE
SW 35TH TER
SW 34TH TER
SW 34TH AVENUE CIR
Impact - Benefit
No Impact - Benefit
Impact - No Benefit
Barrier Recommended
Barrier Not recommended
Planned in Other Project
Developer Built Wall/Berm
CNE
Conforming Billboard
0
300 Feet

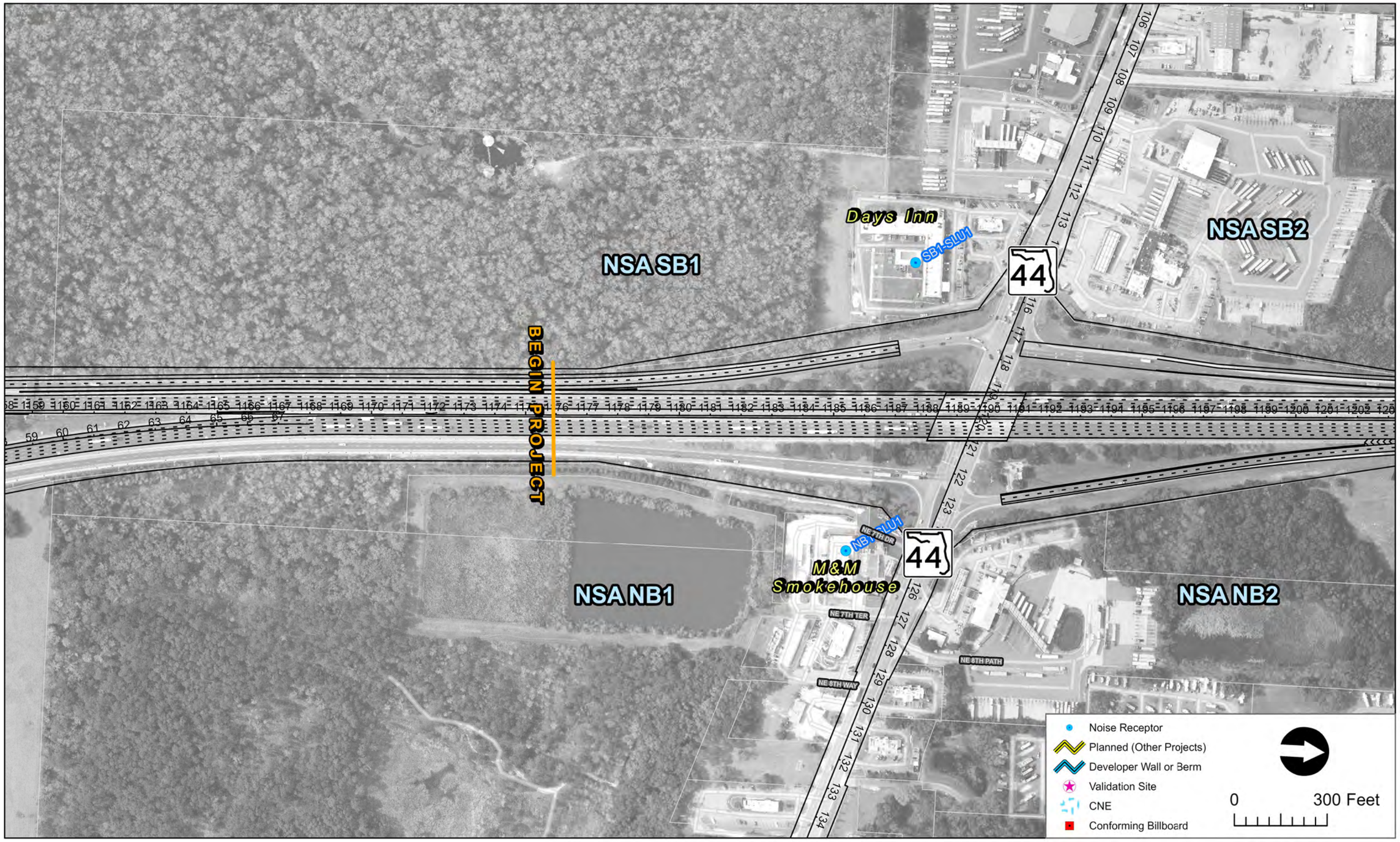
Appendix D Project Aerials



Appendix D
Key Sheet

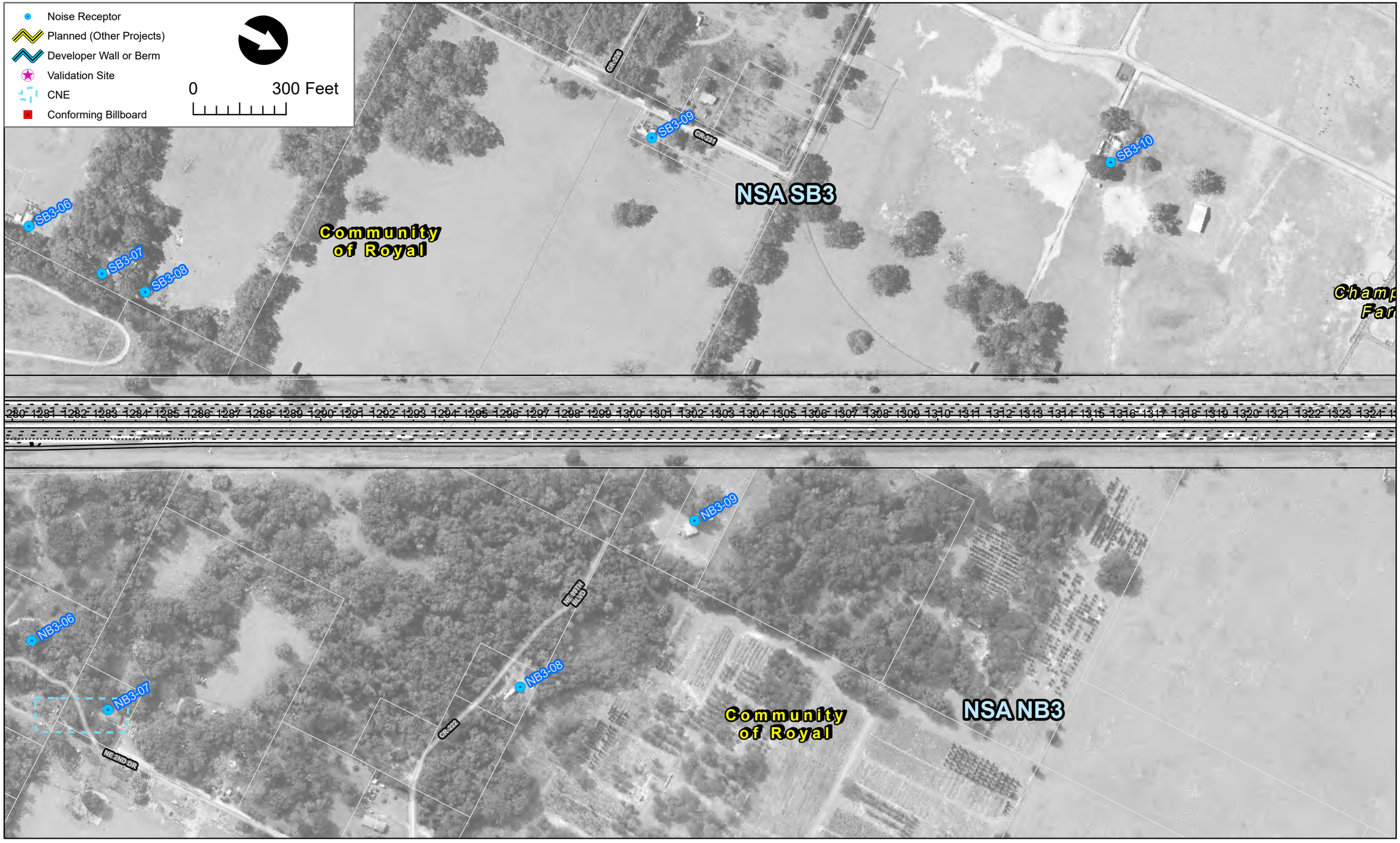
W
S
N
E

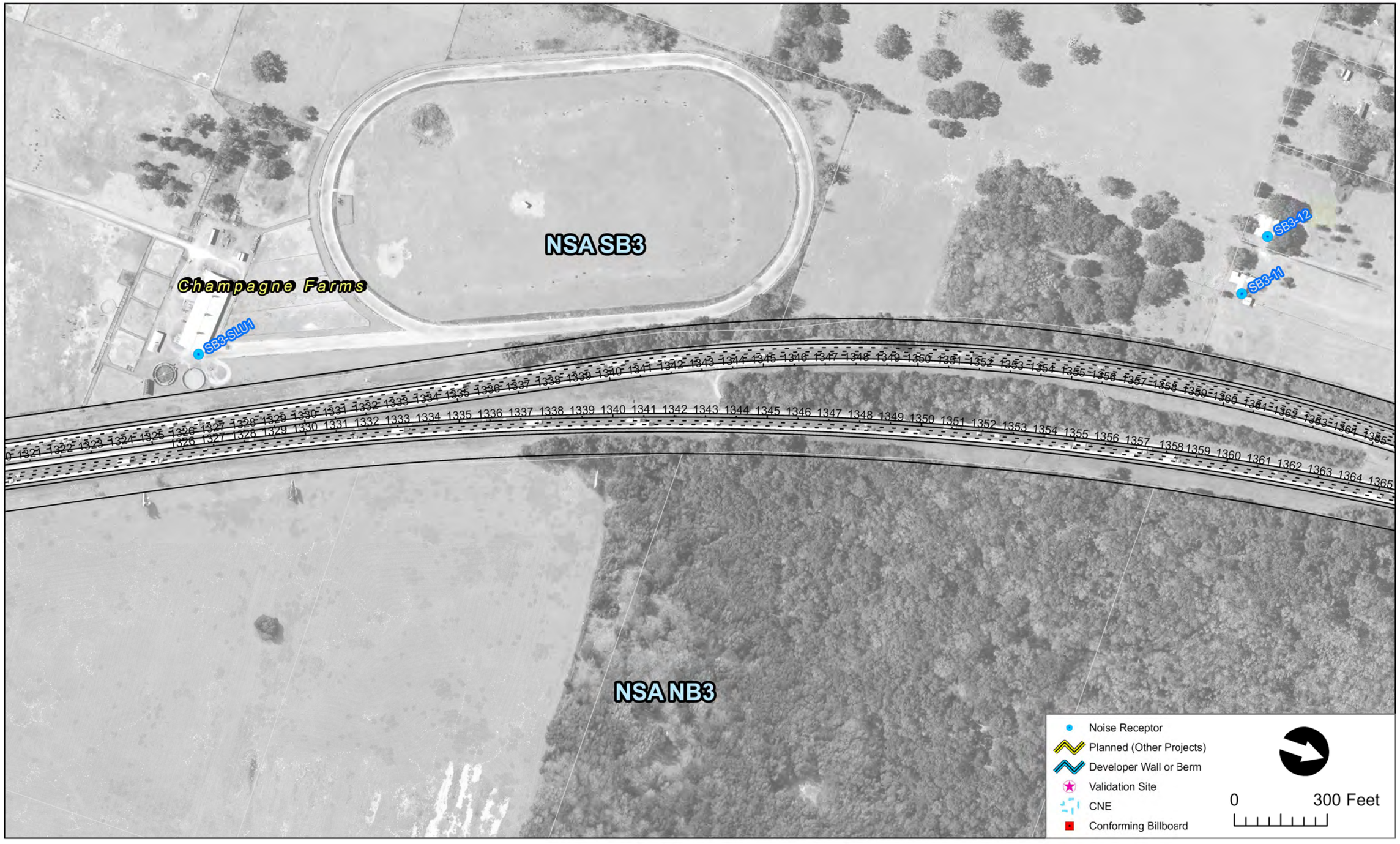
NTS


NSA SB1
Days Inn
SB1-SLU1
NSA SB2
44
BEGIN PROJECT
NB1-SLU1
NE 7TH DR
M&M
Smokehouse
NSA NB1
NE 7TH TER
NE 8TH WAY
NE 8TH PATH
NSA NB2
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB2
NSA NB2
NB2-01
NB2-02
NB2-03
NB2-04
Community of Royal
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB2
NSA SB3
Community of Royal
CR-241
CR-462
SB2-01
SB2-02
SB3-01
SB3-02
SB3-03
SB3-04
SB3-05
SB3-06
SB3-07
462
NSA NB2
NSA NB3
Ebenezer AME Church
Community of Royal
NE 2ND DR
NB2-05
NB2-06
NB2-07
NB2-08
NB3-01
NB3-02
NB3-03
NB3-04
NB3-05
NB3-06
NB3-07
NB3-SLU1
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

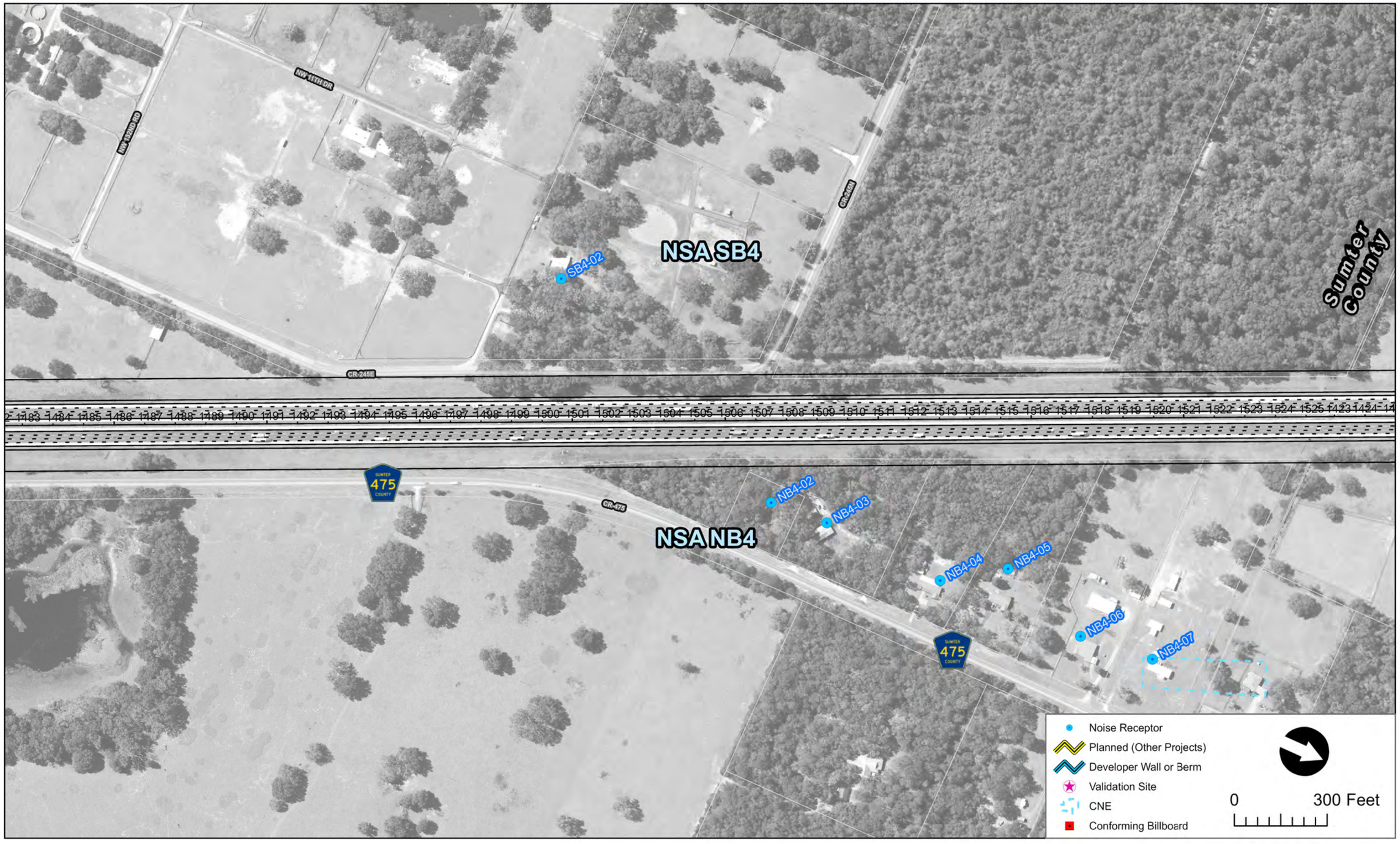

Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet
SB3-06
SB3-07
SB3-08
SB3-09
SB3-10
NSA SB3
Community of Royal
NB3-06
NB3-07
NB3-08
NB3-09
NSA NB3
Community of Royal
NE 2ND DR
NE 60TH BLVD
CR-222
CR-224


NSA SB3
Champagne Farms
SB3-SLU1
SB3-12
SB3-11
NSA NB3
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

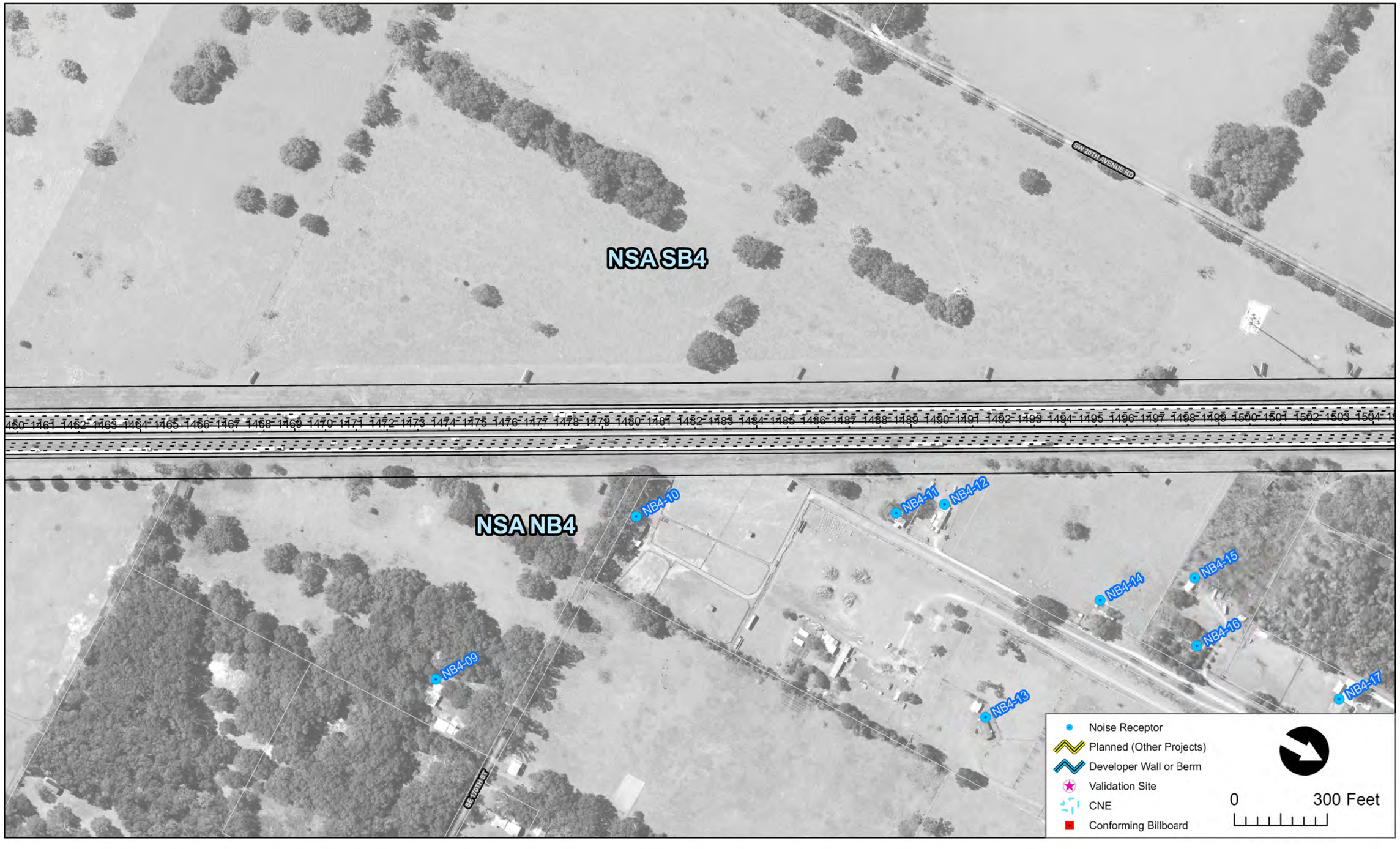

NSA SB3
NSA NB3
SB3-13
SB3-16
SB3-15
SB3-14
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB3
SB3-17
NSA SB4
NSA NB3
NSA NB4
NB4-01
SUMTER 475 COUNTY
CR-476
NW 122ND AVE
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

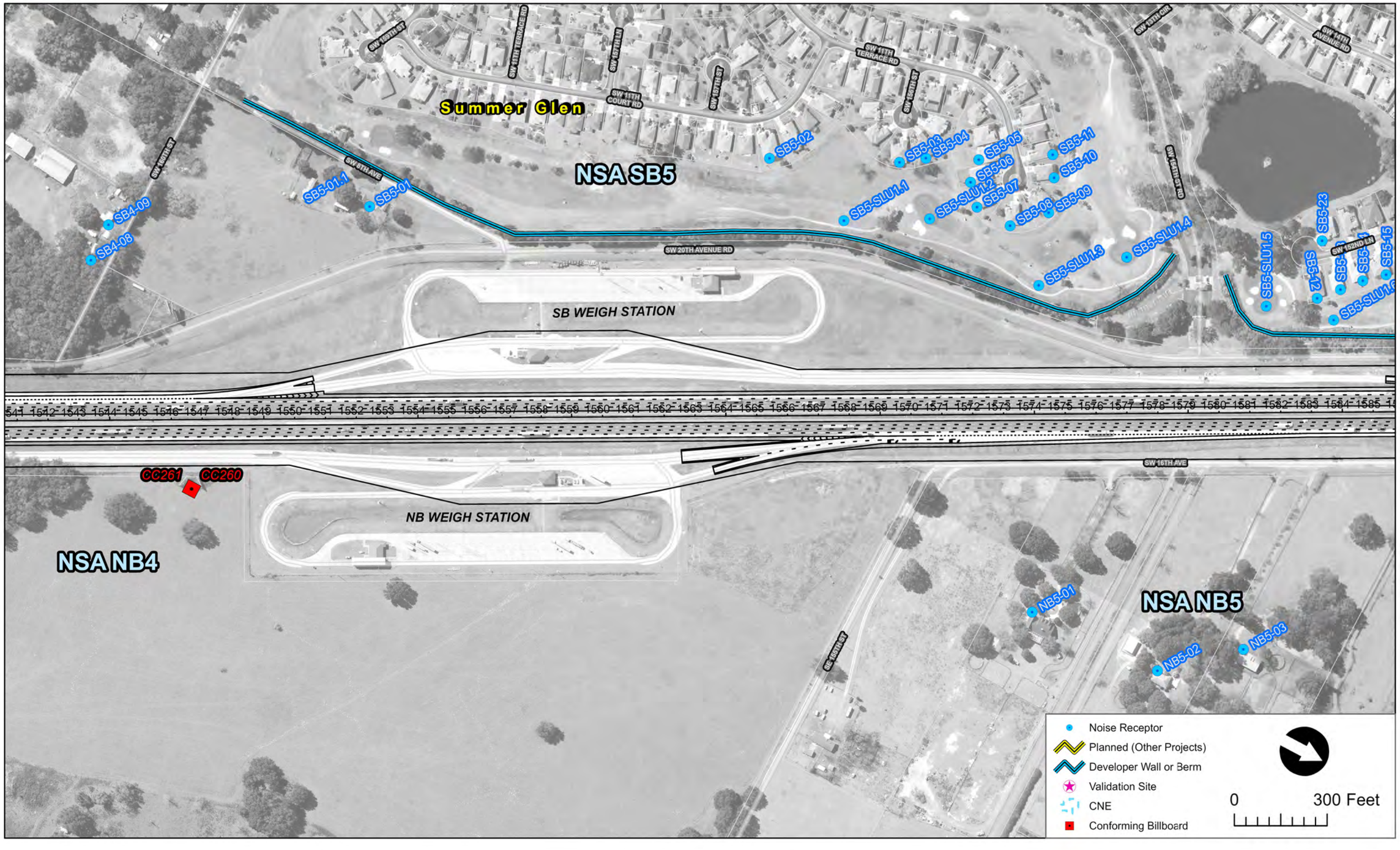

NSA SB4
SB4-01
CR-245E
NW 102ND RD
NSA NB4
CR-475
SUMTER
475
COUNTY
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

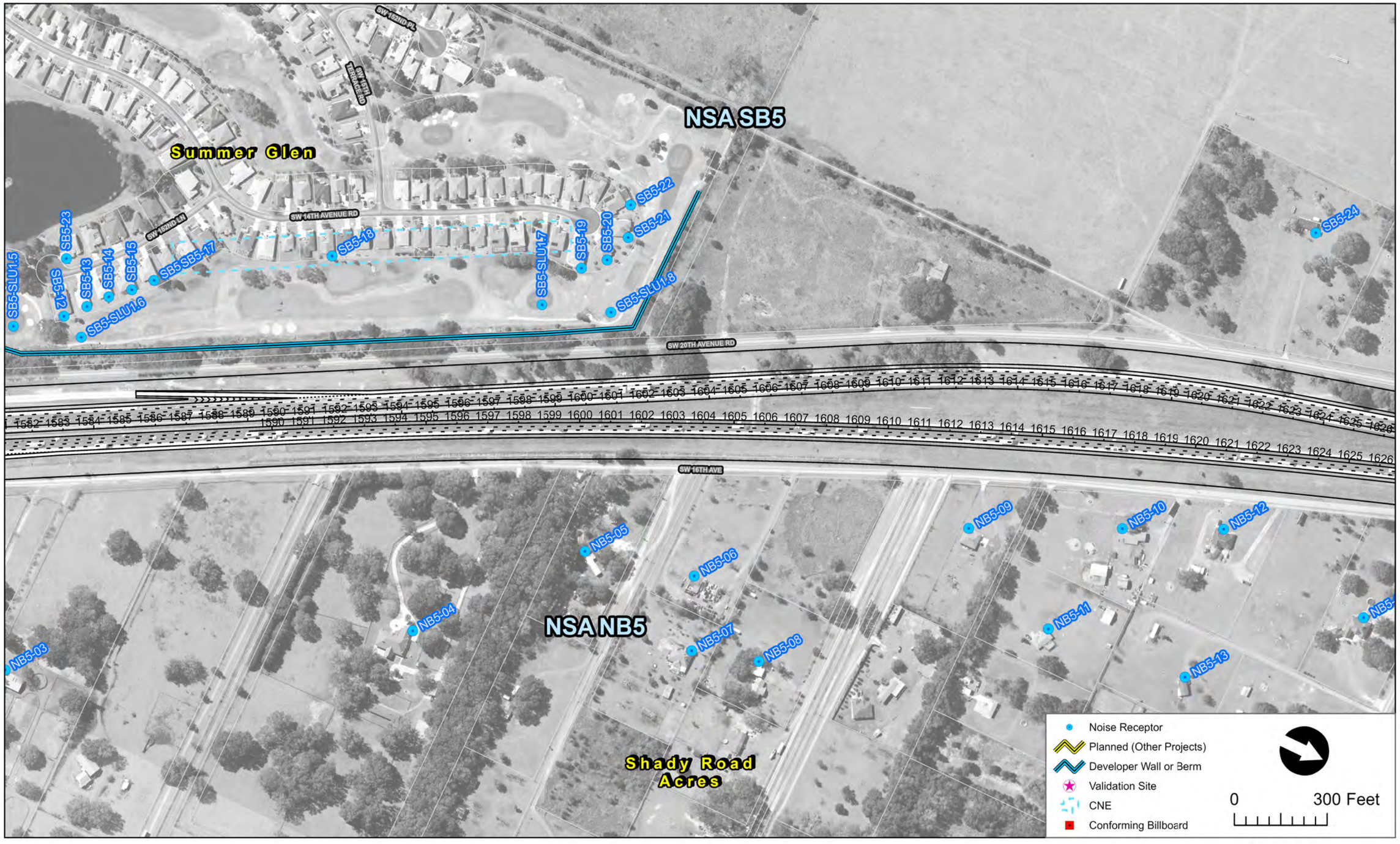

NW 11TH DR
NW 103RD RD
CR-245E
CR-245N
NSA SB4
SB4-02
Sumter County
1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525
SUMTER 475 COUNTY
CR-475
NSA NB4
NB4-02
NB4-03
NB4-04
NB4-05
NB4-06
NB4-07
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


Sumter County
Marion County
NSA SB4
NSA NB4
Kickstart Farm
NB4-SLU1
NB4-03
S HIGHWAY 475
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

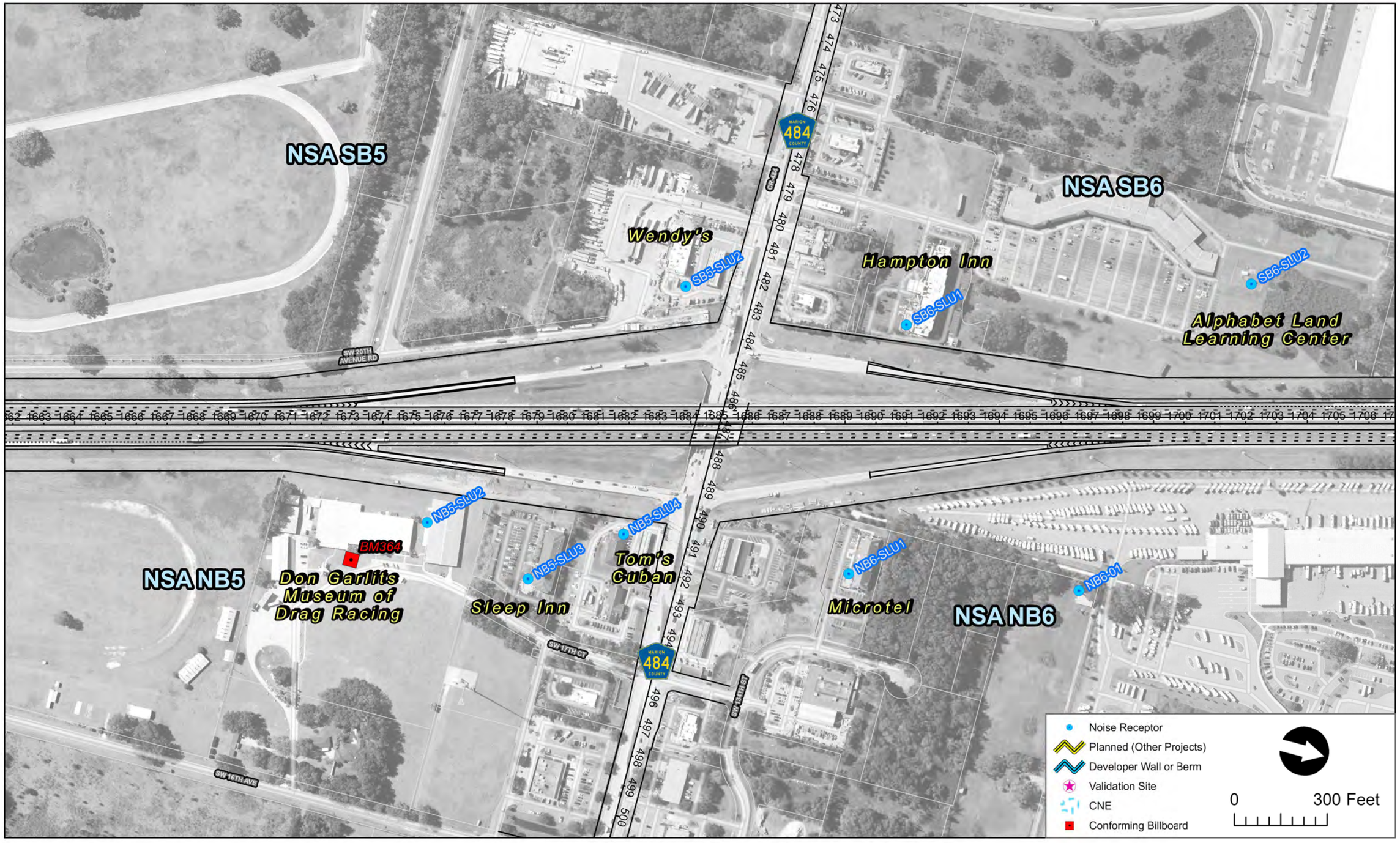

NSA SB4
SW 20TH AVENUE RD
NSA NB4
NB4-09
NB4-10
NB4-11
NB4-12
NB4-13
NB4-14
NB4-15
NB4-16
NB4-17
LENNOX LN
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB4
SB4-03
SB4-04
SB4-05
SB4-06
SB4-07
SB4-08
SW 16TH ST
SW 20TH AVENUE RD
NSA NB4
NB4-17
NB4-18
NB4-19
NB4-20
NB4-21
NB4-22
NB4-23
NB4-24
NB4-25
NB4-26
SE HIGHWAY 441
S MAGNOLIA AVE
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


Summer Glen
NSA SB5
SW 18TH ST
SW 9TH AVE
SW 11TH TERRACE RD
SW 18TH LN
SW 11TH COURT RD
SW 17TH ST
SW 11TH TERRACE RD
SW 18TH ST
SW 15TH CIR
SW 14TH AVENUE RD
SW 15TH ST RD
SW 20TH AVENUE RD
SB WEIGH STATION
SB4-09
SB4-08
SB5-01.1
SB5-01
SB5-02
SB5-03
SB5-04
SB5-05
SB5-06
SB5-12
SB5-07
SB5-08
SB5-09
SB5-10
SB5-11
SB5-SLU1.1
SB5-SLU1.2
SB5-SLU1.3
SB5-SLU1.4
SB5-SLU1.5
SB5-23
SW 152ND LN
SB5-15
SB5-SLU1.6
CC261
CC260
NB WEIGH STATION
NSA NB4
SW 16TH AVE
SW 15TH ST
NB5-01
NSA NB5
NB5-02
NB5-03
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

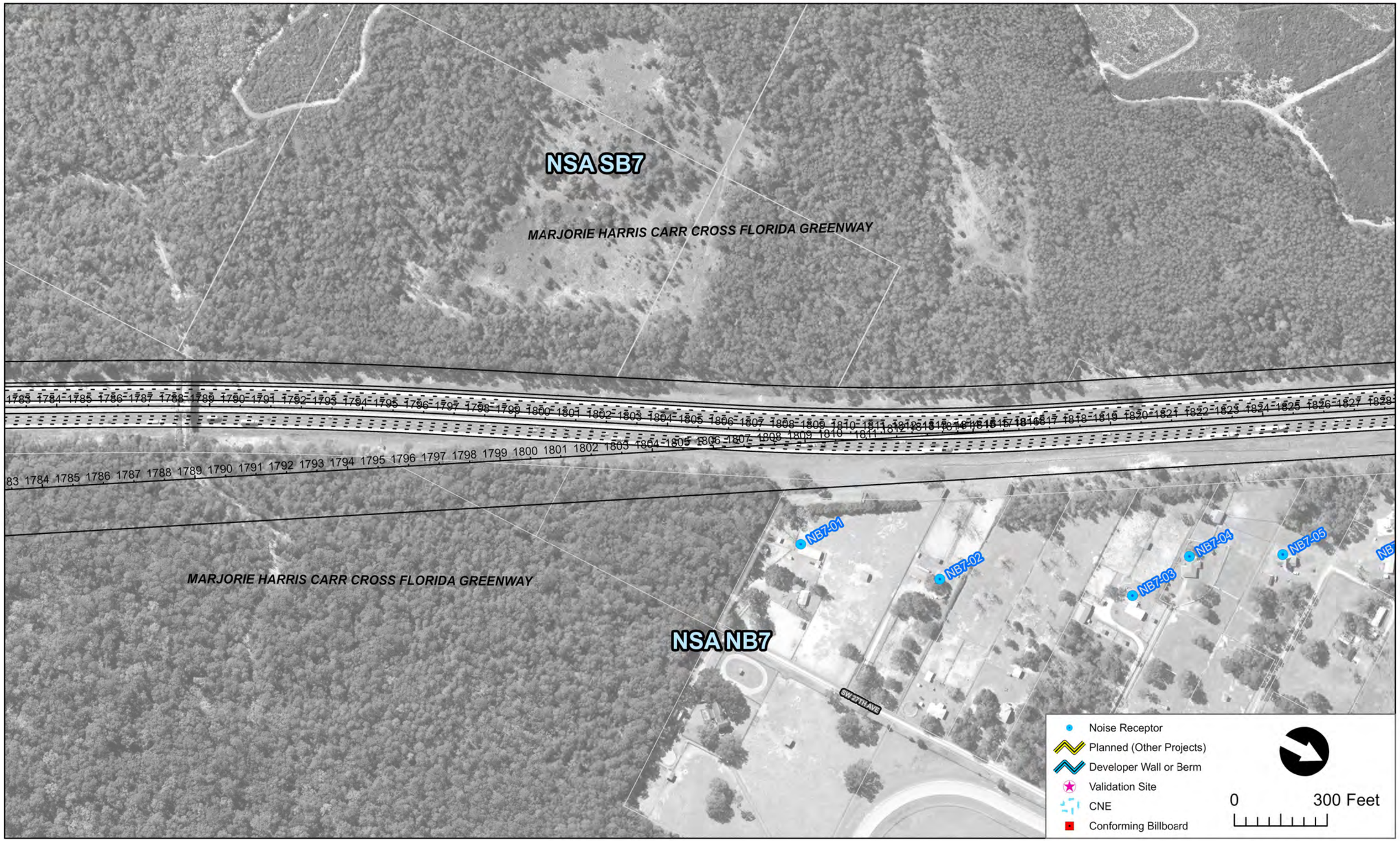

NSA SB5
Summer Glen
SW 152ND PL
SW 15TH TERRACE RD
SW 14TH AVENUE RD
SW 152ND LN
SB5-SLU1.5
SB5-23
SB5-12
SB5-13
SB5-14
SB5-15
SB5-SLU1.6
SB5-17
SB5-18
SB5-SLU1.7
SB5-19
SB5-20
SB5-21
SB5-22
SB5-SLU1.8
SB5-24
SW 20TH AVENUE RD
SW 16TH AVE
NSA NB5
Shady Road Acres
NB5-03
NB5-04
NB5-05
NB5-06
NB5-07
NB5-08
NB5-09
NB5-10
NB5-11
NB5-12
NB5-13
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

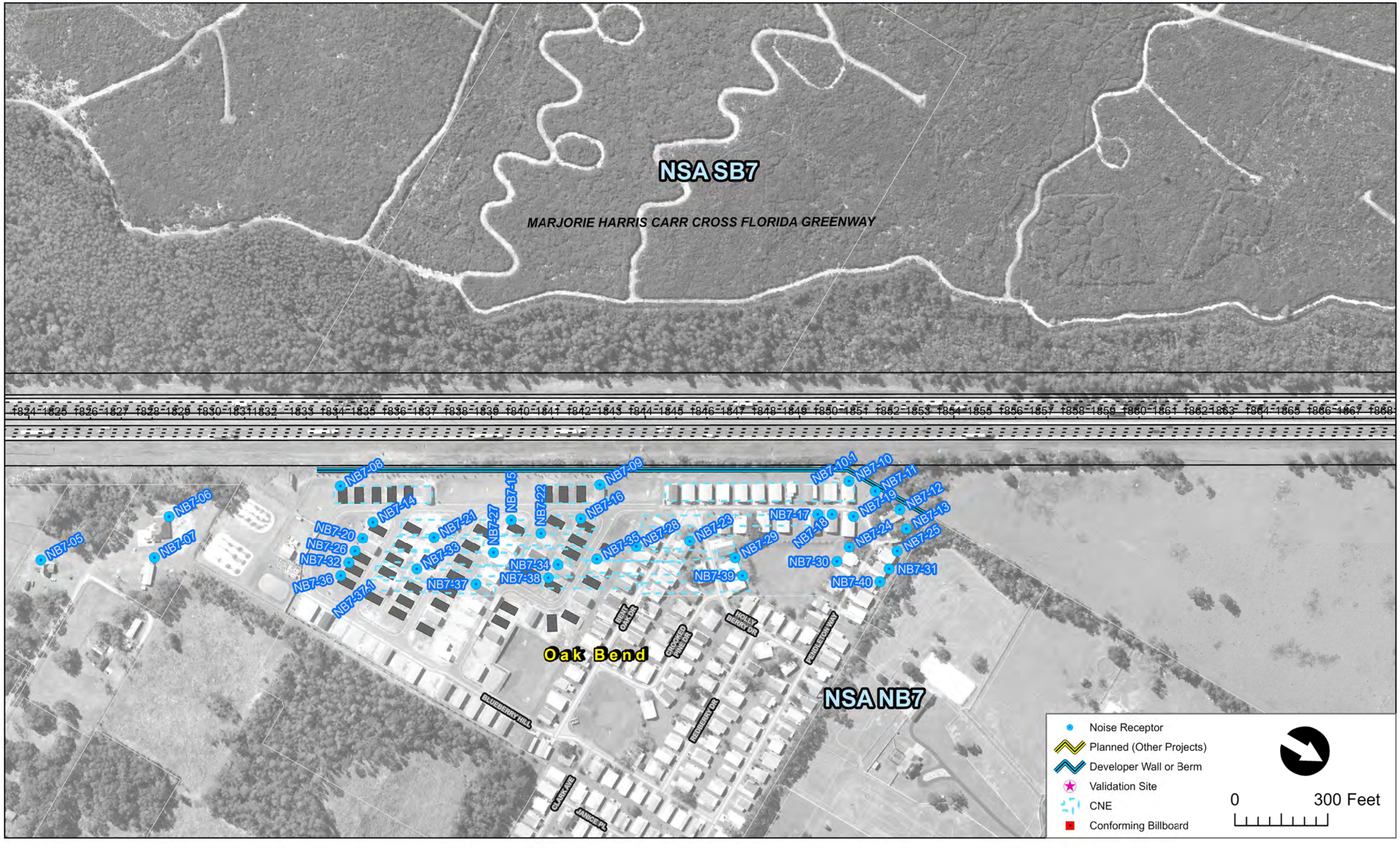

NSA SB5
SB5-24
SW 20TH AVENUE RD
NB5-14
SW 145TH ST
SW 143RD ST
NB5-15
NB5-16
NB5-17
NB5-18
SW 16TH AVE
NSA NB5
NB5-SLU1
NB5-19
Shree Swaminarayan Temple
Shady Road Acres
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

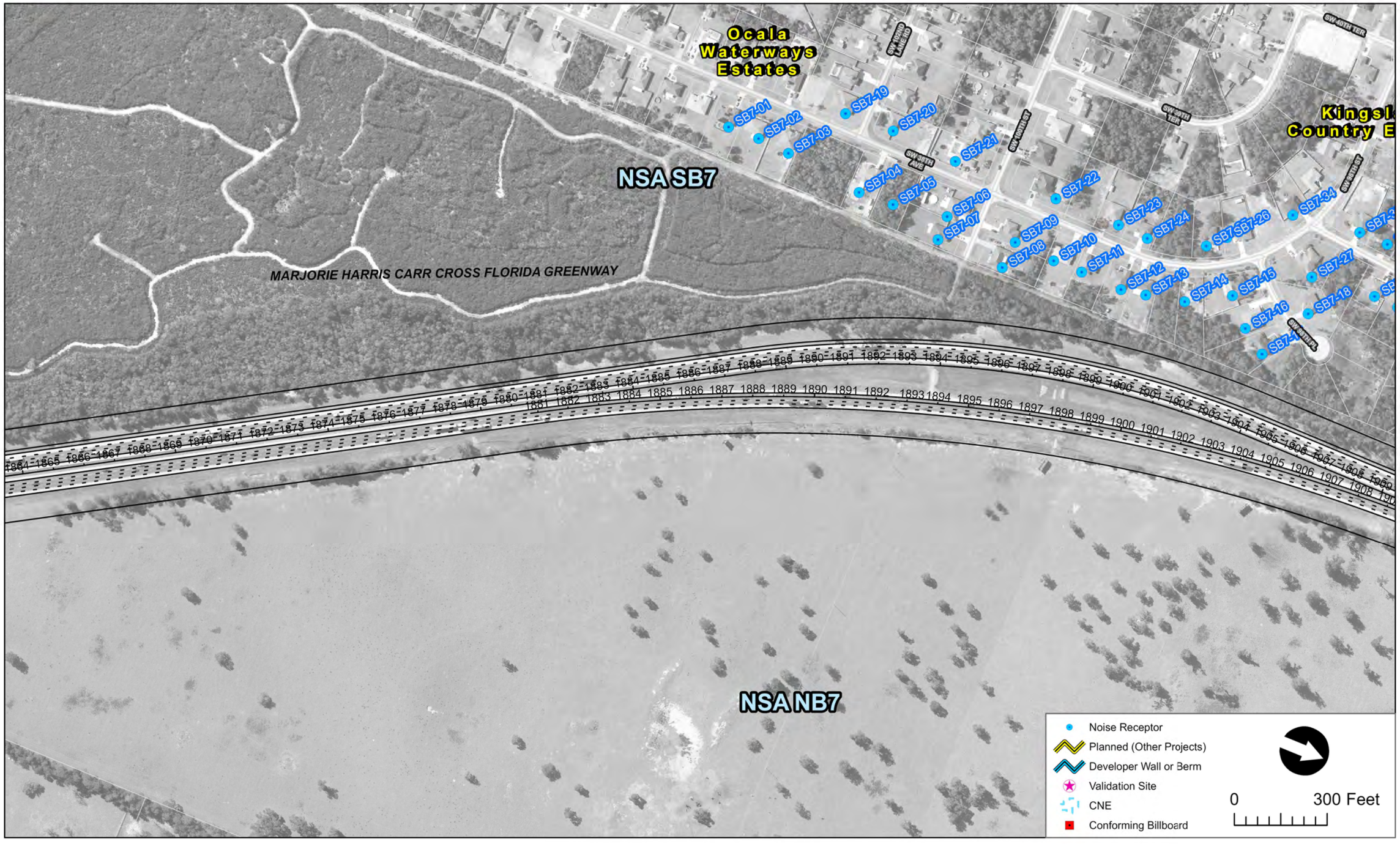

NSA SB5
Wendy's
SB5-SLU2
NSA SB6
Hampton Inn
SB6-SLU1
SB6-SLU2
Alphabet Land
Learning Center
SW 20TH
AVENUE RD
MARION
484
COUNTY
NB5-SLU2
BM364
NB5-SLU4
NB5-SLU3
NB6-SLU1
NB6-01
NSA NB5
Don Garlits
Museum of
Drag Racing
Sleep Inn
Tom's
Cuban
Microtel
NSA NB6
SW 17TH CT
SW 16TH AVE
SW 16TH ST
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB6
NSA SB7
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
SB6-SLU2
Alphabet Land Learning Center
NSA NB6
NSA NB7
NB6-02
SW 60th St Rd
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

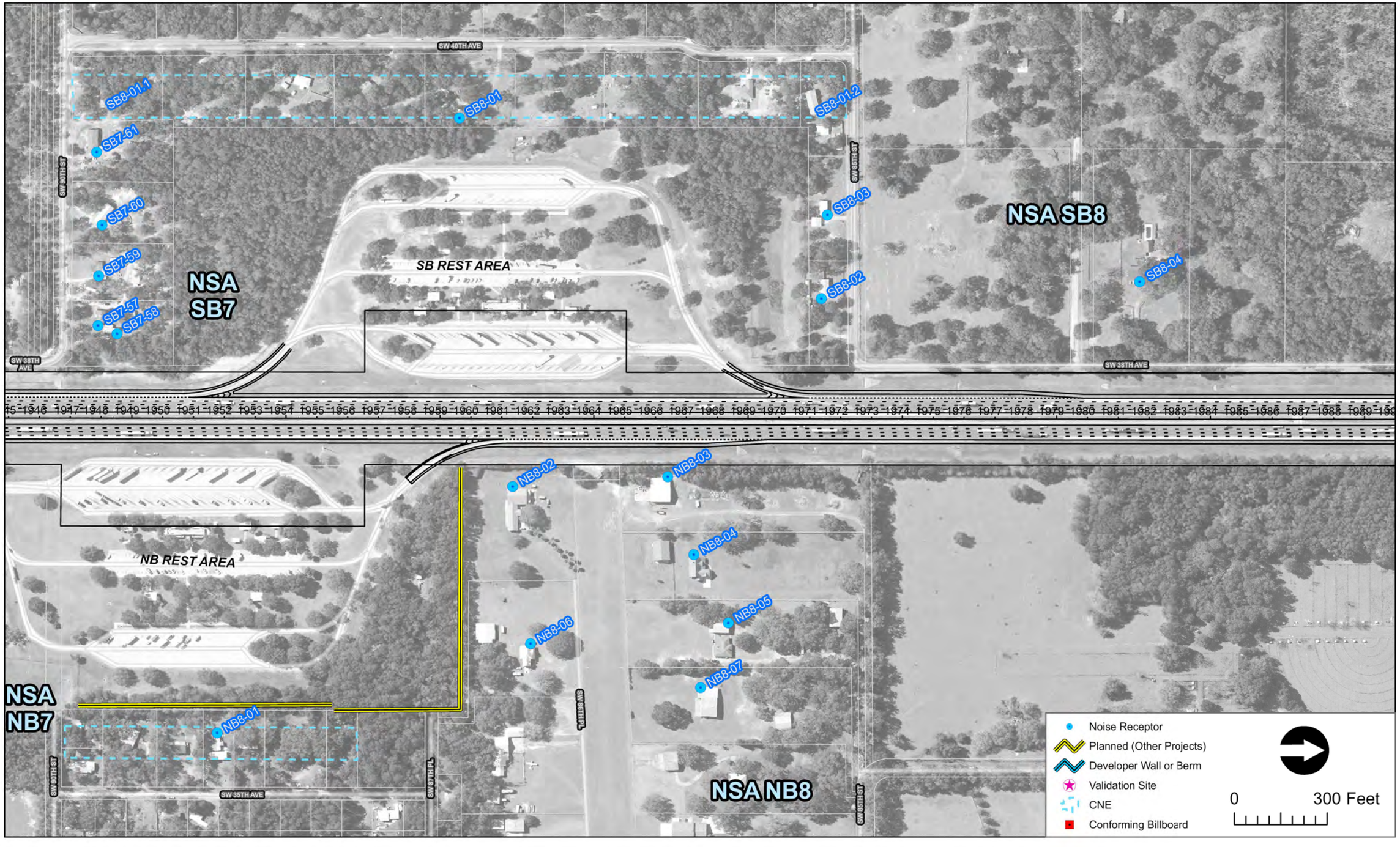

NSA SB7
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
NSA NB7
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB7
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
NSA NB7
NB7-01
NB7-02
NB7-03
NB7-04
NB7-05
SW 27TH AVE
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB7
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
NB7-05
NB7-06
NB7-07
NB7-08
NB7-14
NB7-20
NB7-26
NB7-32
NB7-36
NB7-37.1
NB7-21
NB7-33
NB7-37
NB7-27
NB7-15
NB7-34
NB7-38
NB7-22
NB7-09
NB7-16
NB7-35
NB7-28
NB7-23
NB7-29
NB7-39
NB7-10.1
NB7-10
NB7-11
NB7-19
NB7-17
NB7-18
NB7-12
NB7-13
NB7-24
NB7-25
NB7-30
NB7-31
NB7-40
Oak Bend
BERRY OAK DR
CROOKED RIVER DR
HOLLY BERRY DR
PENDLETON WAY
BLUEBERRY HILL
REDBERRY DR
CLARKLAKE
JANICE PL
NSA NB7
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

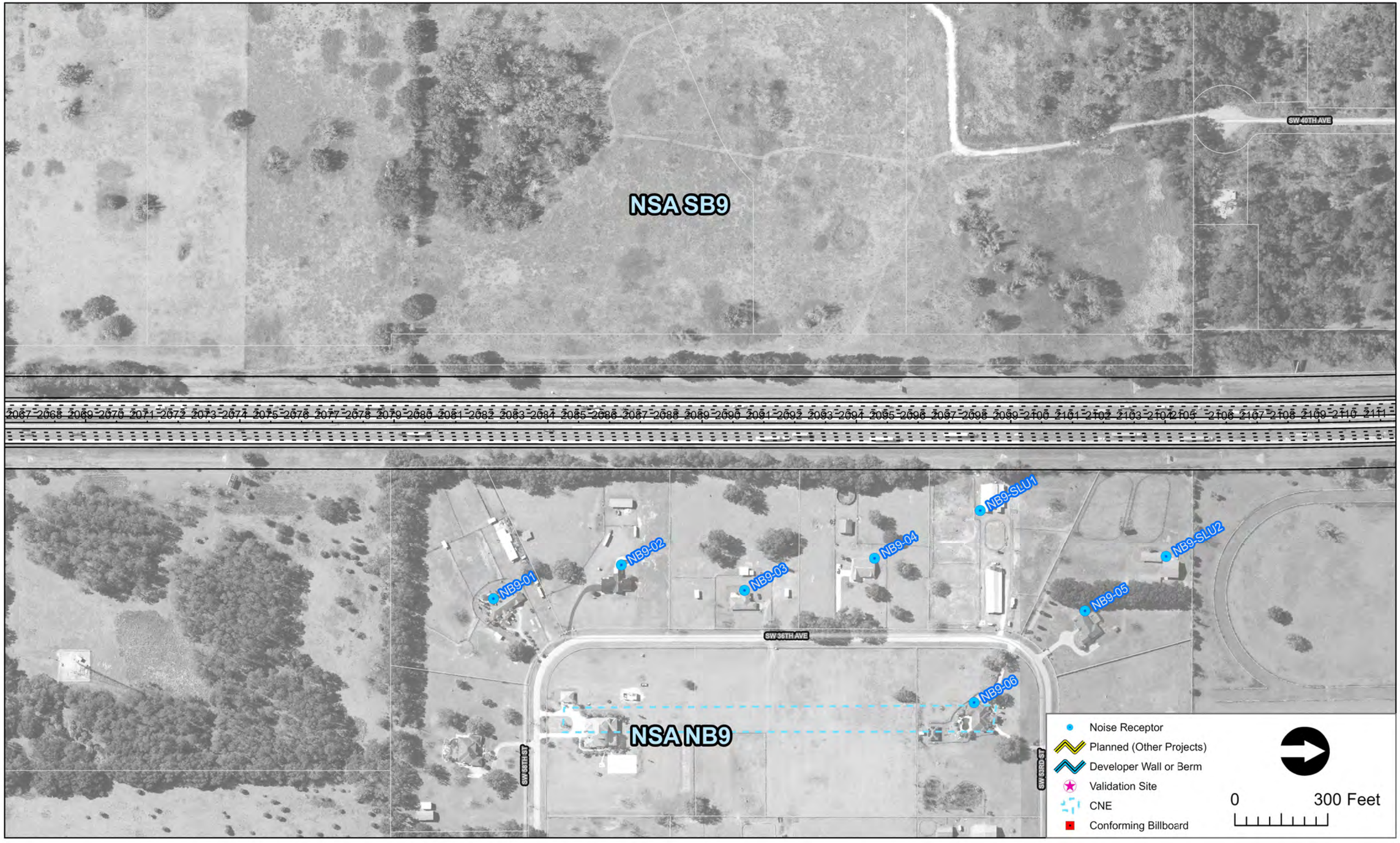

Ocala Waterways Estates
NSA SB7
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY
NSA NB7
SW 43RD TER
SW 40TH TER
SW 40TH AVE
SW 40TH ST
SW 40TH PL
SB7-01
SB7-02
SB7-03
SB7-04
SB7-05
SB7-06
SB7-07
SB7-08
SB7-09
SB7-10
SB7-11
SB7-12
SB7-13
SB7-14
SB7-15
SB7-16
SB7-18
SB7-19
SB7-20
SB7-21
SB7-22
SB7-23
SB7-24
SB7-26
SB7-27
SB7-34
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

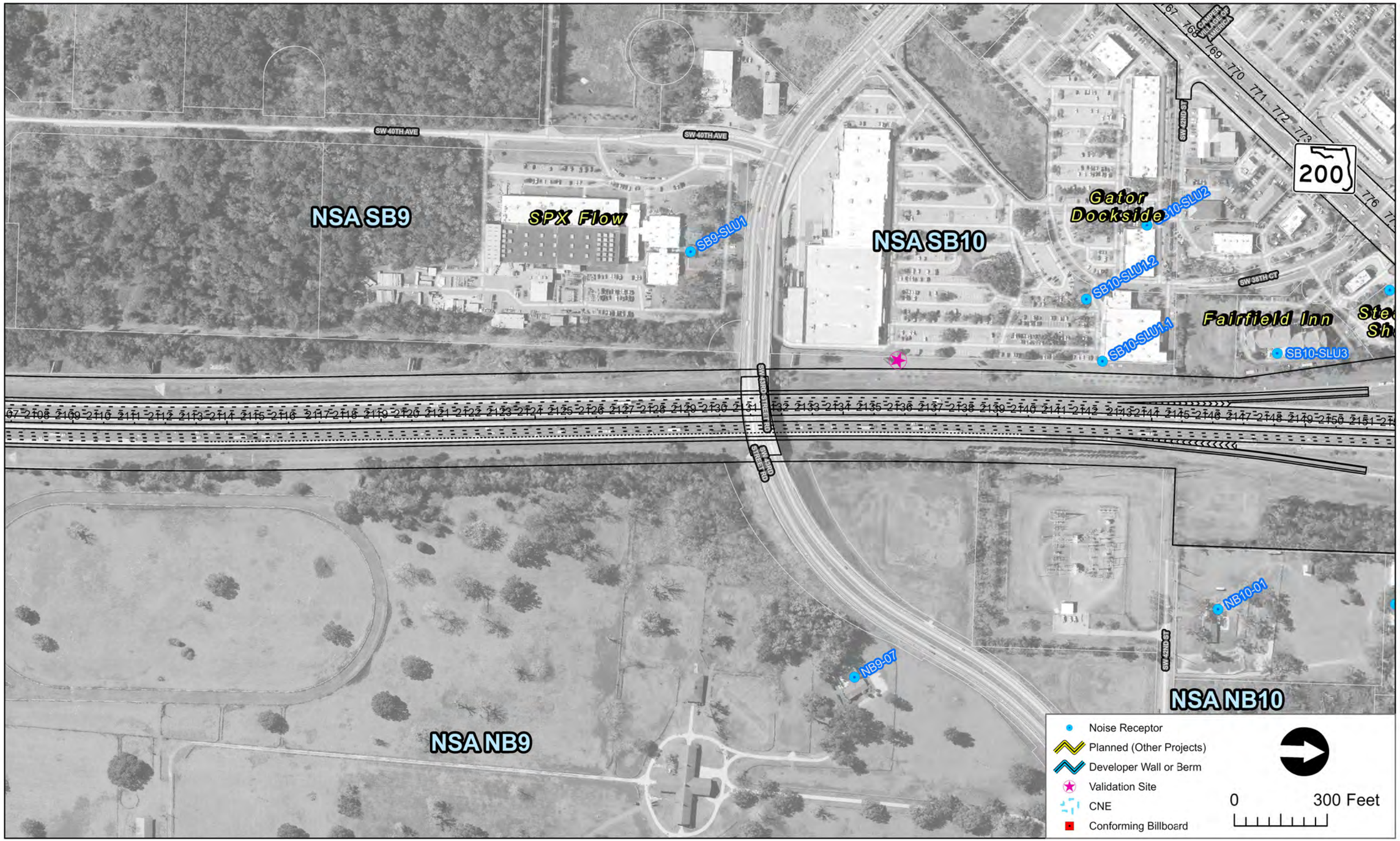

Kingsland
Country Estates
NSA SB7
NSA NB7
NSA NB8
NB REST AREA
SW 40TH TER
SW 40TH AVE
SW 38TH AVE
SW 38TH AVE
SW 95TH ST
SW 96TH LN
SW 96TH PL
SW 90TH ST
SB7-18
SB7-28
SB7-29
SB7-30
SB7-31
SB7-32
SB7-33
SB7-35
SB7-36
SB7-37
SB7-38
SB7-39
SB7-40
SB7-41
SB7-43
SB7-44
SB7-45
SB7-46
SB7-47
SB7-48
SB7-49
SB7-50
SB7-51
SB7-52
SB7-53
SB7-54
SB7-56
SB7-57
SB7-59
SB7-60
SB7-61
SB8-01
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

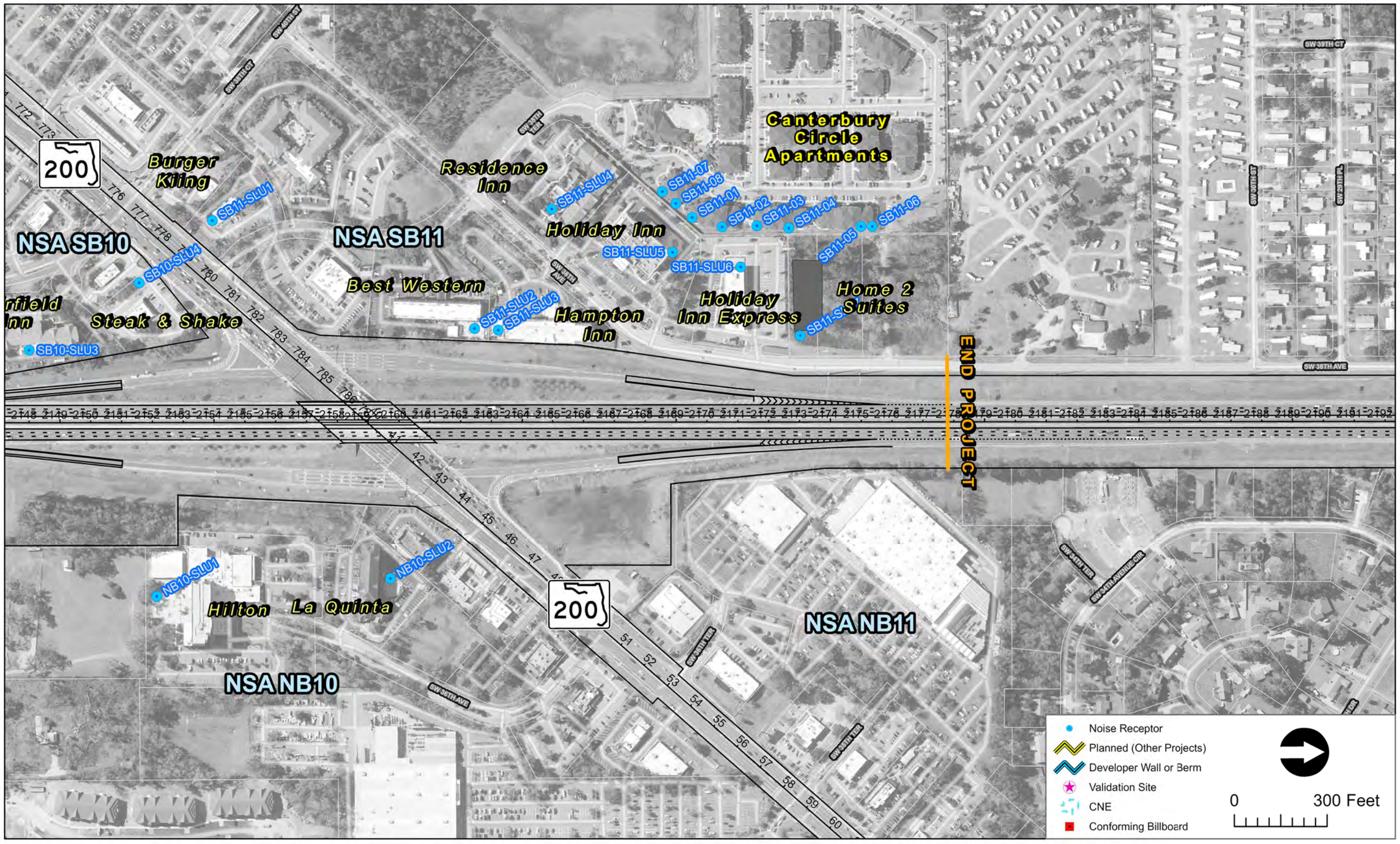

SW 40TH AVE
SB8-01.1
SB8-01
SB8-01.2
SB7-61
SB7-60
SB7-59
SB7-57
SB7-58
SB8-03
SB8-02
SB8-04
SW 90TH ST
SW 91ST AVE
NSA SB7
SB REST AREA
NSA SB8
SW 38TH AVE
SW 38TH AVE
NB8-02
NB8-03
NB8-04
NB8-05
NB8-06
NB8-07
NB REST AREA
NSA NB7
NB8-01
SW 90TH ST
SW 87TH PL
SW 35TH AVE
SW 91ST PL
NSA NB8
SW 85TH ST
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


SB8-07
SB8-10
SB8-13
SB8-06
SB8-09
SB8-12
SB8-08
SB8-05
SB8-11
SW 88TH ST
SB8-14
Ocala Korean
Baptist Church
SB8-SLU1
NSA SB8
SB8-17
SB8-15
SB8-16
SW 38TH AVE
1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030
NB8-08
SW 35TH AVE
NSA NB8
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB8
NSA SB9
SW 38TH AVE
NSA NB8
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB9
SW 40TH AVE
NSA NB9
NB9-01
NB9-02
NB9-03
NB9-04
NB9-SLU1
NB9-SLU2
NB9-05
NB9-06
SW 36TH AVE
SW 35TH ST
SW 33RD ST
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


NSA SB9
SPX Flow
SW 40TH AVE
SW 40TH AVE
SB9-SLU1
NSA SB10
Gator Dockside
SB10-SLU2
SB10-SLU1.2
SB10-SLU1.1
SW 38TH CT
Fairfield Inn
SB10-SLU3
SW 42ND ST
200
SW 43RD STREET RD
SW 43RD STREET RD
NB10-01
NB9-07
NSA NB9
NSA NB10
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet


Canterbury Circle Apartments
Residence Inn
Holiday Inn
Best Western
Hampton Inn
Holiday Inn Express
Home 2 Suites
Steak & Shake
Burger King
NSA SB10
NSA SB11
NSA NB10
NSA NB11
Hilton
La Quinta
SB11-SLU1
SB11-SLU2
SB11-SLU3
SB11-SLU4
SB11-SLU5
SB11-SLU6
SB11-01
SB11-02
SB11-03
SB11-04
SB11-05
SB11-06
SB11-07
SB11-08
SB10-SLU3
SB10-SLU4
NB10-SLU1
NB10-SLU2
END PROJECT
SW 39TH CT
SW 38TH AVE
SW 34TH AVENUE CIR
200
Noise Receptor
Planned (Other Projects)
Developer Wall or Berm
Validation Site
CNE
Conforming Billboard
0
300 Feet

Appendix E Public Noise Comments and FDOT Responses

Event	Concern	Participant	Address	Comment Date	Comment	FDOT Project Manager Response	Response Date
Pre-Public Hearing Email	Noise - SummerGlen	Jerry Doane	15815 SW 11th Court Rd. Ocala, FL 34473	6/10/2024	I live in the SummerGlen community and received your letter on the I-75 expansion. When I first moved here, I talked to the FDOT about the noise levels from the road. I was told that if the I-75 were expanded it would require the State to perform noise measurements to determine if a sound reduction wall is necessary. Is this correct?	Thank you for your interest regarding the proposed I-75 improvements. As part of the Project Development and Environment (PD&E) Study, a noise study has been performed as part of study. The noise study report can be found on the project website: cflroads.com/project/452074-2. If you have any further questions or comments, please feel free to reach out to me.	6/10/2024
Pre-Public Hearing Email Follow-up	Noise - SummerGlen	Jerry Doane	15815 SW 11th Court Rd. Ocala, FL 34473	6/10/2024	Thanks for directing me to the Draft Study. I have a number of initial concerns regarding the study: 1) I can find no dates for the study period. One concern I have is that the section of I-75 near SummerGlen (SB5) was recently repaved. My understanding is that newly paved asphalt contains numerous small surface gaps that reduce the contact between tires and the road surface. This reduces road noise but diminishes over time through traffic pressure and possibly the new asphalt reduced road noise during the study period. 2) For some reason, no receptors were placed in the noisiest section of SummerGlen, the group of homes on the fourth fairway and nearest to the highway. I suspect that it was thought that the effect of the berm would reduce road noise in this area. This is incorrect since these houses are at the farthest distance from the berm the noise level is high. (see attached photo). 3) I don't know if the effect of wind was taken into account. Winds from the east have a tendency to "push" the noise down into the community while winds from the west have the opposite effect and reduce road noise. Although this may not be scientific, it seems to be true from experience. (see attached photo) 4) I think that if accurately run noise tests were conducted in the area mentioned, the number of homes involved would establish a reasonable cost /benefit for a barrier. 5) As you probably know, the rate of increase of I-75 traffic has been very large in the past several years. It is likely that this traffic will continue to grow and very likely that noise levels in SummerGlen will exceed the limit required for barriers if not right now then certainly in several years. At that point, it will be too late for us to qualify for barriers. 6) Please see the picture attached of my sound meter at 5:45 PM on June 17 in my back yard facing the berm. Heavy traffic and wind blowing from the east. I see that this is labelled as a "Draft Study". I would appreciate if you could advise me as to what the process going forward to final approval would be and what if any, opportunities we might have to further establish our case for barriers for SummerGlen. Thanks.	Thank you for reaching out and providing your input on the proposed improvements for I-75. I received your voicemail as well. I wanted to give you a chance to look at this information before I gave you a call. I think this will answer most of your questions except for the cost per benefited receiver. The noise analysis began on February 9, 2024, with field work. The Draft Noise Study Report was completed in April 2024. As stated in the report, the purpose of the field measurements is to determine if traffic is the primary noise source in the area and to validate the FHWA noise prediction model, TNM 2.5, using the conditions observed in the field. The TNM is the tool used throughout the U.S. to predict traffic noise levels for existing conditions and future scenarios. The TNM contains logarithmic calculations that do not factor in wind conditions and uses an average pavement factor pre-programmed into the logarithmic calculations. The traffic volumes used in the noise analysis reflect the worst noise condition for the 2040 Design Year. During field measurements, we use a windscreen on the Sound Level Meter's (SLM) microphone so that wind is not recorded with ambient noise sources, such as the highway. The Radio Shack SLM is a great instrument for measuring the acoustics of stationary sound levels like stereos, etc. However, it does not reflect Leq (Equivalent Continuous Sound Levels), which is necessary to capture the total sound energy over the measurement period accurately. The C-weighted measurement on your meter reflects peak impulse noise, whereas traffic is measured using the A-weighting. It is likely that without a windscreen, the microphone included wind noise along with other ambient noise sources. Receptor SB5-02 represents the home on SW 11 Court Rd (fourth fairway) closest to I-75 on that street. This receptor is approximately 230' from the berm and 758' from the proposed outside pavement of SB I-75. The TNM predicted project noise levels of 59.1 dB(A) at this receptor, which is below the 66.0 dB(A) noise abatement criterion (NAC). The 13th tee box is the closest Summer Glen receptor to I-75 and the only one TNM predicted to be impacted by the project with 68.7 dB(A). For comparison, your home is approximately 890' from the proposed outside pavement. We did evaluate noise levels for Summer Glen with a "no berm" scenario. These results are not reported in the Noise Study Report because they do not represent actual site conditions without the berm included in the analysis. The TNM predicted that the project noise level at Receptor SB5-02 was 64.6 dB(A) without the berm. This noise level is below the 66.0 dB(A) NAC. The closest residential receptor to I-75 outside the Summer Glen community berm is Receptor SB5-01 on SW 8th Avenue. The TNM predicted project noise levels of 65.8 dB(A) at this receptor, which is below the NAC. The TNM accurately predicted future noise levels and concluded that a noise barrier was not justified for the residential areas; hence, they were not included in the golf course noise barrier analysis. Consequently, there is no justification for analyzing additional noise receptors within Summer Glen because the project does not impact the closest Summer Glen residential receptor to I-75 (SB5-02) with or without the existing berm. I'll follow up with a call tomorrow. Thanks again for your interest in the project and for reaching out.	6/25/2024
Pre-Public Hearing Call	Noise - SummerGlen	Jerry Doane	15815 SW 11th Court Rd. Ocala, FL 34473	6/24/2024	Conerns with noise in the SummerGlenn Community and the lack of proposed wall. Had several questions related to the noise study.	Discussed the noise study, measurements taken, results, quiet pavement, distance from the roadway, etc. ETP answered several questions at the public hearing on 6/26.	6/26/2024 at Public Hearing

Event	Concern	Participant	Address	Comment Date	Comment	FDOT Project Manager Response	Response Date
Public Hearing Verbal Comment	Noise - SummerGlen	Jerry Doane	15815 SW 11th Court Rd. Ocala, FL 34473	6/26/2024	I'm going to make some comments regarding the noise study. I'm especially concerned about the methodology that was used. It may be difficult for people who have looked at the noise study to realize it, but in fact only one site with one measurement was made at three different sessions. The report contains what's called 369 receptors. However, those receptors do not represent actual noise measurements. They were done virtual according to the software program. So the actual noise study is done theoretically with a model and to me that does not represent a real deep measurement of the noise problem from I-75. In particular, the noise study refers to the Federal Highway Report HEP10-025 called Highway Traffic Noise Analysis and Abatement Guidance. I think that the study is -- does not conform to the federal report in two different ways. First, I think the federal report dictates that worse traffic conditions should be attempted to be determined and, for example, it says that the period with the highest sound levels may not be the peak traffic hour. So there's a lot that goes into road noise and it's not just traffic volumes and I think that is recognized in the federal report. The other problem I have with this study is that it seems to rely completely on traffic volume, not taking into account time of day, day of week, etc., and in particular the environmental factors such as wind speed which in my research can affect the measurement of road noise by 20 decibels. I have a couple other concerns relative to other ongoing projects and their effect upon the noise. The first is the weigh station. The weigh station was rebuilt completely several months ago. According to the federal report again, a weigh station reconstruction is classified as a Type I project dictating noise study. I don't know if that was done or not. I think it should have been. The second is there's currently an ongoing resurfacing project, 443170-1, between the Sumter County line and Route 200 and from the research I've done the age of asphalt can have a significantimpact on the noise that's generated by tires coming into contact with it. And that is the summation of my comments. Thank you.	***[Note: FDOT Project Manager and Noise Team addressed Mr. Doane's comments previously (see previous page), or at the Public Hearing venue.]***	
Pre-Public Hearing Email	Noise - SummerGlen	Dick Charcalla	15558 SW 11th Terrace Rd. Ocala Fl. 34473	6/11/2024	We moved to Florida 16 years ago from Pennsylvania. We purchased a home in the Summerglen community when it was only halfway completed. After moving in we discovered that the roads were much smoother here than up in snow country but strangely there was no way to go South or East from our home without going North to get on Rt. 484. At the time it wasn't a big deal because we enjoyed driving around and there wasn't much traffic. ***[note: non-noise-related comments have been removed]*** Fast forward to now and boy what a change. Due to poor planning, housing and business construction has way outpaced the road infrastructure. The thin roads here in Florida are not handling the increases in more and heavier traffic. This has resulted in crumbling roads and much congestion. I looked at a lot of your plans you have online. One thing I noted was your descriptions of areas that need noise abatement. Summerglen currently has an earthen wall built between us and I-75 near the southbound weight station. This keeps the noise down to a constant drone. It gets louder when the wind is blowing our way and quieter when blowing away. But one thing that it doesn't stop, is the sudden LOUD noise when a trucker uses his engine compression brakes as he comes into the weigh station. Sometimes this shocks the crap out of you, especially when you in bed sleeping. There are signs posted on I-75 that say, it is against Florida law to use "unmuffled brakes". WHY do the police in that weight station continuously let them do that, that needs to be enforced. Us old people got enough problems without being shocked out of bed at night. I hope that you all seriously consider what I've written. I would also appreciate a response from you, with your opinions on the three points I have brought up.	Thank you for your interest and comment regarding the proposed Interstate 75 (I-75) improvements. The planned I-75 Improvements from south of State Road (S.R.) 44 to S.R. 200 project focuses on immediate near-term strategic improvements to I-75. These improvements include the addition of an auxiliary lane from south of S.R. 44 to S.R. 200. Based on preliminary traffic analysis, these improvements in the near-term are expected to address safety needs, eliminate congestion chokepoints, and provide additional capacity during emergency evacuations. ***[note: non-noise-related responses have been removed]*** Thanks for taking the time to reach out and letting me know your concerns as well as reviewing the project information online. If you have any additional questions and/or comments, please let me know.	6/13/2024

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Pre-Public Hearing Call	Noise	Brandi Hutton	N/A	6/13/2024	Two concerns: 1. Are we going to install a barrier along the ROW? 2. Why wasn't she notified, and why did we only notify 300' and will there be a comment period?	Explained that we are installing two noise barriers, we typically maintain the fence to keep wildlife from crossing onto 75 but cannot do much in terms of prohibiting cars from leaving the 75 ROW. 2. Notified over 1200 people and we will hold a comment period at the public hearing as well as providing dates/times regarding the hearing.	6/13/2024
Pre-Public Hearing Call	Noise - Kingsland Estates	Sra. Miranda	9655 Southwest 37th Terrace, Ocala, FL	6/20/2024	Concerns regarding a noise wall for her property as well as what construction is currently ongoing on I-75, making noises.	Jeanette discussed the project with her and that there are no plans for a noise wall. Also, emailed her on 6/24. Buenas tardes, Sra. Miranda. Gracias por comunicarse con el Florida Department of Transportation (FDOT) sobre el Estudio de Desarrollo de Proyecto y Medio Ambiente (Project Development & Environment, PD&E Study) de la Interestatal 75 (I-75) del sur the la Carretera Estatal (State Road, S.R.) 44 a S.R. 200. Usted expreso su inquietud sobre la necesidad de una barrera contra el sonido cerca de su propiedad en 9655 SW 37th Terrace, Ocala, Florida 34776. Como parte del Estudio PD&E, un análisis de sonido se llevo acabo. El FDOT tiene ciertos requisitos de factibilidad y costo razonable que deben ser cumplidos para recomendar una barrera contra el sonido. Basado en el análisis, una barrera contra el sonido en esta area no cumple con los requisitos. Para mas información, puede referirse al Draft Noise Study Report que esta en la página web del proyecto en https://www.cflroads.com/project/452074-2. En adición, copias del reporte se encuentran disponibles hasta el lunes, 8 de julio del 2024 en las siguientes bibliotecas durante horas laborables: • Marion Oaks Public Library, 294 Marion Oaks Lane, Ocala, Florida 34473 • The Villages Public Library at Pinellas Plaza, 7375 Powell Road, Suite 100, Wildwood, Florida 34785 He incluido la hoja de información del proyecto en Español en este correo electronico para su referencia. Los mapas (roll plots) con las barreras contra el sonido recomendadas como parte del estudio están en la página web del proyecto, y estarán disponibles en la audiencia pública el miércoles, 26 de junio del 2024 (en persona) en Wildwood Community Center, 6500 Powell Road, Wildwood, Florida 34785, y el jueves, 27 de junio del 2024 (virtual) en GoToWebinar usando este enlace: https://bit.ly/fdotsouthhearingrsvp. Si necesita mas información, no dude en comunicarse conmigo. Gracias.	6/20/2024 (Call) 6/24/2024 (Email)

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Public Hearing Verbal Comment	Noise - SummerGlenn	Jeff Fedorchak	15299 SW 15th Terrace Road Ocala, Florida	6/26/2024	My comment's concerning the noise study that was done. I understand that the Summer Glen community was evaluated for a noise barrier and didn't meet the threshold which was required in order to consider a noise barrier. As an alternative I would like to see if the state would consider looking at a quiet pavement alternative to a noise barrier to try to quiet down the traffic noise in that area. From speaking with the consultants here tonight, they said that the State of Florida is not using that as a noise abatement at all right now. It has been under study for quite sometime. It's found to have some effectiveness. It may not meet the DOT threshold that's necessary, but I would like the state to at least take that into consideration as possibly using a quiet pavement alternative in front of our community.	Thank you for your interest and comment regarding the proposed I-75 improvements and the addition of quiet pavement. Your comment will be included in the public hearing record for this project. One thing to note is that the riding surface on I-75, is composed of a "FC-5" mix which is an open graded friction course. While reviewing your concern, I came across this research paper that is underway to investigate quiet pavement in Florida: Quiet Pavements Synthesis (trb.org). I will also pass your concerns onto our design team. Thanks again for your feedback on this project and taking the time to provide your comment regarding the proposed I-75 improvements.	7/10/2024
Public Hearing Email	Noise - SummerGlen	Harvey Guilford	N/A	6/26/2024	I am a resident of Summerglen, a 55+ community in Marion county. I-75 runs beside this community, and with 6 lanes of interstate traffic, is very loud. We do not currently have a sound wall/barrier between our homes and I-75. Adding two more lanes of interstate traffic will only add to this sound issue. We need a sound barrier! Does the state have plans to install a sound wall/barrier along the perimeter of Summerglen to help alleviate this issue?	The noise analysis for the Project Development and Environment (PD&E) study began on February 2024, with field work and a Draft Noise Study Report was completed in April 2024. As part of the noise analysis, the Florida Department of Transportation (FDOT) examined existing and predicted noise levels based on worst case conditions using the Federal Highway Administration's (FHWA) traffic noise model. In order for FDOT to consider a noise barrier, noise levels at residences must meet or exceed the FDOT 66.0 dB(A) noise abatement criterion (NAC) or show an increase of 15 dB(A) over existing conditions. Then, FDOT noise barrier criteria requires that a noise barrier be both feasible and cost-reasonable for FDOT to include a noise barrier on a project. Feasibility factors involve both noise reduction and engineering considerations. The noise barrier must provide a noise reduction of at least 5 dB(A) to a minimum of two impacted receptors. The engineering factors consider constructability of the noise barrier and if it can be constructed using standard construction methods and techniques. In addition, a noise barrier must provide a reduction of 7 dB(A) for one receptor. For a noise barrier to be considered cost-reasonable, the total barrier cost is divided by the number of benefited receptors (those receiving at least 5 decibels of noise reduction). To be cost effective, the cost of the noise barrier cannot exceed the $42,000 per benefited receptor based on a barrier cost of $30 per square foot. A noise barrier was analyzed along I-75 to provide abatement for the Summer Glenn golf course tee box #13. The highest noise level predicted for Summer Glen residences is 64.7 dB(A), which is below the NAC and only shows a 3.4 dB(A) increase over existing conditions, which is also below the 15 dB(A) requirement. This indicates that the existing community earthen berms along the Summer Glen eastern property line effectively reduce the I-75 noise levels in the neighborhood. Consequently, a noise barrier for Summer Glen is not warranted because the project does not impact the residential receptors. At this time, the analyzed golf course noise barrier fails to meet the FDOT noise barrier criteria requirements. Thank you for your interest and comment regarding the proposed I-75 improvements. Your comment will be included in the public hearing record for this project. Additional information regarding the I-75 improvements is available at cflroads.com/project/452074-2, including a copy of the Draft Noise Study Report. If you have any further questions or comments, please feel free to reach out to me.	7/16/2024
Public Hearing Verbal Comment to Court Reporter	Noise	Amanda McDermott	13520 CR 245W, Oxford, FL	6/26/2024	So my comment is regarding the noise. I'm not really sure where -- like I seen the studies or whatever, but I'm not sure like the barriers. I guess they've decided against the barriers and so my question I guess is I-75 butts up to our road to 45 and the auxiliary lane will essentially bring it almost exactly to the fence. So they're going to do construction at night to avoid traffic delays during the day, so does that mean I'm going to have all kinds of sounds all night? Because we can hear 75 from our house down the road because it's like a tunnel, the street down the road. So my concern would be that at night now we're going to hear the construction going on as well. I don't know if there's some type of temporary while they're doing construction in that section that could be put up as a noise barrier or if that's an option. So that's just kind of my question. Like how do they plan to	Typical construction noise from this project will be similar to a roadway resurfacing project such as the resurfacing that's occurring on I-75. Temporary noise walls will not be installed during the project; however, FDOT will work with the contractor throughout the project to complete the project in a timely manner and reduce impacts to neighboring properties. ***[note: non-noise-related responses have been removed]*** Thank you for your interest and comment regarding the proposed I-75 improvements. Your comment will be included in the public hearing record for this project. Additional information regarding the I-75 improvements is available at cflroads.com/project/452074-2. If you have any further questions or comments, please feel free to reach out to me.	7/16/2024

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Public Hearing Comment Form	Noise - Kingsland Estates	Megan Parrott	9757 SW 38th Ave Ocala, FL 34476	6/26/2024	I would like construction of a sound barrier to be considered at 1895-1925/Basin 24/Kingsland Estates (west side of I-75).	The noise analysis for the Project Development and Environment (PD&E) study began on February 2024, with field work and a Draft Noise Study Report was completed in April 2024. As part of the noise analysis, the Florida Department of Transportation (FDOT) examined existing and predicted noise levels based on worst case conditions using the Federal Highway Administration's (FHWA) traffic noise model. In order for FDOT to consider a noise barrier, noise levels at residences must meet or exceed the 66.0 dB(A) noise abatement criterion (NAC) or show an increase of 15dB(A) over existing conditions. Then, FDOT noise barrier criteria requires that a noise barrier be both feasible and cost-reasonable for FDOT to include a noise barrier on a project. Feasibility factors involve both noise reduction and engineering considerations. The noise barrier must provide a noise reduction of at least 5 dB(A) to a minimum of two impacted receptors. The engineering factors consider constructability of the noise barrier and if it can be constructed using standard construction methods and techniques. In addition, a noise barrier must provide a reduction of 7 dB(A) for one receptor. For a noise barrier to be considered cost-reasonable, the total barrier cost is divided by the number of benefited receptors (those receiving at least 5 decibels of noise reduction). To be cost effective, the cost of the noise barrier cannot exceed the $42,000 per benefited receptor based on a barrier cost of $30 per square foot. A noise barrier was analyzed along I-75 to provide abatement for both Kingsland Country Estates and Ocala Waterways Estates. The analyzed noise barrier failed to meet the cost requirement due to the low-density nature of the area as well as the distance from the noise barrier to the homes. For this noise barrier, the cost criteria equates to $275,440 per benefited receptor, greatly exceeding the $42,000 FDOT cost-reasonable criterion. At this time, the noise barrier fails to meet the FDOT noise barrier criteria requirements. Noise abatement is analyzed two times during the development of a project. The first time is during the PD&E phase of the project, which we are currently in the process of, and, during final design. As this project progresses to final design, noise impacts and abatement will be analyzed again and any homes that are permitted between the completion of the PD&E Noise Study Report and the project's Date of Public Knowledge will be analyzed for traffic noise impacts and, if impacts are predicted, will be considered during the final design phase of the project. Thank you for your interest and comment regarding the proposed I-75 improvements. Your comment will be included in the public hearing record for this project. Additional information regarding the I-75 improvements is available at cflroads.com/project/452074-2, including a copy of the Draft Noise Study Report. If you have any further questions or comments, please feel free to reach out to me.	7/16/2024

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Public Hearing Comment Form	Noise - Kingsland Estates	Patrick Chelf	9769 SW 38th Ave Ocala, FL 34476	6/26/2024	Would like a sound barrier to be considered between 1895-1925/Basin 24/Kingsland Estates.	The noise analysis for the Project Development and Environment (PD&E) study began on February 2024, with field work and a Draft Noise Study Report was completed in April 2024. As part of the noise analysis, the Florida Department of Transportation (FDOT) examined existing and predicted noise levels based on worst case conditions using the Federal Highway Administration's (FHWA) traffic noise model. In order for FDOT to consider a noise barrier, noise levels at residences must meet or exceed the 66.0 dB(A) noise abatement criterion (NAC) or show an increase of 15dB(A) over existing conditions. Then, FDOT noise barrier criteria requires that a noise barrier be both feasible and cost-reasonable for FDOT to include a noise barrier on a project. Feasibility factors involve both noise reduction and engineering considerations. The noise barrier must provide a noise reduction of at least 5 dB(A) to a minimum of two impacted receptors. The engineering factors consider constructability of the noise barrier and if it can be constructed using standard construction methods and techniques. In addition, a noise barrier must provide a reduction of 7 dB(A) for one receptor. For a noise barrier to be considered cost-reasonable, the total barrier cost is divided by the number of benefited receptors (those receiving at least 5 decibels of noise reduction). To be cost effective, the cost of the noise barrier cannot exceed the $42,000 per benefited receptor based on a barrier cost of $30 per square foot. A noise barrier was analyzed along I-75 to provide abatement for both Kingsland Country Estates and Ocala Waterways Estates. The analyzed noise barrier failed to meet the cost requirement due to the low-density nature of the area as well as the distance from the noise barrier to the homes. For this noise barrier, the cost criteria equates to $275,440 per benefited receptor, greatly exceeding the $42,000 FDOT cost-reasonable criterion. At this time, the noise barrier fails to meet the FDOT noise barrier criteria requirements. Noise abatement is analyzed two times during the development of a project. The first time is during the PD&E phase of the project, which we are currently in the process of, and, during final design. As this project progresses to final design, noise impacts and abatement will be analyzed again and any homes that are permitted between the completion of the PD&E Noise Study Report and the project's Date of Public Knowledge will be analyzed for traffic noise impacts and, if impacts are predicted, will be considered during the final design phase of the project. Thank you for your interest and comment regarding the proposed I-75 improvements. Your comment will be included in the public hearing record for this project. Additional information regarding the I-75 improvements is available at cflroads.com/project/452074-2, including a copy of the Draft Noise Study Report. If you have any further questions or comments, please feel free to reach out to me.	7/16/2024

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Virtual Public Hearing Comment	Noise - Kingsland Estates	Judy & Richard West	8120 SW 38th Ave Ocala , FL 34476	6/27/2024	Exactly where are the 185 noise barriers going. Our home is on SW38th Ave which is a frontage Rd to I75. We are concerned about how much closer I75 will be to our home. We are already impacted by the noise but more worried if a vehicle leaves the freeway in an accident.	Regarding your noise comment, the noise analysis for the Project Development and Environment (PD&E) study began on February 2024, with field work and a Draft Noise Study Report was completed in April 2024. As part of the noise analysis, the Florida Department of Transportation (FDOT) examined existing and predicted noise levels based on worst case conditions using the Federal Highway Administration's (FHWA) traffic noise model. In order for FDOT to consider a noise barrier, noise levels at residences must meet or exceed the 66.0 dB(A) noise abatement criterion (NAC) or show an increase of 15dB(A) over existing conditions. Then, FDOT noise barrier criteria requires that a noise barrier be both feasible and cost-reasonable for FDOT to include a noise barrier on a project. Feasibility factors involve both noise reduction and engineering considerations. The noise barrier must provide a noise reduction of at least 5 dB(A) to a minimum of two impacted receptors. The engineering factors consider constructability of the noise barrier and if it can be constructed using standard construction methods and techniques. In addition, a noise barrier must provide a reduction of 7 dB(A) for one receptor. For a noise barrier to be considered cost-reasonable, the total barrier cost is divided by the number of benefited receptors (those receiving at least 5 decibels of noise reduction). To be cost effective, the cost of the noise barrier cannot exceed the $42,000 per benefited receptor based on a barrier cost of $30 per square foot. A noise barrier was analyzed along I-75 to provide abatement for both Kingsland Country Estates and Ocala Waterways Estates. The analyzed noise barrier failed to meet the cost requirement due to the low-density nature of the area as well as the distance from the noise barrier to the homes. For this noise barrier, the cost criteria equates to $275,440 per benefited receptor, greatly exceeding the $42,000 FDOT cost-reasonable criterion. At this time, the noise barrier fails to meet the FDOT noise barrier criteria requirements. Noise abatement is analyzed two times during the development of a project. The first time is during the PD&E phase of the project, which we are currently in the process of, and, during final design. As this project progresses to final design, noise impacts and abatement will be analyzed again and any homes that are permitted between the completion of the PD&E Noise Study Report and the project's Date of Public Knowledge will be analyzed for traffic noise impacts and, if impacts are predicted, will be considered during the final design phase of the project. ***[note: non-noise-related responses have been removed]***	7/16/2024
Virtual Public Hearing Email	Noise - Kingsland Estates	Judy & Richard West	8120 SW 38th Ave Ocala , FL 34476	6/29/2024	I attended the virtual meeting on this topic and have a couple of concerns . Our home is on SW 38th Ave in Ocala, which is a frontage road in the county area and faces I-75 . With the increase in traffic, we already face the excessive noise levels both during the day and night , especially with the number of semi trucks on the interstate, and now you want to bring the interstate twelve feet closer to our home . Part of your literature states there are 185 residences affected by noise levels . My question is : is our home on the list of 185 and if not , why ? ***[note: non-noise-related comments have been removed]***		

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Public Hearing Email	Noise - Kingsland Estates	Myrna Miranda and Edwin Arrocho	9655 SW 37th Terrace, Ocala FL 34472	6/27/2024	Good Afternoon, My name is Myrna Miranda & Edwin Arrocho, and we attended the preliminary hearing scheduled on June 26, 2024. One of the topics discussed was regarding the potential Noise Barrier System which will be established alongside parts of the I-75 Project. We noticed the Noise Barrier was not proposed for our zone. We are located at 9655 SW 37th Terrace, Ocala FL 34472. Currently our property's backyard is about 30 feet away from I-75. The map that was used yesterday during the Public Hearing, did not reflect any of our zones being established as the Noise Barrier. The map actually shows land only, We currently have several houses in the neighborhood which will need a noise barrier to protect our properties from the I-75 expansion. There are also several noise barriers being proposed during this project where there is only land and no properties. We would like to be considered for a Noise Barrier as soon as this project starts. Please look into my property, so you can see how close we currently are to I-75 now. It will be even closer to I-75 once the expansion takes place. Thank you very much for your time, Myrna Miranda and Edwin Arrocho	The noise analysis for the Project Development and Environment (PD&E) study began on February 2024, with field work and a Draft Noise Study Report was completed in April 2024. As part of the noise analysis, the Florida Department of Transportation (FDOT) examined existing and predicted noise levels based on worst case conditions using the Federal Highway Administration's (FHWA) traffic noise model. In order for FDOT to consider a noise barrier, noise levels at residences must meet or exceed the 66.0 dB(A) noise abatement criterion (NAC) or show an increase of 15dB(A) over existing conditions. Then, FDOT noise barrier criteria requires that a noise barrier be both feasible and cost-reasonable for FDOT to include a noise barrier on a project. Feasibility factors involve both noise reduction and engineering considerations. The noise barrier must provide a noise reduction of at least 5 dB(A) to a minimum of two impacted receptors. The engineering factors consider constructability of the noise barrier and if it can be constructed using standard construction methods and techniques. In addition, a noise barrier must provide a reduction of 7 dB(A) for one receptor. For a noise barrier to be considered cost-reasonable, the total barrier cost is divided by the number of benefited receptors (those receiving at least 5 decibels of noise reduction). To be cost effective, the cost of the noise barrier cannot exceed the $42,000 per benefited receptor based on a barrier cost of $30 per square foot. A noise barrier was analyzed along I-75 to provide abatement for both Kingsland Country Estates and Ocala Waterways Estates. The analyzed noise barrier failed to meet the cost requirement due to the low-density nature of the area as well as the distance from the noise barrier to the homes. For this noise barrier, the cost criteria equates to $275,440 per benefited receptor, greatly exceeding the $42,000 FDOT cost-reasonable criterion. At this time, the noise barrier fails to meet the FDOT noise barrier criteria requirements. Noise abatement is analyzed two times during the development of a project. The first time is during the PD&E phase of the project, which we are currently in the process of, and, during final design. As this project progresses to final design, noise impacts and abatement will be analyzed again and any homes that are permitted between the completion of the PD&E Noise Study Report and the project's Date of Public Knowledge will be analyzed for traffic noise impacts and, if impacts are predicted, will be considered during the final design phase of the project. Thank you for your interest and comment regarding the proposed I-75 improvements. Your comment will be included in the public hearing record for this project. Additional information regarding the I-75 improvements is available at cflroads.com/project/452074-2, including a copy of the Draft Noise Study Report. If you have any further questions or comments, please feel free to reach out to me.	7/16/2024

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Public Hearing Comment Form	Noise - Kingsland Estates	Roy and Kristen Mathis	9977 SW 38th Ave Ocala, FL 34476	6/26/2024	As property owners with homes located in the Kingsland County/Ocala Waterway Neighborhood we are requesting consideration of a noise barrier between points 1895-1925 of this project to reduce the impact of the noise as its planned today.	The noise analysis for the Project Development and Environment (PD&E) study began on February 2024, with field work and a Draft Noise Study Report was completed in April 2024. As part of the noise analysis, the Florida Department of Transportation (FDOT) examined existing and predicted noise levels based on worst case conditions using the Federal Highway Administration's (FHWA) traffic noise model. In order for FDOT to consider a noise barrier, noise levels at residences must meet or exceed the 66.0 dB(A) noise abatement criterion (NAC) or show an increase of 15dB(A) over existing conditions. Then, FDOT noise barrier criteria requires that a noise barrier be both feasible and cost-reasonable for FDOT to include a noise barrier on a project. Feasibility factors involve both noise reduction and engineering considerations. The noise barrier must provide a noise reduction of at least 5 dB(A) to a minimum of two impacted receptors. The engineering factors consider constructability of the noise barrier and if it can be constructed using standard construction methods and techniques. In addition, a noise barrier must provide a reduction of 7 dB(A) for one receptor. For a noise barrier to be considered cost-reasonable, the total barrier cost is divided by the number of benefited receptors (those receiving at least 5 decibels of noise reduction). To be cost effective, the cost of the noise barrier cannot exceed the $42,000 per benefited receptor based on a barrier cost of $30 per square foot. A noise barrier was analyzed along I-75 to provide abatement for both Kingsland Country Estates and Ocala Waterways Estates. The analyzed noise barrier failed to meet the cost requirement due to the low-density nature of the area as well as the distance from the noise barrier to the homes. For this noise barrier, the cost criteria equates to $275,440 per benefited receptor, greatly exceeding the $42,000 FDOT cost-reasonable criterion. At this time, the noise barrier fails to meet the FDOT noise barrier criteria requirements. Noise abatement is analyzed two times during the development of a project. The first time is during the PD&E phase of the project, which we are currently in the process of, and, during final design. As this project progresses to final design, noise impacts and abatement will be analyzed again and any homes that are permitted between the completion of the PD&E Noise Study Report and the project's Date of Public Knowledge will be analyzed for traffic noise impacts and, if impacts are predicted, will be considered during the final design phase of the project. Thank you for your interest and comment regarding the proposed I-75 improvements. Your comment will be included in the public hearing record for this project. Additional information regarding the I-75 improvements is available at cflroads.com/project/452074-2, including a copy of the Draft Noise Study Report. If you have any further questions or comments, please feel free to reach out to me.	7/16/2024

Event	Concern	Participant	Address	Comment Date	Comment	FDOT Project Manager Response	Response Date
Public Hearing Comment Form	Noise - Kingsland Estates	Vicki Hennessy	9757 38th Ave Ocala Fl 34476	6/26/2024	I would like sound barriers to be considered at 1895-1925/Basin 24/Kingsland Estates. West side of I-75.	The noise analysis for the Project Development and Environment (PD&E) study began on February 2024, with field work and a Draft Noise Study Report was completed in April 2024. As part of the noise analysis, the Florida Department of Transportation (FDOT) examined existing and predicted noise levels based on worst case conditions using the Federal Highway Administration's (FHWA) traffic noise model. In order for FDOT to consider a noise barrier, noise levels at residences must meet or exceed the 66.0 dB(A) noise abatement criterion (NAC) or show an increase of 15dB(A) over existing conditions. Then, FDOT noise barrier criteria requires that a noise barrier be both feasible and cost-reasonable for FDOT to include a noise barrier on a project. Feasibility factors involve both noise reduction and engineering considerations. The noise barrier must provide a noise reduction of at least 5 dB(A) to a minimum of two impacted receptors. The engineering factors consider constructability of the noise barrier and if it can be constructed using standard construction methods and techniques. In addition, a noise barrier must provide a reduction of 7 dB(A) for one receptor. For a noise barrier to be considered cost-reasonable, the total barrier cost is divided by the number of benefited receptors (those receiving at least 5 decibels of noise reduction). To be cost effective, the cost of the noise barrier cannot exceed the $42,000 per benefited receptor based on a barrier cost of $30 per square foot. A noise barrier was analyzed along I-75 to provide abatement for both Kingsland Country Estates and Ocala Waterways Estates. The analyzed noise barrier failed to meet the cost requirement due to the low-density nature of the area as well as the distance from the noise barrier to the homes. For this noise barrier, the cost criteria equates to $275,440 per benefited receptor, greatly exceeding the $42,000 FDOT cost-reasonable criterion. At this time, the noise barrier fails to meet the FDOT noise barrier criteria requirements. Noise abatement is analyzed two times during the development of a project. The first time is during the PD&E phase of the project, which we are currently in the process of, and, during final design. As this project progresses to final design, noise impacts and abatement will be analyzed again and any homes that are permitted between the completion of the PD&E Noise Study Report and the project's Date of Public Knowledge will be analyzed for traffic noise impacts and, if impacts are predicted, will be considered during the final design phase of the project. Thank you for your interest and comment regarding the proposed I-75 improvements. Your comment will be included in the public hearing record for this project. Additional information regarding the I-75 improvements is available at cflroads.com/project/452074-2, including a copy of the Draft Noise Study Report. If you have any further questions or comments, please feel free to reach out to me.	7/16/2024
Post-Public Hearing Call	Noise	Donald Tomlinson	13768 S Hwy 475	7/8/2024	Questioned if he was getting a noise wall due to existing noise levels and the roadway getting closer to him.	Left a voicemail and let him know that a noise wall was evaluated (NB4) but not recommended due to cost criteria.	7/9/2024

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