

FINAL NOISE STUDY REPORT

**Florida Department of Transportation
District Seven**

**SR 600 (US 92) Project Development & Environment Study
Re-evaluation**

From East of I-4 to East of County Line Road
Hillsborough County, Florida

Work Program Item Segment No.: 435749-1
Federal Aid Project No.: MAF-212-1(34)

The Florida Department of Transportation, District Seven, conducted a Project Development and Environment Study Re-evaluation for the proposed widening of State Road 600 (US 92) from east of Interstate 4 to east of County Line Road in Hillsborough County, Florida. The total project length is approximately 18.1 miles. The environmental document that was reevaluated is a Type 2 Categorical Exclusion (Approved by the FHWA on March 24, 1994).

August 2017

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

Any reference contained herein to the Project Development & Environment Manual is referring to the 2016 revision.

August 2017

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study Re-evaluation for the proposed widening of SR 600 (US 92) from east of Interstate 4 (I4) to east of County Line Road in Hillsborough County, Florida. This Noise Study Report (NSR) is one of several documents prepared as part of the Study. The total project length is approximately 18.1 miles. The proposed improvements include widening the existing roadway from two to four lanes (except through downtown Plant City), adding paved shoulders to the inside and outside of the travel lanes, and improving sidewalk connectivity.

This Noise Study Report (NSR) was prepared as part of the PD&E Study Re-evaluation for the project as required by the FDOT's PD&E Manual, Part 2, Chapter 17 (July 26, 2016) and in accordance with Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772)—Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010).

Seven-hundred seventeen noise sensitive receptors (i.e., discrete representative locations) representing 757 properties with a noise sensitive land use(s) were evaluated within 80 noise sensitive areas (NSAs). The evaluated properties are comprised of 722 residential properties, seven places of worship, six schools, six outdoor dining areas at restaurants, four medical facilities, four non-profit institutions, three motels, three recreational areas and two day care centers.

Of the 757 evaluated properties, 55 are predicted to be impacted by traffic noise with existing conditions and 75 are predicted to be impacted in the future without the proposed improvements. With the proposed improvements, 136 of the 757 properties are predicted to be impacted by traffic noise. One hundred and thirty-three of the 136 properties are residences, one is a day care center, one is a playground at a medical center and one is a recreational area.

Traffic management measures, modifications to the roadway alignment, buffer zones and noise barriers were considered as abatement measures. Based on an evaluation of these measures, traffic management, modifications to the alignment of the roadway and buffer zones are not feasible and reasonable measure to abate (i.e., reduce) the predicted traffic noise impacts. For the following noise sensitive land uses, noise barriers are considered to be a potentially feasible and reasonable abatement measure.

- Residences in Parkwood Estates and west of Webb Road (NSA WB2)
- Residences west of Greenway Drive and Happy Homes Mobile Home Park (NSA WB6)
- Residences located in and in the vicinity of Robinson Orange Park (NSA WB13)
- Residences located West of Fletcher Lane (NSA WB14)
- Residences located west of Bethlehem Road and in Coronation Court (NSA WB18)
- Residences located at the Kingsway Subdivision (NSA WB26)
- Residences located at the Brooks Residential Motel and Camp Knox Hotel Tourist Court (NSA WB35)

- Star Motel/Rental Units (NSA EB4)
- Shangri La Subdivision (NSA EB12)
- Residences in the Family Rentals Mobile Home Park and west of Tanner Road (NSA EB25)
- Residences in the Stonebridge Mobile Home Park (NSA EB30)

The estimated cost to construct the noise barriers ranges from \$1,538,760 to \$3,960,000 depending on barrier length and height.

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

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

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SECTION 1 INTRODUCTION

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study Re-evaluation for the proposed widening of SR 600 (US 92) from east of Interstate 4 (I4) to east of County Line Road in Hillsborough County, Florida. This Noise Study Report (NSR) is one of several documents prepared as part of the Study. Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010), requires that projects requiring approval, or that are funded by, the Federal Highway Administration (FHWA) be subjected to a traffic noise analysis and, if applicable, an evaluation of abatement measures.

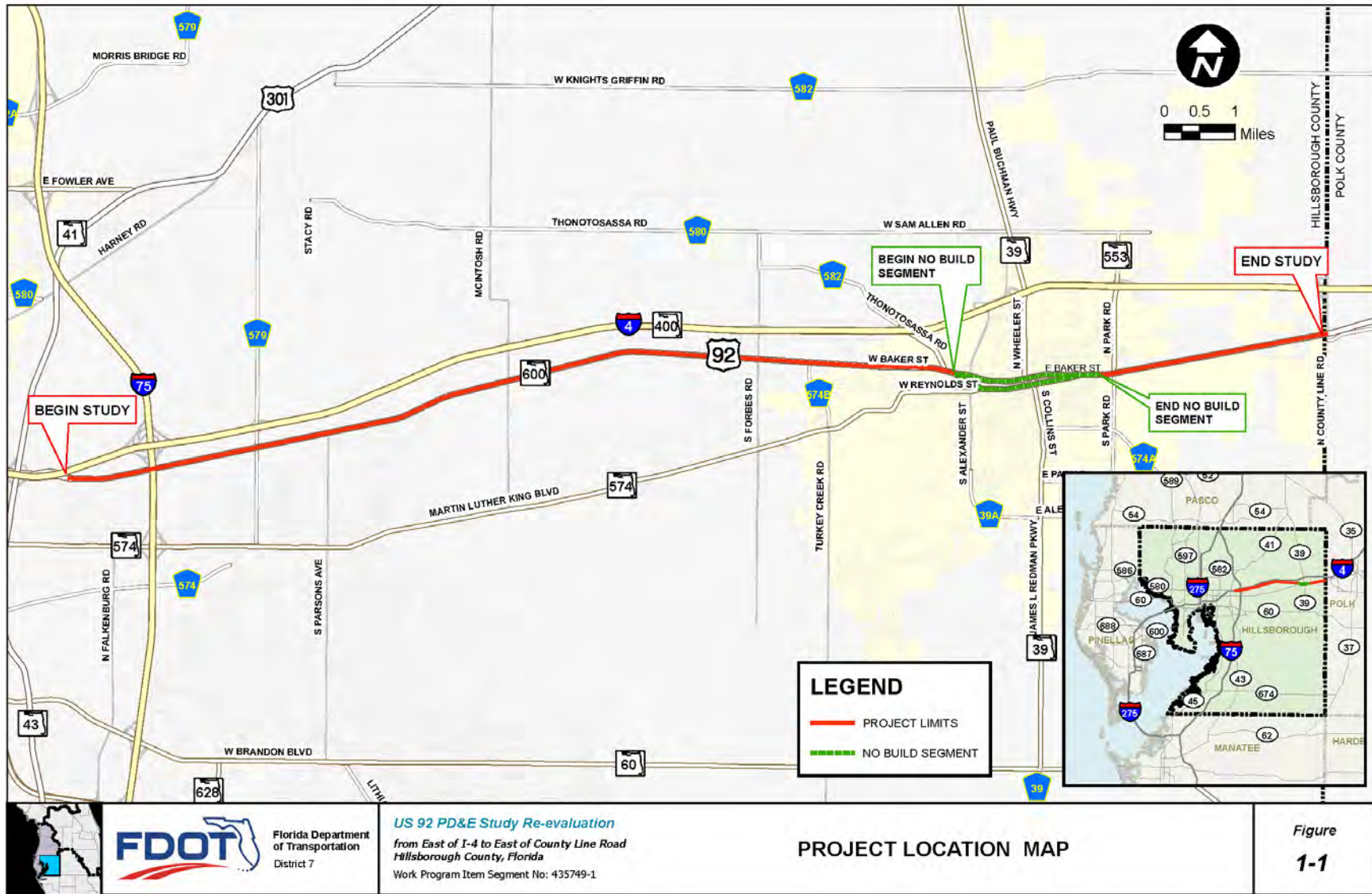
To implement this guidance, the Florida Department of Transportation (FDOT) authored Part 2, Chapter 17 of the PD&E Manual which is the FDOT's Noise Policy (July 27, 2016). The Noise Policy identifies and explains the purpose, process and procedures that are to be used when conducting a traffic noise analysis. This NSR has been prepared in accordance with all applicable guidelines as stated within 23 CFR 772, Part 2, Chapter 17 of the FDOT PD&E Manual and the *Traffic Noise Modeling and Analysis Practitioners Handbook* (January 2016).

1.1 PD&E STUDY RE-EVALUATION PURPOSE

The original PD&E Study was approved by FHWA on March 24, 1994. The study recommended 4- and 6-lane build alternatives from east of Interstate 4 (I-4) to Mobley Street and from Park Road to County Line Road. The no-build alternative was selected for the segment between Mobley Street and Park Road with the exception of improving one section of Baker Street where it was recommended for conversion to an urban section between Mobley Street and Whitehall Street. However, due to a change in design standards and existing conditions, the proposed project's PD&E study was reevaluated. The no-build alternative between Mobley Street and Park Road remained as the recommended alternative. Proposed intersection improvements at Park Road and at County Line Road necessitated the extension of the build segment between Park Road and County Line Road to include a tie in to the existing roadway along US 92 to the west of Park Road and to the east of County Line Road.

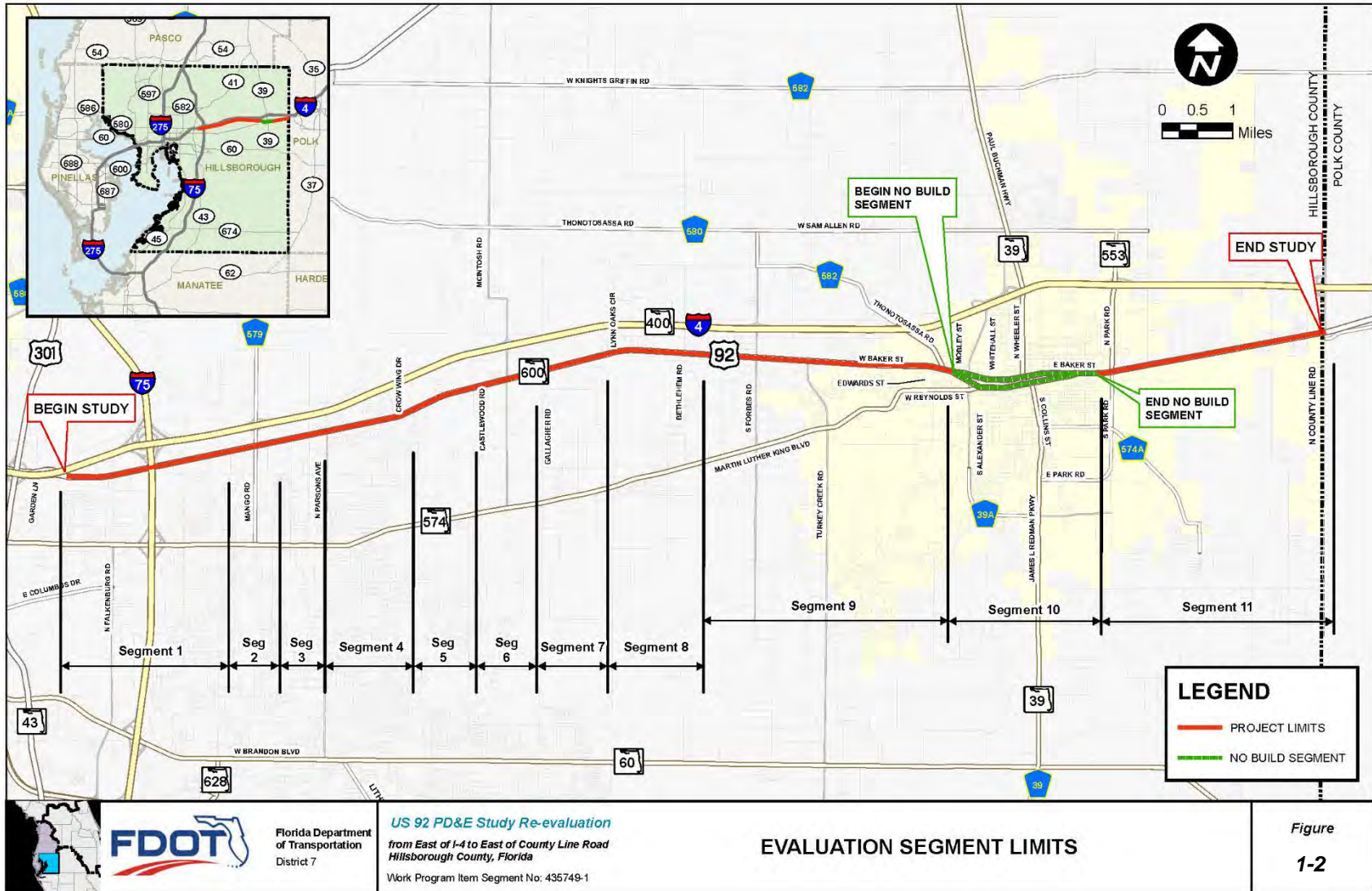
1.2 EXISTING FACILITY AND PROPOSED IMPROVEMENTS

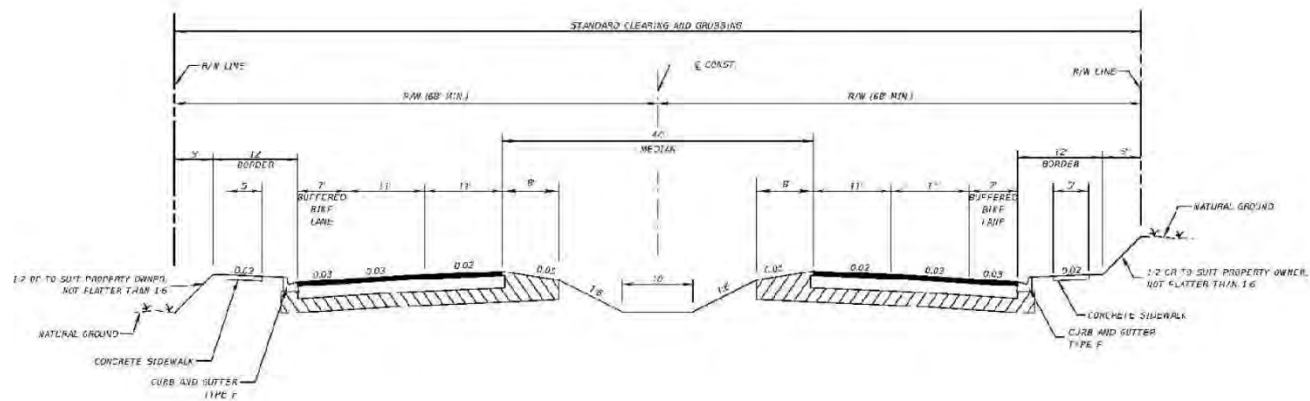
US 92 (SR 600) is an east/west primary arterial facility that, within the project limits, runs approximately parallel to I-4. Part of the project is located within the city of Plant City while the remainder of the project is located in unincorporated Hillsborough County. The total project length is approximately 18.1 miles. A project location map is provided as **Figure 1-1**.



US 92 is currently a two-lane rural roadway from Garden Lane to just east of Thonotosassa Road. East of Thonotosassa Road, US 92 is divided and forms a one-way pair system using Thonotosassa Road and Reynolds Street for eastbound travel and Baker Street for westbound travel. The one-way pair system extends for approximately two miles through downtown Plant City and converges near Gordon Street. East of Gordon Street to Park Road, US 92 is a four-lane, urban, divided facility. East of Park Road, US 92 is a two-lane rural facility. The existing speed limits along US 92 vary from 30 miles-per hour (mph) in downtown Plant City to 55 mph along the rural segments.

The proposed improvements include widening the existing roadway from two to four lanes (except through downtown Plant City), adding paved shoulders to the inside and outside of the travel lanes, and improving sidewalk connectivity. The project was divided into eleven evaluation segments based on land use changes (**Figure 1-2**). The proposed typical sections for each segment are provided in **Figures 1-3 through 1-7**.





FROM EAST OF GARDEN LANE TO WEST OF I-75 - SEGMENT 1
 FROM EAST OF EAST OF I-75 TO WEST OF CR 579 - SEGMENT 1
 FROM WEST OF CR 579 TO EAST OF CR 579 - SEGMENT 2
 FROM EAST OF CR 579 TO NORTH PARSONS AVENUE - SEGMENT 3
 FROM NORTH PARSONS AVENUE TO EAST OF CROW WING DRIVE - SEGMENT 4
 DESIGN SPEED = 45 MPH

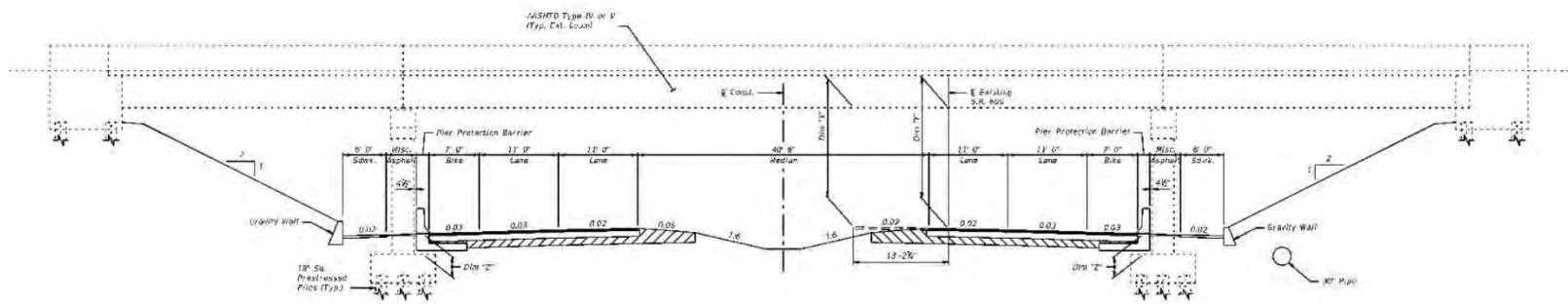


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TYPICAL SECTION 1
PROPOSED FOUR LANE 45 MPH DESIGN SPEED
TYPICAL SECTION

Figure
1-3



UNDER I-75 BRIDGE
 FROM WEST OF I-75 TO EAST OF I-75 - SEGMENT 1
 DESIGN SPEED = 45 MPH

BRIDGE DATA TABLE				
BRIDGE NO.	DIM 1' (ft.)	DIM 2' (ft.)	DIM 3' (ft.)	DIM 4' (ft.)
100414	10.235	10.500	4.720	3.130
100415	10.065	10.315	4.640	3.550
100420	12.073	12.330	2.740	2.240
100424	16.038	16.302	3.420	3.430

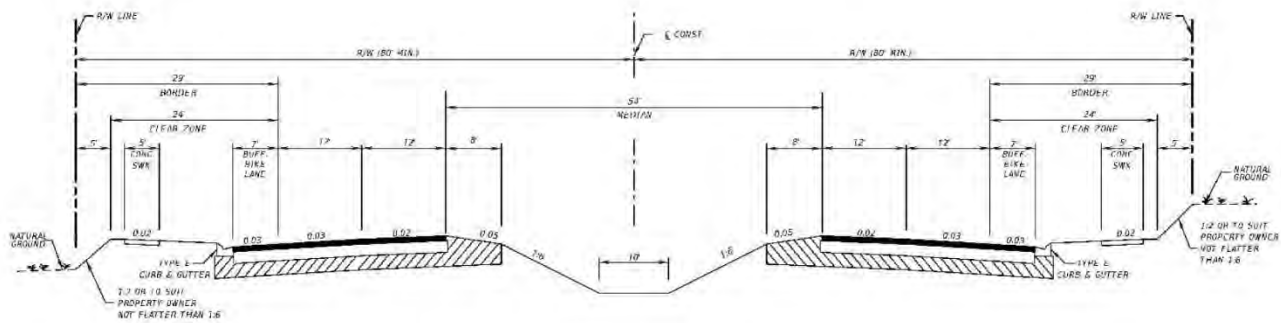


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TYPICAL SECTION 2
PROPOSED FOUR LANE 45 MPH DESIGN SPEED
TYPICAL SECTION UNDER I-75

Figure
1-4



FROM EAST OF CROW WING DRIVE TO CASTLEWOOD ROAD - SEGMENT 5
 FROM CASTLEWOOD ROAD TO WEST OF GALLAGHER ROAD - SEGMENT 6
 FROM WEST OF GALLAGHER ROAD TO LYNN OAKS CIRCLE - SEGMENT 7
 FROM LYNN OAKS CIRCLE TO EAST OF BETHLEHEM ROAD - SEGMENT 8
 FROM EAST OF BETHLEHEM ROAD TO EDWARDS STREET - SEGMENT 9
 DESIGN SPEED = 50 MPH



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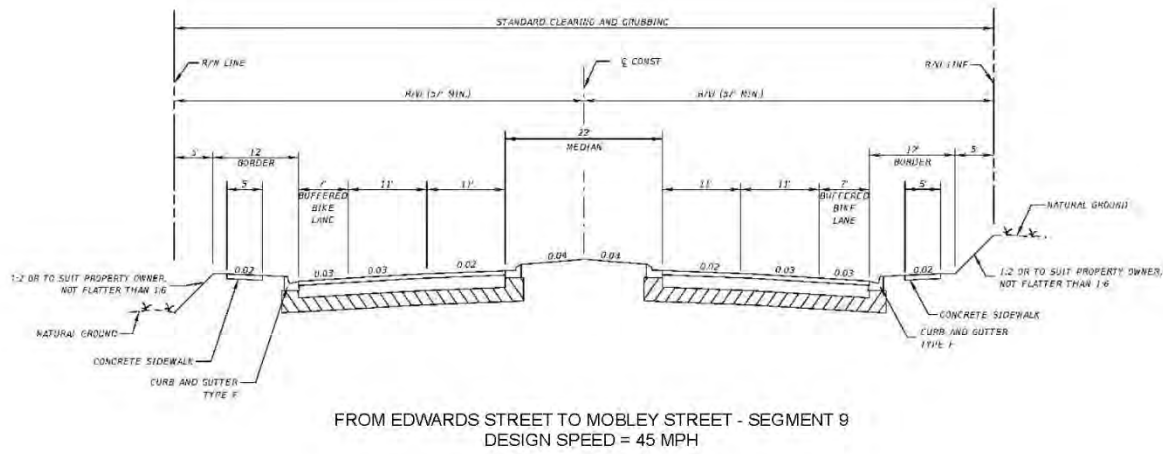
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TYPICAL SECTION 3
PROPOSED FOUR LANE 50 MPH DESIGN SPEED
TYPICAL SECTION

Figure
 1-5

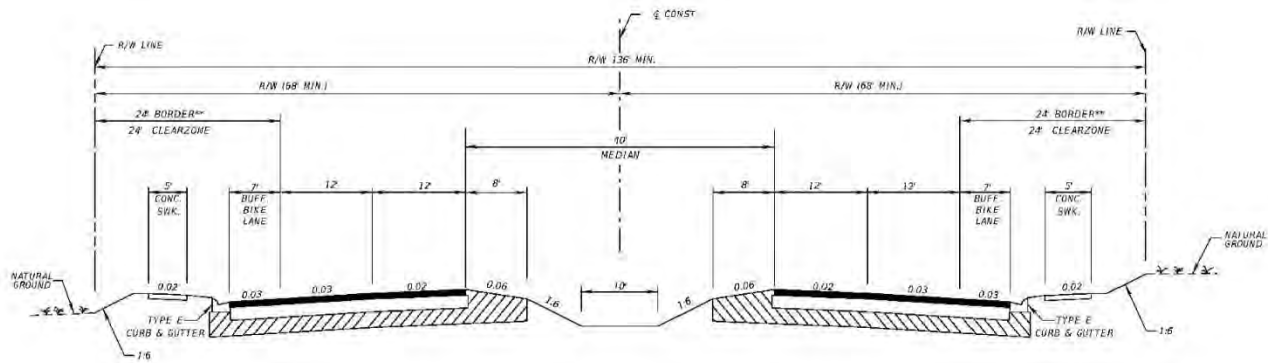


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TYPICAL SECTION 4
PROPOSED FOUR LANE 45 MPH DESIGN SPEED
EDWARDS STREET TO MOBLEY STREET

Figure
1-6



FROM PARK ROAD TO COUNTY LINE ROAD - SEGMENT 11
DESIGN SPEED = 50 MPH



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TYPICAL SECTION 5
PROPOSED FOUR LANE 50 MPH DESIGN SPEED
PARK ROAD TO COUNTY LINE ROAD

Figure
1-7

SECTION 2 METHODOLOGY

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

For properties with uses other than residential, the methodologies described in the FDOT's *A Method to Determine Reasonableness and Feasibility of Noise Abatement at Special Use Locations* were also used. Special land uses for this project included, but were not limited to churches, schools and motels.

2.1 NOISE METRICS

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

2.2 TRAFFIC DATA

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

The traffic volumes used in the analysis were either the roadway design LOS C volume or the forecast demand volume, whichever was less, so that the predicted traffic noise levels with the improvements to US 92 represent the maximum hourly noise level during the project's design year. The Existing (year 2015), Future No-Build (year 2040) and Future Build (year 2040) traffic data used in the analysis are provided in **Appendix A** of this Noise Study Report (NSR).

2.3 NOISE ABATEMENT CRITERIA

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

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

Table 2-1 FHWA/FDOT Noise Abatement Criteria

Activity Category	Description of Activity Category	Activity Leq(h) ¹	
		FHWA	FDOT
A	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.	57 (Exterior)	56 (Exterior)
B ²	Residential	67 (Exterior)	66 (Exterior)
C ²	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails and trail crossings.	67 (Exterior)	66 (Exterior)
D	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools and television studios.	52 (Interior)	51 (Interior)
E ²	Hotels, motels, offices, restaurants/bars and other developed lands, properties or activities not included in A-D or F.	72 (Exterior)	71 (Exterior)
F	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing.	--	--
G	Undeveloped lands that are not permitted.	--	--

Sources: Table 1 of 23 CFR Part 772 and Table 17.1 of Chapter 17 of the FDOT's PD&E Manual (dated 5-24-11).
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.
Note: Noise abatement considerations are also warranted when a substantial noise increase is predicted to occur (i.e., when the predicted future traffic noise level with an improvement project is equal to or greater than 15 dB(A) when compared to the existing traffic noise level.

Table 2-2 Typical Noise Levels

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

Source: California Dept. of Transportation Technical Noise Supplement, Nov. 2009, Page 2-21.

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

2.4 NOISE ABATEMENT MEASURES

When traffic noise impacts are predicted, noise abatement measures are considered for the impacted properties and the feasibility and reasonableness of providing an abatement measure are considered.

Feasibility factors are related to the acoustical and engineering properties of an abatement measure while reasonableness factors relate to the social, economic and environmental properties of a measure.

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

2.4.1 Traffic Management

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

2.4.2 Alignment Modifications

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

2.4.3 Buffer Zones

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

2.4.4 Noise Barriers

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

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

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

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

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

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

SECTION 3 TRAFFIC NOISE ANALYSIS

3.1 NOISE SENSITIVE RECEPTORS

As previously stated, noise sensitive receptors are representative locations of a noise sensitive land use. The locations of the receptors evaluated for the US 92 improvements are shown on aerials provided in **Appendix B**. Seven-hundred seventeen noise sensitive receptors (i.e., discrete representative locations) representing 757 properties with a noise sensitive land use(s) were evaluated within 80 noise sensitive areas (NSAs). The evaluated properties are comprised of 722 residential properties, seven places of worship, six schools, six outdoor dining areas at restaurants, four medical facilities, four non-profit institutions, three motels, three recreational areas and two day care centers.

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

Table 3-1 Noise Sensitive Areas

NSA ID	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Name and/or Location of Noise Sensitive Properties
WB1	30	B - Residential	1	1	Residence east of Webb
WB2	29	B - Residential	56	56	Residences in Parkwood Estates and west of Webb Road
WB3	28-29	B - Residential	8	8	Youmans Praise and Worship Center – Parsonage
		C – Place of Worship (Exterior)	1	1	Youmans Praise and Worship Center – Basketball area
WB4	28	B - Residential	3	3	Residences east of Charlie Taylor Road
WB5	27	B - Residential	4	4	Residences in the vicinity of Thrasher Road
WB6	26-27	B - Residential	17	17	Residences in Happy Homes MHP and west of Greenway Drive
WB7	26	B - Residential	1	1	Residence west of Pleasant Acre Drive
WB8	25	B - Residential	2	2	Residences west of N Wilder Road
WB9	24	B - Residential	2	2	Residences east of N Palm Drive
		D – Medical Office (Interior)	1	1	Medical office east of N Palm Drive

NSA ID	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Name and/or Location of Noise Sensitive Properties
WB10	22-23	B - Residential	2	2	Residences east of Whitehurst/Walter Road
		D – Medical Office (Interior)	2	2	Medical offices east of Whitehurst/Walter Road
WB11	22	B - Residential	1	1	Residence between Enterprise Street and Whitehurst/Walter Road
WB12	21	B - Residential	3	3	Residences west of Enterprise Street
WB13	21	B - Residential	7	7	Residences in Robinson Orange Park and vicinity
WB14	20	B - Residential	8	10	Residences west of Fletcher Lane
WB15	19	B - Residential	5	5	Residences east of Branch Forbes Road
		E – Outdoor dining area	1	1	Outdoor dining area east of Branch Forbes Road – Truck stop picnic tables
WB16	18	B - Residential	5	5	Residences in the vicinity of Rogers Road
WB17	17	B - Residential	19	25	Residences at the Woodcrest Apartments and Galaxy MHP
		C - Recreational	1	1	Shuffleboard court at the Galaxy MHP
WB18	17	B - Residential	5	5	Residences in Coronation Court and west of Bethlehem Road
WB19	16	B - Residential	4	4	Residences north of Meadow Oaks Drive
WB20	14-16	B - Residential	20	20	Residences east of Swinger Road to W of Edmund Court
		E – Outdoor dining area	2	2	Outdoor dining east of Swinger Road to W of Edmund Court
WB21	13-14	B - Residential	12	12	Residences east of Gallagher Road
WB22	12-13	B - Residential	1	1	Residence between McIntosh Road and Gallagher Road
		C – School (Exterior)	1	1	Independence Academy Sports Fields
WB23	11-12	B - Residential	29	29	East Tampa RV Resort - Pool
		C – Recreational Area	1	1	East Tampa RV Resort - Pool
WB24	11	B - Residential	1	1	Residence west of Castlewood Road
WB25	10	B - Residential	3	3	Magnolia Mobile Manor
WB26	9	B - Residential	22	22	Kingsway Subdivision

NSA ID	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Name and/or Location of Noise Sensitive Properties
WB27	8	D – Place of Worship; School	2	2	Burnett Middle School (Interior); New Life Baptist Church (Interior)
WB28	8	B - Residential	1	1	Residence west of Brinwood Drive
WB29	7	B - Residential	2	2	Sunland Rentals
WB30	7	E – Outdoor dining area	1	1	Tiki Hut Bar and Grill outdoor dining
WB31	7	B - Residential	4	4	Coleman MHP
WB32	6	B - Residential	11	11	Residences in the Holleman's MHP and Kennedy Hill Subdivisions
WB33	5	E – Hotel	1	1	Master's Inn Hotel Pool
WB34	5	B - Residential	8	8	Residences in and adjacent to Twin Palms MHP
WB35	4	B - Residential	19	30	Residences at the Brooks Residential Motel and Camp Knox Hotel Tourist Court
WB36	4	B - Residential	1	1	Residence east of Williams Road
		C – Place of Worship (exterior)	1	1	St. Joseph's Syro Catholic Church – Basketball area
		E - Motel	1	1	Motel pool
WB37	2-3	B - Residential	5	5	Residences in Hills Avenue Farms
WB38	2	D – Non profit	1	1	IBEW Local Union (Interior)
WB39	2	B - Residential	14	14	Residences in the Carousel MHP and between Baptist Church Road and Falkenburg Road
EB1	1-2	B - Residential	10	10	Residences from Garden Ln to Falkenburg Road
		D – Place of Worship; Nonprofit	2	2	St Nicholas Russian Orthodox Cathedral; Millwrights Local Union
EB2	2	B - Residential	1	1	Residences between Falkenburg Road and I-75
		D – Nonprofit	1	1	Iron Workers Local Union
EB3	3	B - Residential	1	1	Residence between I-75 and McLeod Drive

NSA ID	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Name and/or Location of Noise Sensitive Properties
EB4	4	B - Residential	14	14	Star Motel/Rentals
		C- Recreational	1	1	Star Motel/Rentals - Pool
EB5	4	B - Residential	18	18	Residences between Williams Road and Mobile Drive
		C – Day Care	1	1	A Little Kid's Academy
EB6	5	B - Residential	14	17	Residences between Mobile Drive and Mango Road
		C – Place of Worship	1	1	First Freewill Baptist Church - Playground
EB7	6	B - Residential	9	9	Residences between Mango Road to Pine Street
		E – Outdoor dining area	1	1	Hardee's outdoor dining area
EB8	7	B - Residential	5	5	Residences between Pine St and N Taylor Road
EB9	7	B - Residential	3	3	Residences between N Taylor Road and N Parsons Ave
EB10	8	B - Residential	9	9	Parson's Pointe Subdivision
EB11	8	B - Residential	16	16	Residences between Parson's Pointe Street and N Kingsway Road
EB12	9	B - Residential	44	44	Shangri La Subdivision
		C – Day Care	1	1	Seffner Early Childhood Learning Center - Playground
EB13	10	B - Residential	5	5	Residences between Darby Lake and Brady Lee Trail
EB14	10	B - Residential	9	9	Mobile home park at Brady Lee Trail
EB15	11	B - Residential	8	8	Residences between Brady Lee Trail and Castlewood Road
EB16	12	B - Residential	11	15	Oaklea Manor
EB17	12	B - Residential	1	1	Residence west of McIntosh Road
EB18	13	B - Residential	9	9	Residences between McIntosh Road and Gallagher Road
EB19	13	B - Residential	7	7	Residences between Gallagher Road and Moores Lake Road
EB20	15	B - Residential	3	4	Residences east of Moores Lake Road

NSA ID	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Name and/or Location of Noise Sensitive Properties
EB21	15-16	B - Residential	11	11	Residences in the vicinity of Lindsey Loop
EB22	16-17	B - Residential	25	25	Residences in the vicinity of Meadow Oaks Drive
EB23	17	B - Residential	27	27	Residences at Motel 92 and east of Bethlehem Road
EB24	17-18	B - Residential	3	3	Residences west of Tanner Road
EB25	18	B - Residential	15	15	Residences in the Family Rentals Mobile Home Park and west of the Tanner Road
EB26	18	D – Place of Worship (interior)	1	1	Iglesia de Dios Torre Fuerte in Dover
EB27	19	B - Residential	2	2	Residences west of Whitelaw Road
EB28	19-20	B - Residential	2	2	Residences east of Haggard Road
EB29	20	B - Residential	31	31	Residences east of Turkey Creek Road
EB30	21	B - Residential	18	18	Stonebridge Mobile Home Park
EB31	21	B - Residential	11	11	Mobile home park in the vicinity of Sugar Creek
EB32	21	B - Residential	4	7	Residences east of Sugar Creek Drive
		C - Playground	1	1	Exodus Medical Center - Playground
EB33	21	E – Outdoor dining area	1	1	Plaza Mexico outdoor dining
EB34	21	B - Residential	15	20	Residences in the Rosebrook Mobile Home Park and residence at Brockport Drive
EB35	22	B - Residential	1	4	Sunset Villa Apartments
EB36	22	B - Residential	8	10	Residences in the vicinity of N Seminole Lake Blvd
		E - Motel	1	1	Motel in the vicinity of N Seminole Lake Blvd
EB37	23	C – School	1	1	Tomlin Middle School – band shell
		D - School	1	1	Tomlin Middle School
EB38	23	B - Residential	2	2	Residences east of Woodrow Wilson Street
		C – Place of Worship	1	1	One Accord Church – basketball hoop

NSA ID	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Name and/or Location of Noise Sensitive Properties
		D – Nonprofit	1	1	American Legion
EB39	23	C – School	2	2	Bryan Elementary School - playground
EB40	28	B - Residential	3	3	Residences west of S Wiggins Road
EB41	29	B - Residential	1	1	Residences east of Webb Road
Total			717	757	

Following FHWA/FDOT guidance, the residences were evaluated as Activity Category “B” (i.e. abatement considered at a predicted traffic noise level of 66 dB(A)). Where exterior areas of use exist at the schools, day cares, recreational areas, places of worship and the medical office were evaluated as Activity Category “C” (i.e., abatement considered at a predicted traffic noise level of 66 dB(A)). Where there are no areas of exterior use at the places of worship, medical offices, schools and non-profit institutions, these receptors were evaluated as Activity Category “D” (i.e., abatement considered at a predicted interior level of 51 dB(A)). Finally, the hotels and outdoor dining areas were evaluated as Activity Category “E” (i.e., abatement considered at a predicted traffic noise level of 71 dB(A)). These Activity Categories are also listed in the table above for each NSA.

3.2 MEASURED NOISE LEVELS

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

The field measurements were conducted in accordance with the FHWA’s *Measurement of Highway-Related Noise*. The measurements were obtained using a Larson Davis Model 831, Type II integrating sound level meter (SLM). The SLM was calibrated before and after the measurement period with a Larson Davis CAL200 calibrator.

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

Table 3-2 presents the field measurements and the validation results. As shown, the ability of the model to predict noise levels within the FDOT limits of plus or minus 3 dB(A) for the project was

confirmed. Documentation in support of the validation is provided in **Appendix C** of this NSR.

Table 3-2 Validation Data

Location	Site	Measurement Period	Modeled (dB(A))	Measured (dB(A))	Difference
US 92 and Jim Lefler Road	1	1	61.7	61.6	0.1
		2	61.9	63.8	-1.9
		3	63.6	64.5	-0.9
US 92 west of Bible Baptist Church	2	1	64.6	62.4	2.2
		2	64.0	62.0	2.0
		3	64.2	61.4	2.8

3.3 PREDICTED TRAFFIC NOISE LEVELS

The predicted traffic noise levels for each evaluated receptor are provided in **Appendix D. Table 3-3** lists the number of evaluated receptors in each NSA and the number of receptors predicted to be impacted by traffic noise with existing conditions and for future conditions with and without the improvements to US 92.

Table 3-3 Traffic Noise Analysis Results

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Number of Impacted Noise Sensitive Properties		
					Existing	No-Build	Build
WB1	30	B - Residential	1	1	0	0	0
WB2	29	B - Residential	56	56	0	3	5
WB3	28-29	B - Residential	8	8	0	0	0
		C – Place of Worship (Exterior)	1	1	0	0	0
WB4	28	B - Residential	3	3	0	1	1
WB5	27	B - Residential	4	4	0	3	3
WB6	26-27	B - Residential	17	17	0	3	9
WB7	26	B - Residential	1	1	0	1	1
WB8	25	B - Residential	2	2	0	1	1
WB9	24	B - Residential	2	2	0	0	1
		D – Medical Office (Interior)	1	1	0	0	0
WB10	22-23	B - Residential	2	2	0	0	0
		D – Medical Office (Interior)	2	2	0	0	0
WB11	22	B - Residential	1	1	0	0	0

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Number of Impacted Noise Sensitive Properties		
					Existing	No-Build	Build
WB12	21	B - Residential	3	3	0	0	0
WB13	21	B - Residential	7	7	0	0	0
WB14	20	B - Residential	8	10	0	0	0
WB15	19	B - Residential	5	5	0	0	0
		E – Outdoor dining area	1	1	0	0	0
WB16	18	B - Residential	5	5	1	1	0
WB17	17	B - Residential	19	25	3	3	5
		C - Recreational	1	1	0	1	1
WB18	17	B - Residential	5	5	0	0	0
WB19	16	B - Residential	4	4	0	0	0
WB20	14-16	B - Residential	20	20	0	0	2
		E – Outdoor dining area	2	2	0	0	0
WB21	13-14	B - Residential	12	12	3	3	4
WB22	12-13	B - Residential	1	1	0	0	0
		C – School (Exterior)	1	1	0	0	0
WB23	11-12	B - Residential	29	29	0	0	0
		C – Recreational Area	1	1	0	0	0
WB24	11	B - Residential	1	1	0	0	0
WB25	10	B - Residential	3	3	0	0	0
WB26	9	B - Residential	22	22	0	0	0
WB27	8	D – Place of Worship; School	2	2	0	0	0
WB28	8	B - Residential	1	1	0	0	0
WB29	7	B - Residential	2	2	0	0	0
WB30	7	E – Outdoor dining area	1	1	0	0	0
WB31	7	B - Residential	4	4	0	0	0
WB32	6	B - Residential	11	11	3	3	5
WB33	5	E – Hotel	1	1	0	0	0
WB34	5	B - Residential	8	8	0	0	0
WB35	4	B - Residential	19	30	5	7	6
WB36	4	B - Residential	1	1	0	0	0
		C – Place of Worship (exterior)	1	1	0	0	0
		E - Motel	1	1	0	0	0
WB37	2-3	B - Residential	5	5	1	1	1
WB38	2	D – Non profit	1	1	0	0	0

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Number of Impacted Noise Sensitive Properties		
					Existing	No-Build	Build
WB39	2	B - Residential	14	14	0	0	0
EB1	1-2	B - Residential	10	10	1	2	2
		D – Place of Worship; Nonprofit	2	2	0	0	0
EB2	2	B - Residential	1	1	0	0	0
		D – Nonprofit	1	1	0	0	0
EB3	3	B - Residential	1	1	0	0	1
EB4	4	B - Residential	15	15	0	0	4
EB5	4	B - Residential	18	18	0	0	6
		C – Day Care (exterior)	1	1	0	0	1
EB6	5	B - Residential	14	17	0	0	5
		C – Place of Worship (exterior)	1	1	0	0	0
EB7	6	B - Residential	9	9	0	0	0
		E – Outdoor dining area	1	1	0	0	0
EB8	7	B - Residential	5	5	0	0	2
EB9	7	B - Residential	3	3	0	0	3
EB10	8	B - Residential	9	9	1	1	1
EB11	8	B - Residential	16	16	0	0	0
EB12	9	B - Residential	44	44	16	16	17
		C – Day Care (exterior)	1	1	0	0	0
EB13	10	B - Residential	5	5	0	0	0
EB14	10	B - Residential	9	9	2	2	2
EB15	11	B - Residential	8	8	0	0	0
EB16	12	B - Residential	11	15	0	0	2
EB17	12	B - Residential	1	1	0	0	0
EB18	13	B - Residential	9	9	0	0	3
EB19	13	B - Residential	7	7	0	0	4
EB20	15	B - Residential	3	4	0	0	0
EB21	15-16	B - Residential	11	11	0	0	2
EB22	16-17	B - Residential	25	25	6	6	9
EB23	17	B - Residential	27	27	0	0	2
EB24	17-18	B - Residential	3	3	0	0	2
EB25	18	B - Residential	15	15	0	0	7
EB26	18	D – Place of Worship (interior)	1	1	0	0	0
EB27	19	B - Residential	2	2	0	0	1

NSA No.	Sheet No. (See Appendix B)	Activity Category	Number of Evaluated Receptors	Number of Evaluated Noise Sensitive Properties	Number of Impacted Noise Sensitive Properties		
					Existing	No-Build	Build
EB28	19-20	B - Residential	2	2	0	0	1
EB29	20	B - Residential	31	31	0	4	1
EB30	21	B - Residential	18	18	6	6	6
EB31	21	B - Residential	11	11	0	0	0
EB32	21	B - Residential	4	7	1	0	0
		C - Playground	1	1	0	1	1
EB33	21	E – Outdoor dining area	1	1	0	0	0
EB34	21	B - Residential	15	20	5	5	5
EB35	22	B - Residential	1	4	0	0	0
EB36	22	B - Residential	8	10	1	1	1
		E - Motel	1	1	0	0	0
EB37	23	C – School	1	1	0	0	0
		D - School	1	1	0	0	0
EB38	23	B - Residential	2	2	0	0	0
		C – Place of Worship (exterior)	1	1	0	0	0
		D – Nonprofit	1	1	0	0	0
EB39	23	C – School	2	2	0	0	0
EB40	28	B - Residential	3	3	0	0	0
EB41	29	B - Residential	1	1	0	0	0
Total			717	757	55	75	136

As shown in the table above, of the 757 evaluated properties with a noise sensitive land use(s), 55 are predicted to be impacted by traffic noise with existing conditions. In the future without the proposed improvements 75 of the properties are predicted to be impacted. Finally, with the proposed improvements, 136 of the properties are predicted to be impacted by traffic noise. One hundred and thirty-three of the 136 properties are residences, one is a day care center, one is a playground at a medical center and one is a recreational area.

3.4 ABATEMENT CONSIDERATIONS

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

3.4.1 Traffic Management

Reducing traffic speeds and/or the traffic volume or changing the motor vehicle fleet on US 92 is inconsistent with the goal of improving the ability of the roadway to handle the forecast traffic volume. Therefore, traffic management measures were not considered to be a reasonable noise abatement measure for the US 92 project.

3.4.2 Alignment Modifications

The proposed improvements would be constructed to follow the existing roadway alignment. Because shifting the alignment horizontally would require ROW acquisitions and, because noise sensitive land uses are located on both sides of the roadway, a modification to the alignment of US 92 for the purpose of reducing traffic noise impacts was not considered to be a reasonable noise abatement measure.

3.4.3 Buffer Zones

As previously stated, to abate predicted traffic noise at an existing noise sensitive land use, the property would have to be acquired. The same cost effective limit that applies to noise barriers (i.e., \$42,000 per benefited noise sensitive receptor) would apply to the purchase price of any impacted noise sensitive property. A review of data from the Hillsborough County Property Appraisers Office indicates that the cost to acquire the developed properties adjacent to US 92 exceed the cost effective limit. Therefore, creating a buffer zone by acquiring existing noise sensitive properties was not considered to be a reasonable noise abatement measure.

3.4.4 Noise Barriers

The TNM was used to evaluate the ability of noise barriers to reduce traffic noise levels for the impacted noise sensitive receptors adjacent to US 92. The barriers were evaluated on the FDOT's ROW at heights from eight to 22 feet (in two-foot increments). The length of each barrier was optimized to determine if at least the minimum noise reduction requirements (i.e., a minimum reduction of 5 dB(A) for at least two impacted receptors and a minimum reduction of 7 dB(A) for at least one impacted receptor) could be achieved.

Barriers were not considered for the impacted properties listed in **Table 3-4** because these areas only envelop one impacted receptor each and, in order for a barrier to be considered acoustically feasible and reasonable, at least two receptors are required to be benefited by a barrier.

Table 3-4 Isolated Impacted Noise Sensitive Receptors

NSA ID	Receptor ID	Description/Location
WB4	WB67	Resident east of Charlie Taylor Road
WB8	WB93	Resident west of N Wilder Road
WB9	WB94	Resident east of N Palm Drive
WB11	WB102	Resident between Enterprise Street and Whitehurst/Walter Road
WB12	WB105	Resident west of Enterprise Street
WB16	WB128	Resident in the vicinity of Rogers Road
WB19	WB158	Resident north of Meadow Oaks Drive
WB24	WB228	Resident west of Castlewood Road
WB37	WB307	Resident in Hills Avenue Farms
EB1	EB1	Resident from Garden Ln to Falkenburg Road
EB1	EB9	Resident from Garden Ln to Falkenburg Road
EB3	EB17	Resident between I-75 and McLeod Drive
EB10	EB93	Resident in Parson's Pointe Subdivision
EB27	EB289	Resident west of Whitelaw Road
EB28	EB291	Resident east of Haggard Road
EB29	EB299	Resident east of Turkey Creek Road
EB36	EB378	Resident in the vicinity of N Seminole Lake Boulevard

The following provides the results of the noise barrier evaluation and discusses the potential amount of noise reduction and the cost effectiveness of providing barriers as an abatement measure for the areas in which traffic noise has been predicted to impact noise sensitive properties.

Residences in Parkwood Estates and west of Webb Road (NSA WB2 - Receptors 2, 3, 9, 10 and 22)

A noise barrier was evaluated for the five impacted residences in Parkwood Estates and west of Webb Road. The barrier was evaluated in three segments to accommodate access to/from the properties. The results of the evaluation are provided in Table 3-5. As shown, at barrier heights between 8 and 22 feet, at least three of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Because the results of the analysis indicated that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in Table 3-6. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA WB2. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 29 in Appendix B.

Receptors 2 and 3 have been identified as potential relocations. If confirmed in the project’s design phase, the barrier may no longer be considered.

Table 3-5 Residences in Parkwood Estates and west of Webb Road (NSA WB2)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 5										
8	815	0	1	2	3	4	7	\$195,600	\$27,943	yes
10	961	1	0	3	4	8	12	\$288,300	\$24,025	yes
12	925	1	0	3	4	13	17	\$333,000	\$19,588	yes
14	958	2	0	3	5	14	19	\$402,360	\$21,177	yes
16	918	2	0	3	5	15	20	\$440,640	\$22,032	yes
18	898	2	0	3	5	16	21	\$484,920	\$23,091	yes
20	898	2	0	3	5	16	21	\$538,800	\$25,657	yes
22	898	2	0	3	5	16	21	\$592,680	\$28,223	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

⁵ Number of receptors represents the number of properties.

Table 3-6 Additional Barrier Considerations (NSA WB2)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences in the vicinity of Thrasher Road (NSA WB5 – Receptors 71-73)

A noise barrier was evaluated for the three impacted residences in the vicinity of Thrasher Road. The barrier was evaluated in two segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Residences west of Greenway Drive and Happy Homes Mobile Home Park (NSA WB6 - Receptors 74-77, 80-82, 85, 90)

A noise barrier was evaluated for the nine impacted residences west of Greenway Drive and in the Happy Homes Mobile Home Park. The barrier was evaluated in six segments to accommodate access to/from the properties. The results of the evaluation are provided in **Table 3-7**. As shown, at barrier heights between 8 and 12 feet, at least three of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-8**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in

NSA WB6. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheets 26 and 27 in Appendix B.

Receptors 74-75, and 90 have been identified as potential relocations. If confirmed in the project’s design phase, the barrier may no longer be considered.

Table 3-7 Residences west of Greenway Drive and Happy Homes Mobile Home Park (NSA WB6)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 9										
8	249	2	0	1	3	0	3	\$59,760	\$19,920	yes
10	973	2	1	2	5	2	7	\$291,900	\$41,700	yes
12	913	2	1	2	5	3	8	\$328,680	\$41,085	yes
14	830	2	1	2	5	3	8	\$348,600	\$43,575	no
16	822	2	1	2	5	3	8	\$394,560	\$49,320	no
18	822	2	1	2	5	3	8	\$443,880	\$55,485	no
20	910	3	1	2	6	4	10	\$546,000	\$54,600	no
22	880	3	1	2	6	4	10	\$580,800	\$58,080	no

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

⁵ Number of receptors represents the number of properties.

Table 3-8 Additional Barrier Considerations (NSA WB6)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences located in the vicinity of Robinson Orange Park (NSA WB13 - Receptors 106-107)

A noise barrier was evaluated for the impacted residence east of Robinson Orange Park (Receptor 106) and the impacted residence in Robinson Orange Park (Receptor 107). The barrier was evaluated in three segments to accommodate access to/from the properties. The results of the evaluation are provided in **Table 3-9**. As shown, at barrier heights between 8 and 22 feet, both of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-10**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA WB13. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 21 in Appendix B.

Receptor 106 has been identified as a potential relocation. If confirmed in the project's design phase, the barrier would no longer be considered.

Table 3-9 Residences located in and in the vicinity of Robinson Orange Park (NSA WB13)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 2										
8	90	1	0	1	2	0	2	\$21,600	\$10,800	yes
10	80	1	0	1	2	0	2	\$24,000	\$12,000	yes
12	70	1	0	1	2	0	2	\$25,200	\$12,600	yes
14	70	1	0	1	2	0	2	\$29,400	\$14,700	yes
16	70	1	0	1	2	0	2	\$33,600	\$16,800	yes
18	70	1	0	1	2	0	2	\$37,800	\$18,900	yes
20	70	1	0	1	2	0	2	\$42,000	\$21,000	yes
22	70	1	0	1	2	0	2	\$46,200	\$23,100	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

⁵ Number of receptors represents the number of properties.

Table 3-10 Additional Barrier Considerations (NSA WB13)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences located West of Fletcher Lane (NSA WB14 - Receptors 115-116, 121)

A noise barrier was evaluated for the impacted residences west of Fletcher Lane. The barrier was evaluated in five segments to accommodate access to/from the properties. The results of the evaluation are provided in Table 3-11. As shown, at barrier heights between 8 and 22 feet, two of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in Table 3-12. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA WB14. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 20 in Appendix B.

Table 3-11 Residences located West of Fletcher Lane (NSA WB14)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 3										
8	110	1	0	1	2	0	2	\$26,400	\$13,200	yes
10	110	1	0	1	2	0	2	\$33,000	\$16,500	yes
12	100	0	1	1	2	0	2	\$36,000	\$18,000	yes
14	100	0	1	1	2	0	2	\$42,000	\$21,000	yes
16	100	0	1	1	2	0	2	\$48,000	\$24,000	yes
18	100	0	1	1	2	0	2	\$54,000	\$27,000	yes
20	100	0	1	1	2	0	2	\$60,000	\$30,000	yes
22	100	0	1	1	2	0	2	\$66,000	\$33,000	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

⁵ Number of receptors represents the number of properties.

Table 3-12 Additional Barrier Considerations (NSA WB14)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences at the Woodcrest Apartments and Galaxy Mobile Home Park (NSA WB17 - Receptors 141, 145, 148-149, 152)

A noise barrier was evaluated for the five impacted residences at the Woodcrest Apartments and the Galaxy Mobile Home Park. The barrier was evaluated in six segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Shuffleboard Court at the Galaxy Mobile Home Park (NSA WB17 - Receptor 144)

A noise barrier was evaluated for the impacted area of the shuffleboard court. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 97 feet and an optimal height of 10 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of seven dB(A). Because it is not known how frequently the impacted and benefited area of the shuffleboard court would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the shuffleboard court in order for a barrier to be considered cost effective is 45 person-hours (i.e., 45 people would have to use the area for one hour each day of the year). Because it is reasonable to assume that this level of activity would not occur within the impacted area that would be benefited by a barrier, it was not considered a reasonable noise abatement measure for the impacted area of the shuffleboard court.

Residences located at the Coronation Court Apartments (NSA WB18 - Receptors 153-156)

A noise barrier was evaluated for the four impacted residences at the Coronation Court Apartments. The results of the evaluation are provided in **Table 3-13**. As shown, at barrier heights between 10 and 22 feet, all four of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-14**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA WB18. The limits of the most

cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 17 in Appendix B.

Table 3-13 Residences located at the Coronation Court Apartments (NSA WB18)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 4										
8	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
10	150	2	1	1	4	0	4	\$45,000	\$11,250	yes
12	140	1	1	2	4	0	4	\$50,400	\$12,600	yes
14	130	2	0	2	4	0	4	\$54,600	\$13,650	yes
16	130	2	0	2	4	0	4	\$62,400	\$15,600	yes
18	130	2	0	2	4	0	4	\$70,200	\$17,550	yes
20	130	2	0	2	4	0	4	\$78,000	\$19,500	yes
22	130	2	0	2	4	0	4	\$85,800	\$21,450	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

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

⁶ Number of receptors represents the number of properties.

Table 3-14 Additional Barrier Considerations (NSA WB18)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences between Swinger Road and Edmund Court (NSA WB20 - Receptors 163 and 165)

A noise barrier was evaluated for the two impacted residences located between Swinger Road and Edmund Court. The barrier was evaluated in four segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Residences located east of Gallagher Road (NSA WB21 - Receptors 187, 189, 194-195)

A noise barrier was evaluated for the four impacted residences located east of Gallagher Road. The results of the evaluation are provided in Table 3-15. As shown, at barrier heights between 12 and 22 feet, both of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT’s cost reasonable limit, Barrier WB21 was not considered a reasonable noise abatement measure.

Table 3-15 Residences located east of Gallagher Road (NSA WB21)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 4										
8	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
10	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
12	246	1	0	1	2	0	2	\$88,560	\$44,280	no
14	216	1	0	1	2	0	2	\$90,720	\$45,360	no
16	196	1	0	1	2	0	2	\$94,080	\$47,040	no
18	190	1	0	1	2	0	2	\$102,600	\$51,300	no
20	190	1	0	1	2	0	2	\$114,000	\$57,000	no
22	180	1	0	1	2	0	2	\$118,800	\$59,400	no

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

Residences at the East Tampa RV Resort (NSA WB23 - Receptors 215 and 223)

A noise barrier was evaluated for the two impacted residences located in the East Tampa RV Resort. The barrier was evaluated in two segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Pool located at the East Tampa RV Resort (NSA WB23 - Receptor 213)

A noise barrier was evaluated for the impacted area of the East Tampa RV Resort pool. The FDOT's special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 190 feet and an optimal height of 14 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of seven dB(A). Because it was not known how frequently the impacted and benefited area of the pool would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the pool in order for a barrier to be considered cost effective is 118 person-hours (i.e., 118 people would have to use the area for one hour each day of the year). Because it was reasonable to assume that this level of activity would not occur within the impacted area that would be benefited by a barrier, it was not considered a reasonable noise abatement measure for the impacted area of the pool.

Residences located at the Kingsway Subdivision (NSA WB26 - Receptors 232-249)

A noise barrier was evaluated for the 18 impacted residences in the Kingsway Subdivision. The results of the evaluation are provided in **Table 3-16**. As shown, at barrier heights between 8 and 18 feet, at least 17 of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-17**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA WB26. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 9 in Appendix B.

Receptors 232-248 have been identified as potential relocations. If confirmed in the project's design phase, the barrier would no longer be considered.

Table 3-16 Residences located at the Kingsway Subdivision (NSA WB26)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 18										
8	1127	0	2	15	17	0	17	\$270,480	\$15,911	yes
10	1127	0	1	16	17	0	17	\$338,100	\$19,888	yes
12	1127	0	0	17	17	0	17	\$405,720	\$23,866	yes
14	1289	1	0	17	18	0	18	\$541,380	\$31,846	yes
16	1269	1	0	17	18	0	18	\$609,120	\$35,831	yes
18	1249	1	0	17	18	0	18	\$674,460	\$39,674	yes
20	1249	1	0	17	18	0	18	\$749,400	\$44,082	no
22	1249	1	0	17	18	0	18	\$824,340	\$48,491	no

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

⁵ Number of receptors represents the number of properties.

Table 3-17 Additional Barrier Considerations (NSA WB26)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences in Holleman's Mobile Home Park and the Kennedy Hill Subdivision (NSA WB32 - Receptors 262-264, 266, and 270)

A noise barrier was evaluated for the five impacted residences located in Holleman's Mobile Home Park and the Kennedy Hill Subdivision. The barrier was evaluated in four segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Residences in the Twin Palms Mobile Home Park (NSA WB34 - Receptors 275-277)

A noise barrier was evaluated for the three impacted residences located in the Twin Palms Mobile Home Park. The barrier was evaluated in three segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements and the distance of the barrier from the receptors, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Residences located at the Brooks Residential Motel and Camp Knox Hotel Tourist Court (NSA WB35 - Receptors 284, 292-296)

A noise barrier was evaluated for the six impacted residences located at the Brooks Residential Motel and Camp Knox Hotel Tourist Court. The results of the evaluation are provided in **Table 3-18**. As shown, at barrier heights between 8 and 20 feet, at least two of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-19**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA WB35. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 4 in Appendix B.

Table 3-18 Residences located at the Brooks Residential Motel and Camp Knox Hotel Tourist Court (NSA WB35)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 6										
8	238	1	0	1	2	0	2	\$57,120	\$28,560	yes
10	183	2	0	1	3	0	3	\$54,900	\$18,300	yes
12	171	2	0	1	3	0	3	\$61,560	\$20,520	yes
14	171	2	0	1	3	0	3	\$71,820	\$23,940	yes
16	171	2	0	1	3	0	3	\$82,080	\$27,360	yes
18	161	2	0	1	3	0	3	\$86,940	\$28,980	yes
20	161	2	0	1	3	0	3	\$96,600	\$32,200	yes
22	161	2	0	1	3	0	3	\$106,260	\$35,420	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

⁵ Number of receptors represents the number of properties.

Table 3-19 Additional Barrier Considerations (NSA WB35)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences located between Baptist Church Road and Falkenburg Road and in the Carousel Mobile Home Park (NSA WB39 - Receptors 315-317, 322)

A noise barrier was evaluated for the four impacted residences located between Baptist Church Road and Falkenburg Road and in the Carousel Mobile Home Park. The barrier was evaluated in four segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements and the distance of the barrier from the receptors, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Residences located at the Star Motel (Rentals) (NSA EB4 - Receptors 18, 22-23, 31)

A noise barrier was evaluated for the five impacted residences located at the Star Motel (Rentals). The results of the evaluation are provided in Table 3-20. As shown, at barrier heights between 8 and 22 feet, at least four of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in Table 3-21. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA EB4. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 4 in Appendix B.

Table 3-20 Star Motel/Rental Units (NSA EB4)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors⁵ = 4										
8	318	2	0	2	4	6	10	\$76,320	\$7,632	yes
10	268	2	0	2	4	7	11	\$80,400	\$7,309	yes
12	258	2	0	2	4	7	11	\$92,880	\$8,444	yes
14	258	1	1	2	4	7	11	\$108,360	\$9,851	yes
16	258	1	1	2	4	7	11	\$123,840	\$11,258	yes
18	248	1	1	2	4	7	11	\$133,920	\$12,175	yes
20	248	1	1	2	4	7	11	\$148,800	\$13,527	yes
22	248	1	1	2	4	7	11	\$163,680	\$14,880	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

⁵Number of receptors represents the number of properties.

Table 3-21 Additional Barrier Considerations (NSA EB4)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project’s design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT’s ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project’s design phase.
	Utilities	A determination of utility conflicts will be made during the project’s design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Pool located at the Star Motel (Rentals) (NSA EB4 - Receptor 34)

A noise barrier was evaluated for the impacted area of the Star Motel pool. The FDOT’s special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 148 feet and an optimal height of 10 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of seven dB(A). Because it is not known how frequently the impacted and benefited area of the pool would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the pool in order for a barrier to be considered cost effective is 62 person-hours (i.e., 62 people would have to use the area for one hour each day of the year). Because it is reasonable to assume that this level of activity would not occur within the impacted area that would be benefited by a barrier, it was not considered a reasonable noise abatement measure for the impacted area of the pool.

Residences between Williams Road and Mobile Drive (NSA EB5 - Receptors 34, 37, 39, 44-47)

A noise barrier was evaluated for the seven impacted residences located between Williams Road and Mobile Drive. The results of the evaluation are provided in Table 3-22. As shown, at barrier heights between 10 and 22 feet, three of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT’s cost reasonable limit, Barrier EB5 was not considered a reasonable noise abatement measure.

Table 3-22 Residences between Williams Road and Mobile Drive (NSA EB5)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 7										
8	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
10	1,002	2	0	1	3	0	3	\$300,600	\$100,200	no
12	990	4	0	1	5	0	5	\$356,400	\$71,280	no
14	880	4	0	1	5	0	5	\$369,600	\$73,920	no
16	854	4	0	1	5	0	5	\$409,920	\$81,984	no
18	850	4	0	1	5	0	5	\$459,000	\$91,800	no
20	841	4	0	1	5	0	5	\$504,600	\$100,920	no
22	841	4	0	1	5	0	5	\$555,060	\$111,012	no

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

Little Kids Academy Playground (NSA EB5 - Receptor 47)

A noise barrier was evaluated for the impacted area of the Little Kids Academy Playground. The FDOT’s special land use procedures were used to determine if a noise barrier could be considered a potential abatement measure for the impacted area.

For the purpose of this special land use evaluation, the optimal length and height for a noise barrier was determined using TNM. At an optimal length of 231 feet and an optimal height of 12 feet, a barrier would reduce predicted traffic noise levels within the impacted area a minimum of seven dB(A). Because it is not known how frequently the impacted and benefited area of the playground would be used and by how many people, the minimum number of person-hours of use on an average day in order for a barrier to be considered cost effective was calculated.

The cost effectiveness calculations were based on the formulas from the special land use procedures. Assuming the optimal barrier length and height, the minimum daily use required within the impacted and benefited area of the playground in order for a barrier to be considered cost effective is 263 person-hours (i.e., 263 people would have to use the area for one hour each day of the year). Because

it is reasonable to assume that this level of activity would not occur within the impacted area that would be benefited by a barrier, it was not considered a reasonable noise abatement measure for the impacted area of the playground.

Residences between Mobile Drive and Mango Road (NSA EB6 - Receptors 52-53, 59, 64)

A noise barrier was evaluated for the four impacted residences located between Mobile Drive and Mango Road. The results of the evaluation are provided in **Table 3-23**. As shown, at barrier heights between 16 and 22 feet, three of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT’s cost reasonable limit, Barrier EB6 was not considered a reasonable noise abatement measure.

Table 3-23 Residences between Mobile Drive and Mango Road (NSA EB6)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 4										
8	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}	NA ^{5,6}
10	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
12	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
14	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
16	426	0	1	1	2	1	3	\$204,480	\$68,160	no
18	413	0	1	1	2	1	3	\$223,020	\$74,340	no
20	413	0	1	1	2	1	3	\$247,800	\$82,600	no
22	413	0	1	1	2	1	3	\$272,580	\$90,860	no

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

Residences between Pine Street and North Taylor Road (NSA EB8 - Receptors 77 and 80)

A noise barrier was evaluated for the two impacted residences located between Pine Street and North Taylor Road. The results of the evaluation are provided in **Table 3-24**. As shown, at barrier heights between 10 and 22 feet, both of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT’s cost reasonable limit, Barrier EB6 was not considered a reasonable noise abatement measure.

Table 3-24 Residences between Pine Street and North Taylor Road (NSA EB8)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 2										
8	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
10	390	1	0	1	2	0	2	\$117,000	\$58,500	no
12	310	1	0	1	2	0	2	\$111,600	\$55,800	no
14	270	1	0	1	2	0	2	\$113,400	\$56,700	no
16	270	1	0	1	2	0	2	\$129,600	\$64,800	no
18	270	1	0	1	2	1	3	\$145,800	\$48,600	no
20	250	1	0	1	2	1	3	\$150,000	\$50,000	no
22	250	1	0	1	2	1	3	\$165,000	\$55,000	no

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

Residences located between North Taylor Road and North Parsons Avenue (NSA EB9 - Receptors 82-84)

A noise barrier was evaluated for the three impacted residences located between North Taylor Road and North Parsons Avenue. The barrier was evaluated in two segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier was not considered a reasonable noise abatement measure.

Residences located Shangri La Subdivision (NSA EB12 - Receptors 112, 114, 116, 120, 122-123, 126, 130, 135, 138, 145, 148-149)

A noise barrier was evaluated for the thirteen impacted residences located in the Shangri La Subdivision. The results of the evaluation are provided in **Table 3-25**. As shown, at barrier heights between 8 and 16 feet, at least seven of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT’s cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-26**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA EB12. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheets 9 and 10 in Appendix B.

Table 3-25 Shangri La Subdivision (NSA EB12)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 13										
8	1,833	3	1	3	7	4	11	\$439,920	\$39,993	yes
10	1,917	4	2	4	10	8	18	\$575,100	\$31,950	yes
12	1,901	3	2	5	10	12	22	\$684,360	\$31,107	yes
14	1,901	2	1	7	10	12	22	\$798,420	\$36,292	yes
16	1,901	2	2	6	10	12	22	\$912,480	\$41,476	yes
18	1,881	3	1	6	10	13	23	\$1,015,740	\$46,170	no
20	1,881	3	1	6	10	14	24	\$1,128,600	\$49,070	no
22	1,881	3	0	7	10	14	24	\$1,241,460	\$53,977	no

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

Table 3-26 Additional Barrier Considerations (NSA EB12)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project’s design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT’s ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project’s design phase.
	Utilities	A determination of utility conflicts will be made during the project’s design phase.
Reasonable-ness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences located in the mobile home park at Brady Lee Trail (NSA EB14 - Receptors 161-169)

A noise barrier was evaluated for the two impacted residences located in the mobile home park at Brady Lee Trail. The barrier was evaluated in two segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a reasonable noise abatement measure.

Residences located in Oaklea Manor (NSA EB16 - Receptors 177a, 177b)

A noise barrier was evaluated for the two impacted residences located in Oaklea Manor. The barrier was evaluated in two segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a reasonable noise abatement measure.

Residences between McIntosh Road and Gallagher Road (NSA EB19 - Receptors 189, 192, 194)

A noise barrier was evaluated for the two impacted residences located between McIntosh Road and Gallagher Road. The results of the evaluation are provided in Table 3-27. As shown, at barrier heights between 10 and 22 feet, at least two of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT's cost reasonable limit, Barrier EB18 is not considered a reasonable noise abatement measure.

Table 3-27 Residences between McIntosh Road and Gallagher Road (NSA EB18)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 3										
8	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
10	698	1	0	1	2	1	3	\$209,400	\$69,800	no
12	619	1	0	1	2	1	3	\$222,840	\$74,280	no
14	579	1	0	1	2	1	3	\$243,180	\$81,060	no
16	653	2	0	1	3	1	4	\$313,440	\$78,360	no
18	643	3	0	0	3	1	4	\$347,220	\$86,805	no
20	603	3	0	0	3	1	4	\$361,800	\$90,450	no
22	603	3	0	0	3	1	4	\$397,980	\$99,495	no

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

Residences located between Gallagher and Moores Lake Road (NSA EB19 - Receptors 198, 200-202)

A noise barrier was evaluated for the four impacted residences located between Gallagher and Moores Lake Road. The barrier was evaluated in five segments to accommodate access to/from the properties.

Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a reasonable noise abatement measure.

Residences in the vicinity of Lindsey Loop (NSA EB21 - Receptors 206-207)

A noise barrier was evaluated for the two impacted residences located in the vicinity of Lindsey Loop. Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a reasonable noise abatement measure.

Residences in the vicinity of Meadow Oaks Drive (NSA EB22 - Receptors 223, 225-227, 231, 233, 236,238)

A noise barrier was evaluated for the nine impacted residences located in the vicinity of Meadow Oaks Drive. The results of the evaluation are provided in Table 3-28. As shown, at barrier heights between 16 and 22 feet, two of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved. However, because the cost of the barrier at all barrier heights would be above the FDOT’s cost reasonable limit, Barrier EB6 is not considered a reasonable noise abatement measure.

Table 3-28 Residences in the vicinity of Meadow Oaks Drive (NSA EB22)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 9										
8	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
10	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
12	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
14	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
16	824	1	0	1	2	0	2	\$395,520	\$197,760	no
18	724	1	0	1	2	0	2	\$390,960	\$195,480	no
20	542	1	0	1	2	0	2	\$325,200	\$162,600	no
22	532	1	0	1	2	0	2	\$351,120	\$175,560	no

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

Residences east of Bethlehem Road (NSA EB23 - Receptors 244 and 246)

A noise barrier was evaluated for the two impacted residences located east of Bethlehem Road. The barrier was evaluated in five segments to accommodate access to/from the properties. Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a reasonable noise abatement measure.

Residences West of Tanner Road (NSA EB24 - Receptors 269-270)

A noise barrier was evaluated for the two impacted residences located west of Tanner Road. The barrier was evaluated in three segments to accommodate access to/from the properties. Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a reasonable noise abatement measure.

Residences in the Family Rentals Mobile Home Park and west of Tanner Road (NSA EB25 - Receptors 273-276, 281-283)

A noise barrier was evaluated for the seven impacted residences located in the Family Rentals Mobile Home Park and west of Tanner Road. The results of the evaluation are provided in **Table 3-29**. As shown, at barrier heights between 14 and 22 feet, at least four of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-30**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA EB25. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 18 in Appendix B.

Receptors 281-283 have been identified as potential relocations. If confirmed in the project's design phase, the barrier may no longer be considered.

Table 3-29 Residences in the Family Rentals Mobile Home Park and west of Tanner Road (NSA EB25)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 7										
8	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
10	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
12	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵	NA ⁵
14	460	2	0	2	4	3	7	\$193,200	\$27,600	yes
16	440	2	0	2	4	4	8	\$211,200	\$26,400	yes
18	432	2	0	2	4	4	8	\$233,280	\$29,160	yes
20	432	2	0	2	4	4	8	\$259,200	\$32,400	yes
22	432	2	0	2	4	4	8	\$285,120	\$35,640	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

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

Table 3-30 Additional Barrier Considerations (NSA EB25)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences in the Stonebridge Mobile Home Park (NSA EB30 - Receptors 326-331)

A noise barrier was evaluated for the six impacted residences located in the Stonebridge Mobile Home Park and west of Tanner Road. The results of the evaluation are provided in **Table 3-31**. As shown, at

barrier heights between 8 and 22 feet, all six of the impacted residences would receive a benefit from a reduction in traffic noise of 5 dB(A) or more, the noise reduction design goal of 7 dB(A) would be achieved and the cost of the barrier would be below the FDOT's cost reasonable limit. Because the results of the analysis indicate that a barrier would provide the minimum noise reduction requirements at a cost below the cost effective limit, the barrier was evaluated further. A summary of the additional barrier considerations is provided in **Table 3-32**. Based on the review of these factors, a barrier was determined to be a potential noise abatement measure for the impacted residences in NSA EB30. The limits of the most cost reasonable barrier (based on the results of this PD&E analysis) are depicted on Sheet 21 in Appendix B.

Table 3-31 Residences in the Stonebridge Mobile Home Park (NSA EB30)

Barrier Height (feet)	Barrier Length (feet)	Noise Reduction at Impacted Receptors (dB(A)) ¹			Number of Benefited Receptors ²			Total Estimated Cost ³	Cost per Benefited Receptor ⁴	Cost Reasonable Yes/No
		5 -5.9	6 – 6.9	≥7	Impacted	Not Impacted	Total			
Number of Impacted Receptors = 6										
8	270	1	0	5	6	0	6	\$64,800	\$10,800	yes
10	270	0	1	5	6	0	6	\$81,000	\$13,500	yes
12	270	0	1	5	6	0	6	\$97,200	\$16,200	yes
14	270	0	1	5	6	0	6	\$113,400	\$18,900	yes
16	270	0	1	5	6	0	6	\$129,600	\$21,600	yes
18	270	0	1	5	6	0	6	\$145,800	\$24,300	yes
20	270	0	1	5	6	0	6	\$162,000	\$27,000	yes
22	270	0	1	5	6	0	6	\$178,200	\$29,700	yes

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

² Receptors with a predicted reduction of 5 dB(A) or more are considered benefited.

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

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

Table 3-32 Additional Barrier Considerations (NSA EB30)

Type of Factor	Evaluation Criteria	Comment
Feasibility	Design and Construction	A determination of whether a noise barrier can be constructed using standard construction methods and techniques will be made during the project's design phase. Notably, additional costs to solely construct a noise barrier will be included in the final cost reasonableness evaluation of a noise barrier at this location.
	Safety	It does not appear that there would be any safety concerns (e.g., loss of sight distance).
	Accessibility	The barrier would be located on the FDOT's ROW for US 92 and would not block ingress or egress to any property.
	ROW	If barriers are placed on/at the FDOT ROW line, a perpetual maintenance easement and a temporary construction easement will be required.
	Maintenance	The FDOT should be able to maintain a barrier at this location using standard practices.
	Drainage	A determination as to whether the barrier can be designed so that water would be directed along, under, or away from the barrier will be made during the project's design phase.
	Utilities	A determination of utility conflicts will be made during the project's design phase.
Reasonableness	Community desires	The desires of the property owners and renters (if applicable) will be solicited during the design phase of the project.

Residences in the Rosebrook Mobile Home Park and in the vicinity of Brockport Drive (NSA EB34 - Receptors 365, 367 and 371)

A noise barrier was evaluated for the three impacted residences located in the Rosebrook Mobile Home Park and in the vicinity of Brockport Drive. The barrier was evaluated in four segments to accommodate access to/from the properties. Due to constraints on the lengths of the barrier segments because of access requirements, the noise reduction design goal of 7 dB(A) could not be achieved at any of the evaluated barrier heights. Therefore, the barrier is not considered a reasonable noise abatement measure.

SECTION 4 CONCLUSIONS

As previously stated, future traffic noise levels with the proposed improvements are predicted to approach, meet, or exceed the NAC at 136 properties with a noise sensitive use(s). The results of the evaluation indicate that construction of noise barriers is a potentially reasonable and feasible noise abatement method to reduce predicted traffic noise for up to 64 of the 136 properties. These properties are located at:

- Residences in Parkwood Estates and west of Webb Road (NSA WB2)
- Residences west of Greenway Drive and Happy Homes Mobile Home Park (NSA WB6)
- Residences located in and in the vicinity of Robinson Orange Park (NSA WB13)
- Residences located West of Fletcher Lane (NSA WB14)
- Residences located west of Bethlehem Road and in Coronation Court (NSA WB18)
- Residences located at the Kingsway Subdivision (NSA WB26)
- Residences located at the Brooks Residential Motel and Camp Knox Hotel Tourist Court (NSA WB35)
- Star Motel/Rental Units (NSA EB4)
- Shangri La Subdivision (NSA EB12)
- Residences in the Family Rentals Mobile Home Park and west of Tanner Road (NSA EB25)
- Residences in the Stonebridge Mobile Home Park (NSA EB30)

The estimated cost to construct the noise barriers ranges from \$1,538,760 to \$3,960,000 depending on barrier length and height.

4.1 STATEMENT OF LIKELIHOOD

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

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

SECTION 5 NOISE CONTOURS

Land uses such as residences and recreational areas are considered incompatible with highway noise levels that approach or exceed the NAC. To reduce the possibility of additional traffic noise-related impacts, noise level contours were developed for the future improved roadway facility. These noise contours delineate the extent of the predicted traffic noise impact area from the improved roadway's edge-of-travel lane for each of the land use Activity Categories (**Table 2-1**). **Table 5-1** provides the distance from the edge-of-travel lane at which traffic noise levels are predicted to be 56 dB(A)—the NAC for land uses classified as Activity Category A, to 66 dB(A)—the NAC for land uses classified as Activity Category B and C, and to 71 dB(A)—the NAC for land uses classified as Activity Category E.

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

Table 5-1 Noise Contour Limits

US 92 Roadway Segment	Distance from Improved Roadway's Edge-of-Travel Lane (ft)*		
	Activity Category A 56 dB(A)	Activity Category B/C 66 dB(A)	Activity Category E 71 dB(A)
Falkenburg Road to Williams Road	315	135	85
Williams Road to Pine Street	300	130	80
Pine Street to Kingsway Road	290	120	75
Kingsway Road to Branch Forbes Road	300	130	80
Branch Forbes Road to Thonotosassa Road/Lemon Street	285	115	70
Maryland Avenue to Park Road	305	125	80
Park Road to County Line Road	320	140	85

* See Table 2-1 for a description of the activities that occur within each category. Distances do not reflect any reduction in noise levels that would occur from existing structures (shielding) and should be used for planning purposes only.

SECTION 6 CONSTRUCTION NOISE AND VIBRATION

Some land uses adjacent US 92 are identified on the FDOT listing of noise- and vibration-sensitive sites (e.g., residential use). Construction of the proposed roadway improvements is not expected to have a significant noise or vibration effect. Additionally, the application of the *FDOT Standard Specifications for Road and Bridge Construction* may minimize or eliminate potential issues. Should unanticipated noise or vibration issues arise during the construction process, the Project Engineer, in coordination with the District Noise Specialist and the Contractor, will investigate additional methods of controlling these impacts.

SECTION 7 COMMUNITY COORDINATION

A public hearing was held in two sessions at two different locations. The hearing was held to inform citizens and interested parties about the project details, recommended alternative and schedule, and allow them the opportunity to provide comments concerning the proposed improvements. The first session was held on December 1, 2016 from 5:30 p.m. to 7:30 p.m. at the Hillsborough Community College Trinkle Center in Plant City. A total of 144 people signed in at this session. Seven citizens spoke during the formal hearing, and 17 comments were submitted during this session. Most attendees at the first session were interested in when construction will begin and the ROW acquisition process, several attendees expressed concern with various segments of the project, and two attendees expressed a strong opinion against the project. Most of the comments pertained to being added to the contact list and access management concerns.

The second session was held on December 6, 2016 from 6:00 p.m. to 8:00 p.m. at the Sheraton Tampa East Hotel in Tampa. A total of 95 people signed in at the session. Nobody spoke during the formal hearing, and 17 comments were submitted during this session. Most attendees at the second session were supportive of the project, several attendees were interested in the ROW acquisition process and when construction would begin, one was concerned with his property and submitted a formal comment.

The public hearing transcript from both hearing sessions is included in the Final Comments and Coordination Report. The Final Comments and Coordination Report also contains copies of the written comments and responses. In addition, copies of all public hearing displays and presentation materials are included in the Public Hearing Scrapbook prepared for this study.

Two comments were received at the public hearing sessions related to noise. The first comment requested the extension of a noise barrier wall. The second comment was a general statement regarding changes in the Dover area related to anticipated increases in noise and speed resulting from the project.

Appendix A

Traffic Data

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of County Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Park Road to County Line Road

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: _____	ADT: _____	ADT: _____
LOS (C) <u>16,800</u>	LOS (C) <u>37,900</u>	LOS (C) <u>37,900</u>
Demand <u>10,000</u>	Demand <u>28,950</u>	Demand <u>28,950</u>
Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.
T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr
2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV
2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV
0.0 % Buses DHV	0.0 % Buses DHV	0.0 % Buses DHV
0.0 % Motorcycles DHV	0.0 % Motorcycles DHV	0.0 % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: Demand	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>863</u>	Southbound: Autos <u>1948</u>	Southbound: Autos <u>1948</u>
Med Trucks <u>19</u>	Med Trucks <u>43</u>	Med Trucks <u>43</u>
Hvy Trucks <u>19</u>	Hvy Trucks <u>43</u>	Hvy Trucks <u>43</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>565</u>	Northbound: Autos <u>1320</u>	Northbound: Autos <u>1320</u>
Med Trucks <u>13</u>	Med Trucks <u>29</u>	Med Trucks <u>29</u>
Hvy Trucks <u>13</u>	Hvy Trucks <u>29</u>	Hvy Trucks <u>29</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>514</u>	Southbound: Autos <u>1488</u>	Southbound: Autos <u>1488</u>
Med Trucks <u>11</u>	Med Trucks <u>33</u>	Med Trucks <u>33</u>
Hvy Trucks <u>11</u>	Hvy Trucks <u>33</u>	Hvy Trucks <u>33</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>348</u>	Northbound: Autos <u>1008</u>	Northbound: Autos <u>1008</u>
Med Trucks <u>8</u>	Med Trucks <u>22</u>	Med Trucks <u>22</u>
Hvy Trucks <u>8</u>	Hvy Trucks <u>22</u>	Hvy Trucks <u>22</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of County Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Falkenburg Road to Williams Road

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: <u>16,800</u>	ADT: <u>16,800</u>	ADT: <u>37,900</u>
LOS (C) <u>16,800</u>	LOS (C) <u>16,800</u>	LOS (C) <u>37,900</u>
Demand <u>12,750</u>	Demand <u>37,650</u>	Demand <u>37,650</u>
Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>45</u> mph <u>72</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>7.5</u> % for 24 hrs.	T= <u>7.5</u> % for 24 hrs.	T= <u>7.5</u> % for 24 hrs.
T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr
2.6 % Medium Trucks DHV	2.6 % Medium Trucks DHV	2.6 % Medium Trucks DHV
1.1 % Heavy Trucks DHV	1.1 % Heavy Trucks DHV	1.1 % Heavy Trucks DHV
0.5 % Buses DHV	0.5 % Buses DHV	0.5 % Buses DHV
0.0 % Motorcycles DHV	0.0 % Motorcycles DHV	0.0 % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: LOS (C)	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>863</u>	Southbound: Autos <u>863</u>	Southbound: Autos <u>1947</u>
Med Trucks <u>23</u>	Med Trucks <u>23</u>	Med Trucks <u>53</u>
Hvy Trucks <u>10</u>	Hvy Trucks <u>10</u>	Hvy Trucks <u>22</u>
Buses <u>5</u>	Buses <u>5</u>	Buses <u>10</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>585</u>	Northbound: Autos <u>585</u>	Northbound: Autos <u>1320</u>
Med Trucks <u>16</u>	Med Trucks <u>16</u>	Med Trucks <u>36</u>
Hvy Trucks <u>7</u>	Hvy Trucks <u>7</u>	Hvy Trucks <u>15</u>
Buses <u>3</u>	Buses <u>3</u>	Buses <u>7</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>655</u>	Southbound: Autos <u>1935</u>	Southbound: Autos <u>1935</u>
Med Trucks <u>18</u>	Med Trucks <u>53</u>	Med Trucks <u>53</u>
Hvy Trucks <u>8</u>	Hvy Trucks <u>22</u>	Hvy Trucks <u>22</u>
Buses <u>3</u>	Buses <u>10</u>	Buses <u>10</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>444</u>	Northbound: Autos <u>1311</u>	Northbound: Autos <u>1311</u>
Med Trucks <u>12</u>	Med Trucks <u>36</u>	Med Trucks <u>36</u>
Hvy Trucks <u>5</u>	Hvy Trucks <u>15</u>	Hvy Trucks <u>15</u>
Buses <u>2</u>	Buses <u>7</u>	Buses <u>7</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of Courty Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Williams Road to CR 579 (Mango Rd)

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: <u>16,800</u>	ADT: <u>16,800</u>	ADT: <u>37,900</u>
LOS (C) <u>16,800</u>	LOS (C) <u>16,800</u>	LOS (C) <u>37,900</u>
Demand <u>14,350</u>	Demand <u>33,200</u>	Demand <u>33,200</u>
Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>45</u> mph <u>72</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.0</u> % for 24 hrs.	T= <u>8.0</u> % for 24 hrs.	T= <u>8.0</u> % for 24 hrs.
T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr
3.0 % Medium Trucks DHV	3.0 % Medium Trucks DHV	3.0 % Medium Trucks DHV
1.0 % Heavy Trucks DHV	1.0 % Heavy Trucks DHV	1.0 % Heavy Trucks DHV
0.7 % Buses DHV	0.7 % Buses DHV	0.5 % Buses DHV
0.0 % Motorcycles DHV	0.0 % Motorcycles DHV	0.0 % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: LOS (C)	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>859</u>	Southbound: Autos <u>859</u>	Southbound: Autos <u>1941</u>
Med Trucks <u>27</u>	Med Trucks <u>27</u>	Med Trucks <u>61</u>
Hvy Trucks <u>9</u>	Hvy Trucks <u>9</u>	Hvy Trucks <u>20</u>
Buses <u>6</u>	Buses <u>6</u>	Buses <u>10</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>582</u>	Northbound: Autos <u>582</u>	Northbound: Autos <u>1316</u>
Med Trucks <u>18</u>	Med Trucks <u>18</u>	Med Trucks <u>41</u>
Hvy Trucks <u>6</u>	Hvy Trucks <u>6</u>	Hvy Trucks <u>14</u>
Buses <u>4</u>	Buses <u>4</u>	Buses <u>7</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>734</u>	Southbound: Autos <u>1697</u>	Southbound: Autos <u>1701</u>
Med Trucks <u>23</u>	Med Trucks <u>53</u>	Med Trucks <u>53</u>
Hvy Trucks <u>8</u>	Hvy Trucks <u>18</u>	Hvy Trucks <u>19</u>
Buses <u>5</u>	Buses <u>12</u>	Buses <u>9</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>497</u>	Northbound: Autos <u>1150</u>	Northbound: Autos <u>1153</u>
Med Trucks <u>16</u>	Med Trucks <u>36</u>	Med Trucks <u>36</u>
Hvy Trucks <u>5</u>	Hvy Trucks <u>12</u>	Hvy Trucks <u>12</u>
Buses <u>4</u>	Buses <u>8</u>	Buses <u>6</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of Courty Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: CR 579 (Mango Rd) to Pine Street

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: <u>16,800</u>	ADT: <u>16,800</u>	ADT: <u>37,900</u>
LOS (C) <u>16,800</u>	LOS (C) <u>16,800</u>	LOS (C) <u>37,900</u>
Demand <u>17,450</u>	Demand <u>33,800</u>	Demand <u>33,800</u>
Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>45</u> mph <u>72</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.0</u> % for 24 hrs.	T= <u>8.0</u> % for 24 hrs.	T= <u>8.0</u> % for 24 hrs.
T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr
<u>3.0</u> % Medium Trucks DHV	<u>3.0</u> % Medium Trucks DHV	<u>3.0</u> % Medium Trucks DHV
<u>1.0</u> % Heavy Trucks DHV	<u>1.0</u> % Heavy Trucks DHV	<u>1.0</u> % Heavy Trucks DHV
<u>0.7</u> % Buses DHV	<u>0.7</u> % Buses DHV	<u>0.5</u> % Buses DHV
<u>0.0</u> % Motorcycles DHV	<u>0.0</u> % Motorcycles DHV	<u>0.0</u> % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: LOS (C)	No-Build (Design Year) Model: LOS (C)	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>859</u>	Southbound: Autos <u>859</u>	Southbound: Autos <u>1341</u>
Med Trucks <u>27</u>	Med Trucks <u>27</u>	Med Trucks <u>61</u>
Hvy Trucks <u>9</u>	Hvy Trucks <u>9</u>	Hvy Trucks <u>20</u>
Buses <u>6</u>	Buses <u>6</u>	Buses <u>10</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>582</u>	Northbound: Autos <u>582</u>	Northbound: Autos <u>1316</u>
Med Trucks <u>18</u>	Med Trucks <u>18</u>	Med Trucks <u>41</u>
Hvy Trucks <u>6</u>	Hvy Trucks <u>6</u>	Hvy Trucks <u>14</u>
Buses <u>4</u>	Buses <u>4</u>	Buses <u>7</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>892</u>	Southbound: Autos <u>1728</u>	Southbound: Autos <u>1731</u>
Med Trucks <u>28</u>	Med Trucks <u>54</u>	Med Trucks <u>54</u>
Hvy Trucks <u>9</u>	Hvy Trucks <u>18</u>	Hvy Trucks <u>18</u>
Buses <u>6</u>	Buses <u>13</u>	Buses <u>9</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>606</u>	Northbound: Autos <u>1171</u>	Northbound: Autos <u>1174</u>
Med Trucks <u>19</u>	Med Trucks <u>37</u>	Med Trucks <u>37</u>
Hvy Trucks <u>6</u>	Hvy Trucks <u>12</u>	Hvy Trucks <u>12</u>
Buses <u>4</u>	Buses <u>9</u>	Buses <u>6</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of Courty Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Pine Street to Kingsway Road

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: <u>16,800</u>	ADT: <u>16,800</u>	ADT: <u>37,900</u>
LOS (C): <u>16,800</u>	LOS (C): <u>16,800</u>	LOS (C): <u>37,900</u>
Demand: <u>14,975</u>	Demand: <u>14,975</u>	Demand: <u>30,275</u>
Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh	Speed: <u>45</u> mph <u>72</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.0</u> % for 24 hrs.	T= <u>8.0</u> % for 24 hrs.	T= <u>8.0</u> % for 24 hrs.
T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr	T= <u>4.0</u> % Design hr
<u>3.0</u> % Medium Trucks DHV	<u>3.0</u> % Medium Trucks DHV	<u>3.0</u> % Medium Trucks DHV
<u>1.0</u> % Heavy Trucks DHV	<u>1.0</u> % Heavy Trucks DHV	<u>1.0</u> % Heavy Trucks DHV
<u>0.7</u> % Buses DHV	<u>0.7</u> % Buses DHV	<u>0.5</u> % Buses DHV
<u>0.0</u> % Motorcycles DHV	<u>0.0</u> % Motorcycles DHV	<u>0.0</u> % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: Demand	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>859</u>	Southbound: Autos <u>859</u>	Southbound: Autos <u>1341</u>
Med Trucks <u>27</u>	Med Trucks <u>27</u>	Med Trucks <u>61</u>
Hvy Trucks <u>9</u>	Hvy Trucks <u>9</u>	Hvy Trucks <u>20</u>
Buses <u>6</u>	Buses <u>6</u>	Buses <u>10</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>582</u>	Northbound: Autos <u>582</u>	Northbound: Autos <u>1316</u>
Med Trucks <u>18</u>	Med Trucks <u>18</u>	Med Trucks <u>41</u>
Hvy Trucks <u>6</u>	Hvy Trucks <u>6</u>	Hvy Trucks <u>14</u>
Buses <u>4</u>	Buses <u>4</u>	Buses <u>7</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>766</u>	Southbound: Autos <u>766</u>	Southbound: Autos <u>1551</u>
Med Trucks <u>24</u>	Med Trucks <u>24</u>	Med Trucks <u>49</u>
Hvy Trucks <u>8</u>	Hvy Trucks <u>8</u>	Hvy Trucks <u>16</u>
Buses <u>6</u>	Buses <u>6</u>	Buses <u>9</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>519</u>	Northbound: Autos <u>519</u>	Northbound: Autos <u>1051</u>
Med Trucks <u>18</u>	Med Trucks <u>18</u>	Med Trucks <u>33</u>
Hvy Trucks <u>5</u>	Hvy Trucks <u>5</u>	Hvy Trucks <u>11</u>
Buses <u>4</u>	Buses <u>4</u>	Buses <u>6</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of Courty Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Kingsway Road to Branch Forbes Road

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: <u>16,800</u>	ADT: <u>16,800</u>	ADT: <u>37,900</u>
LOS (C): <u>16,800</u>	LOS (C): <u>16,800</u>	LOS (C): <u>37,900</u>
Demand: <u>10,567</u>	Demand: <u>10,567</u>	Demand: <u>23,650</u>
Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.6</u> % for 24 hrs.	T= <u>10.0</u> % for 24 hrs.	T= <u>8.6</u> % for 24 hrs.
T= <u>4.3</u> % Design hr	T= <u>5.0</u> % Design hr	T= <u>4.3</u> % Design hr
<u>3.6</u> % Medium Trucks DHV	<u>3.6</u> % Medium Trucks DHV	<u>3.6</u> % Medium Trucks DHV
<u>1.7</u> % Heavy Trucks DHV	<u>1.7</u> % Heavy Trucks DHV	<u>1.7</u> % Heavy Trucks DHV
<u>0.0</u> % Buses DHV	<u>0.0</u> % Buses DHV	<u>0.0</u> % Buses DHV
<u>0.0</u> % Motorcycles DHV	<u>0.0</u> % Motorcycles DHV	<u>0.0</u> % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: Demand	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>853</u>	Southbound: Autos <u>853</u>	Southbound: Autos <u>1925</u>
Med Trucks <u>32</u>	Med Trucks <u>32</u>	Med Trucks <u>73</u>
Hvy Trucks <u>15</u>	Hvy Trucks <u>15</u>	Hvy Trucks <u>35</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>578</u>	Northbound: Autos <u>578</u>	Northbound: Autos <u>1305</u>
Med Trucks <u>22</u>	Med Trucks <u>22</u>	Med Trucks <u>50</u>
Hvy Trucks <u>10</u>	Hvy Trucks <u>10</u>	Hvy Trucks <u>23</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>537</u>	Southbound: Autos <u>537</u>	Southbound: Autos <u>1201</u>
Med Trucks <u>20</u>	Med Trucks <u>20</u>	Med Trucks <u>46</u>
Hvy Trucks <u>10</u>	Hvy Trucks <u>10</u>	Hvy Trucks <u>22</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>364</u>	Northbound: Autos <u>364</u>	Northbound: Autos <u>814</u>
Med Trucks <u>14</u>	Med Trucks <u>14</u>	Med Trucks <u>31</u>
Hvy Trucks <u>7</u>	Hvy Trucks <u>7</u>	Hvy Trucks <u>15</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of Courty Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Branch Forbes Road to Turkey Creek Rd

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: <u>16,800</u>	ADT: <u>16,800</u>	ADT: <u>37,900</u>
LOS (C) <u>16,800</u>	LOS (C) <u>16,800</u>	LOS (C) <u>37,900</u>
Demand <u>13,950</u>	Demand <u>19,600</u>	Demand <u>19,600</u>
Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.
T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr
2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV
2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV
0.0 % Buses DHV	0.0 % Buses DHV	0.0 % Buses DHV
0.0 % Motorcycles DHV	0.0 % Motorcycles DHV	0.0 % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: LOS (C)	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>863</u>	Southbound: Autos <u>863</u>	Southbound: Autos <u>1348</u>
Med Trucks <u>19</u>	Med Trucks <u>19</u>	Med Trucks <u>43</u>
Hvy Trucks <u>19</u>	Hvy Trucks <u>19</u>	Hvy Trucks <u>43</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>585</u>	Northbound: Autos <u>585</u>	Northbound: Autos <u>1320</u>
Med Trucks <u>13</u>	Med Trucks <u>13</u>	Med Trucks <u>29</u>
Hvy Trucks <u>13</u>	Hvy Trucks <u>13</u>	Hvy Trucks <u>29</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>717</u>	Southbound: Autos <u>1007</u>	Southbound: Autos <u>1007</u>
Med Trucks <u>16</u>	Med Trucks <u>22</u>	Med Trucks <u>22</u>
Hvy Trucks <u>16</u>	Hvy Trucks <u>22</u>	Hvy Trucks <u>22</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>486</u>	Northbound: Autos <u>683</u>	Northbound: Autos <u>683</u>
Med Trucks <u>11</u>	Med Trucks <u>15</u>	Med Trucks <u>15</u>
Hvy Trucks <u>11</u>	Hvy Trucks <u>15</u>	Hvy Trucks <u>15</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of Courty Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Turkey Creek Rd to Thonotosassa Rd/Lemon St

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>2</u>	Lanes: <u>2</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: LOS (C) <u>16,800</u>	ADT: LOS (C) <u>16,800</u>	ADT: LOS (C) <u>37,900</u>
Demand <u>11,550</u>	Demand <u>19,625</u>	Demand <u>19,625</u>
Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>55</u> mph <u>89</u> kmh	Speed: <u>50</u> mph <u>80</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.
T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr
2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV
2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV
0.0 % Buses DHV	0.0 % Buses DHV	0.0 % Buses DHV
0.0 % Motorcycles DHV	0.0 % Motorcycles DHV	0.0 % Motorcycles DHV

STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: LOS (C)	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>863</u>	Southbound: Autos <u>863</u>	Southbound: Autos <u>1348</u>
Med Trucks <u>13</u>	Med Trucks <u>13</u>	Med Trucks <u>43</u>
Hvy Trucks <u>13</u>	Hvy Trucks <u>13</u>	Hvy Trucks <u>43</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>585</u>	Northbound: Autos <u>585</u>	Northbound: Autos <u>1320</u>
Med Trucks <u>13</u>	Med Trucks <u>13</u>	Med Trucks <u>29</u>
Hvy Trucks <u>13</u>	Hvy Trucks <u>13</u>	Hvy Trucks <u>29</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>594</u>	Southbound: Autos <u>1008</u>	Southbound: Autos <u>1008</u>
Med Trucks <u>13</u>	Med Trucks <u>22</u>	Med Trucks <u>22</u>
Hvy Trucks <u>13</u>	Hvy Trucks <u>22</u>	Hvy Trucks <u>22</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>402</u>	Northbound: Autos <u>684</u>	Northbound: Autos <u>684</u>
Med Trucks <u>9</u>	Med Trucks <u>15</u>	Med Trucks <u>15</u>
Hvy Trucks <u>9</u>	Hvy Trucks <u>15</u>	Hvy Trucks <u>15</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

TRAFFIC DATA FOR NOISE STUDIES

Project: SR 600 (US 92) from East of I-4 to East of Courty Line Road Date: 3/9/2016
 State Project Number(s): _____ Prepared By: AMH
 Financial Project ID: 435749 1 22 01
 Federal Aid Number(s): N/A
 Segment Description: Maryland Ave to Park Road

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

Existing Facility	No-Build (Design Year)	Build (Design Year)
Lanes: <u>4</u>	Lanes: <u>4</u>	Lanes: <u>4</u>
Year: <u>2015</u>	Year: <u>2040</u>	Year: <u>2040</u>
ADT: <u>37,900</u>	ADT: <u>37,900</u>	ADT: <u>37,900</u>
LOS (C): <u>37,900</u>	LOS (C): <u>37,900</u>	LOS (C): <u>37,900</u>
Demand: <u>13,300</u>	Demand: <u>31,400</u>	Demand: <u>31,400</u>
Speed: <u>45</u> mph <u>72</u> kmh	Speed: <u>45</u> mph <u>72</u> kmh	Speed: <u>45</u> mph <u>72</u> kmh
K= <u>9.0</u> %	K= <u>9.0</u> %	K= <u>9.0</u> %
D= <u>59.6</u> %	D= <u>59.6</u> %	D= <u>59.6</u> %
T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.	T= <u>8.5</u> % for 24 hrs.
T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr	T= <u>4.2</u> % Design hr
2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV	2.1 % Medium Trucks DHV
2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV	2.1 % Heavy Trucks DHV
0.0 % Buses DHV	0.0 % Buses DHV	0.0 % Buses DHV
0.0 % Motorcycles DHV	0.0 % Motorcycles DHV	0.0 % Motorcycles DHV

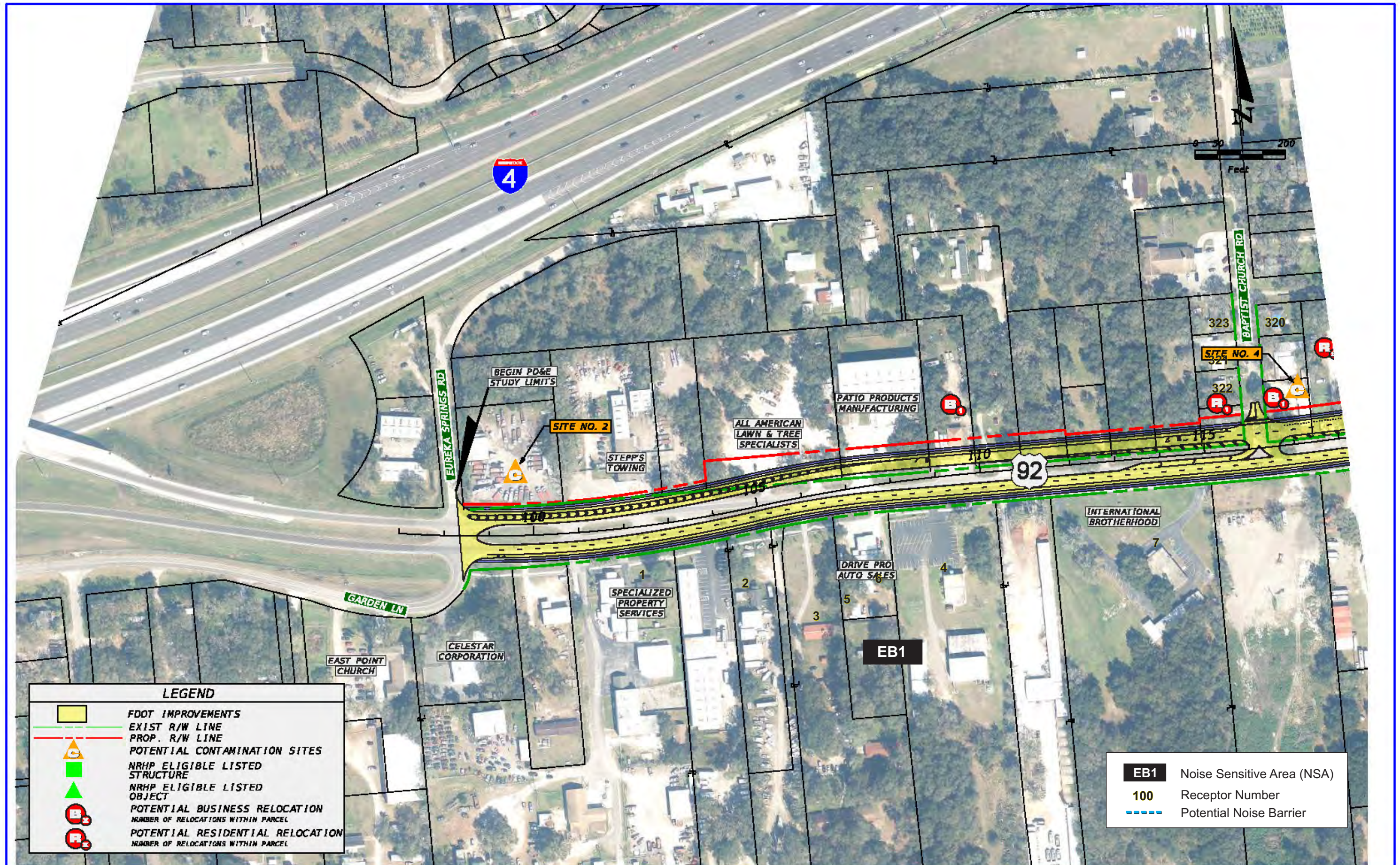
STAMINA/TNM INPUT

The following are spreadsheet calculations based on the input above - do not enter data below this line

Existing Facility Model: Demand	No-Build (Design Year) Model: Demand	Build (Design Year) Model: Demand
LOS (C)	LOS (C)	LOS (C)
Southbound: Autos <u>1948</u>	Southbound: Autos <u>1948</u>	Southbound: Autos <u>1948</u>
Med Trucks <u>43</u>	Med Trucks <u>43</u>	Med Trucks <u>43</u>
Hvy Trucks <u>43</u>	Hvy Trucks <u>43</u>	Hvy Trucks <u>43</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>1320</u>	Northbound: Autos <u>1320</u>	Northbound: Autos <u>1320</u>
Med Trucks <u>29</u>	Med Trucks <u>29</u>	Med Trucks <u>29</u>
Hvy Trucks <u>29</u>	Hvy Trucks <u>29</u>	Hvy Trucks <u>29</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Demand	Demand	Demand
Southbound: Autos <u>683</u>	Southbound: Autos <u>1614</u>	Southbound: Autos <u>1614</u>
Med Trucks <u>15</u>	Med Trucks <u>35</u>	Med Trucks <u>35</u>
Hvy Trucks <u>15</u>	Hvy Trucks <u>35</u>	Hvy Trucks <u>35</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>
Northbound: Autos <u>463</u>	Northbound: Autos <u>1094</u>	Northbound: Autos <u>1094</u>
Med Trucks <u>10</u>	Med Trucks <u>24</u>	Med Trucks <u>24</u>
Hvy Trucks <u>10</u>	Hvy Trucks <u>24</u>	Hvy Trucks <u>24</u>
Buses <u>0</u>	Buses <u>0</u>	Buses <u>0</u>
Motorcycles <u>0</u>	Motorcycles <u>0</u>	Motorcycles <u>0</u>

Appendix B

Project Aerials



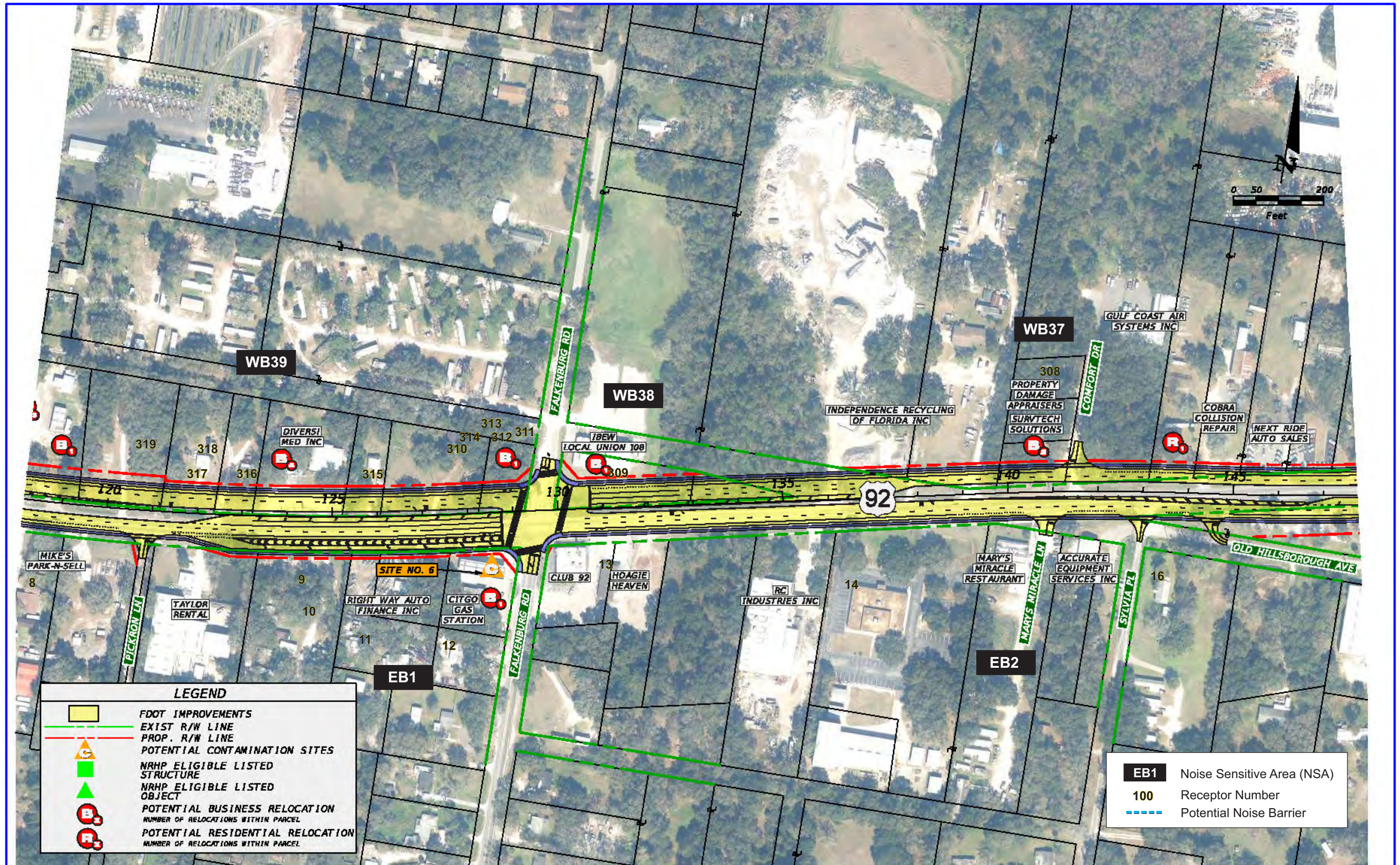
REVISIONS	
DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 1
 PREFERRED ALIGNMENT**

SHEET NO.
 1



REVISIONS	
DATE	DESCRIPTION

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ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 1
 PREFERRED ALIGNMENT**

SHEET NO.
 2



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	FDOT IMPROVEMENTS
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	PROP. R/W LINE
	POTENTIAL CONTAMINATION SITES
	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL

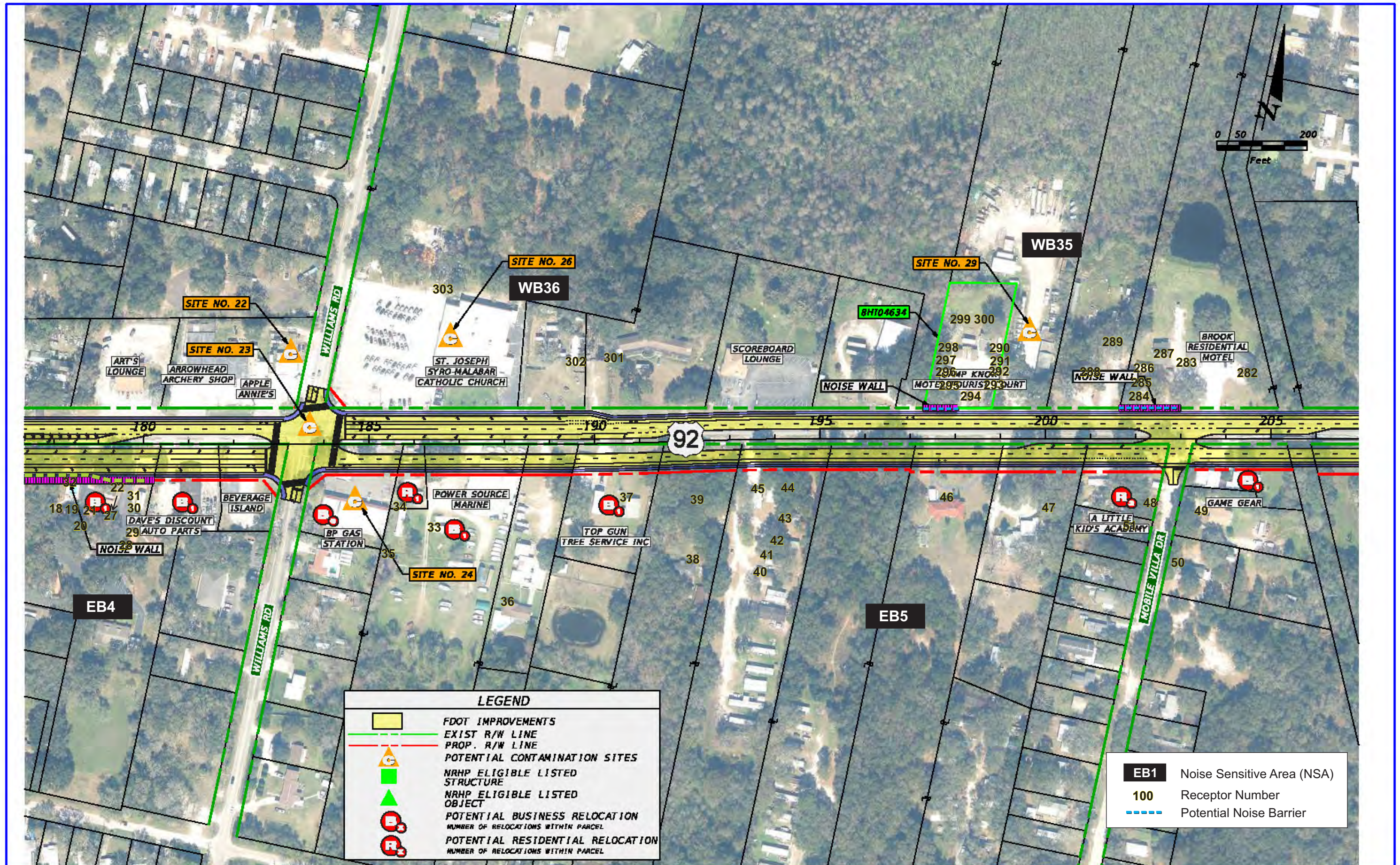
REVISIONS	
DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
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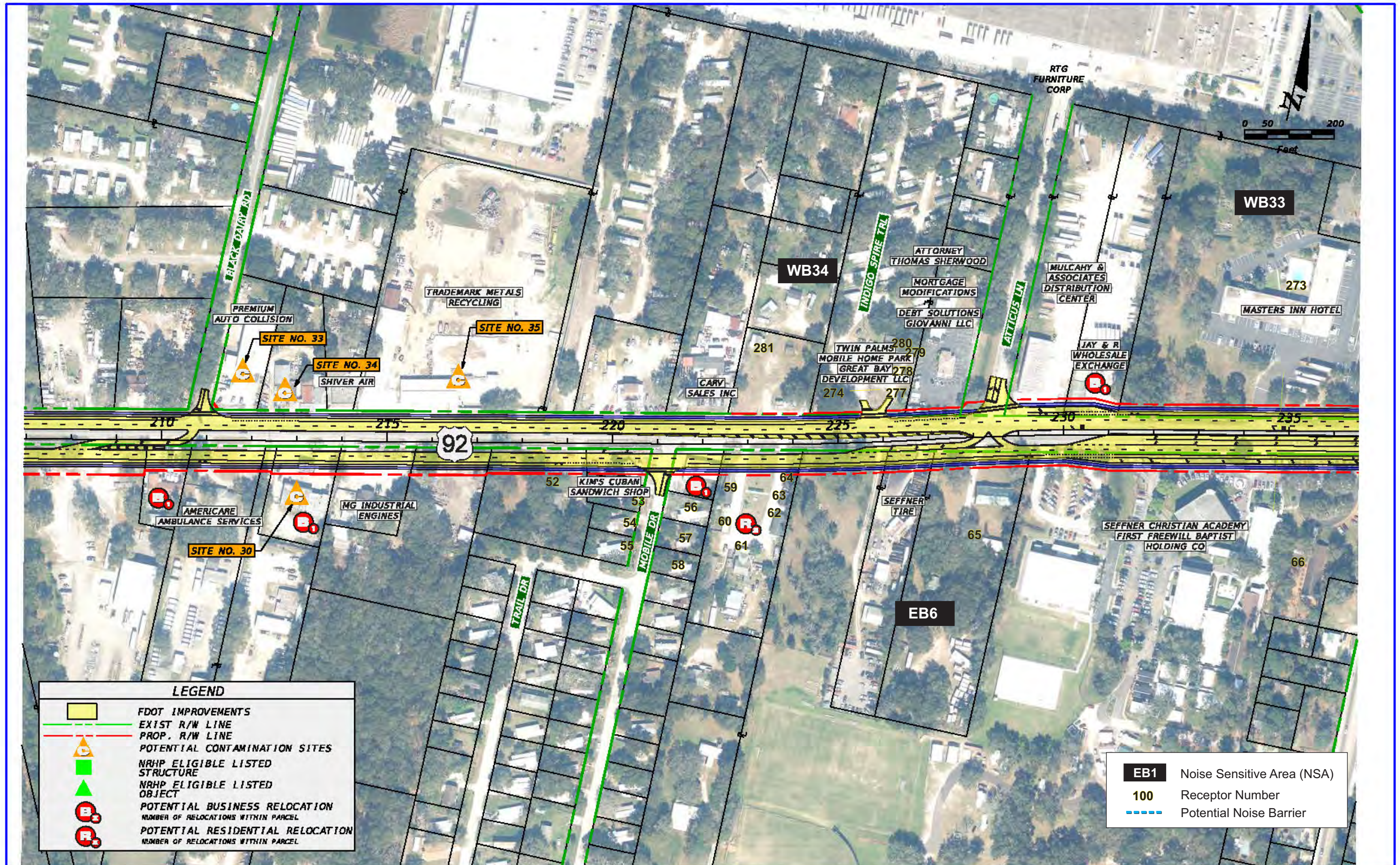
**US 92 / SR 600
 PLAN SHEETS SEG 1
 PREFERRED ALIGNMENT**

SHEET NO.
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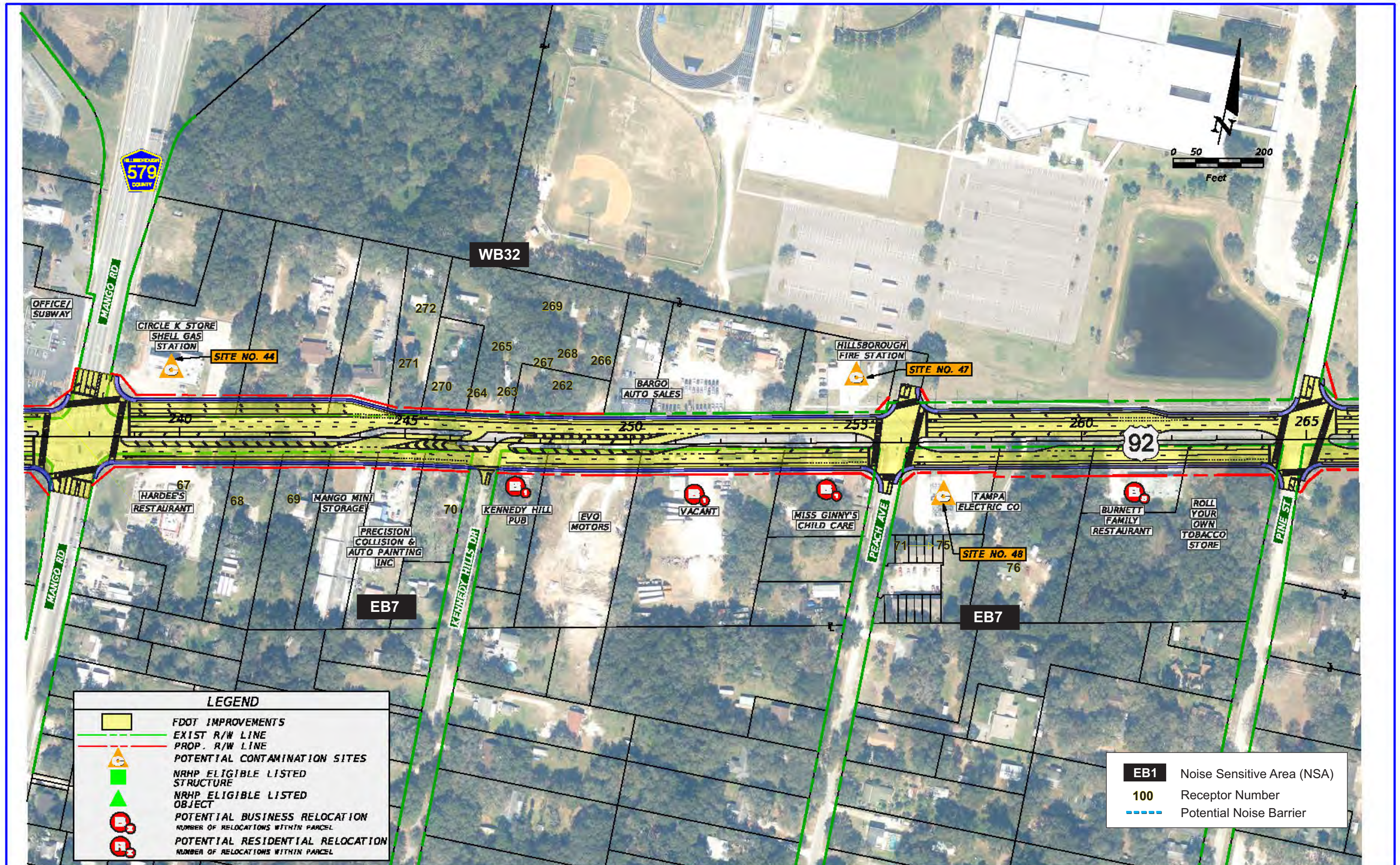
	Noise Sensitive Area (NSA)
	Receptor Number
	Potential Noise Barrier

REVISIONS		ENGINEER OF RECORD Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32785 P. 407.971.8850	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			US 92 / SR 600 PLAN SHEETS SEG 1 PREFERRED ALIGNMENT	SHEET NO. 4
DATE	DESCRIPTION		ROAD NO.	COUNTY	WPI SEGMENT NO.		
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REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA			US 92 / SR 600 PLAN SHEETS SEG 2 PREFERRED ALIGNMENT	SHEET NO. 5
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				ROAD NO.	COUNTY	WPI SEGMENT NO.		
				600	HILLSBOROUGH	435749-1		

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**US 92 / SR 600
PLAN SHEETS SEG 2
PREFERRED ALIGNMENT**



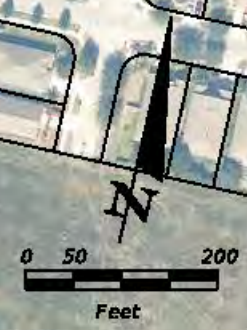
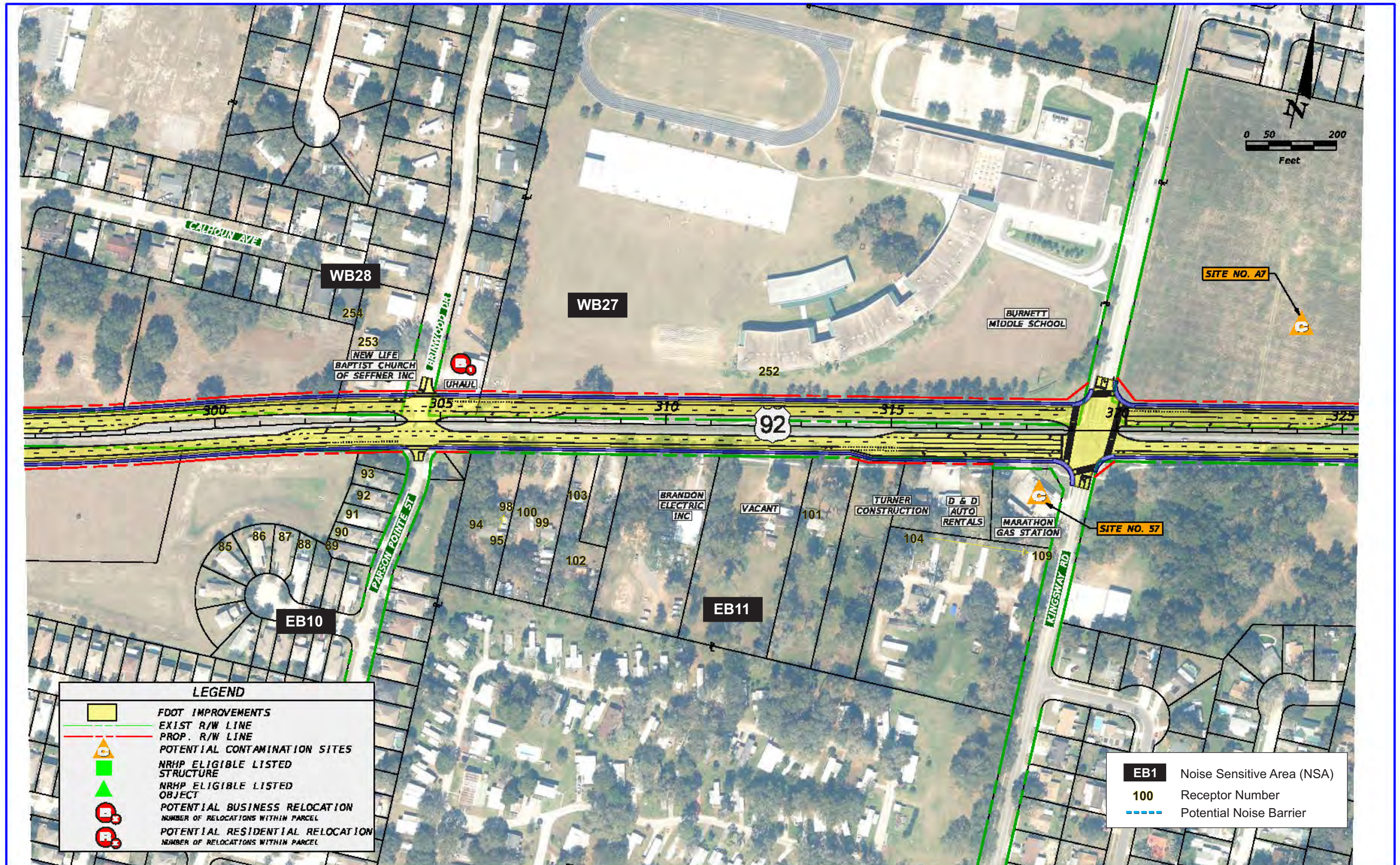
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	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL
	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
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US 92 / SR 600
PLAN SHEETS SEG 4
PREFERRED ALIGNMENT



LEGEND

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	PROP. R/W LINE
	POTENTIAL CONTAMINATION SITES
	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

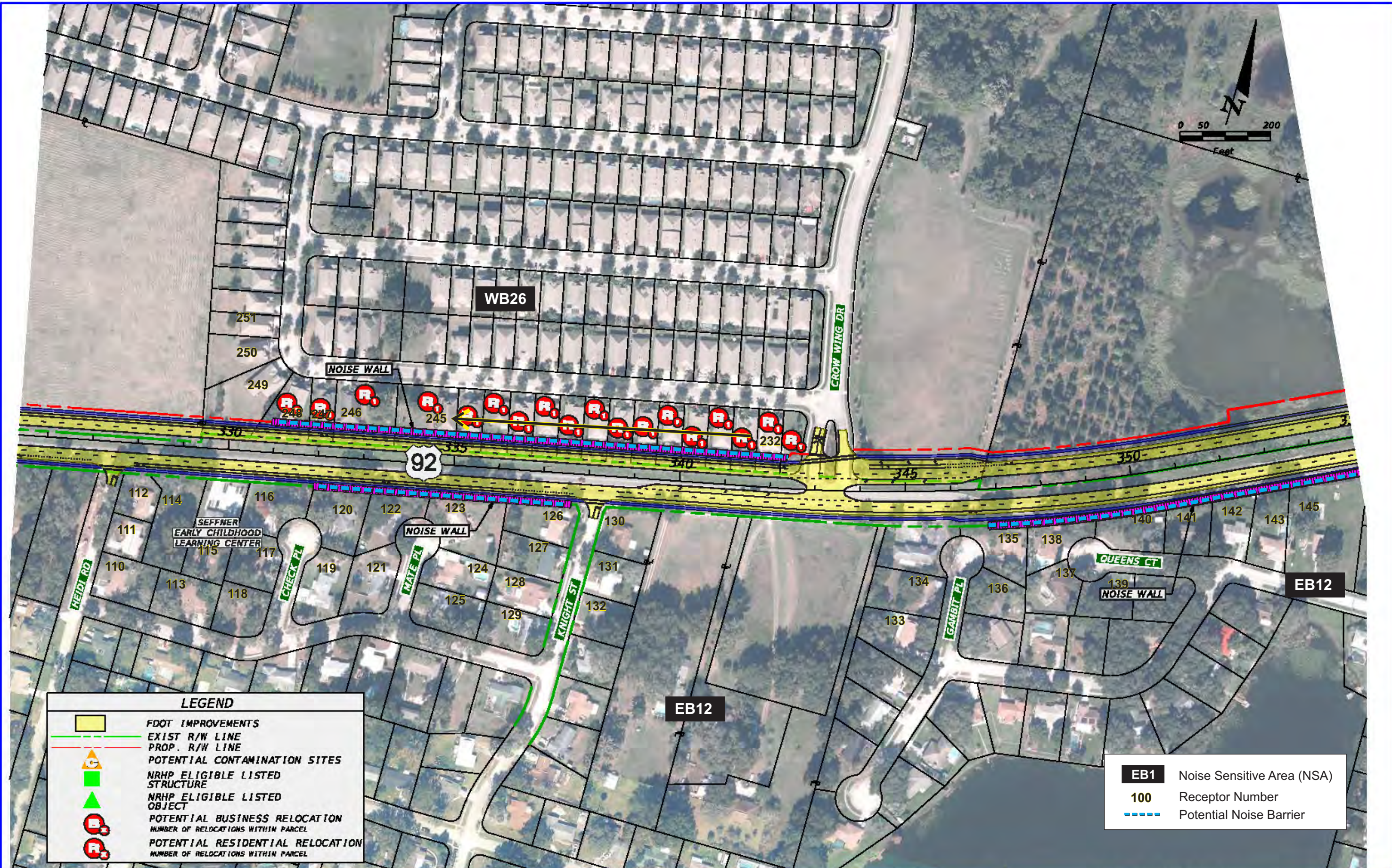
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 4
 PREFERRED ALIGNMENT**

SHEET NO.
 8



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	FDOT IMPROVEMENTS
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	PROP. R/W LINE
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	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

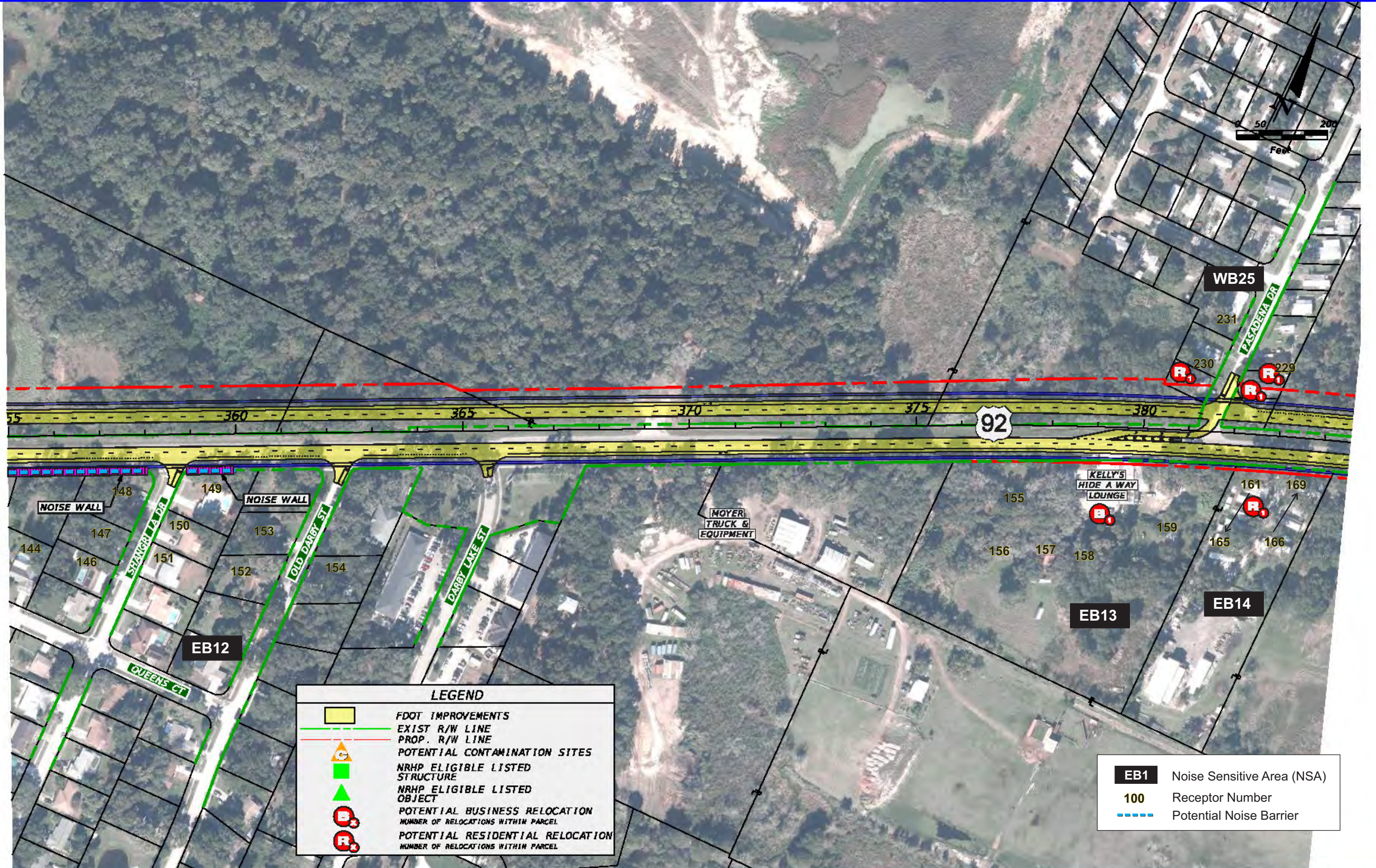
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DATE	DESCRIPTION

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ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 4
 PREFERRED ALIGNMENT**

SHEET NO.
9



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	PROP. R/W LINE
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	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

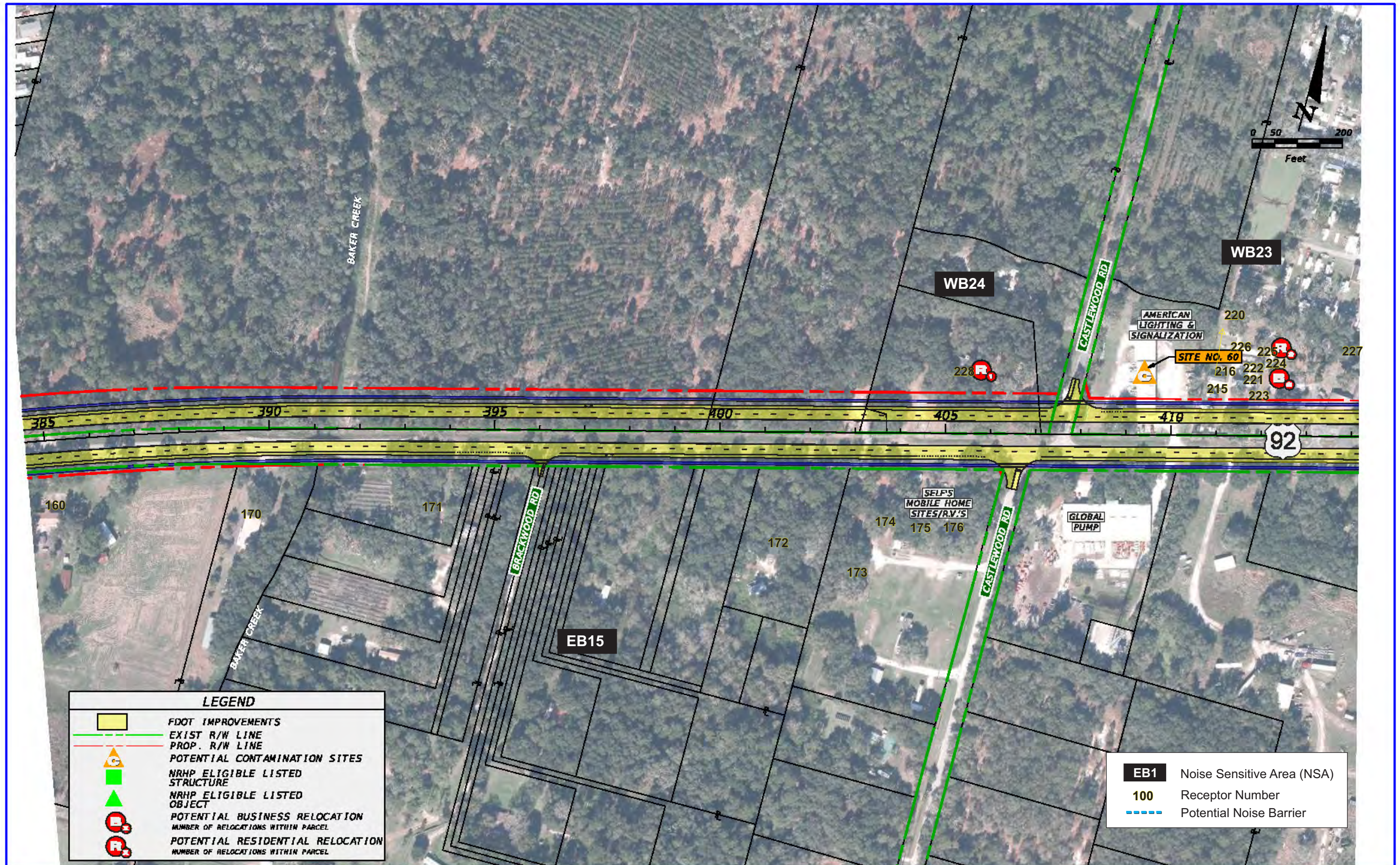
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 5
 PREFERRED ALIGNMENT**

SHEET NO.
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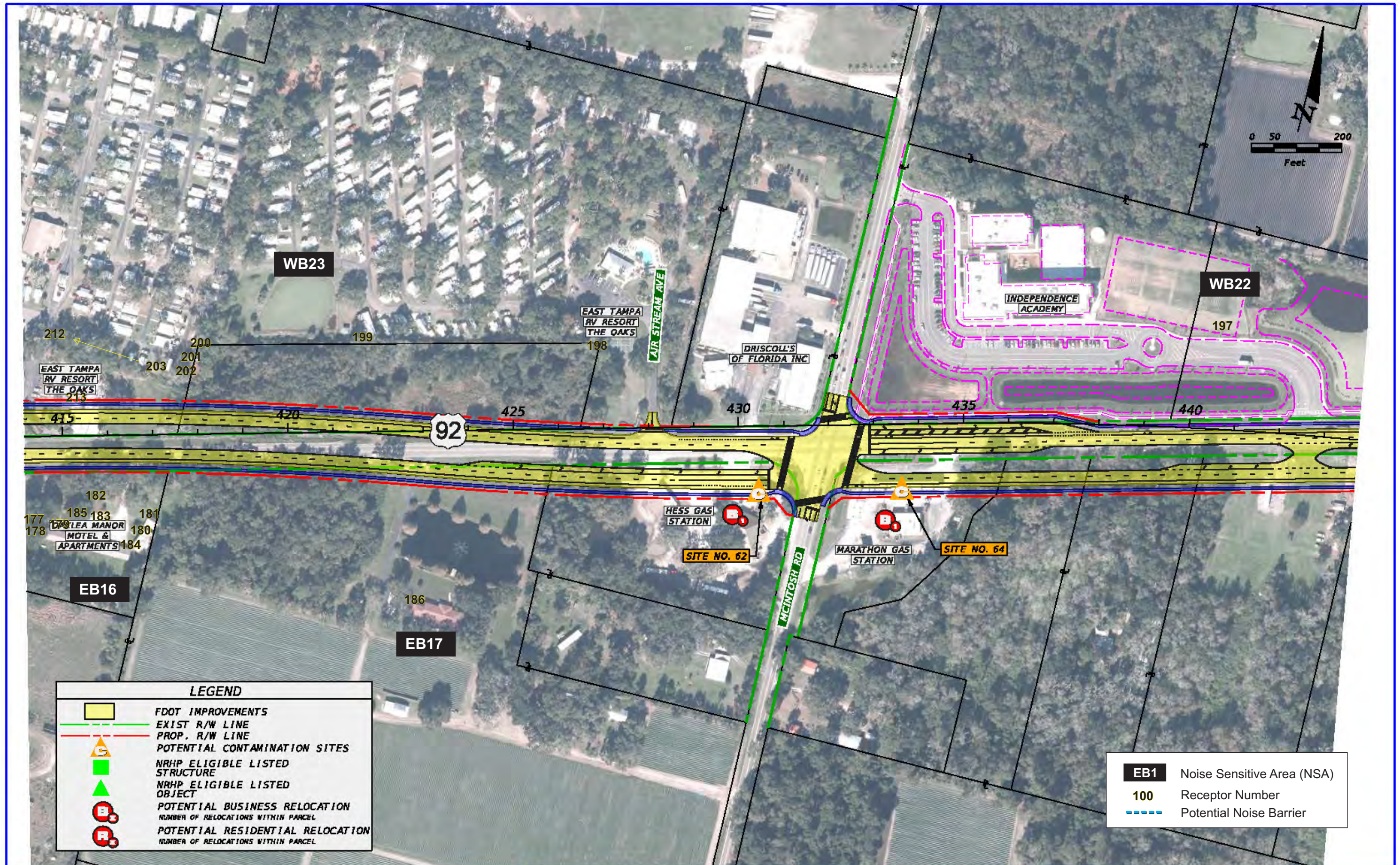


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	PROP. R/W LINE
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	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS		DATE	DESCRIPTION			<p>ENGINEER OF RECORD Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32785 P. 407.971.8850</p>	<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p> <table border="1"> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>WPI SEGMENT NO.</th> </tr> <tr> <td>600</td> <td>HILLSBOROUGH</td> <td>435749-1</td> </tr> </table>	ROAD NO.	COUNTY	WPI SEGMENT NO.	600	HILLSBOROUGH	435749-1	<p>US 92 / SR 600 PLAN SHEETS SEG 6 PREFERRED ALIGNMENT</p>	<p>SHEET NO. 11</p>
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ROAD NO.	COUNTY	WPI SEGMENT NO.															
600	HILLSBOROUGH	435749-1															



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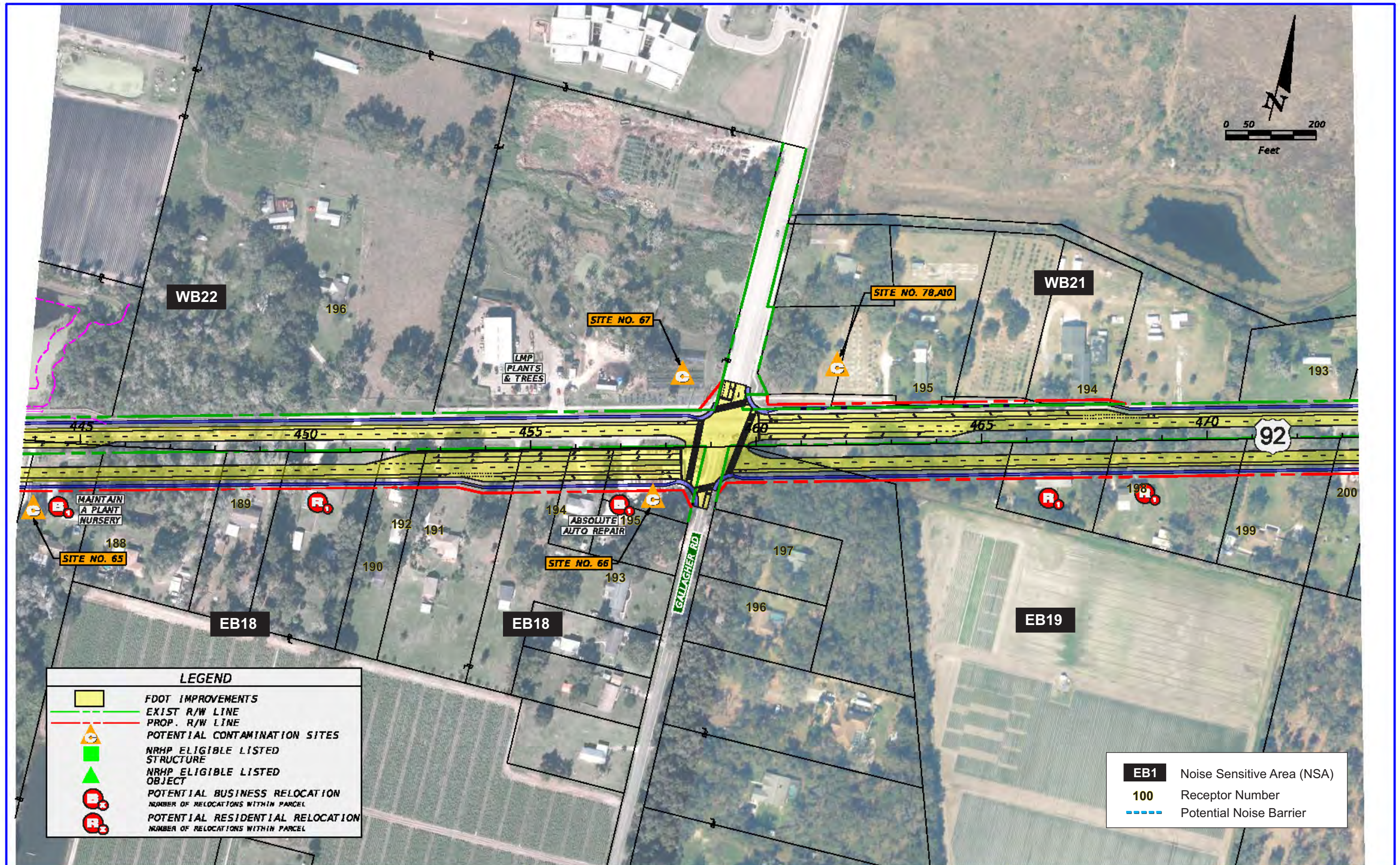
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	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

	EB1 Noise Sensitive Area (NSA)
	100 Receptor Number
	Potential Noise Barrier

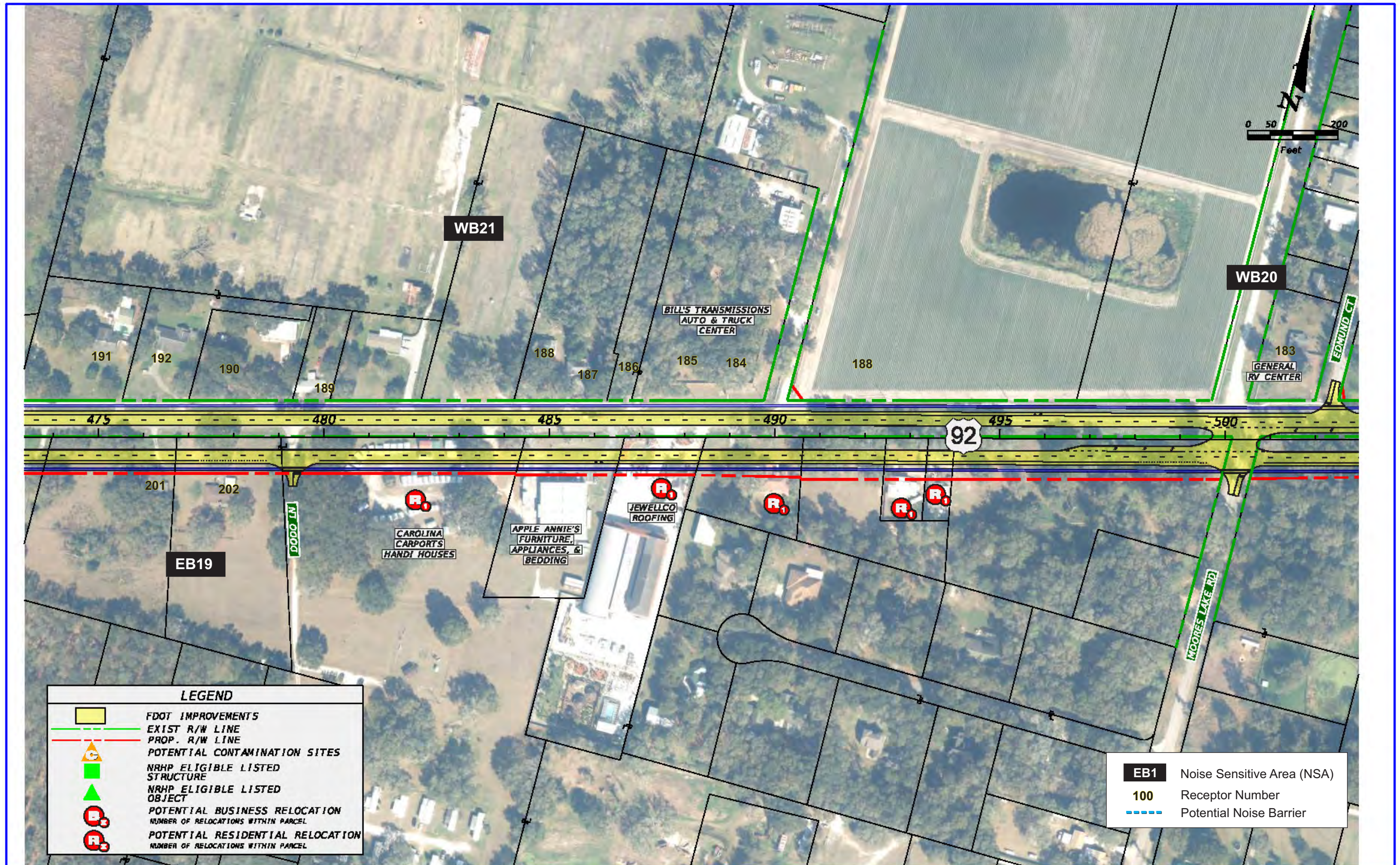
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				600	HILLSBOROUGH	435749-1	12

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**US 92 / SR 600
 PLAN SHEETS SEG 6
 PREFERRED ALIGNMENT**



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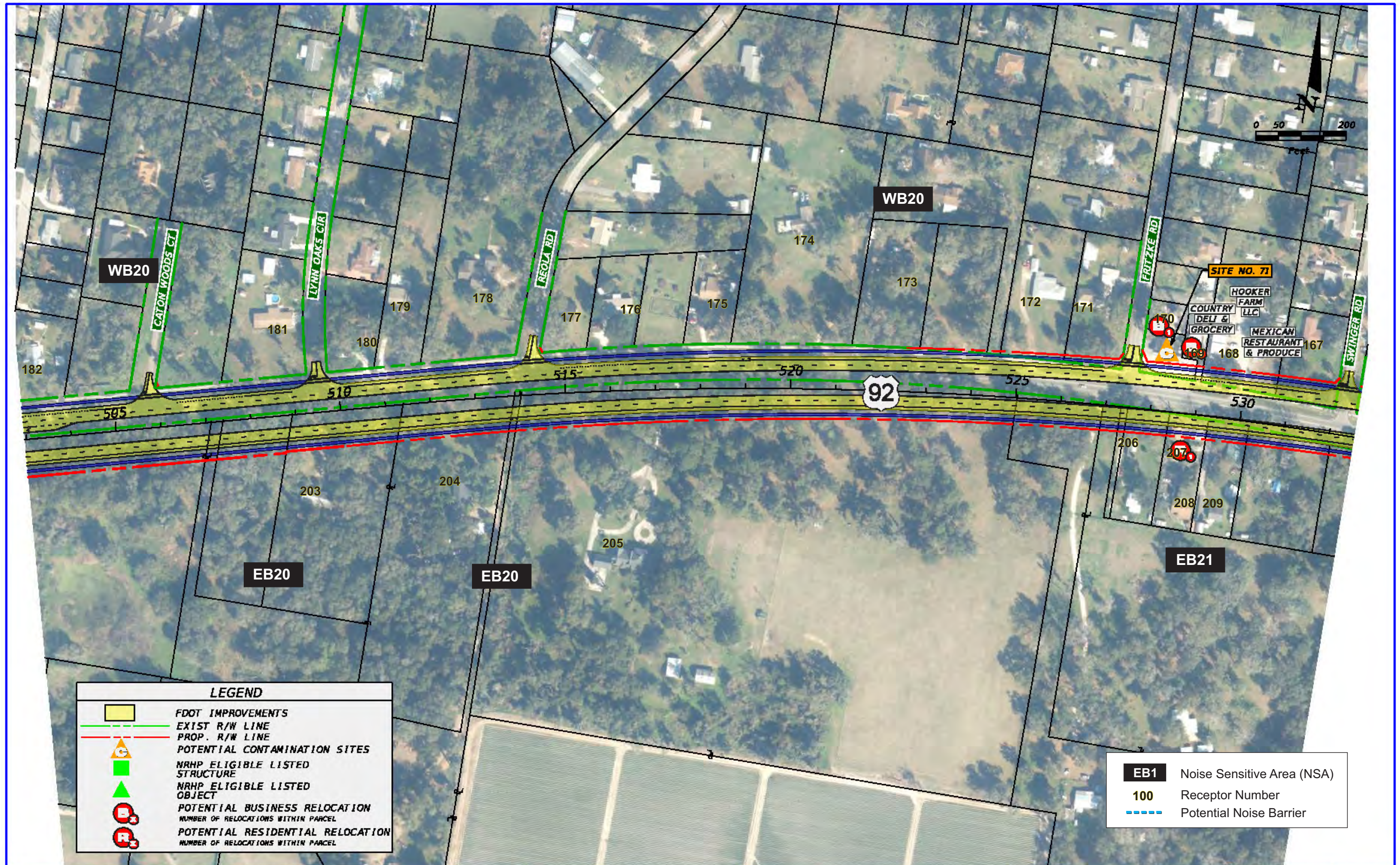


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- EXIST R/W LINE
- PROP. R/W LINE
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- NRHP ELIGIBLE LISTED STRUCTURE
- NRHP ELIGIBLE LISTED OBJECT
- R₁ POTENTIAL BUSINESS RELOCATION
NUMBER OF RELOCATIONS WITHIN PARCEL
- R₂ POTENTIAL RESIDENTIAL RELOCATION
NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA			US 92 / SR 600 PLAN SHEETS SEG 7 PREFERRED ALIGNMENT	SHEET NO. 14
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	WPI SEGMENT NO.		
				Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32785 P 407.971.8850	600	HILLSBOROUGH	435749-1	



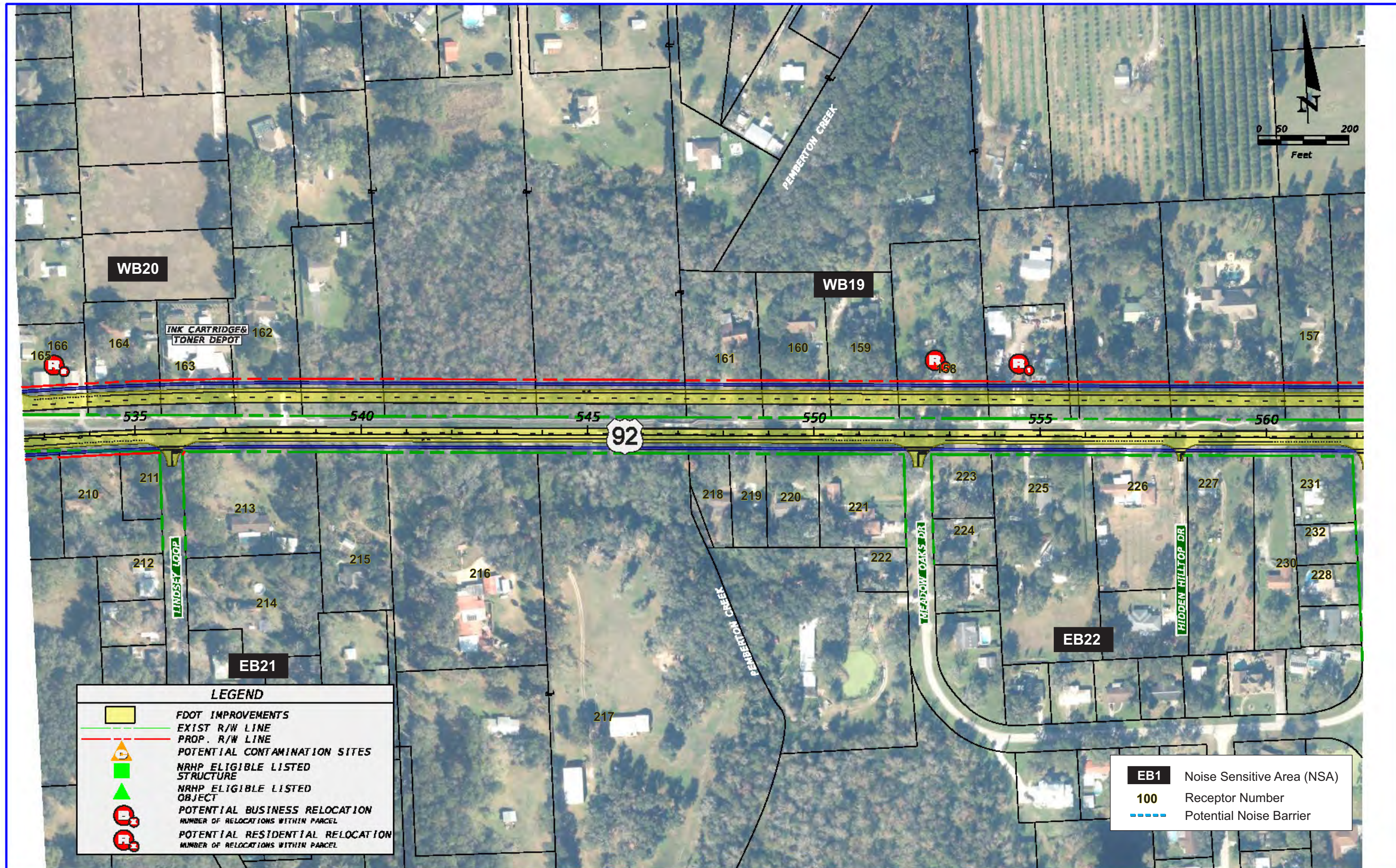
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	NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

REVISIONS				ENGINEER OF RECORD Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32765 P 407.971.8850	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. 15
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	WPI SEGMENT NO.	
					600	HILLSBOROUGH	435749-1	

**US 92 / SR 600
PLAN SHEETS SEG 8
PREFERRED ALIGNMENT**



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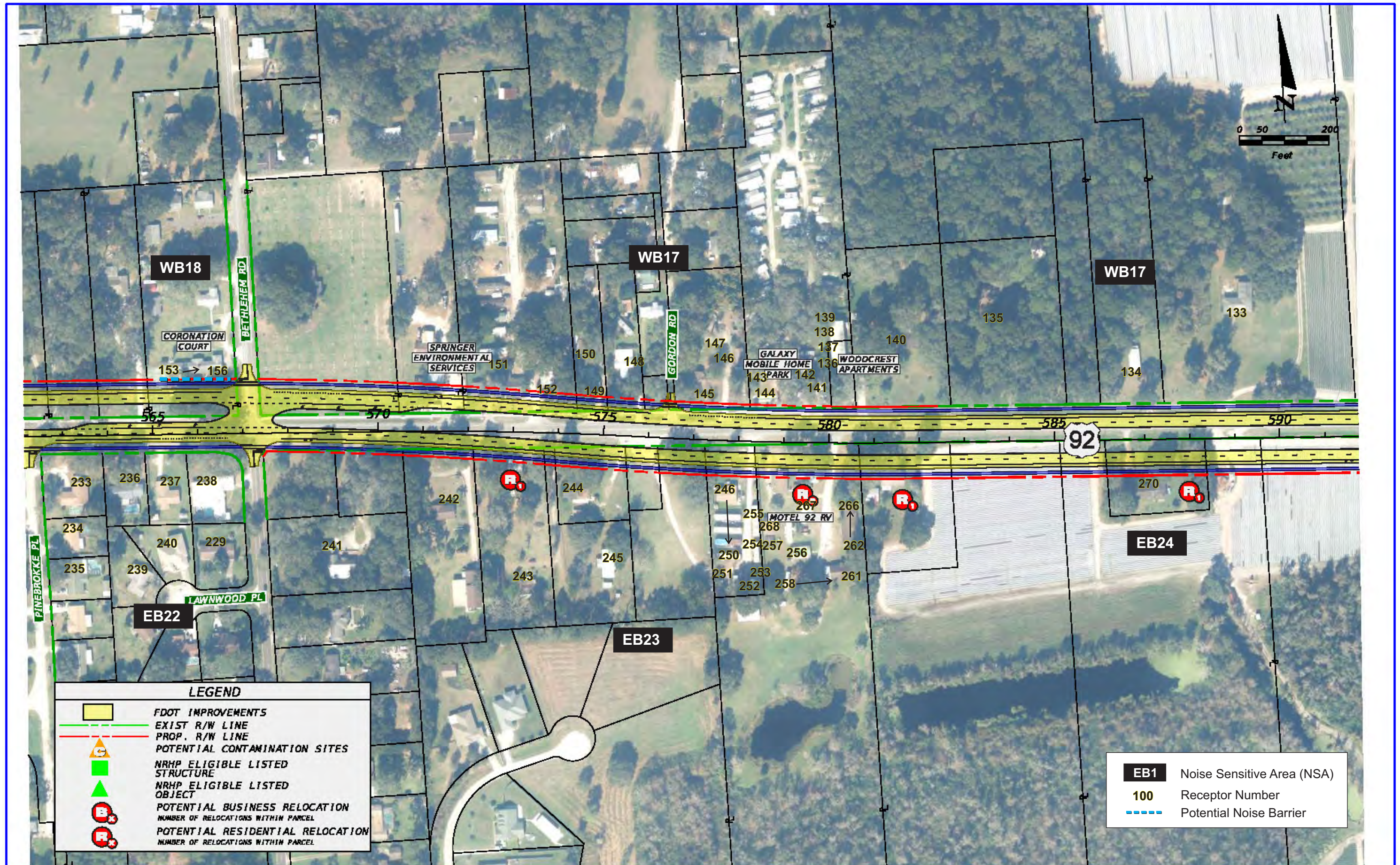
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	NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	DEPARTMENT OF TRANSPORTATION			
				ROAD NO.	COUNTY	WPI SEGMENT NO.	16
				600	HILLSBOROUGH	435749-1	

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US 92 / SR 600
PLAN SHEETS SEG 8
PREFERRED ALIGNMENT



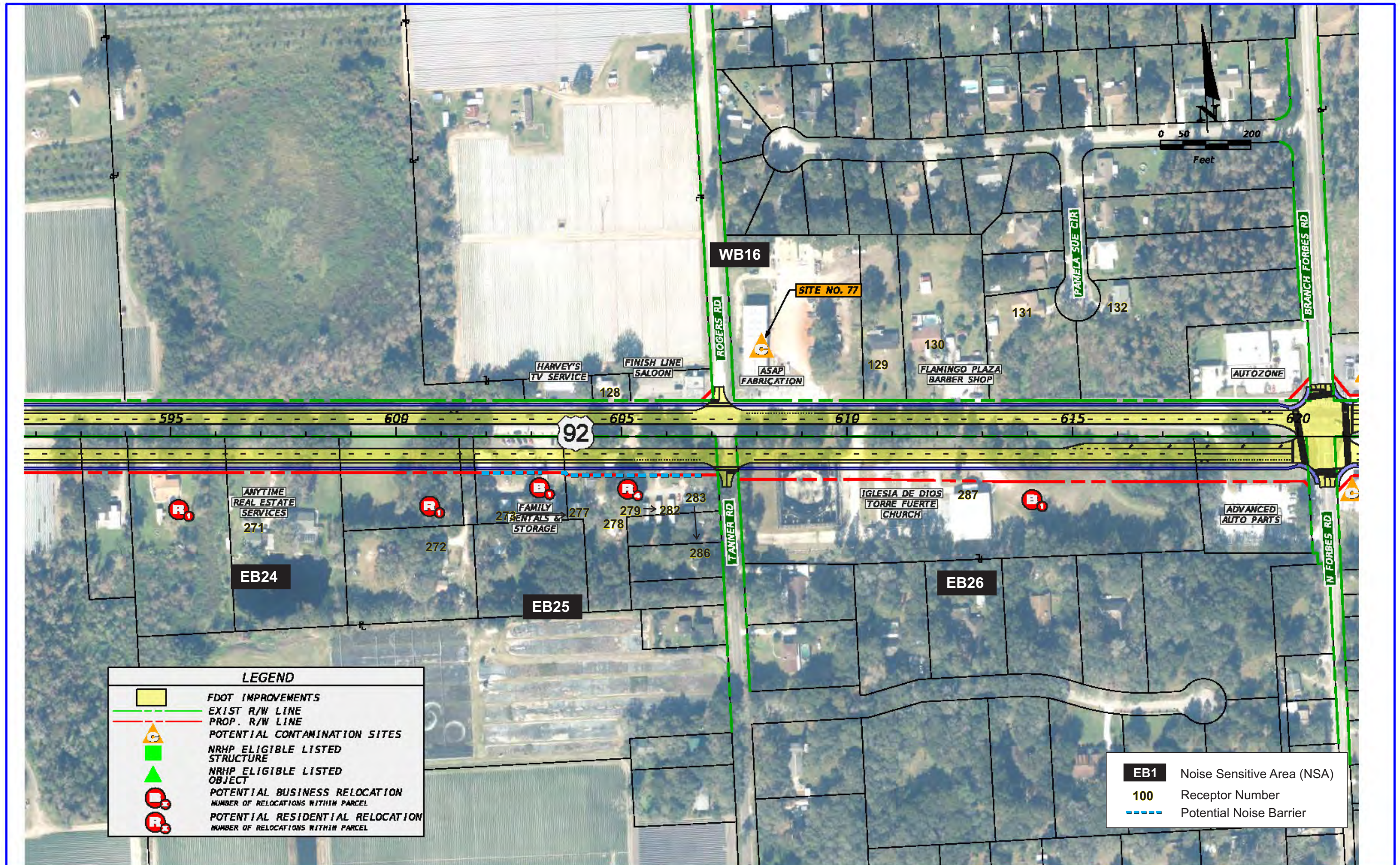
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	POTENTIAL BUSINESS RELOCATION
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA			US 92 / SR 600 PLAN SHEETS SEG 8 PREFERRED ALIGNMENT	SHEET NO. 17
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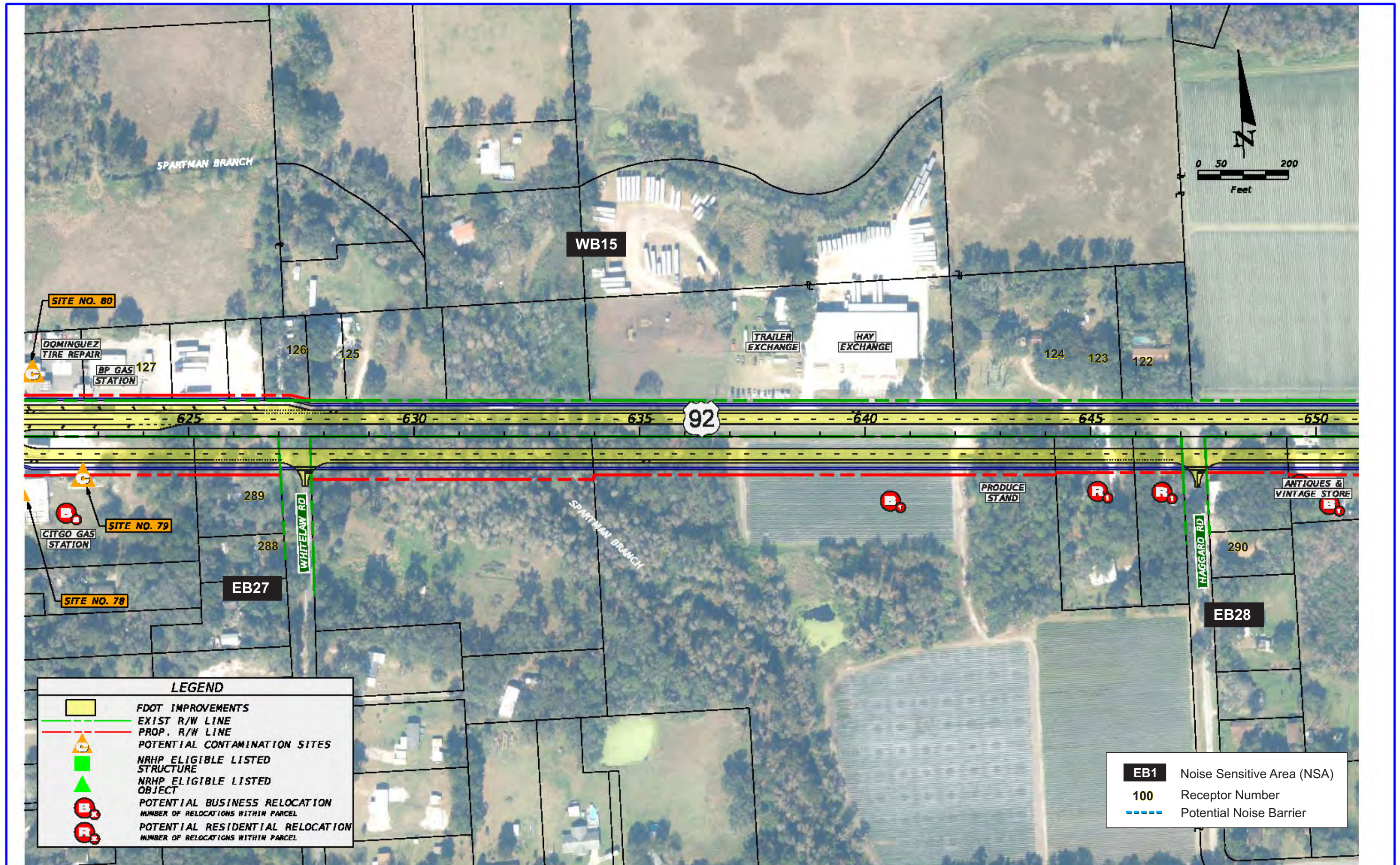


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	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL

	Noise Sensitive Area (NSA)
	Receptor Number
	Potential Noise Barrier

<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS		DATE	DESCRIPTION			<p>ENGINEER OF RECORD Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32785 P 407.971.8850</p>		<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p> <table border="1"> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>WPI SEGMENT NO.</th> </tr> <tr> <td>600</td> <td>HILLSBOROUGH</td> <td>435749-1</td> </tr> </table>		ROAD NO.	COUNTY	WPI SEGMENT NO.	600	HILLSBOROUGH	435749-1	<p>US 92 / SR 600 PLAN SHEETS SEG 9 PREFERRED ALIGNMENT</p>		<p>SHEET NO. 18</p>
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600	HILLSBOROUGH	435749-1																		



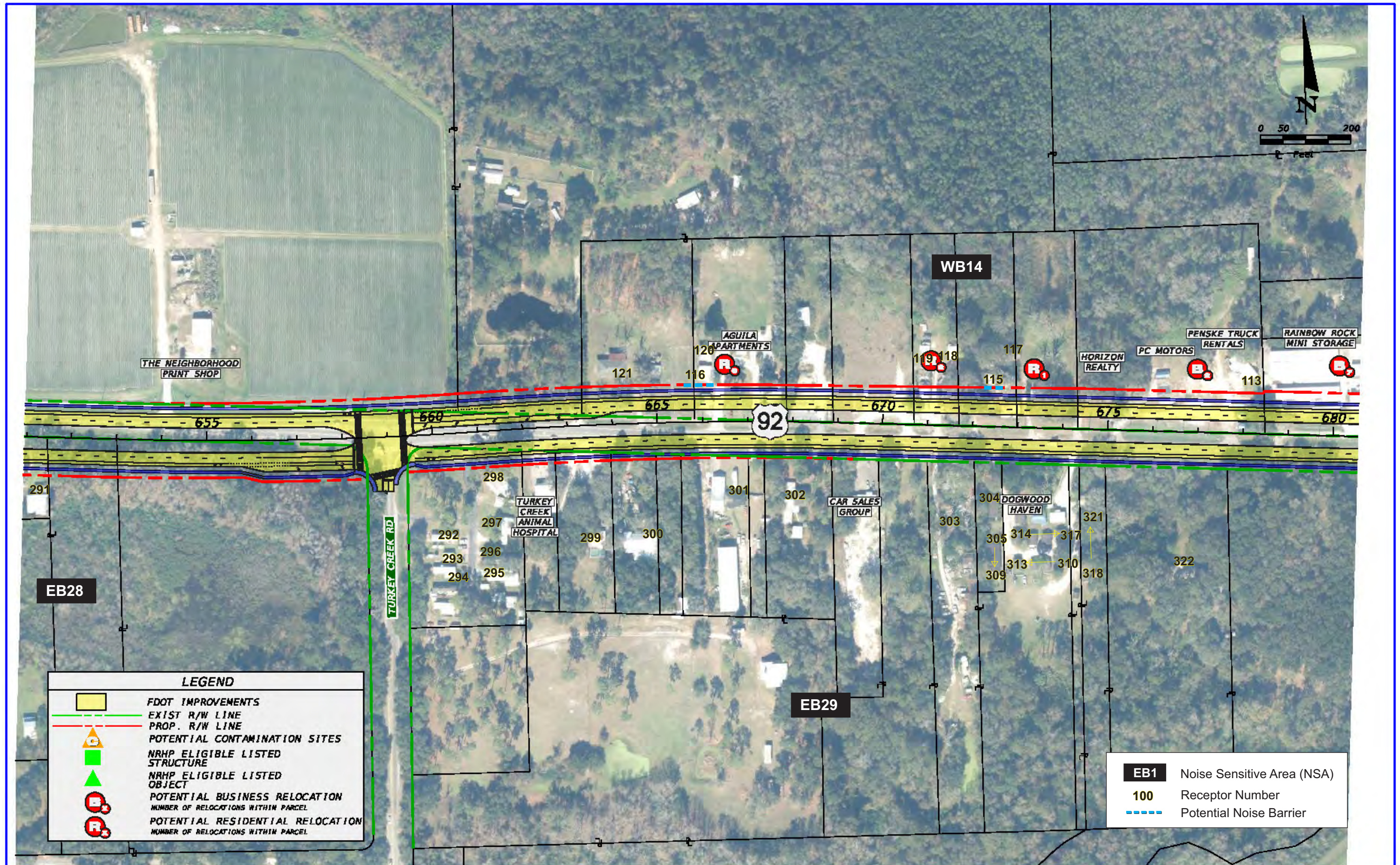
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ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 9
 PREFERRED ALIGNMENT**

SHEET NO.
19



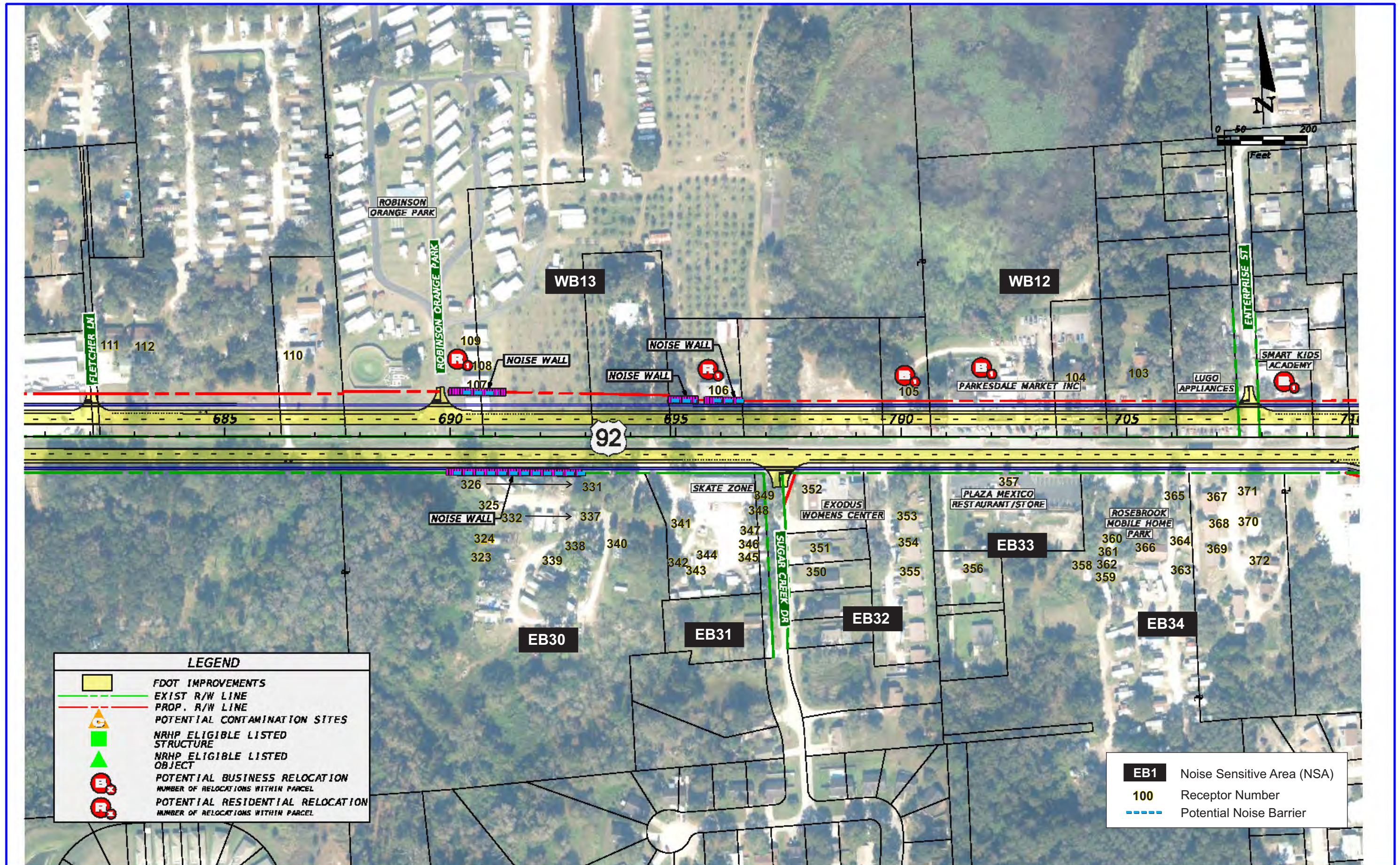
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- FDOT IMPROVEMENTS
- EXIST R/W LINE
- PROP. R/W LINE
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- NRHP ELIGIBLE LISTED STRUCTURE
- NRHP ELIGIBLE LISTED OBJECT
- R₁ POTENTIAL BUSINESS RELOCATION
NUMBER OF RELOCATIONS WITHIN PARCEL
- R₂ POTENTIAL RESIDENTIAL RELOCATION
NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			US 92 / SR 600 PLAN SHEETS SEG 9 PREFERRED ALIGNMENT	SHEET NO. 20
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	WPI SEGMENT NO.		
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LEGEND

	FDOT IMPROVEMENTS
	EXIST R/W LINE
	PROP. R/W LINE
	POTENTIAL CONTAMINATION SITES
	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL
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	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

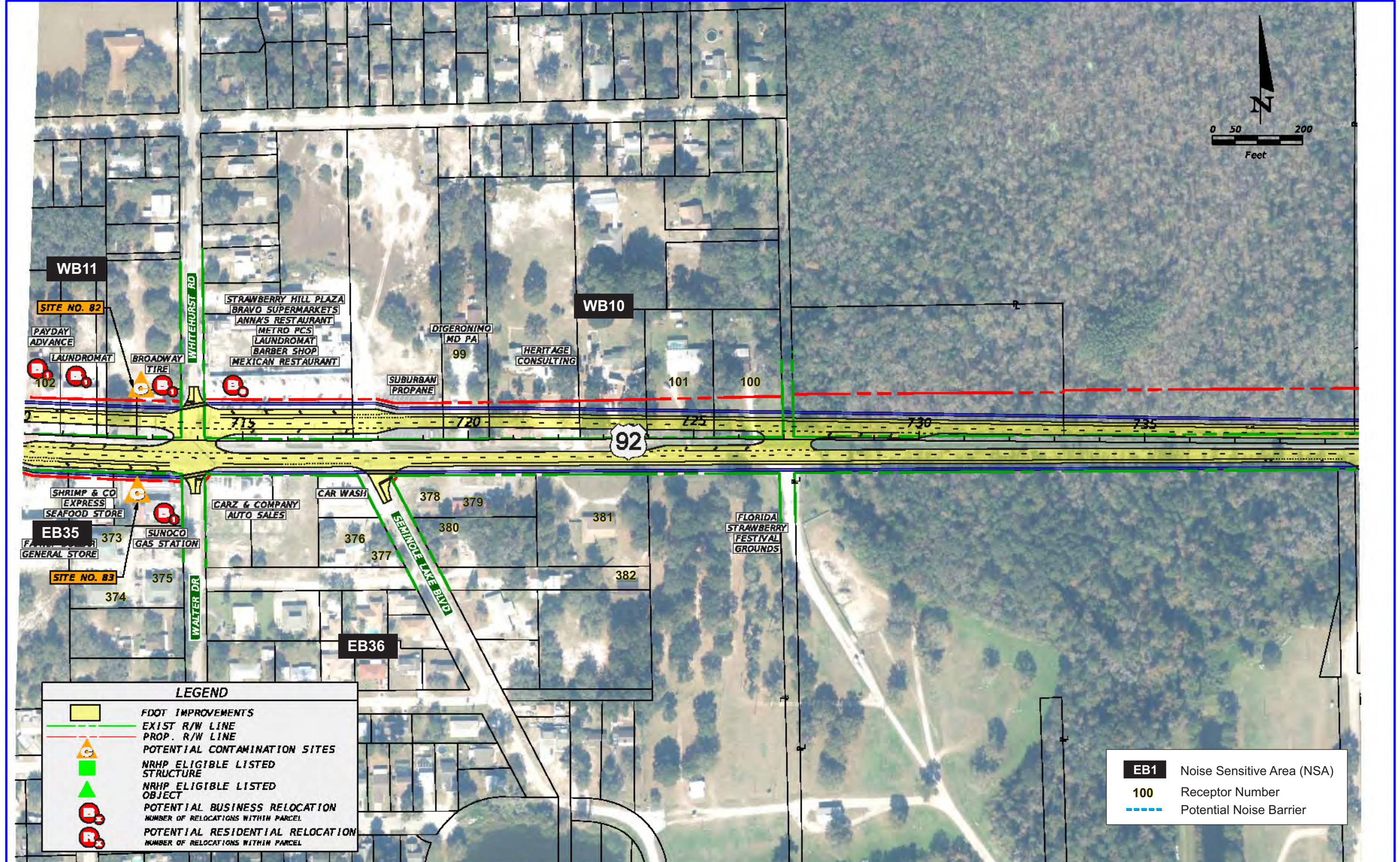
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DATE	DESCRIPTION	DATE	DESCRIPTION

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**US 92 / SR 600
 PLAN SHEETS SEG 9
 PREFERRED ALIGNMENT**

SHEET NO.
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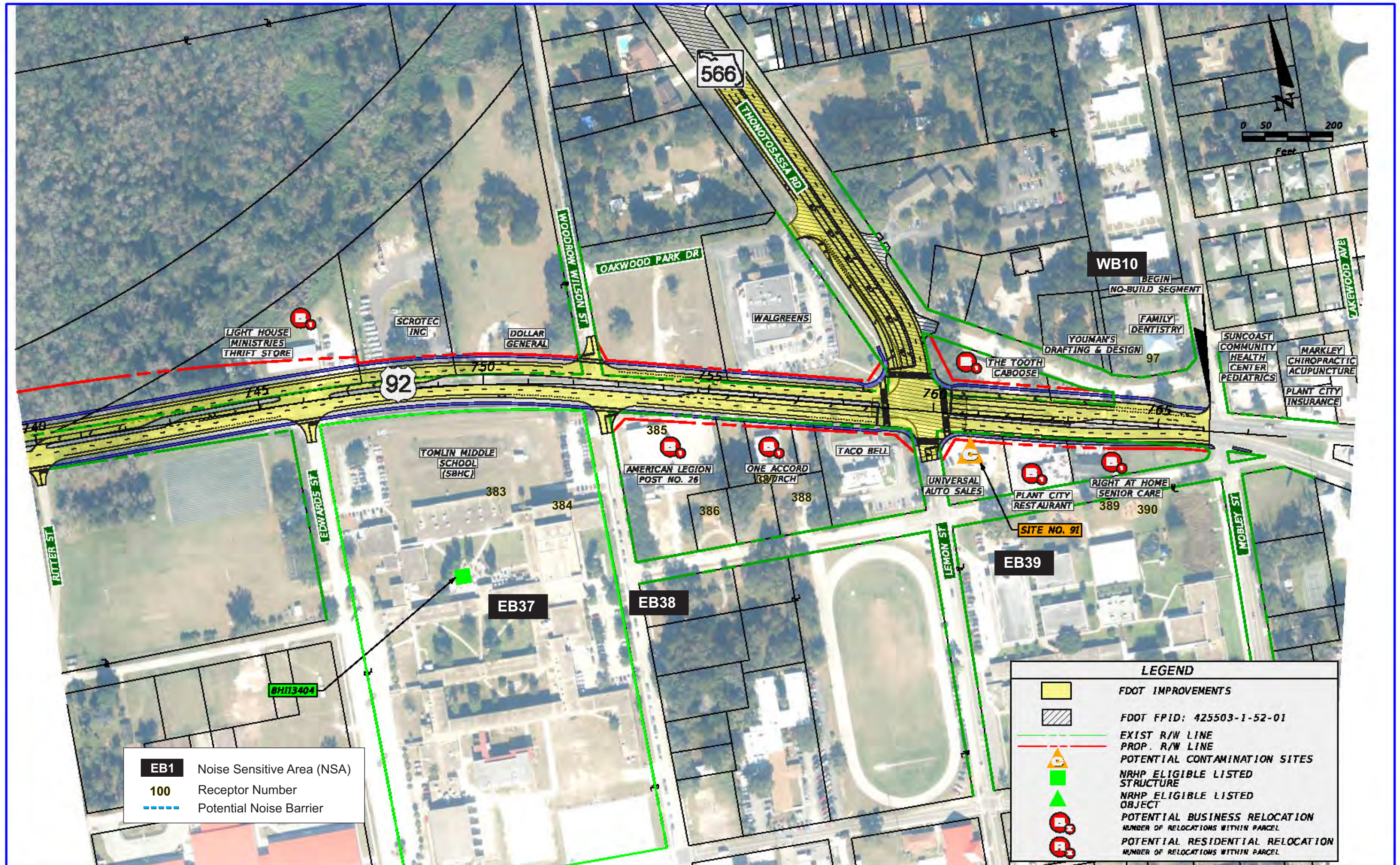
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
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**US 92 / SR 600
 PLAN SHEETS SEG 9
 PREFERRED ALIGNMENT**

SHEET NO.
22



EB1 Noise Sensitive Area (NSA)
100 Receptor Number
 - - - - Potential Noise Barrier

LEGEND

- FDOT IMPROVEMENTS
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- EXIST R/W LINE
- PROP. R/W LINE
- C POTENTIAL CONTAMINATION SITES
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- NRHP ELIGIBLE LISTED OBJECT
- P POTENTIAL BUSINESS RELOCATION
- R POTENTIAL RESIDENTIAL RELOCATION

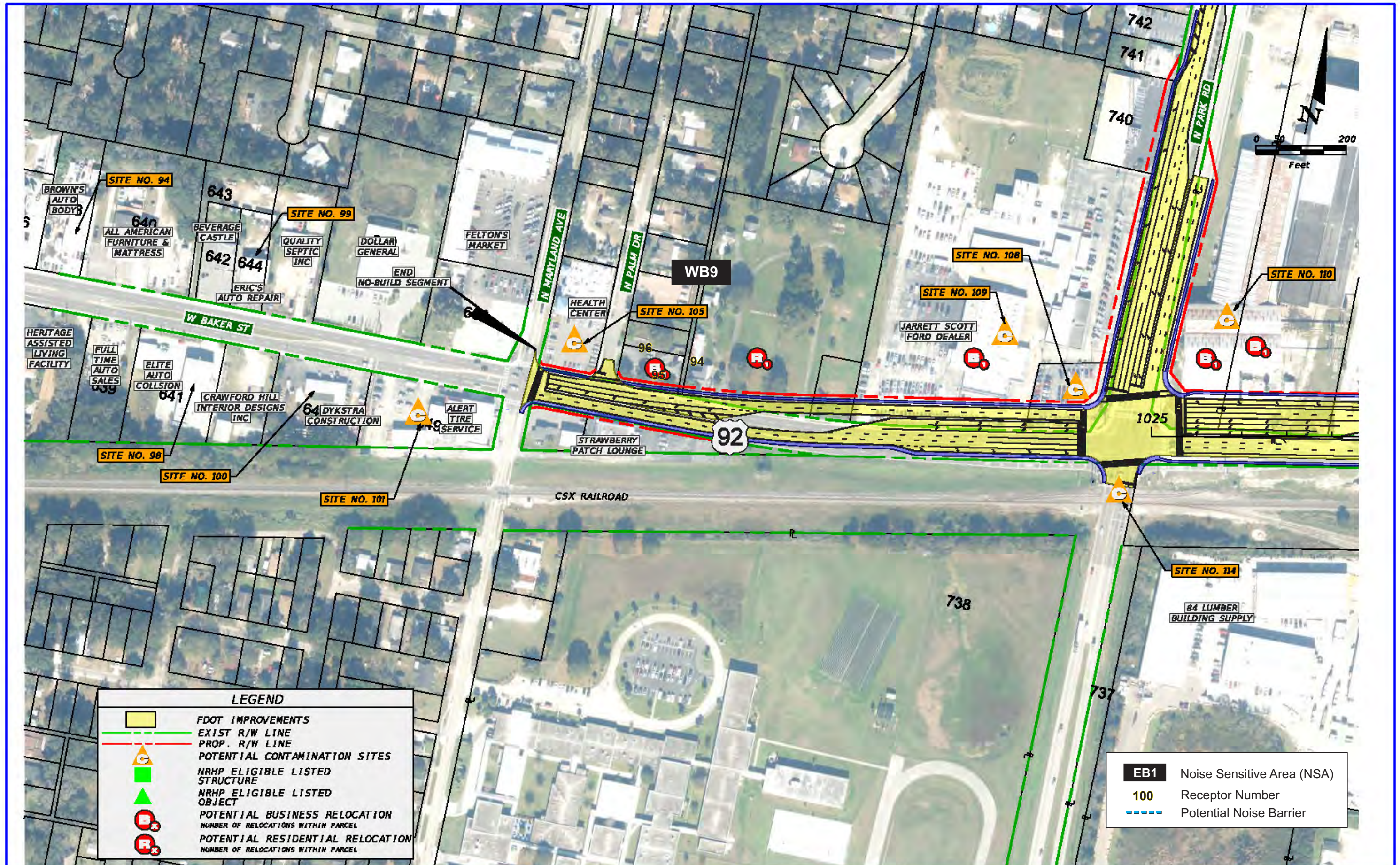
REVISIONS		REVISIONS	
DATE	DESCRIPTION	DATE	DESCRIPTION

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 PE No. 51905
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 P. 407.971.8850

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 9
 PREFERRED ALIGNMENT**

SHEET NO.
 23



LEGEND

- FDOT IMPROVEMENTS
- EXIST R/W LINE
- PROP. R/W LINE
- C POTENTIAL CONTAMINATION SITES
- NRHP ELIGIBLE LISTED STRUCTURE
- NRHP ELIGIBLE LISTED OBJECT
- B POTENTIAL BUSINESS RELOCATION
- R POTENTIAL RESIDENTIAL RELOCATION

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

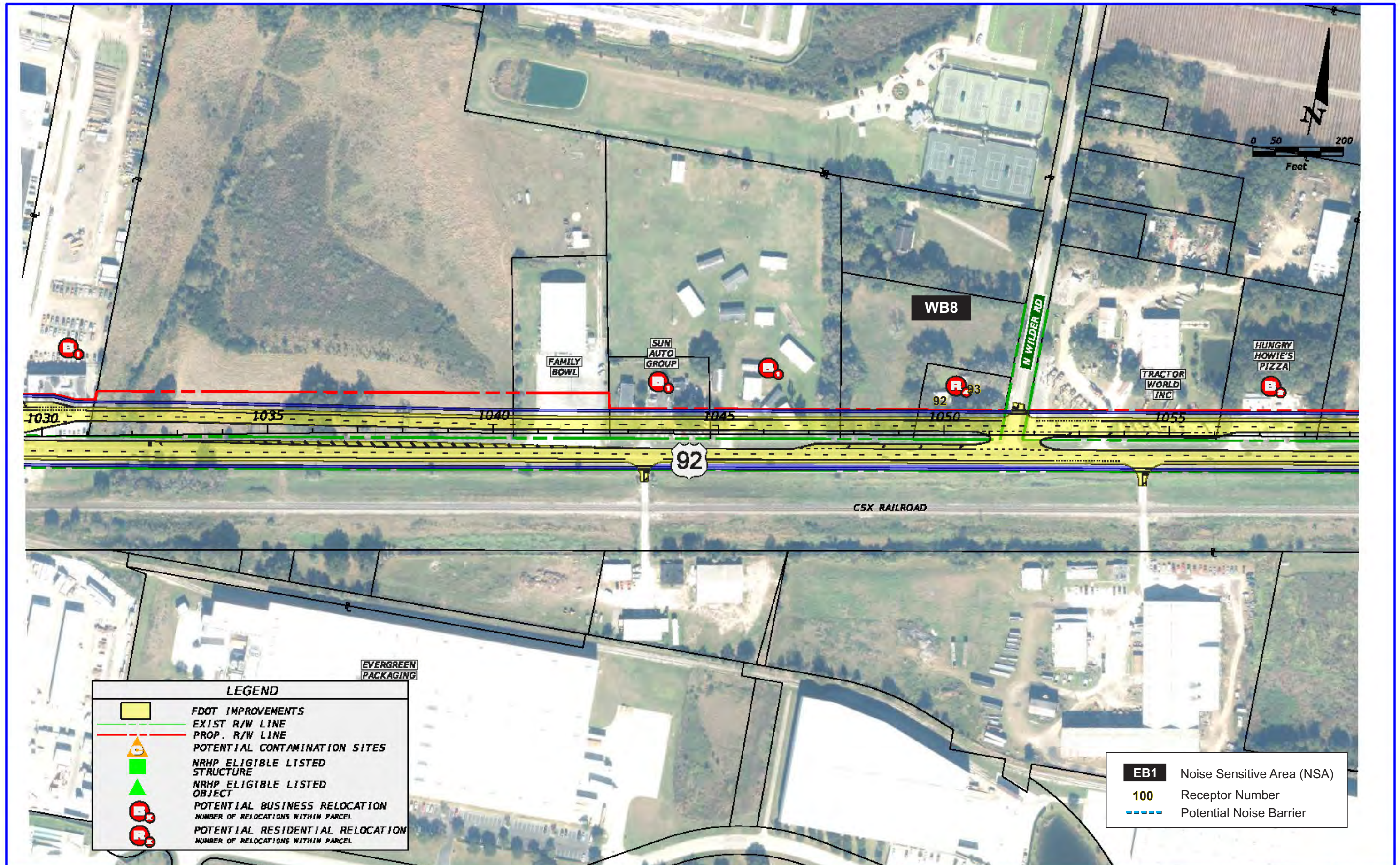
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ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

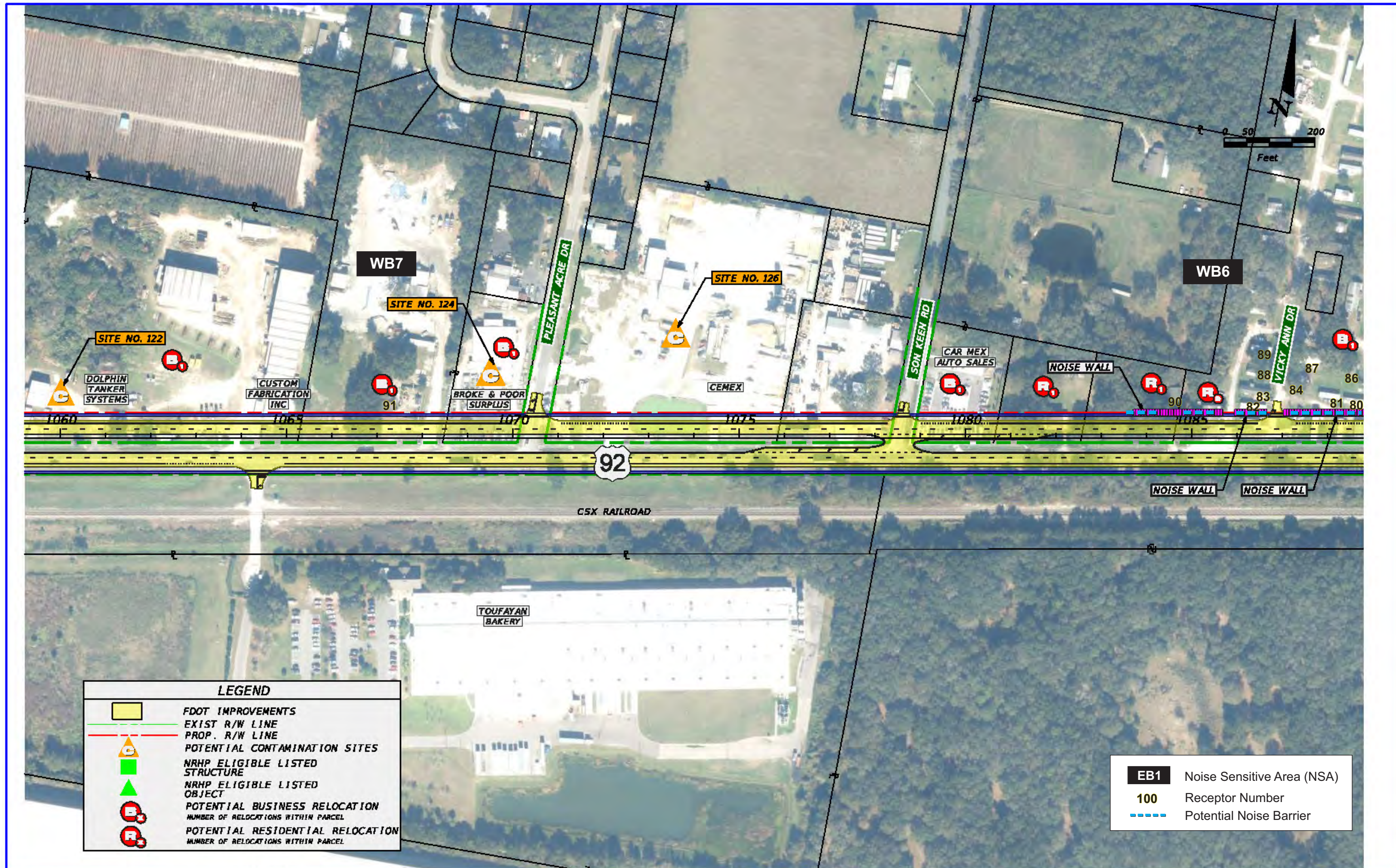
**US 92 / SR 600
 PLAN SHEETS SEG 11
 PREFERRED ALIGNMENT**

SHEET NO.
 24



EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS		DATE	DESCRIPTION			<table border="1"> <tr> <td colspan="2"> ENGINEER OF RECORD Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32785 P 407.971.8850 </td> <td> <table border="1"> <tr> <td colspan="3"> STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION </td> </tr> <tr> <td>ROAD NO.</td> <td>COUNTY</td> <td>WPI SEGMENT NO.</td> </tr> <tr> <td>600</td> <td>HILLSBOROUGH</td> <td>435749-1</td> </tr> </table> </td> </tr> </table>	ENGINEER OF RECORD Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32785 P 407.971.8850		<table border="1"> <tr> <td colspan="3"> STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION </td> </tr> <tr> <td>ROAD NO.</td> <td>COUNTY</td> <td>WPI SEGMENT NO.</td> </tr> <tr> <td>600</td> <td>HILLSBOROUGH</td> <td>435749-1</td> </tr> </table>	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ROAD NO.	COUNTY	WPI SEGMENT NO.	600	HILLSBOROUGH	435749-1	<table border="1"> <tr> <td> US 92 / SR 600 PLAN SHEETS SEG 11 PREFERRED ALIGNMENT </td> <td> <table border="1"> <tr> <td>SHEET NO.</td> </tr> <tr> <td>25</td> </tr> </table> </td> </tr> </table>	US 92 / SR 600 PLAN SHEETS SEG 11 PREFERRED ALIGNMENT	<table border="1"> <tr> <td>SHEET NO.</td> </tr> <tr> <td>25</td> </tr> </table>	SHEET NO.	25
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LEGEND	
	FDOT IMPROVEMENTS
	EXIST R/W LINE
	PROP. R/W LINE
	POTENTIAL CONTAMINATION SITES
	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

	Noise Sensitive Area (NSA)
	Receptor Number
	Potential Noise Barrier

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 11
 PREFERRED ALIGNMENT**

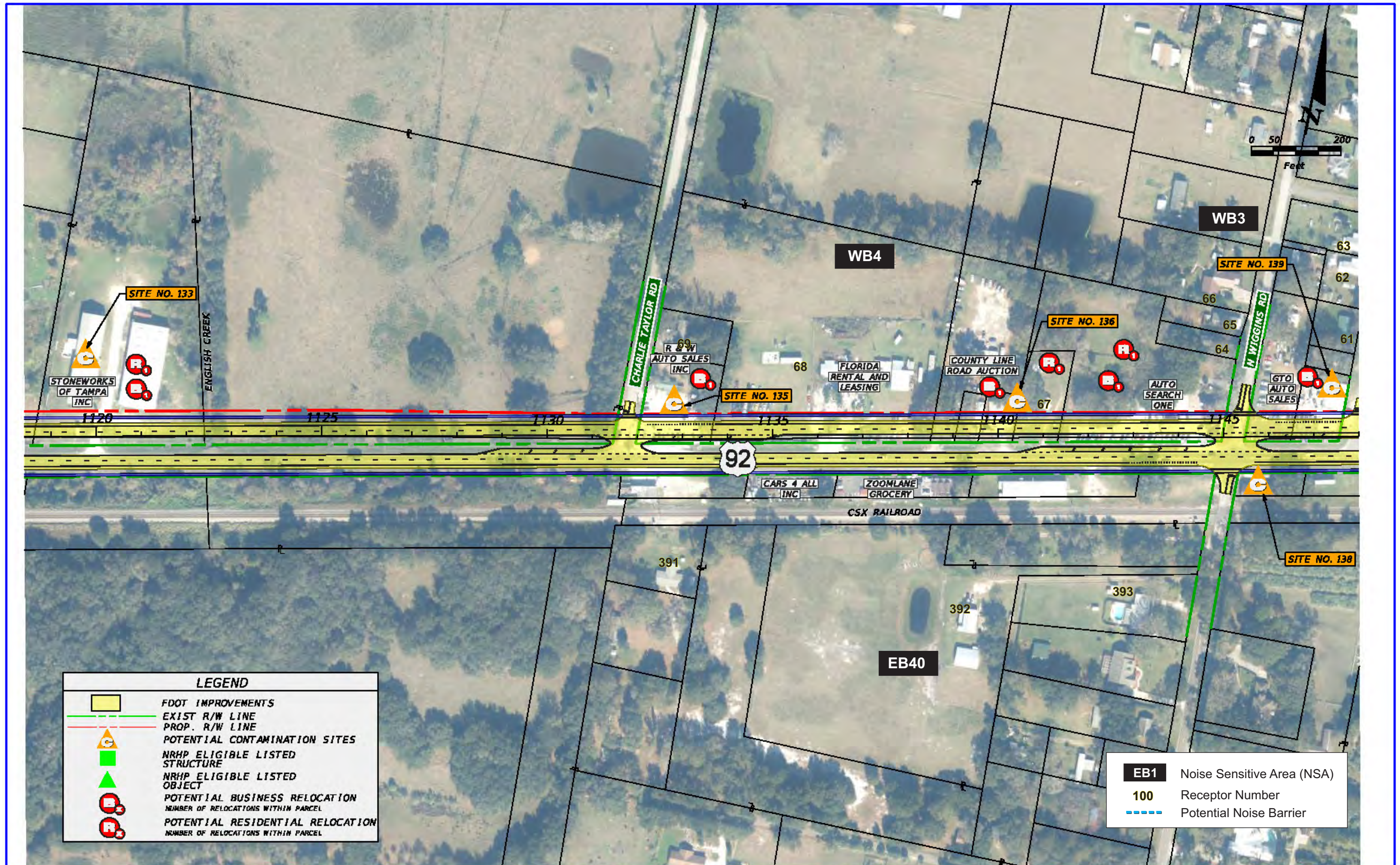
SHEET NO.
26



LEGEND	
	FDOT IMPROVEMENTS
	EXIST R/W LINE
	PROP. R/W LINE
	POTENTIAL CONTAMINATION SITES
	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION
	NUMBER OF RELOCATIONS WITHIN PARCEL

EB1	Noise Sensitive Area (NSA)
100	Receptor Number
	Potential Noise Barrier

REVISIONS		ENGINEER OF RECORD Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32785 P 407.971.8850	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			US 92 / SR 600 PLAN SHEETS SEG 11 PREFERRED ALIGNMENT	SHEET NO. 27
DATE	DESCRIPTION		ROAD NO.	COUNTY	WPI SEGMENT NO.		
			600	HILLSBOROUGH	435749-1		

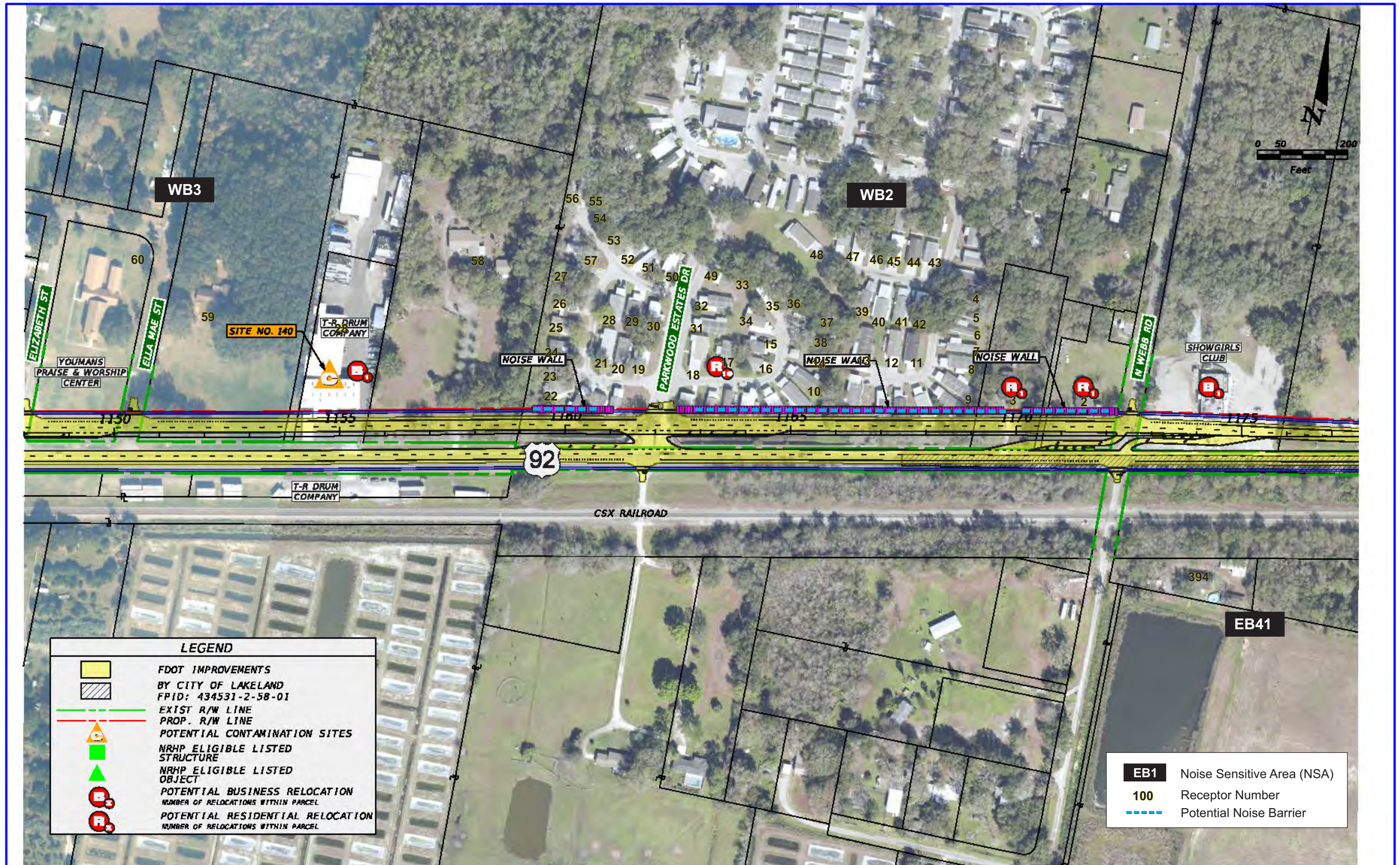


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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 11
 PREFERRED ALIGNMENT**

SHEET NO.
28



LEGEND	
	FDOT IMPROVEMENTS
	BY CITY OF LAKELAND FPID: 434531-2-58-01
	EXIST R/W LINE
	PROP. R/W LINE
	POTENTIAL CONTAMINATION SITES
	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL

	Noise Sensitive Area (NSA)
	Receptor Number
	Potential Noise Barrier

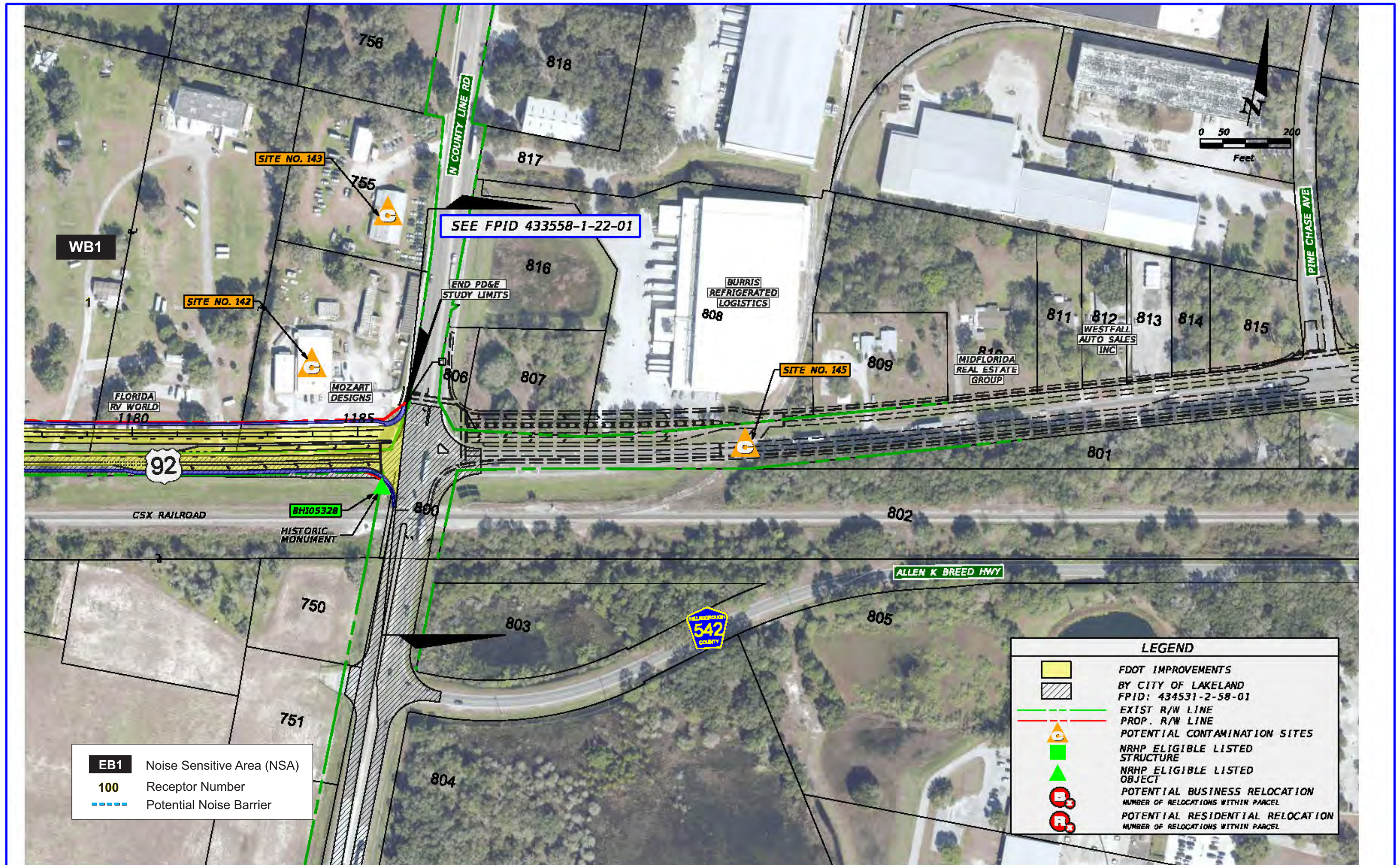
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DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 11
 PREFERRED ALIGNMENT**

SHEET NO.
29



EB1 Noise Sensitive Area (NSA)
100 Receptor Number
 - - - - Potential Noise Barrier

LEGEND	
	FDOT IMPROVEMENTS
	BY CITY OF LAKE LAND FPID: 434531-2-58-01
	EXIST R/W LINE
	PROP. R/W LINE
	POTENTIAL CONTAMINATION SITES
	NRHP ELIGIBLE LISTED STRUCTURE
	NRHP ELIGIBLE LISTED OBJECT
	POTENTIAL BUSINESS RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL
	POTENTIAL RESIDENTIAL RELOCATION NUMBER OF RELOCATIONS WITHIN PARCEL

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	WPI SEGMENT NO.
600	HILLSBOROUGH	435749-1

**US 92 / SR 600
 PLAN SHEETS SEG 11
 PREFERRED ALIGNMENT**

SHEET NO.
 30

Appendix C

Validation Documentation

NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Lindsay Baumaister, Wayne Arner, Nick Rhodes Date: 8/16/16
 Time Study Started: 12:17 p.m. Time Study Ended: 12:52 p.m.

Project Identification:

Financial Project ID: 435749-1
 Project Location: East of I-4 to East of County Line Road

Site Identification: Site 1: South side of US 92 at Jim Lefler Rd, across from Parkwood Estates, 72 feet from edge of nearest travel lane.

Weather Conditions:

Sky: Clear Partly Cloudy Cloudy Other
 Temperature 93F Wind Speed 2.5 mph Wind Direction from N Humidity 63%

Equipment:

Sound Level Meter:

Type: Larson Davis 831 Serial Number(s): 1285
 Did you check the battery? Yes No
 Calibration Readings: Start 114.9 End 114.1
 Response Settings: Fast Slow
 Weighting: A Other

Calibrator:

Type: Larson Davis CAL 200 Serial Number: 5592
 Did you check the battery? Yes No

TRAFFIC DATA

Roadway Identification	US 92 Westbound		US 92 Eastbound	
	Run 1-Run 2-Run 3		Run 1-Run 2-Run 3	
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	30-40-37	46-46-44	46-23-38	48-47-43
Medium Trucks	N/A-3-1	47-48-51	3-2-4	47-44-47
Heavy Trucks	4-5-10	45-47-44	N/A-1-1	46-44-45
Buses	N/A-N/A-N/A	N/A-N/A-N/A	N/A-N/A-N/A	N/A-N/A-N/A
Motorcycles	N/A-1-N/A	N/A-50-N/A	N/A-1-N/A	N/A-60-N/A
Duration	10 minutes per run		10 minutes per run	

RESULTS [dB(A)]

L_{EQ} 61.6-63.8-64.5 L_{max} 97.0-93.4-92.2

Background Noise: insects.
 Major Sources: US 92
 Unusual Events: loud music, loud muffler



NOISE MEASUREMENT DATA SHEET

Measurements Taken By: Lindsay Baumaister, Wayne Arner, Nick Rhodes Date: 8/16/16
 Time Study Started: 1:31 p.m. Time Study Ended: 2:04 p.m.

Project Identification:

Financial Project ID: 435749-1
 Project Location: East of I-4 to East of County Line Road

Site Identification: Site 2: North side of US 92 east of Bible Baptist Church

Weather Conditions:

Sky: Clear Partly Cloudy Cloudy Other
 Temperature 95F Wind Speed 1.5 mph Wind Direction from E Humidity 57%

Equipment:

Sound Level Meter:

Type: Larson Davis 831 Serial Number(s): 1285
 Did you check the battery? Yes No
 Calibration Readings: Start 113.94 End 113.92
 Response Settings: Fast Slow
 Weighting: A Other

Calibrator:

Type: Larson Davis CAL 200 Serial Number: 5592
 Did you check the battery? Yes No

TRAFFIC DATA

Roadway Identification	US 92 Westbound		US 92 Eastbound	
	Run 1-Run 2-Run 3		Run 1-Run 2-Run 3	
Vehicle Type	Volume	Speed (mph)	Volume	Speed (mph)
Autos	51-62-54	45-46-46	66-45-64	42-40-42
Medium Trucks	2-3-2	46-50-48	2-1-1	37-41-43
Heavy Trucks	4-1-2	41-32-44	2-4-2	43-50-31
Buses	2-1-0	43-38-N/A	N/A-N/A-N/A	N/A-N/A-N/A
Motorcycles	N/A-N/A-N/A	N/A-50-N/A	N/A-1-1	N/A-N/A-41
Duration	10 minutes per run		10 minutes per run	

RESULTS [dB(A)]

L_{EQ} 62.4-62.0-61.4 L_{max} 89.3-88.0-87.5

Background Noise: insects and birds

Major Sources: US 92

Unusual Events: flyover, dog barking



Appendix D

Noise Sensitive Receptors

NSA #	Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix B)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				Approaches, Meets, or Exceeds the NAC?
						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
WB1	1	B	Residential	1	66	52.4	57.0	56.3	3.9	--
WB2	2	B	Residential	1	66	64.2	68.8	71.6	7.4	YES
WB2	3	B	Residential	1	66	63.2	67.8	70.1	6.9	YES
WB2	4	B	Residential	1	66	52.0	56.6	55.6	3.6	--
WB2	5	B	Residential	1	66	53.4	58.0	57.3	3.9	--
WB2	6	B	Residential	1	66	55.3	59.9	59.6	4.3	--
WB2	7	B	Residential	1	66	56.6	61.2	61.3	4.7	--
WB2	8	B	Residential	1	66	58.5	63.1	63.7	5.2	--
WB2	9	B	Residential	1	66	62.0	66.6	68.2	6.2	YES
WB2	10	B	Residential	1	66	61.2	65.8	67.5	6.3	YES
WB2	11	B	Residential	1	66	58.5	63.1	63.7	5.2	--
WB2	12	B	Residential	1	66	58.2	62.8	63.4	5.2	--
WB2	13	B	Residential	1	66	58.8	63.4	64	5.2	--
WB2	14	B	Residential	1	66	55.8	60.4	61	5.2	--
WB2	15	B	Residential	1	66	56.6	61.2	61.2	4.6	--
WB2	16	B	Residential	1	66	58.7	63.3	63.6	4.9	--
WB2	17	B	Residential	1	66	58.5	63.1	63.5	5.0	--
WB2	18	B	Residential	1	66	58.1	62.8	63.2	5.1	--
WB2	19	B	Residential	1	66	58.3	62.9	63.4	5.1	--
WB2	20	B	Residential	1	66	58.2	62.8	63.4	5.2	--
WB2	21	B	Residential	1	66	58.2	62.8	63.4	5.2	--
WB2	22	B	Residential	1	66	61.3	65.9	69.2	7.9	YES
WB2	23	B	Residential	1	66	56.5	61.1	62.1	5.6	--
WB2	24	B	Residential	1	66	54.5	59.1	59.6	5.1	--
WB2	25	B	Residential	1	66	53.3	57.9	57.6	4.3	--
WB2	26	B	Residential	1	66	52.4	57.0	56.4	4.0	--
WB2	27	B	Residential	1	66	50.7	55.3	54.3	3.6	--
WB2	28	B	Residential	1	66	53.2	57.8	57.1	3.9	--
WB2	29	B	Residential	1	66	53.7	58.3	57.6	3.9	--
WB2	30	B	Residential	1	66	54.2	58.8	58.2	4.0	--
WB2	31	B	Residential	1	66	54.5	59.1	58.5	4.0	--
WB2	32	B	Residential	1	66	52.9	57.5	56.5	3.6	--
WB2	33	B	Residential	1	66	52.0	56.6	55.4	3.4	--
WB2	34	B	Residential	1	66	54.3	59.0	58.2	3.9	--
WB2	35	B	Residential	1	66	52.9	57.5	56.6	3.7	--
WB2	36	B	Residential	1	66	52.6	57.2	56.3	3.7	--
WB2	37	B	Residential	1	66	53.3	57.9	57.3	4.0	--
WB2	38	B	Residential	1	66	54.7	59.3	59.3	4.6	--
WB2	39	B	Residential	1	66	53.2	57.8	57.1	3.9	--
WB2	40	B	Residential	1	66	54.0	58.6	58.1	4.1	--

NSA #	Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix B)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				Approaches, Meets, or Exceeds the NAC?
						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
WB2	41	B	Residential	1	66	54.2	58.8	58.3	4.1	--
WB2	42	B	Residential	1	66	54.4	59.0	58.5	4.1	--
WB2	43	B	Residential	1	66	50.6	55.2	54.2	3.6	--
WB2	44	B	Residential	1	66	50.7	55.3	54.3	3.6	--
WB2	45	B	Residential	1	66	50.5	55.1	54	3.5	--
WB2	46	B	Residential	1	66	50.4	55.0	53.8	3.4	--
WB2	47	B	Residential	1	66	50.2	54.8	53.6	3.4	--
WB2	48	B	Residential	1	66	49.7	54.3	53.2	3.5	--
WB2	49	B	Residential	1	66	51.4	56.1	54.8	3.4	--
WB2	50	B	Residential	1	66	51.4	56.0	54.8	3.4	--
WB2	51	B	Residential	1	66	50.8	55.4	54.2	3.4	--
WB2	52	B	Residential	1	66	50.3	54.9	53.7	3.4	--
WB2	53	B	Residential	1	66	49.6	54.2	53	3.4	--
WB2	54	B	Residential	1	66	48.9	53.5	52.5	3.6	--
WB2	55	B	Residential	1	66	48.2	52.8	51.9	3.7	--
WB2	56	B	Residential	1	66	47.7	52.4	51.6	3.9	--
WB2	57	B	Residential	1	66	50.3	54.9	53.7	3.4	--
WB3	58	B	Residential	1	66	50.1	54.7	53.6	3.5	--
WB3	59	B	Residential	1	66	53.1	57.7	56.7	3.6	--
WB3	60	C	Place of Worship	1	66	49.7	54.3	53.1	3.4	--
WB3	61	B	Residential	1	66	55.0	59.6	59.1	4.1	--
WB3	62	B	Residential	1	66	50.6	55.2	53.9	3.3	--
WB3	63	B	Residential	1	66	49.2	53.8	52.5	3.3	--
WB3	64	B	Residential	1	66	56.9	61.5	61.4	4.5	--
WB3	65	B	Residential	1	66	52.7	57.3	56.5	3.8	--
WB3	66	B	Residential	1	66	51.3	55.9	54.7	3.4	--
WB4	67	B	Residential	1	66	64.3	68.9	70.7	6.4	YES
WB4	68	B	Residential	1	66	57.8	62.4	62.5	4.7	--
WB4	69	B	Residential	1	66	55.3	59.9	59.6	4.3	--
WB5	70	B	Residential	1	66	58.8	63.4	63.8	5.0	--
WB5	71	B	Residential	1	66	62.1	66.7	66.9	4.8	YES
WB5	72	B	Residential	1	66	63.0	67.6	68.6	5.6	YES
WB5	73	B	Residential	1	66	62.9	67.5	68.4	5.5	YES
WB6	74	B	Residential	1	66	62.8	67.4	68.2	5.4	YES
WB6	75	B	Residential	1	66	62.9	67.5	68.4	5.5	YES
WB6	76	B	Residential	1	66	62.9	67.5	68.3	5.4	YES
WB6	77	B	Residential	1	66	62.2	66.8	67.3	5.1	YES
WB6	78	B	Residential	1	66	58.5	63.1	63.6	5.1	--
WB6	79	B	Residential	1	66	54.4	59.0	58.8	4.4	--
WB6	80	B	Residential	1	66	63.6	68.2	69.8	6.2	YES

NSA #	Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix B)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				Approaches, Meets, or Exceeds the NAC?
						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
WB6	81	B	Residential	1	66	63.1	67.7	68.8	5.7	YES
WB6	82	B	Residential	1	66	64.4	69.0	71.1	6.7	YES
WB6	83	B	Residential	1	66	60.5	65.0	65.8	5.3	--
WB6	84	B	Residential	1	66	60.1	64.7	65.1	5.0	--
WB6	85	B	Residential	1	66	61.3	65.9	66.2	4.9	YES
WB6	86	B	Residential	1	66	59.7	64.3	64.1	4.4	--
WB6	87	B	Residential	1	66	57.4	62.0	62.5	5.1	--
WB6	88	B	Residential	1	66	57.1	61.7	62.2	5.1	--
WB6	89	B	Residential	1	66	54.9	59.5	59.6	4.7	--
WB6	90	B	Residential	1	66	63.3	67.9	69.2	5.9	YES
WB7	91	B	Residential	1	66	63.3	68.0	71.7	8.4	YES
WB8	92	B	Residential	1	66	60.8	65.4	65.9	5.1	--
WB8	93	B	Residential	1	66	63.0	67.6	68.6	5.6	YES
WB9	94	B	Residential	1	66	59.9	63.6	66.2	6.3	YES
WB9	95	D	Medical	1	51	46.5	50.2	50.8	4.3	--
WB9	96	B	Residential	1	66	57.6	61.4	63.3	5.7	--
WB10	97	D	Medical	1	51	38.5	40.1	42.1	3.6	--
WB10	99	D	Medical	1	51	38.0	39.6	41.4	3.4	--
WB10	100	B	Residential	1	66	60.0	61.6	64.2	4.2	--
WB10	101	B	Residential	1	66	60.2	61.8	64.6	4.4	--
WB11	102	B	Residential	1	66	61.7	63.3	66.2	4.5	YES
WB12	103	B	Residential	1	66	61.2	62.8	65	3.8	--
WB12	104	B	Residential	1	66	61.5	63.1	65.7	4.2	--
WB12	105	B	Residential	1	66	63.8	65.4	70.2	6.4	YES
WB13	106	B	Residential	1	66	63.9	65.5	70.1	6.2	YES
WB13	107	B	Residential	1	66	62.4	64.0	68.4	6.0	YES
WB13	108	B	Residential	1	66	58.3	59.9	62.7	4.4	--
WB13	109	B	Residential	1	66	55.5	57.1	59.3	3.8	--
WB13	110	B	Residential	1	66	58.2	59.8	63.1	4.9	--
WB13	111	B	Residential	1	66	55.5	57.1	59.7	4.2	--
WB13	112	B	Residential	1	66	55.1	56.7	59.3	4.2	--
WB14	113	B	Residential	1	66	61.6	63.2	66.9	5.3	YES
WB14	115	B	Residential	1	66	62.9	64.5	69.2	6.3	YES
WB14	116	B	Residential	2	66	63.7	65.3	69.1	5.4	YES
WB14	117	B	Residential	1	66	58.9	60.5	63.7	4.8	--
WB14	118	B	Residential	1	66	59.5	61.2	64.3	4.8	--
WB14	119	B	Residential	1	66	59.8	61.4	64.4	4.6	--
WB14	120	B	Residential	2	66	58.4	60.0	63	4.6	--
WB14	121	B	Residential	1	66	62.9	64.5	67.3	4.4	YES
WB15	122	B	Residential	1	66	64.3	65.1	64.7	0.4	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
WB15	123	B	Residential	1	66	62.5	63.3	63.8	1.3	--
WB15	124	B	Residential	1	66	60.9	61.7	62.3	1.4	--
WB15	125	B	Residential	1	66	62.7	63.5	63.1	0.4	--
WB15	126	B	Residential	1	66	63.3	64.1	63.6	0.3	--
WB15	127	E	Outdoor	1	71	65.1	65.9	65.1	0.0	--
WB16	128	B	Residential	1	66	68.2	68.2	69.9	1.7	YES
WB16	129	B	Residential	1	66	61.3	61.3	63.4	2.1	--
WB16	130	B	Residential	1	66	61.3	61.3	63.4	2.1	--
WB16	131	B	Residential	1	66	58.1	58.1	59.8	1.7	--
WB16	132	B	Residential	1	66	57.4	57.5	59.3	1.9	--
WB17	133	B	Residential	1	66	57.0	57.0	59.2	2.2	--
WB17	134	B	Residential	1	66	64.0	64.0	65.8	1.8	--
WB17	135	B	Residential	1	66	58.4	58.4	61.2	2.8	--
WB17	136	B	Residential	2	66	61.7	61.7	63	1.3	--
WB17	137	B	Residential	2	66	60.2	60.2	61.7	1.5	--
WB17	138	B	Residential	2	66	58.7	58.7	60.3	1.6	--
WB17	139	B	Residential	2	66	57.2	57.2	59.1	1.9	--
WB17	140	B	Residential	1	66	61.0	61.0	62.4	1.4	--
WB17	141	B	Residential	1	66	68.1	68.1	68.9	0.8	YES
WB17	142	B	Residential	1	66	63.3	63.3	64.6	1.3	--
WB17	143	B	Residential	1	66	64.5	64.5	65.8	1.3	--
WB17	144	C	Recreational	1	66	69.5	69.5	70.3	0.8	YES
WB17	145	B	Residential	1	66	67.1	67.1	69	1.9	YES
WB17	146	B	Residential	2	66	62.0	62.0	63.5	1.5	--
WB17	147	B	Residential	2	66	58.3	58.3	60.3	2.0	--
WB17	148	B	Residential	1	66	63.8	63.8	66.7	2.9	YES
WB17	149	B	Residential	1	66	67.7	67.7	71.7	4.0	YES
WB17	150	B	Residential	1	66	60.0	60.0	63.9	3.9	--
WB17	151	B	Residential	1	66	59.2	59.2	65.4	6.2	--
WB17	152	B	Residential	1	66	64.5	64.5	70.1	5.6	YES
WB18	153	B	Residential	1	66	61.2	61.2	69.7	8.5	YES
WB18	154	B	Residential	1	66	61.1	61.2	69.9	8.8	YES
WB18	155	B	Residential	1	66	61.0	61.0	69.6	8.6	YES
WB18	156	B	Residential	1	66	60.9	60.9	69.4	8.5	YES
WB18	157	B	Residential	1	66	57.0	57.0	62.6	5.6	--
WB19	158	B	Residential	1	66	64.3	64.3	73.2	8.9	YES
WB19	159	B	Residential	1	66	57.8	57.8	59.5	1.7	--
WB19	160	B	Residential	1	66	57.5	57.5	59.1	1.6	--
WB19	161	B	Residential	1	66	58.8	58.8	64.3	5.5	--
WB20	162	B	Residential	1	66	56.3	56.3	60.3	4.0	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
WB20	163	B	Residential	1	66	61.4	61.4	67.7	6.3	YES
WB20	164	B	Residential	1	66	58.6	58.6	64.2	5.6	--
WB20	165	B	Residential	1	66	61.0	61.0	66.1	5.1	YES
WB20	166	B	Residential	1	66	60.1	60.1	65.4	5.3	--
WB20	167	B	Residential	1	66	60.5	60.5	64.9	4.4	--
WB20	168	E	Outdoor	1	71	59.9	59.9	63.4	3.5	--
WB20	169	E	Outdoor	1	71	66.4	66.4	70.2	3.8	--
WB20	170	B	Residential	1	66	59.3	59.3	62.1	2.8	--
WB20	171	B	Residential	1	66	60.7	60.7	63.2	2.5	--
WB20	172	B	Residential	1	66	60.5	60.5	62.6	2.1	--
WB20	173	B	Residential	1	66	58.0	58.0	59.6	1.6	--
WB20	174	B	Residential	1	66	55.3	55.3	57	1.7	--
WB20	175	B	Residential	1	66	63.5	63.5	63.9	0.4	--
WB20	176	B	Residential	1	66	63.9	63.9	64.4	0.5	--
WB20	177	B	Residential	1	66	64.4	64.4	64.6	0.2	--
WB20	178	B	Residential	1	66	59.0	59.0	60	1.0	--
WB20	179	B	Residential	1	66	60.6	60.6	61.7	1.1	--
WB20	180	B	Residential	1	66	65.2	65.2	65.7	0.5	--
WB20	181	B	Residential	1	66	61.8	61.9	62.8	1.0	--
WB20	182	B	Residential	1	66	63.1	63.1	65.1	2.0	--
WB20	183	B	Residential	1	66	60.6	60.6	62.9	2.3	--
WB21	184	B	Residential	1	66	62.6	62.6	63.8	1.2	--
WB21	185	B	Residential	1	66	62.1	62.1	63.6	1.5	--
WB21	186	B	Residential	1	66	64.2	64.2	65.5	1.3	--
WB21	187	B	Residential	1	66	65.1	65.1	66	0.9	YES
WB21	188	B	Residential	1	66	62.2	62.2	63.2	1.0	--
WB21	189	B	Residential	1	66	69.3	69.3	69.4	0.1	YES
WB21	190	B	Residential	1	66	64.3	64.3	65	0.7	--
WB21	191	B	Residential	1	66	63.2	63.2	63.9	0.7	--
WB21	192	B	Residential	1	66	63.3	63.3	64.1	0.8	--
WB21	193	B	Residential	1	66	64.1	64.1	64.7	0.6	--
WB21	194	B	Residential	1	66	67.4	67.4	68.3	0.9	YES
WB21	195	B	Residential	1	66	66.3	66.3	68.1	1.8	YES
WB22	196	B	Residential	1	66	55.7	55.7	57.6	1.9	--
WB22	197	C	School (field)	1	66	56.2	56.2	58	1.8	--
WB23	198	B	Residential	1	66	57.3	57.3	59.4	2.1	--
WB23	199	B	Residential	1	66	56.1	56.1	59.8	3.7	--
WB23	200	B	Residential	1	66	56.6	56.6	61.9	5.3	--
WB23	201	B	Residential	1	66	57.5	57.5	63.5	6.0	--
WB23	202	B	Residential	1	66	58.6	58.6	64.7	6.1	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
WB23	203	B	Residential	1	66	59.4	59.4	65.7	6.3	--
WB23	204	B	Residential	1	66	58.9	58.9	65.3	6.4	--
WB23	205	B	Residential	1	66	58.5	58.5	64.9	6.4	--
WB23	206	B	Residential	1	66	58.2	58.2	64.6	6.4	--
WB23	207	B	Residential	1	66	58.0	58.0	64.4	6.4	--
WB23	208	B	Residential	1	66	57.9	57.9	64.3	6.4	--
WB23	209	B	Residential	1	66	57.4	57.4	63.9	6.5	--
WB23	210	B	Residential	1	66	56.7	56.7	63.0	6.3	--
WB23	211	B	Residential	1	66	56.4	56.4	62.6	6.2	--
WB23	212	B	Residential	1	66	56.1	56.1	62.1	6.0	--
WB23	213	C	Recreational	1	66	63.4	63.4	71.9	8.5	YES
WB23	214	B	Residential	1	66	56.7	56.7	62.3	5.6	--
WB23	215	B	Residential	1	66	60.3	60.3	67.5	7.2	YES
WB23	216	B	Residential	1	66	56.3	56.3	62.3	6.0	--
WB23	217	B	Residential	1	66	55.1	55.1	61.3	6.2	--
WB23	218	B	Residential	1	66	54.5	54.5	60.5	6.0	--
WB23	219	B	Residential	1	66	51.2	51.2	56.5	5.3	--
WB23	220	B	Residential	1	66	50.8	50.9	55.7	4.9	--
WB23	221	B	Residential	1	66	56.5	56.5	63.3	6.8	--
WB23	222	B	Residential	1	66	55.9	55.9	62.4	6.5	--
WB23	223	B	Residential	1	66	58.9	58.9	69.3	10.4	YES
WB23	224	B	Residential	1	66	57.1	57.1	63.5	6.4	--
WB23	225	B	Residential	1	66	54.7	54.7	60.6	5.9	--
WB23	226	B	Residential	1	66	53.7	53.7	59.3	5.6	--
WB23	227	B	Residential	1	66	55.1	55.1	60.6	5.5	--
WB24	228	B	Residential	1	66	60.2	60.2	67.1	6.9	YES
WB25	229	B	Residential	1	66	60.8	60.8	65.9	5.1	--
WB25	230	B	Residential	1	66	60.0	60.0	64.9	4.9	--
WB25	231	B	Residential	1	66	54.2	54.2	58.5	4.3	--
WB26	232	B	Residential	1	66	65.0	65.0	71.3	6.3	YES
WB23	201	B	Residential	1	66	57.5	57.5	63.5	6.0	--
WB26	233a	B	Residential	1	66			59.6		--
WB26	234	B	Residential	1	66	65.2	65.2	71.2	6.0	YES
WB26	235	B	Residential	1	66	65.4	65.4	71.4	6.0	YES
WB26	236	B	Residential	1	66	65.5	65.5	71.4	5.9	YES
WB26	237	B	Residential	1	66	65.3	65.3	71.1	5.8	YES
WB26	238	B	Residential	1	66	65.2	65.2	71	5.8	YES
WB26	239	B	Residential	1	66	65.1	65.1	70.9	5.8	YES
WB26	240	B	Residential	1	66	64.8	64.8	70.6	5.8	YES
WB26	241	B	Residential	1	66	65.2	65.2	71.1	5.9	YES

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WB26	242	B	Residential	1	66	65.0	65.0	71	6.0	YES
WB26	243	B	Residential	1	66	64.5	64.5	70.5	6.0	YES
WB26	244	B	Residential	1	66	65.5	65.5	71.9	6.4	YES
WB26	245	B	Residential	1	66	65.2	65.2	71.7	6.5	YES
WB26	245a	B	Residential	1	66			59.7		--
WB26	246	B	Residential	1	66	65.0	65.0	72	7.0	YES
WB26	247	B	Residential	1	66	64.2	64.2	71.4	7.2	YES
WB26	248	B	Residential	1	66	65.1	65.1	72.4	7.3	YES
WB26	249	B	Residential	1	66	60.4	60.4	66.5	6.1	YES
WB26	250	B	Residential	1	66	55.3	55.3	60.3	5.0	--
WB26	251	B	Residential	1	66	53.2	53.2	57.2	4.0	--
WB27	252	D	School	1	51	42.7	42.7	47.5	4.8	--
WB27	253	D	Place of Worship	1	51	46.7	46.7	50.4	3.7	--
WB28	254	B	Residential	1	66	56.2	56.2	58.4	2.2	--
WB29	255	B	Residential	1	66	58.6	58.6	60.2	1.6	--
WB29	256	B	Residential	1	66	57.9	57.9	59.7	1.8	--
wB30	257	E	Outdoor	1	71	66.3	66.3	67	0.7	--
WB31	258	B	Residential	1	66	61.2	61.2	62.4	1.2	--
WB31	259	B	Residential	1	66	61.2	61.2	62	0.8	--
WB31	260	B	Residential	1	66	57.6	57.6	58.3	0.7	--
WB31	261	B	Residential	1	66	57.2	57.1	58.7	1.5	--
WB32	262	B	Residential	1	66	66.3	66.1	68.2	1.9	YES
WB32	263	B	Residential	1	66	66.6	66.5	68.7	2.1	YES
WB32	264	B	Residential	1	66	66.9	66.8	69.5	2.6	YES
WB32	265	B	Residential	1	66	59.2	59.1	62.1	2.9	--
WB32	266	B	Residential	1	66	63.7	63.6	66	2.3	YES
WB32	267	B	Residential	1	66	62.4	62.2	64.8	2.4	--
WB32	268	B	Residential	1	66	62.4	62.3	64.9	2.5	--
WB32	269	B	Residential	1	66	56.7	56.6	58.7	2.0	--
WB32	270	B	Residential	1	66	65.6	65.5	68.7	3.1	YES
WB32	271	B	Residential	1	66	61.4	61.3	65.3	3.9	--
WB32	272	B	Residential	1	66	56.1	56.1	58.8	2.7	--
WB33	273	E	Recreational	1	71	48.5	49.0	51.7	3.2	--
WB34	274	B	Residential	1	66	63.1	63.7	65.5	2.4	--
WB34	275	B	Residential	1	66	63.6	64.2	66	2.4	YES
WB34	276	B	Residential	1	66	63.8	64.5	66.2	2.4	YES
WB34	277	B	Residential	1	66	64.4	65.0	66.9	2.5	YES
WB34	278	B	Residential	1	66	60.0	60.6	63.4	3.4	--
WB34	279	B	Residential	1	66	60.1	60.8	64	3.9	--

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WB34	280	B	Residential	1	66	59.6	60.2	63.2	3.6	--
WB34	281	B	Residential	1	66	60.1	60.7	61.6	1.5	--
WB35	282	B	Residential	7	66	64.6	65.3	64.8	0.2	--
WB35	283	B	Residential	6	66	62.5	63.1	62.5	0.0	--
WB35	284	B	Residential	1	66	68.0	68.6	68.1	0.1	YES
WB35	285	B	Residential	1	66	65.0	65.6	64.9	-0.1	--
WB35	286	B	Residential	1	66	62.7	63.4	62.9	0.2	--
WB35	287	B	Residential	1	66	62.7	63.4	62.7	0.0	--
WB35	288	B	Residential	1	66	65.3	66.0	65.6	0.3	--
WB35	289	B	Residential	1	66	61.3	62.0	61.8	0.5	--
WB35	290	B	Residential	1	66	61.0	61.6	62.3	1.3	--
WB35	291	B	Residential	1	66	63.4	64.0	64.2	0.8	--
WB35	292	B	Residential	1	66	67.4	68.0	67.9	0.5	YES
WB35	293	B	Residential	1	66	71.3	72.0	71.7	0.4	YES
WB35	294	B	Residential	1	66	71.2	71.8	71.5	0.3	YES
WB35	295	B	Residential	1	66	67.7	68.4	68.4	0.7	YES
WB35	296	B	Residential	1	66	65.5	66.2	66	0.5	YES
WB35	297	B	Residential	1	66	60.4	61.1	61.8	1.4	--
WB35	298	B	Residential	1	66	58.5	59.2	60.1	1.6	--
WB35	299	B	Residential	1	66	59.5	60.2	60.9	1.4	--
WB35	300	B	Residential	1	66	60.2	60.9	61.6	1.4	--
WB36	301	E	Recreational	1	71	61.9	62.5	62.7	0.8	--
WB36	302	B	Residential	1	66	62.7	63.4	63.4	0.7	--
WB36	303	C	Place of Worship	1	66	55.3	56.1	57	1.7	--
WB37	304	B	Residential	1	66	62.8	64.0	65.1	2.3	--
WB37	305	B	Residential	1	66	60.6	61.8	62.6	2.0	--
WB37	306	B	Residential	1	66	61.6	62.8	64.4	2.8	--
WB37	307	B	Residential	1	66	67.4	68.6	69.1	1.7	YES
WB37	308	B	Residential	1	66	56.9	58.1	60.4	3.5	--
WB38	309	D	Nonprofit	1	51	45.0	46.2	50.8	5.8	--
WB39	310	B	Residential	1	66	59.7	60.9	65.9	6.2	--
WB39	311	B	Residential	1	66	58.9	60.1	65.2	6.3	--
WB39	312	B	Residential	1	66	59.3	60.5	65.6	6.3	--
WB39	313	B	Residential	1	66	59.0	60.2	65	6.0	--
WB39	314	B	Residential	1	66	58.7	59.9	64.3	5.6	--
WB39	315	B	Residential	1	66	62.2	63.4	69.9	7.7	YES
WB39	316	B	Residential	1	66	64.4	65.6	72	7.6	YES
WB39	317	B	Residential	1	66	63.9	65.1	70.3	6.4	YES
WB39	318	B	Residential	1	66	60.0	61.2	65.3	5.3	--

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WB39	319	B	Residential	1	66	60.8	62.0	65.4	4.6	--
WB39	320	B	Residential	1	66	56.1	57.3	59.5	3.4	--
WB39	321	B	Residential	1	66	58.4	59.6	62.6	4.2	--
WB39	322	B	Residential	1	66	63.1	64.4	67.8	4.7	YES
WB39	323	B	Residential	1	66	55.1	56.3	58.7	3.6	--
EB1	1	B	Residential	1	66	65.9	67.1	67.7	1.8	YES
EB1	2	B	Residential	1	66	61.3	62.5	63.4	2.1	--
EB1	3	D	Place of Worship	1	51	36.2	37.4	37.8	1.6	--
EB1	4	D	Nonprofit	1	51	40.5	41.7	41.7	1.2	--
EB1	5	B	Residential	1	66	57.7	58.9	59	1.3	--
EB1	6	B	Residential	1	66	60.1	61.3	61.4	1.3	--
EB1	7	B	Residential	1	66	61.6	62.8	63.1	1.5	--
EB1	8	B	Residential	1	66	63.2	64.4	63.7	0.5	--
EB1	9	B	Residential	1	66	67.2	68.4	67.4	0.2	YES
EB1	10	B	Residential	1	66	59.7	60.9	61.1	1.4	--
EB1	11	B	Residential	1	66	58.2	59.4	59.9	1.7	--
EB1	12	B	Residential	1	66	58	59.2	59.8	1.8	--
EB2	14	D	Nonprofit	1	51	42.8	44.1	43.5	0.7	--
EB2	16	B	Residential	1	66	60.4	61.6	63.4	3	--
EB3	17	B	Residential	1	66	63.2	64.4	68.2	5	YES
EB4	18	B	Residential	1	66	60.3	61.5	66.4	6.1	YES
EB4	19	B	Residential	1	66	59.8	61	65.9	6.1	--
EB4	20	B	Residential	1	66	57.9	59.1	63.9	6	--
EB4	21	B	Residential	1	66	59.6	60.8	65.6	6	--
EB4	22	B	Residential	1	66	61.4	62.6	70.5	9.1	YES
EB4	23	B	Residential	1	66	58.5	59.6	66.8	8.3	YES
EB4	24	B	Residential	1	66	57.2	58.3	65.6	8.4	--
EB4	25	B	Residential	1	66	56.1	57.3	64.6	8.5	--
EB4	26	B	Residential	1	66	56.2	57.4	64.4	8.2	--
EB4	27	B	Residential	1	66	56.6	57.8	63.5	6.9	--
EB4	28	B	Residential	1	66	55.9	57	61.1	5.2	--
EB4	29	B	Residential	1	66	56.5	57.6	62.0	5.5	--
EB4	30	B	Residential	1	66	57.9	59.1	64.4	6.5	--
EB4	31	B	Residential	1	66	60.6	61.8	67.8	7.2	YES
EB4	32	C	Residential	1	66	63.7	64.9	72.1	8.4	YES
EB5	33	B	Residential	1	66	58.1	58.8	63.4	5.3	--
EB5	34	B	Residential	1	66	60.3	61.1	66.1	5.8	YES
EB5	35	B	Residential	1	66	55.8	56.6	60.5	4.7	--
EB5	36	B	Residential	1	66	52.7	53.4	56.6	3.9	--

NSA #	Receptor ID#	Activity Category	Description of Activity Category	No. of Noise Sensitive Sites Represented	Sheet No. (See Appendix B)	Predicted Traffic Noise Level (Leq(h)) [Expressed as dB(A)]				Approaches, Meets, or Exceeds the NAC?
						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB5	37	B	Residential	1	66	61.1	61.8	67.1	6	YES
EB5	38	B	Residential	1	66	53.5	54.2	57.4	3.9	--
EB5	39	B	Residential	1	66	60.8	61.5	66.3	5.5	YES
EB5	41	B	Residential	1	66	53.8	54.5	57.8	4	--
EB5	42	B	Residential	1	66	55.3	56	59.5	4.2	--
EB5	43	B	Residential	1	66	57.3	57.9	62.3	5	--
EB5	44	B	Residential	1	66	63.1	63.8	69	5.9	YES
EB5	45	B	Residential	1	66	62.8	63.5	68.7	5.9	YES
EB5	46	B	Residential	1	66	61.4	62.1	66.7	5.3	YES
EB5	47	C	Day Care	1	66	64.2	64.9	70	5.8	YES
EB5	48	B	Residential	1	66	60.9	61.6	65.9	5	--
EB5	49	B	Residential	1	66	60.4	61	65.2	4.8	--
EB5	50	B	Residential	1	66	54.3	55	57.4	3.1	--
EB5	51	B	Residential	1	66	56.5	57.1	60.8	4.3	--
EB6	52	B	Residential	1	66	54.9	55.5	68	13.1	YES
EB6	53	B	Residential	1	66	55.2	55.8	68.5	13.3	YES
EB6	54	B	Residential	1	66	52.3	52.9	62.3	10	--
EB6	55	B	Residential	1	66	50.3	50.9	57.6	7.3	--
EB6	56	B	Residential	1	66	53.6	54.3	65.3	11.7	--
EB6	57	B	Residential	1	66	50.1	50.7	58.4	8.3	--
EB6	58	B	Residential	1	66	49.5	50.1	55.6	6.1	--
EB6	59	B	Residential	2	66	54.5	55.1	67.4	12.9	YES
EB6	60	B	Residential	1	66	52.1	52.7	61.7	9.6	--
EB6	61	B	Residential	1	66	50.2	50.8	57.8	7.6	--
EB6	62	B	Residential	3	66	52.5	53.1	62.9	10.4	--
EB6	63	B	Residential	1	66	53.7	54.4	65.5	11.8	--
EB6	64	B	Residential	1	66	54.9	55.6	70.2	15.3	YES
EB6	65	B	Residential	1	66	53.6	54.2	59.9	6.3	--
EB6	66	C	Place of Worship	1	66	55.2	55.6	57.8	2.6	--
EB7	67	E	Restaurant	1	71	64.4	64.3	66.8	2.4	--
EB7	68	B	Residential	1	66	62	61.9	64.9	2.9	--
EB7	69	B	Residential	1	66	62.1	62	65	2.9	--
EB7	70	B	Residential	1	66	61.6	61.5	64.5	2.9	--
EB7	71	B	Residential	1	66	58.5	58.3	62.4	3.9	--
EB7	72	B	Residential	1	66	58.5	58.4	62.4	3.9	--
EB7	73	B	Residential	1	66	58.5	58.4	62.4	3.9	--
EB7	74	B	Residential	1	66	58.4	58.3	62.3	3.9	--
EB7	75	B	Residential	1	66	58.3	58.2	62.3	4	--
EB7	76	B	Residential	1	66	56.8	56.7	60.6	3.8	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB8	77	B	Residential	1	66	65.6	65.6	70.7	5.1	YES
EB8	78	B	Residential	1	66	61.1	61.1	64.7	3.6	--
EB8	79	B	Residential	1	66	58.2	58.2	60.9	2.7	--
EB8	80	B	Residential	1	66	62.5	62.5	66.8	4.3	YES
EB8	81	B	Residential	1	66	56.7	56.7	59.7	3	--
EB9	82	B	Residential	1	66	62.7	62.7	68.3	5.6	YES
EB9	83	B	Residential	1	66	62.2	62.2	67.6	5.4	YES
EB9	84	B	Residential	1	66	61.9	61.9	67.5	5.6	YES
EB10	85	B	Residential	1	66	57.8	57.8	58.6	0.8	--
EB10	86	B	Residential	1	66	59.7	59.7	60.3	0.6	--
EB10	87	B	Residential	1	66	59.5	59.5	59.9	0.4	--
EB10	88	B	Residential	1	66	58.1	58.1	58.1	0	--
EB10	89	B	Residential	1	66	57.1	57.1	57.1	0	--
EB10	90	B	Residential	1	66	58.8	58.8	58.9	0.1	--
EB10	91	B	Residential	1	66	60.3	60.3	61	0.7	--
EB10	92	B	Residential	1	66	62.6	62.6	63.5	0.9	--
EB10	93	B	Residential	1	66	67.5	67.5	67.7	0.2	YES
EB11	94	B	Residential	1	66	59.4	59.4	59.8	0.4	--
EB11	95	B	Residential	1	66	48.3	48.4	49.7	1.4	--
EB11	96	B	Residential	1	66	53.7	53.7	54.5	0.8	--
EB11	97	B	Residential	1	66	59.8	59.8	60.2	0.4	--
EB11	98	B	Residential	1	66	62.4	62.4	63.2	0.8	--
EB11	99	B	Residential	1	66	60.5	60.5	60.8	0.3	--
EB11	100	B	Residential	1	66	60.8	60.8	61.3	0.5	--
EB11	101	B	Residential	1	66	62.7	62.7	63.3	0.6	--
EB11	102	B	Residential	1	66	55.8	55.8	56.6	0.8	--
EB11	103	B	Residential	1	66	63.3	63.3	63.8	0.5	--
EB11	104	B	Residential	1	66	57.6	57.6	58.1	0.5	--
EB11	105	B	Residential	1	66	56.6	56.6	57.6	1	--
EB11	106	B	Residential	1	66	56.7	56.7	57.9	1.2	--
EB11	107	B	Residential	1	66	56.4	56.4	57.6	1.2	--
EB11	108	B	Residential	1	66	56.3	56.3	57.3	1	--
EB11	109	B	Residential	1	66	57.1	57.1	58.5	1.4	--
EB12	110	B	Residential	1	66	55.3	55.3	56.5	1.2	--
EB12	111	B	Residential	1	66	59.3	59.3	61	1.7	--
EB12	112	B	Residential	1	66	68.5	68.5	69.8	1.3	YES
EB12	113	B	Residential	1	66	51.9	51.9	53.2	1.3	--
EB12	114	B	Residential	1	66	67	67	67.7	0.7	YES
EB12	115	C	Day Care	1	66	54.1	54.1	54.9	0.8	--
EB12	116	B	Residential	1	66	69.9	69.9	70.8	0.9	YES

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB12	117	B	Residential	1	66	57.4	57.4	58.6	1.2	--
EB12	118	B	Residential	1	66	51.1	51.1	52.3	1.2	--
EB12	119	B	Residential	1	66	56.1	56.1	57.3	1.2	--
EB12	120	B	Residential	1	66	68.4	68.4	68.9	0.5	YES
EB12	121	B	Residential	1	66	56.3	56.3	57.1	0.8	--
EB12	122	B	Residential	1	66	68.6	68.6	69.5	0.9	YES
EB12	123	B	Residential	1	66	69.8	69.8	70.9	1.1	YES
EB12	124	B	Residential	1	66	57.9	57.9	58.1	0.2	--
EB12	125	B	Residential	1	66	53.4	53.4	53.9	0.5	--
EB12	126	B	Residential	1	66	68.6	68.6	68.8	0.2	YES
EB12	127	B	Residential	1	66	60.7	60.7	62.2	1.5	--
EB12	128	B	Residential	1	66	57.2	57.2	57.2	0	--
EB12	129	B	Residential	1	66	53.2	53.2	53.5	0.3	--
EB12	130	B	Residential	1	66	68.1	68.1	68.4	0.3	YES
EB12	131	B	Residential	1	66	58.3	58.3	59.1	0.8	--
EB12	132	B	Residential	1	66	53.3	53.3	54	0.7	--
EB12	133	B	Residential	1	66	54.5	54.5	55.2	0.7	--
EB12	134	B	Residential	1	66	53.6	53.6	54.7	1.1	--
EB12	135	B	Residential	1	66	68.8	68.8	68.9	0.1	YES
EB12	136	B	Residential	1	66	57.6	57.6	58.2	0.6	--
EB12	137	B	Residential	1	66	59.6	59.6	60	0.4	--
EB12	138	B	Residential	1	66	68	68.1	67.8	-0.2	YES
EB12	139	B	Residential	1	66	59.2	59.2	59.4	0.2	--
EB12	140	B	Residential	1	66	69.8	69.8	69.7	-0.1	YES
EB12	141	B	Residential	1	66	68.8	68.8	68.6	-0.2	YES
EB12	142	B	Residential	1	66	68.1	68.1	68.1	0	YES
EB12	143	B	Residential	1	66	66.8	66.8	67	0.2	YES
EB12	144	B	Residential	1	66	58	58	59.4	1.4	--
EB12	145	B	Residential	1	66	65.9	65.9	66.1	0.2	YES
EB12	146	B	Residential	1	66	56.7	56.7	58	1.3	--
EB12	147	B	Residential	1	66	59.9	59.9	61.3	1.4	--
EB12	148	B	Residential	1	66	68.1	68.1	68.3	0.2	YES
EB12	149	B	Residential	1	66	69.3	69.3	69.1	-0.2	YES
EB12	150	B	Residential	1	66	60.5	60.5	61.9	1.4	--
EB12	151	B	Residential	1	66	56.1	56.1	57	0.9	--
EB12	152	B	Residential	1	66	54.2	54.2	55	0.8	--
EB12	153	B	Residential	1	66	60.8	60.8	62.2	1.4	--
EB12	154	B	Residential	1	66	56.5	56.5	57.2	0.7	--
EB13	155	B	Residential	1	66	64.7	64.7	65.9	1.2	--
EB13	156	B	Residential	1	66	57.8	57.8	58.8	1	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB13	157	B	Residential	1	66	57.1	57.1	59.5	2.4	--
EB13	158	B	Residential	1	66	56.2	56.2	58.5	2.3	--
EB13	159	B	Residential	1	66	59.6	59.6	61.2	1.6	--
EB15	160	B	Residential	1	66	64	64	65.2	1.2	--
EB14	161	B	Residential	1	66	68.4	68.4	69.7	1.3	YES
EB14	162	B	Residential	1	66	64.7	64.7	65.4	0.7	--
EB14	163	B	Residential	1	66	62.3	62.3	63.5	1.2	--
EB14	164	B	Residential	1	66	60.6	60.6	61.9	1.3	--
EB14	165	B	Residential	1	66	58.9	58.9	60.1	1.2	--
EB14	166	B	Residential	1	66	54.2	54.2	56.5	2.3	--
EB14	167	B	Residential	1	66	58.1	58.1	60.1	2	--
EB14	168	B	Residential	1	66	62.3	62.3	63.5	1.2	--
EB14	169	B	Residential	1	66	68.7	68.7	70.3	1.6	YES
EB15	170	B	Residential	1	66	61.6	61.6	63.2	1.6	--
EB15	171	B	Residential	1	66	62.7	62.7	64.3	1.6	--
EB15	172	B	Residential	1	66	58.2	58.2	60.8	2.6	--
EB15	173	B	Residential	1	66	57.5	57.5	58.4	0.9	--
EB15	174	B	Residential	1	66	60.3	60.3	62.5	2.2	--
EB15	175	B	Residential	1	66	60.5	60.5	62.7	2.2	--
EB15	176	B	Residential	1	66	60.8	60.8	63	2.2	--
EB16	177a	B	Residential	1	66	65.9	65.9	66.4	0.5	YES
EB16	177b	B	Residential	1	66	65.7	65.7	66.2	0.5	YES
EB16	177	B	Residential	2	66	62.1	62.1	64.1	2	--
EB16	178	B	Residential	1	66	61.3	61.3	63.2	1.9	--
EB16	179	B	Residential	1	66	60.7	60.7	62.7	2	--
EB16	180	B	Residential	1	66	60.3	60.3	62.4	2.1	--
EB16	181	B	Residential	2	66	62.3	62.3	64.4	2.1	--
EB16	182	B	Residential	2	66	64.8	64.8	65.7	0.9	--
EB16	183	B	Residential	2	66	59.4	59.4	61.2	1.8	--
EB16	184	B	Residential	1	66	58.5	58.5	60.4	1.9	--
EB16	185	B	Residential	1	66	60.1	60.1	62	1.9	--
EB17	186	B	Residential	1	66	54.5	54.5	57.5	3	--
EB18	187	B	Residential	1	66	58.1	58.1	65	6.9	--
EB18	188	B	Residential	1	66	56.6	56.6	63.1	6.5	--
EB18	189	B	Residential	1	66	61.3	61.3	68.9	7.6	YES
EB18	190	B	Residential	1	66	54.1	54.1	59.6	5.5	--
EB18	191	B	Residential	1	66	57.3	57.3	63.9	6.6	--
EB18	192	B	Residential	1	66	59.5	59.5	66.5	7	YES
EB18	193	B	Residential	1	66	52	52	56.7	4.7	--
EB18	194	B	Residential	1	66	61.1	61.1	69.1	8	YES

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB18	195	B	Residential	1	66	57.6	57.6	64.6	7	--
EB19	196	B	Residential	1	66	52.6	52.6	56.8	4.2	--
EB19	197	B	Residential	1	66	57.1	57.1	62.9	5.8	--
EB19	198	B	Residential	1	66	62.6	62.6	71.4	8.8	YES
EB19	199	B	Residential	1	66	57.2	57.2	62.4	5.2	--
EB19	200	B	Residential	1	66	60.7	60.7	68	7.3	YES
EB19	201	B	Residential	1	66	62.5	62.5	70.9	8.4	YES
EB19	202	B	Residential	1	66	61.9	61.9	70.1	8.2	YES
EB20	203	B	Residential	1	66	58.4	58.4	64.9	6.5	--
EB20	204	B	Residential	1	66	57.3	57.4	64.1	6.8	--
EB20	205	B	Residential	2	66	51.5	51.5	56.6	5.1	--
EB21	206	B	Residential	1	66	64.3	64.3	69.7	5.4	YES
EB21	207	B	Residential	1	66	64.8	64.8	69.8	5	YES
EB21	208	B	Residential	1	66	56.4	56.4	60.3	3.9	--
EB21	209	B	Residential	1	66	56.8	56.8	60.5	3.7	--
EB21	210	B	Residential	1	66	61.2	61.2	64.1	2.9	--
EB21	211	B	Residential	1	66	62.6	62.6	64.8	2.2	--
EB21	212	B	Residential	1	66	52.6	52.6	55.2	2.6	--
EB21	213	B	Residential	1	66	59.5	59.5	61.9	2.4	--
EB21	214	B	Residential	1	66	50.8	50.8	53.0	2.2	--
EB21	215	B	Residential	1	66	54.4	54.4	56.6	2.2	--
EB21	216	B	Residential	1	66	53.8	53.8	55.8	2	--
EB22	217	B	Residential	1	66	47.9	47.9	49.6	1.7	--
EB22	218	B	Residential	1	66	63.6	63.6	64.0	0.4	--
EB22	219	B	Residential	1	66	63.8	63.8	64.0	0.2	--
EB22	220	B	Residential	1	66	62.9	62.9	63.5	0.6	--
EB22	221	B	Residential	1	66	61	61	61.8	0.8	--
EB22	222	B	Residential	1	66	54	54	56.9	2.9	--
EB22	223	B	Residential	1	66	67.1	67.1	68.6	1.5	YES
EB22	224	B	Residential	1	66	58.1	58.1	59.4	1.3	--
EB22	225	B	Residential	1	66	65.8	65.8	67.4	1.6	YES
EB22	226	B	Residential	1	66	66.1	66.1	67.8	1.7	YES
EB22	227	B	Residential	1	66	66.3	66.3	68.1	1.8	YES
EB22	228	B	Residential	1	66	54.1	54.1	56.0	1.9	--
EB22	229	B	Residential	1	66	56.5	56.5	57.0	0.5	--
EB22	230	B	Residential	1	66	55.1	55.1	57.2	2.1	--
EB22	231	B	Residential	1	66	66.9	66.9	68.3	1.4	YES
EB22	232	B	Residential	1	66	56.8	56.8	58.1	1.3	--
EB22	233	B	Residential	1	66	65.9	65.9	67.1	1.2	YES
EB22	234	B	Residential	1	66	59.2	59.2	59.4	0.2	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB22	235	B	Residential	1	66	54.2	54.3	55.7	1.5	--
EB22	236	B	Residential	1	66	65.6	65.6	66.4	0.8	YES
EB22	237	B	Residential	1	66	66.2	66.2	67.0	0.8	YES
EB22	238	B	Residential	1	66	66.3	66.3	66.8	0.5	YES
EB22	239	B	Residential	1	66	54.5	54.5	54.8	0.3	--
EB22	240	B	Residential	1	66	57.7	57.7	57.2	-0.5	--
EB22	241	B	Residential	1	66	57	57	57.5	0.5	--
EB23	242	B	Residential	1	66	61.6	61.6	63.6	2	--
EB23	243	B	Residential	1	66	54.1	54.1	56.0	1.9	--
EB23	244	B	Residential	1	66	64.6	64.6	67.8	3.2	YES
EB23	245	B	Residential	1	66	55.8	55.8	58.9	3.1	--
EB23	246	B	Residential	1	66	63.2	63.3	69.9	6.7	YES
EB23	247	B	Residential	1	66	57.6	57.6	62.5	4.9	--
EB23	248	B	Residential	1	66	53.9	53.9	58.7	4.8	--
EB23	249	B	Residential	1	66	51.3	51.3	55.3	4	--
EB23	250	B	Residential	1	66	49	49.1	52.2	3.2	--
EB23	251	B	Residential	1	66	51.2	51.2	54.5	3.3	--
EB23	252	B	Residential	1	66	50.5	50.5	53.7	3.2	--
EB23	253	B	Residential	1	66	50.5	50.5	53.6	3.1	--
EB23	254	B	Residential	1	66	50.6	50.6	54.4	3.8	--
EB23	255	B	Residential	1	66	59.1	59.1	64.4	5.3	--
EB23	256	B	Residential	1	66	53.2	53.2	57.4	4.2	--
EB23	257	B	Residential	1	66	55.7	55.7	61.2	5.5	--
EB23	258	B	Residential	1	66	50.8	50.8	54.2	3.4	--
EB23	259	B	Residential	1	66	51.3	51.3	54.8	3.5	--
EB23	260	B	Residential	1	66	51.4	51.4	55.4	4	--
EB23	261	B	Residential	1	66	51.5	51.6	55.7	4.2	--
EB23	262	B	Residential	1	66	51.3	51.3	55.3	4	--
EB23	263	B	Residential	1	66	52.8	52.8	57.9	5.1	--
EB23	264	B	Residential	1	66	54.2	54.2	59.7	5.5	--
EB23	265	B	Residential	1	66	55.9	55.9	61.6	5.7	--
EB23	266	B	Residential	1	66	59.7	59.7	65.1	5.4	--
EB23	267	B	Residential	1	66	57.8	57.8	64.6	6.8	--
EB23	268	B	Residential	1	66	56.8	56.8	62.4	5.6	--
EB24	269	B	Residential	1	66	62.7	62.7	70.7	8	YES
EB24	270	B	Residential	1	66	59.8	59.8	66.3	6.5	YES
EB24	271	B	Residential	1	66	55.4	55.4	61.5	6.1	--
EB25	272	B	Residential	1	66	54.8	54.8	60.5	5.7	--
EB25	273	B	Residential	1	66	60.1	60.2	66.5	6.4	YES
EB25	274	B	Residential	1	66	60.1	60.1	66.4	6.3	YES

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB25	275	B	Residential	1	66	60.2	60.2	66.6	6.4	YES
EB25	276	B	Residential	1	66	60.4	60.4	66.9	6.5	YES
EB25	277	B	Residential	1	66	59.5	59.5	65.9	6.4	--
EB25	278	B	Residential	1	66	57.5	57.5	63.6	6.1	--
EB25	279	B	Residential	1	66	59.4	59.4	65.7	6.3	--
EB25	280	B	Residential	1	66	59.6	59.6	65.9	6.3	--
EB25	281	B	Residential	1	66	59.8	59.8	66	6.2	YES
EB25	282	B	Residential	1	66	59.8	59.8	66.1	6.3	YES
EB25	283	B	Residential	1	66	60.5	60.6	66.9	6.4	YES
EB25	284	B	Residential	1	66	56.8	56.8	62.6	5.8	--
EB25	285	B	Residential	1	66	55.4	55.4	61.2	5.8	--
EB25	286	B	Residential	1	66	52.5	52.5	57.2	4.7	--
EB26	287	D	Place of Worship	1	52	40.9	40.9	47.5	6.6	--
EB27	288	B	Residential	1	66	56.2	56.9	59.8	3.6	--
EB27	289	B	Residential	1	66	62.5	63.2	68	5.5	YES
EB28	290	B	Residential	1	66	56.4	57.2	60.2	3.8	--
EB28	291	B	Residential	1	66	63.6	64.4	69.3	5.7	YES
EB29	292	B	Residential	1	66	58.3	59.6	60.6	2.3	--
EB29	293	B	Residential	1	66	52.9	54.2	55.3	2.4	--
EB29	294	B	Residential	1	66	53.3	54.6	55.5	2.2	--
EB29	295	B	Residential	1	66	54	55.3	55.8	1.8	--
EB29	296	B	Residential	1	66	55.2	56.6	57.2	2	--
EB29	297	B	Residential	1	66	57.7	59	60.3	2.6	--
EB29	298	B	Residential	1	66	57.9	59.5	59.3	1.4	--
EB29	299	B	Residential	1	66	65	66.5	69.2	4.2	YES
EB29	300	B	Residential	1	66	57.8	59.5	59.1	1.3	--
EB29	301	B	Residential	1	66	64.1	65.7	64.8	0.7	--
EB29	302	B	Residential	1	66	64.6	66.2	64.6	0	--
EB29	303	B	Residential	1	66	60.3	61.9	60.4	0.1	--
EB29	304	B	Residential	1	66	64.7	66.3	64.6	-0.1	--
EB29	305	B	Residential	1	66	56	57.6	56.5	0.5	--
EB29	306	B	Residential	1	66	52.4	54	53.2	0.8	--
EB29	307	B	Residential	1	66	51.6	53.2	52.5	0.9	--
EB29	308	B	Residential	1	66	50.8	52.4	51.8	1	--
EB29	309	B	Residential	1	66	50.2	51.8	51.3	1.1	--
EB29	310	B	Residential	1	66	55.9	57.5	56.5	0.6	--
EB29	311	B	Residential	1	66	54.1	55.7	54.7	0.6	--
EB29	312	B	Residential	1	66	53.1	54.7	53.8	0.7	--
EB29	313	B	Residential	1	66	55.7	57.3	56.3	0.6	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB29	314	B	Residential	1	66	61.4	63	61.7	0.3	--
EB29	315	B	Residential	1	66	62.3	63.9	62.5	0.2	--
EB29	316	B	Residential	1	66	62.3	63.9	62.6	0.3	--
EB29	317	B	Residential	1	66	62.1	63.7	62.4	0.3	--
EB29	318	B	Residential	1	66	53.8	55.4	54.5	0.7	--
EB29	319	B	Residential	1	66	56.4	58.1	57	0.6	--
EB29	320	B	Residential	1	66	60.1	61.7	60.4	0.3	--
EB29	321	B	Residential	1	66	64.9	66.5	64.7	-0.2	--
EB29	322	B	Residential	1	66	56.4	58	57.2	0.8	--
EB30	323	B	Residential	1	66	54.9	56.5	55.8	0.9	--
EB30	324	B	Residential	1	66	56.7	58.3	57.2	0.5	--
EB30	325	B	Residential	1	66	61.1	62.8	61	-0.1	--
EB30	326	B	Residential	1	66	70.2	71.8	69.4	-0.8	YES
EB30	327	B	Residential	1	66	70.9	72.5	70.1	-0.8	YES
EB30	328	B	Residential	1	66	70.7	72.4	70.1	-0.6	YES
EB30	329	B	Residential	1	66	70.7	72.3	70	-0.7	YES
EB30	330	B	Residential	1	66	70.7	72.3	70.1	-0.6	YES
EB30	331	B	Residential	1	66	70.7	72.3	70.0	-0.7	YES
EB30	332	B	Residential	1	66	58.1	59.8	58.4	0.3	--
EB30	333	B	Residential	1	66	58.1	59.7	58.4	0.3	--
EB30	334	B	Residential	1	66	58.4	60	58.7	0.3	--
EB30	335	B	Residential	1	66	59.7	61.3	59.8	0.1	--
EB30	336	B	Residential	1	66	60.3	61.9	60.4	0.1	--
EB30	337	B	Residential	1	66	60.5	62.1	60.5	0	--
EB30	338	B	Residential	1	66	56.4	58	56.2	-0.2	--
EB30	339	B	Residential	1	66	53.4	55	53.8	0.4	--
EB30	340	B	Residential	1	66	59.2	60.8	58.9	-0.3	--
EB31	341	B	Residential	1	66	61.1	62.8	61.2	0.1	--
EB31	342	B	Residential	1	66	54.3	56	54.5	0.2	--
EB31	343	B	Residential	1	66	54	55.6	54.3	0.3	--
EB31	344	B	Residential	1	66	54.7	56.3	54.7	0	--
EB31	345	B	Residential	1	66	51.9	53.5	52.2	0.3	--
EB31	346	B	Residential	1	66	52.2	53.8	52.5	0.3	--
EB31	347	B	Residential	1	66	55.7	57.3	56.1	0.4	--
EB31	348	B	Residential	1	66	61.9	63.5	62.4	0.5	--
EB31	349	B	Residential	1	66	64.2	65.8	64.7	0.5	--
EB31	350	B	Residential	1	66	51.5	53.1	51.9	0.4	--
EB31	351	B	Residential	1	66	57.7	59.4	57.6	-0.1	--
EB32	352	C	Medical	1	66	67.9	69.5	67.6	-0.3	YES
EB32	353	B	Residential	2	66	61.8	63.4	62.2	0.4	--

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						Existing (2015)	No-Build (2040)	Build (2040)	Increase/Decrease from Existing*	
EB32	354	B	Residential	2	66	56.4	58	56.1	-0.3	--
EB32	355	B	Residential	2	66	53.7	55.3	53.6	-0.1	--
EB32	356	B	Residential	1	66	56.2	57.8	56	-0.2	--
EB33	357	E	Restaurant	1	71	70.3	71.9	69.7	-0.6	--
EB34	358	B	Residential	1	66	55.7	57.3	56	0.3	--
EB34	359	B	Residential	1	66	54.7	56.3	55.1	0.4	--
EB34	360	B	Residential	1	66	62.3	63.9	62.8	0.5	--
EB34	361	B	Residential	1	66	58.9	60.5	59.1	0.2	--
EB34	362	B	Residential	1	66	55.1	56.7	55.3	0.2	--
EB34	363	B	Residential	1	66	52.7	54.4	53.8	1.1	--
EB34	364	B	Residential	1	66	59.7	61.3	60	0.3	--
EB34	365	B	Residential	1	66	68.9	70.5	68.1	-0.8	YES
EB34	366	B	Residential	1	66	57	58.7	57	0	--
EB34	367	B	Residential	2	66	67.8	69.4	66.7	-1.1	YES
EB34	368	B	Residential	2	66	60	61.6	59.7	-0.3	--
EB34	369	B	Residential	2	66	55.3	57	55.2	-0.1	--
EB34	370	B	Residential	2	66	60.5	62.1	60.6	0.1	--
EB34	371	B	Residential	2	66	68.1	69.7	67.1	-1	YES
EB34	372	B	Residential	1	66	55.5	57.1	55.7	0.2	--
EB35	373	B	Residential	4	66	57.9	59.5	59.2	1.3	--
EB36	374	B	Residential	1	66	52.5	54.1	53.2	0.7	--
EB36	375	B	Residential	1	66	54.6	56.2	55.2	0.6	--
EB36	376	B	Residential	1	66	59.6	61.2	60.2	0.6	--
EB36	377	B	Residential	1	66	57	58.6	57.1	0.1	--
EB36	378	B	Residential	1	66	67.2	68.8	67.1	-0.1	YES
EB36	379	E	Motel	1	71	66.2	67.8	66.0	-0.2	--
EB36	380	B	Residential	1	66	58.5	60.1	59.1	0.6	--
EB36	381	B	Residential	1	66	63.7	65.3	63.6	-0.1	--
EB36	382	B	Residential	3	66	54.7	56.3	55.2	0.5	--
EB37	383	D	School	1	51	38.1	39.7	38.6	0.5	--
EB37	384	C	School	1	66	56.8	58.4	57.5	0.7	--
EB38	385	D	Nonprofit	1	51	50	50.6	50.5	0.5	--
EB38	386	B	Residential	1	66	55.9	57.5	57.6	1.7	--
EB38	387	C	Place of	1	66	57.8	59.4	60.2	2.4	--
EB38	388	B	Residential	1	66	57.4	59	59.8	2.4	--
EB39	389	C	School	1	66	54.3	55.9	57.0	2.7	--
EB39	390	C	School	1	66	57.3	58.9	60.7	3.4	--
EB40	391	B	Residential	1	66	56.6	61.5	57.5	0.9	--
EB40	392	B	Residential	1	66	51.5	56.4	53.5	2	--
EB40	393	B	Residential	1	66	53.5	58.5	55.4	1.9	--

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EB41	394	B	Residential	1	66	57.3		57.5	0.2	--
* When compared to predicted levels with the Build Alternative.										