

**C-466A**  
***PD&E Feasibility Study***

**Prepared for:**

**Lake-Sumter MPO  
City of Wildwood  
Sumter County**

**Prepared by:**



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**PD&E Feasibility Study**

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# **C-466A PD&E Feasibility Study**

## **1. SUMMARY**

This study was prepared to address the feasibility of potential roadway widening of C-466A in the City of Wildwood, Florida. The potential project would involve widening of C-466A from two lanes to four lanes from US-301 to CR-139.

In conjunction with this study, two public meetings were held. The first meeting provided an introduction to the purpose and intent of the study being done. At the second meeting the results of the analysis were presented and feedback was solicited from the public.

A third public meeting is to be held upon completion of the final report (currently anticipated for October 2008). This public meeting is to be a joint meeting of the representatives of the Commissions of the City of Wildwood, Sumter County, and representatives of the Lake-Sumter MPO.

Based on the results of the engineering analysis, the discussions with the stakeholders, and feedback from the public, the recommended alternative for construction of C-466A is widening the roadway approximately symmetrical to the existing centerline of the roadway as this is estimated to have the least impact to adjacent land and buildings.

Though not analyzed as part of this report, a "hybrid" widening could be investigated at the design phase which would further reduce the impacts to adjacent land owners. This alternative would allow the design engineer to provide roadway curves in order to avoid impacts to adjacent homes.

## 2. INTRODUCTION

### 2.1. Purpose

The purpose of this Feasibility Report is to document the findings of an engineering evaluation for potential improvements to C-466A/Cleveland Avenue from US-301 to C-462/CR-139/Pony Farm Road (herein referred to as CR-139) in the City of Wildwood, Florida. This report presents the engineering data and analysis needed to provide a feasibility (preliminary level) overview of the potential project improvements. It documents the existing physical features of the roadway and the existing environmental characteristics of the project corridor. The report also defines the need for improvements, including analysis of existing and projected traffic conditions that establish the requirements for the potential project improvements. The results of the analysis of the viable alternatives are documented, including the presentation of an alternatives evaluation matrix that provides the framework for comparing the relative advantages and disadvantages of the individual alignment alternatives developed for this study. From this evaluation matrix, an alternative was then identified for which a preliminary design analysis and conceptual plans were prepared, and the social, economic and environmental impacts were evaluated.

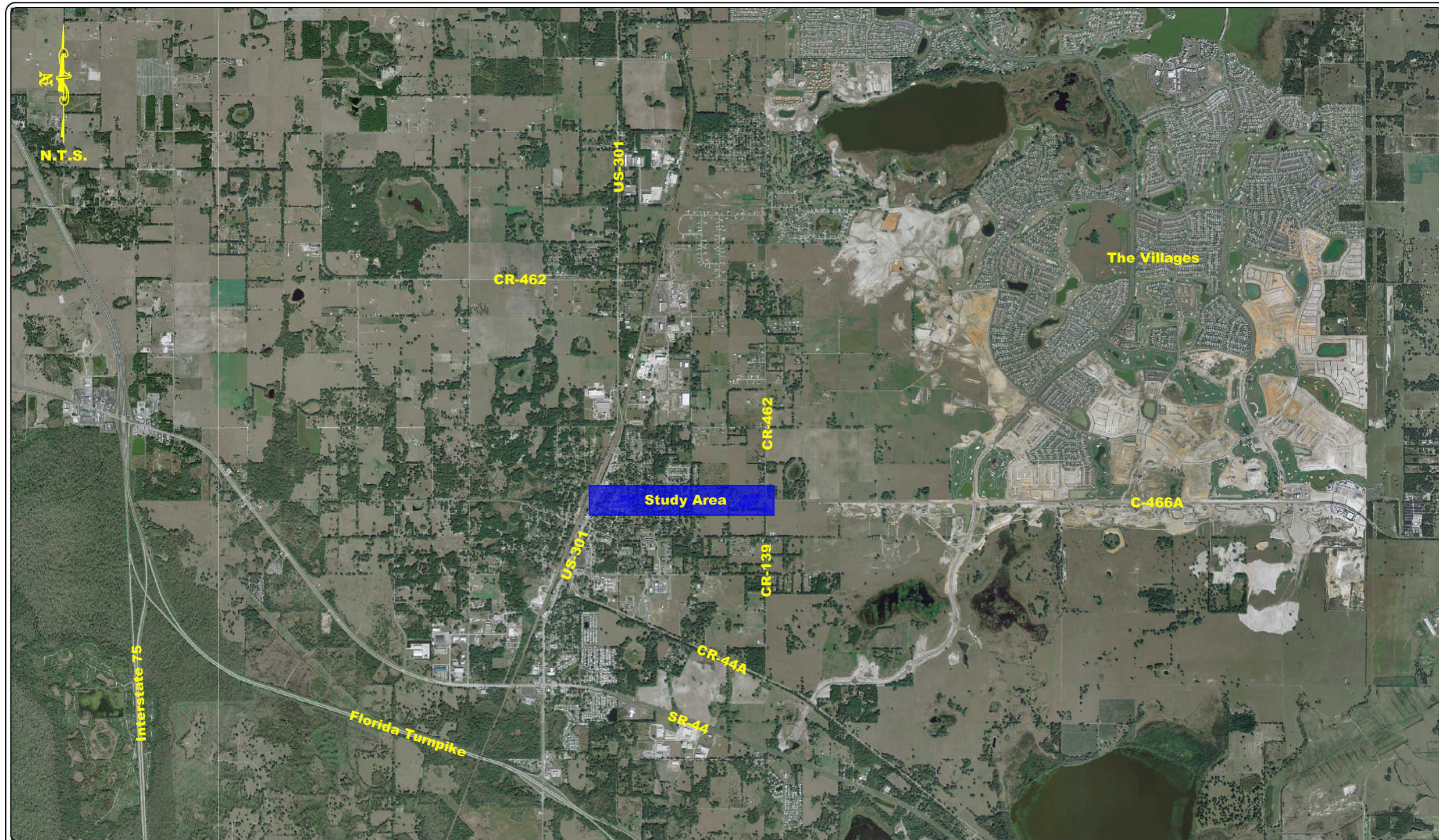
As this report is preliminary in nature, the primary source of data was existing information available through the City of Wildwood, Sumter County, and the Lake-Sumter Metropolitan Planning Organization (MPO). Sources of data utilized in this study included, but were not limited to:


- Construction Plans for the Reconstruction of County Road 466-A, Springstead Engineering, March 1992 (Construction of closed drainage section for portions of C-466A)
- Construction Plans for County Road 466-A, Springstead Engineering, No Date (Construction of road and open swale along the eastern portion of the study area)
- City of Wildwood Visioning Workshop Summary Report, July 2007
- City of Wildwood DRAFT Long Range Transportation Plan, Kimley Horn
- 2014 Central Florida Regional Planning Model modified for the Villages Development
- 2000 and 2030 Central Florida Regional Planning Model base model files

### 2.2. Project Description

The proposed project involves the widening of C-466A from two lanes to four lanes in the City of Wildwood. The study area begins at US-301 and extends eastward 1.15 miles to the intersection with CR-139. East of the study area, C-466A is to be widened to four lanes with future development.

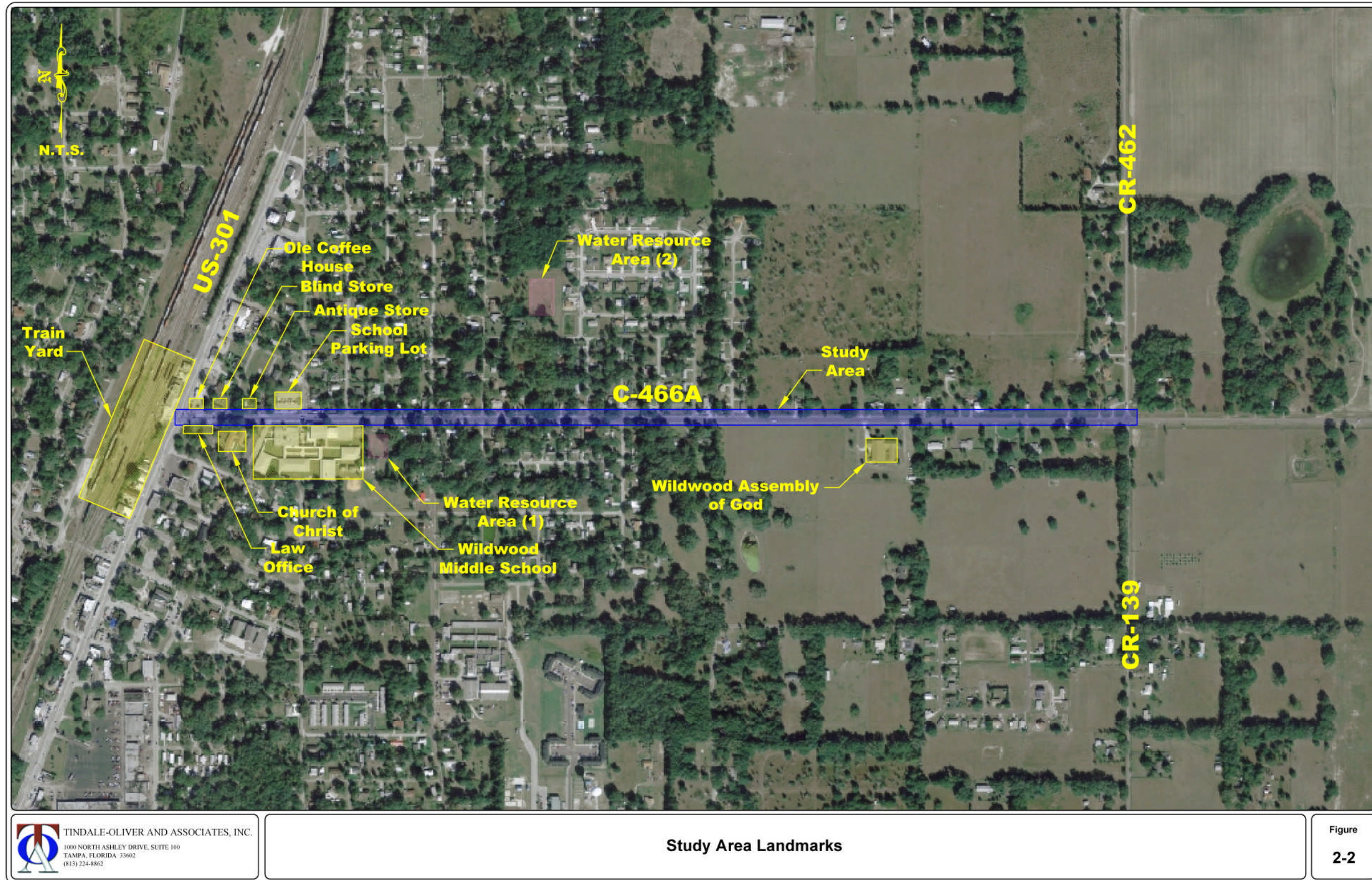
The project study area is depicted on Figure 2-1 and 2-2.




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**C-466A Study Area**

**Figure**  
**2-1**




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**Study Area Landmarks**

Figure  
**2-2**

### 3. NEED FOR IMPROVEMENT

The need for improvement to this roadway is based on several factors. The first of these factors is to provide for additional capacity to meet the projected increase in traffic volumes in the area. The second factor is the need to enhance safety on C-466A. Third, improvements to C-466A will help meet the social/economic demand of the area. Lastly, the proposed improvements are consistent with the DRAFT Long Range Transportation Plan of the City of Wildwood. This section of the report presents the findings relative to each of these areas and a review of the recommendations presented by the local comprehensive planning efforts.

#### 3.1. Capacity

A No-Project Alternative analysis was conducted for C-466A to document the need for additional capacity and/or geometric improvements. The No-Project Alternative is defined as C-466A under the existing configuration with all other planned regional roadway improvements assumed complete.

The No-Project estimated near term (2015) Annual Average Daily Traffic (AADT) volumes on C-466A from US-301 to CR-139 are approximately 21,600 vehicles per day (vpd). In 2015, the roadway segment is estimated to experience operation worse than minimum acceptable Level of Service (LOS) "D".

The No-Project projected design year (2030) AADT volumes on C-466A from US-301 to CR-139 are 23,700 vpd. In 2030, the roadway segment is estimated to experience operation worse than the minimum acceptable LOS "D".

C-466A will operate worse than LOS "D" even with the completion of anticipated improvements to the regional roadway network. These improvements included widening of C-466A east of the study area, extension of CR-139 to SR-44, and the construction of a connection from C-466A to SR-44 and ending at an interchange with the Florida Turnpike.

The existing and future traffic analysis is provided in Section 6.

#### 3.2. Safety

One of the primary considerations when analyzing future roadway improvements is to provide for the safe movement of vehicular traffic, as well as pedestrian and bicycle traffic. One of the key design elements of this study upgrades the corridor to provide for new, or modifications to, pedestrian and bicycle facilities. This study also includes a historical review of the crash history along the corridor in determination the existence of potential safety concerns. The results of the crash history analysis are provided in Section 4.



### 3.3. Consistency with Transportation Plans

The widening of C-466A from two lanes to four lanes was compared against the transportation plans of the City of Wildwood, Sumter County, and the Lake-Sumter Metropolitan Planning Organization (LSMPO) as follows:

- City of Wildwood DRAFT Long Range Transportation Plan as presented in the City of Wildwood Visioning Workshops Summary Report calls for C-466A as a four lane roadway.
- The LSMPO Long Range Transportation Plan 2025 includes Lake County and a portion of the north east corner of Sumter County. The City of Wildwood and C-466A west of the Lake County line are not contained in the LSMPO LRTP.
- The Sumter County's most current Capital Improvement Program does not indicate a programmed improvement within the study area.

### 3.4. Social/Economic Demands

The City of Wildwood has spent considerable effort recent years developing a vision to guide development in the future. Part of this vision includes redevelopment of the C-466A corridor to include a "downtown" commercial district.

Additionally, large scale development to the east is currently under development review. The development of "The Villages of Sumter" is anticipated to be a mixed use development consisting of, among other things, approximately 32,000 dwelling units, 4.5 million square feet of retail, and 0.5 million square feet of office.

C-466A would provide the primary interconnection between the City of Wildwood and the Villages development. Providing a roadway connection with acceptable operating conditions between the City and the Villages would encourage interaction of the uses within these two areas.

## 4. EXISTING CONDITIONS

### 4.1. Existing Roadway Conditions

C-466A begins at US-301 in the City of Wildwood and runs approximately 8.25 miles east to US-27/441 (SR-25/500) in Lake County. This study area covers C-466A from US-301 east approximately 1.2 miles to CR-139. Existing conditions were also documented in Technical Memorandum #1 which is supplied in Appendix A.

#### 4.1.1. Functional Classification

C-466A currently functions primarily as a local collector street providing access to small side streets, residential, school, and church uses. However, C-466A also provides one of few east west connections between Sumter and Lake Counties in a continuous alignment and in that way will function as a rural principal arterial east of the study area.

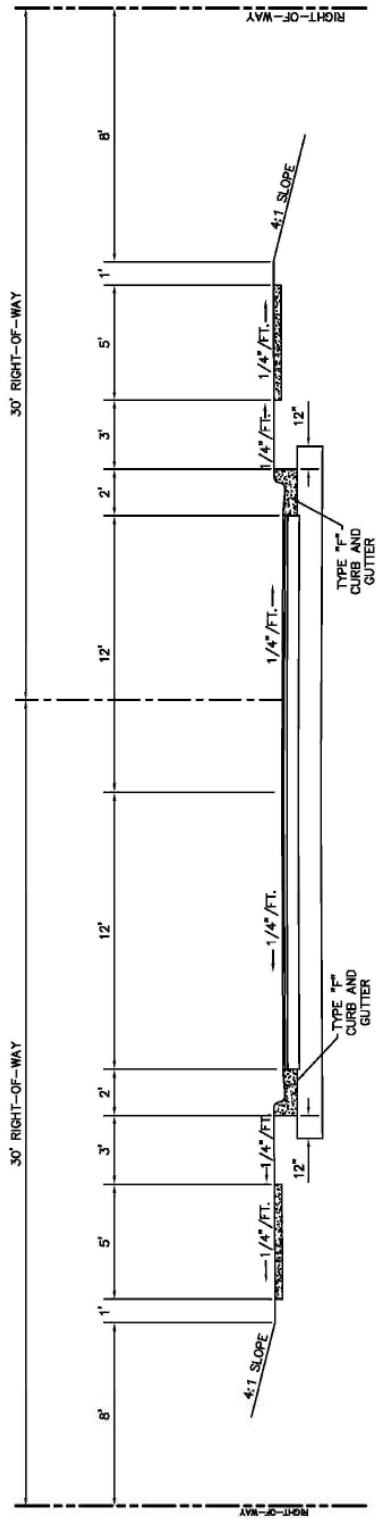
#### 4.1.2. Typical Section

There are primarily two typical sections that exist along the C-466A in the study area.

The first section extending from US-301 eastward approximately 0.90 miles is a two lane, undivided, urban (closed drainage) section with 12' lanes and concrete sidewalk on both sides of the roadway. In this section, stormwater runoff is collected in curbside inlets which feed an underground stormwater piping system that distributes the stormwater to one of the two Water Resource Areas (WRA).

The second section, which continues east to CR-139 and subsequently outside of the limits of the study area, is a two lane, undivided, rural (open) section with 12' lanes. Here, stormwater runoff is collected in roadside ditches and flows eastward out of the study area. A sidewalk is provided on the south side of the roadway, inside the southern right-of-way line.

The existing typical sections are presented in Figure 4-1 and Figure 4-2.

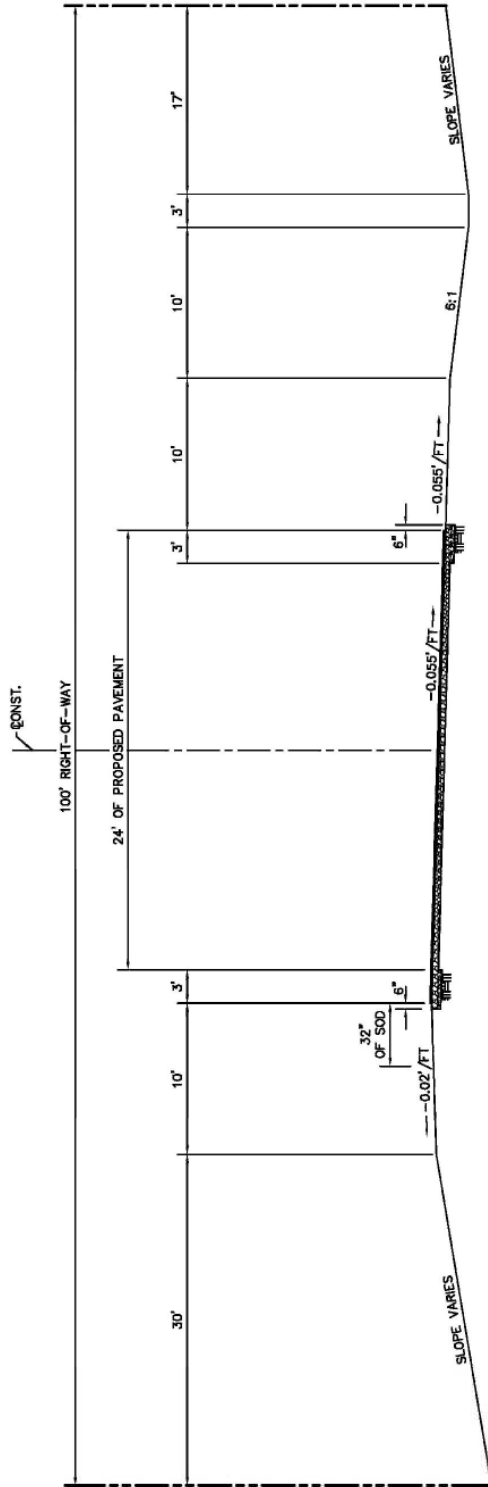


**C-466A Typical Section from US-301 to East of Pleasantdale Drive (Urban / Closed Section)**

**Figure 4-1**




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**C-466A Typical Section from East of Pleasantdale Drive to CR-139 (Rural / Open Section)**

**Figure 4-2**



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#### 4.1.3. Pedestrian and Bicycle Facilities

As noted above, there are 5' sidewalks along C-466A for the portion that has an urban section and sidewalks on the south side only of the open or rural section. No bicycle facilities exist within the study area.

#### 4.1.4. Right of Way

Previous construction plans and information from the Sumter County Property Appraiser's office were reviewed to identify the existing right-of-way along C-466A. There are several discrepancies between the two sources; in many instances the property boundaries of land adjacent to C-466A appear to encroach on the right-of-way as estimated from the construction documents. For purposes of this analysis, the construction plans were assumed as the most accurate source for right-of-way information. The existing right-of-way in the study area is summarized as follows:

- From US-301 to 1200' east of Pleasantdale Drive (East of Church) - 60'
- From East of Church to CR-139 – 100'

Given the discrepancy between property appraiser data and that of the most recent construction plans, prior to proceeding with preliminary and final construction plans, a full right-of-way survey will need to be conducted.

Appendix B provides a table and several exhibits which show discrepancies between the assumed/provided right-of-way and the information provided by the property appraiser.

#### 4.1.5. Horizontal Alignment

In the study area, C-466A runs in a straight alignment east-west with no significant horizontal curves.

#### 4.1.6. Vertical Alignment

Over the study area limits, C-466A experiences approximately 20'-25' in elevation change between the low point and the high point. The roadway generally slopes upward from west to east. The low point along the project area is east of Wildwood Middle School at the existing Water Resource Area. The high point of the study area is on the east end at, or around, the existing Wildwood Assembly of God Church. No elevation data was available east of this location, but a field review indicated that after the peak at the church, the roadway generally slopes downward from west to east toward CR-139.

#### 4.1.7. Drainage

As discussed, approximately 0.9 miles of C-466A is currently served by an urban section with curb and gutter and an under road pipe system which delivers storm water to one of two Water Resource Areas (WRA). WRA 1 is located just east of Wildwood Middle School and holds 0.665 acre-feet from the control elevation to the top of bank. WRA 2 is located north of C-466A in the vicinity of Milray Drive and Crestview Circle and holds 2.781 acre-feet from the control elevation to the top of bank.

The storm water permit calculations done for the previous design of the closed roadway section were reviewed (STORMWATER DRAINAGE CALCULATION FOR COUNTY ROAD 466-A IN CITY OF WILDWOOD, FLORIDA' by Springstead Engineering, Inc. May, 1992). Based on those calculations, existing WRA 1, east of Wildwood Middle School, does not have the estimated capacity necessary to accommodate the 25 year or 100 year, 24 hour design storms. The current calculations estimate, that for the design storm, the demand will result in ponding onto the road. Note that WRA1 is located at the lowest roadway elevation along the study area.

Using the previous calculations as a base, the additional stormwater pond capacity necessary to mitigate the additional impacts of the proposed widening was calculated. Based on these calculations, it is estimated that an additional 1.8 acre-feet of pond capacity will be needed to offset the impacts of the project, and a total of 6.0 acre-feet of capacity will be needed to fully accommodate the stormwater demands for the study area for the design year storm.

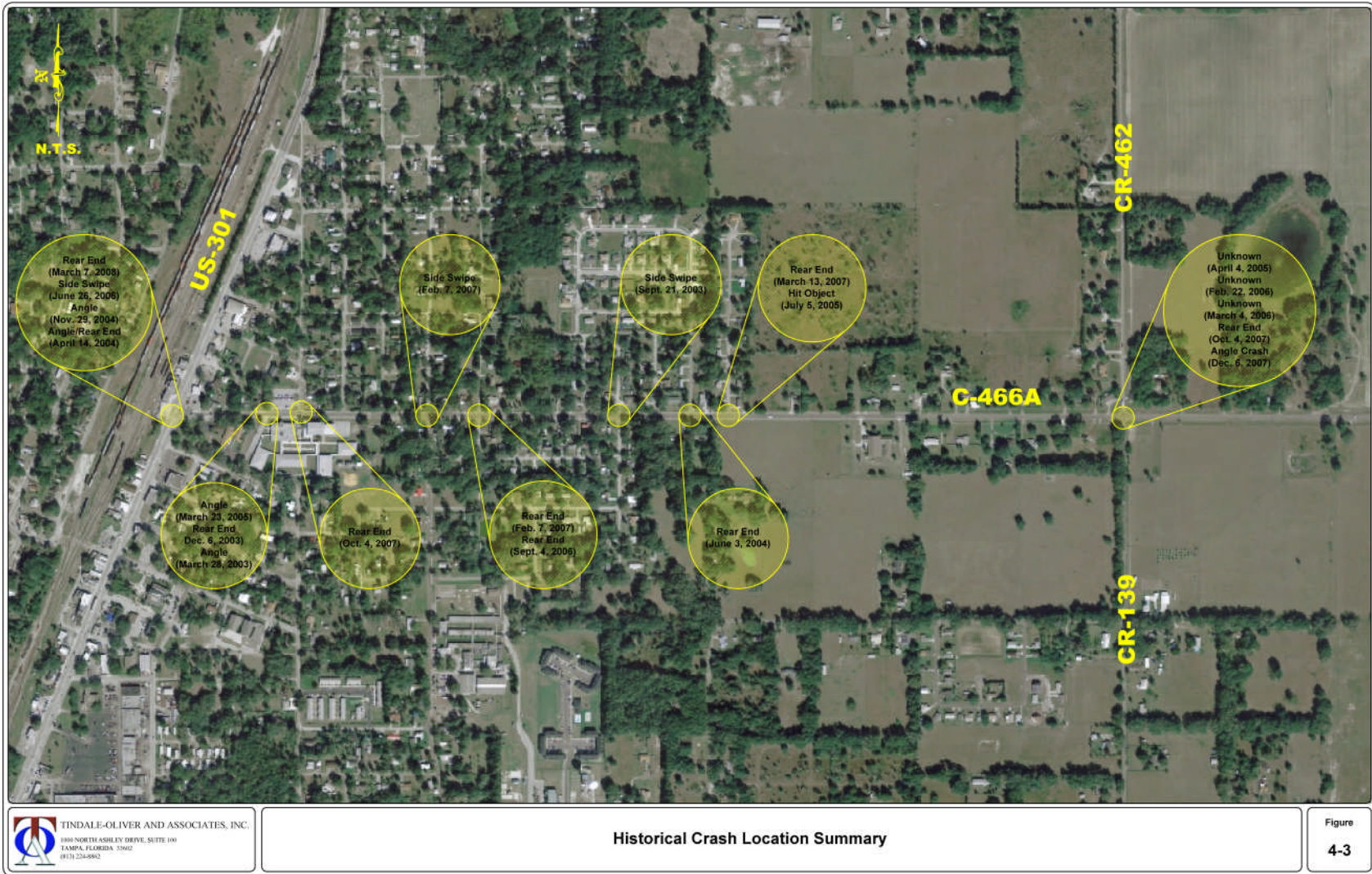
#### 4.1.8. Crash Data

Crash records for the study area were obtained from Sumter County Sherriff's Department and the City of Wildwood Police Department from 2003/2004 to 2008. These data were reviewed to identify any safety issues along the corridor. The data is summarized in Table 4-1 and presented graphically in Figure 4-3.

**Table 4-1 Crash Data Summary**

Crash Data Source	On Street	Cross Street	Date	# of Crashes	# of Vehicles Involved	# of Injuries	# of Fatalaties	Type of Crashes			Other (Explain)
								Angle	Rear End	Side Swipe	
Sumter County Sheriff	466A	462	4/4/2005	1	1	N/A	N/A	N/A	N/A	N/A	
Sumter County Sheriff	466A	462	2/22/2006	1	2	N/A	N/A	N/A	N/A	N/A	
Sumter County Sheriff	466A	139	3/4/2006	1	1	N/A	N/A	N/A	N/A	N/A	
Sumter County Sheriff	466A	462W	6/3/2006	1	2	N/A	N/A	N/A	N/A	N/A	
Sumter County Sheriff	466A	CR 462	9/29/2006	1	2	N/A	N/A	N/A	N/A	N/A	
Wildwood P.D.	Cleveland Avenue	Pony Farm Road	10/4/2007	1	2	1	0		x		
Wildwood P.D.	Cleveland Avenue	Pony Farm Road	12/6/2007	1	2	0	0	x			
Wildwood P.D.	Cleveland Avenue	Pleasantdale Drive	3/13/2007	1	2	0	0		x		
Wildwood P.D.	Pleasantdale Drive	Cleveland Avenue	7/5/2005	1	1	0	0				hit trash cans
Wildwood P.D.	Cleveland Avenue	Masters Drive	6/3/2004	1	2	0	0		x		
Wildwood P.D.	Cleveland Avenue	Gray Avenue	9/21/2003	1	2	1	0			x	
Wildwood P.D.	Stanley Avenue	Cleveland Avenue	2/7/2007	1	2	0	0		x		car 1 backed into car 2
Wildwood P.D.	Cleveland Avenue	Stanley Avenue	9/4/2006	1	2	0	0		x		
Wildwood P.D.	Warfield Avenue	Cleveland Avenue	5/27/2005	1	2	0	0			x	
Wildwood P.D.	Oldwire Road	Cleveland Avenue	10/4/2007	1	2	0	0		x		
Wildwood P.D.	Cleveland Avenue	Gamble Street	3/23/2005	1	2	0	0	x			
Wildwood P.D.	Cleveland Avenue	Gamble Street	12/6/2003	1	2	0	0		x		
Wildwood P.D.	Cleveland Avenue	Gamble Street	3/28/2003	1	2	0	0	x			
Wildwood P.D.	Cleveland Avenue	Stanley Avenue	4/7/2003	1	1	0	0				hit speed limit sign
Wildwood P.D.	US 301	Cleveland Avenue	3/7/2008	1	2	0	0		x		
Wildwood P.D.	Cleveland Avenue	US 301	6/26/2006	1	1	0	0			x	hit building and run
Wildwood P.D.	Cleveland Avenue	US 301	11/29/2004	1	2	0	0	x			
Wildwood P.D.	Cleveland Avenue	US 301	4/14/2004	1	2	0	0	x	x		

As shown, the data provided indicates that over the past five years there have been a total of 23 accidents. In these accidents there were no reported fatalities and two injuries. The rate of accidents, as reported, is approximately 4 per year. If it is assumed that the roadway averaged approximately 5,000-6,000 vehicles per day over this time, that would calculate to approximately 4 crashes/ (365 days \* 5000 vehicles/day) = 2 crashes/million vehicles. The statewide average for 2 lane, undivided urban segments is 3.708 crashes per million vehicles. This level of crash activity would not be considered unusually hazardous.





#### 4.1.9. Intersections and Signalization

At the west terminus of the study area, the intersection of C-466A and US-301 is a signalized T-intersection. US-301 runs north-south and westbound vehicles along C-466A can either make a left or a right turn. Directly west of C-466A is an existing rail yard that would make it very costly to extend C-466A further west.

At the east terminus of the study area, the intersection of C-466A and CR-139 is a two-way stop controlled intersection with C-466A operating freely as the major street and CR-139 operating under stop control as the minor street. As development occurs at the intersection of C-466A and CR-139 it is anticipated that this intersection will become signalized. However, at the time of this report, signalization of this intersection is not programmed in the City or County's planned improvements.

#### 4.1.10. Access Management

Throughout the study area, there is frequent access provided to C-466A. These connections include minor residential side streets, residential driveways, and access to churches and a school. No turn lanes are provided at any of these side street connections.

For the future design, if a raised median is chosen, attention much be paid to the location of median breaks to allow for connectivity for the existing roadway system. It is recommended that FDOT and/or County guidelines provide a guide for the number and location of median openings through the corridor, while still allowing for access to the neighboring parcels as they are developed.

#### 4.1.11. Lighting

Roadside lighting is mounted on the power poles within the study roadway. These poles are located on the north side of C-466A from US-301 to east of Wildwood Middle School. Then the power poles, and subsequently the street lighting, shifts to the south side of C-466A. The street lighting ends just east of the Wildwood Assembly of God Church.

#### 4.1.12. Utilities

Along the corridor several utilities exist both underground and overhead. The majority of the utilities are located within the right of way outside of the edge of pavement. For the most part, it appears that utilities were not located underneath the existing sidewalk. The utilities in the corridor are as follows:

- Water is located on the south side
- Buried telephone and TV are located on the north and south sides

- Sanitary sewer picks up on the south side at Stanley Avenue
- Overhead utilities begin on the north side of C-466A, progressing west to east, past Wildwood Elementary School, the overhead shifts to the south side of the roadway.

#### 4.1.13. Pavement Conditions

Based on a “windshield” survey, the pavement along C-466A appears to be in good condition with minimal, if any, cracking. The existing pavement does not appear to need replaced or resurfaced.

### 4.2. Environmental Characteristics

#### 4.2.1. Land Use Data

##### 4.2.1.1. Existing Land Use

Existing land use data along the study area was based on review of recent aerial photography as well as a field inspection and is summarized as follows:

- The intersection of C-466A and US-301 has a restaurant (The Coffee House) and a commercial building (48 Hour Blinds Factory) on the northeast quadrant and a church (Church of Christ) and law office on the south east quadrant. In the vicinity on the north side of C-466A is a gift shop (Cottage Garden Gifts).
- Wildwood Middle School is located approximately 500’ east of US-301
- The Wildwood Assembly of God church is located on the eastern end of the study area, approximately 1600’ west of CR-139
- The remainder of the study area is comprised of primarily single family residential units on varying sized lots and some larger area agricultural.

It is anticipated that redevelopment will occur along the study area and the C-466A corridor will transition from primarily residential to commercial in character.

#### 4.2.2. Cultural Features

Discussions with the stake holders indicated that no archaeological, architectural or historically significant buildings or features were designated within the study area.

#### 4.2.3. Natural and Biological Features

##### 4.2.3.1. Wetlands

Information from the Southwest Florida Water Management District was reviewed to identify potential impacts to wetlands in the study area. Based on this review the study area is in a designated upland area. There are several palustrine designated

areas (ponds) approximately 500' north and south of C-466A. Supporting documentation is provided in Appendix C

#### 4.2.3.2.Floodplain/Floodways

Information from the Federal Emergency Management Agency was reviewed to determine if any of the C-466A study area is in a floodplain or a high flood area. According to FEMA, the majority of the City of Wildwood, including the C-466A study area is designated as Flood Zone "C" – Areas of Minimal Flooding. Supporting documentation is provided in Appendix D.

#### 4.2.3.3.Vegetation

C-466A is "canopied" by various sizes and types of trees including oak trees. These trees are located generally just outside of the existing right-of-way. The potential project would likely require removal or relocation of these trees.

## 5. DESIGN CRITERIA

As C-466A is a county roadway, design and construction criteria for the proposed improvement must comply with Sumter County recommended standards and practices. The following documents, or most recent revisions at the time of design, shall guide the design and construction of the proposed improvements.

- Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (Florida Greenbook), FDOT, May 2007
- Geometric Design of Streets and Highways, AASHTO, 2004
- Plans Preparation Manual, FDOT, January 2008
- State of Florida Department of Transportation Drainage Manual, FDOT, January 2008
- Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), FHWA, 2003
- Other generally accepted federal, state, and local guidelines.

It should be noted that if FDOT or other State funds are used for the construction of this improvement, that the design and construction may need to meet FDOT standards. This should be verified prior to preparing preliminary and final engineering documents.

## 6. TRAFFIC

The information in this section is generally taken from Technical Memorandum #2: C-466A Traffic Analysis which is provided in Appendix E. This memorandum documented the existing (2008) traffic conditions, future volume estimates along the corridor, and future operating conditions of the roadway progressively through 2030.

### 6.1. Existing Traffic Conditions

The existing (2008) AADT along C-466A in the study area is estimated to be 7,000 vehicles per day.

### 6.2. Existing Roadway Segment Levels of Service

The existing (2008) Level of Service (LOS) along C-466A was estimated based on existing AADT and using FDOT's Generalized LOS Capacity Table 4-1 (Urbanized Areas). As a two-lane, undivided, non-State/County roadway, C-466A currently operates at LOS "C".

### 6.3. Future Traffic Projections

The future traffic volumes were estimated for both a No-Project and Build condition. Based on the future volume forecasting methodology, the No-Project and Build determination had little, if any, impact on the future volume projections on C-466A. Therefore the Build scenario volume estimate was used for future roadway operations analysis.

Using the previously discussed methodology for future volume estimation, the future demands on C-466A are estimated as follows:

- 2015 – 21,600 vpd
- 2030 – 23,700 vpd

It should be noted that the drastic increase in traffic along C-466A, particularly in the short term, is closely tied to the level of development of the Villages. The forecasts above are based on an "aggressive" assumption that the Villages is to be built by 2014.

### 6.4. Future Roadway Segment Levels of Service

Based on the traffic volume projections, C-466A is estimated to begin to exceed LOS "D" capacity in 2012 at 16,700 vpd with the existing two-lane configuration.

With the widening of C-466A to four lanes, the roadway is expected to operate at LOS "C" through 2014 and isn't expected to exceed LOS "D" within the study horizon.

## 7. Corridor Analysis

The area was reviewed to determine the feasibility of alternate corridors for this project. No alternate corridors were identified which would be preferable to the existing alignment.

## 8. Alternative Alignment Analysis

### 8.1. Overview

The objective of the Alternative Alignment Analysis process is to identify technically and environmentally sound alignment alternatives that meet the traffic needs of the project and that are cost effective and acceptable to the community. This section documents the results of the identification and evaluation of the alternatives that were considered in this study. The C-466A study area was broken into three distinct analysis segments based on a review of existing land use, geometric, and right-of-way considerations. The selection of the segments is discussed below:

#### Segment 1: C-466A from US-301 to the vicinity of Warfield Avenue

This segment was separated because of the location of Wildwood Middle School approximately 600' east of US-301 and some of the buildings abut the existing right-of-way. For the purposes of this analysis the school and the WRA are considered fixed objects so regardless of the alignments chosen east of this segment, the roadway must be aligned to accommodate the existing school as well as transitions westward to the intersection with US-301.

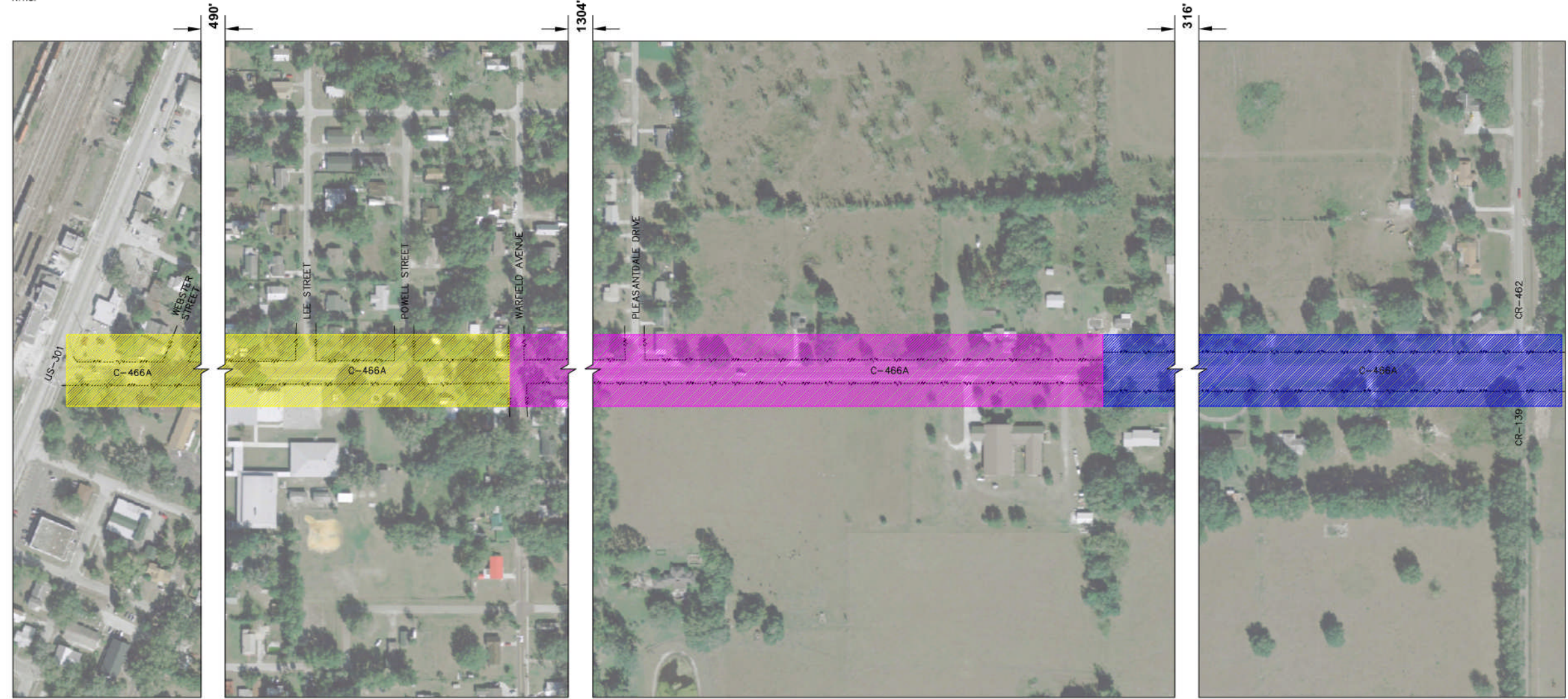
#### Segment 2: C-466A from Warfield Avenue to 1,200' east of Pleasantdale Drive

This portion of C-466A was studied as a second segment based on the existing right-of-way and roadway design information. This section of roadway has existing 60' of right-of-way and an based on the previously discussed construction plans. Also, this section of roadway has an urban (closed drainage) roadway section.





#### Segment 3: C-466A from 1,200' east of Pleasantdale Drive to CR-139

The third segment of C-466A was defined based on the existing right-of-way and roadway design information. This section of roadway has existing 100' of right-of-way based on the previously discussed construction plans. Also, this section of roadway has a rural (open drainage) roadway section.

The segment breakdown for the study area is presented in Figure 8-1.



**LEGEND**

-  SEGMENT 1
-  SEGMENT 2
-  SEGMENT 3
-  R/W EXISTING RIGHT OF WAY



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## Study Area Segments

Figure  
**8-1**

## 8.2. Typical Section

The typical section alternatives to be developed for this project were discussed with the project stake holders. Through much discussion, the ultimate section was determined in order to provide the character of roadway desired by the City of Wildwood for one of its gateway roadways and to provide efficient bicycle and pedestrian mobility.

Though the design of C-466A is effectively straight, because of the school constraint to the west and depending on the other options chosen (to be discussed) the final design will need to incorporate horizontal curves. Attention to the design of the curves should be paid in order provide for the appropriate roadway design speed.

### 8.2.1. Segment 1

Segment 1 is constrained by Wildwood Middle School and the existing WRA. This segment must connect to the chosen Segment 2 alignment at Warfield, continue westward past the school toward US-301, and eventually tie back into the intersection with US-301. Because of the physical constraints, particularly the sidewalk abutting the school, the “typical” section of this segment was modified. Within the right-of-way are two travel lanes east and two travel lanes westbound, a 14’ median, two 4’ bike lanes, and a 5’ sidewalk on the south side. On the north side of the road, outside of the right-of-way, a 10’ easement area with a buffer and an 8’ sidewalk will be specified and constructed as redevelopment occurs. Though shown as a raised median in the typical section, the 14’ could accommodate any number of configurations such as raised and landscaped, raised and providing for turn lanes, or even accommodate a two-way left-turn lane.

All options of Segment 1 are identical up to the area of transition and would require, generally, an additional 44’ of right-of-way on the north side of C-466A and results in impacts to two residential buildings and three buildings that operate commercially. Additionally there would be impacts to the existing school parking lot of approximately 14 parking spaces and the driveway. Based on a review of the size of the parking lot parcel, these spaces could be relocated on site.

The typical section for C-466A in segment 1 (generally in front of the school) is presented in Figure 8-2 and a conceptual layout of this area is shown in Figure 8-3.

The impacts of the transition of Segment 1 to Segment 2 are discussed below for the different Segment 2 alignments.

For purposes of the segment analysis, if any part of an existing building is located within the proposed right-of-way, the building is considered impacted and noted as a relocation.



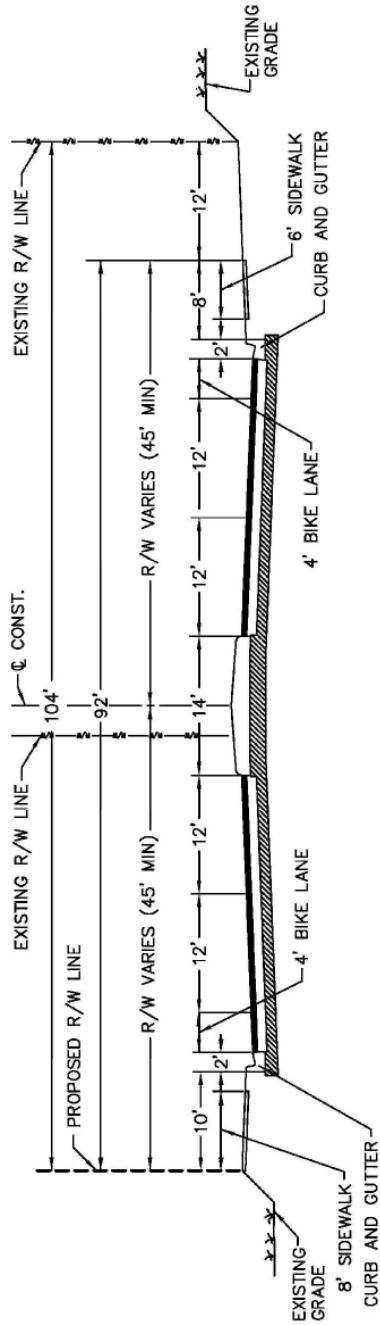
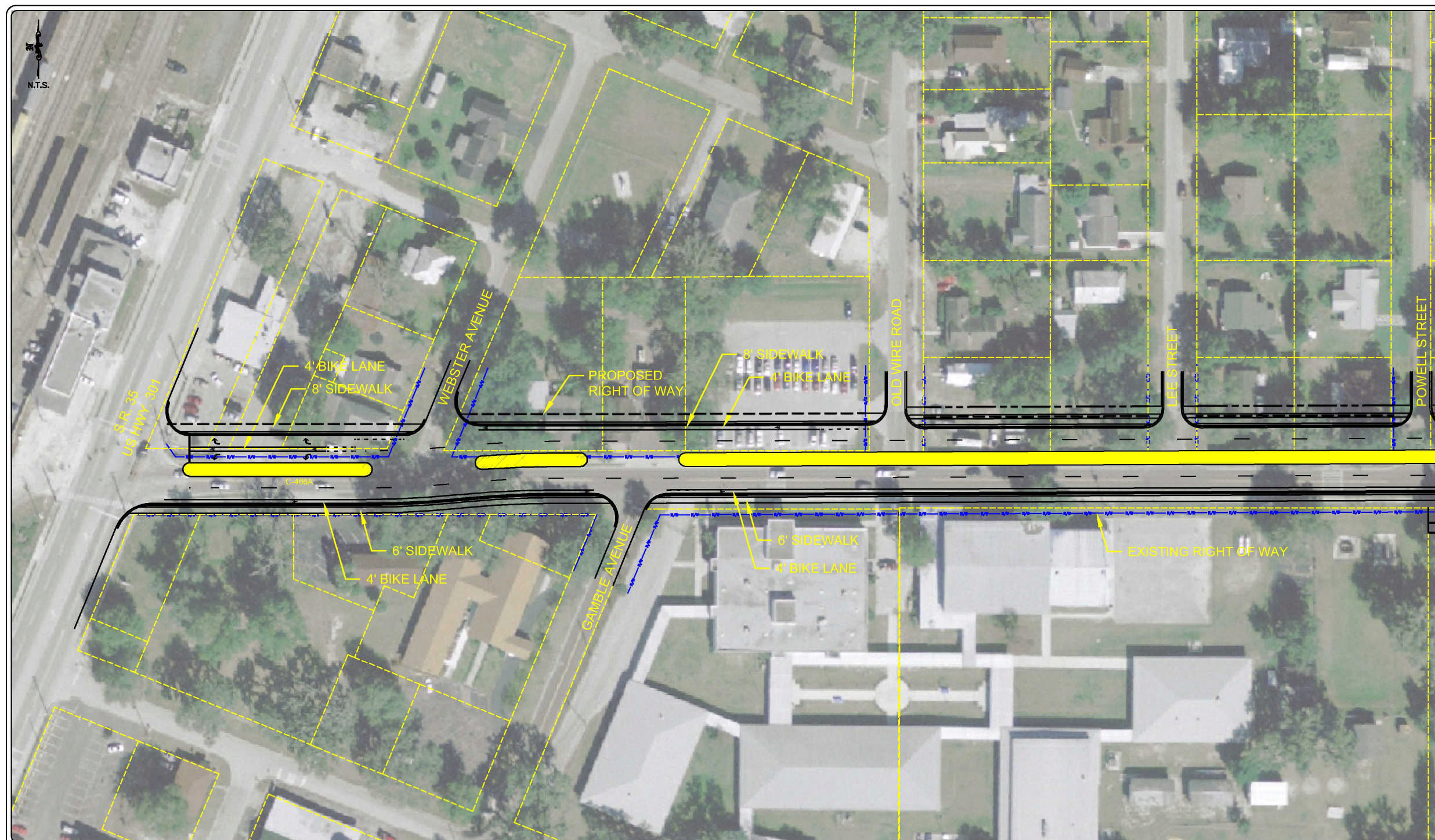


Figure  
8-2

**C-466A Segment 1 Proposed Typical Section  
(Near Wildwood Middle School)**

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**Segment 1 Conceptual Layout**

Figure  
**8-3**

**Segment 1 connecting to Segment 2 “North”:**

For the transition of Segment 1 to tie into Segment 2 “North”, additional right-of-way would be required on the north side of C-466A and the widening would result in two residential relocations.

**Segment 1 connecting to Segment 2 “South”:**

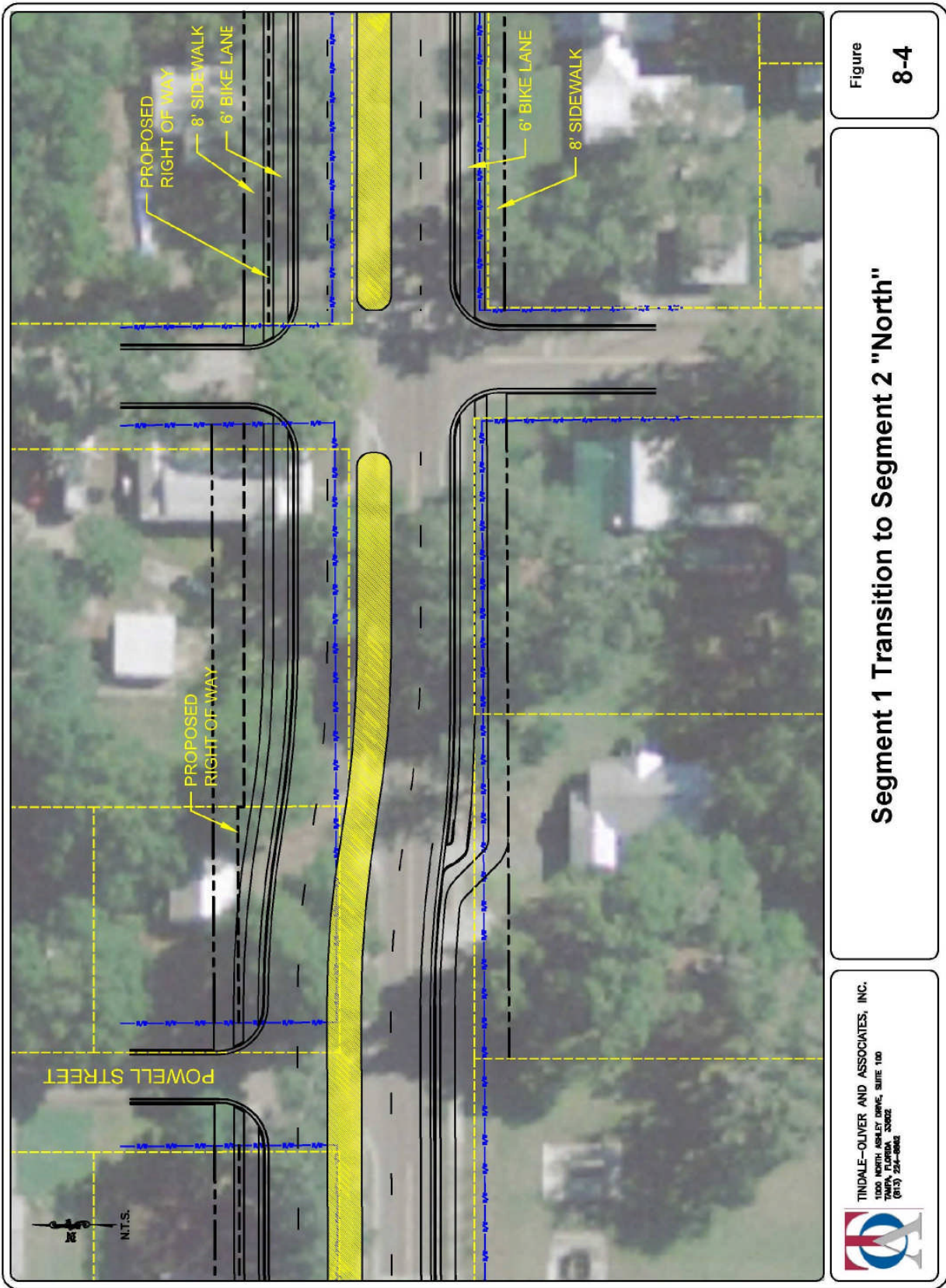
For the transition of Segment 1 to tie into Segment 2 “South”, additional right-of-way would be required on both the north and south side of C-466A and the widening would result in two residential relocations.

**Segment 1 connecting to Segment 2 “Center”:**

For the transition of Segment 1 to tie into Segment 2 “Center”, additional right-of-way would be required on both the north and south side of C-466A and the widening would result in two residential relocations.

All three alternatives above had the horizontal curvatures laid out, conceptually, at a design speed of 30 mph. If a higher design speed is desired, the curves will need a higher design radius and the “length” of the curves will be extended.

Figures 8-4, 8-5, and 8-6 show the conceptual transitions for each of the above options.



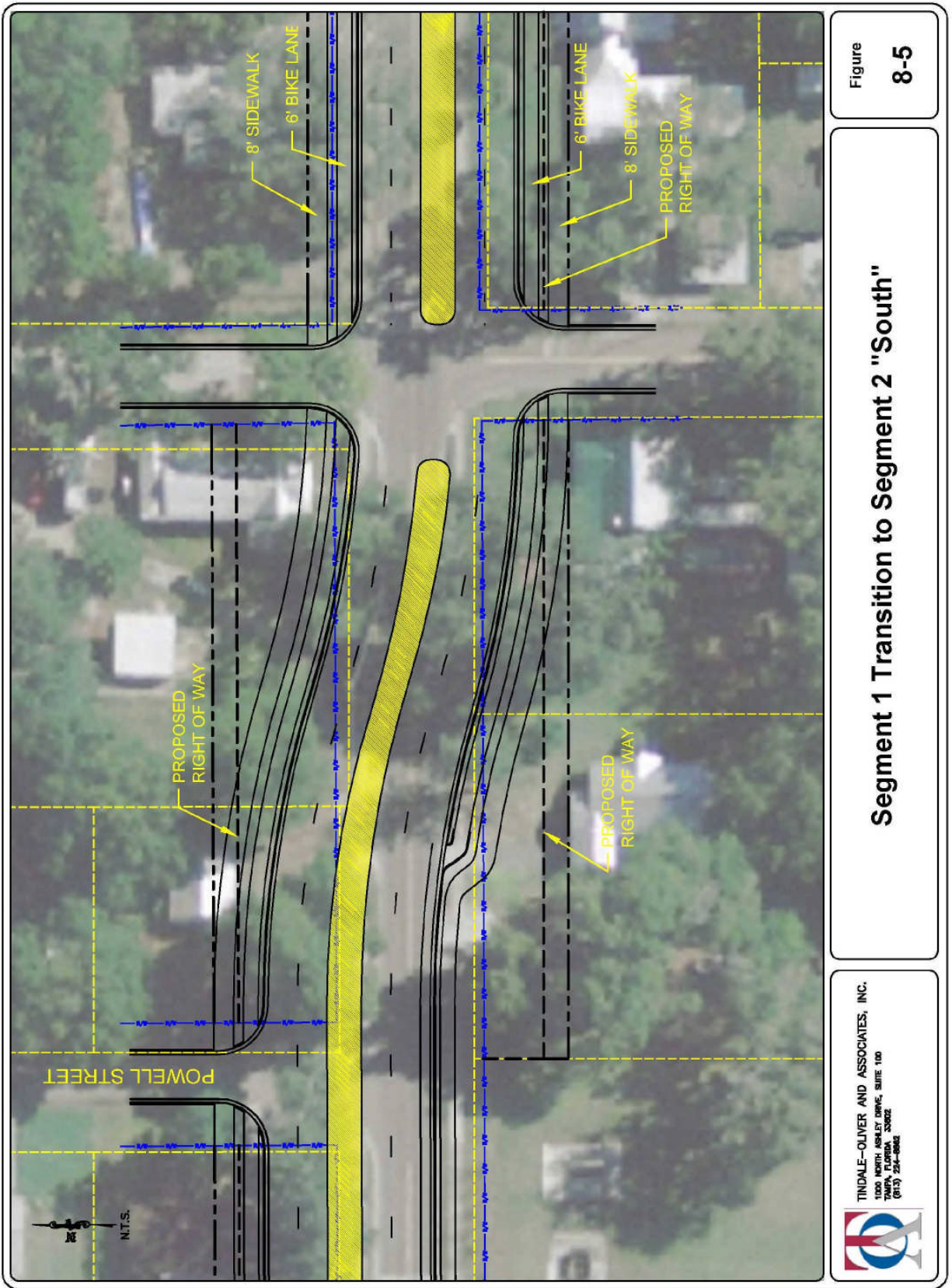


Figure  
8-5

Segment 1 Transition to Segment 2 "South"



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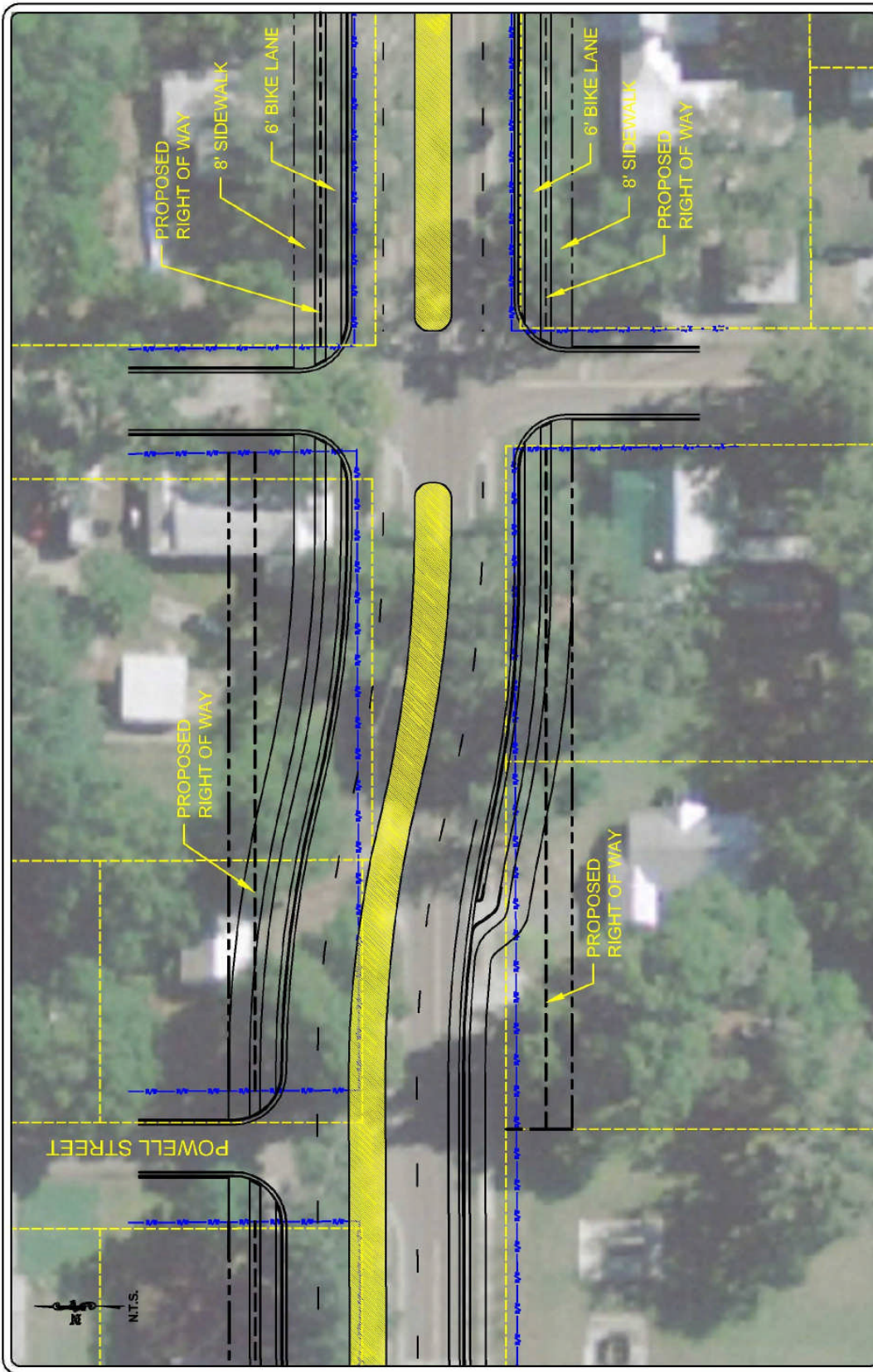


Figure  
8-6

Segment 1 Transition to Segment 2 "Center"



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### 8.2.2. Segment 2

All options of segment 2 were analyzed with the following typical section. Within the right-of-way are two travel lanes eastbound and two travel lanes westbound, a 14' median, two 6' bike paths, 2' curb and gutter, and buffers. This section requires 86' of right-of way. On each side of the road, outside of the right-of-way, a 10' easement area with a buffer and an 8' sidewalk will be specified and constructed by the property owners as redevelopment occurs.

#### **Segment 2: North Widening –**

For this alternative, the exiting right-of-way on the south side of 466A is held. This alternative requires an additional 26' of right-of-way and results in three relocations of homes (impacted by the proposed right-of way) on the north side of C-466A within the boundary of Segment 2.

The typical section for the north widening of Segment 2 is presented in Figure 8-7.

#### **Segment 2: South Widening –**

For this alternative, the existing right-of-way on the north side of 466A is held. This alternative requires an additional 26' of right-of-way and results in four relocations of homes (impacted by the proposed right-of way) on the south side of C-466A within the boundary of Segment 2.

The typical section for the south widening of Segment 2 is presented in Figure 8-8.

#### **Segment 2: Center Widening –**

For this alternative, the road would be constructed symmetrically from the center of the existing right-of-way. This alternative requires an additional 13' of right-of-way on the north side and south side of C-466A and two relocations of homes (impacted by proposed right-of-way) within the boundary of Segment 2.

The typical section for the center widening of Segment 2 is presented in Figure 8-9.

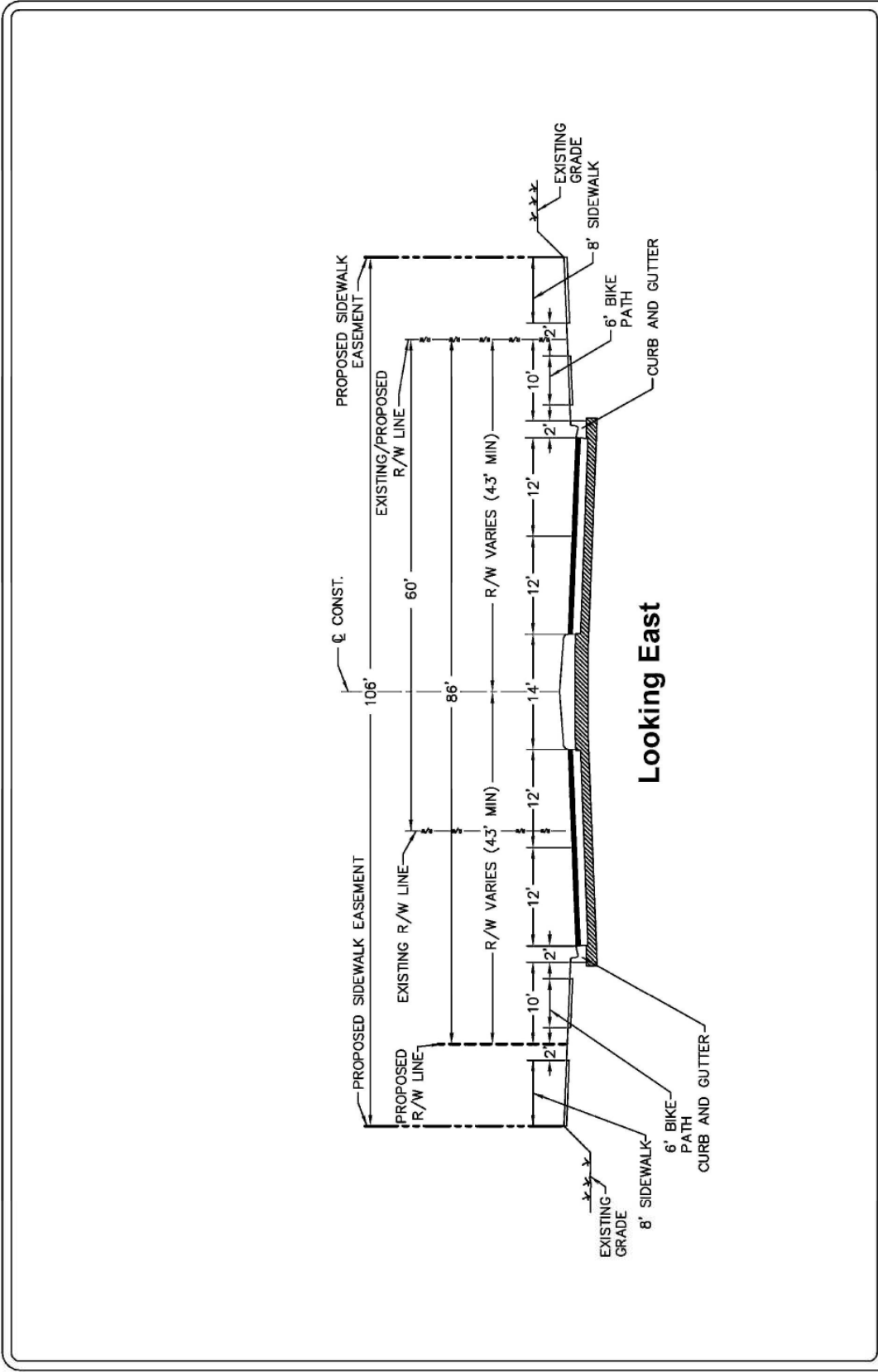



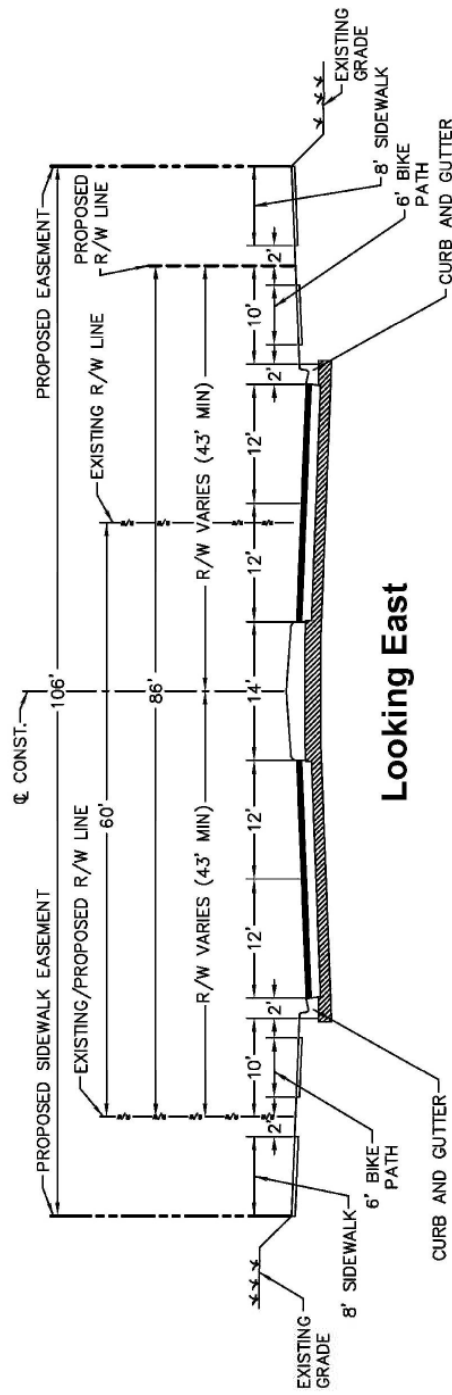
Figure 8-7

C-466A Segment 2 Typical Section "North Widening"



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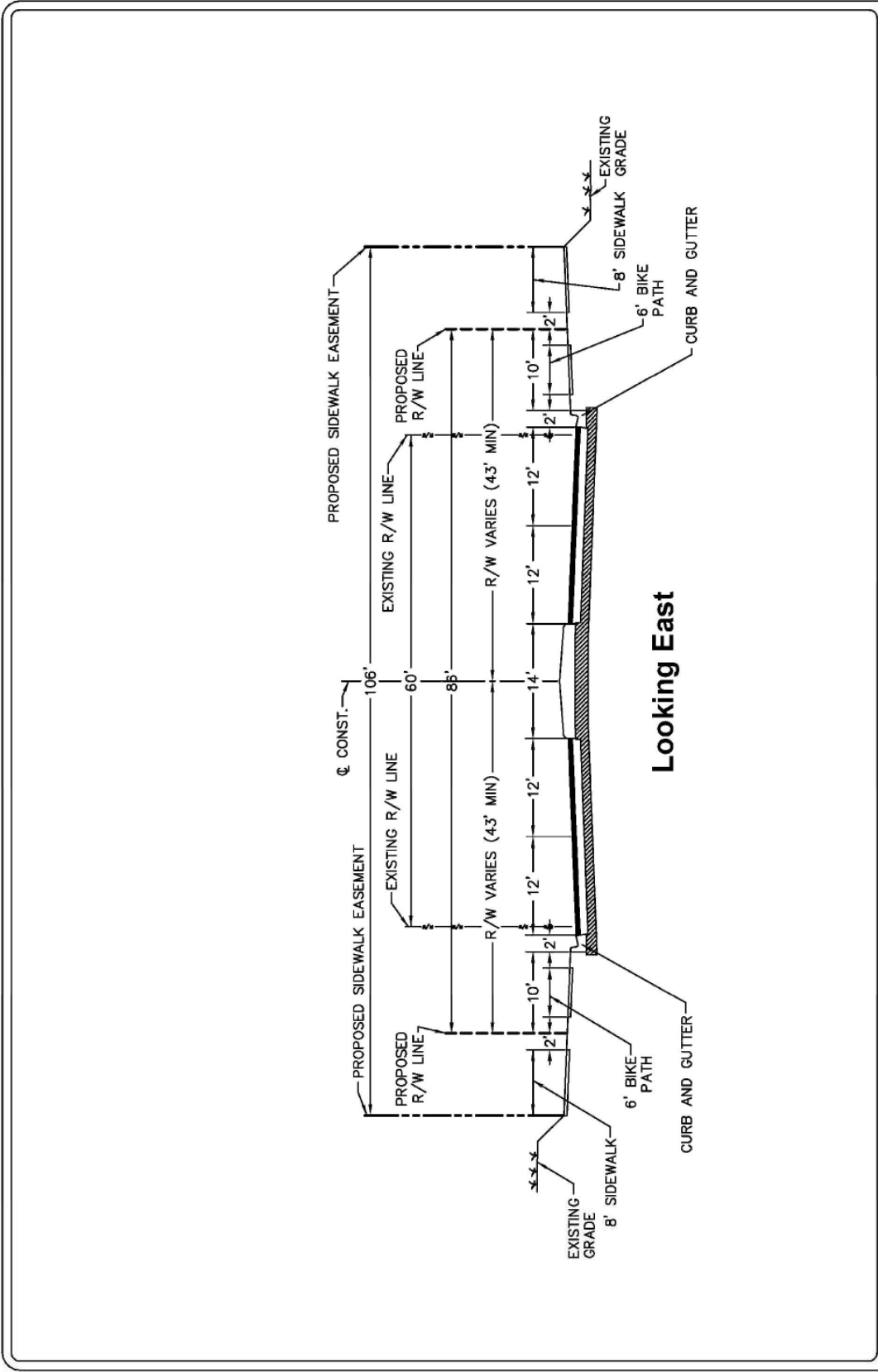


**C-466A Segment 2 Typical Section  
"South Widening"**

**Figure  
8-8**

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**C-466A Segment 2 Typical Section  
"Center Widening"**

Figure  
**8-9**



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### 8.2.3. Segment 3

All alternatives of segment 3 were analyzed to be constructed within the existing right-of-way and have the following configuration. Within the right-of-way are two travel lanes eastbound and two travel lanes westbound, a 14' median, two 6' bike paths, 2' curb and gutter, and buffers.

#### **Segment 3: North Widening -**

For this alternative the roadway would be constructed generally south of center of right-of-way such that, on the north side of the road there will be a 14' buffer between the bike path and the right-of-way. On each side of the road, outside of the right-of-way, a 10' easement area with a buffer and an 8' sidewalk will be specified and constructed as redevelopment occurs. This alternative does not require acquisition of additional right-of-way.

The typical section for the north widening of Segment 3 is presented in Figure 8-10.

#### **Segment 3: South Widening –**

For this alternative the roadway would be constructed generally north of center of right of way such that, on the south side of the road there will be a 14' buffer between the bike path and the right-of-way. On each side of the road, outside of the right-of-way, a 10' easement area with a buffer and an 8' sidewalk will be specified and constructed as redevelopment occurs. This alternative does not require acquisition of additional right-of-way.

The typical section for the north widening of Segment 3 is presented in Figure 8-11.

#### **Segment 3: Center Widening –**

For this alternative the roadway would be constructed symmetrically about the center of right of way such that on the north side and south side of the road there will be a 7' buffer between the bike path and the right-of-way. On each side of the road, outside of the right-of-way, a 10' easement area with a buffer and an 8' sidewalk will be specified and constructed as redevelopment occurs. This alternative does not require acquisition of additional right-of-way.

The typical section for the north widening of Segment 3 is presented in Figure 8-12.

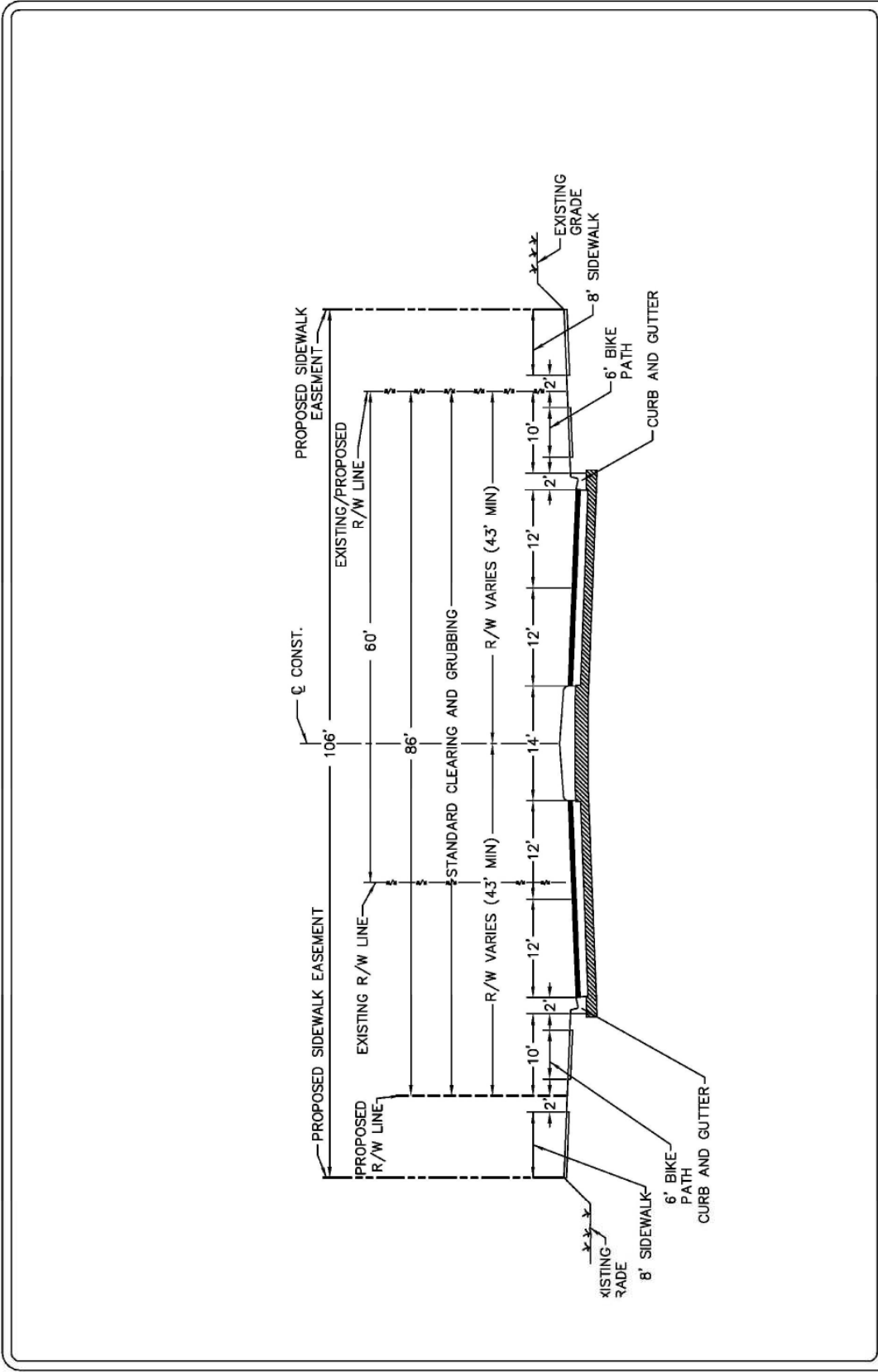
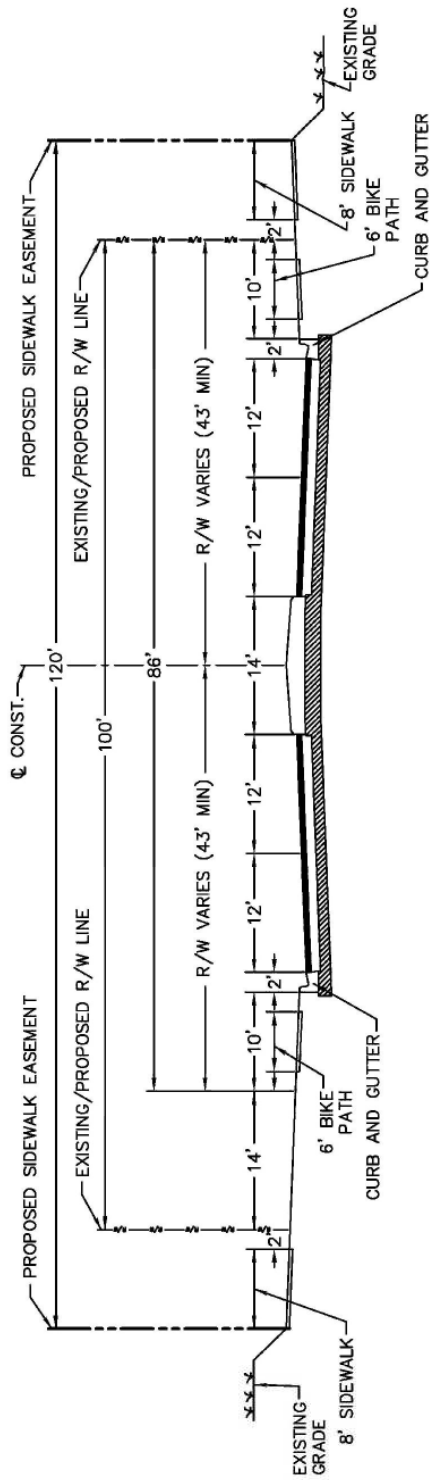


Figure 8-10

C-466A Segment 3 Typical Section "North Widening"



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**C-466A Segment 3 Typical Section  
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Figure  
**8-11**

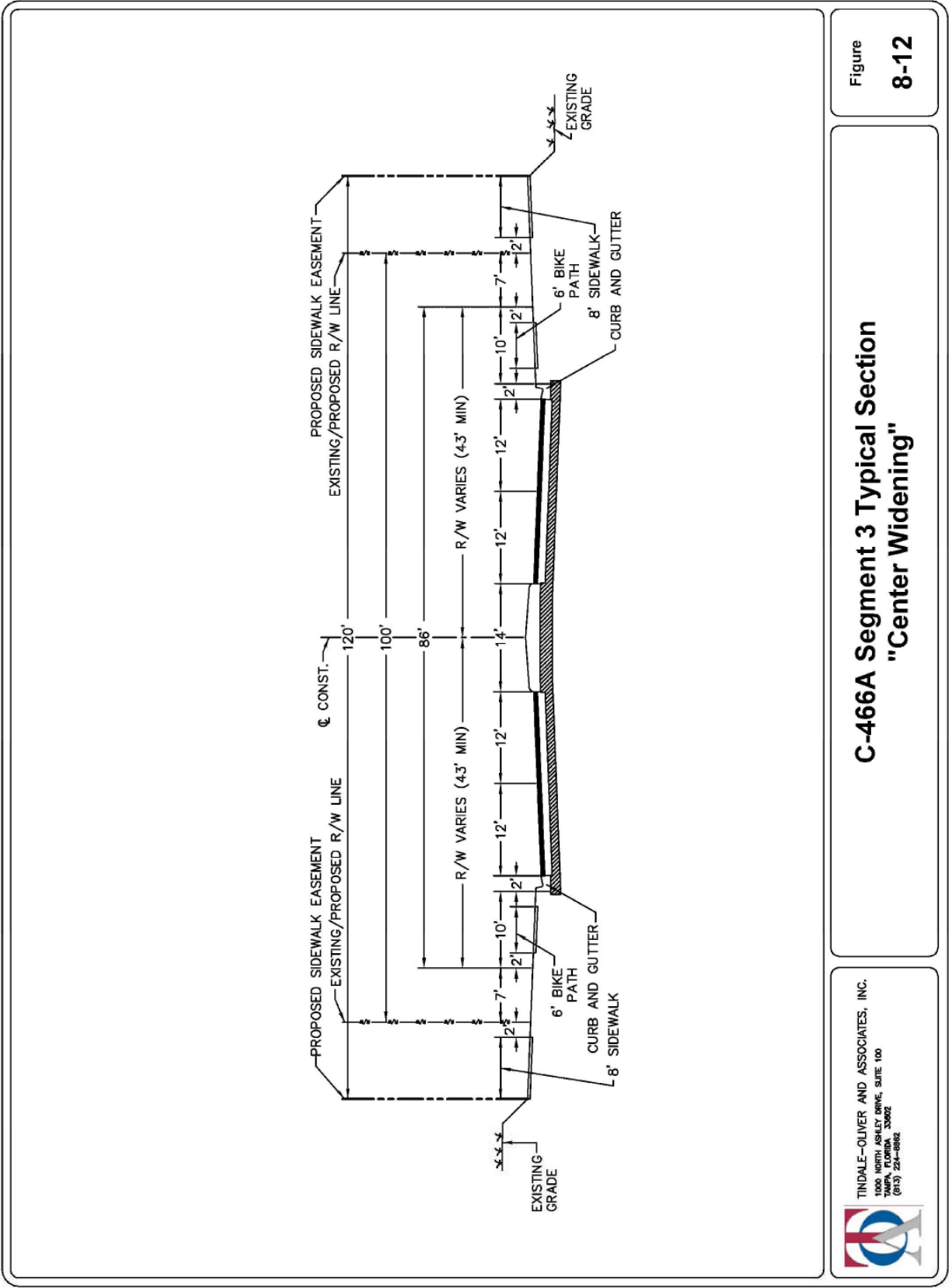



Figure  
8-12

**C-466A Segment 3 Typical Section  
"Center Widening"**

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### 8.3. Evaluation Matrix

The evaluation process for the alternatives considered involved the analysis of a variety of factors. Some of the representative evaluation factors that were considered include the land acquisition costs, impacts to adjacent property owners, impacts to wetlands and floodplains, and impacts to archaeological or historical sites.

For this preliminary level analysis, cost estimates for the alternatives for each segment were not undertaken. Given the similarity in design for each of the alternatives, it is assumed that the construction costs for the alternatives would be comparable and therefore were not used in the evaluation of the individual alternatives. A generalized, planning level, cost estimate was undertaken using the FDOT Long Range Estimating (LRE) system and generalized assumptions including:

- Utilities relocation costs for water, sewer, and communication lines
- 5 foot sidewalks
- Maintenance of Traffic (10% of total construction costs)
- Mobilization (10% of total construction costs)

Using this methodology the cost estimate was approximately \$10,024,460.92. It should be noted that the cost estimates generated by this program are typically used for planning purposes and are tied strictly to typical quantities for a 4-lane urban design section recommended in FDOT's Design Handbook. This estimate should only serve as a guide to the scale of costs although they are representative of current units prices based on FDOT bid data. Given the recent fluctuation in costs, this cost estimate remains a planning level estimate represents only unit prices effective in today's market. The LRE worksheets are provided in Appendix F.

The Evaluation Matrices presented in Table 8-1 provides a comparative summary of the analyzed roadway typical sections for each of the three analysis segments. This analysis serves to provide a basis to identify the recommended typical sections.

Detailed parcel and building information is provided in Appendix G.

**Table 8-1 Evaluation Matrix**

EVALUATION CRITERIA	Segment 1	Segment 1 "Transition" to Segment 2			Segment 2			Segment 3		
	All	North	South	Center	North	South	Center	North	South	Center
Land Costs	\$ 32,730	\$ 6,562	\$ 9,389	\$ 8,039	\$ 27,788	\$ 22,334	\$ 20,618	\$ -	\$ -	\$ -
Building Costs	\$ 306,500	\$ 100,100	\$ 100,100	\$ 100,100	\$ 240,700	\$ 362,300	\$ 144,500	\$ -	\$ -	\$ -
Total Cost	\$ 339,230	\$ 106,662	\$ 109,489	\$ 108,139	\$ 268,488	\$ 384,634	\$ 165,118	\$ -	\$ -	\$ -
Residential Relocations	2	2	2	2	5	4	3	0	0	0
Business Relocations	3	0	0	0	0	0	0	0	0	0
Church Relocations	0	0	0	0	0	0	0	0	0	0
Wetland Impacts (acre)	0	0	0	0	0	0	0	0	0	0
Floodplain Impact (acre)	0	0	0	0	0	0	0	0	0	0
Archaeological Impacts	0	0	0	0	0	0	0	0	0	0
Historic Land Impacts	0	0	0	0	0	0	0	0	0	0

Notes

Land and Building Costs based on Property Appraiser Land and Building Value data.

Land costs calculated based on amount of land needed to accommodate the proposed right-of-way. Buildings costs were determined if the proposed ROW impacts an existing building.

Segment 3 is assumed to be constructed entirely within the existing 100' ROW, therefore no impact to adjacent property owners



#### 8.4. Recommended Alternative

Based on the results of the engineering analysis, the discussions with the stake holders, and feedback from the public, the recommended alternative for construction of C-466A is widening the roadway approximately symmetrical to the existing centerline of the roadway as this is estimated to have the least impact to adjacent land and buildings. In conjunction with this alignment the design should incorporate a slight “meandering” where design allows to further reduce impacts to buildings in Segment 2.

The symmetrical and “meandering” alignment was presented to, and approved by, the City of Wildwood Board of Commissioners on March 9, 2009 and by the Sumter County Board of Commissioners on March 24, 2009.