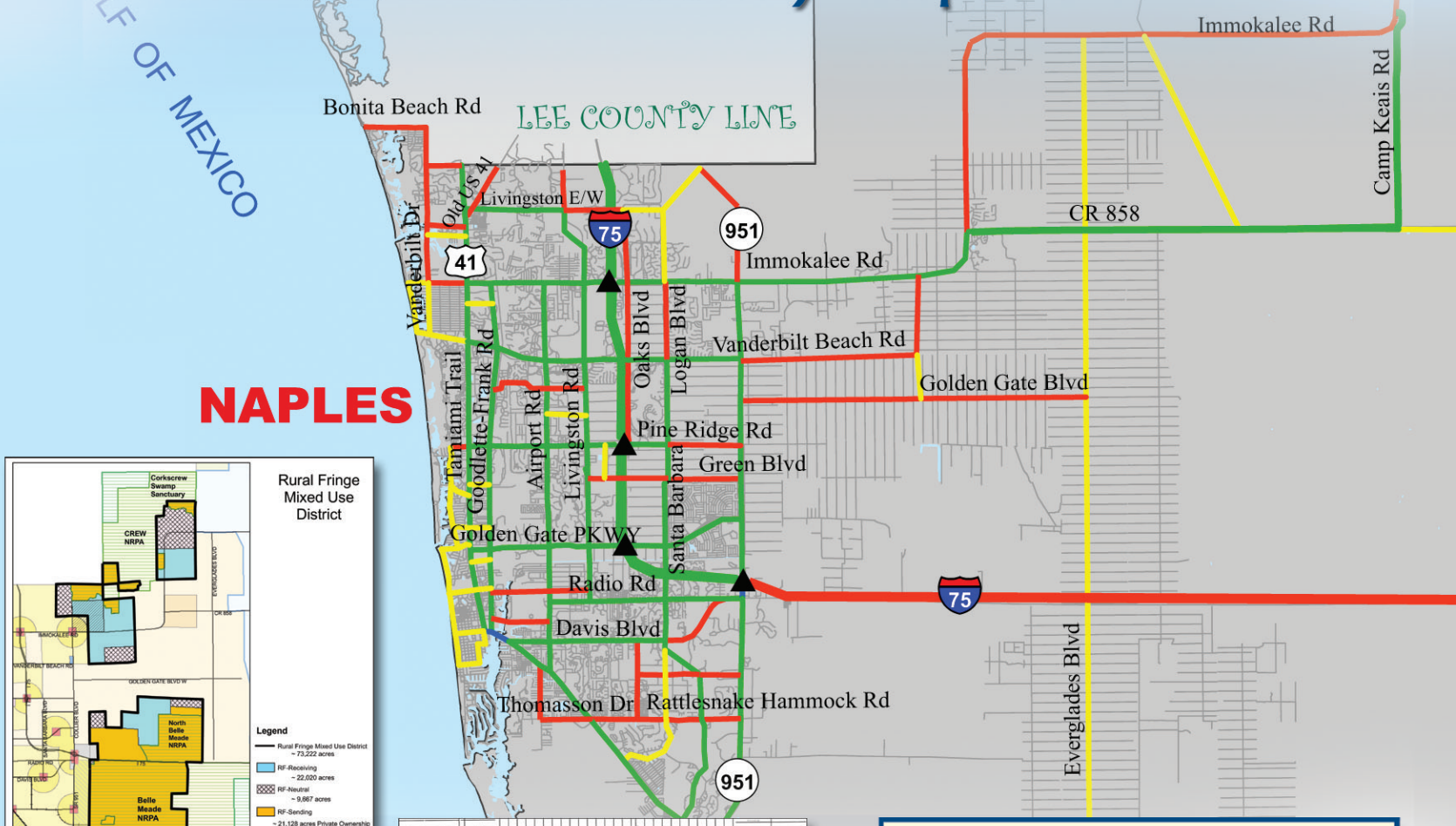
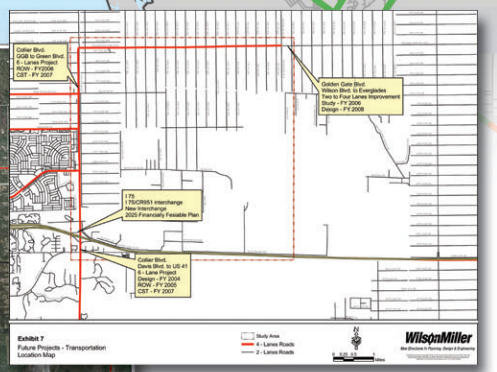
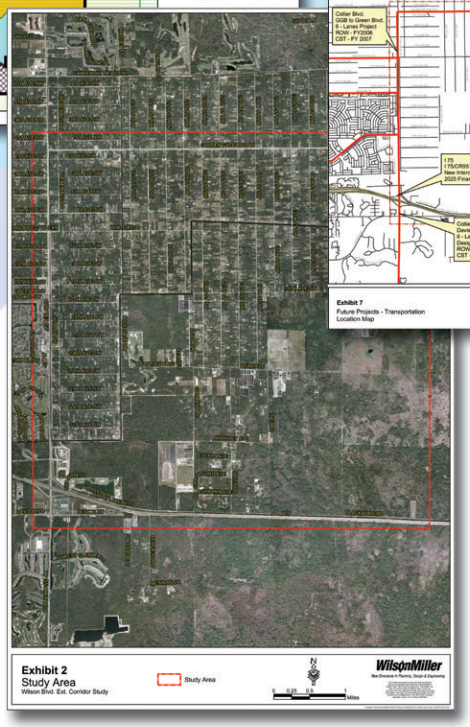
Wilson Boulevard Extension Corridor Study Report







May 2005

Presented to:

Collier County

Presented by:

WilsonMiller

New Directions In Planning, Design & Engineering

In consultation with

Hole Montes, Inc. and Southern Biomes

On behalf of East Naples Land Co.

EXECUTIVE SUMMARY

This report presents the research, findings and conclusions of the Wilson Boulevard Extension Corridor Study required by the adoption of the North Belle Meade Overlay of the Growth Management Plan (GMP). The study was undertaken as a public/private sector initiative, funded by East Naples Land Company, and conducted with the cooperation and oversight of the Collier County Transportation Department staff.

The original limits of the study included the area bounded by Golden Gate Boulevard on the north, I-75 on the south, Wilson Boulevard on the East and Collier Boulevard on the west. Late in the study process, as a direct result of public input received during the first public workshop, the easternmost boundary of the study area was extended to include the Everglades Boulevard area of Golden Gate Estates. The alternatives within this report were analyzed in terms of the effects of new corridor alignments on Peak Seasonal Daily Traffic (PSDT) volume of existing roads. Comments and recommendations from several meetings with Collier County Transportation Department staff and civic associations/groups, including two public workshops, contributed to this study.

The data analyzed included traffic volumes on specific roadway links that were identified as crucial to the study, existing transportation facilities (such as bridges, traffic signals, number of lanes, etc.), and existing transportation plans and programs that may affect the corridor alignment. The future land uses and plans that modify the intensity of land use within the study area were studied. Population and land use projections were developed as part of the data analysis. Based on the results from the population and land use projections, the Collier County MPO's traffic analysis model was refined and updated. A demographic analysis of the study area was also used to understand the impact different alternatives would have on communities.

At the beginning of process, the Collier County Transportation Department staff, and Collier County Comprehensive Planning staff, along with the Consultants, identified the preliminary corridor alternatives for traffic analysis. An agreement was reached on five corridor alternatives; and later, WilsonMiller identified three additional alternatives for study that were also consistent with the Collier County GMP. The analyses of the corridor alternatives were

presented to the public in a workshop during which comments and suggestions were solicited. The residents were also specifically asked to select from a list of nine alternatives and/or suggest other alternatives in a survey distributed during the public workshop.

The survey results showed that there was no clear support for any particular alternative presented. Twenty-eight percent of the residents supported all of the alternatives, i.e. all the roadway links presented be constructed. Twenty-four percent of the residents supported Alternative #8; connecting Wilson Boulevard to Landfill Road and extending 16th Avenue SW to Tobias Street. Twenty-three percent of the residents supported the "No Build" option, which does not preclude a private haul road for the purpose of rock mining.

Following the phase I analyses and the first public workshop, which resulted in the identification and testing of two additional alternatives, WilsonMiller team and Collier County Transportation Staff developed an alternative for the second public workshop. This alternative was divided into two sets of corridor alignments.

Potential Future Corridors (2005 - 2015) Collier County should consider opportunities to program the following corridor alignments:

- Extend 16th Ave. SW to Collier Blvd.,
- Extend Kean Ave. to the western edge of Section 20,
- A connection to either to I-75 or Landfill Rd. along the east side of Section 33 from the south of Section 28 and,
- A bridge connection on 23rd St. SW across Golden Gate Canal

Potential Future Corridors (Beyond 2015) Collier County MPO should consider the following corridor alignments in their Long-Range Transportation Plan update:

- Bridging Tobias St. and Wilson Boulevard South,
- Connecting 23rd St. SW and Garland Rd.,
- Extending Garland Rd. to White Lake Blvd.,
- Extend 16th Ave SW to Everglades Blvd., and
- Everglades Blvd. S / I-75 Interchange.

Although the Potential Future Corridors cited above are divided into two distinct time frames, within the 2005-2015 timeframe, it was clear from input received during and following the second public workshop that there is a desire, need and an opportunity to facilitate several "immediate action" improvements in the North Belle Meade area.

RECOMMENDATIONS

Acknowledging Collier County's limited transportation resources, most of which are already programmed for the next five or more years, opportunities may exist to minimize costs by utilizing existing right-of-ways and/or obtain needed right-of-way from willing donors who repeatedly expressed the importance and value in making immediate improvements in the North Belle Meade Area. Additionally, adjacent landowners are frequently encouraged to become partners with local government to facilitate improvements that directly benefit them.

After evaluating ten different alternatives, two public workshops, and numerous meetings with the Collier County Transportation Department Staff and other interest groups, the following corridor alignments are recommended for consideration by the Board of County Commissioners in two different time frames 1) 2005-2015 (near-term), 2) Beyond 2015 (long-term). In addition, in recognition of the need to explore low-cost improvements to local roads that might facilitate improved traffic circulation in the short term, an immediate action plan strategy was developed. Including such improvements in its work program provides a benefit to residents and agri-businesses in Section 25, 29, 30, and 31, as well as potential residential development in Section 20 and land mining activities that might commence in the future in Sections 21, 28, and the west ¼ of Sections 22 and 27 per the Collier County Growth Management Plan. Low-cost solutions would include, but not be limited to, using existing roadways where public/private easements or rights-of-ways already exist, where needed rights-of-ways could be easily obtained through the cooperation of adjacent landowners, and where new bridges would not be necessary. Recommended solutions fall into the following three groups:

Immediate Action Plan Improvements

- Extending Kean Avenue to the western edge of Section 21; and
- Public road “upgrades” to the existing set of local roads in the area between Kean Avenue and Landfill Road

Other Near Term (2005-2015) Improvements

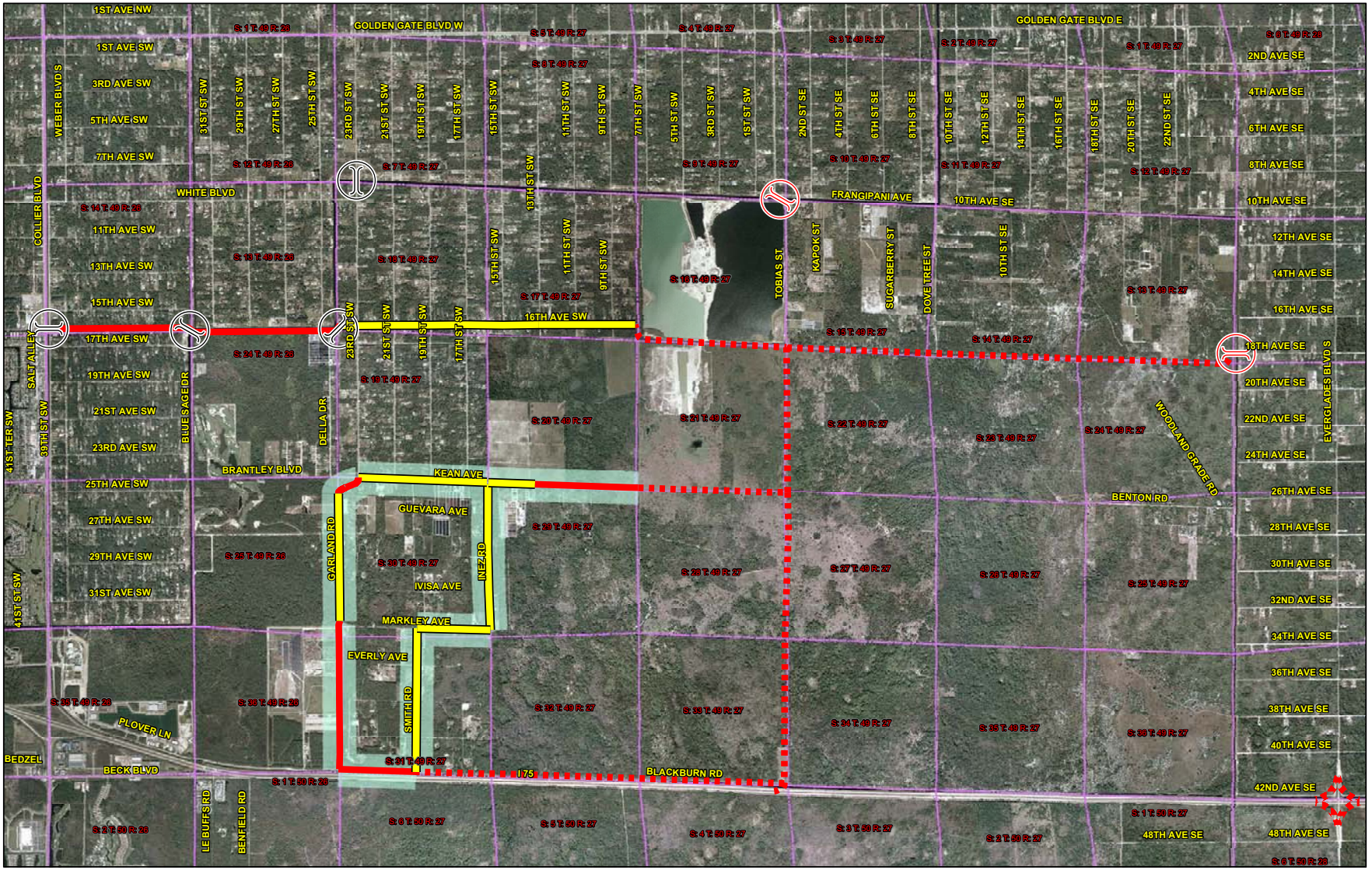
- Extending 16th Avenue SW westward to Collier Boulevard; and
- Adding a new bridge connection on 23rd Street SW across Golden Gate Canal
- Realigning the 23rd Street SW and Garland Road intersection

Long-Range Improvements to be considered by the MPO

- Extending 16th Avenue SW eastward from 9th Street SW to 18th Avenue SE in order to reach to Everglades Boulevard; and
- Extending Kean Avenue eastward to the Wilson Boulevard Extension; and
- Adding a new interchange at Everglades Boulevard and I-75; and
- Bridging the Golden Gate Canal to extend Wilson Boulevard along the Tobias Street alignment southward to either a directional I-75 interchange or a Landfill Road/Blackburn Road Extension

It is important to note that all of the corridor alignments recommended in this report are conceptual in nature, and that any specific right-of-way requirements and exact alignments would be identified/determined during a subsequent engineering design study.

The study documentation that follows is to be presented to the Board of County Commissioners for their consideration during the regular meeting on June 28, 2005.


GOLDEN GATE BLVD W
GOLDEN GATE BLVD E
WHITE BLVD
FRANGIPANI AVE
16TH AVE SW
KEAN AVE
BRANTLEY BLVD
GUEVARA AVE
IVISA AVE
MARKLEY AVE
EVERLY AVE
PLOVER LN
BECK BLVD
BLACKBURN RD
BENTON RD
WOODLAND GRADE RD
I-75
COLLIER BLVD
WEBER BLVD S
SALT ALLEY
BLUE SAGE DR
DELLA DR
GARLAND RD
INEZ RD
SMITH RD
TOBIAS ST
KAPOK ST
SUGARBERRY ST
DOVE TREE ST
EVERGLADES BLVD S
LE BUFFS RD
BENFIELD RD
BEDZEL
1ST AVE NW
1ST AVE SW
3RD AVE SW
5TH AVE SW
7TH AVE SW
11TH AVE SW
13TH AVE SW
15TH AVE SW
17TH AVE SW
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Recommended Alternative
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REVISED: 05/20/05
Potential Future Bridge (2005-2015)
Potential Future Bridge (Beyond 2015)
Existing Roadway Requiring Right of Way Acquisition and/or Improvements (2005-2015)
Potential Future Corridor (2005-2015)
Potential Future Corridor (Beyond 2015)
Recommended Immediate Action Improvements
Section Lines
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SECTION I:
INTRODUCTION

The North Belle Meade Overlay, adopted June 19, 2002, as part of the Rural Fringe Plan Amendments to the Collier County Growth Management Plan, provides that "*an extension of Wilson Boulevard should be provided through Section 33, Range 27 East, comprising a collector or arterial road extending to the south to Interstate 75, via an interchange or service road for residential development, should it commence in Sections 21, 28 and 27, or, in the alternate, a haul road along an extension of Wilson Boulevard to service earth mining activities with a connection through Sections 32 and 31 to Landfill Road.*" The Plan further states, "The roadway's alignment shall be determined with public input and taking into consideration the following, at a minimum:

1. Usefulness as a route for truck traffic generated from any earth mining operations in North Belle Meade;
2. Usefulness as a link in the County's major roadway network;
3. Avoidance of residential neighborhoods, to the extent feasible and prudent;
4. Avoidance of environmentally sensitive wildlife habitat, wildlife corridors, or greenways, to the extent feasible and prudent;
5. The costs of construction, including any related design, permitting, and mitigation costs; and
6. The costs of acquiring necessary right-of-way."

Accordingly, the Wilson Boulevard Extension Corridor Study was undertaken as a public/private initiative, funded by the East Naples Land Company, and conducted with the cooperation and oversight of the Collier County Transportation Department Staff. The results of the transportation study are intended to provide valuable input into the County's short-range and long-range transportation planning decision-making processes.

SECTION II.
PROJECT DESCRIPTION

The purpose of the Wilson Boulevard Extension Corridor Study was to determine one or more feasible corridor alternatives that will provide an east-west connection between Collier Boulevard and Wilson Boulevard, as well as, a southerly extension of Wilson Boulevard. Such a corridor alignment must be consistent with the requirements of the Rural Fringe Plan Amendments. The study involved the collection of existing data, a demographic analysis, development of land use and population projections, and the development and evaluation of various possible alternatives, and the selection of a recommended alternative.

At the beginning of the study, the limits of the study area were identified as the area bounded by Golden Gate Boulevard on the north, I-75 on the south, Wilson Boulevard on the East and Collier Boulevard on the west. Later during the process, the extension of some corridor alternatives eastward, outside the study limits were also included in the analysis.

The objectives of the study were:

1. To ascertain the study area's future residential and non-residential transportation demands, including, traffic volumes, travel characteristics, and operation (level of service).
2. To take public input into consideration during the study process.
3. To develop and recommend alignment alternatives consistent with the Collier County Growth Management Plan (or identify those that might require amendments to the plan).
4. To consider the physical, social, political, environmental, and economic constraints within the alignment corridor that could have a deleterious effect upon any proposed alignments.

SECTION III:
EXISTING DATA

The purpose of this section is to document existing physical features, socioeconomic aspects, and transportation elements (such as roads, bridges, etc.) within the study area in order to provide a thorough understanding of all relevant issues that may affect the various corridor alignment(s). This section is also intended to provide detailed information to the public regarding the various parameters upon which the study effort was based.

A. OVERVIEW

Immediately following the Notice to Proceed, WilsonMiller and Subcontractors began collecting and compiling information and materials related to planning, environmental and engineering concerns within the study area. The information included data necessary to perform a general evaluation of the initial corridor alternatives and to assist in the identification of any "fatal flaws" that could immediately rule out an alternative. The majority of the data and the resulting maps were based upon information collected from various state and local sources. Existing data was verified as necessary by on-site research.

Available traffic and land use data were collected to determine the extent of deficiencies of information that existed. Additional traffic and land use data was collected by the consultant team to supplement the existing available data. The study area characteristics and relevant planning documents were reviewed, including, but not limited to, the current local government Growth Management Plan, planning projects under development, the current Florida Department of Transportation Five Year Work Program for Collier County, and the Collier County Transportation Capital Improvement Programs (CIP).

The existing inventory conditions have been summarized in appropriate tabular and graphic manner to clearly present the existing conditions within the study area.

The following types of data have been reviewed and/or are addressed in this report:

1. **Traffic Data Collection Summary**
   - 24-Hours machine counts
   - Turning movement data
   - Classification counts
   - 2025 travel demand model projections

2. **Transportation Infrastructure**
   - Number of Lanes
   - Pedestrian & bicycle facilities
   - Traffic Signals
   - Bridges

3. **Transportation and Land Use Plans & Programs**
   - Florida Department of Transportation 5-Year Work Program (2003-2007)
   - Collier County 5-Year Work Program
   - Collier County MPO's 2025 Long Range Transportation Plan
   - Collier County Growth Management Plan
   - 2000 U.S Census Data

4. **Utilities**
   - Water
   - Wastewater
   - Overhead electric
   - Underground wire, cable, and fiber-optic

5. Cultural Features

- Medical facilities (hospital, surgery centers, medical office complexes, etc.)
- Assisted Living Facilities and Nursing Facilities
- Educational Facilities (Public and Private)
- Religious Institutions
- Cemeteries (Public and Private)
- Publicly owned lands (Parks, Recreation areas, Wildlife refuges)
- Historic Districts and sites
- Archeological sites
- Fire stations, Community or civic facilities, government buildings
- Neighborhoods

6. Natural Features

- Wetlands
- Threatened and Endangered Species
- Soils
- Floodplain and Drainage

B. BASE MAPPING

A series of countywide and study area maps and aerial photographs served as a base for the displaying of existing conditions, initial corridor alternatives, and major constraints. **Exhibit 1** identifies the location of the study area, and **Exhibit 2** depicts the study area.

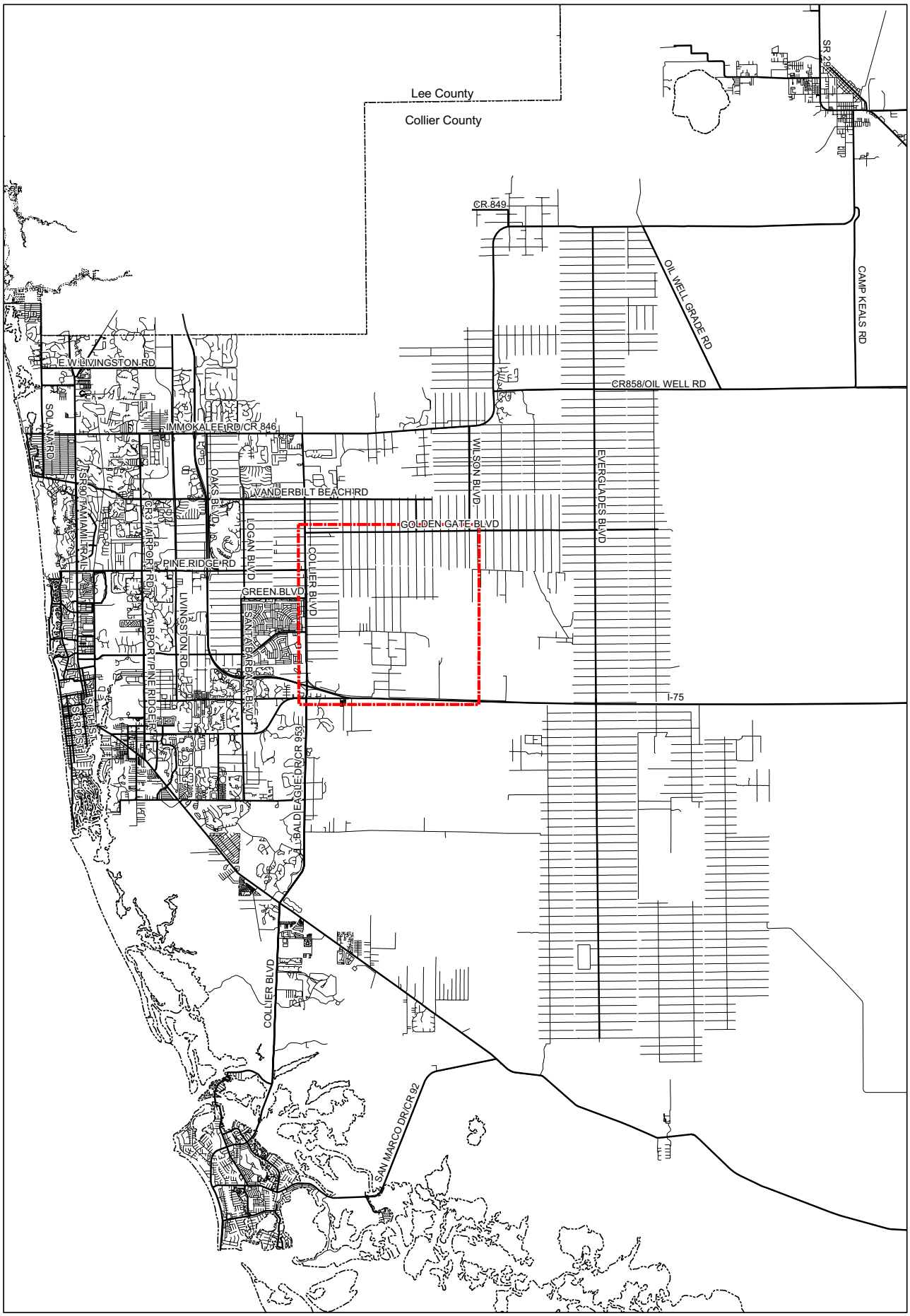

Exhibit 1

Study Area Location

Wilson Blvd. Ext. Corridor Study

WilsonMiller

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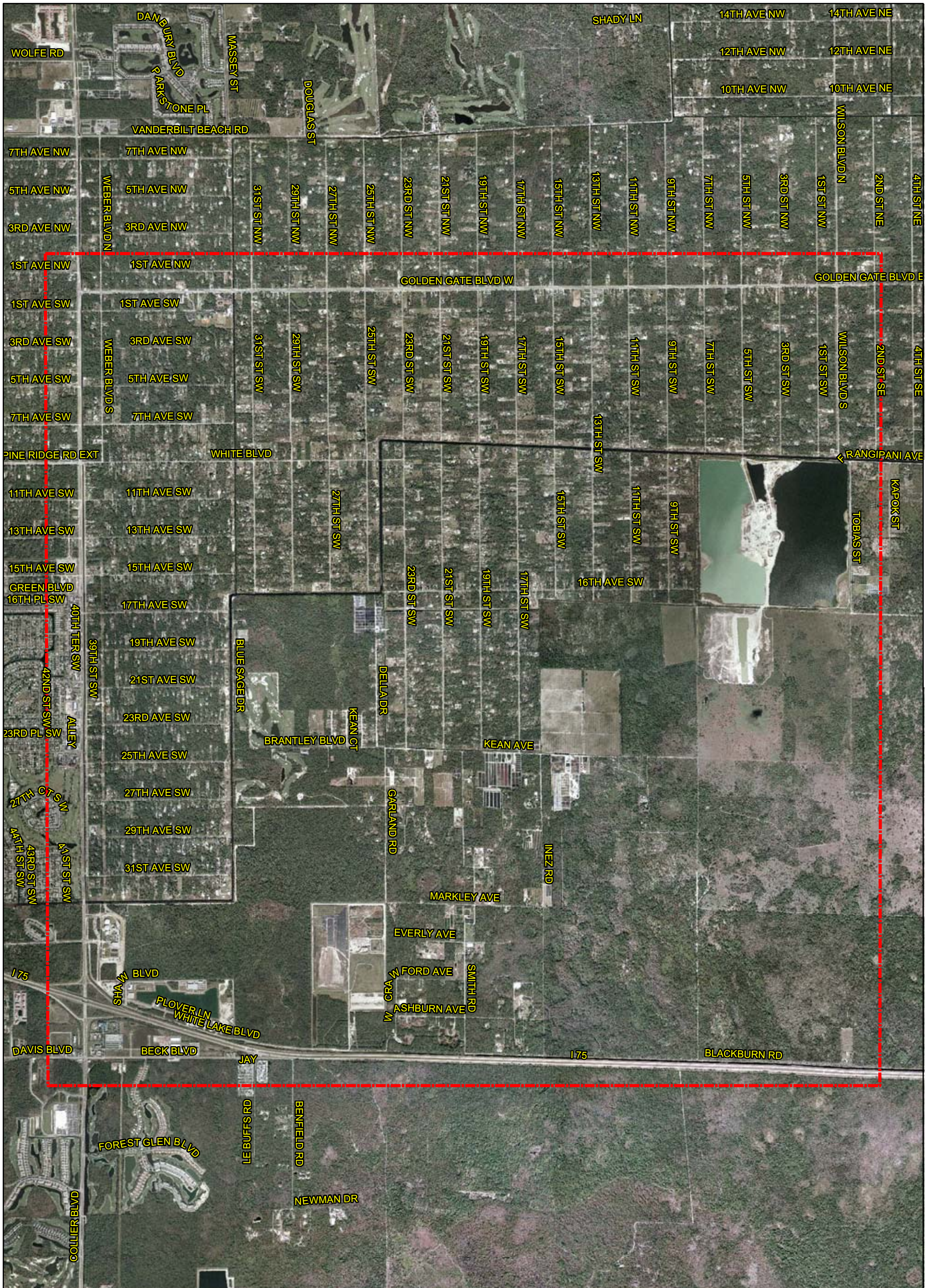

Exhibit 2

Study Area

Wilson Blvd. Ext. Corridor Study

Study Area

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C. TRANSPORTATION FACILITIES

This section provides a brief description of those roads in the study area that may be impacted by the Wilson Boulevard extension project. **Exhibit 3** provides a detailed look at the transportation elements within the study area.

Collier Boulevard (County Road 951) – Golden Gate Boulevard to Green Boulevard

4-Lane Rural- Major Collector.

Currently, there are traffic signals at the intersections of Golden Gate Boulevard and Collier Boulevard, and Collier Boulevard and Pine Ridge Road. A nearly continuous sidewalk exists along the entire length between Golden Gate Boulevard and Green Boulevard

Collier Boulevard (County Road 951) – Green Boulevard to I-75

This segment is a 4-Lane Urban Collector.

White Boulevard, 25th Avenue, and Golden Gate Boulevard connect Collier Boulevard to the study area by bridges across the Golden Gate canal. Currently, there is a traffic signal at Collier Boulevard and Magnolia Pond Drive, White Lake Boulevard, and at the I-75 interchange ramps. The Magnolia Pond Drive/White Lake Boulevard intersection provides access to the Collier County landfill, water treatment plant, and industrial PUD northeast of I-75 interchange.

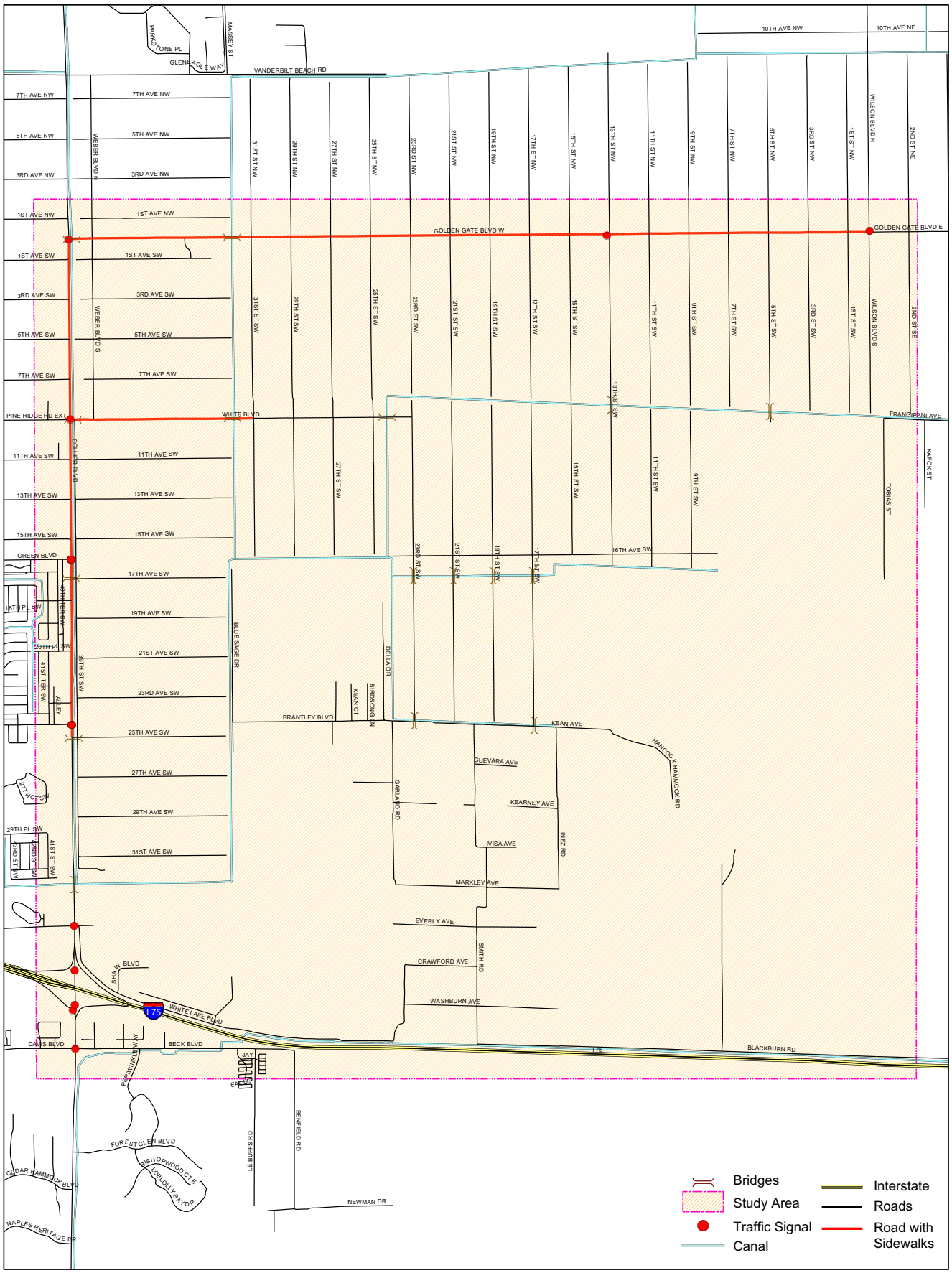

Exhibit 3
Transportation Elements
Wilson Blvd. Ext. Corridor Study

0 0.3 0.6 1.2 Miles

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Golden Gate Boulevard – Collier Boulevard to Wilson Boulevard

4-Lane Rural-Major Collector

This is a major road that gives access to the study area. This roadway cross-section includes a sidewalk. In addition to the traffic signal at Collier Boulevard, there are traffic signals at the intersections of Golden Gate Boulevard at 13th Street SW, and at Wilson Boulevard.

Wilson Boulevard – South of Golden Gate Boulevard

This portion of Wilson Boulevard is a 2-lane local road to the south of Golden Gate Boulevard currently serving about 40 single-family residential units. This is a 1-mile long public road ending in a dirt road that runs parallel to the canal.

Wilson Boulevard – North of Golden Gate Boulevard

This portion of Wilson Boulevard is a 2-lane collector road extending north of Golden Gate Boulevard approximately 3 miles to Immokalee Road. This road provides access to local residential streets.

White Boulevard – West of Collier Boulevard

This is a 2-lane collector road providing access to neighborhoods east of Collier Boulevard. There is a sidewalk that runs almost continuous from Collier Boulevard to the bridge before 31st Street SW. Currently, there is a traffic signal at the intersection of Collier Boulevard and White Boulevard. White Boulevard interconnects to Golden Gate Boulevard via Weber Boulevard South.

16th Avenue SW – 23rd Street SW to 9th Street SW

This is a 2-lane local collector road that serves as a connector across multiple local streets. This road runs approximately 2 miles long between Golden Gate Canal on the west and the mining operation on the east. A single bridge on 13th Street SW connects the neighborhoods served by 16th Street SW with Golden Gate Boulevard.

White Lake Boulevard & Blackburn Road – North of I-75

These are 2-lane roads providing access to the Collier County landfill operations and White Lake Corporate Park north of I-75 from Collier Boulevard. Blackburn Road is generally an unimproved local roadway that extends east of the White Lake Boulevard, running parallel to I-75.

Brantley Boulevard / Kean Avenue – East of Collier

These are 2-lane local roads providing access to Hideout Golf Club and residential neighborhoods and agricultural businesses east of Collier Boulevard and south of Golden Gate Boulevard. This is a road starting at Blue Sage Drive extending eastward approximately 3-miles and intersecting several unimproved or semi-improved local roads.

D. TRAFFIC DATA

To the maximum extent possible, WilsonMiller, Inc. utilized the traffic count data that is routinely collected by local agencies. WilsonMiller reviewed the existing traffic count database provided by Collier County and the Florida Department of Transportation (FDOT). **Exhibit 4** shows the locations of these count stations. Recommendations for additional locations for turning movement counts and vehicle classification counts are shown on **Exhibit 5**. WilsonMiller collected 24-hour vehicle classification counts at eight different locations to determine the percentage of trucks within the traffic stream.

1. **Classification Counts**

The classification count data were conducted in 15-minute increments with hourly totals for the entire twenty-four hour period. A summary of traffic counts is shown in ***Table III.1***.

Table III.1: Summary of Traffic Counts

Station No.	Road	Location	Count Date	PM Peak Hour Began	Peak Hour Volume	Peak Direction	NB/EB	% Dir Split	SB/ WB	% Dir Split	Peak Direction Volume	Peak to Daily Ratio	24-Hr Count	Peak Seasonal Traffic Volume	AADT	Percent Trucks
531	**Golden Gate Blvd.**	East of Collier Blvd.	22-Jun-04	1545	2,115	E	1,498	71	617	29	1,498	0.09	23,559	28,506	25,679	19.4
W106	**White Blvd.**	East of Collier Blvd.	22-Jun-04	1615	1,134	E	802	71	332	29	802	0.07	17,034	20,611	18,567	21.5
W107	**White Blvd.**	West of 23rd St. SW	22-Jun-04	1530	554	E	372	67	182	33	372	0.08	6,606	7,993	7,201	28.0
W108	**5th St. SW**	North of Quarry Entrance	22-Jun-04	1200	121	N	60	50	61	50	61	0.15	833	1,008	908	92.0
W109	**25th Ave SW**	East of Collier Blvd.	22-Jun-04	1430	157	W	65	41	92	59	92	0.05	2,881	3,486	3,140	19.4
W104	**White Lake Blvd.**	East of Landfill Rd.	22-Jun-04	1230	44	E/W	22	50	22	50	22	0.12	367	444	400	57.2
W100	**Utility Rd**	East of Collier Blvd.	22-Jun-04	1545	327	E	228	70	99	30	228	0.11	2,849	3,447	3,105	52.1
W110	**17th Ave. SW**	East of Collier Blvd.	22-Jun-04	1700	134	E	79	59	55	41	79	0.06	2,248	2,720	2,450	22.4
681	**Wilson Blvd.**	South of Golden Gate Blvd.	9-Jul-03	1700	49	S	16	33	33	67	33	0.14	356	427	381	NA
678	**Golden Gate Blvd.**	West of Wilson Blvd.	9-Jul-03	1700	1,853	E	1,334	72	519	28	1,334	0.09	20,684	24,821	22,132	NA

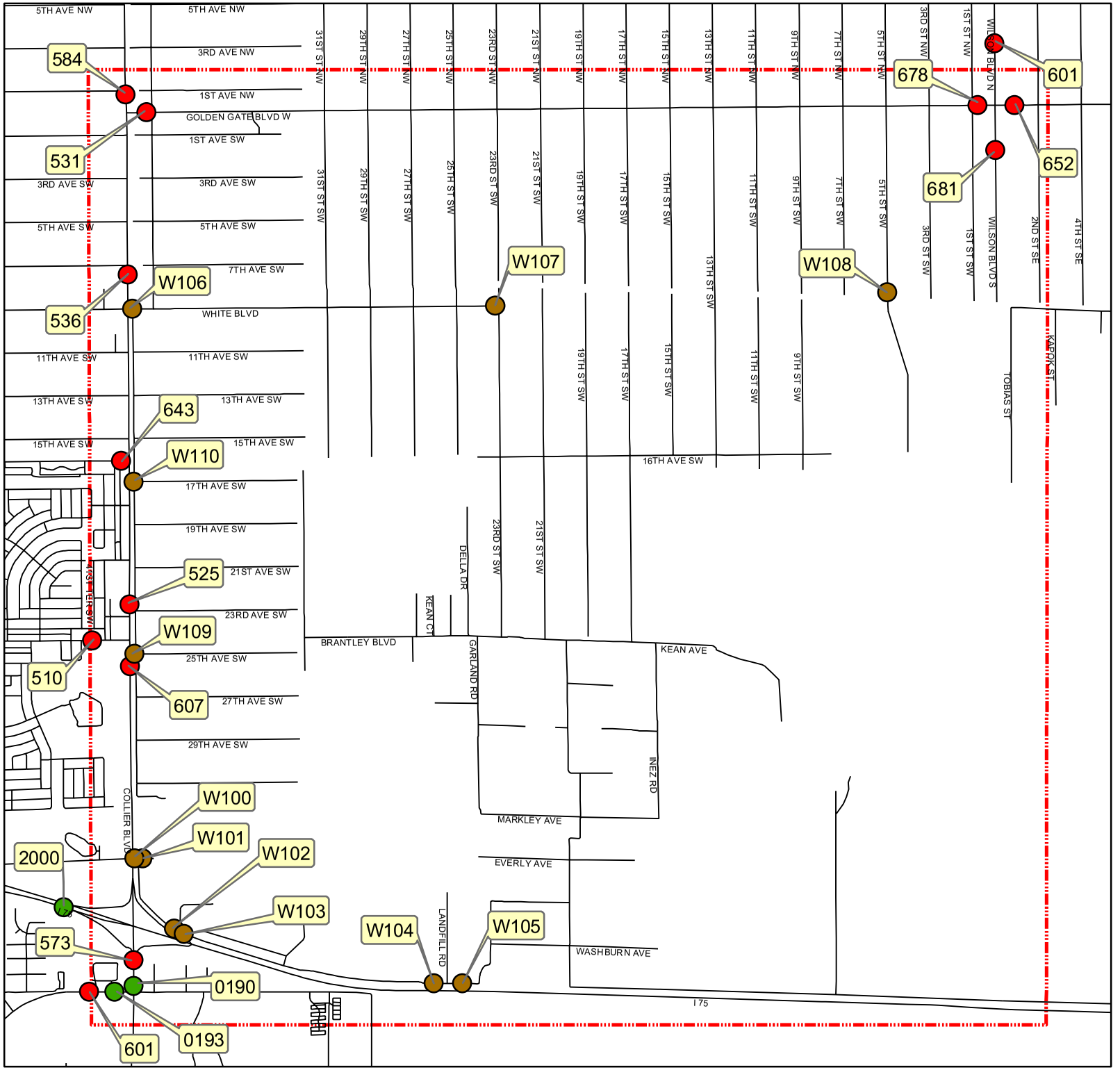
Note: The prefix W in Station No. indicates that the data was collected by WilsonMiller, Inc and/or sub consultants

2. **Turning Movement Counts**

Turning movement data helps to identify how traffic is moving through the study area and specifically at major intersections, and provides an understanding of how increases in volumes of future traffic are likely to affect the operations of major intersections. WilsonMiller collected PM peak hour turning movement data during June 2004 at the following intersections:

i. Collier Boulevard at White Utility Road
ii. Collier Boulevard at 25th Avenue SW
iii. Collier Boulevard at Golden Gate Pkwy.
iv. Collier Boulevard at 17th Avenue SW
v. Collier Boulevard at Green Boulevard
vi. Collier Boulevard at White Boulevard
vii. Collier Boulevard at Golden Gate Boulevard
viii. Golden Gate Boulevard at 13th Street SW
ix. Golden Gate Boulevard at 5th Street SW
x. Golden Gate Boulevard at Wilson Boulevard

PM Peak Hour turning movements are depicted in **Exhibit 6**.



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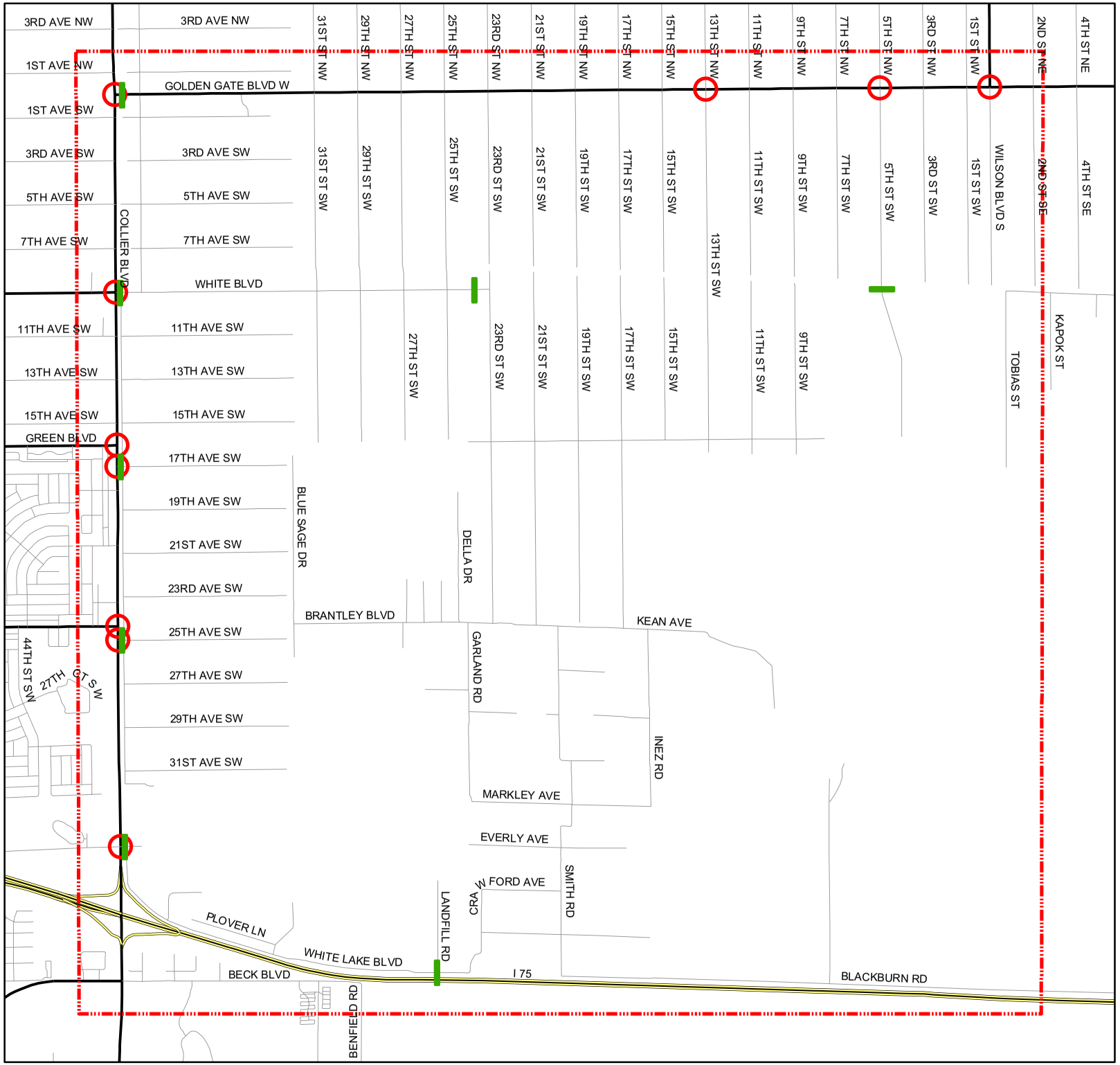

Exhibit 5

Turn Count and Tube Count Locations

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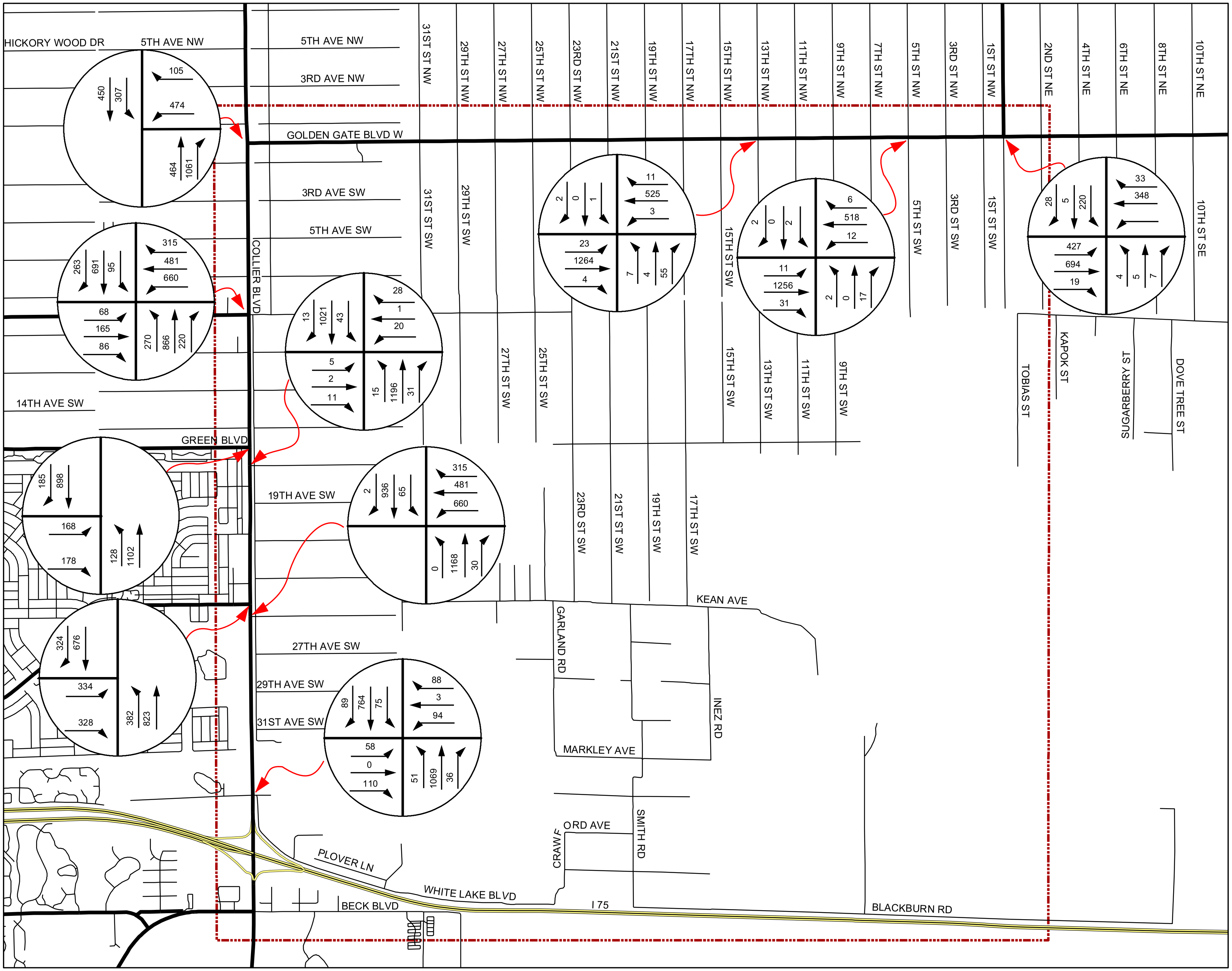

Study Area

N

0 0.3 0.6 1.2 Miles

Exhibit 6

2004 PM Peak Hour Intersection Turning Movement Counts

(June 01, 2004)

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E. TRANSPORTATION PLANS AND PROGRAMS

WilsonMiller conducted a review of adopted and/or tentative transportation work programs from Collier County, and FDOT to identify all improvements that are programmed for existing and new facilities in the study area. ***Table III.2*** summarizes projects, by phases, (also see **Exhibit 7**) which have been scheduled in the next five years and are programmed to be funded under the current revenue projections, in the study area.

Table III.2: Funded Projects

Road	Limits	Improvement Type	Work Program					
			FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Collier Blvd.	Immokalee Rd. to Golden Gate Blvd.	2-lane to 4-lane project	D/ROW/C	ROW/C	ROW	-		-
Collier Blvd.	Golden Gate Parkway to Green Blvd.	4-lane to 6-lane project	-	-	ROW	C		-
Collier Blvd.	Green Blvd. to Davis Blvd.	4-lane to 6-lane Project	2025 Financially Feasible Plan					
Golden Gate Blvd.	Wilson Blvd. to Everglades	2-lane to 4 lane project	-	-	D	ROW	-	C

Note: D – Design
ROW – Right-of-Way
C - Construction

The 2025 Needs Plan (**Exhibit 8**) identifies the roadway improvements needed to accommodate the projected demand in the year 2025, without regard to the availability of funding. Those projects that could reasonably be expected to be funded within the same time frame are included in the 2025 Financially Feasible Plan (**Exhibit 9)**. Project improvements are generally taken from the 2025 Needs Plan and added to the Financially Feasible Plan as additional revenue sources become available.

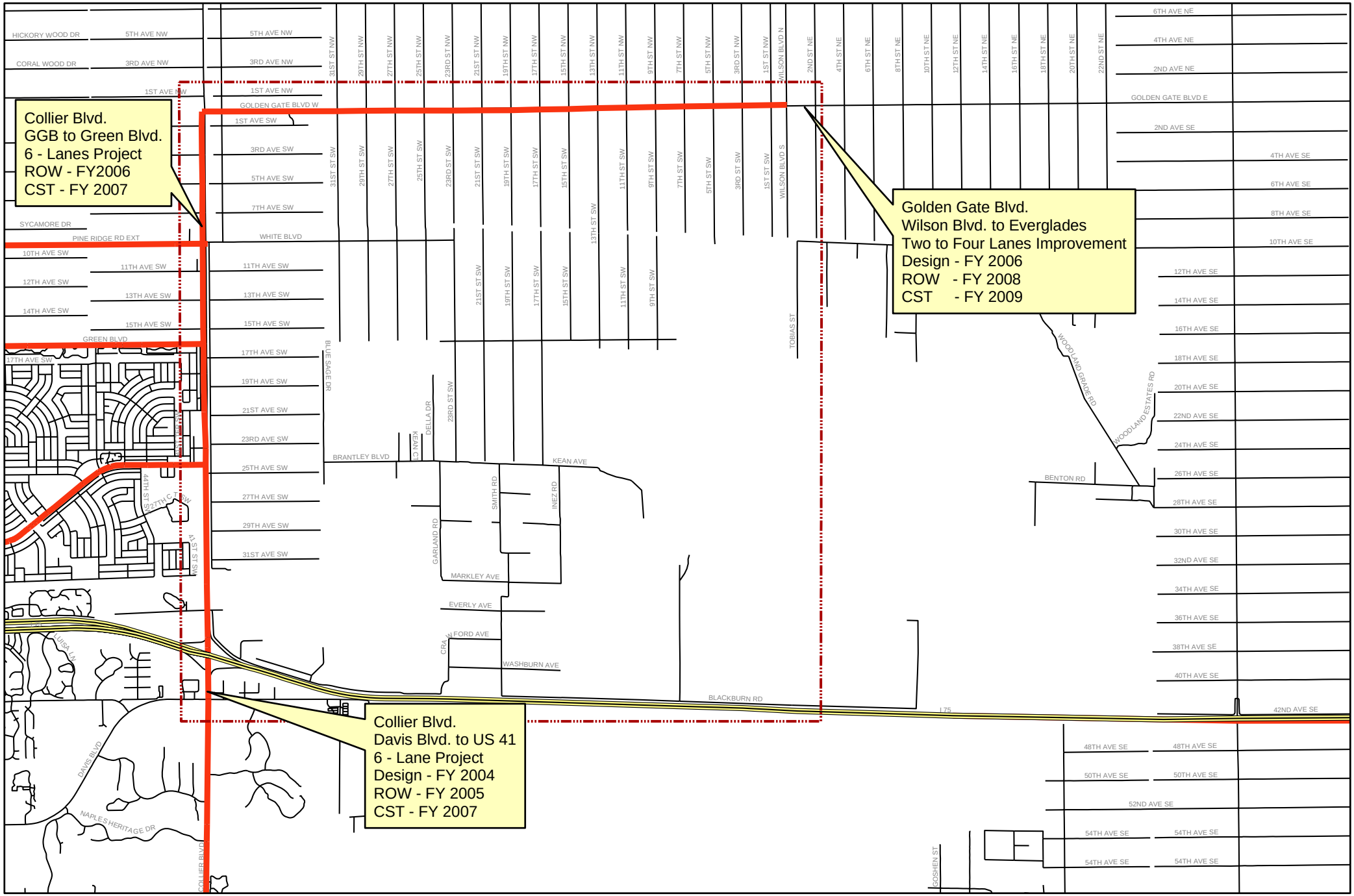

Exhibit 7

Future Projects - Transportation
Location Map

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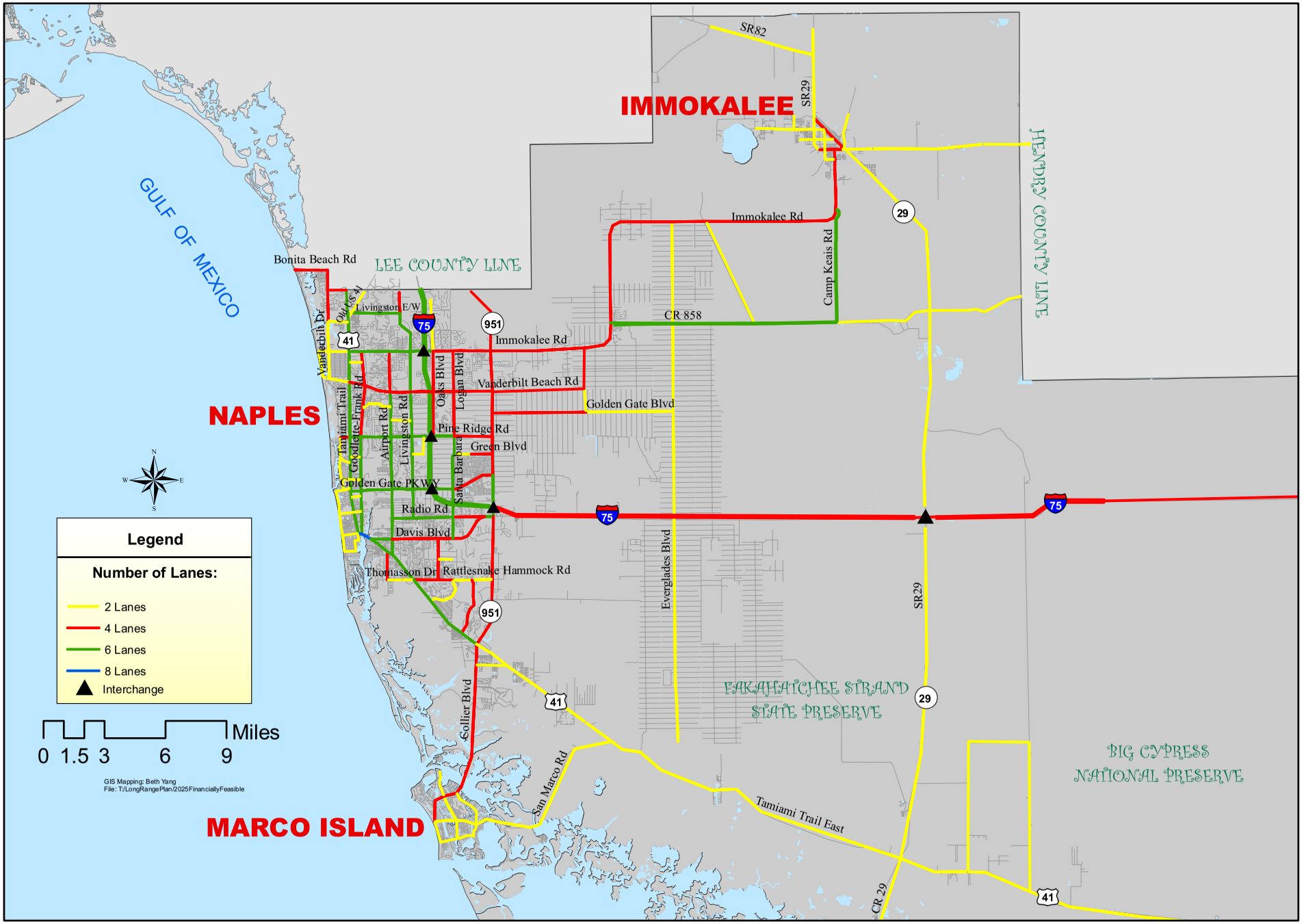
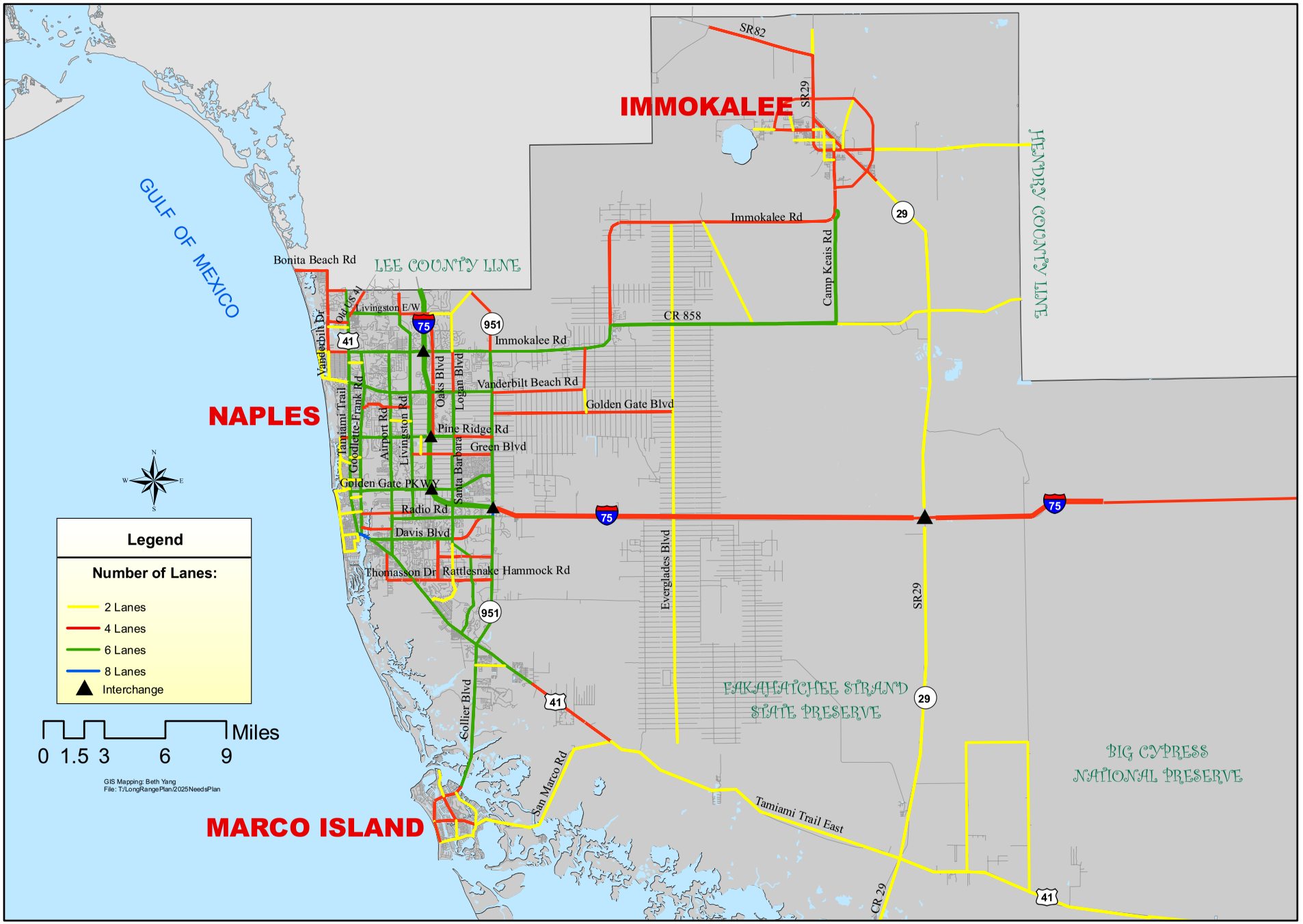
COLLIER COUNTY 2025 LONG RANGE FINANCIALLY FEASIBLE PLAN



COLLIER COUNTY 2025 LONG RANGE NEEDS PLAN



F. LAND USE AND LAND USE PLANS

WilsonMiller collected and compiled data regarding present and future land uses, proposed developments, current zoning, and observed trends within the study area. The data available is considered sufficient to show existing and projected residential, commercial, industrial, public, and undeveloped areas within the study area, and to demonstrate any relationships between land use, and development policies. Collier County Zoning Atlas (**Appendix A**) and Growth Management Plan documents were used to identify future land uses (**Exhibit 10**) within the study area.

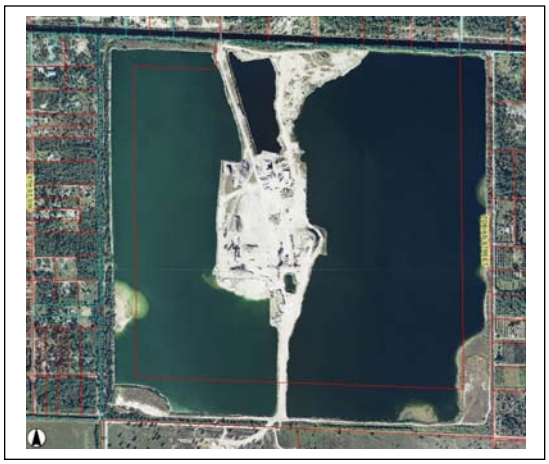
LAND USE

The primary land use within the Golden Gate Estates portion of the study area is almost exclusively single-family residential development on 1-acre to 5-acre homesites. Lands in the agricultural area of the North Belle Meade study area are developed with a mix of single-family "ranchettes" as well as active agricultural/nursery-type activities. In the southernmost portion of the study area, a few commercial and industrial PUDs have been approved. A brief description of each of these PUDs is given below.

1. **City Gate DRI** – A mixed-use development located to the north of I-75 and east of Collier Boulevard approved for 259,670 sq. ft. of commercial, 2,666,330 sq. ft of industrial, and 250 multi-family dwelling units. The PUD was approved in 1988 and the buildout or the sunset date is set for the year 2008. This PUD was undeveloped as of June 2004.

2. **White Lake Industrial Corp. Park** – This is a 144.4-acre commercial and industrial PUD, located north of I-75 and east of Collier Boulevard, approved for 96,165 sq. ft. of commercial and 222,775 sq. ft. of industrial development. This project is partially developed with infrastructure in place.

3. **Warren Brothers** – A total of 666.7 acres of which 42 acres are developed as industrial. This PUD is located to the south of Golden Gate Boulevard and west of Tobias Street This is an APAC-FLORIDA Inc. mining operation.



Although these are the only PUDs that are within the study area, there are other PUDs adjacent to the study area which may influence future traffic demands. These are shown in **Exhibit 11**.

LANDUSE PLAN

Rural Fringe Mixed Use (RFMU) District

The purpose of the Rural Fringe Mixed Use (RFMU) District of the Growth Mangement Plan is to provide a transition between urban and estate designated lands as well as, urban and rural/agricultural, and conservation lands. RFMU District comprises approximately 93,600 acres, almost 7 percent of Collier County.

The purpose of RFMU District is to preserve natural resources, while at the same time protecting private property rights through regulations and incentives. RFMU District acts as a transition by allowing mixture of urban and rural levels of density and level of services.

As seen in **Exhibit 12**, majority of the RFMU land are adjacent to urban, or Golden Gate Estate platted lands. To retain a rural, pastoral, or park-like appearance for the majority of right-of-way within this area, and to protect property rights some innovative land use strategies have been developed, including the adoption of the North Belle Meade Overlay, Natural Resource Protection Areas (NRPAs), establishment of Sending, Receiving, and Neutral Areas, and the Transfer of Development Rights (TDR) program.

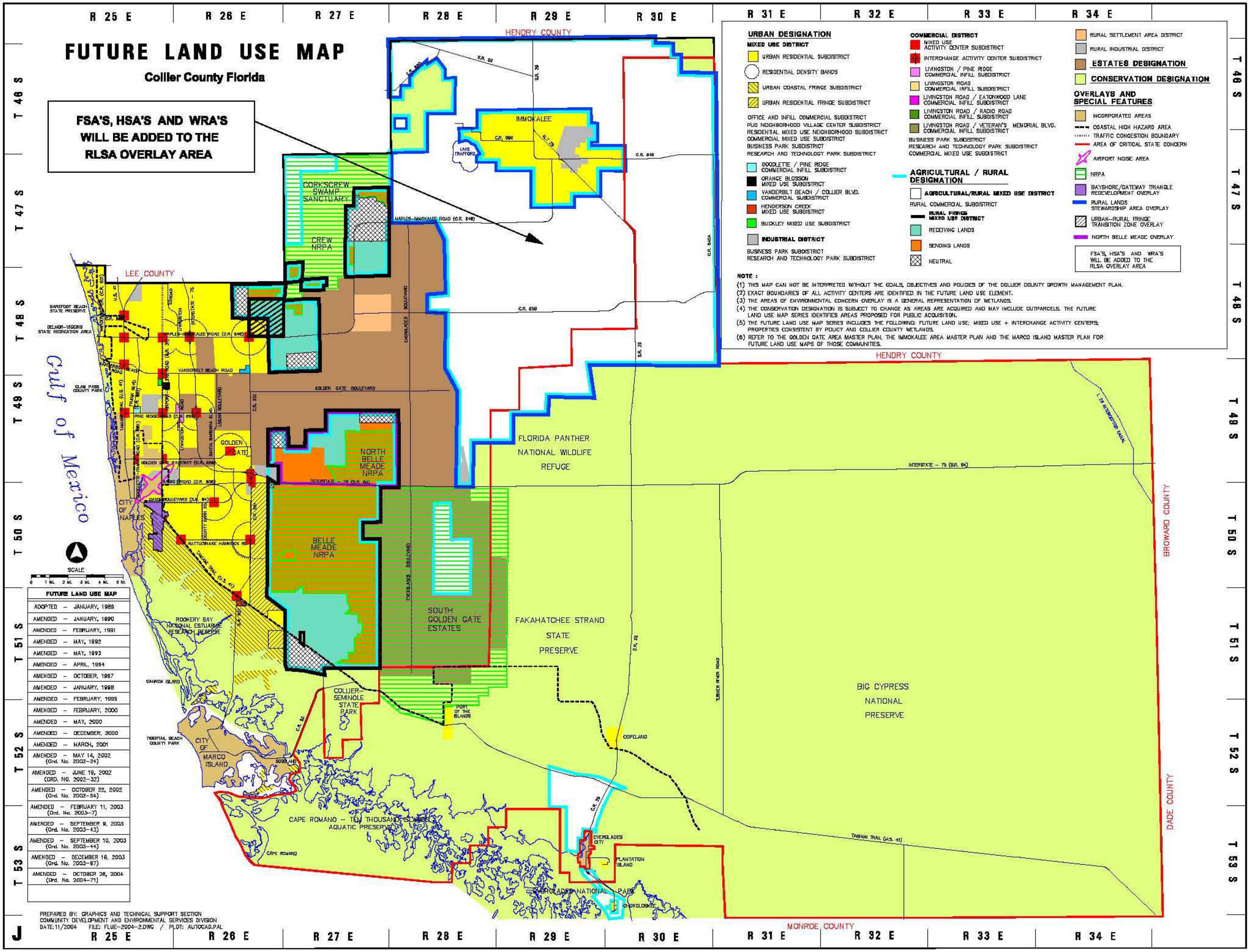
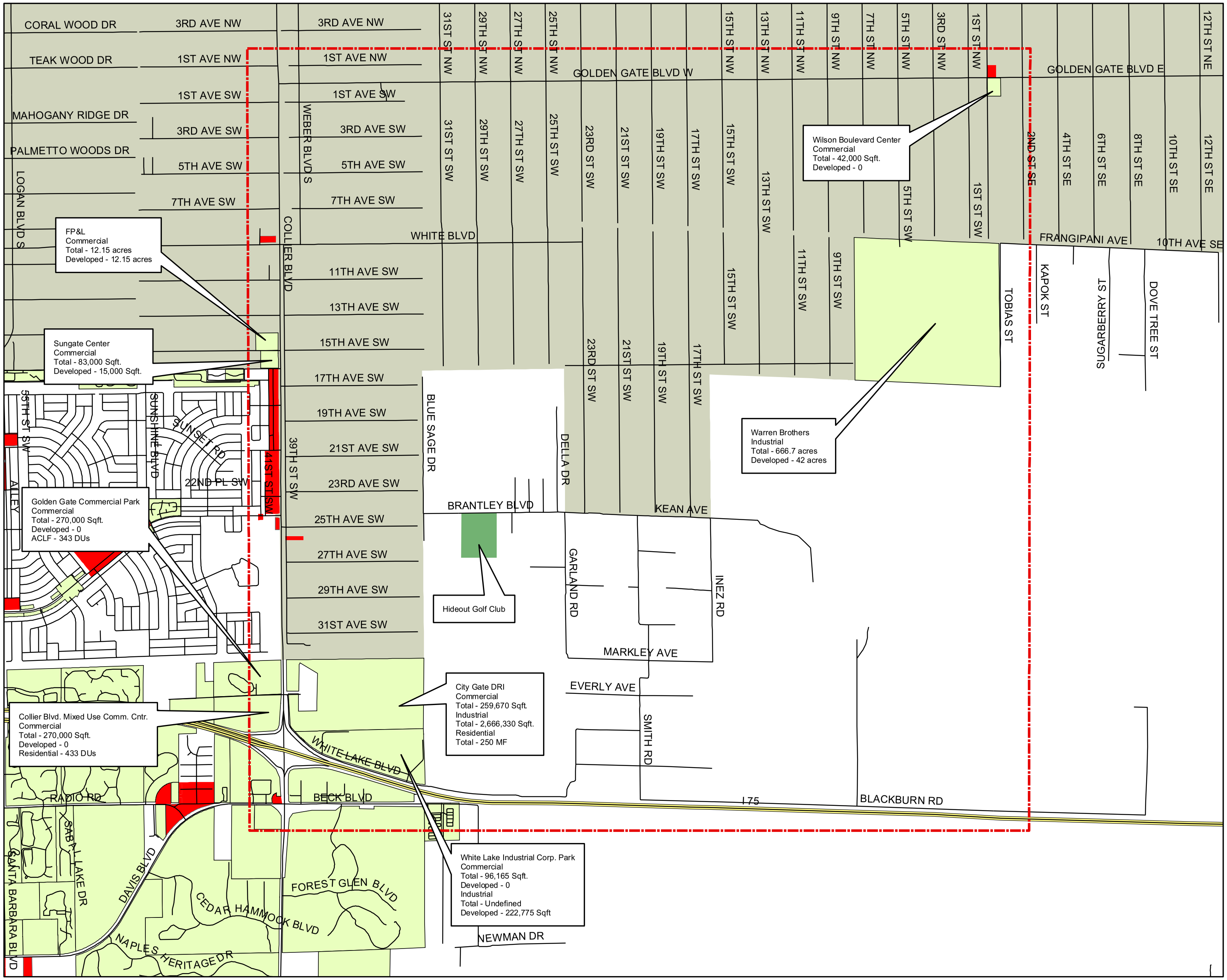


Exhibit 10
Future Land Use Map
http://colliergov.net/graphics/Zoning_Maps/Other%20Graphics/FLUE-2004-2-WEB.pdf



Study Area | GG Estates
Commercial | Roads
PUD | Interstate

N

0 0.25 0.5 1 Miles

Exhibit 11

Planned Unit Developments and Commercial Zonning

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This exhibit was prepared using GIS data provided by various sources that may include but are not limited to federal, state, district and local agencies. WilsonMiller, Inc. does not warrant data provided by other sources for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a true title search, property appraisal, survey, or for zoning verification.

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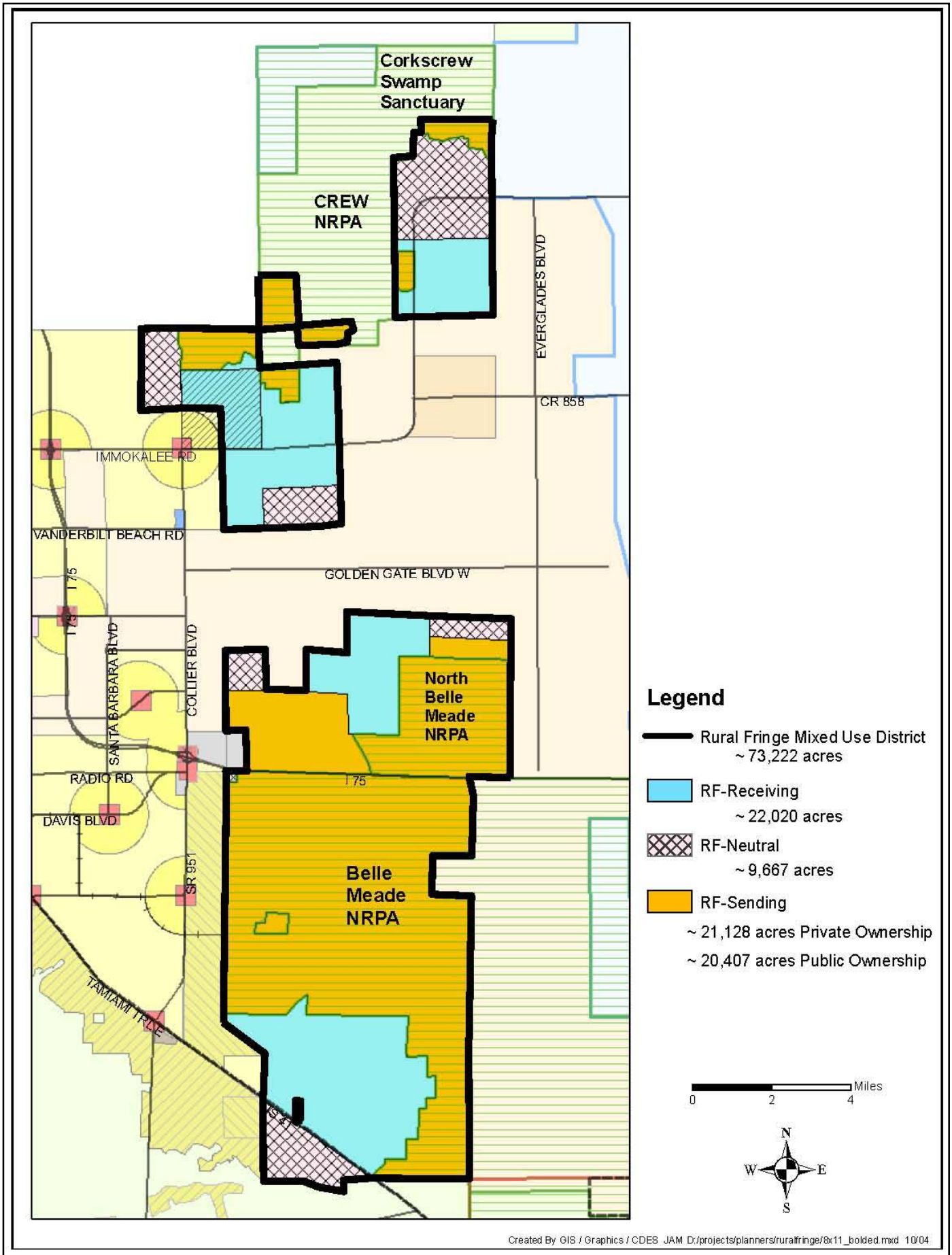

Exhibit 12
Rural Fringe Mixed Use District

North Belle Meade Overlay

The study area is part of the North Belle Meade (NBM) Overlay adopted by the Rural Fringe Plan amendments on June 19, 2002. This amendment delineates the NBM Overlay area as "*unique to the Rural Fringe area because it is surrounded by areas that are vested for developments on three sides*" (Collier County, Ordinance No. 2002-32). Due to its natural resources, this area can provide valuable habitat for listed species that may be present in the area. The NBM Overlay intends to achieve a balance between preservation and development in this area, some of which has already been impacted as a result of canal constructions and other agriculture practices. The NBM Overlay is approximately 15,552 acres, as depicted in the Future Land Use Map (**Exhibit 12**). There are four distinct areas that are treated differently based on their existing conditions. These areas are:

1. Natural Resources Protection Area (NRPA),
2. Receiving Areas,
3. Sending Areas, and
4. Neutral Areas.

Natural Resources Protection Area (NRPA)

NBM NRPA is a aproximately 6,075 acres of land, which comprises thirty nine percent of the NBM Overlay. This consists of wetlands, and listed species habitat as in other Rural Fringe NRPAs. "*This consideration combined with the fragmented ownership pattern and the state's desire to purchase significant portations of this area warrants a different level of prorection than in other NRPA areas, particularly for incentives for the consolidation of lots to assist in the future preservation of lands.*" (Ordinance No. 2002-32). NBM NRPA is designated as Sending Lands for the Transfer of Developments Rights program.

Receiving Areas

Receiving Areas comprise approximately 3,368 acres of land in the northern and northwestern portion of North Belle Meade Overlay (**Exhibit 10**). This portion of land is almost entirely contiguous to Golden Gate Estates. Two sections are directly south of the existing mining operation. The receiving lands have been determined to be of less environmental value than other portions of NBM Overlay, and thus more suitable to sustain future development.

Sending Areas

Sending Areas comprise approximately 4,598 acres of land identified for the transfer of development rights in the western, eastern, and southern portion of NBM (**Exhibit 10**). The protection of endangered and threatened species habitat are the primary considerations in this area.

Excerpts from the Future Land Use Element (FLUE) of Collier County Growth Management Plan (GMP) describing regulations that apply to the North Belle Meade Overlay are provided in **Appendix B**.

Transfer of Development Rights (TDR)

The primary purpose of the TDR process is to preserve land with environmental value by allowing for the preservation of certain “sending” lands in exchange for transfering the development rights to more suitbale “receiving” lands. TDRs protect the interests of property owners of such lands by allowing them to recoup lost value and development potential through the process of retaing and transferring such rights. TDRs can be transferred from sending lands to receiving lands as designated in the Future Land Use Map (**Exhibit 12**).

Receiving Lands

Receiving lands are those lands in the Rural Fringe Mixed Use District that are most appropriate for development. These lands have been identified as lands with lesser environmental value than the Sending lands. The incentives deployed to redirect developments from properties with more environmental value are:

1. TDR process
2. Clustered development
3. Density bonus incentives, and
4. Provisions for central sewer and water

The residential density allowed in the designated receiving lands is one dwelling unit for every five acres, but through the TDR process a maximum density of one dwelling unit for every one acre can be achieved. Once the maximum density is achieved through the TDR process a density bonus is provided for every additional acre of native vegetation preserved in excess of the minimum required preserves. The development of Receiving Lands in North Belle Meade area are required to follow the additional standards set forth in North Belle Meade Overlay.

Neutral Lands

Neutral lands are generally intneded for semi-rural residential/agricultural development. These are identified to have higher ratio of native vegetation, and thus higher environmental value than the designated Receiving Lands. A lower maximum gross density is set forth for Neutral Lands compared to Receiving Lands, and some permitted uses in the Receiving Lands are not permitted in Neutral Lands. The maximum density permitted on Neutral Lands is one dwelling unit for every 5 acres of land. Clustering is allowed to increase the density of development, while maintaining the 1 unit per 5-acre ratio.

Sending Lands

Sending lands are the prime targets for preservation and conservation efforts because of their high environmental and natural resource values. The Sending Lands include wetlands, uplands, and native habitat for listed species. Land owners of Sending Lands can choose to transfer densities to Receiving Lands within the Rural Fringe Mixed Use District using the TDR process. The dwelling units can be transferred from sending lands at a maximum rate of one dwelling unit for every five acres. For nonconforming parcels that existed before June 22, 1999, and less than five acres, one dwelling unit may be transferred from the parcel. Where there is a conservation easement or other development restrictions prohibiting residential developments, then such lands are not eligible for transfer. Once the residential density has been transferred, the land may be retained in private owership or may be sold or deeded by gift to another entity. All lands within the Natural Resource Protection Area Overlay are designated as Sending Lands.

SECTON IV:
EXISTING DATA ANALYSIS

A. DEMOGRAPHICS

Demographics data was collected and analyzed in order to evaluate the Traffic Analysis Zones (TAZs) information that would be used by the travel demand models to evaluate the future traffic conditions. This study provides an understanding of the population, in terms of race, ethnicity, household size, age, and median income. This section also provides the socioeconomic aspects found in the study area.

The data for this phase of the study was obtained from the U.S Census Bureau, and has not been independently verified. For more details on nonsampling errors that might be involved in this dataset please visit the U.S Census Bureau website at http://factfinder.census.gov/home/en/datanotes/ expsf1u.htm.

Race and Ethinicity

Table IV.1 summarizes the racial and ethnic makeup of the study area census tracts.

Table IV.1: Population by Race/Ethnicity

Race/ Ethnicity	Collier County	Census Tract (104.13, 104.14)	Percent Total	Percent Countywide
Not Hispanic or Latino:	**202,081**	**7,987**	**79.9**	**4.0**
White	185,517	7,590	76.0	4.1
Black or African American alone	10,999	163	1.6	1.5
American Indian and Alaska Native alone	482	30	0.3	6.2
Asian alone	1,527	52	0.5	3.4
Native Hawaiian and Other Pacific Islander alone	63	2	0.0	3.2
Some other race alone	250	6	0.1	2.4
Two or more races	3,243	144	1.4	4.4
Hispanic or Latino:	**49,296**	**2,005**	**20.1**	**4.1**
White alone	30,828	1,365	13.7	4.4
Black or African American alone	420	13	0.1	3.1
American Indian and Alaska Native alone	251	10	0.1	4.0
Asian alone	42	6	0.1	14.3
Native Hawaiian and Other Pacific Islander alone	90	0	0.0	0.0
Some other race alone	15,304	523	5.2	3.4
Two or more races	2,361	88	0.9	3.7
Total:	**251,377**	**9,992**	**100.0**	**4.0**

Source: U.S Census Bureau, 2000

The total population of the study area is about 4-percent of the entire County. The racial and ethnic composition of these census tracts is representitive of the Collier County population. That is, the percentages of racial and ethnic groups in the study area is approximately equal to the percentages in entire Collier County.

Age and Gender

The population within the census tracts of the study area sharply differs from the Collier County population. The seniors (those age 65 and above) make up approximately 25% of the population of Collier County, whereas in the study area census tracts, they make up only approximately 5% of the population. Similarly, the percentages of people under the age of 18 is approximately 30% county-wide, while they attribute to approximately 20% of the population within the census tracts under study. ***Figure IV.1*** *and* ***IV.2*** present 'population pyramids' representing these differences graphically.

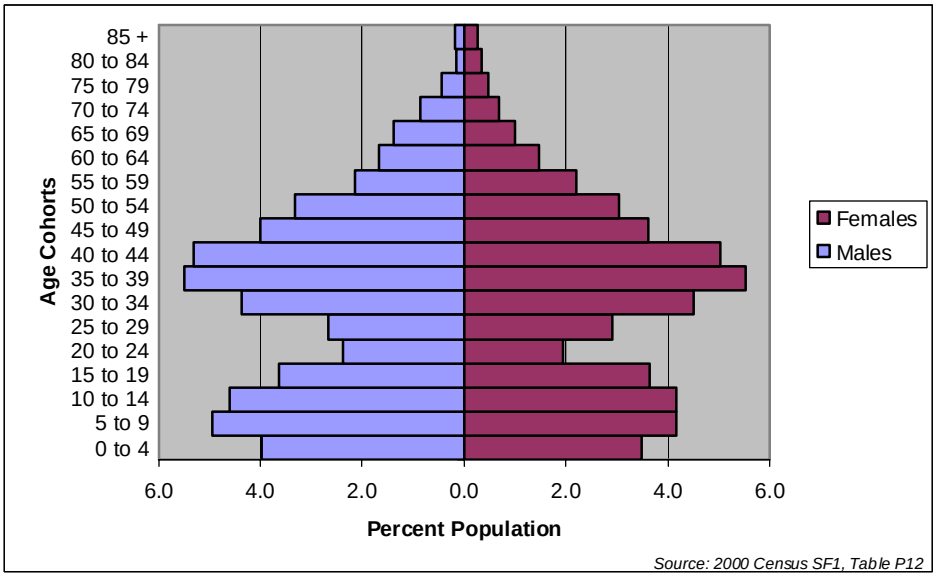

Figure IV.1: Census Tracts 104.13 & 104.14 Percent Population by Age and Sex

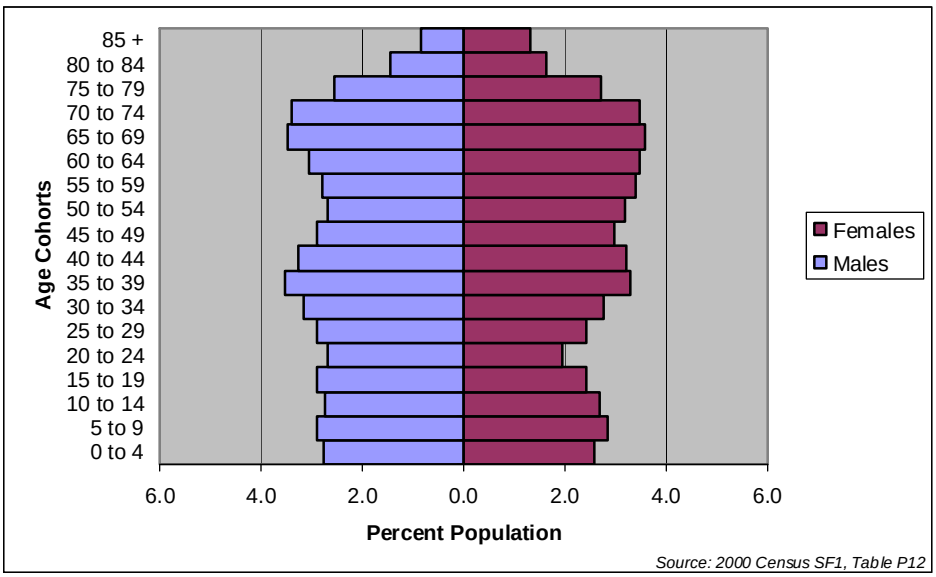

Figure IV.2: Collier County Percent Population by Age and Sex

Socioeconomic Characteristics

Table IV.2 provides some of the socioeconomic indicators for the study area and compares them with those of county and the state.

Table IV.2: Socioeconomic Indicators

Socioeconomic Indicator	Florida	Collier County	Census Tract	
			104.13	104.14
Median Household income, 1999	$38,819	$48,289	$49,341	$57,134
Percent Persons Below Poverty, 1999	12.5%	10.3%	4.3%	3.4%
Percent High School Graduate, 2000	79.9%	81.8%	78.5%	81.8%
Percent College Graduate, 2000	22.3%	27.9%	17.2%	11.5%
Percent Home Ownership, 2000	70.1%	75.6%	91.1%	92.1%
Median Value of Owner Occupied Units, 2000	$105,500	$168,000	$135,400	$132,300

B. LANDUSE AND POPULATION PROJECTIONS

The Collier County Growth Management Plan Amendments designate rural fringe land as sending, receiving, or neutral areas, as discussed earlier. These amendments modify the permitted intensities of land uses and consequently, their development potential. To comply with the new regulation, the County's approved land-use forecast was reviewed and necessary updates were made to reflect the changes in development potential brought about as a result of the Rural Fringe Amendments. Furthermore, to evaluate the future traffic demand on different alternatives (Wilson Boulevard Extension) in the year 2025, Metropolitan Planning Organization's (MPO's) traffic demand model was reviewed and, adjustments were made as necessary to reflect future land use forecast in each traffic analysis zone (TAZ).

The first step in this process was to conduct an overlay analysis of future land uses, and TAZs, to identify TAZs impacted by the Rural Fringe Amendments for further

study (**Exhibit 13**). This analysis reveals that the rural fringe lands are disseminated across TAZs 181, 185, 202, 234, 272, 289, 361, and 371.

The next step was to get a better understanding of these TAZs by observing the trends in population growth in the last decade. This study helped in validating the population and dwelling units in the interim year (2025), as well as at buildout.

The graphical representation of population from 1990 to 2003 (***Figure IV.3***) shows that the population in TAZs 181, 185, 202, 234, 272, 289, and 361 had increased at an average of 33.2 percent over the last five years.

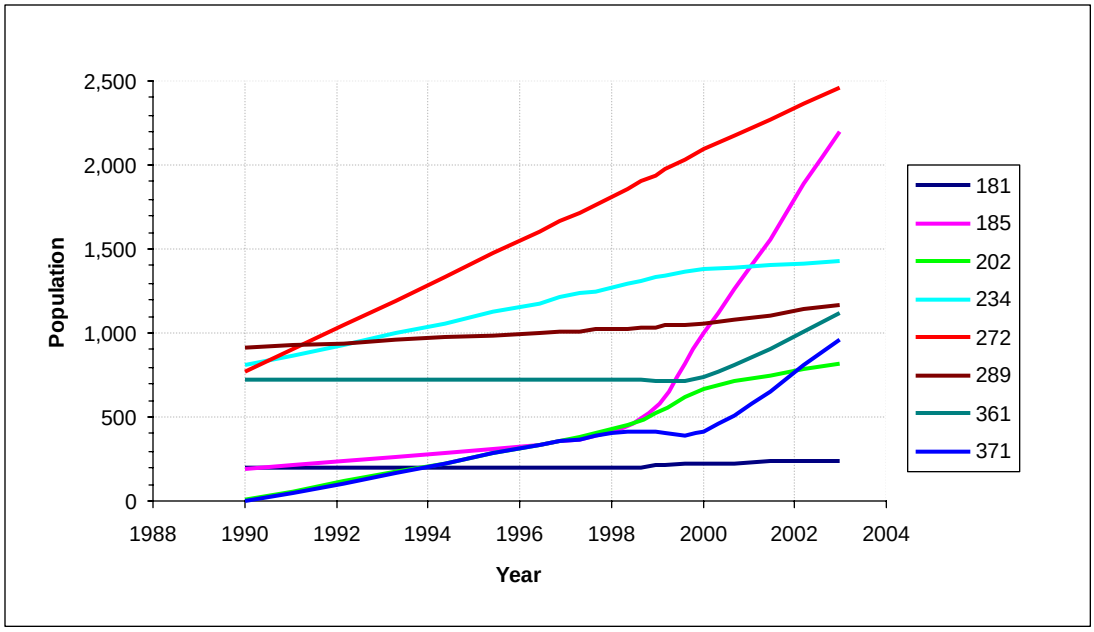

Figure IV.3: Population Trend in Study Area TAZs

The majority of these TAZs encompasses areas of Golden Gate Estates and/or is in close proximity to the urban area. The fastest growing TAZ in terms of population has been TAZ 185, the content of which has more than doubled over the last five years. This can be attributed to the Orange Tree and Waterways of Naples single-family residential developments found within this TAZ. Conversely, TAZ 181 has seen the least growth, which can be attributed to the fact that majority of land is in conservation and/or agriculture use. The population in this TAZ has grown by only 18 percent in the last 13 years.

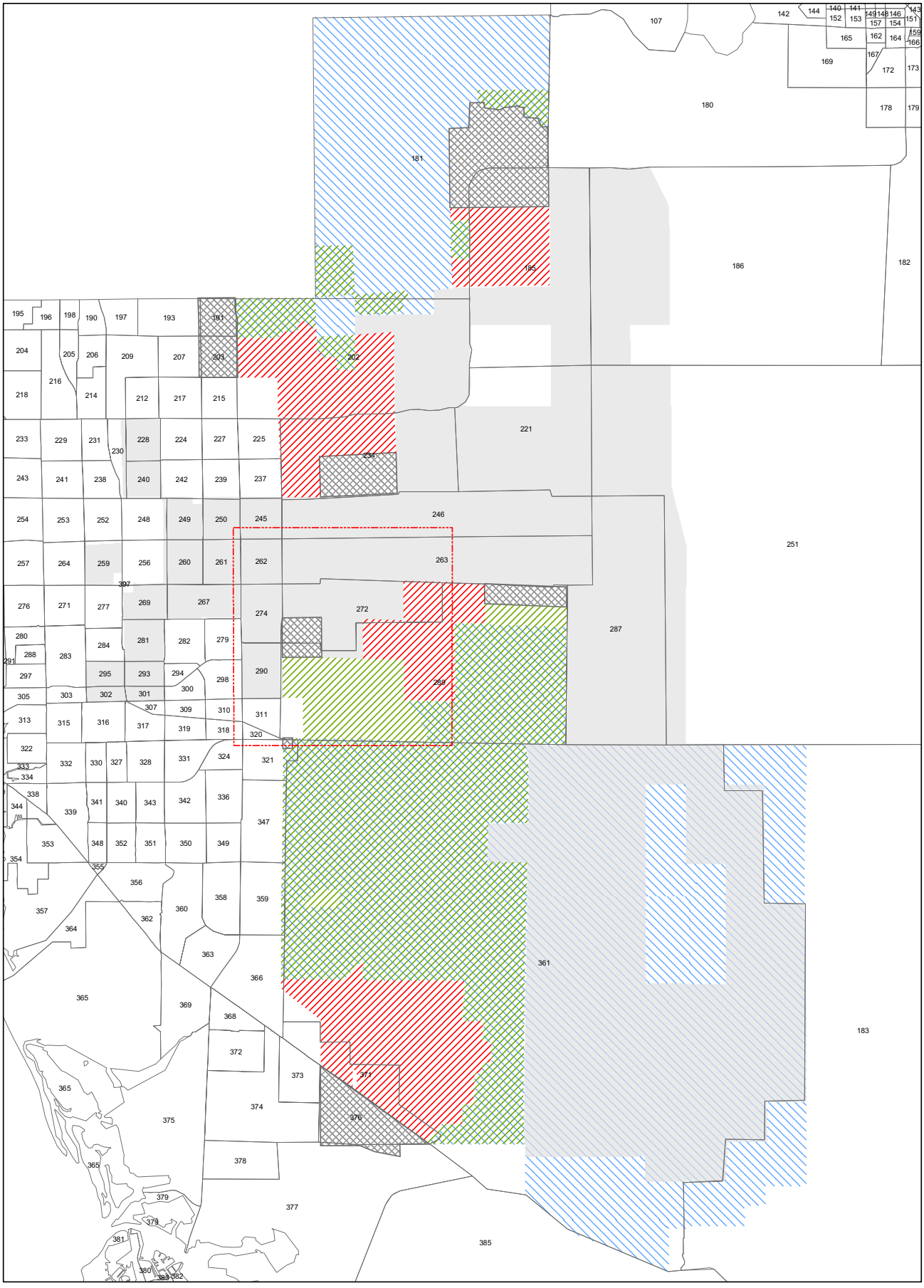

Exhibit 13

Impacted TAZs

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Buildout Dwelling Units and Population

In order to establish an interim year (2025) land use forecast it was necessary to establish a new "buildout" total for each affected TAZ. The new buildout total dwelling units were calculated based on the allowable densities in each of the TAZs affected by the Rural Fringe amendments (RFA).

To calculate the buildout total dwelling units in each TAZ the following assumptions were made:

1. Seventy-five percent of the property owners in sending area would transfer development rights under the TDR program by buildout.
2. The aggregate of dwelling units in all TAZs at buildout will remain the same (Control Total).
3. The number of dwelling units in receiving lands, and receiving land acreages in each TAZ are proportionate. This is done to account for the transfer of developments rights that might occur from one TAZ to another, as not all TAZs in the Rural Fringe have equal amount of acreages of receiving and sending lands.

Following are the densities used in calculating the number of buildout dwelling units (DUs):

Receiving Lands: The total number of dwelling units in the Receiving Lands was calculated at 1 DU/5 acres, and at 1 DU/1 acre for every transfer of development right (TDR) from the Sending Lands.

Sending Lands: The permitted density of dwelling units in the sending area is maintained at 1 DU/5 acres to calculate the total number of dwelling units.

Neutral Lands and other Lands: The number of dwelling units in the remaining lands was calculated as the remainder of total buildout dwellings (prior to the Rural Fringe Amendments) after eliminating sending and receiving area dwelling units at 1DU/5acre. Any TAZ that produced a negative number for the number of

dwelling units was assigned a value of zero, and that number is subtracted from the sending area dwelling units to maintain a control total of 24,600 dwelling units.

The summary of buildout dwelling units in the previous forecast (prior to the Rural Fringe Amendments) and in the revised forecast based on the Rural Fringe Amendments by TAZ is shown in ***Table IV.3***.

The revised projection shows a strong linear correlation between the buildout dwelling units and receiving land acreage (r = 0.7). The revised projection also shows a decrease in the total number of dwelling units in TAZs 181, 289, and 361 by 16%, 25%, and 33% respectively, over the previous projection. On the other hand TAZ 234 is expected to increase by almost 56% over the previous projected values as result of the adopted Rural Fringe Amendments.

Table IV.3: Revised Buildout Dwelling Units

MPO TAZ NO.	Sending Acres	Receiving Acres	Neutral / Other Acres	Previous BO DUs	Revised BO DUs
181	1,596	330	21,110	923	776
185	0	2,594	7,241	3,680	4,411
202	1,843	4,324	4,928	5,802	6,743
234	0	2,541	3,359	1,276	1,992
272	0	580	2,872	1,480	1,643
289	10,479	3,081	1,738	2,816	2,112
361	27,155	7,047	50,435	6,414	4,326
371	54	1,404	478	2,269	2,657
TOTAL	**41,127**	**21,902**	**92,161**	**24,660**	**24,660**

The total population at buildout was calculated by disaggregating the revised total buildout dwelling units into multi-family (MF) and single-family (SF) dwelling units. The same densities of population per dwelling unit as in the MPO model were used in revised projections. A summary of the projection is given in ***Table IV.4*****.** In spite of the total dwelling units at buildout being kept constant (Control Total) the total population in the year 2025 has decreased by 0.25% from the previous projection. This decrease in population is attributed to the changes in the percentage of MF and SF dwelling units in each TAZ.

Table IV.4: Projected Buildout Population by TAZ

MPO TAZ NO.	Build Out Dwelling Units		Multi-Family DUs		Single-Family DUs		BO Population	
	Previous	Revised	Previous	Revised	Previous	Revised	Previous	Revised
181	923	776	0	0	923	776	2,235	1,880
185	3,680	4,411	80	96	3,600	4,315	8,982	10,765
202	5,802	6,743	3,080	3,580	2,722	3,164	11,246	13,071
234	1,276	1,992	0	0	1,276	1,992	3,879	6,056
272	1,480	1,643	0	0	1,480	1,643	4,504	5,001
289	2,816	2,112	0	0	2,816	2,112	8,577	6,433
361	6,414	4,326	0	0	6,414	4,326	13,340	8,998
371	2,269	2,657	1,002	1,173	1,267	1,483	2,469	2,891
TOTAL	**24,660**	**24,660**	**4,162**	**4,849**	**20,498**	**19,811**	**55,232**	**55,096**

Interim year (2025) population and dwelling units

The forecast model was updated with year 2003 population (base year) and revised buildout projection in order to interpolate an interim year (2025) population. The total countywide population projection was maintained constant at 453,000 (University of Florida, Bureau of Economic & Business Research). A summary of the interpolation is given in ***Table IV.5***.

Table IV.5: Projected 2025 Dwelling units and Population by TAZ

MPO TAZ NO.	2025 Dwelling Units		Multi-Family DUs		Single-Family DUs		2025 Population	
	Previous	Revised	Previous	Revised	Previous	Revised	Previous	Revised
181	460	355	0	0	460	355	1,114	860
185	1,654	2,432	36	53	1,618	2,379	4,037	5,937
202	2,547	2,545	1,352	1,351	1,195	1,194	4,937	4,934
234	932	1,165	0	0	932	1,165	2,835	3,542
272	1,166	1,344	0	0	1,166	1,344	3,548	4,091
289	1,498	1,106	0	0	1,498	1,106	4,563	3,396
361	2,938	1,972	0	0	2,938	1,972	6,111	4,101
371	1,315	1,817	581	802	734	1,015	1,431	1,977
TOTAL	**12,510**	**12,736**	**1,969**	**2,206**	**10,541**	**10,530**	**28,576**	**28,838**

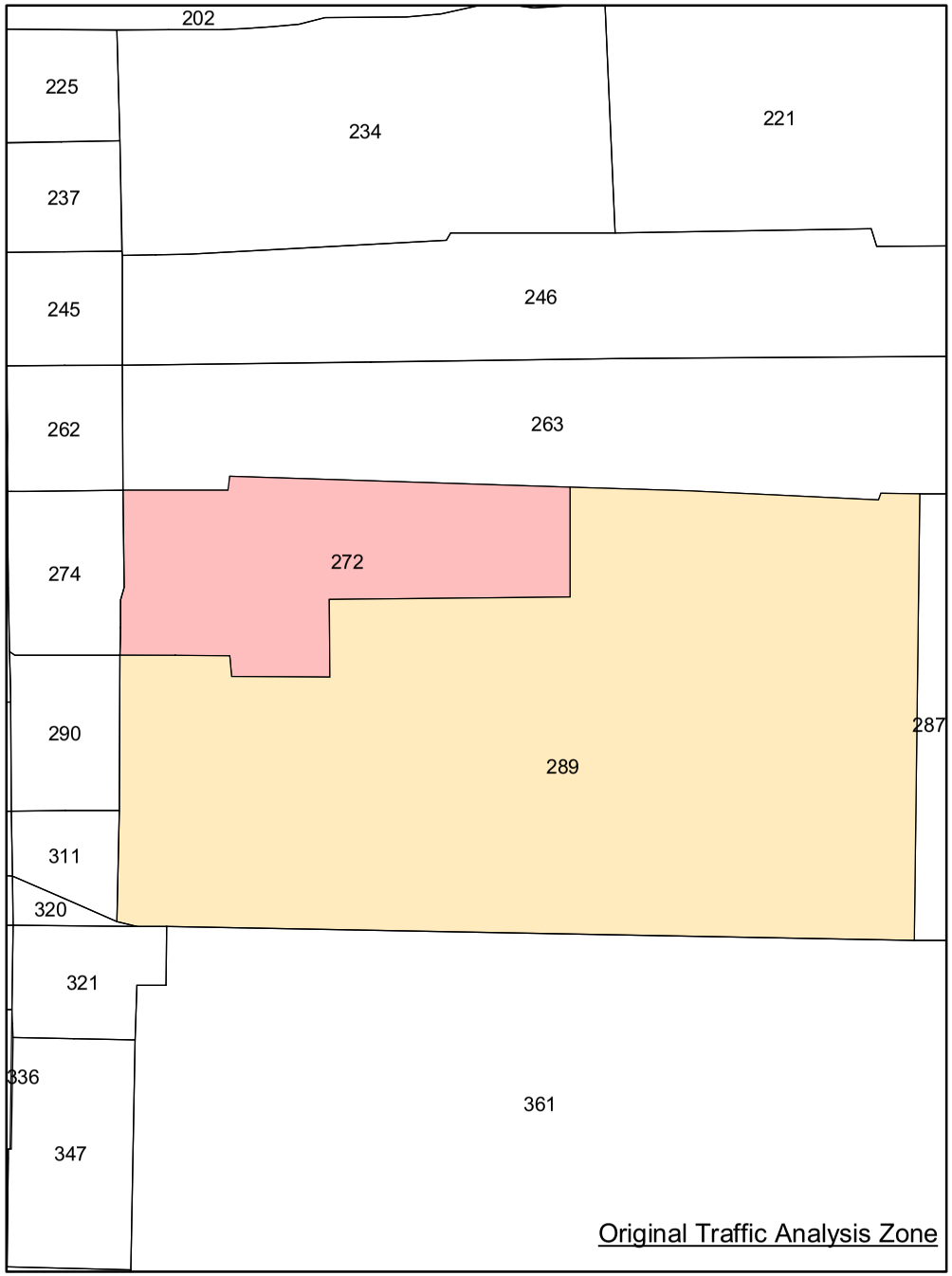
The model estimates a population of 28,838 in the year 2025 for the TAZs within the study area; a slight increase from the previous estimates. The results from the forecast model show that the majority of TAZs are composed of single-family dwelling units; only 37.5% of the TAZs have multi-family dwelling units. The results also reveals that all of the TAZs, with the exception of TAZ 289, will reach nearly one half of their maximum capacity of dwelling units by the year 2025.

C. GEOGRAPHY REFINEMENTS

Both the land use forecast methodology and the County's travel demand modeling structure use a TAZ "geography" that establishes the size and boundary limits of each TAZ. The current TAZ geography in the study area was evaluated based on four standard criteria; spatial contiguity, boundaries, compactness, and homogeneity (*You, et.al., 1997*). The Rural Fringe amendments were also considered in evaluating the TAZs boundaries as these amendments frequently designated land differently within the same TAZ. A brief description of each of the standard criteria used in evaluation is given below.

Spatial contiguity – The units that make up a particular TAZ should be adjacent,
Boundaries – The census boundaries or physical entities such as roads, waterways, etc., should make up the boundaries of a TAZ,
Compactness – The shape of each TAZ should be spatially compact, and
Homogeneity – Preferably, TAZs should consist of a single or predominant Land use.

An analysis of the TAZ structure within the study area (263, 272, and 289) revealed that TAZ 272 and 289 did not satisfy one or more of the above criteria. The southwest part of TAZ 272 was divided by the Golden Gate major and minor canals from the rest of the TAZ, allowing only limited access to the rest of the TAZ. A result, this TAZ was divided into two TAZs, TAZ 272 and 393. Similarly, TAZ 289 was found to be neither spatially contiguous nor compact, making it difficult to analyze the trips generated by, and attracted to this TAZ, which is essential for this study. Consequently, this TAZ was divided based on the future land uses and potential corridor alignments (major roads) that would define the boundary. **Exhibit 14** shows the traffic analysis zones, as they exist today and the revised traffic analysis zones.



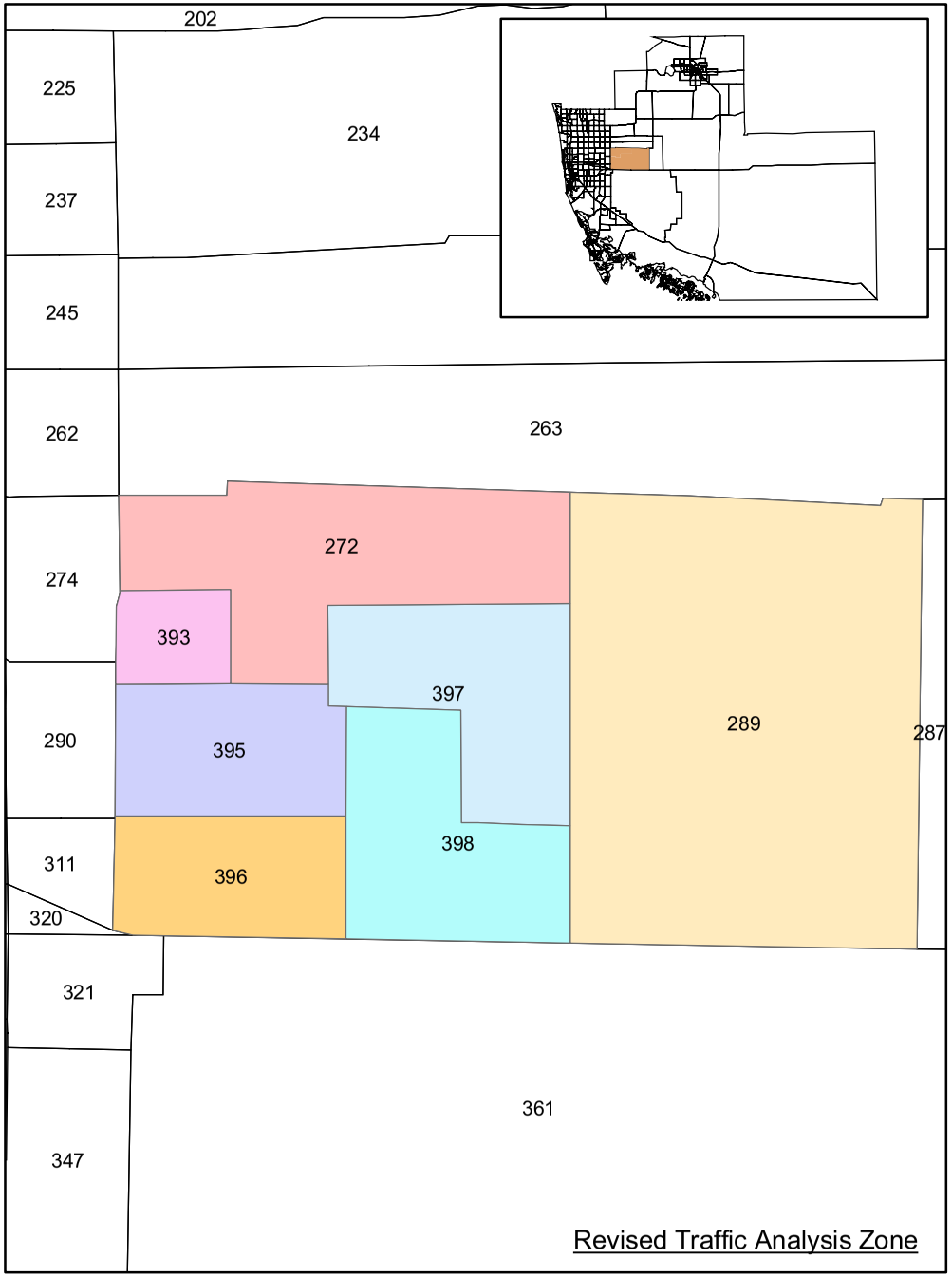


Exhibit 14

Traffic Analysis Zones

N

0 0.5 1 2 Miles

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D. COLLIER COUNTY MPO MODEL UPDATE

In order to use the Collier County MPO's 2025 Financially Feasible travel demand model for this study, it was necessary to update model as follows:

1. **New TAZ structure:** The results from the geographic refinements were updated in the model highway network file.
2. **Links (roadways):** The roadways that might be affected by the proposed Wilson Boulevard extension were incorporated into the model. For the purpose of modeling, these links were assumed to be very low speed, local collector facilities in undeveloped rural area. The following links were added in the model: Wilson Boulevard South, Tobias Street, 13th Street SW, 16th Avenue SW, White Boulevard, 23rd Street SW, Kean Avenue, Brantley Boulevard, Inez Avenue, Markley Avenue, Smith Road, Utility Road, and Landfill Road.

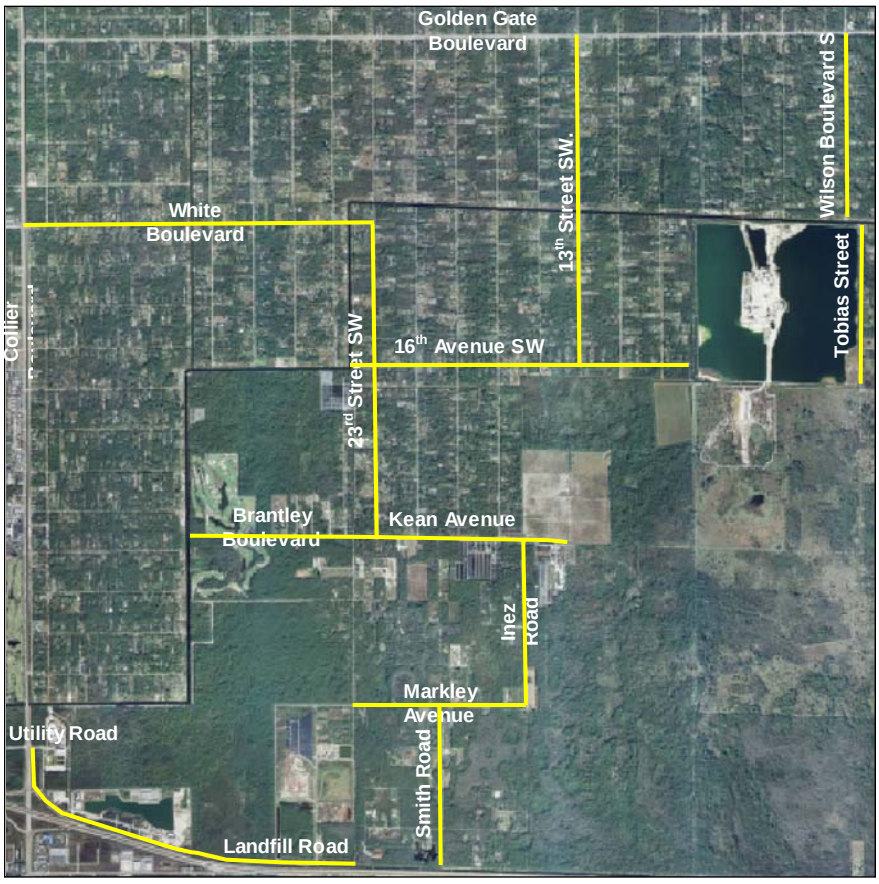


Figure IV.4: Roadway links Updated in Base Model

3. **Interim Year (2025) Dwelling Units and Employment:** The revised TAZs were populated with dwelling units proportionate to the area of each original TAZ. The same population density was assumed as it was in the original TAZ structure. ***Table IV.6*** summarizes dwelling units in each TAZ. Similarly, the employment was populated in the new TAZ based on the population in each TAZ. ***Table IV.7*** summarizes the total employment within each TAZ in the Year 2025.

Table IV.6: Total Dwelling Units at Buildout, and Year 2025 by TAZ

Revised TAZ no.	Buildout	Year 2025
181	776	356
202	6,743	2,547
289	918	527
397	906	332
398	99	82
395	91	70
396	98	71
361	4,326	1,973
371	2,657	1,818
185	4,411	2,433
234	1,992	1,165
272	1,415	1,145
393	228	198
TOTAL	**24,660**	**12,717**

Table IV.7: Year 2025 Total Employment by Sector, and TAZ

Revised TAZ No.	Year 2025 (Interim) Employment			
	Industrial	Commercial	Service	**Total**
181	-	-	131	**131**
202	1,313	-	47	**1,360**
289	1	51	2	**54**
397	40	3	10	**53**
398	-	3	3	**6**
395	-	-	5	**5**
396	6	-	-	**6**
361	106	37	92	**235**
371	345	321	830	**1,496**
185	-	21	54	**75**
234	18	13	65	**96**
272	44	4	25	**73**
393	-	-	12	**12**
Total	**1,873**	**453**	**1,276**	**3,602**

SECTION V:
CORRIDOR ALTERNATIVES

The North Belle Meade Overlay as part of the Rural Fringe Plan Amendments, states that "*an extension of Wilson Boulevard should be provided through Section 33, Range 27 East, comprising a collector or arterial road extending to the south to Interstate 75, via an interchange or service road for residential development, should it commence in Sections 21, 28 and 27, or, in the alternate, a haul road along an extension of Wilson Boulevard to service earth mining activities with a connection through Sections 32 and 31 to Landfill Road*."

Accordingly, WilsonMiller, with input from the Collier County Transportation Staff initially developed eight different alternatives (roadway configurations) for the north-south/east-west roadway alignments. WilsonMiller tested these eight potential alternatives in terms of their potential to serve as public roadway corridors for residential and non-residential development activities in the North Belle Meade Area in accordance with the Growth Management Plan. In this phase (Phase I) of the study no "ranking" of alternatives was made.

Phase I of the Study was completed with the development and testing of 8 potential public roadway corridor alternatives, described below.

A. CORRIDOR ALIGNMENTS

Baseline ("No-Build")

The 2025 Baseline Alternative (also known as the "No-Build" Alternative) is the existing road network with planned improvements through the year 2025 (the Horizon Year of the study). The improvements assumed in the Baseline Alternative (***Figure V.1***) are those adopted in the Metropolitan Planning Organization's 2025 Financially Feasible Plan and incorporated into the Collier County Growth Management Plan – Transportation Element. It should be noted that the "No-Build" option for public roadways would require the identification and construction of one or more mining truck haul routes that may or may not be shown on the described alternatives.

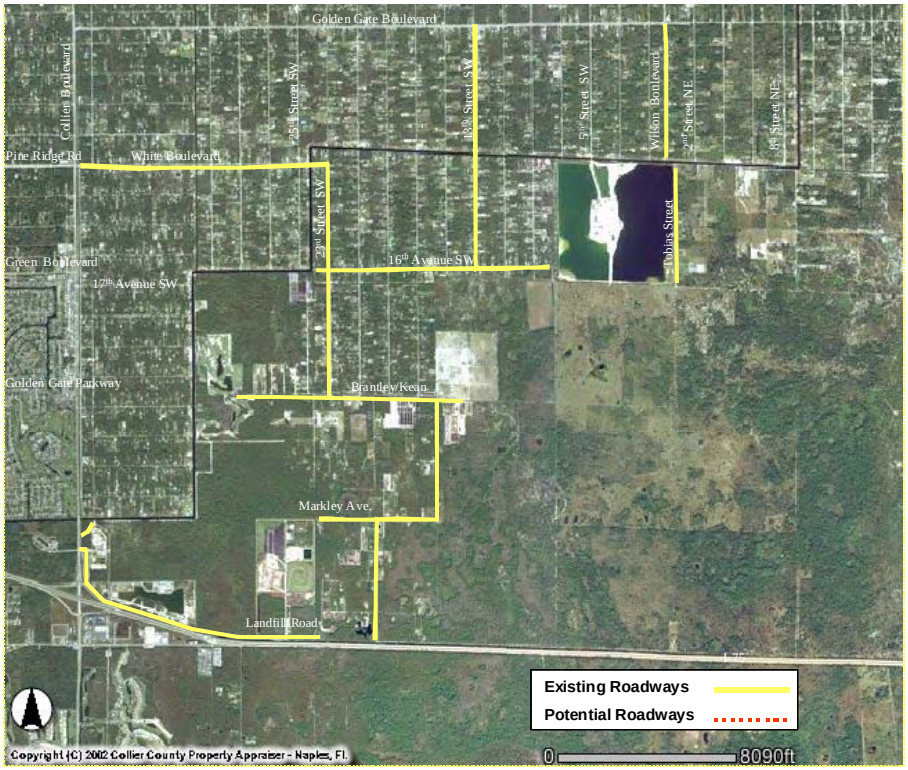


Figure V.1: Baseline Alternative or "No Build"

Alternative #1 – Wilson Boulevard to Brantley-Keen Road & Landfill Road

Alternative #1 included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward an additional mile to an eastward extension of Brantley-Kean Roads as shown in ***Figure V.2***. The alternative incorporated a westward extension of Brantley-Kean Road across the Golden Gate main Canal along a new alignment of what would be 24th Avenue SW to a crossing of the CR-951 Canal, intersecting with Collier Boulevard at an intersection aligning with Golden Gate Parkway. This alternative also assumed an improvement to Landfill Road.

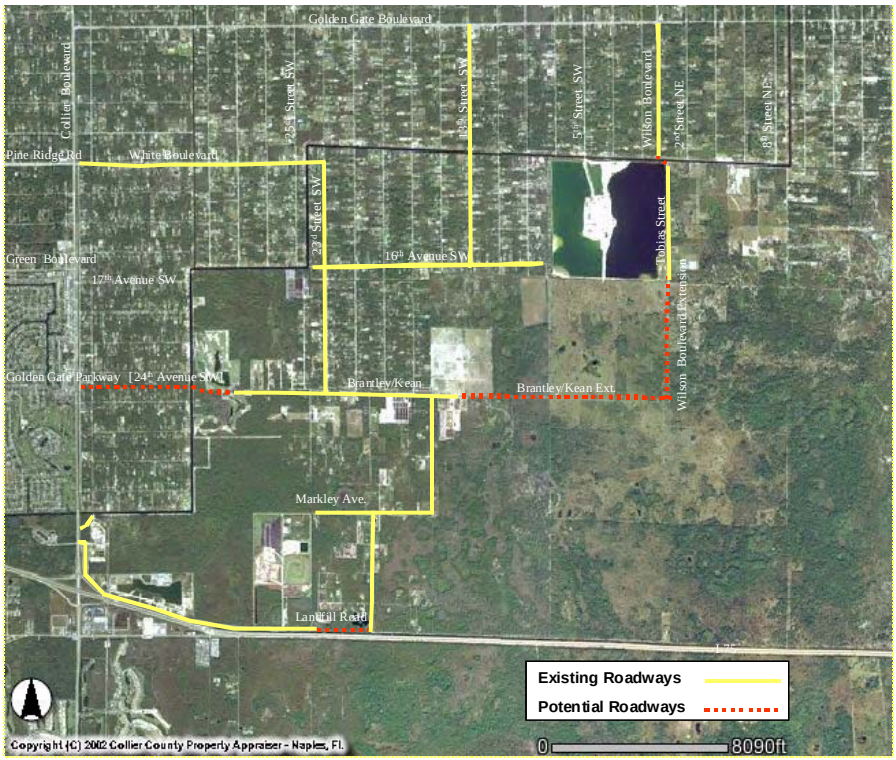


Figure V.2: Alternative #1 - Wilson Boulevard to Brantley-Keen Road & Landfill Road

Alternative #2 – Wilson Boulevard to 16th Avenue SW & Landfill Road

Alternative #2 included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward to an eastward extension of 16th Street SW, and then continued an additional mile to an eastward extension of Brantley-Kean Roads (***Figure V.3***). The alternative also incorporated a westward extension of 16th Avenue SW across the Golden Gate Main Canal, and then along a new alignment between 15th Avenue SW and 17th Avenue SW, crossing the CR-951 Canal to intersect with Collier Boulevard at an alignment with Green Boulevard. This alternative also assumed an improvement to Landfill Road.

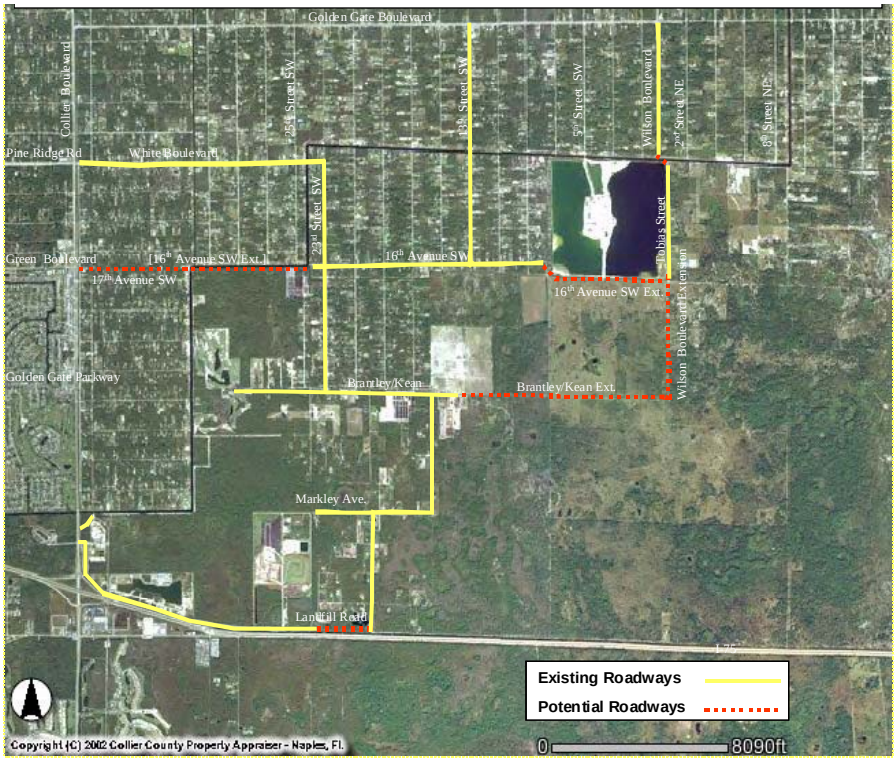


Figure V.3: Alternative #2 - Wilson Boulevard to 16th Avenue SW & Landfill Road

Alternative #3 – Wilson Boulevard to Markley Avenue & Landfill Road

Alternative #3 included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward to an eastward extension of Brantley-Kean Roads (***Figure V.4***). The alternative also incorporated a westward extension of Markley Avenue to Collier Boulevard at the new City Gate Access Road intersection. This alternative also assumed an improvement to Landfill Road.

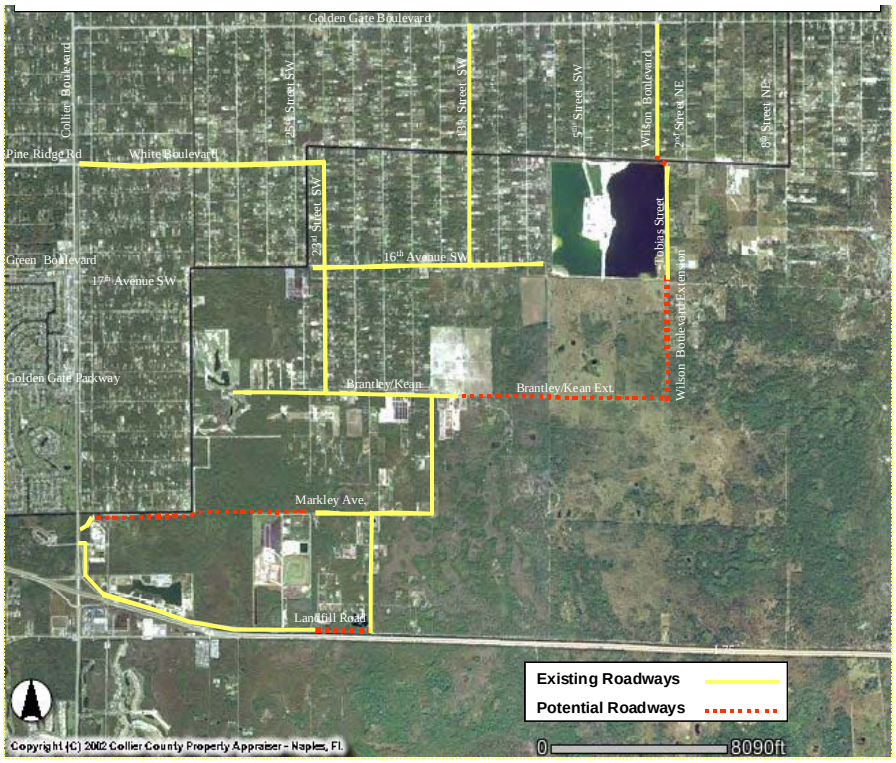


Figure V.4: Alternative #3 - Wilson Boulevard to Markley Avenue & Landfill Road

Alternative #4- Wilson Boulevard to White Boulevard via 16th Avenue SW & Landfill Road

Alternative #4 included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward to an eastward extension of 16th Avenue SW (***Figure V.5***). Traffic would circulate along existing 16th Avenue SW to White Boulevard. This alternative also assumed an improvement to Landfill Road.

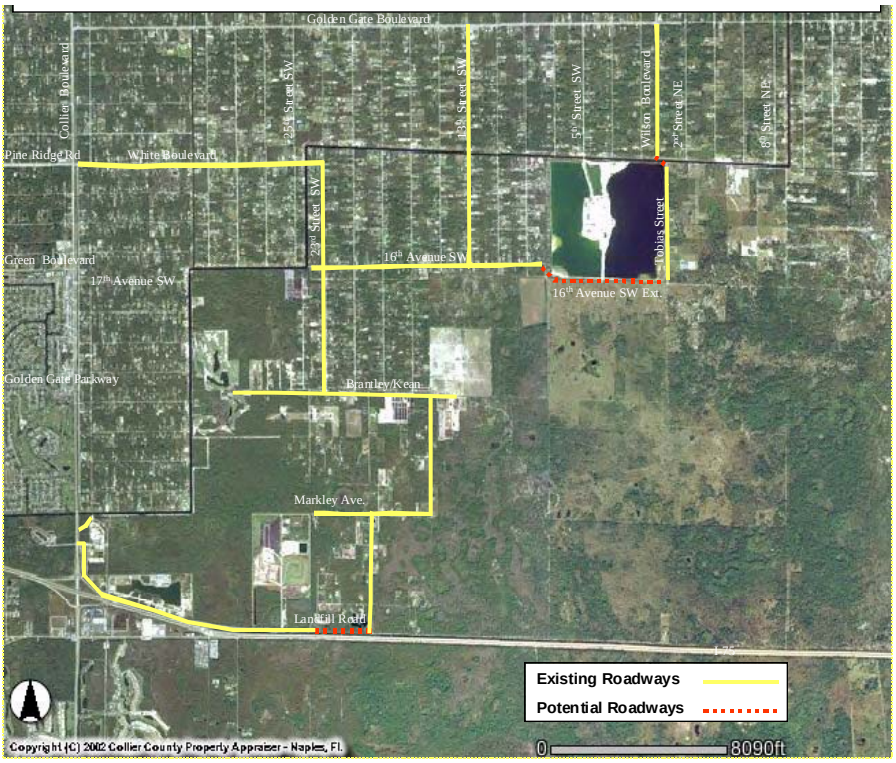


Figure V.5: Alternative #4 - Wilson Boulevard to White Boulevard via 16th Avenue SW & Landfill Road

Alternative #5 – Wilson Boulevard to 16th Avenue SW & Landfill Road

Alternative #5 included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward to an eastward extension of 16th Avenue SW (***Figure V.6***). The alternative also incorporated a westward extension of 16th Avenue SW to Collier Boulevard along a new alignment of what would be 16th Avenue SW aligning with Green Boulevard. This E/W extension would require two additional bridges. This alternative also assumed an improvement to Landfill Road.

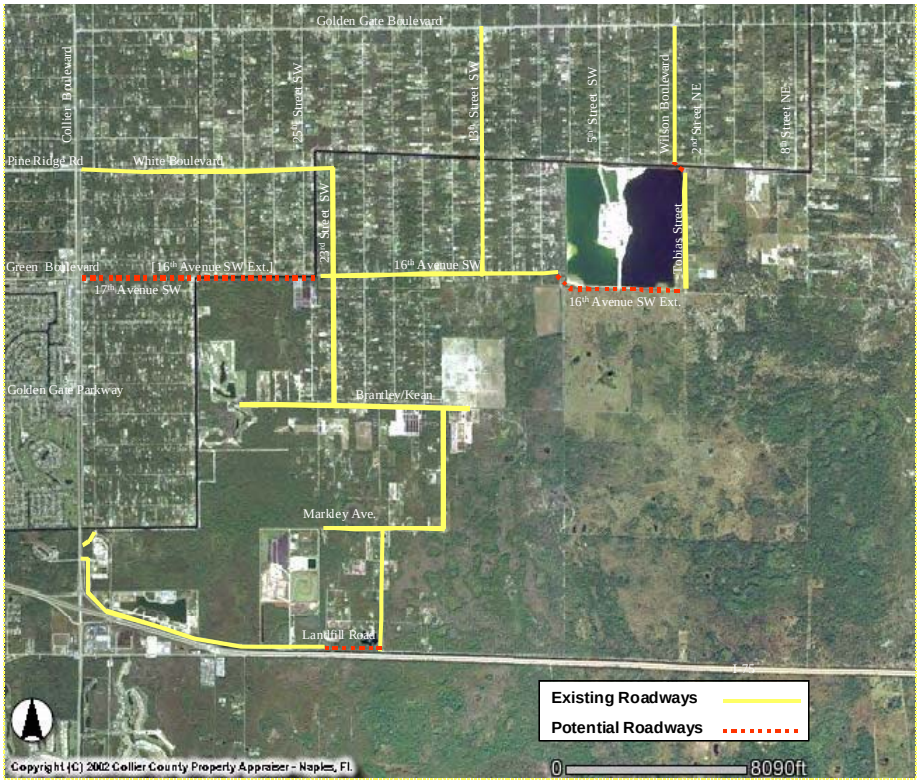


Figure V.6: Wilson Boulevard to 16th Avenue SW & Landfill Road

Alternative #6 – 13th Street SW, 16th Avenue SW & Landfill Road

Alternative #6 included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward to an eastward extension of 16th Avenue SW (***Figure V.7***). The alternative also incorporated the southerly extension of 13th Street SW south of 16th Avenue SW to an eastward extension of Landfill Road.

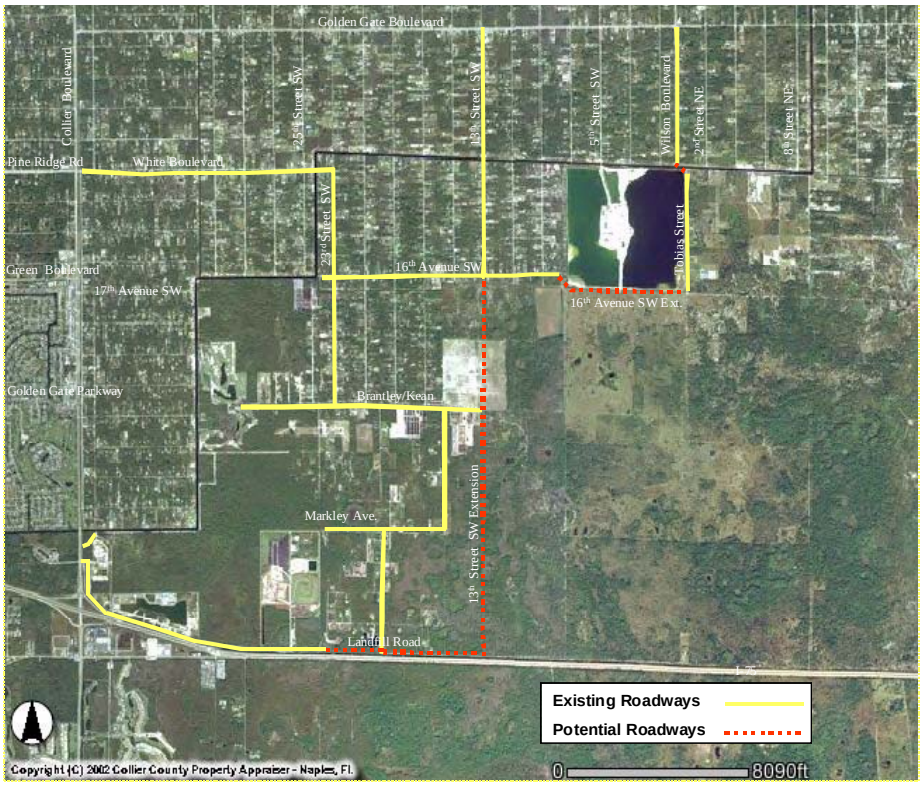


Figure V.7: 13th Street SW, 16th Avenue SW & Landfill Road

Alternative #7 – Wilson Boulevard to I-75 & 16th Avenue SW & Landfill Road

Alternative #7 (*Figure V.8)* included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward to an eastward extension of 16th Avenue SW, and then continuing southward a distance of approximately 3 miles to a partial interchange at I-75 (only allowing movements to/from the west). This alternative also assumed an improvement to Landfill Road.

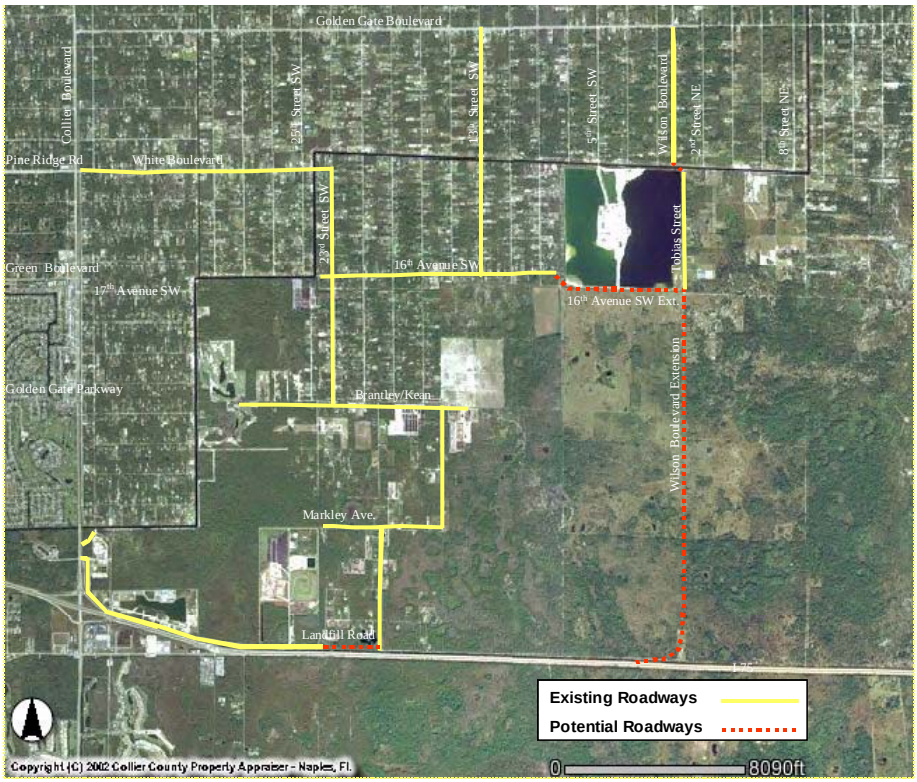


Figure V.8: Wilson Boulevard to I-75 & 16th Avenue SW & Landfill

Alternative #8 – Wilson Boulevard to Landfill Road & 16th Avenue SW

Alternative #8 (*Figure V.9*) included the extension of Wilson Boulevard across a new bridge over the Golden Gate Main Canal and along the Tobias Street alignment extended southward to an eastward extension of 16th Avenue SW, and then continuing southward a distance of approximately 3 miles to an eastward extension of Landfill Road.

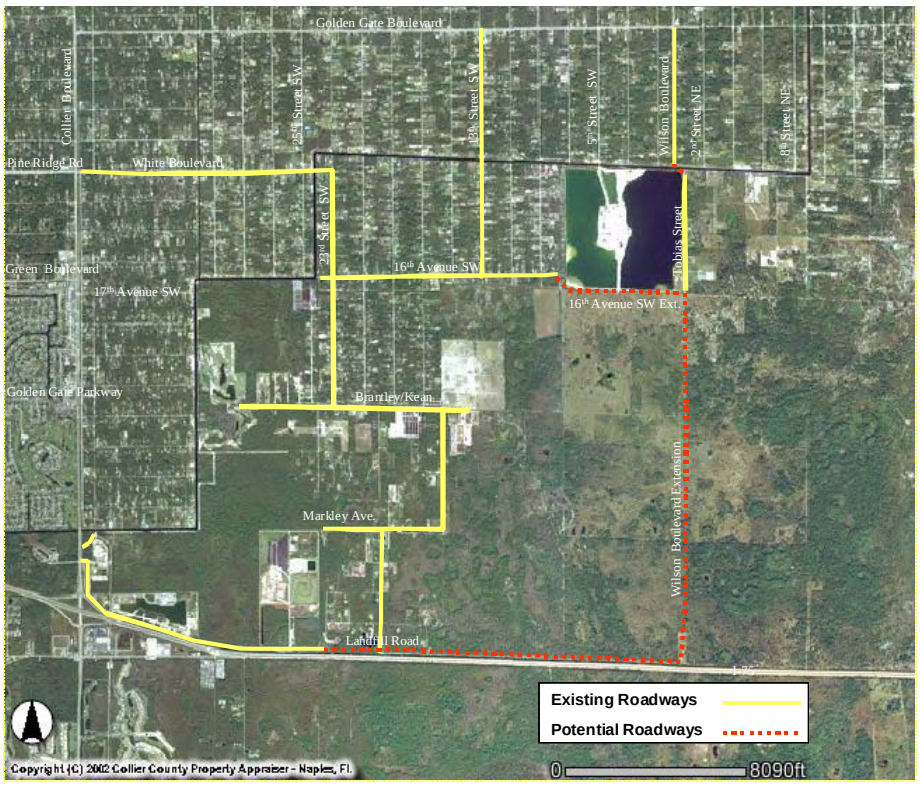


Figure V.9: Wilson Boulevard to I-75 & 16th Avenue SW & Landfill Road

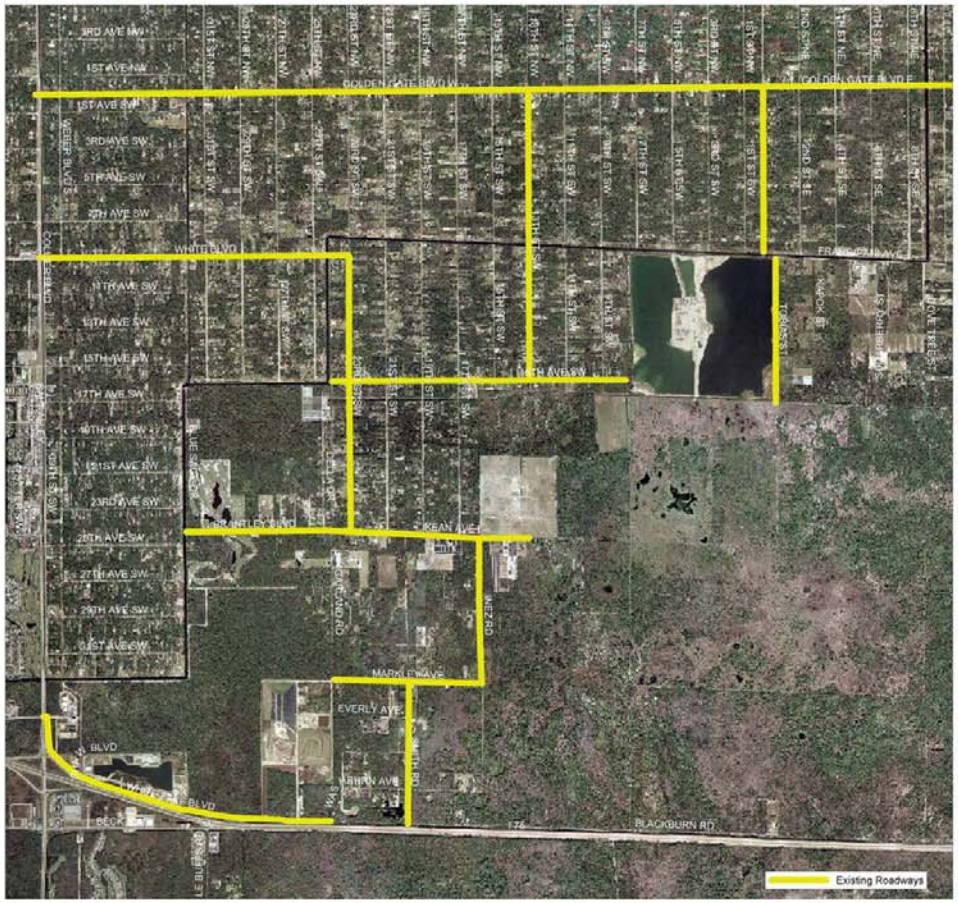
B. CORRIDOR ALIGNMENT ANALYSIS

Each corridor alignment was analyzed by comparing the peak seasonal daily traffic (PSDT) volumes generated by the revised travel demand model, with the capacity of the roadways to determine the congestion levels on the system. This analysis assisted in understanding the impacts of adopting a specific alternative. This also helped in determining the infrastructure improvements that may be needed to accommodate the future traffic demand as predicted by the model. For the purpose of this analysis, the adopted roadway capacities in the MPO's 2025 Financially Feasible Model were used. The advantages and disadvantages of a corridor alignment in terms of the number of bridges to be constructed, and the approximate number of miles of new road construction required, were also determined based upon the preliminary corridor alignments. The exhibits that follow ("No-Build" and "Alternatives 1-8") graphically represent the changes. An in-depth analysis of the impact of a particular alternative is made in the next phase of study.

The exhibits are formatted in two frames on each page. The frame on the right represents the corridor alignments. The yellow lines represent the existing roadways and the red lines represent the potential corridor alignments. The advantages and disadvantages of each alternative are tabulated at the bottom-right of each exhibit.

The frame on the left represents the results from the travel demand modeling analysis. The thickness of the lines represents the peak seasonal daily traffic (PSDT) volume. The PSDT volume is also labeled on each roadway. The analysis of congestion levels in the year 2025 is represented by the color of the lines, i.e., green for a lower congestion level to red for severe congestion levels.

BASELINE ("NO-BUILD")



Legend

- Major Roads
- Local Roads
- 789 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N

Advantages	Disadvantages
No new bridge construction required; No associated costs	Traffic continues to grow at historical rates on Golden Gate Blvd.
No new roadway segment construction required; No associated costs	Traffic continues to grow at historical rates on White Blvd.
No new roadway corridor through residential "backyards"	Traffic continues to grow at historical rates on 16th Ave.
No new right-of-way required along existing roadways	Traffic continues to grow at historical rates on 13th St.
	Provides no new connection directly to Collier Blvd.
	Existing collectors (White Blvd, 13th St. etc.) will carry new NBM development traffic

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 1

Wilson Blvd. to Brantley-Kean Rd. Ext. (24th Ave. SW) & Landfill Rd.

Legend

- Interstate
- Major Roads
- Local Roads
- Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

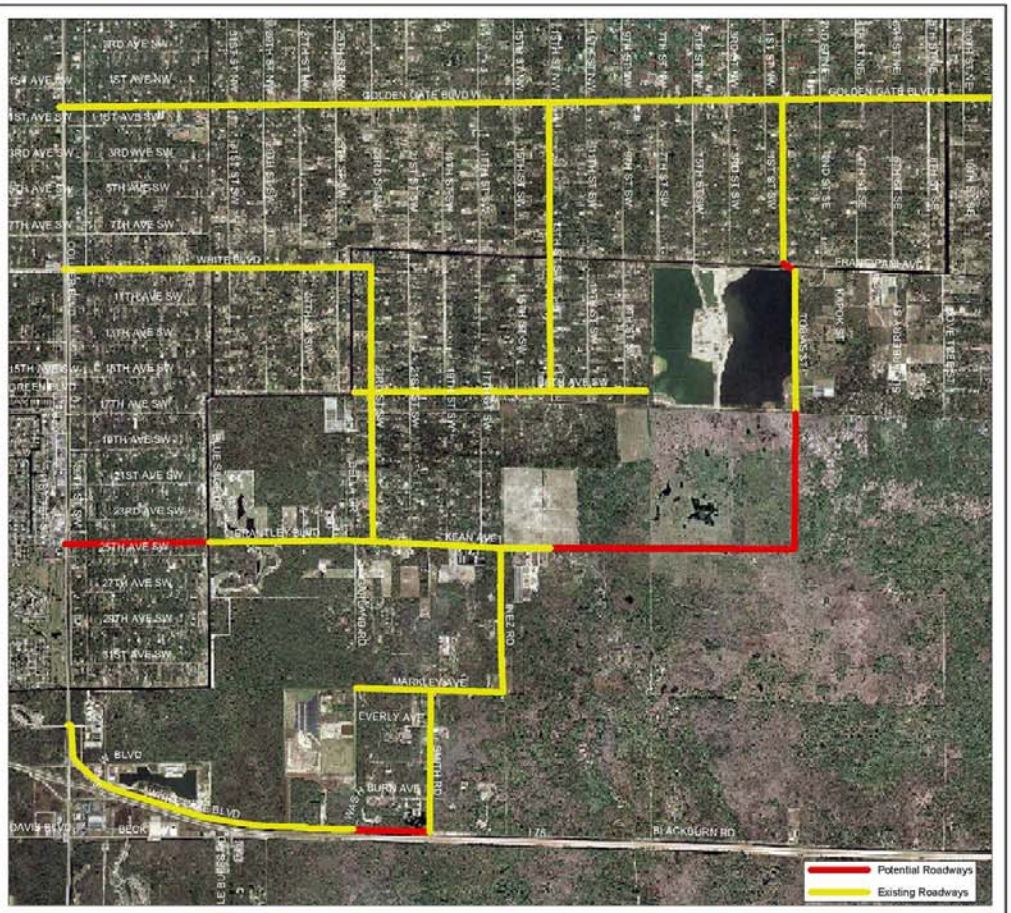
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (west of 13th Street SW) by 11%	Increases traffic on 23rd Street SW (south of 16th Street SW) by 414%
Reduces traffic on 23rd Street SW (between White Boulevard & 16th Street) by 43%	Increases traffic on Brantley-Kean Roads by 93%
Reduces traffic on White Boulevard by 43%	Increases traffic on 13th Street SW by 200%
Reduces traffic on Markley Avenue by 75%	Increases traffic on 16th Avenue SW by 76%
Reduces traffic on Landfill Road by 78%	Increases traffic on Wilson Boulevard by 264%
Minimizes traffic increase on Landfill Access Road at Collier Boulevard	Increases traffic on Tobias Street by 976%
General Comments	**General Comments**
Provides direct connection to Golden Gate Parkway	+/- 4.5 miles of new roads to construct
New alignment along 24th Avenue SW minimizes impacts to 23rd & 25th Avenues SW	1 new bridge on Wilson Boulevard
	2 new bridges on 24th Avenue SW
	1 mile of new roadway corridor through residential "backyards"

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 2

Wilson Blvd. to 16th Ave. SW Ext. & Brantley-Kean Ext. to Landfill Rd.

Legend

- Interstate
- Major Roads
- Local Roads
- 938 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

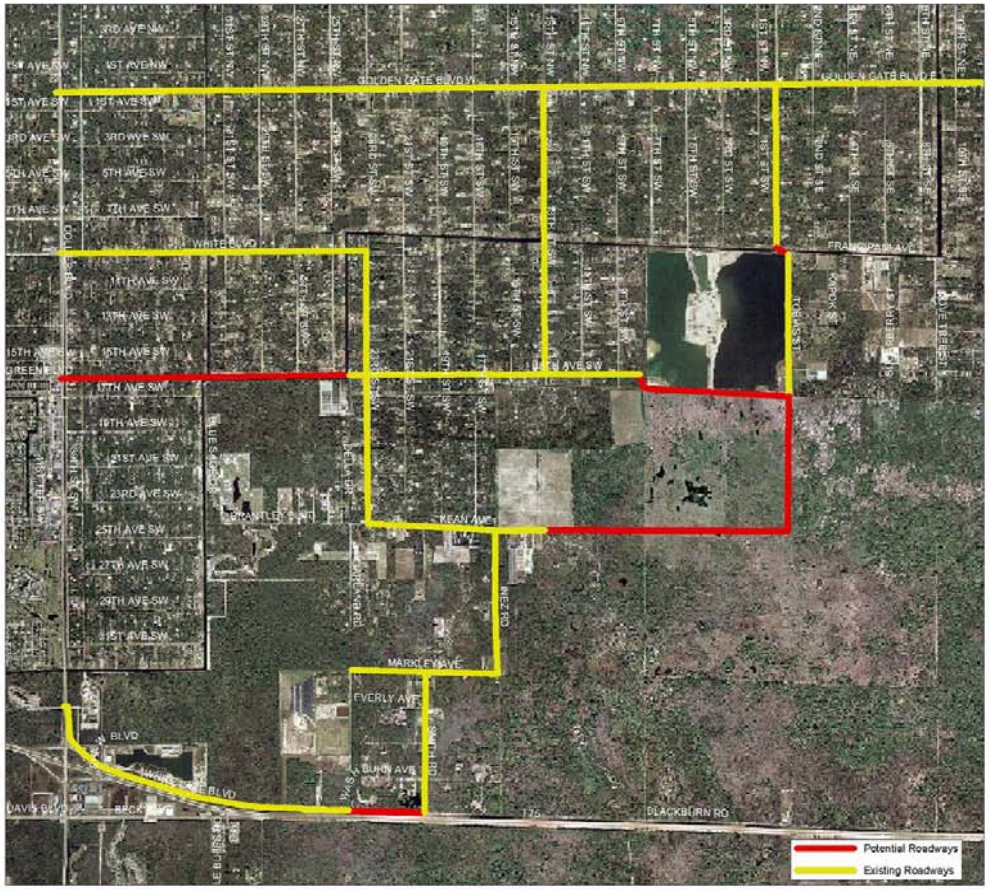
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (west of 13th Street SW) by 11%	Increases traffic on 13th Street SW by 106%
Reduces traffic on 23rd Street SW by 62-67%	Increases traffic on 16th Avenue SW by 78%
Reduces traffic on White Boulevard by 67%	Increases traffic on Landfill Road by 84%
Reduces traffic on Brantley-Kean Roads by 75%	Increases traffic on Wilson Boulevard by 769%
	Increases traffic on Tobias Street by 1385%
General Comments	**General Comments**
Minimizes traffic increase on Landfill Access Road at Collier Boulevard	+/- 6.5 miles of new roads to construct
Provides direct connection to Green Boulevard	1 new bridge on Wilson Boulevard
New alignment along 16th Avenue SW minimizes impacts to 15th & 17th Avenues SW	2 new bridges on 16th Avenue SW
	1 mile of new roadway corridor through residential "backyards"

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 3

Wilson Blvd. to Brantley-Kean Ext. to Markley Ave. Ext. & Landfill Rd.

Legend

- Interstate
- Major Roads
- Local Roads
- 988 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

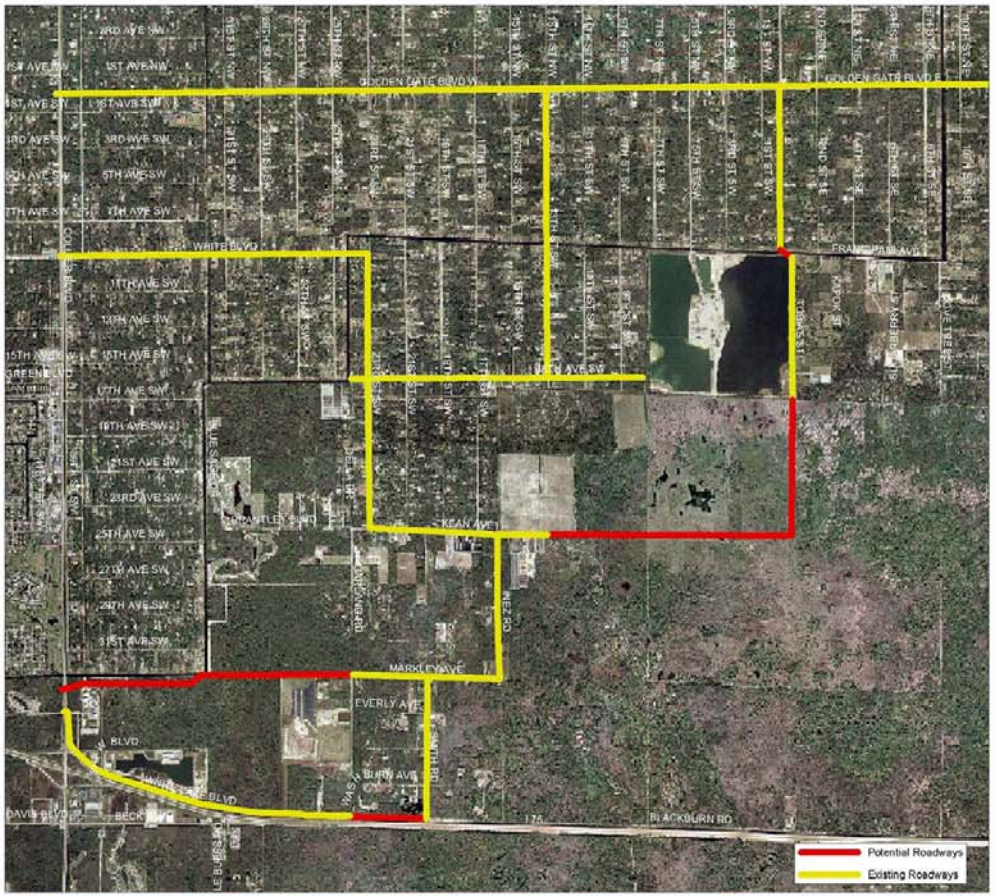
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (west of 13th Street SW) by 6%	Increases traffic on Markley Avenue by 230%
Reduces traffic on 13th Street SW by 44%	Increases traffic on Landfill Access Road by 30%
Reduces traffic on 16th Avenue SW by 19%	Increases traffic on Wilson Boulevard by 1250%
Reduces traffic on 23rd Street SW (south of 16th Avenue) by 41%	Increases traffic on Tobias Street by 3066%
Reduces traffic on White Boulevard by 2%	
Reduces traffic on Brantley-Kean Roads by 37%	
Reduces traffic on Landfill Road by 49%	
General Comments	**General Comments**
No new roadway corridors through residential "backyards"	+/- 5.5 miles of new roads to construct
Provides direct proximity access to existing I-75 Interchange at Collier Blvd.	1 new bridge on Wilson Boulevard
	Direct proximity access to I-75 Interchange at Collier Boulevard

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 4

Wilson Blvd. to White Blvd. via 16th Ave. SW Ext. & Landfill Rd.

Legend

- Interstate
- Major Roads
- Local Roads
- 999 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

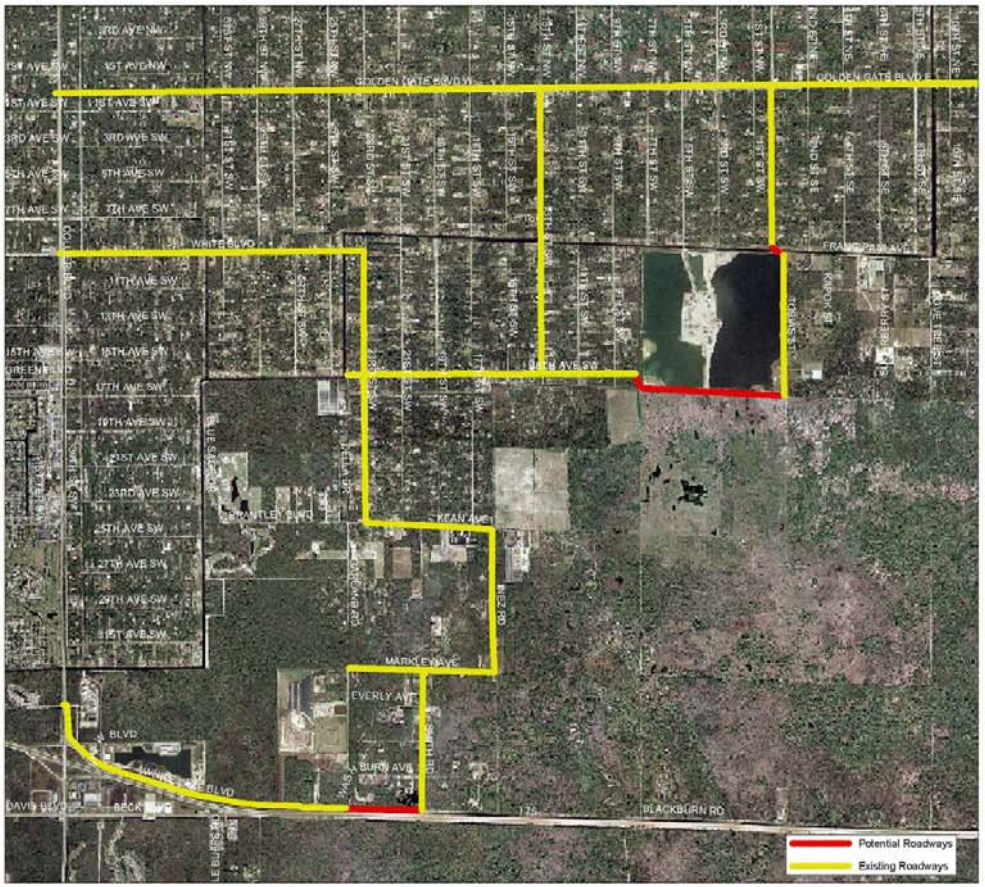
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (East of Wilson Blvd.) by 5%	No reduction in traffic on Golden Gate Boulevard west of 13th Avenue SW
Reduces traffic on 13th Street SW by 6%	Increase traffic on Golden Gate Boulevard West of Wilson Boulevard by 6%
No traffic increase on Brantley-Kean Roads or Markley Avenue	Increase traffic on 16th Avenue SW by 25%
No traffic increase on Landfill Road	Increase traffic on 23rd Street SW (north of 16th Avenue) by 29%
	Increase traffic on White Boulevard by 29%
	Increases traffic on Wilson Boulevard by 9%
General Comments	**General Comments**
+/- 1.5 miles of new roads to construct	1 new bridge on Wilson Boulevard
No new roadway corridors through residential "backyards"	Channels all traffic through existing neighborhoods
	Provides no new "external" connection to Collier Boulevard

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 5

Wilson Blvd. to 16th Ave. SW Ext. & Landfill Rd.

Legend

- Interstate
- Major Roads
- Local Roads
- 738 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

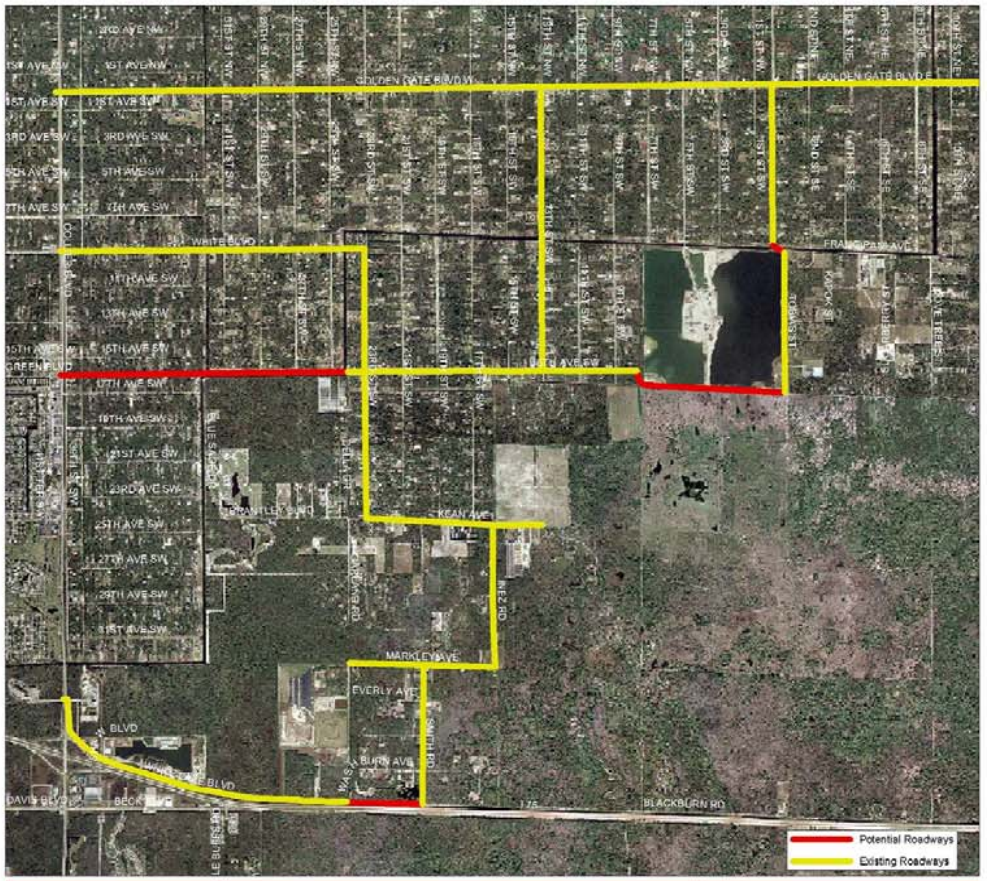
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (west of 13th Street SW) by 8%	Increases traffic on 13th Street SW by 170%
Reduces traffic on 23rd Street SW by 25-68%	Increases traffic on 16th Avenue SW by 105%
Reduces traffic on White Boulevard by 68%	Increases traffic on Wilson Boulevard by 81%
Reduces traffic on Brantley-Kean Roads by 32%	
Reduces traffic on Markley Avenue by 34%	
Reduces traffic on Landfill Road by 35%	
Reduces traffic on Landfill Access Road at Collier Blvd. by 1%	
General Comments	**General Comments**
Provides direct connection to Green Boulevard	+/- 3.5 miles of new roads to construct
New alignment along 16th Avenue SW minimizes impacts to 15th & 17th Avenues SW	1 new bridge on Wilson Boulevard
	2 New bridges on 16th Avenue SW
	1 mile of new roadway corridor through residential "backyards"

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 6

13th St. SW Ext. w/ 16th Ave. SW Ext. & Landfill Rd.

Legend

- Interstate
- Major Roads
- Local Roads
- 999 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

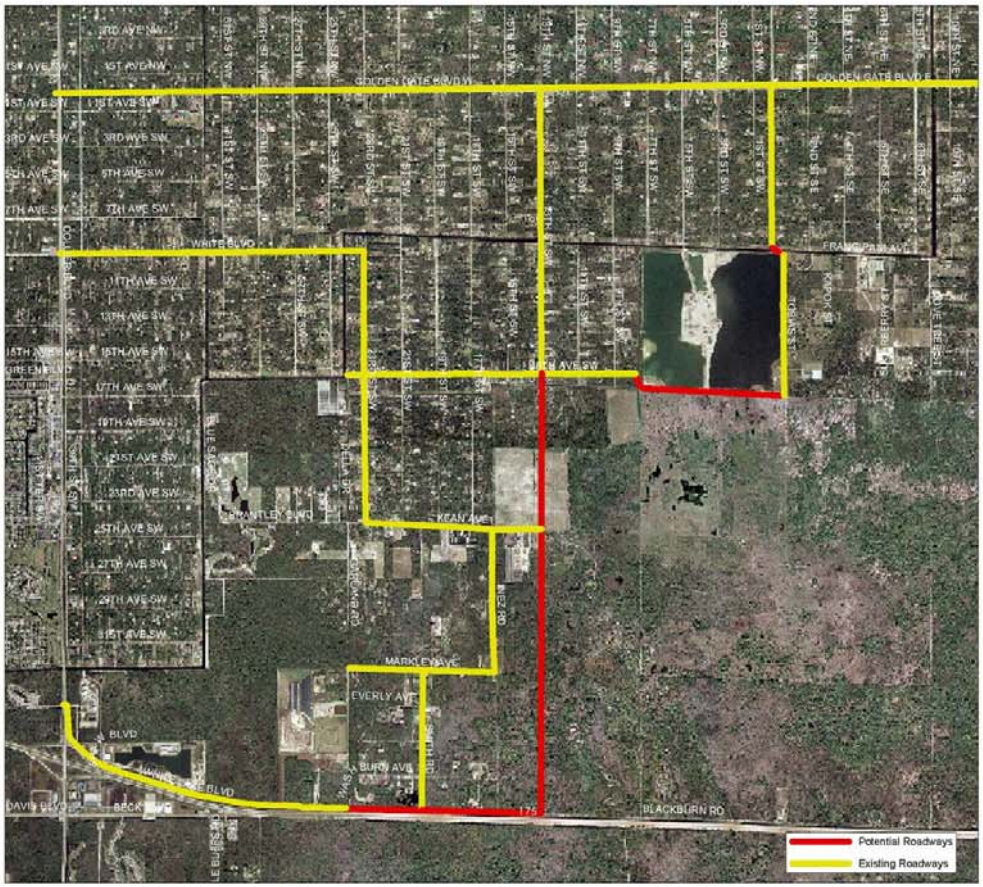
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (west of 13th Street SW) by 5%	Increases traffic on 13th Street SW by 79%
Reduces traffic on 23rd Street SW south of 16th Avenue by 81%	Increases traffic on 23rd Street SW north of 16th Avenue by 23%
Reduces traffic on Brantley-Kean Roads by 96%	Increases traffic on White Boulevard by 23%
Reduces traffic on Markley Avenue by 97%	Increases traffic on Wilson Boulevard by 26%
	Increases traffic on Tobias Street by 152%
	Increases traffic on Landfill Access Road at Collier Boulevard by 8%
	Increases traffic on Landfill Rd. by 115%
General Comments	**General Comments**
No new roadway corridors through residential "backyards"	+/- 5.5 miles of new roads to construct
	1 new bridge on Wilson Boulevard

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 7

Wilson Blvd. to I-75 w/ 16th Ave. SW Ext. & Landfill Rd.

Legend

- Interstate
- Major Roads
- Local Roads
- 999 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

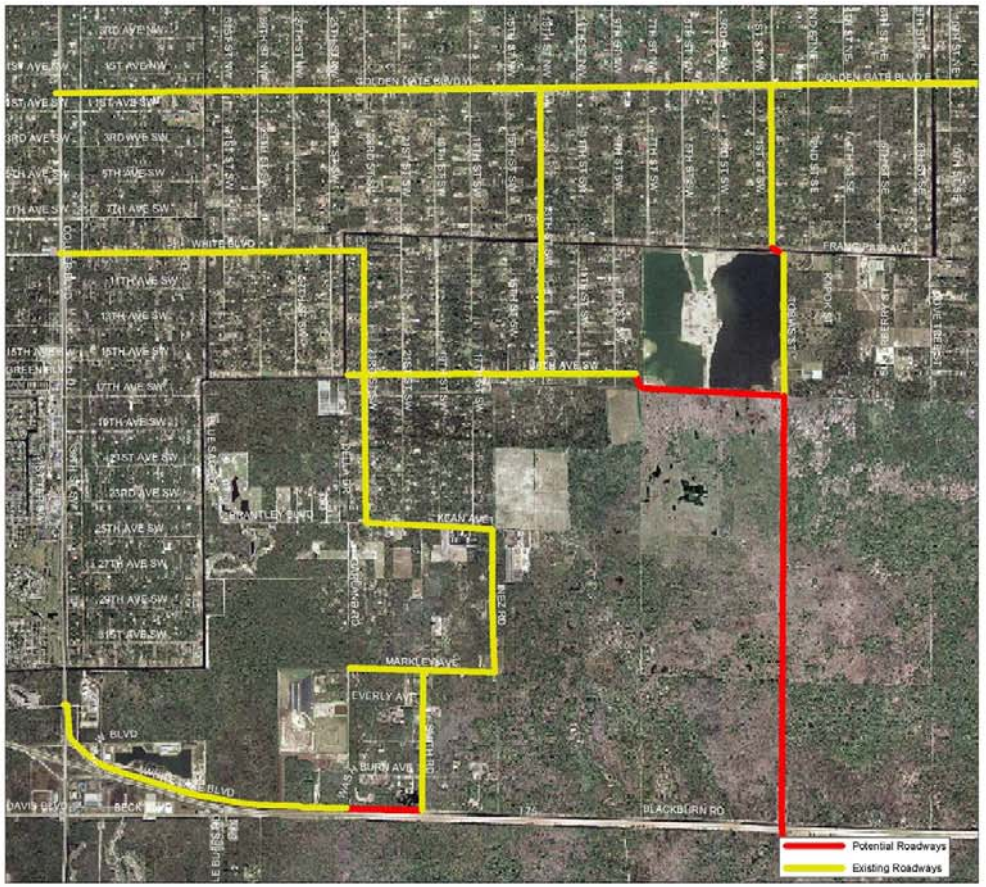
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (west of 13th Street SW) by 6%	Increases traffic on 23rd Street SW north of 16th Avenue by 17%
Reduces traffic on 13th Street SW by 37%	Increases traffic on White Boulevard by 17%
Reduces traffic on 23rd Street SW south of 16th Avenue by 40%	Increases traffic on Wilson Boulevard by 1033%
Reduces traffic on Brantley-Kean Roads by 63%	Increases traffic on Tobias Street by 2165%
Reduces traffic on Markley Avenue by 44%	
Reduces traffic on Landfill Road by 45%	

General Comments	General Comments
Minimizes traffic increase on Landfill Access Road at Collier Boulevard	+/- 4.5 miles of new roads to construct
Partial interchange provides direct connection to I-75 to/from the west	1 new bridge on Wilson Boulevard
No new roadway corridors through residential "backyards"	Requires construction of partial interchange "flyover" (eastbound to northbound)

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 8

Wilson Blvd. to Landfill Road & 16th Ave. SW Ext.

Legend

- Interstate
- Major Roads
- Local Roads
- Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

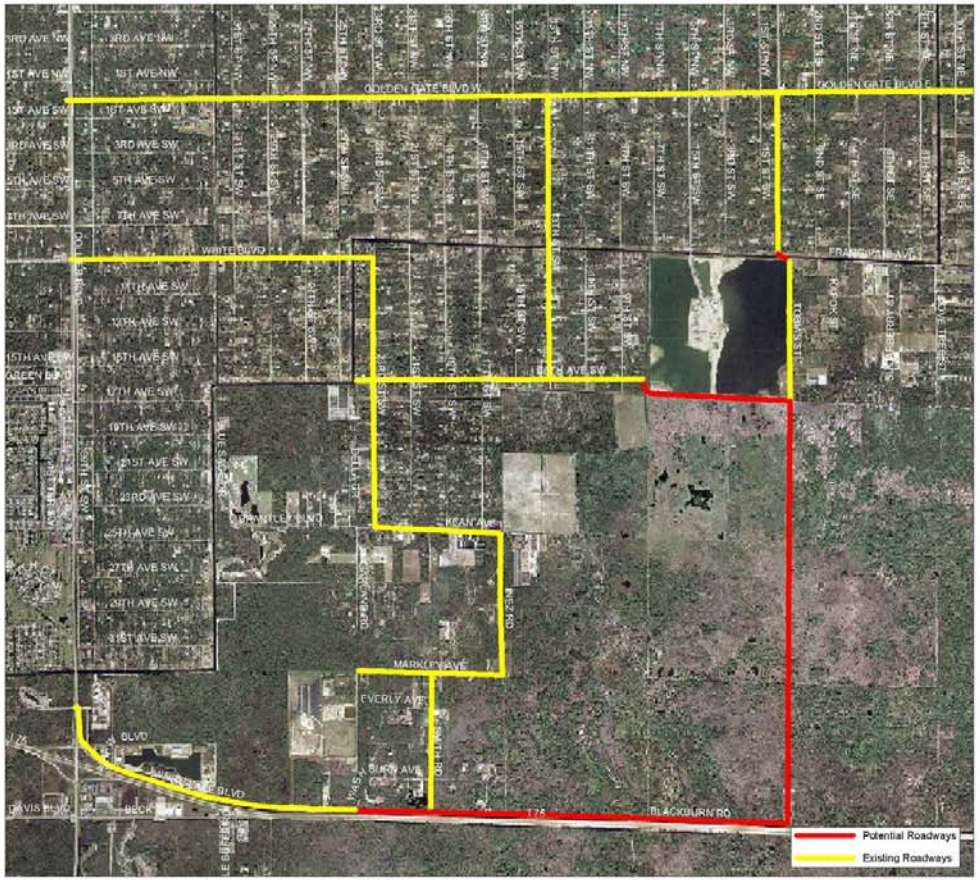
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on Golden Gate Boulevard (west of 13th Street SW) by 4%	Increases traffic on 23rd Street SW north of 16th Avenue by 27%
Reduces traffic on 13th Street SW by 42%	Increases traffic on White Boulevard by 27%
Reduces traffic on 23rd Street SW south of 16th Avenue by 57%	Increases traffic on Landfill Road by 88%
Reduces traffic on Brantley-Kean Roads by 68%	Increases traffic on Landfill Access Road at Collier Boulevard by 8%
Reduces traffic on Markley Avenue by 45%	Increases traffic on Wilson Boulevard by 754%
	Increases traffic on Tobias Street by 1609%
General Comments	**General Comments**
No new roadway corridors through residential "backyards"	+/- 6.0 miles of new roads to construct
	1 new bridge on Wilson Boulevard

Wilson Boulevard Extension Corridor Study

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SECTION VI:
PUBLIC INVOLVEMENT

An effective plan that is one that meets the study objectives while considering the impacts on landowners, balanced with the needs of the community. Residents, businesses and visitors all rely on the roadway system to meet their transportation needs. It is important that everyone who has a stake in these decisions have an opportunity to participate in the planning process.

As an integral part of this study, the public was encouraged to attend public workshops to keep abreast of the plan progress, and to express their concerns during the public forum. At the outset, small introductory meetings were held with area civic groups and property owners associations. Meetings were scheduled with Golden Gate Estates Area Civic Association (GGEACA), Naples Alligator Alley Civic Association (NAACA), and Civic Advisory Group (CAG) to make them aware of the study, to discuss their concerns and gather their suggestions. The meeting minutes for GGEACA and NAACA are given in **Appendix-C**. The meetings offered the opportunity to introduce the public to the purpose and objectives of the study, to explain the process that would be followed, what the public might expect, and to explain how they would be able to participate during the process. Following the introductory meetings, Phase 1 of the study was initiated, with the work effort culminating in the first public workshop.

The first public workshop was held in Golden Gate Community Center on September 29, 2004, during which the nine corridor alignment alternatives (including “No Build”) were displayed for public review and comment. The WilsonMiller team, Collier County Transportation staff, and representatives from Hole Motes were present at the public workshop to answer questions. A survey sheet was distributed asking residents to choose “favorites” from the nine alternatives and/or suggest an alternative that was not presented. Copies of the surveys from the public workshop are provided in **Appendix D**.

Following the public workshop, an 18-day window was provided for the residents to return the completed surveys. At the end of the response period there were a total of 75 respondents. Hole Montes summarized the survey responses (***Table VI.1***).

Table VI.1: Summary of Survey Results

Alternative No.	#1	#2	#3	#4	#5	#6	#7	#8	ALL	NONE	OTHER
No. of Responses	9	6	3	3	12	3	9	18	21	17	13
Respondents	12%	8%	4%	4%	16%	4%	12%	24%	28%	23%	17%
Responses	8%	5%	3%	3%	11%	3%	8%	16%	18%	15%	11%

As seen in ***Table VI.1***, there was no clear support for any particular alternative. In fact, 17% of the respondents suggested alternatives other than the ones presented. These alternatives were variations to the nine alternatives presented during the workshop.

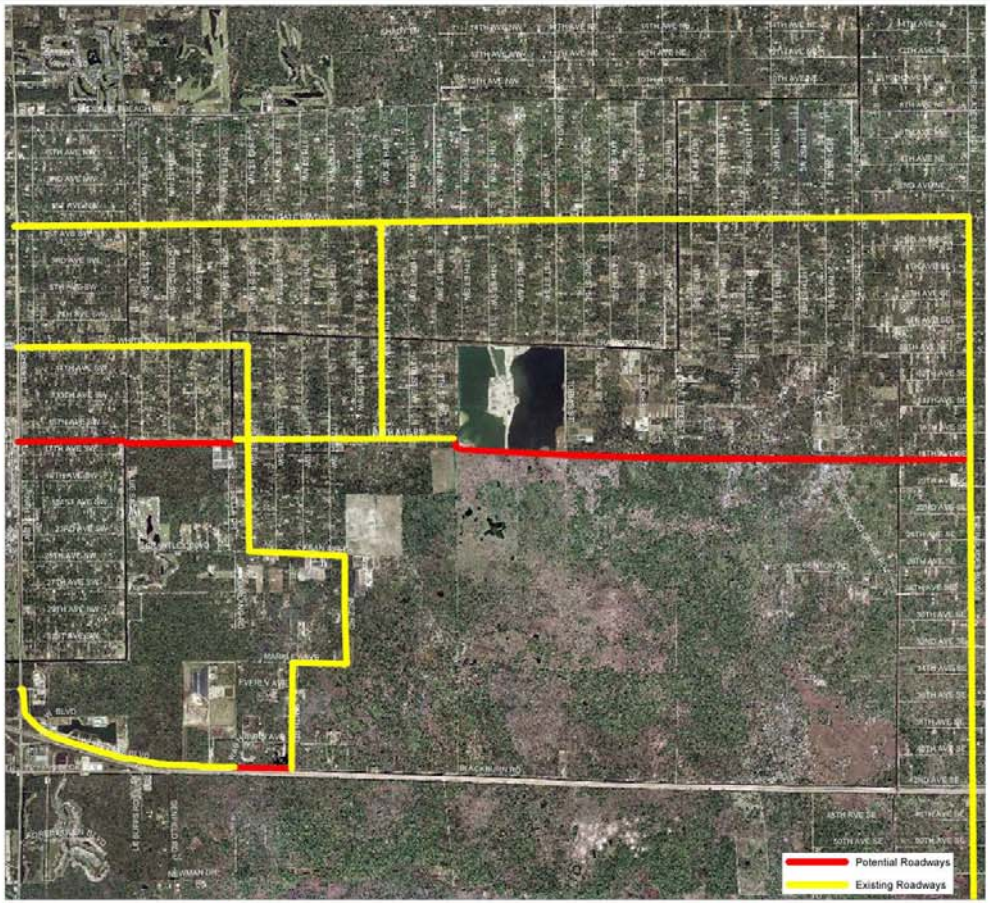
Following are the suggestions received from the public:

1. Extend 16th Avenue, Bradley/Keene and Landfill Road from 951 to Desoto and Tobias Street to Landfill Road, without bridging the canal to Wilson Boulevard,
2. Look at opening I-75 at Everglades Boulevard,
3. Extend White to Everglades Boulevard and pave Inez to Markley,
4. 10th Street SE to Dove Tree to Kam Luck Dr. to I-75 and/or Blackburn Road,
5. Extend 16th Avenue east to Everglades, widen Everglades from Immokalee to I-75,
6. Extend Wilson to Markley and to 951 just south of Canal,
7. Extend 5th Street south thru APAC and the Industrial Park south to Markley and Extend Keene east to the new schools,
8. Alternate 6 only if no bridge on Wilson,
9. 4-lane Wilson Boulevard, bridge canal & 4-lane Landfill Road to 951, and
10. Alternative #5 continued east to Everglades Boulevard would relieve some of Golden Gate and Wilson Boulevard traffic

A “No bridges on Wilson” comment was the single most common response received in the survey. Some people expressed concerns regarding the safety of children in these neighborhoods. Residents of the Frangipani Community living in the area south of Golden Gate Estates and east of Tobias Street expressed concerns for lack of basic services and the difficulty for emergency vehicles to access the area.

Following the public workshop and the evaluation of all public comments, two new alternatives were developed (Alternative 9, and Alternative 10). The findings from the analyses were presented to the Collier County Transportation staff for consensus.

ALTERNATIVE # 9
16th Ave SW Ext. - Collier Blvd. to Everglades Blvd.



Legend

- Major Roads
- Local Roads
- 358 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N

Advantages	Disadvantages
Reduces traffic on GG Blvd. West of 13th St. by 13.7%	Increases traffic on existing 16th Ave. SW corridor by 198.8%
Reduces traffic on GG Blvd. East of Wilson Blvd. by 27.2%	Increases traffic on 23rd St. SW South of 16th Ave SW by 20%%
Reduces traffic on White Blvd by 19.6%	Increases traffic on 13th St. SW by 181%
Reduces traffic on Landfill Road by 9.3%	Increases traffic on Markley Avenue by 22.8%
Reduces traffic on Everglades Blvd. between GG Blvd. and 16th Ave. SW Ext. by 56.6%	
Reduces traffic on Brantley/Kean by 22.8%	
Reduces traffic on Inez Rd. by 11%	

General Comments	General Comments
Alleviates traffic congestion on Golden Gate Blvd.	New roadway corridor through residential "backyards"
Provides direct access to neighborhoods south of Golden Gate Cannel.	2 to 3 new bridges required based on corridor alignment
No extension of Wilson Blvd. is required	+/- 7 miles of new roads required.
No new roads in conservation area.	
Provides direct connection to Green Boulevard	
New alignment along 16th Avenue SW minimizes impacts to 15th & 17th Avenues SW	

Wilson Boulevard Extension Corridor Study

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ALTERNATIVE # 10
16th Ave SW Ext. - Collier Blvd. to Everglades Blvd.
With Everglades Blvd./I-75 Interchange

Legend

- Major Roads
- Local Roads
- 75 Peak Seasonal Daily Traffic Vol.
- Potential Roads
- Existing Roads

Range of Peak Seasonal Daily Traffic Vol.

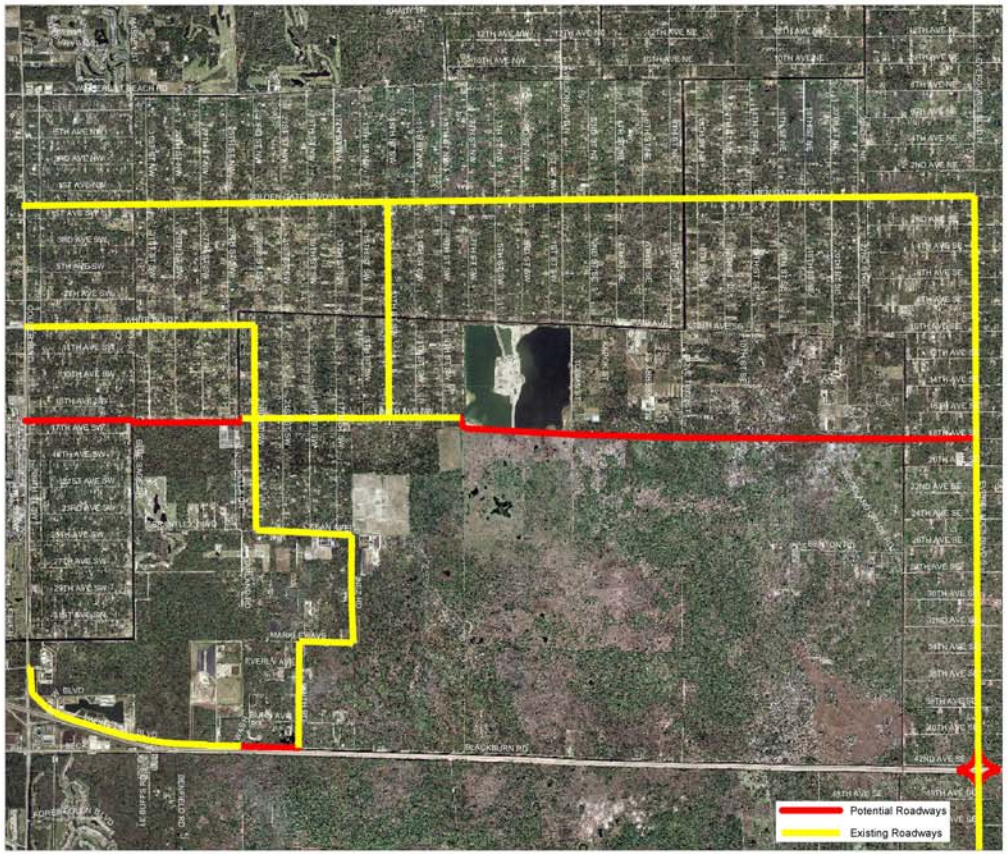
- < 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 25000
- > 25000

Congestion Levels in 2025

- Good (Less than 75% of Capacity)
- Fair (75% to 100% of Capacity)
- Poor (100% to 125% of Capacity)
- Severe (Over 125% of Capacity)

0 0.5 1 2 Miles

N



Advantages	Disadvantages
Reduces traffic on GG Blvd. West of 13th St. by 14%	Increases traffic on existing 16th Ave. SW corridor by 150%
Reduces traffic on GG Blvd. East of Wilson Blvd. by 29%	Increases traffic on 13th St. SW by 334%%
Reduces traffic on White Blvd by 31%	Increases traffic on Everglades Blvd. south of 16th St. SW ext. by 14%
Reduces traffic on Landfill Road by 35%	
Reduces traffic on Everglades Blvd. between GG Blvd. and 16th Ave. SW Ext. by 21%	
Reduces traffic on Brantley/Kean by 45%	
Reduces traffic on Inez Rd. by 40%	
Reduces traffic on Markley 40%	
Reduces traffic on 23rd St. Sw North of 16th Ave. SW by 31%	
Reduces traffic on 23rd St. SW south of 16th Ave. SW by 35%	
General Comments	
Alleviates traffic congestion on Golden Gate Blvd.	New roadway corridor through residential "backyards"
Provides direct access to neighborhoods south of Golden Gate Cannel.	2 to 3 new bridges required based on corridor alignment
No extension of Wilson Blvd. is required	+/- 7 miles of new roads required.
No new roads in conservation area.	New Interchange construction required
Provides direct connection to Green Boulevard	
New alignment along 16th Avenue SW minimizes impacts to 15th & 17th Avenues SW	

Wilson Boulevard Extension Corridor Study

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SECTION VII:
ANALYSIS PHASE II

A. CORRIDOR ALIGNMENT

Following a review of the analyses and comments received from the public, the Collier County Transportation Department staff, and the Consultant team reached a consensus on an approach that divided the potential improvements into two separate implementation time frames; 1) Improvements that should be implemented between 2005-2015; and 2) Improvements that will be needed after 2015. It was generally agreed that this approach would allow the County decision-makers to focus on a set of near term improvements (relative the current work program and available revenues) and that the "after 2015" set of improvements would be studied in greater detail during the current update to the MPO's Long-Range Transportation Plan.

The two sets of improvements are reflected on **Exhibit 15**. In the near term, the alternatives would include:

2) Extending 16th Avenue SW westward to Collier Boulevard;
3) Extending Kean Avenue to the western edge of Section 21;
4) Adding a new bridge connection on 23rd Street SW across Golden Gate Canal; and
5) Public road "upgrades" to the existing set of local roads in the area between Kean Avenue and Landfill Road to improve circulation, continuity and interconnectivity.

The Collier County MPO would then consider the other corridor alignments (for implementation after 2015) including:

6) Extending 16th Avenue SW eastward from 9th Street SW to 18th Avenue SE in order to reach to Everglades Boulevard;
7) Extending Kean Avenue eastward to the Wilson Boulevard Extension;
8) Adding a new interchange at Everglades Boulevard and I-75;
9) Bridging the Golden Gate Canal to extend Wilson Boulevard along the Tobias Street alignment southward to either a directional I-75 interchange or a Landfill Road/Blackburn Road Extension (White Lake Boulevard); and
10) Connecting 23rd Street SW and Garland Road, and extending Garland Road to Landfill Road/Blackburn Road Extension (White Lake Boulevard).

In this phase of the Study the above corridor alignments were subjected to further detailed analysis and evaluation in terms of the right-of-way requirements, impacts to adjacent property owners, and environmental opportunities and constraints.

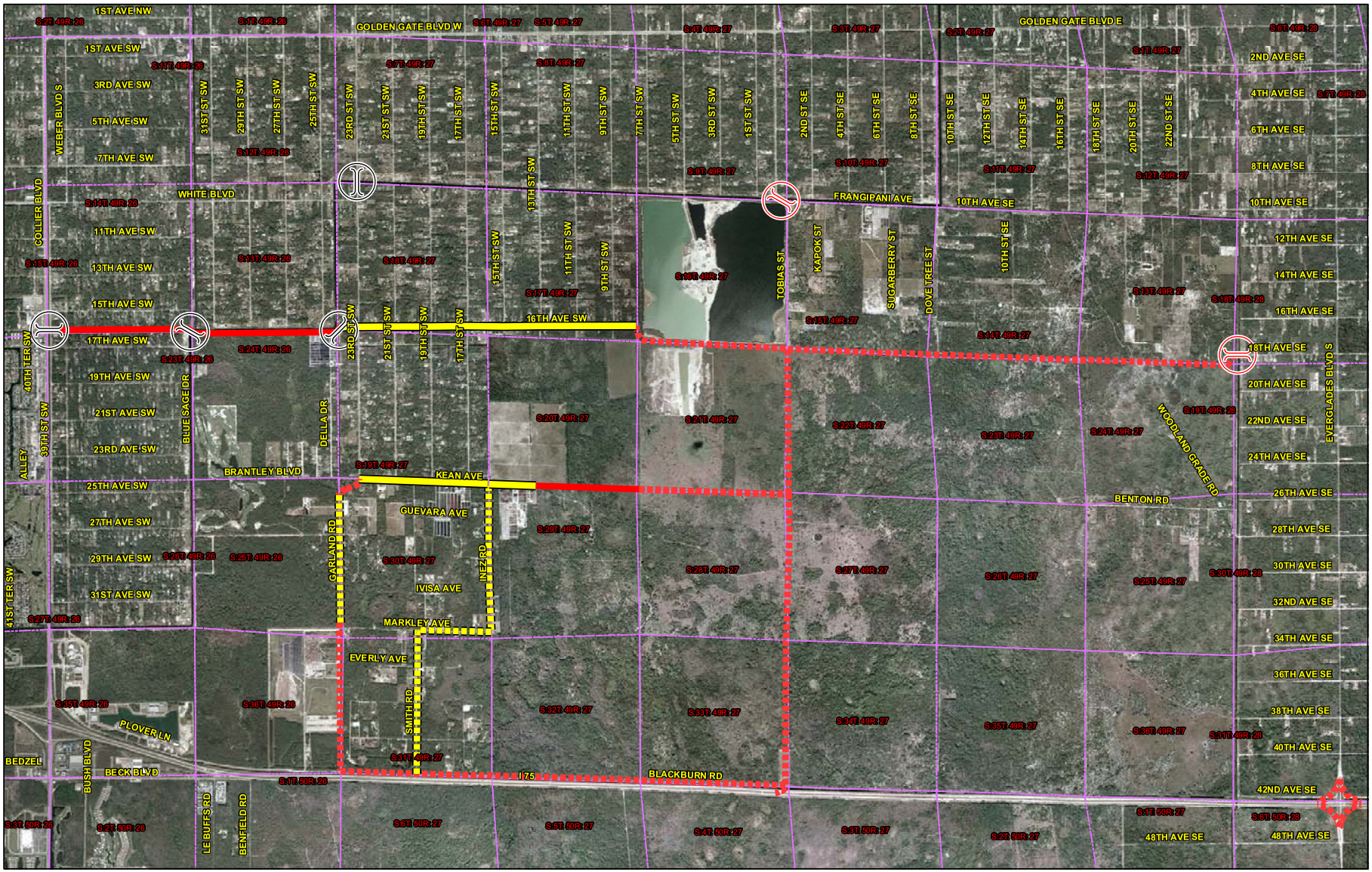


Exhibit 15

Alternative
for Phase II of Study

N

0 0.45 0.9 Miles

REVISED: 05/12/05

Potential Future Bridge (2005-2015)

Potential Future Bridge (Beyond 2015)

Existing Roadway Requiring Right of Way Acquisition and/or Improvements (2005-2015)

Potential Future Corridor (2005-2015)

Existing Roadway Requiring Right of Way Acquisition and/or Improvements (Beyond 2015)

Potential Future Corridor (Beyond 2015)

Section Lines

WilsonMiller

New Directions in Planning, Design & Engineering

B. ENVIRONMENTAL ASSESSMENT

Introduction

The Scope of this study is for the evaluation of the Wilson Boulevard Extension and associated east-west connectors in Collier County, Florida, and for the preparation of the necessary environmental documentation as a result of this Study. The limits of the study area are generally described as follows: the area bounded by Golden Gate Boulevard on the north, I-75 on the south, Wilson Boulevard on the East and Collier Boulevard on the west. Following several planning meetings by the study team with Collier County transportation department staff, three potential alignments were selected for evaluation. This section provides preliminary environmental data obtained from four 300 ft. wide linear study areas consisting of the proposed Wilson Boulevard Extension, and three alternative connections towards Collier Boulevard.

The first study area consisted of the southerly extension of Wilson Boulevard (Wilson Boulevard Extension), commencing from the northeastern corner of Section 16 of the APAC Mine, along Tobias Street, and extending southward to Interstate 75. Because the construction of this road may not be built in its entirety, or at the same time, it was divided into three segments to help assess the environmental impacts to the various potential alternative alignments. **Segment I** extended the length of Sections 15-16, which primarily includes Tobias Street, **segment II** extended the length of Sections 21-22 and could interface with Kean Avenue, and **segment III** extended the rest of the way to Interstate 75, through sections 27-28, and 33-34. The potential alternative connections from the Wilson Boulevard Extension to Collier Boulevard were identified as **Corridors A through C** (**Exhibit 16**).

For the purpose of this environmental assessment, **Corridor A** was divided into two components, with Corridor A-1 beginning at the southeastern corner of Section 16 of the APAC Mine, extending westward to the eastern terminus of 16th Avenue located at the southwestern end of APAC Mine. A westerly extension of this corridor, or Corridor A-2, should it be necessary to permit, would commence from the westerly terminus of 16th Avenue (NE corner of Section 24), following the northern fringe of Section 24, south of

the canal, and continuing westward through the rear lots of Section 14 and 23, to the intersection of Green Boulevard and Collier Boulevard (CR-951).

Corridor B commenced from the southeastern corner of Section 21, heading westward to connect to Kean Avenue, at the southern terminus of 17th Street SW, which is approximately where Kean Avenue's graded lime rock road ends. Since the paved portion of Kean Avenue does not begin until 23rd Street SW, some improvements may need to be made in this section. Kean/Brantley Roads, at this point, will not be extended to Collier Boulevard. Therefore, the connection to Collier Boulevard would be via 23rd Street SW and White Boulevard, or two alternative extensions; 1), turning southward on Inez Road, to Markley Avenue, and Smith Road to White Lake Boulevard (Land Fill Road), or 2), connecting Garland Road to White Lake Boulevard, either which end on Collier Boulevard. However, this environmental study was limited only to that portion terminating at Kean Avenue.

Corridor C begins at the southern terminus of the proposed Wilson Boulevard Extension, extending westerly along the northern fringes of I-75 to White Lake Boulevard (Land Fill Road), which connects to Collier Boulevard. Corridor C has been designated as Blackburn Road on several Collier County planning maps.

Assessment Findings

The Scope of this assessment was to generally identify and map significant wetlands falling partially or wholly within the Study area that may affect the viability or location of any Corridor Alternative, to identify and map potential wildlife corridors that affect any Corridor Alternative, and to conduct a literature search, and survey and map the area affected by the Corridor Alternatives for state and federally designated endangered and threatened species or species of special concern.

Wilson Boulevard Extension: As previously mentioned, for the purpose of this assessment, the southward extension of Wilson Boulevard was divided into three segments; each specifically divided to simplify calculating the total environmental impacts for the three alternative corridors A through C, which would have to share the data from at least one of the segments of the proposed extension to complete their connection from the current terminus of Wilson Boulevard to Collier Boulevard. The attached aerial photographic **Exhibit 16** provides a reference of land cover types, as well as upland and wetland habitats using the Florida land use and cover classification codes established by the Florida Department of Transportation for each segment, and total acreages for the entire length of the corridor. The following narrative provides a preliminary analysis of the cover types, as well as listed species issues, and what environmental problems will have to be resolved during permitting.

Segment I is approximately one-mile long north-south segment of land lying east of the existing lake of the APAC Mine. The land cover consists primarily of reclaimed uplands and lake fringe associated with the old mining operation, a lime rock road, agricultural or nursery properties, and forestland. No wetlands were found within this corridor and no listed species were observed. However, this area has potential fox squirrel habitat, red-cockaded woodpecker (RCW) habitat, and is within the Florida panther consultation area.

Segment II is also a mile long, and continues southward, through existing East Naples Mine property, currently under permit review with FDEP and the ACOE. Most of the cover type is in rangeland for cattle grazing, and is regularly mowed to prevent the land from transitioning into melaleuca thickets or dense cabbage palm forests. Two small isolated wetlands are located within the southern half of this segment. Although no listed species were observed, the species that may have to be addressed during permitting are woodstork, fox squirrel, and Florida panther.

Segment III is two miles long, and continues southward to I-75. The northern one-mile is still within the East Naples Mine property, and is under permit review with FDEP and the ACOE. It is also regularly mowed, but is somewhat more remote, with portions dominated by wet prairie rangeland, and pine and cabbage palm forests. The southern one mile is predominantly forested, with both upland and wetland forests. Melaleuca invasion is evident throughout, but no major flow ways would be interrupted or bisected. A single-family residence is located along the most southern portion, prior to reaching I-75. If the proposed extension is only a mining haul road, this property can be avoided by relocating the alignment along the western side of the property, which are primarily melaleuca invaded wetlands. Listed species that will need to be addressed by this portion of the road alignment would be RCW foraging habitat, woodstorks, fox squirrels, and Florida panther. One mile to the west are known RCW cavity trees, and fox squirrels have been sited within the open pine areas. The following tables provide a complete breakdown of land cover or habitats, and their acreages, within each of the segments of the study areas.

Table VII.1: Wilson Boulevard Extension Upland/Wetland Acreage Analysis

Habitats/Land Cover	Segment I	Segment II	Segment III	Total Area
Upland Habitats	34.87	36.37	44.02	115.26
Wetland Habitats	2.72	1.13	27.92	31.77
TOTAL	**37.59**	**37.50**	**71.94**	**147.03**

Table VII.2: Wilson Boulevard Extension Habitat/Land Cover Analysis

CODES	DESCRIPTIONS	Segmt. I Sec 15-16 ACREAGES	Segmt. II Sec 21-22 ACREAGES	Segmt. III Sec 27-34 ACREAGES	TOTAL ACREAGES
UPLANDS					
110	Low Density Single Family Residential			4.61 Ac.±	4.61 Ac.±
165	Reclaimed Mine Area	12.65 Ac.±			12.65 Ac.±
212	Unimproved Pasture		3.04 Ac.±	1.01 Ac.±	4.05 Ac.±
213	Woodlands Pasture		0.55 Ac.±	0.62 Ac.±	1.17 Ac.±
240	Landscape Plant Nurseries	9.11 Ac.±			9.11 Ac.±
321	Saw Palmetto Prairie				0.00 Ac.±
330	Fox grape-Cabbage Palm Rangeland		20.79 Ac.±	19.32 Ac.±	40.11 Ac.±
410/621	Cypress-Fox grape-Beautyberry Upland		1.20 Ac.±		1.20 Ac.±
411	Pine-Saw Palmetto Flatwoods	9.55 Ac.±	3.40 Ac.±	3.44 Ac.±	16.39 Ac.±
418	Slash Pine-Cabbage Palm Mixed Forest			1.19 Ac.±	1.19 Ac.±
419	Slash Pine-Cypress Mixed Forest			3.87 Ac.±	3.87 Ac.±
424/621	Melaleuca /Cypress Upland Forest			4.67 Ac.±	4.67 Ac.±
428	Cabbage Palm Dominated Forest		7.39 Ac.±	5.29 Ac.±	12.68 Ac.±
8144	Road ROW, Graded, Limerock	3.56 Ac.±			3.56 Ac.±
	TOTAL UPLAND	34.87 Ac.±	36.37 Ac.±	44.02 Ac.±	115.26 Ac.±
WETLANDS & OTHER SURFACE WATERS (OSW)					
520	Cow pond (OSW)			0.09 Ac.±	0.09 Ac.±
616	Seasonal Pond, Shrubs / Herbaceous		1.13 Ac.±	1.42 Ac.±	2.55 Ac.±
621/424	Melaleuca Dominated Cypress Forest (>75%)			13.29 Ac.±	13.29 Ac.±
624	Pine-Cypress-Cabbage Palm Forested Wetlands			3.24 Ac.±	3.24 Ac.±
641/210	Sawgrass / Dogfennel Rangeland			8.31 Ac.±	8.31 Ac.±
643	Wet Prairie			1.57 Ac.±	1.57 Ac.±
742W	Excavation/Borrow Lake Fringe	2.72 Ac.±			2.72 Ac.±
	TOTAL WETLANDS	2.72 Ac.±	1.13 Ac.±	27.92 Ac.±	31.77 Ac.±
	TOTAL	**37.59 Ac.±**	**37.50 Ac.±**	**71.94 Ac.±**	**147.03 Ac.±**

Corridor A: Also for the purpose of this assessment, Corridor A was divided into two segments, A-1 and A-2, but would have to include the data from Segment I of the Wilson Boulevard Extension to complete the connection to Wilson Boulevard A-1 covers the area from the southeastern corner of the APAC Mine Borrow Lake, which is also the southern terminus of Tobias Street, to the eastern end of 16th Avenue, while A-2 commences at the western end of 16th Avenue to Collier Boulevard. The attached aerial photographic **Exhibit 16** provides a reference of land cover types, as well as upland and wetland habitats using the Florida land use and cover classification codes established by the Florida Department of Transportation for each segments, and total acreages for the entire length of the corridor. The following narrative provides a preliminary analysis of the cover types, as well as comments about listed species issues, and what environmental problems will have to be resolved during permitting.

The eastern most portion of this corridor, segment **A-1** is either the reclaimed portion of the old APAC mine, the buffer area of the new APAC mine, or a portion of East Naples Mine property consisting of open pastureland. As the corridor nears 16th Avenue, the corridor turns northwesterly though undeveloped residential lots and Mine buffer, dominated with pine and saw palmetto flatwoods. The only wetlands consist of a small section of wet pasture within the East Naples Mine property. No listed species were noted or are expected to be found within this segment of the corridor. However, the area is within secondary panther habitat zone and would require habitat compensation.

The second segment, **A-2** has to cross a canal and continue westerly along the south side of the canal, primarily through forested lands for approximately one mile, until the canal is crossed again in a northwesterly direction, and continues between developed and undeveloped residential lots, to the intersection of Collier and Green Boulevard. The forested areas consist of both upland and wetland areas, but are marginal because of the hydrologic alterations created by the canal. Listed species issues consist primarily of gopher tortoises, fox squirrels and RCWs, which have a long history in this area. In addition, Section 24 is within the panther consultation area, and would require habitat compensation for any impacts. The following tables provide a complete breakdown of uplands and wetlands, land cover and habitats, and their acreages, within each of the segments of the study areas.

Table VII.3: Corridor A (16th Avenue) Upland/Wetland Acreage Analysis

Habitats/Land Cover	A- I	A- II	Total Area
Upland Habitats	47.23	59.48	106.71
Wetland Habitats	0.56	23.94	24.50
TOTAL	**47.79**	**83.42**	**131.21**

Table VII.4: Corridor A (16th Avenue) Habitat/Land Cover Analysis

CODES	DESCRIPTIONS	Sec 16-21 ACREAGES	Sec 14-23-24 ACREAGES	TOTAL ACREAGES	TOTAL
UPLANDS					
165	Reclaimed Mine/Buffer Area	41.50 Ac.±		41.50 Ac.±	31.63%
120	Medium Density Residential		3.94 Ac.±	3.94 Ac.±	3.00%
121	Medium Density Single Family Residential		29.38 Ac.±	29.38 Ac.±	22.39%
2129	Melaleuca Dominated Pasture (>75%)	0.65 Ac.±		0.65 Ac.±	0.50%
240	Landscape Plant Nurseries		3.63 Ac.±	3.63 Ac.±	2.77%
321	Saw Palmetto Prairie		5.06 Ac.±	5.06 Ac.±	3.86%
411	Pine-Saw Palmetto Flatwoods	5.08 Ac.±	6.00 Ac.±	11.08 Ac.±	8.44%
418	Slash Pine-Cabbage Palm Mixed Forest		5.91 Ac.±	5.91 Ac.±	4.50%
419	Slash Pine-Cypress Mixed Forest		3.17 Ac.±	3.17 Ac.±	2.42%
740	Disturbed Ruderal Land		1.11 Ac.±	1.11 Ac.±	0.85%
8144	Road ROW, Paved		0.52 Ac.±	0.52 Ac.±	0.40%
832	Powerline Easement		0.76 Ac.±	0.76 Ac.±	0.58%
	TOTAL UPLAND	47.23 Ac.±	59.48 Ac.±	106.71 Ac.±	81.33%
WETLANDS & OTHER SURFACE WATERS (OSW)					
510	Canal or Ditch		2.72 Ac.±	2.72 Ac.±	2.07%
621	Cypress Forest		2.24 Ac.±	2.24 Ac.±	1.71%
624	Pine-Cypress-Cabbage Palm Forested Wetlands		5.04 Ac.±	5.04 Ac.±	3.84%
624/424	Pine-Cypress-Melaleuca Wetlands (50-75%)		13.94 Ac.±	13.94 Ac.±	10.62%
643/210	Foxtail-Herbaceous Wet Pastureland	0.56 Ac.±		0.56 Ac.±	0.43%
	TOTAL WETLANDS	0.56 Ac.±	23.94 Ac.±	24.50 Ac.±	18.67%
	TOTAL	47.79 Ac.±	83.42 Ac.±	131.21 Ac.±	100.00%

Corridor B: Corridor B commences westward from approximately the midpoint of the proposed Wilson Boulevard extension, for approximately two miles to Kean Avenue. The attached **Exhibit 16** provides an aerial reference of upland and wetland habitats and acreages for the entire length of the corridor. The following narrative provides an analysis of the wetland and listed species issues, and what environmental obstacles will have to be resolved in permitting Corridor B.

There are approximately 70.5 acres of uplands and 7.3 acres of wetlands associated with the two-mile long corridor. The most easterly mile extends through the East Naples Mine property, consisting of rangeland and pasture intermixed with patches of forested uplands and wetlands. This area is currently under permit review with the FDEP and the ACOE. It is also regularly mowed, and maintained for cattle grazing. The second mile, which ends where Kean Avenue has already been filled and graded with lime rock, is dominated by a mix of upland and wetland forests, rangeland, improved pasture, and agricultural and landscape nurseries. The East Naples Mine permit application has included this route as a temporary haul road, but may be removed from the permit application as the review progresses. Wetland impacts would be considered less environmentally friendly along Corridor B than in Corridor A because the road would

bisect wetlands, thus creating secondary impacts. Conversely, Corridor A would only impact marginal wetlands along their fringes, with minimal secondary impacts. Listed species issues to consider along this corridor are woodstork foraging habitat, fox squirrels and RCW habitat, potential gopher tortoise burrows, and the loss of the Florida panther's primary zone habitat. Due to past wildfires, there is only marginal RCW nesting habitat remaining, but portions may be still considered viable foraging habitat, or corridors to foraging habitat. RCW colonies are known to occur within a mile to the south and southwest.

Table VII.5: Corridor B (Kean Avenue) Upland/Wetland Acreage Analysis

Habitats/Land Cover	Total Area
Upland Habitats	70.54
Wetland Habitats	7.34
TOTAL	**77.88**

Table VII.6: Corridor B (Kean Avenue) Habitat/Land Cover Analysis

CODES	DESCRIPTIONS	ACREAGES
UPLANDS		
121	Medium Density Single Family Residential	0.00 Ac.±
210	Pastureland	0.00 Ac.±
211	Improved Pasture	8.99 Ac.±
212	Unimproved Pasture	28.39 Ac.±
240	Landscape Plant Nurseries	5.90 Ac.±
330	Fox grape-Cabbage Palm Rangeland	6.30 Ac.±
410/621	Cypress-Fox grape-Beautyberry Upland	2.83 Ac.±
411	Pine-Saw Palmetto Flatwoods	5.64 Ac.±
419	Slash Pine-Cypress Mixed Forest	6.19 Ac.±
428	Cabbage Palm Dominated Forest	0.53 Ac.±
428/330	Cabbage Palm Forest/Fox grape	5.77 Ac.±
740	Disturbed Ruderal Land	0.00 Ac.±
8144	Road ROW, Paved	0.00 Ac.±
	TOTAL UPLAND	70.54 Ac.±
WETLANDS & OTHER SURFACE WATERS (OSW)		
510	Canal or Ditch	0.00 Ac.±
616	Seasonal Pond, Shrubs / Herbaceous	1.58 Ac.±
643/210	Foxtail-Herbaceous Wet Pastureland	5.76 Ac.±
	TOTAL WETLANDS	7.34 Ac.±
	TOTAL	77.88 Ac.±

Corridor C: Corridor C commences at the southern terminus of the Wilson Boulevard Extension, westward along the north side of I-75 for approximately three miles, to White Lakes Boulevard. The attached **Exhibit 16** provides an aerial reference of upland and wetland habitats and acreages for the entire length of the corridor. The following narrative provides an analysis of the wetlands and listed species issues, and what environmental obstacles will have to be resolved in permitting this corridor.

Corridor C is by far the most environmentally sensitive, but not impossible to permit. Not only does it require impacting habitats within the entire length of the proposed four miles of Wilson Boulevard Extension to I-75, but it also impacts continuous forested uplands and wetlands for three additional miles along the north side of I-75 canal. An existing forest road, with a cleared right of way ranging from 25 to 45 feet wide, which has also been partially filled for access to a residence, extends the entire length of the corridor. The remaining corridor consists of pine, cypress, and melaleuca forests, ranging in various degrees of exotic invasion and viable wetlands. Although more than 76% of the corridor is identified as wetlands, the canal adjacent to I-75 has altered the hydrology, and reduced the natural hydroperiod of the area. This has degraded the historic wetlands from either no longer being wetlands, to wetlands with significant melaleuca invasion, or other vegetative alterations.

As with the wetlands, this corridor also has the greatest impact on listed species. Specifically, they include the woodstork, RCW, fox squirrel, Florida panther, and black bear. Fox squirrels have been observed in the area, RCW cavity trees are within the northern portions of section 32 and 33, black bear have been observed within sections 27 and 28, and a Florida panther has denned and given birth to three kittens within section 33 in 2001. In addition, there are telemetry records indicated both bear and panther movement within these sections. Woodstork habitat would be restricted to the depressional areas along the existing woods road, and within the open wetlands areas. Fox squirrels and RCW are within the open forested pine and pine-cypress forest associations, and bear and panther are active within all the habitats. Mitigation for all of these species will have to be addressed, and compensation provided through habitat preservation, habitat enhancement, or mitigation banks.

Table VII.7: Corridor C (Blackburn Road) Upland/Wetland Acreage Analysis

Habitats/Land Cover	Total Area
Upland Habitats	26.60
Wetland Habitats	84.65
TOTAL	**111.25**

Table VII.8: Corridor C (Blackburn Road) Habitat/Land Cover Analysis

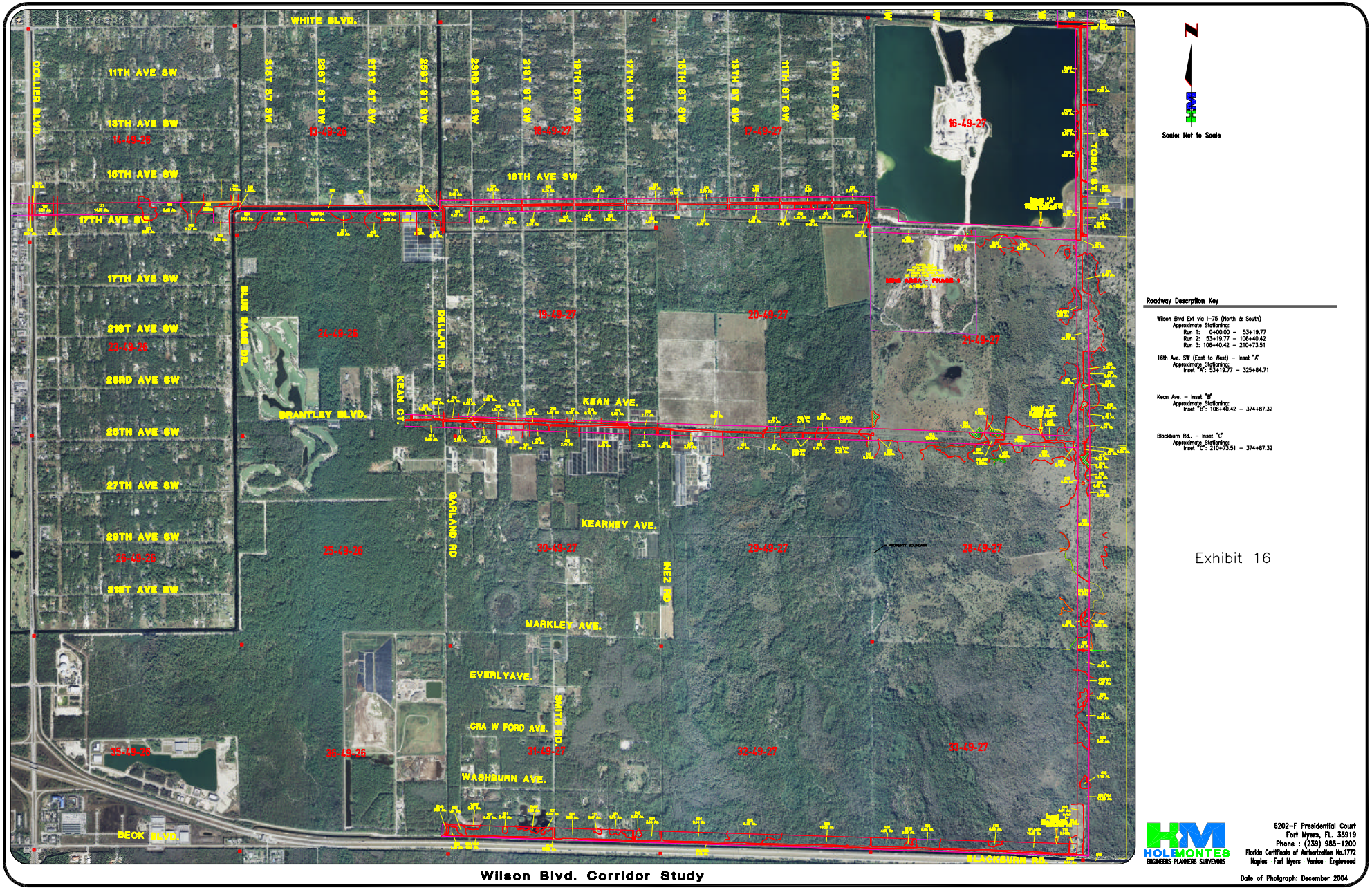
CODES	DESCRIPTIONS	ACREAGES
UPLANDS		
110	Low Density Single Family Residential	1.14 Ac.±
121	Medium Density Single Family Residential	2.76 Ac.±
418	Slash Pine-Cabbage Palm Mixed Forest	8.89 Ac.±
740	Disturbed Ruderal Land	0.55 Ac.±
8144	Road ROW, Paved	0.31 Ac.±
8145	Woodlands Road	12.95 Ac.±
	TOTAL UPLAND	26.60 Ac.±
WETLANDS & OTHER SURFACE WATERS (OSW)		
621	Cypress Forest	2.07 Ac.±
621/424	Melaleuca Dominated Cypress Forest (>75%)	16.46 Ac.±
6219	Cypress Forest with Melaleuca (50-75%)	0.99 Ac.±
624	Pine-Cypress-Cabbage Palm Forested Wetlands	45.06 Ac.±
624/424	Pine-Cypress-Melaleuca Wetlands (50-75%)	10.40 Ac.±
625	Cypress-Pine Forested Wetlands	6.16 Ac.±
742W	Excavation/Borrow Area	2.16 Ac.±
	TOTAL WETLANDS	84.65 Ac.±
	TOTAL	111.25 Ac.±

Corridor Wetland Impact And Mitigation Assessment

For comparative purposes a table has been provided to illustrate the total wetlands within the 300 ft. wide study areas. Since road right of ways (ROW) typically do not utilize such a wide area, wetland impacts can be approximated by reducing the impacts in proportion to the actual width required for the proposed ROW. Because some of the ROW areas will be within areas currently being permitted, the proposed mitigation for wetland impacts can be provided by a combination of on-site preservation of wetlands (within the East Naples Mine property) and off-site mitigation through a mitigation bank. To determine off-site mitigation the Wetland Rapid Assessment Procedure (WRAP) evaluation is utilized, since the ACOE uses it to assess their mitigation requirements for either on or off site mitigation. The WMD use it for determining off site mitigation within approved mitigation banks only. The UMAM (Unified Mitigation Assessment Method) is currently used by WMD for on-site mitigation determinations. The results of the assessment will be provided at a later date of this assessment. For the purpose of this report it is sufficient to evaluate the aerial extent of wetland impacted to determine the feasibility of permitting the corridor.

Table VII.9: Wilson Boulevard Ext. & Corridors Upland/Wetland Acreage Analysis

Wilson Boulevard Extension	**Segmt I**	**Segmt II**	**Segmt III**	**Total Area**
Upland Habitats	34.87	36.37	44.02	115.26
Wetland habitats	2.72	1.13	27.92	31.77
TOTALS	37.59	37.50	71.94	147.03
Corridor A (16th Avenue)	**A- I**	**A- II**		**Total Area**
Upland Habitats	47.23	59.48		106.71
Wetland habitats	0.56	23.94		24.50
TOTALS	47.79	83.42		131.21
Corridor B (Kean Avenue)				**Total Area**
Upland Habitats				70.54
Wetland habitats				7.34
TOTALS				77.88
Corridor C (Blackburn Road)				**Total Area**
Upland Habitats				26.60
Wetland habitats				84.65
TOTALS				111.25



N

Scale: Not to Scale

Roadway Description Key

Wilson Blvd Ext via I-75 (North & South)
Approximate Stationing:
Run 1: 0+00.00 – 53+19.77
Run 2: 53+19.77 – 106+40.42
Run 3: 106+40.42 – 210+73.51

16th Ave. SW (East to West) – Inset "A"
Approximate Stationing:
Inset "A": 53+19.77 – 325+84.71

Kean Ave. – Inset "B"
Approximate Stationing:
Inset "B": 106+40.42 – 374+87.32

Blackburn Rd. – Inset "C"
Approximate Stationing:
Inset "C": 210+73.51 – 374+87.32

Exhibit 16

HOLE MONTES
ENGINEERS PLANNERS SURVEYORS

6202-F Presidential Court
Fort Myers, FL. 33919
Phone : (239) 985-1200
Florida Certificate of Authorization No.1772
Naples Fort Myers Venice Englewood

Date of Photograph: December 2004

Wilson Blvd. Corridor Study

Wetland Impact Summary

Wilson Boulevard Extension to I-75 Wetland Impacts w/ Segment I, II & III	31.77 ac.
Corridor A-I Wetland Impacts w/ Wilson Boulevard Segment I	3.28 ac.
Corridor A-I & A-II Wetland Impacts w/ Wilson Boulevard Segment I	27.22 ac.
Corridor B Wetland Impacts w/ Wilson Boulevard Segment I & II	11.19 ac.
Corridor C Wetland Impacts w/ Wilson Boulevard Segment I, II & III	116.42 ac.

SUMMARY ASSESSMENT

Based on wetland mitigation only, it is clear that the least difficult corridor to permit is Corridor A-1, which ties Wilson Boulevard to 16th Avenue. Wetland impacts would be less than 3.28 acres, depending on the width of the ROW. The second least difficult corridor would be Corridor B, which ties Wilson Boulevard to Kean Avenue, with less than 11.19 acres of wetland impacts, depending on the width of the ROW. If it were important to continue Corridor A, by extending 16th Avenue to Collier Boulevard, wetland impacts would increase to less than 27.22 acres. However, if the preferred corridor were Corridor C, the wetland impacts would increase to something less than 116.42 acres, which more than quadruples the wetland impacts.

Since none of the corridors are totally unpermittable, the determining factor will be whether the selected corridor meets its intended purpose, is acceptable by the majority of the affected residents, whether the construction of the road is economically feasible for its intended use, and/or whether there is available public funding to assist in the construct of the road. Endangered species issues follow the same permitting difficulties as the wetland issues. The corridor with the least endangered species problems is Corridor A-1, and the most is Corridor C. However, the basic alignments selected for these three corridors, are equal to, or more desirable and environmentally friendly, than other potential corridor alignments, which were considered, but not presented in this study.

C. COST ESTIMATES

Based on the discussions with Collier County Transportation Department staff it was decided that all proposed potential corridors (**Exhibit 15**) would initially be constructed as two lanes roads within a four-lane right-of-way (150-feet), to estimate the total cost of the project. Four-lane right-of-way (ROW) allows for future additional lanes, if demand on these roadways increases. The estimates of total project cost were made in terms of the right-of-way cost, bridge construction cost, and roadway construction cost (including design and permitting). The project cost estimates were made for roadway corridors that are to be considered in the time frame 2005-2015. It should be noted that these cost estimates are to be used as a planning level cost estimate for comparative purposes. The exact cost of the project would be determined at a later stage.

Right-of-Way: The Collier County Right-of-Way Acquisition Section, Transportation Engineering and Construction Management (TECM) provided the right-of-way cost estimates for the proposed potential future corridor (2005-2015). The estimates were based on the price per acre cost (Land Value), appraisal fees, business damages, severance damages, relocation costs, etc, as applicable to each parcel along the corridor. The total acquisition cost for the FY 04-05 was estimated based on an annual appreciation rate of 20 percent. **Appendix E** provides the work sheets of ROW acquisition cost. **Table VII.10** shows the ROW cost estimates for the various segments. It should be noted that, if there is an existing ROW, then the cost estimates indicated are the additional ROW (costs) required for this project.

Table VII.10: Summary of Project Cost Estimate

	16th Avenue SW		Kean Avenue		23rd Street SW	TOTAL
	Collier Boulevard to 23rd Street SW	23rd Street SW to 9th Street SW	23rd Street SW to Inez Road	Inez Road to West of Section 28		
Right-of-Way	$ 9,668,951	$ 9,571,896	$ 2,194,757	$ 2,194,757	-	**$ 23,630,361**
Bridge Cost	$ 6,136,274	-	-	-	$ 2,070,068	**$ 8,206,342**
Road Construction Cost	$ 8,580,000	$ 764,400	$ 3,510,000	$ 3,900,000	-	**$ 16,754,400**
TOTAL	**$ 24,385,225**	**$ 10,336,296**	**$ 5,704,757**	**$ 6,094,757**	**$ 2,070,068**	**$ 48,591,103**

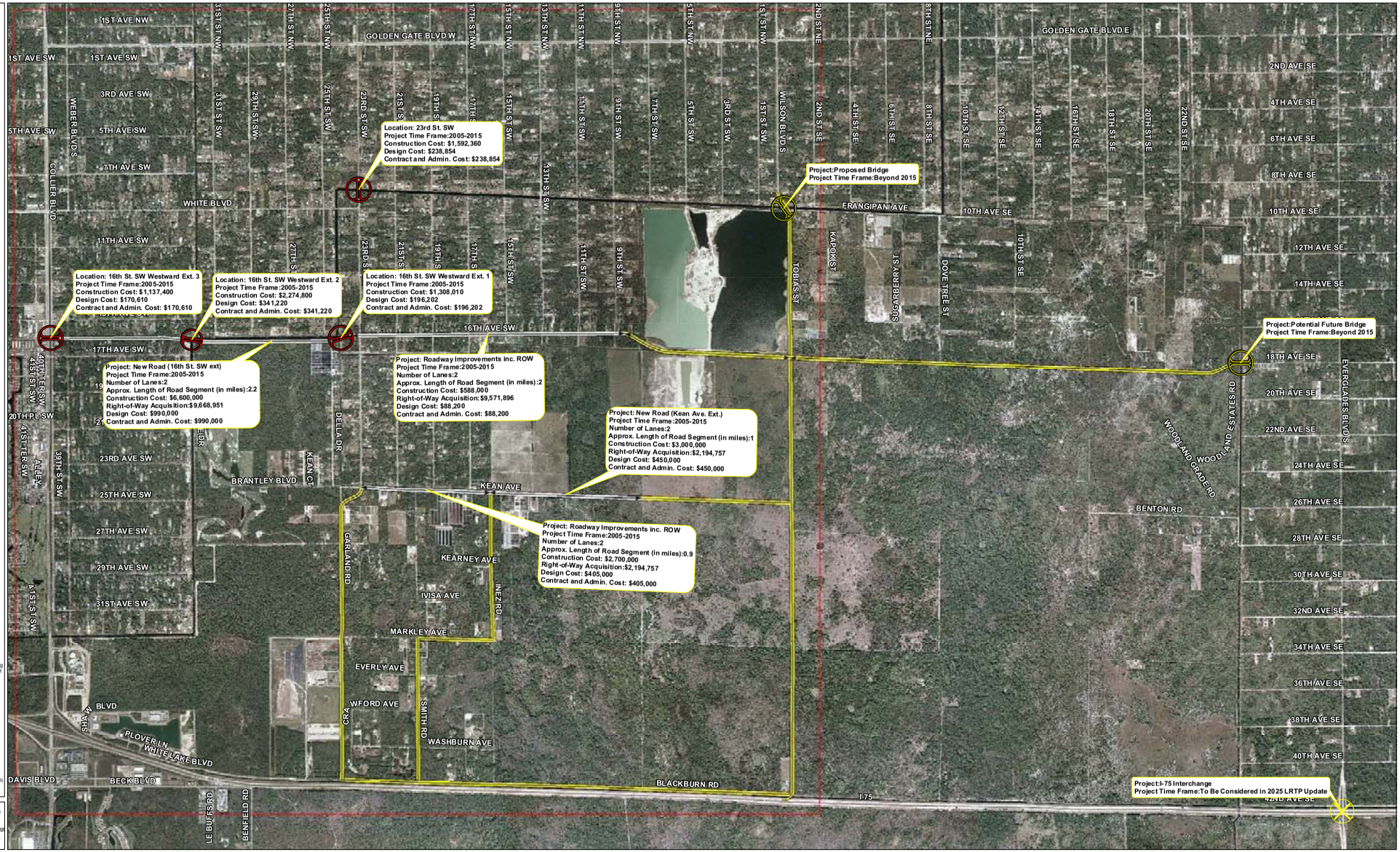
Bridge Construction Cost: A total of four bridges are proposed in the time frame 2005-2015 that will provide the interconnectivity to the proposed corridor. The unit cost used and other cost factors that were used in the cost estimates were developed from Lakewood Avenue Bridge over Cocohatchee Canal and 13th Street SW bridge over Golden Gate Main Canal. To estimate the construction cost these costs were inflated at and assumed annual inflation rate of 7 percent. In addition to the total construction cost and additional 30 percent of the construction cost was assumed for design, contract and administration cost. **Table VII.10** summarizes the total bridge cost on each segment.

Roadway Construction Cost: Per the guidelines provided by the Collier County Transportation Department Staff, the same assumptions used for impact fee calculations- $1.5 million per lane mile for construction was use in estimating the construction cost of new roads and $147,000 per mile for widening existing roads with 2 feet paved shoulders (which includes asphalt, level coursing, excavation, lime rock, capping, striping, and a couple feet of sod on both sides). **Table VII.10** summarizes the total cost by segments.

Exhibit 17 summarizes the proposed project in terms of the individual component costs (like ROW, bridge cost, etc), and also the time frame of various improvements.

Exhibit 17

Wilson Boulevard Extension Project



The Costs shown in this map are Planning Level cost estimates in the FY 05-06 and should not be considered as the final project costs

Legend

- Potential Future Corridor (2005-2015)
- Potential Future Corridor (Beyond 2015)
- Study Area
- Potential Future Bridge (2005-2015)
- Potential Future Bridge (Beyond 2015)

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D. PUBLIC WORKSHOP II

The result of the Phase II detailed analysis of the recommended corridor alignments was presented to the public in a second workshop held in Golden Gate Community Center on April13, 2005. A direct-mail notice of the workshop was sent to over 800 residences directly affected by the corridor alignments. A ¼ page advertisement in the daily newspaper was also used to provide notice to the public of the workshop. The WilsonMiller team, Collier County Transportation Department staff, and representatives from Hole Motes were present at the public workshop to answer questions. A comment sheet was distributed for public to provide comments. Large-scale aerial photo composites depicting the proposed potential corridors were provided for the residents to understand the impact the corridor might have on individual's property.

A handout summarizing the proposed potential corridors and the date of the upcoming Board of County Commissioners meeting at which the study would be presented was also distributed to the participants attending the public workshop. Comments were welcomed from the public for a two-week period following the workshop. Copies of the comments received are included in **Appendix D**.

A synopsis of those comments is as follows:

- Less than 20% were in favor of the 16th Avenue proposal and over 70% were opposed.
- While the Wilson Boulevard bridge proposal attracted some strong opposition at the first public workshop, the written response from the second workshop were almost 6 to one (about 60% vs. 10%) in favor of the Wilson Boulevard Extension to either a ramp onto I-75 or to Blackburn and CR 951.
- About 30% opposed, while 10% were in favor of the 23rd Street bridge.
- A common theme expressed by a number of people was that multiple improvements would lessen the impact on individual connecting roads. Others, however, urged "Stick to the original plan of improving Wilson Boulevard, as soon as possible."
- It was also suggested that Boulevards be widened to four lanes and streets and avenues, whether improved or not, remain as two-lane roads.

- A number of comments form residents focused on the immediate need to make improvements to the existing local road network in the North Belle Meade area. A number of possible local road options were suggested.

CONCLUSION

After evaluating ten different alternatives, two public workshops, and numerous meetings with the Collier County Transportation Department Staff and other interest groups, the following corridor alignments are recommended for consideration by the Board of County Commissioners in two different time frames 1) 2005-2015 (near-term), 2) Beyond 2015 (long-term). In addition, in recognition of the need to explore low-cost improvements to local roads that might facilitate improved traffic circulation in the short term, an immediate action plan strategy was developed. Low-cost solutions would include, but not be limited to, using existing roadways where public/private easements or rights-of-ways already exist, where needed rights-of-ways could be easily obtained through the cooperation of adjacent landowners, and where new bridges would not be necessary. Recommended solutions fall into the following three groups (see **Exhibit 18**):

Immediate Action Plan Improvements

- Extending Kean Avenue to the western edge of Section 21; and
- Public road "upgrades" to the existing set of local roads in the area between Kean Avenue and Landfill Road

Other Near Term (2005-2015) Improvements

- Extending 16th Avenue SW westward to Collier Boulevard; and
- Adding a new bridge connection on 23rd Street SW across Golden Gate Canal
- Realigning the 23rd Street SW and Garland Road intersection

Long-Range Improvements to be considered by the MPO

- Extending 16th Avenue SW eastward from 9th Street SW to 18th Avenue SE in order to reach to Everglades Boulevard; and
- Extending Kean Avenue eastward to the Wilson Boulevard Extension; and

- Adding a new interchange at Everglades Boulevard and I-75; and
- Bridging the Golden Gate Canal to extend Wilson Boulevard along the Tobias Street alignment southward to either a directional I-75 interchange or a Landfill Road/Blackburn Road Extension

This study is helpful in understanding the near- and long-term transportation needs of the North Belle Mead and Golden Gate Estates area. It was observed that one or more of the corridor is essential for future public traffic circulations, given the growth in population expected east of Collier Boulevard. It is essential that the County plans for and implement improvements that will effectively support the travel needs of the current and future residents of this area.

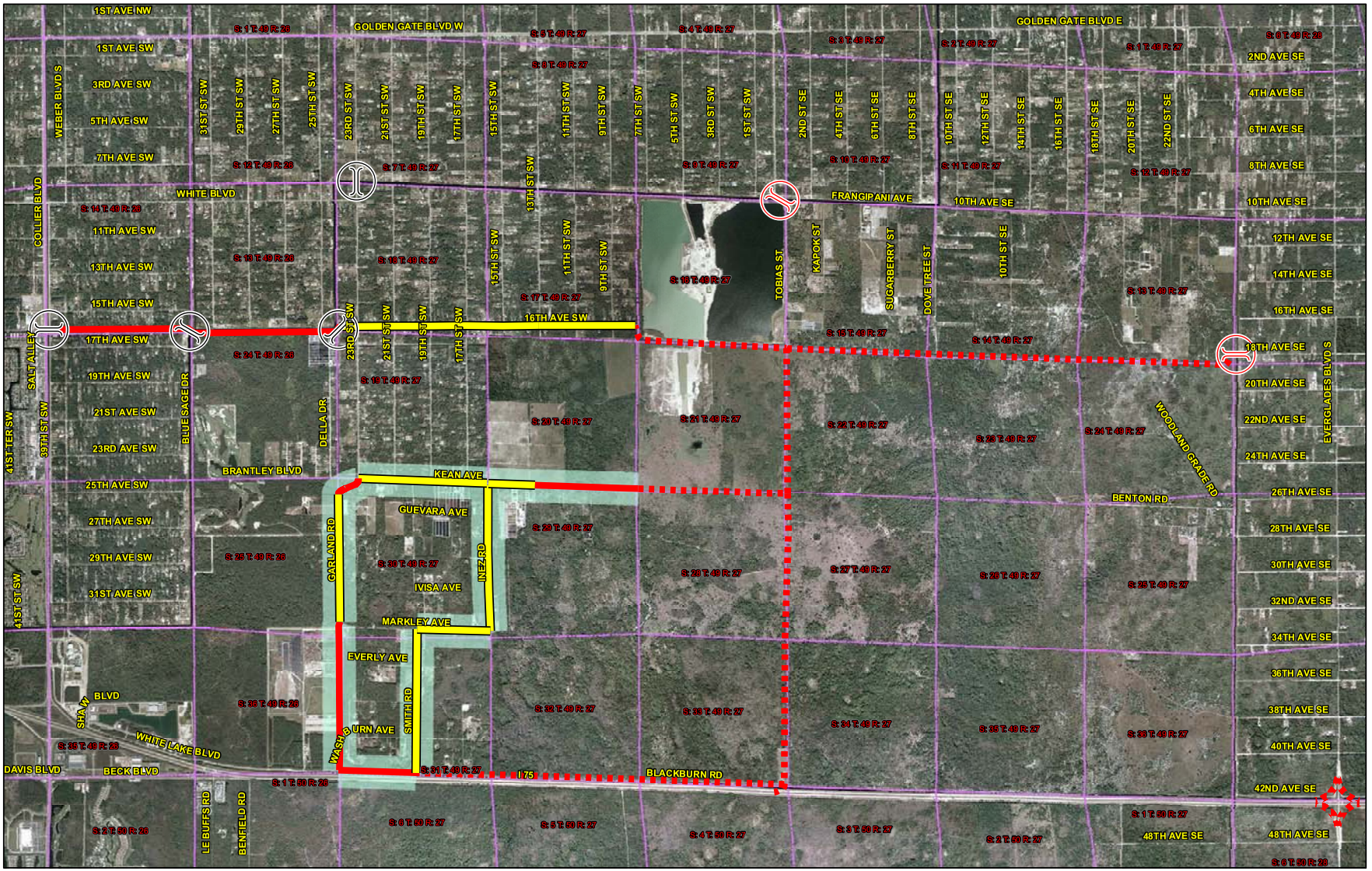

Exhibit 18

Recommended Alternative

N

0 0.45 0.9 Miles

REVISED: 05/20/05

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New Directions in Planning, Design & Engineering