

TOWN OF MALABAR

PLANNING AND ZONING ADVISORY BOARD
REGULAR MEETING
WEDNESDAY SEPTEMBER 23, 2009
7:30 PM
MALABAR COUNCIL CHAMBER
2725 MALABAR ROAD
MALABAR, FLORIDA

AGENDA

- A. CALL TO ORDER, PRAYER AND PLEDGE
- B. ROLL CALL
- C. ADDITIONS/DELETIONS/CHANGES
- D. CONSENT AGENDA -
 - 1. Approval of Minutes
 - Planning and Zoning Meeting- 08/12/09
 - Exhibit: Agenda Report No. 1
 - Recommendation: Action
- E. PRESENTATION/ ACTION:
 - 2. Foundation Park Boulevard Extension Feasibility Study-
Jeffrey Maxwell, Calvin, Giordano & Associates, Inc
 - Exhibit: Agenda Reports No. 2
 - Recommendation: Action
- F. DISCUSSION:
- G. PUBLIC:
- H. OLD BUSINESS/NEW BUSINESS:
- I. ADJOURN

If an individual decides to appeal any decision made by this board with respect to any matter considered at this meeting, a verbatim transcript may be required, and the individual may need to insure that a verbatim transcript of the proceedings is made (Florida Statute 286.0105). The Town does not provide this service. In compliance with the Americans With Disabilities Act (ADA), anyone who needs a special accommodation for this meeting should contact the Town's ADA Coordinator at 321-727-7764 at least 48 hours in advance of this meeting.

TOWN OF MALABAR
PLANNING AND ZONING

AGENDA ITEM REPORT

AGENDA ITEM NO: 1
Meeting Date: September,23 2009

Prepared By: Denine Fusco-Scarbro, Planning and Zoning Board Secretary

SUBJECT: Approval of minutes

BACKGROUND/HISTORY:

The minutes must reflect the actions taken by the Board:

- Who made the Motion
- What is the motion
- Who seconded the motion
- What was the vote

Malabar has historically included discussion to provide the reader the understanding of how the Board came to their vote. It is not verbatim and some editing is done to convey the thought. People do not speak the way they write.

ATTACHMENTS:

Draft minutes of P&Z Board Meeting of August 12, 2009

"The following draft minutes are subject to changes and/or revisions by the Planning and Zoning Board and shall not be considered the official minutes until approved by the P&Z Board."

MALABAR PLANNING AND ZONING BOARD REGULAR MEETING
August 12, 2009 7:30 PM

This meeting of the Malabar Planning and Zoning was held at Town Hall at 2725 Malabar Road.

A. CALL TO ORDER, PRAYER AND PLEDGE:

Meeting called to order at 7:30 P.M. Prayer and Pledge led by Chair Bob Wilbur.

B. ROLL CALL:

CHAIR:	BOB WILBUR,
VICE-CHAIR:	PATRICK REILLY
BOARD MEMBERS:	DON KRIEGER
	BUD RYAN
	LIZ RITTER
ALTERNATE:	CINDY ZINDEL
ALTERNATE:	BRIDGET PORTS
SECRETARY:	DENINE SHEREAR
BUILDING OFFICIAL	ROGER CLOUTIER
TOWN PLANNER	KEITH MILLS

Also present: Mayor Eschenberg, Debby Franklin, Town Clerk/ Treasurer

C. ADDITIONS/DELETIONS/CHANGES: Chair added Staff Report

D. CONSENT AGENDA -

1. Approval of Minutes

Planning and Zoning Meeting- 07/22/09

Exhibit: Agenda Report No. 1

Recommendation: Action

MOTION: Reilly / Ryan to approve. Ritter has corrections to the narrative in the motion on page 5: west boundary OI should be to the east side of Weber Woods SD as OI not RLC and continues to the west of Isassa Lane ROW. The drawing was changed to reflect the correct intent. The rest looks good.

Krieger had corrections: pg 3, 3rd para 3rd line, ...we are legislating land values – the next sentence – “he thinks they are trying to go from higher to lower – if it is to negotiate the land use – delete out and it should be limited. If it is up to the land owner to come in and negotiate then make him come in and ask for the change.

Page 3, 6th line from bottom: Keith Mills said said

Pg 4, 9th line from bottom para – Krieger said spot land use. Keith said it should spot land use. Down from that line, 6 lines, alce sb place– change it from Krieger's land to Glatter Road or Krieger Publishing. Designate by exact location and not a person. Keep reference as Glatter Road.

Next para, last sentence. Change the regardless at end of sentence. Ryan asked why Krieger wanted that sentence taken out on page 3. Ritter said they are not verbatim minutes. It is discussion. There was much discussion and it is not included in the minutes.

Regarding Krieger's change on page 3, leave the sentence as is – and then the next sentence is state, then the next sentence and it is and make the owner come in and make the change.

Taking a vote on it. Then repeat the same language to land use and make owner come in and ask for the change.

VOTE: All Ayes.

E. PUBLIC HEARING: none

F. ACTION: none

G. DISCUSSION:

2. Land Use on Malabar Road

Exhibit: Agenda Reports No. 2

Recommendation: Discussion

Wilbur said we are working on the future land use map designations (FLUM) for the north side of Malabar Road, starting at the western boundary. Town Planner Keith Mills said the north side is more problematic than the south side. If you are trying to get the same land use as on the south, you have the Malabar Scrub Sanctuary and it is going to be infilling between those existing uses that aren't vacant.

Wilbur mention the large parcel with a large wetlands in "Y" shape east of Enchanted Lakes. The Turkey Creek tributary goes through Enchanted Lakes across this property that has three residences. It has large standoff Oaks and an Orange grove in back. St Johns would govern any development there. Wilbur talked to Palm Bay about designing a trail through that way along the FPL easement that goes north to the canal.

Keith Mills said you have to look at the depth. Ryan said he was at the Town Council meeting Monday night and the FPL executives were there and they stated they do move power lines. Ritter said to the north side there is residential use in Palm Bay. Mills said how sensitive do you want to be to your Palm Bay neighbors. Wilbur did not know how you would get there across the creek.

Mills said you could go RLC to a certain depth and then single family homes north of that to the boundary with Palm Bay. Wilbur said we could go 400' or 600' and still leave the most northern part as RR-65. You would have to access it from Palm Bay because you could not get across the creek. Mills said that access would be up to the property owner to determine how he would access the land. There is R-O-W in there in Malabar. Wilbur said the creek runs to the north to Fallon Blvd.

P&Z Secretary Denine Sherear showed the aerial of the north side of Malabar Road on the overhead. Krieger said looking at the line at Stillwater that is where he would make the line. Draw a straight line between there and the post office. Board discussed the depth on north side. Zindel said leave it alone.

Wilbur said go 660' to allow the three existing homes to be used. The 660' allows you a better chance to design it.

Ritter said if we go to 1320 it would go to the Palm Bay line. They decided to go RLC or OI between Enchanted Lakes and the western edge of the EELs property.

Wilbur stated the land use should be split, the two lots between Enchanted Lakes and the western edge of the EELs property. The front 660' would be RLC and the back would remain RR.

The EELs land would go to the new conservation classification.

The existing house to the east of Sandy Creek Lane R-O-W line that is already RR and surrounded by the Stillwater Preserve subdivision. We can leave it at RR or change it to RLC. If you continue the line over to Corey Road it would match up with those houses that are in RR65. ~~Leave it at RR65~~ Wilbur said if we change it we would get resistance from the stakeholders within the subdivision. Mills said when you designate RLC you could allow six units per acre. Does the Board want that next to the Stillwater Preserve? There is water service.

Wilbur said the NW corner at Corey and Malabar Road was left out of the subdivision and they have asked for an OI designation. Franklin said they had applied for land use change to OI for future development, possible day care facility. More discussion.

Staff accessed the Brevard Property Appraiser website and looked at the properties on the north side of Malabar Road from the NW corner lot at Corey Road east to Marie Street. As the Board discussed the land use on the north side, they considered what they had already done on the south side for consistency. They decided to use the lot line of the north side of the corner lot. From the plat of Stillwater Preserve subdivision it appears to be 264 feet plus half of the R-O-W for about 300'.

Board consensus to draw a straight line from the top of the NW corner lot at Malabar and Corey Roads to the east edge of the Malabar Community Park property. See drawing.

The Board discussed mixed use. Mills asked what they intended. It is intended for mixed use with residential and office use. Wilbur referred to Dunedin. He did not the size. Law office downstairs and residence upstairs.

Wilbur asked FLUM means at some point in the future. If you make it RLC then you allow An existing property owner more use of his existing home. Keith Mills likes RLC. You are not going to achieve what Strawbridge Avenue has in Melbourne. Wilbur said we are talking about is a design that would encourage sidewalks. It could be accessed from Corey Road also. Mills said in Malabar someone may buy all the lots and design something like Melbourne has. Zindel said what about access. She asked Mills how they would access the property, saying they can't use the residential roads and can't change the land use on an existing platted subdivision. Mills said technically all of Malabar is in one subdivision or another. Franklin said this area Zindel is referring to is in the Horace Price subdivision. Malabar approved the replatting of a subdivision when they approved Oakmont Preserve subdivision. Much discussion.

Town Planner Keith Mills said mixed use is becoming very popular. It will lend itself to that kind of development and may encourage similar development.

The Board reviewed the maps on the overhead and developed a line from the west boundary of Malabar on the north side of Malabar Road and worked east until they got to Marie Street. Franklin said the map will be reviewed and approved by P&Z and then go to the Planner and Attorney to work up the legal narrative.

The next meeting on August 26 will continue this review from Marie Street to US1, and then review the south side of Malabar Road from Glatter Road to US 1 and then move to the Babcock Street corridor.

4. Building Official Roger Cloutier stated he is looking for guidance from P&Z Board. He has had some BTRs, business tax applications, for using the areas within the mini-storage facilities for parking of tracker trailers (Denine – listen to tape – please do verbatim.

Ritter said this had already been discussed and the P&Z Board recommended using the type of license required to provide guidance. Tractor trailer require CDL license. RVs and boat trailers do not. Franklin said the previous Building Official was very clear to Malabar Oppen Storage that a certain square footage was permitted for automobile storage only and the fee was based on that square footage. Over time, he had expanded and allowed tractor trailers and refrigerator trucks and complaints came in and cod eenforcement evolved and they were told to move. They moved to Malabar Mini and Malabar Open Storage complained.

Reilly said staff should look at the site plan that was approved with entrance on Malabar Road. Anything else is a violation. Very straight forward.

Ritter said we must be fair. Zindel suggested changing to allowed uses to allow for certain other type of parking. Compliance with other governing agencies would be required.

Franklin said Railroad Avenue Storage was grandfathered in from the original owner that had the approved site plan to allow recreational vehicle parking.

Cloutier said that they don't have any other parking, only recreational.

H. PUBLIC:

H. OLD BUSINESS/NEW BUSINESS:

Franklin said for the September 9, 2009 P&Z meeting, Council will need it for first public hearing on budget. P&Z may want to consider postponing to 8PM or moving to the conference room for the meeting. Reilly said that they may want to attend the budget public hearing. They discussed holding their meeting on the 10th but Bridgett and Don could not attend. Board decided to cancel the P&Z for September 9 and only have a meeting on September 23. Franklin will notify Calvin Giordano representative to reschedule to the 23rd for presentation of feasibility study. Franklin has given the study to Keith Mills to review. Board asked for Keith to continue to come during these land use discussions. Franklin said he would.

I. ADJOURN:

There being no further business to discuss, **MOTION:** Reilly / Ryan to adjourn this meeting.
Vote: All Ayes. The meeting adjourned at 10 :20 P.M.

BY:

Bob Wilbur, Chair

Denine Fusco-Scarbro, Secretary

Date Approved

TOWN OF MALABAR
PLANNING AND ZONING

AGENDA ITEM REPORT

AGENDA ITEM NO: 2
Meeting Date: September 23, 2009

Prepared By: Denine Fusco-Scarbro, Planning and Zoning Board Secretary

SUBJECT: Foundation Park Boulevard Extension Feasibility Study

BACKGROUND/HISTORY:

Calvin, Giordano & Associates, Inc did a feasibility study for the Town of Malabar for the possible extension of Foundation Park Boulevard east of Babcock Street to provide access to the triangle area north of Booth, east of Babcock and west of I-95. This would allow access for commercial general (CG) and commercial limited (CL) development without adversely impacting the rural residential community south of Booth Road.

The property owners that would be impacted if such an extension were to be pursued have been contacted and invited to attend.

ATTACHMENTS:

Feasibility Study from Calvin Giordano & Associates, Inc.

Foundation Park Boulevard Extension Feasibility Study

Prepared for:
Town of Malabar



Prepared By:



an Employee Owned Company

Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS

- 560 Village Boulevard Suite 340
- West Palm Beach, Florida 33409
- Phone: (561) 684-6161 Fax: (561) 684-6360
- CGA Project No. 08-2106

August, 2009

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Attachments

- Attachment A** – Existing Turning Movement Counts
- Attachment B** – Future Land Use Map
- Attachment C** – Internal Capture Rates
- Attachment D** – Synchro 7 software printouts
- Attachment E** – National Wetland Inventory Map
- Attachment F** – FFWCC Habitat Map
- Attachment G** – Aerial Photograph
- Attachment H** – Subject Property Photographs
- Attachment I** – Potential species located within the Town of Malabar

1.0 INTRODUCTION

Calvin, Giordano & Associates, Inc. was commissioned by the Town of Malabar to perform a feasibility study for the extension of Foundation Park Boulevard east of Babcock Street to coincide with possible future land development east of Lett Lane.

The Town of Malabar is a smaller community located along the west coast of Indian River and extending to I-95 in Brevard County, Florida. The Town consists of a land area of approximately 6,372 acres with an estimated population of 2,842 according to 2005 census data. Much of Malabar is undeveloped land accounting for approximately 4,117 acres.

The scope of this feasibility study includes traffic volume data collection, trip generation and distribution for future commercial and office buildout east of Lett Lane and south of I-95, traffic operational analyses of Foundation Park Boulevard at Babcock Street and Booth Road at Babcock Street, and recommendations for the feasibility of extending Foundation Park Boulevard including potential wetland impacts, ultimate right-of-way, and roadway cross sections necessary to accommodate future development.

2.0 TRAFFIC OPERATIONAL ANALYSIS

2.1 Existing Roadway Network

Currently, Babcock Street (SR 507) is a two-lane undivided roadway classified as a Rural Minor Arterial from Malabar Road to Valkaria Road. Foundation Park Boulevard is a three-lane roadway (two through lanes and a center turning lane) classified as a Rural Major Collector. Booth Road and Lett Lane are each two-lane undivided Local roadways.

In the vicinity of the study area, Foundation Park Boulevard terminates to the east at Babcock Street, forming a T-intersection which is currently signalized. The northbound approach consists of one exclusive left-turn deceleration lane and one through lane. The southbound approach consists of one exclusive right-turn deceleration lane and one through lane, while the eastbound approach consists of one exclusive left-turn lane and one exclusive right-turn lane.

The intersection of Booth Road at Babcock Street is an unsignalized T-intersection with stop control on Booth Road. There are no exclusive turn lanes on any of the three approaches. The existing lane geometry of both study intersections is depicted in **Figure 1**.

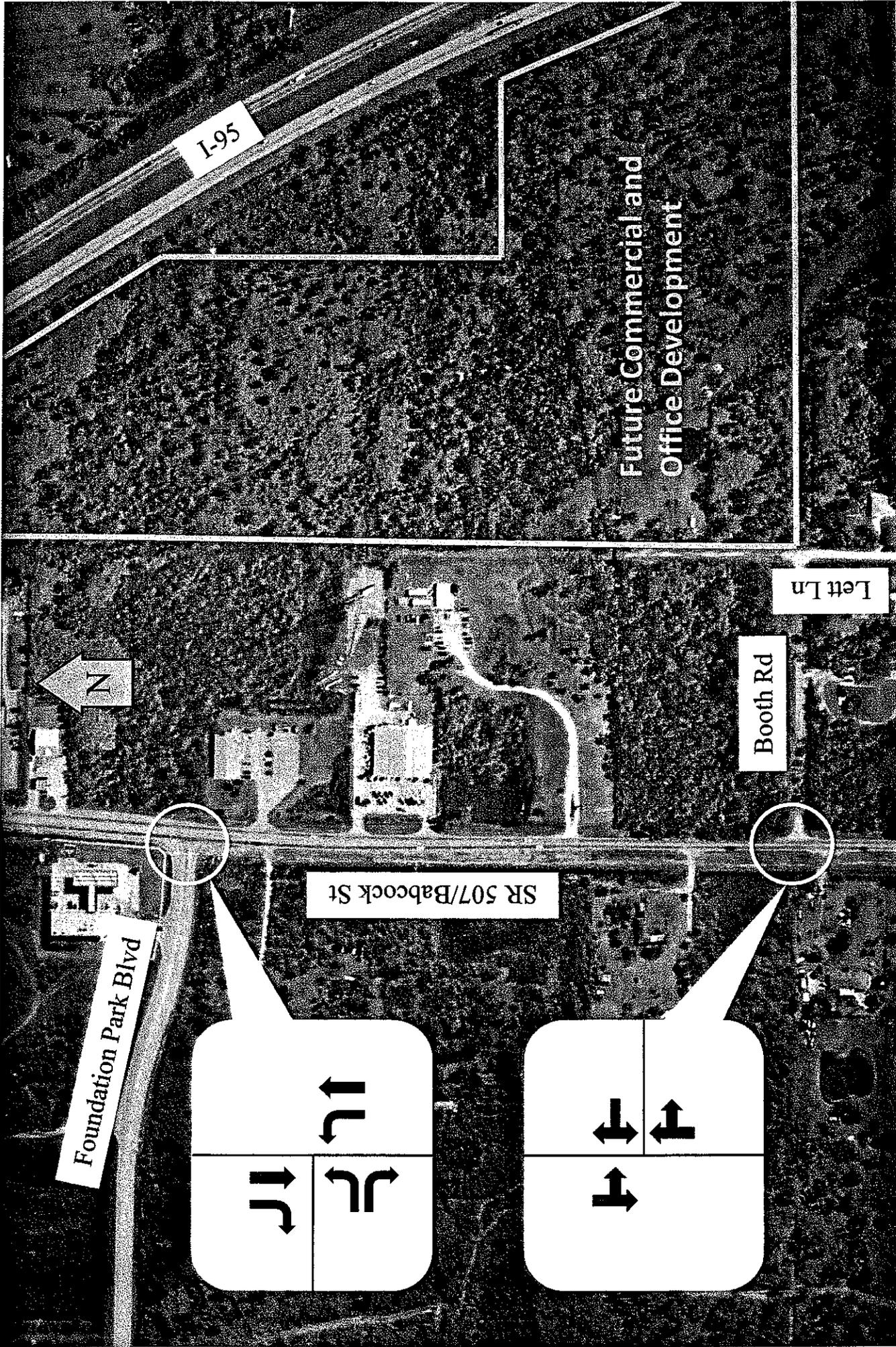


Figure 1
 Existing Lane Configuration
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

2.2 Data Collection

Morning and evening peak hour turning movement counts were collected for the intersections of Babcock Street with Foundation Park Boulevard and Booth Road on Wednesday May 20, 2009 and Thursday May 21, 2009, respectively. The printouts of the turning movement counts are included in **Attachment A**.

2.3 Future Development

The Town of Malabar Future Land Use Map was utilized to determine the available land dedicated for commercial and office development east of Lett Lane and south of I-95. The Future Land Use Map indicates that approximately 20.32 acres are available for commercial development and approximately 12.08 acres are available for office development. The Future Land Use Map is provided in **Attachment B**.

A maximum gross floor area of 20% was assumed for both commercial and office development pursuant to the Town of Malabar Land Development Code (LDC) Article III Section 1-3.2. This translates to a total of 177,028 square feet of commercial development and 105,241 square feet of office development. These development assumptions were utilized as the basis for future buildout conditions east of Lett Lane and south of I-95.

2.4 Future Conditions

Four different alternative scenarios for future traffic conditions were analyzed:

- Alternative 1A – No extension of Foundation Park Boulevard and no improvements to the existing roadway network
- Alternative 1B – No extension of Foundation Park Boulevard, but signalization and intersection improvements to Booth Road
- Alternative 2A – Extension of Foundation Park Boulevard/ Project traffic utilizes both Foundation Park Boulevard and Booth Road
- Alternative 2B – Extension of Foundation Park Boulevard/ Project traffic utilizes Foundation Park Boulevard only

Each alternative assumes buildout of future development east of Lett Lane and south of I-95.

2.5 Trip Generation

A trip generation was performed for the proposed development utilizing published rates from the Institute of Transportation Engineers (ITE) 7th Edition Trip Generation Handbook. The net development trips after internal capture and pass-by capture reductions resulted in 7,560 daily trips, 317 AM peak hour trips, and 778 PM peak hour trips. The trip generation table is illustrated in **Table 1** and internal capture rates are included in **Attachment C**.

Table 1
TRIP GENERATION ANALYSIS

Land Use	ITE Land Use Code	Intensity	ITE 7th Edition Equation	Daily Trips			AM Peak Hour of Adjacent Street			PM Peak Hour of Generator		
				Trips	In	Out	Trips	In	Out	Trips	In	Out
Proposed Use General Commercial Office	820	177	$LN(T) = 0.65LN(X) + 5.83$	9,844	182	71	913	439	475	48%	52%	
	710	105	$LN(T) = 0.77LN(X) + 3.65$	1,388	195	23	197	34	164	17%	83%	
	Sub Total			11,232	377	94	1,110	473	639			
Internal Capture General Commercial Office	See Attachment C			257			19	9	11			
	See Attachment C			257			19	11	9			
	Sub Total			514			38	19	19			
Pass By General Commercial	820	33	$LN(T) = -0.29LN(X) + 5.001$	3,158	60	23	294	142	153			
				3,158	60	23	294	142	153			
	Sub Total											
	Net Trips			7,560	317	71	778	312	467			

ITE 820 - AM: T=1.03X, PM: $LN(T) = 0.66LN(X) + 3.4$
ITE 710 - AM: $LN(T) = 0.80LN(X) + 1.55$, PM: T=1.120X+78.81

2.6 Trip Distribution and Assignment

The distribution of future buildout traffic was determined based on the existing roadway network along with surrounding residential and commercial uses. It is estimated that 45 percent of the net new vehicle trips will originate from Babcock Street south of Booth Road while 45 percent of the net new vehicle trips will originate from Babcock Street north of Foundation Park Boulevard. The remaining 10 percent of net new vehicle trips will originate from Foundation Park Boulevard west of Babcock Street. The trip distribution is illustrated in **Figures 2-4** for Alternatives 1-4. The net peak hour trips are provided in **Figures 5-7**.

Since the proposed future development is adjacent to Lett Lane which is not a major roadway, reductions for pass-by traffic were applied to Babcock Street. The pass-by capture adjustments are depicted in **Figures 8-10**.

2.7 Intersection Operational Analysis

An intersection operational analysis to compute intersection Levels of Service (LOS) was completed for the intersections of Foundation Park Boulevard at Babcock Street and Booth Road at Babcock Street using Synchro 7 software for the existing conditions and each of the aforementioned alternatives. Level of Service (LOS) is defined within the Highway Capacity Manual (HCM) as a qualitative measure describing operational conditions within a traffic flow, and the perception of these conditions by drivers or passengers. These conditions include factors such as travel time, freedom to maneuver, traffic interruptions, comfort, convenience and safety. LOS is given letter designations, from A to F, with LOS A representing the best operating conditions (free flow, little delay) and LOS F the worst (congestion, long delays). Generally, LOS A and B are high, LOS C and D are moderate and LOS E and F are low conditions of serviceability. The Synchro 7 software printouts are included in **Attachment D**.

2.7.1 Existing Conditions

The intersection turning movement counts collected on May 20, 2009 and May 21, 2009 were utilized to analyze the intersections of Foundation Park Boulevard at Babcock Street and Booth Road at Babcock Street. The existing turning movement counts are depicted in **Figure 11**.

2.7.1.1 Foundation Park Boulevard at Babcock Street

Currently, the signalized intersection of Foundation Park Boulevard at Babcock Street is operating at Level of Service (LOS) B during both the AM and PM peak hours. Additionally, each of the approaches are operating at LOS C or better for both peak hours.

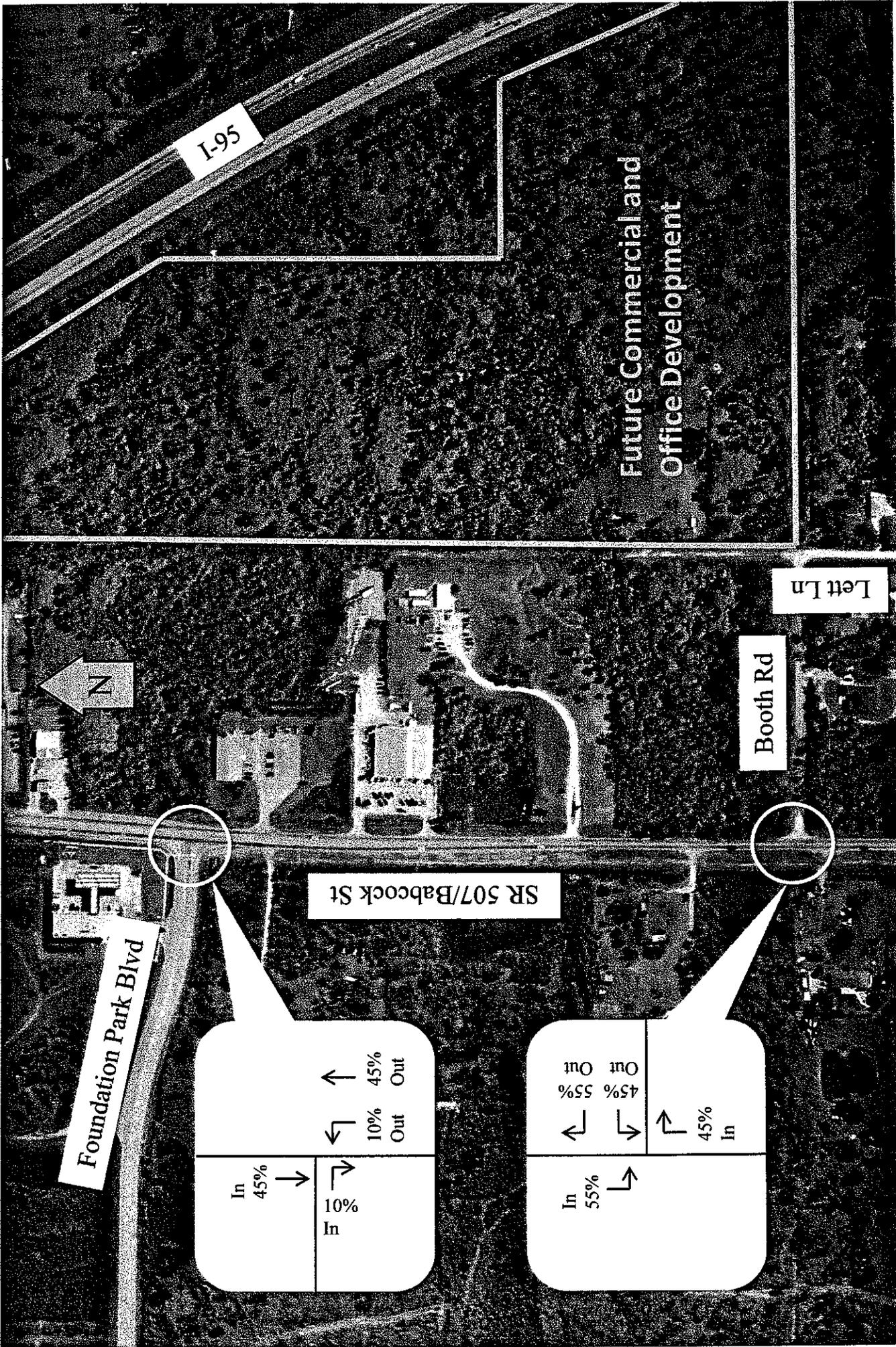


Figure 2
Alternatives 1A & 1B - Trip Distribution
Foundation Park Blvd Extension Feasibility Study
Malabar, Florida



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 EXCEPTIONAL SOLUTIONS

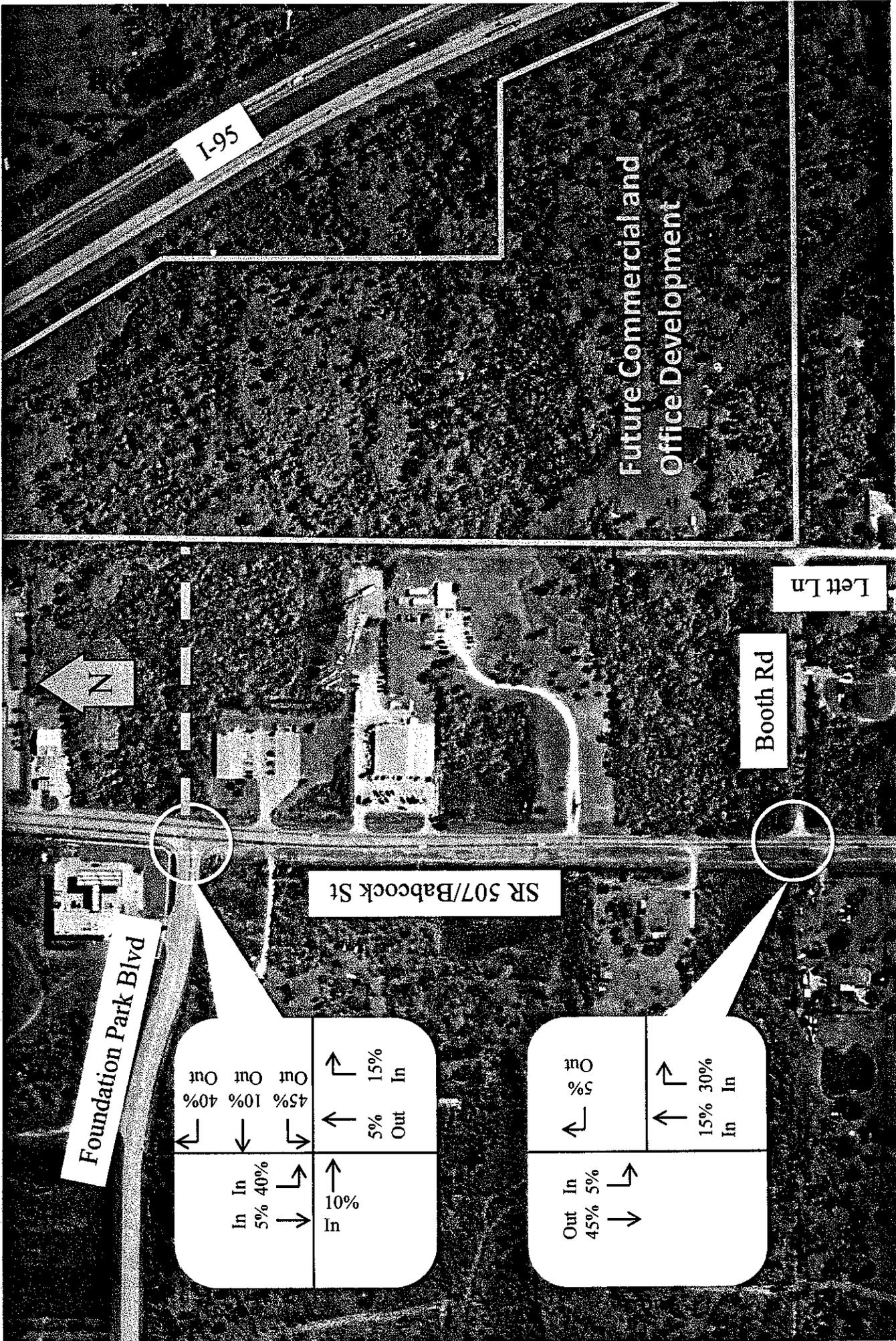


Figure 3
 Alternative 2A - Trip Distribution
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



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 EXCEPTIONAL SOLUTIONS

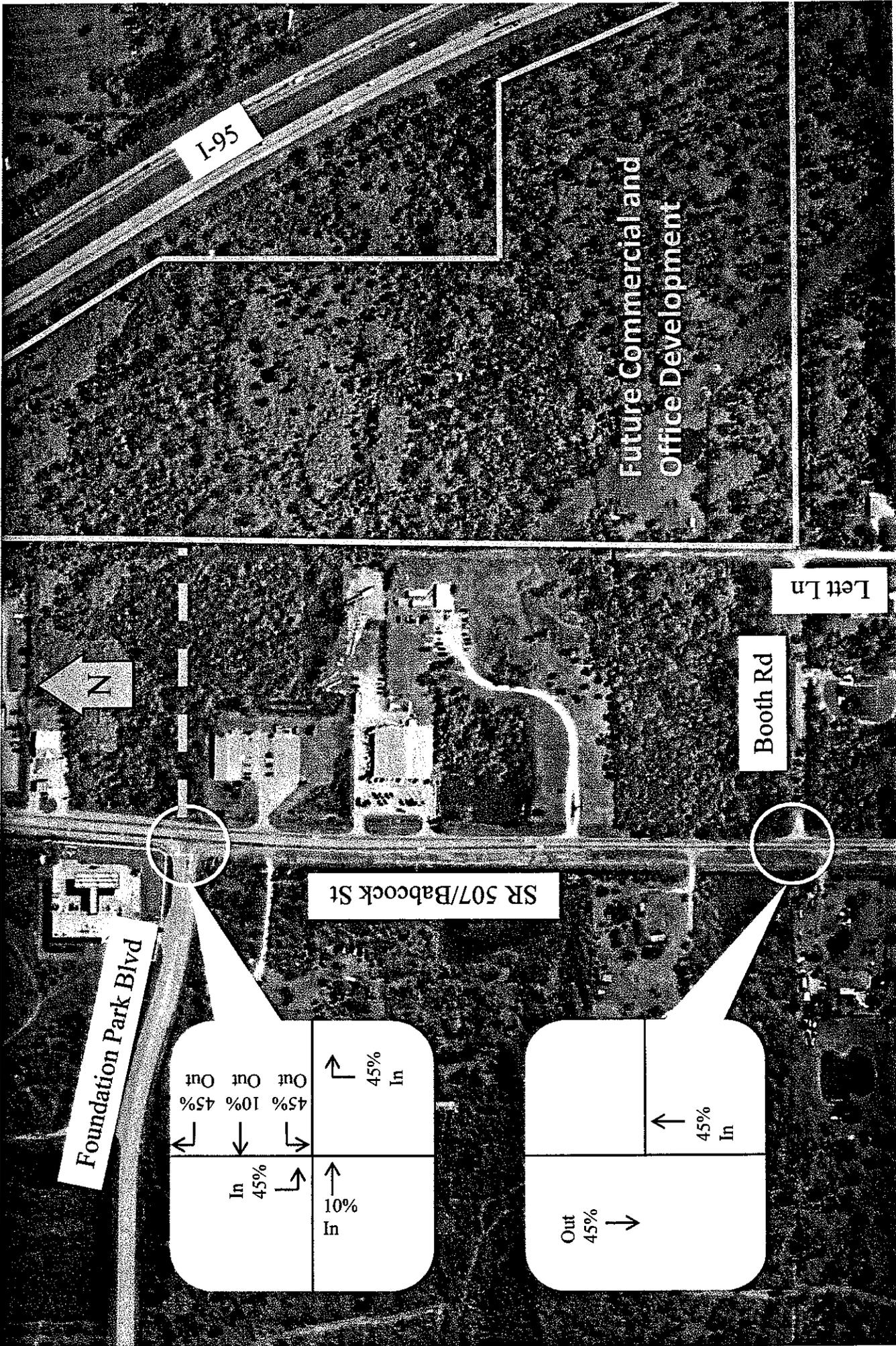


Figure 4
 Alternative 2B - Trip Distribution
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

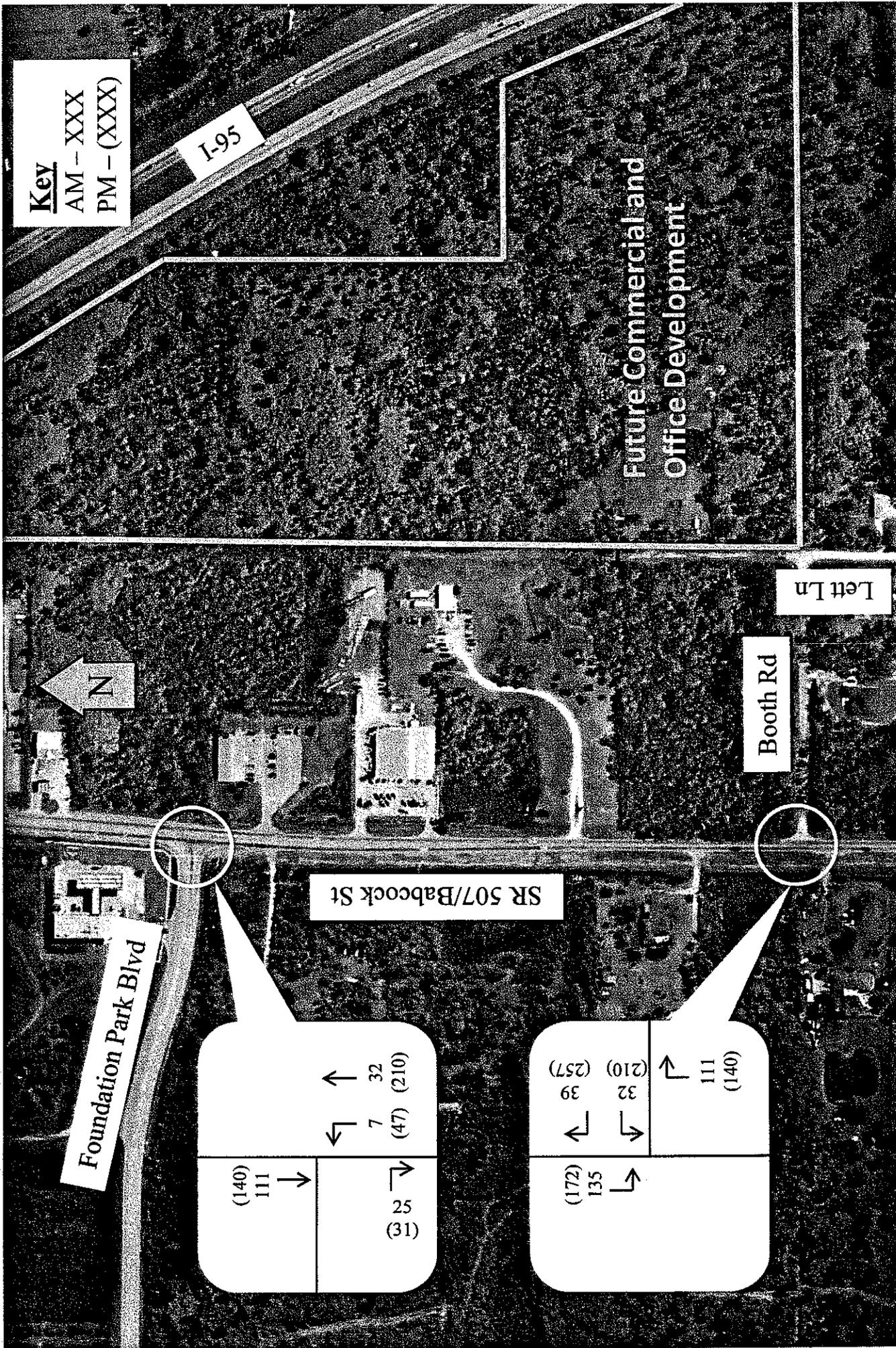


Figure 5
 Alternatives 1A & 1B - Net New Peak Hour Project Trips
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida

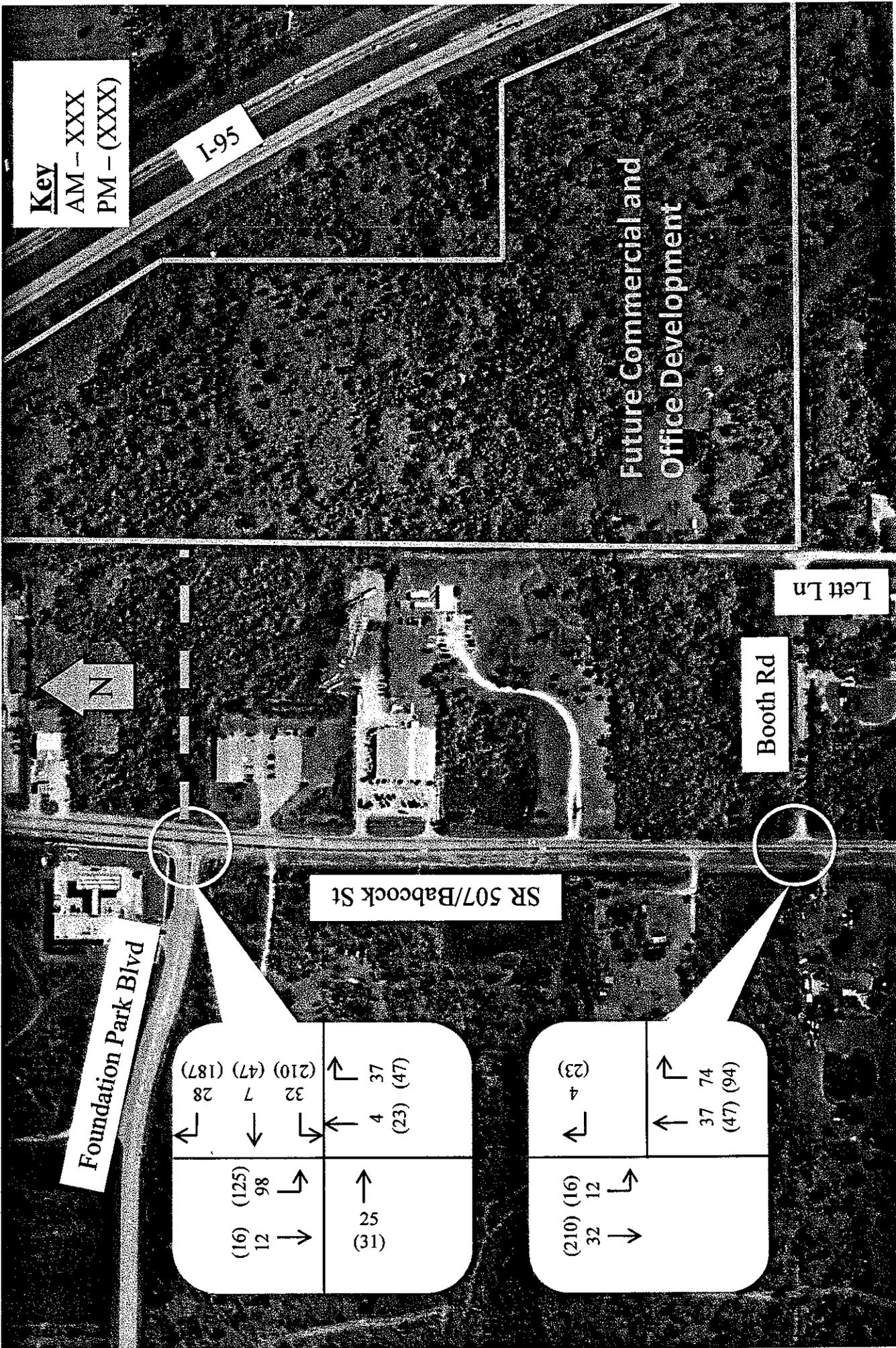


Figure 6
 Alternative 2A – Net New Peak Hour Project Trips
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



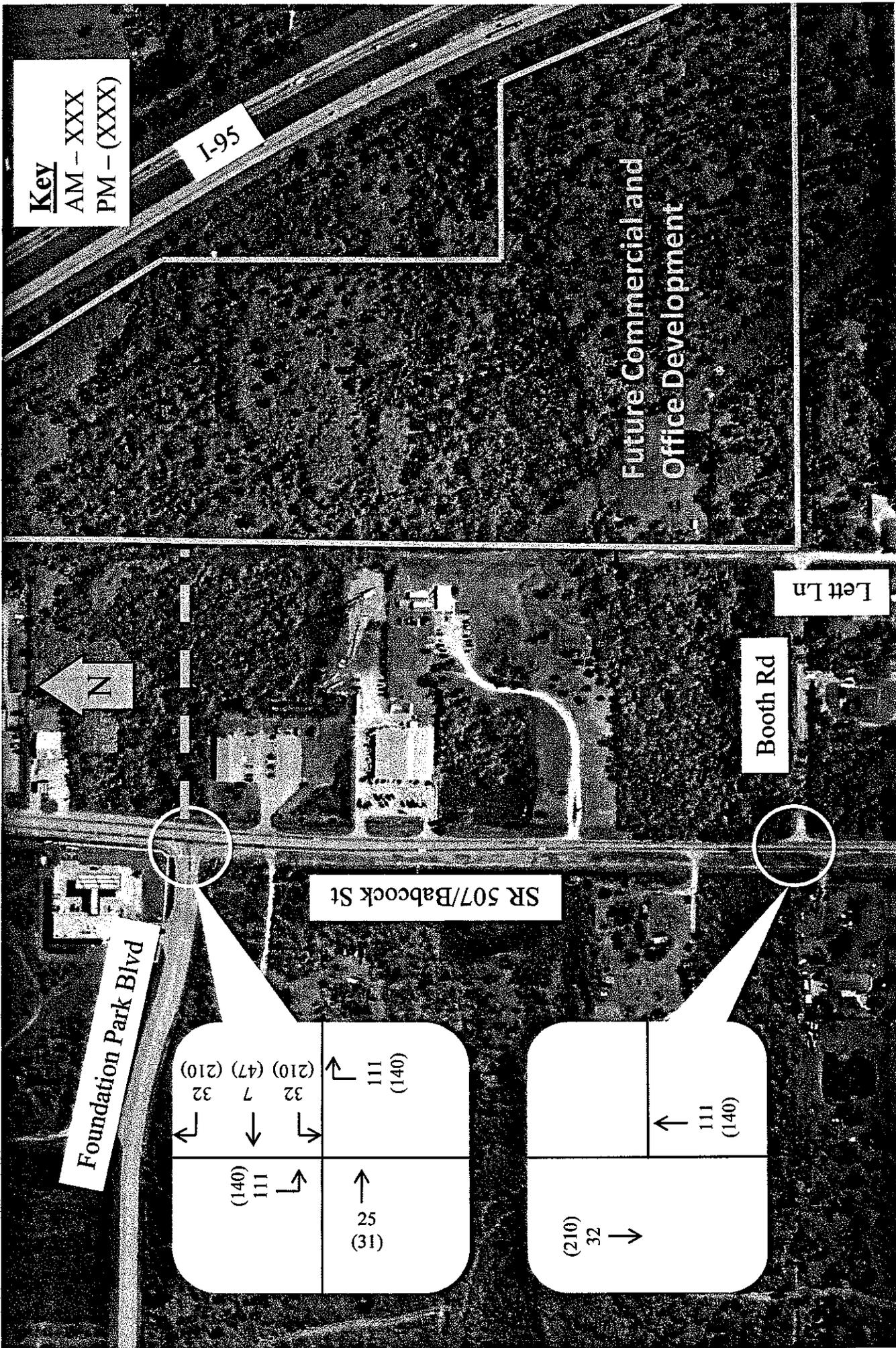


Figure 7
 Alternative 2B – Net New Peak Hour Project Trips
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

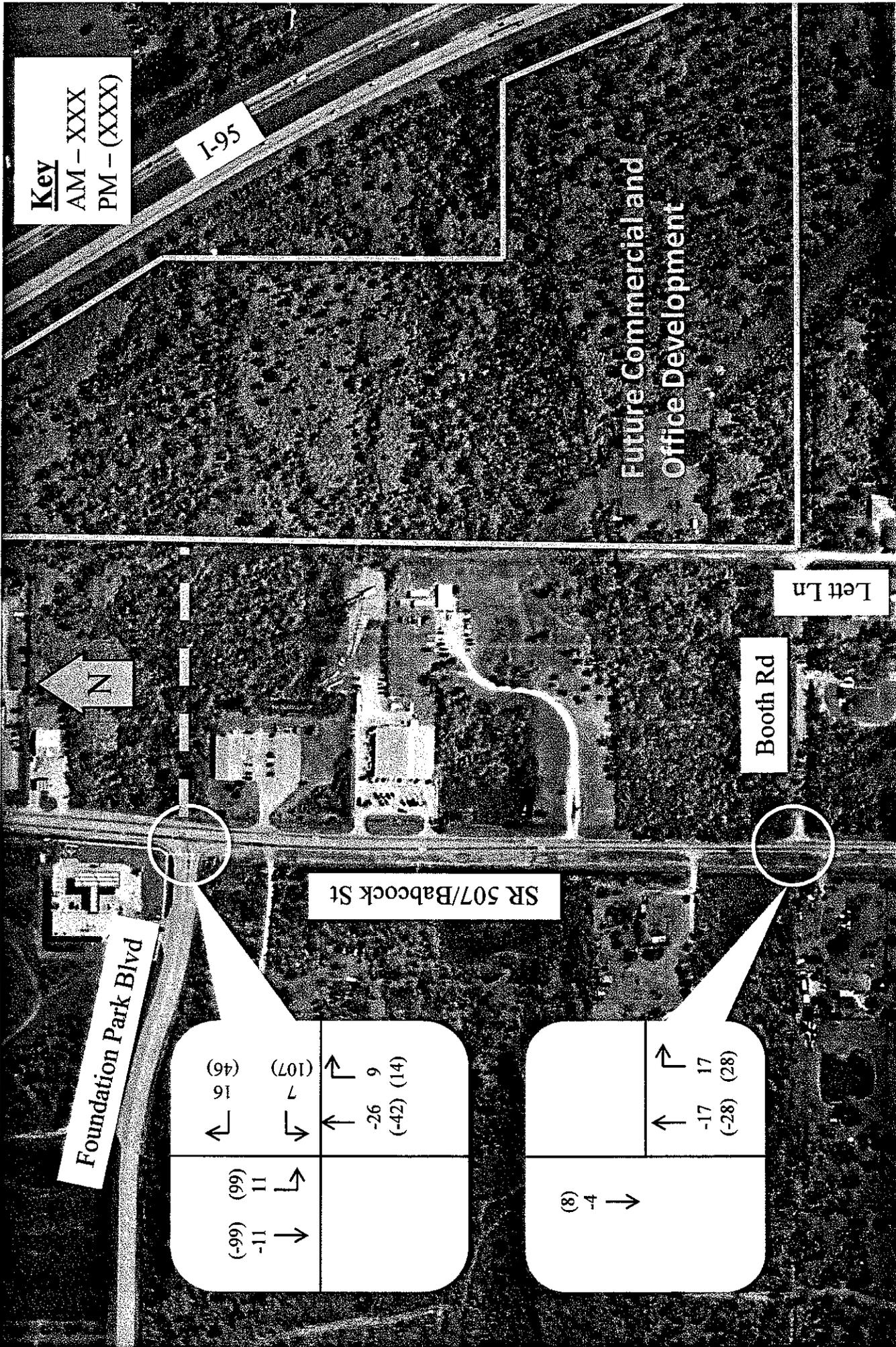


Figure 9
 Alternative 2A – Pass-By Capture Adjustments
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

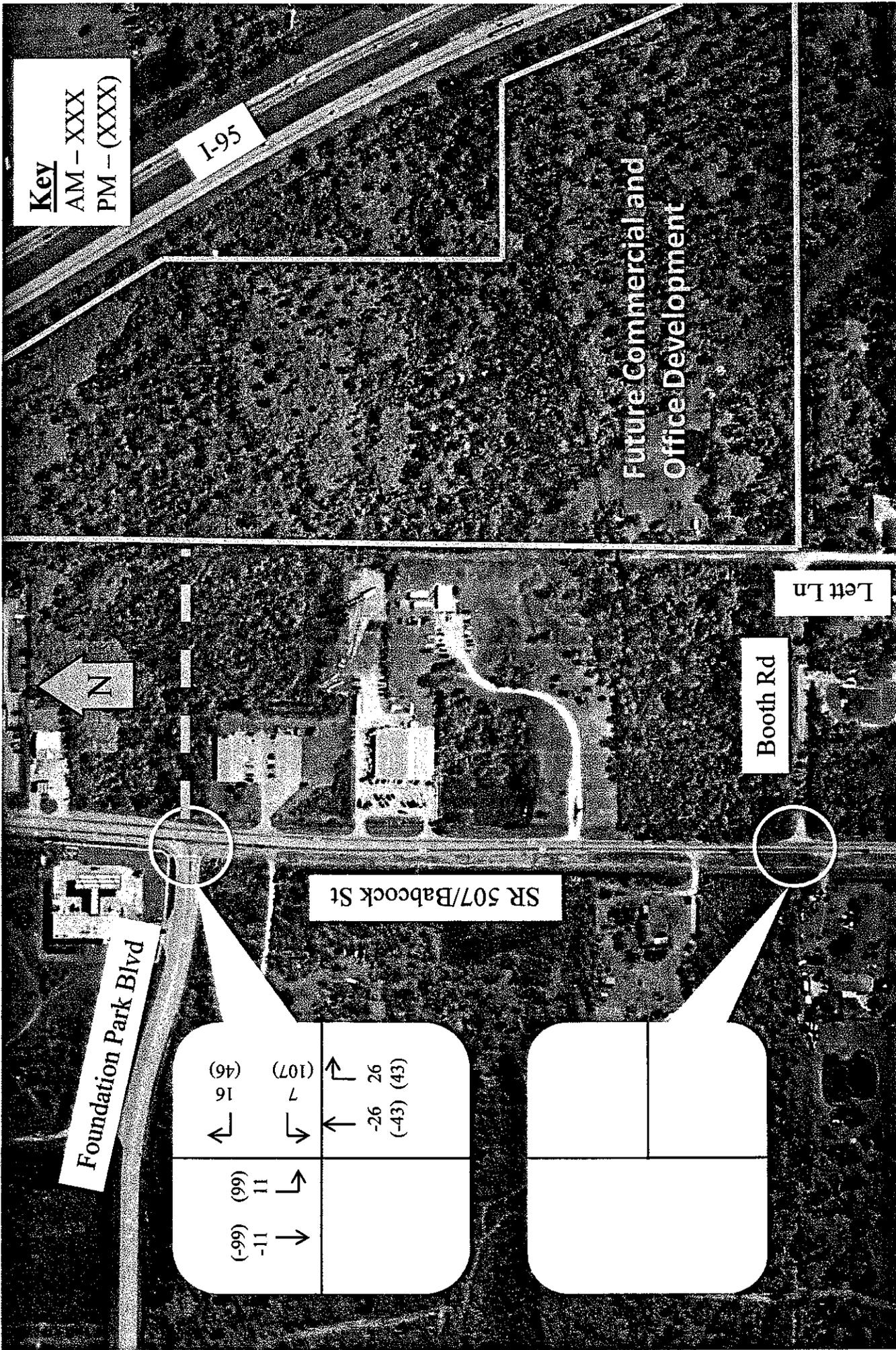


Figure 10
 Alternative 2B – Pass-By Capture Adjustments
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

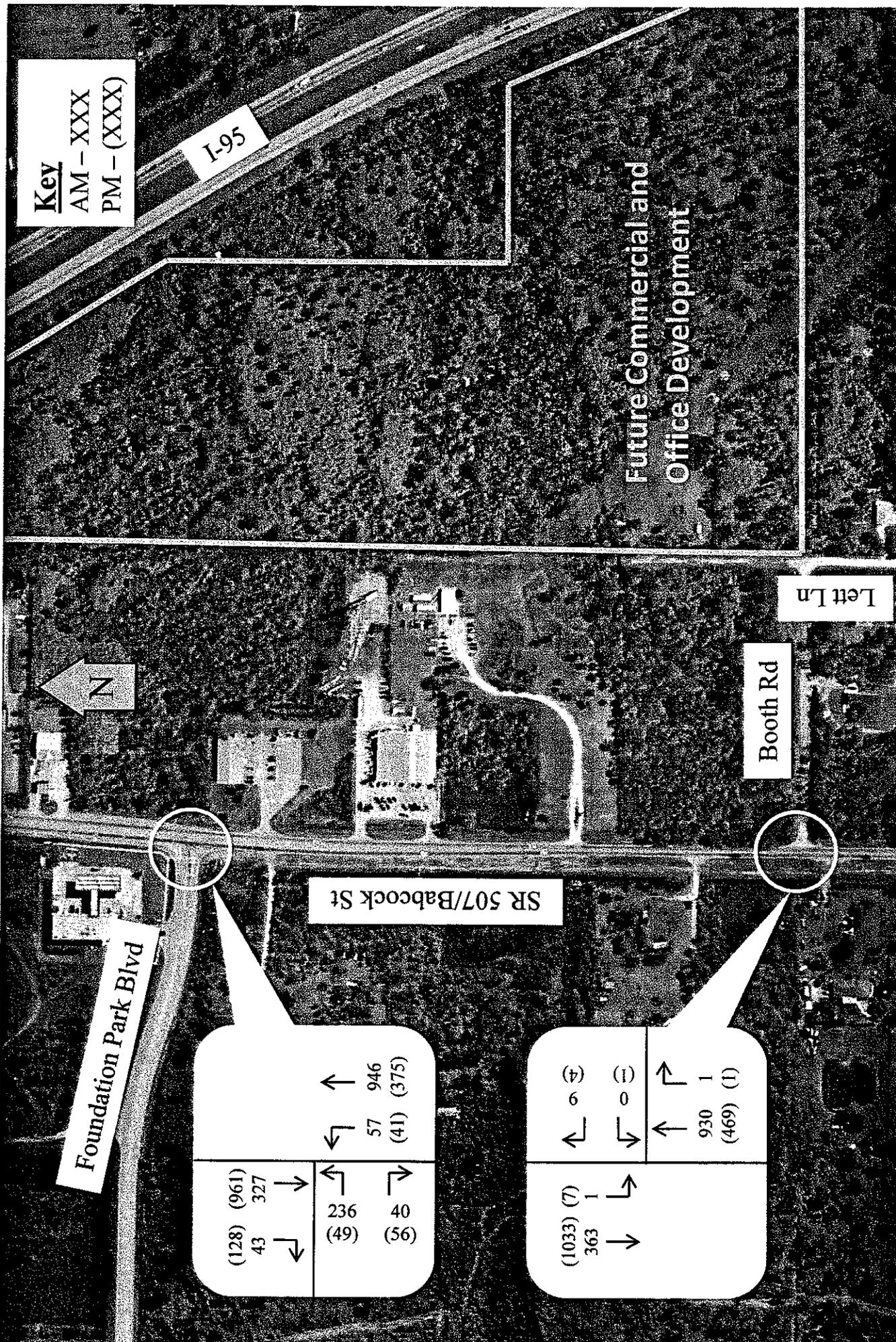


Figure 11
 Existing Turning Movement Counts
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida

2.7.1.2 Booth Road at Babcock Street

Currently, the unsignalized intersection of Booth Road at Babcock Street is operating at LOS A for both the AM and PM peak hours. The westbound traffic volumes on Booth Road are very low particularly the westbound left turning movement. However, even with the low amount of traffic, the westbound approach is operating at LOS C for both peak hours. There are minimal acceptable “gaps” in northbound/southbound traffic flow on Babcock Street, making it difficult for westbound traffic to enter the north/south traffic stream. For this reason, any increase in westbound left-turning traffic volumes would result in increased delay for the westbound approach.

2.7.2 ALTERNATIVE 1A – No extension of Foundation Park Boulevard and no improvements to existing roadway network

For Alternative 1A, it is assumed that Booth Road is the only available access to the proposed development east of Lett Lane and that no intersection improvements are made at either study intersection. The total traffic, which includes existing traffic and proposed development traffic, for Alternative 1A is illustrated in **Figure 12**.

2.7.2.1 Foundation Park Boulevard at Babcock Street

The signalized intersection of Foundation Park Boulevard at Babcock Street will operate at LOS B for both the AM and PM peak hours. Additionally, each of the approaches will operate at LOS D or better for during each peak hour.

2.7.2.2 Booth Road at Babcock Street

The unsignalized intersection of Booth Road at Babcock Street will operate at LOS A during the AM peak hour, but LOS F during the PM peak hour. The westbound approach is expected to fail during each peak hour with significant delays for westbound traffic.

2.7.3 ALTERNATIVE 1B – No Extension of Foundation Park Boulevard, but signalization and intersection improvements to Booth Road

Alternative 1B is similar to Alternative 1A except that signalization and intersection improvements to the intersection of Booth Road at Babcock Street are considered. The proposed lane geometry on Booth Road at Babcock Street for Alternative 1B consists of one through lane and one exclusive right turn lane for the northbound approach, one exclusive left turn lane and one through lane for the southbound approach, and exclusive left and right turn lanes for the westbound approach. The proposed lane geometry for Alternative 1B is illustrated in **Figure 13**. The total traffic, which includes existing traffic and proposed development traffic, for Alternative 1B is illustrated in **Figure 12**. Under Alternative 1B, all project trips utilize Booth Road to access the proposed development.

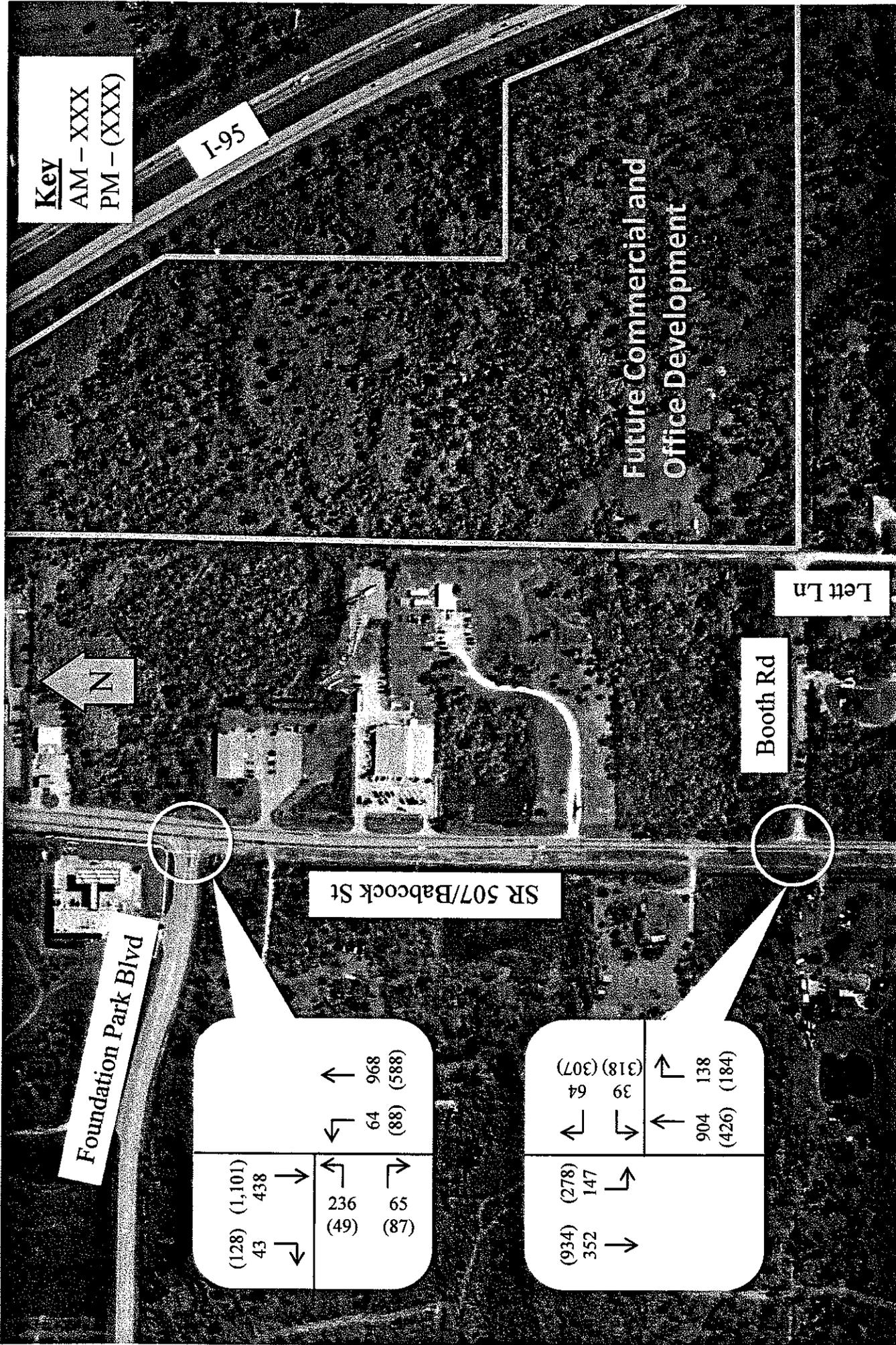


Figure 12
 Alternatives 1A & 1B - Total Traffic
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

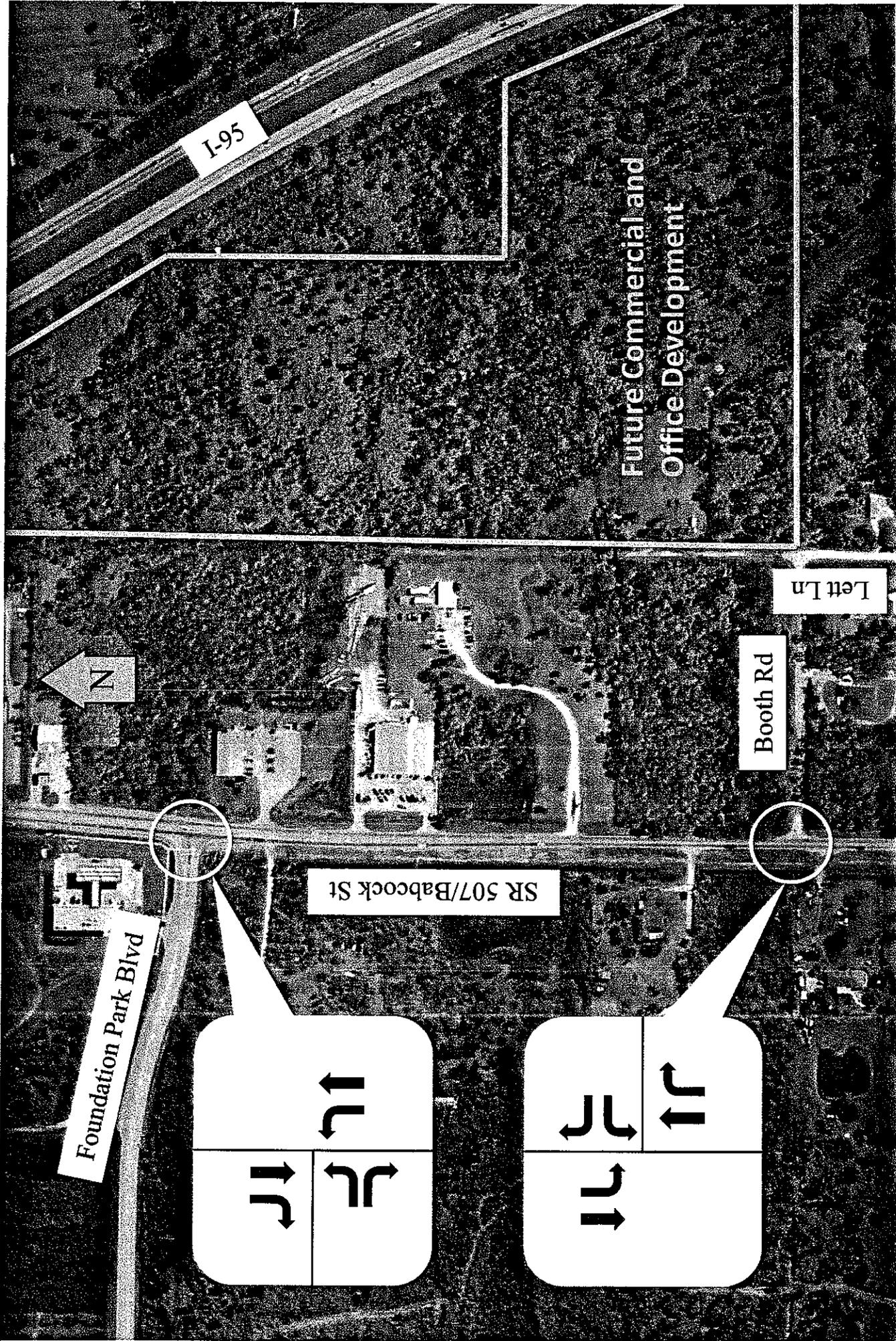


Figure 13
 Alternative 1B - Lane Configuration
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

2.7.3.1 Foundation Park Boulevard at Babcock Street

The signalized intersection of Foundation Park Boulevard at Babcock Street will operate at LOS B for both the AM and PM peak hours. Additionally, each of the approaches will operate at LOS D or better for both peak hours.

2.7.3.2 Booth Road at Babcock Street

The proposed signalized intersection of Booth Road at Babcock Street will operate at LOS B for both the AM and PM peak hours. Additionally, each of the approaches will operate at LOS D or better for both peak hours.

2.7.4 ALTERNATIVE 2A – With Foundation Park Boulevard Extension/ Project traffic utilizes both Foundation Park Boulevard and Booth Road

Alternative 2A consists of the proposed development east of Lett Lane and south of I-95 with the extension of Foundation Park Boulevard from Babcock Street to Lett Lane. The assumed lane geometry for Foundation Park Boulevard at Babcock Street consists of one exclusive left turn lane, one through lane, and one exclusive right turn lane for the northbound and southbound approaches and one exclusive left turn lane and one shared through/ right turn lane for the eastbound and westbound approaches. The proposed lane geometry for Alternative 2A & 2B is depicted on **Figure 14**. The total traffic for Alternative 2 was derived from the summation of the existing traffic counts, net new development trips, and the pass-by capture adjustments. Project trips for Alternative 2A utilize both Foundation Park Boulevard and Booth Road to access the proposed development. The total traffic for Alternative 2A is shown on **Figure 15**.

2.7.4.1 Foundation Park Boulevard at Babcock Street

The signalized intersection of Foundation Park Boulevard at Babcock Street will operate at LOS C for both the AM and PM peak hours. Additionally, each of the approaches will operate at LOS D or better for both peak hours.

2.7.4.2 Booth Road at Babcock Street

The unsignalized intersection of Booth Road at Babcock Street will operate at LOS A for both the AM and PM peak hours. Additionally, the northbound and southbound approaches will operate at LOS A for both peak hours. The westbound approach will operate at LOS C during the AM peak hour and LOS B during the PM peak hour.

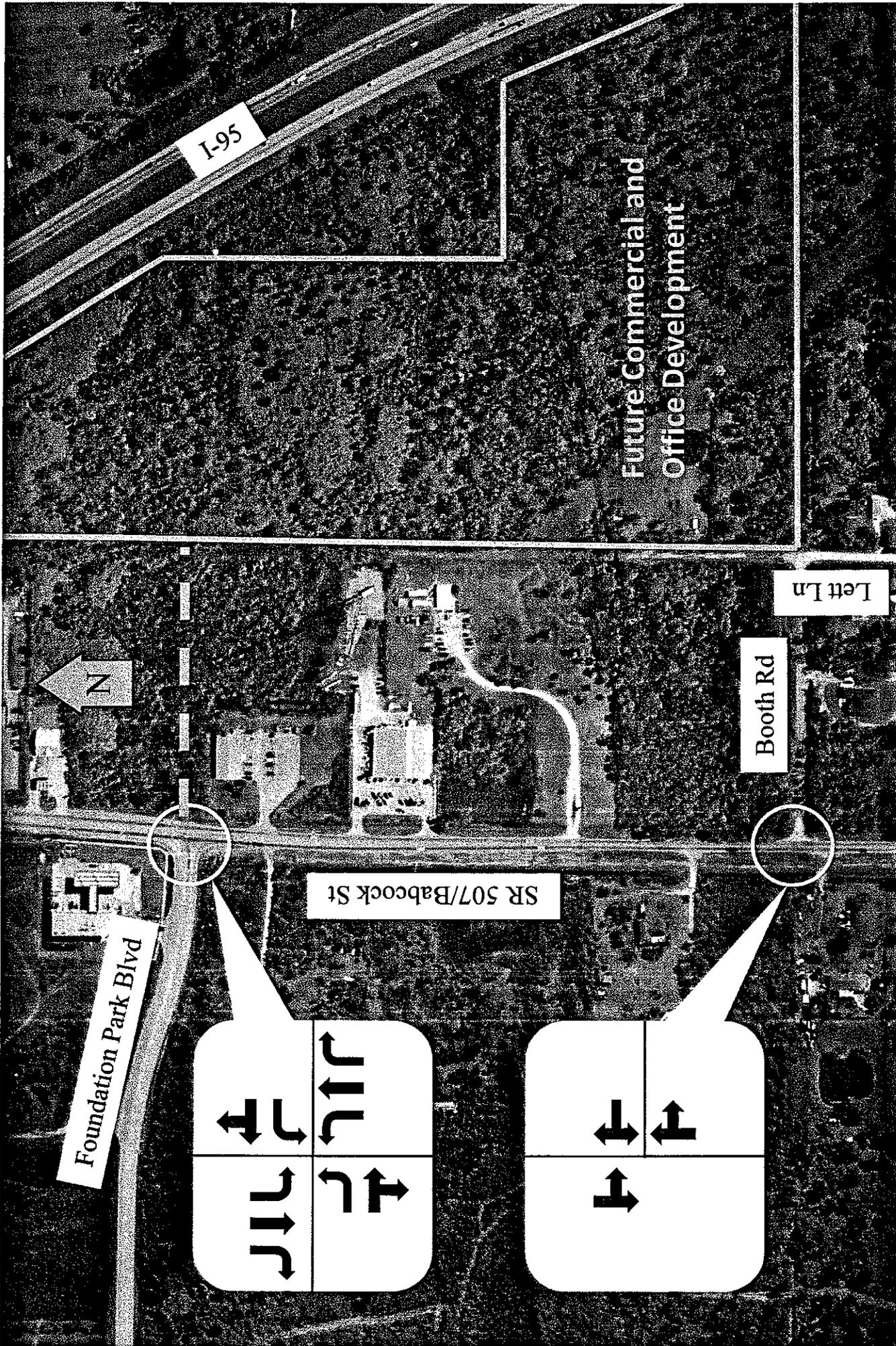


Figure 14
 Alternatives 2A & 2B - Lane Configuration
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Engineering and Construction

Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

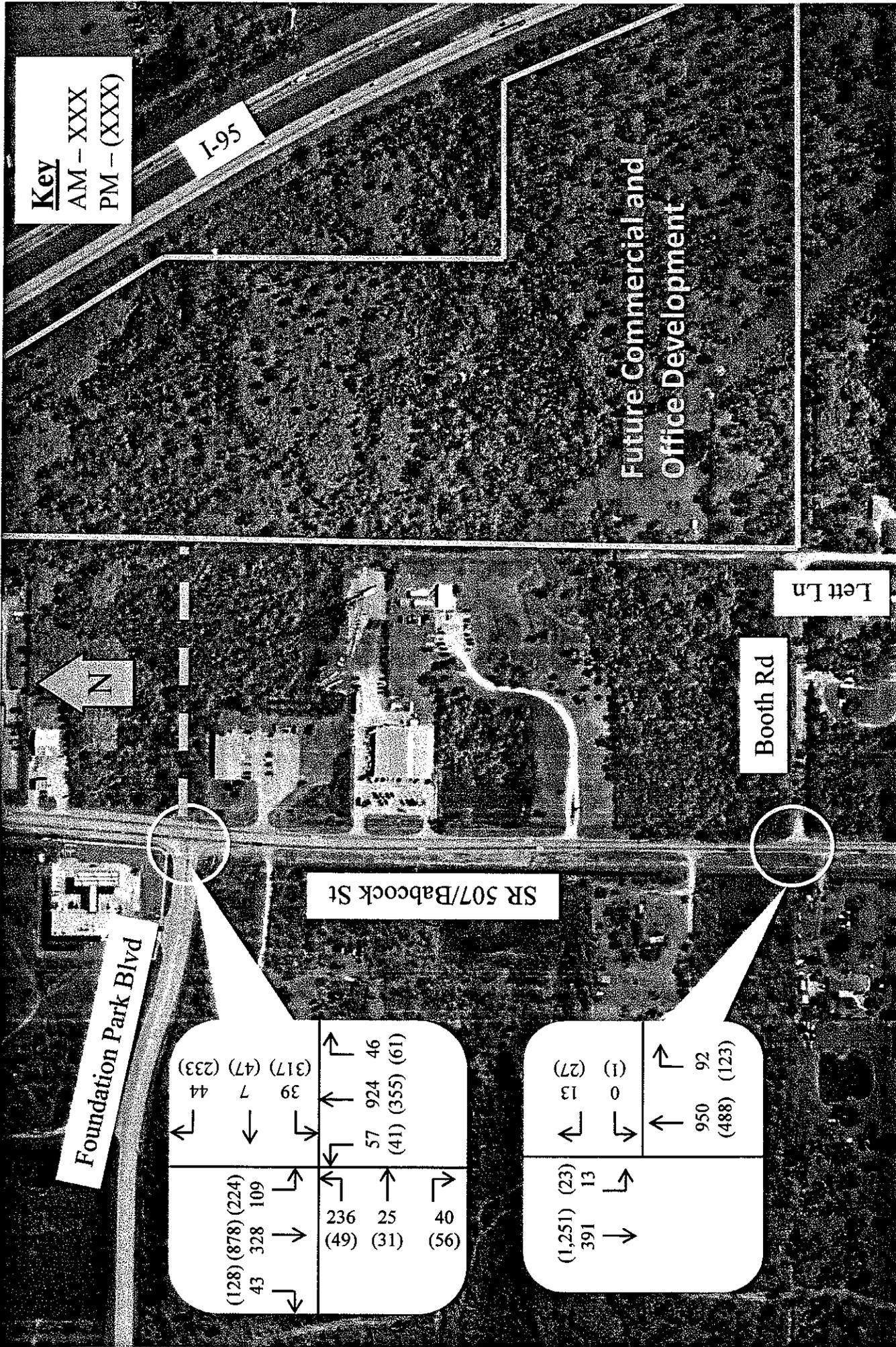


Figure 15
 Alternative 2A - Total Traffic
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



Calvin, Giordano & Associates, Inc.
 EXCEPTIONAL SOLUTIONS

2.7.5 Alternative 2B – With Foundation Park Boulevard Extension/ Project traffic utilizes Foundation Park Boulevard only

Alternative 2B is similar to Alternative 2A except that all project trips utilize the intersection of Foundation Park Boulevard at Babcock Street to arrive at and depart the future development. The total traffic for Alternative 2B was derived from the summation of the existing traffic counts, net new development trips, and the pass-by capture adjustments. The total traffic for Alternative 2B is shown on **Figure 16**.

2.7.5.1 Foundation Park Boulevard at Babcock Street

The signalized intersection of Foundation Park Boulevard at Babcock Street will operate at LOS C for both the AM and PM peak hours. Additionally, each of the approaches will operate at LOS D or better for both peak hours.

2.7.5.2 Booth Road at Babcock Street

The unsignalized intersection of Booth Road at Babcock Street will operate at LOS A for both the AM and PM peak hours. Additionally, the northbound and southbound approaches will operate at LOS A for both peak hours. The westbound approach will operate at LOS C during the both peak hours.

The operational analysis for Alternatives 1 and 2 on Babcock Street at Foundation Park Boulevard and Booth Road are shown in **Tables 2 and 3** for the AM and PM peak hours, respectively.

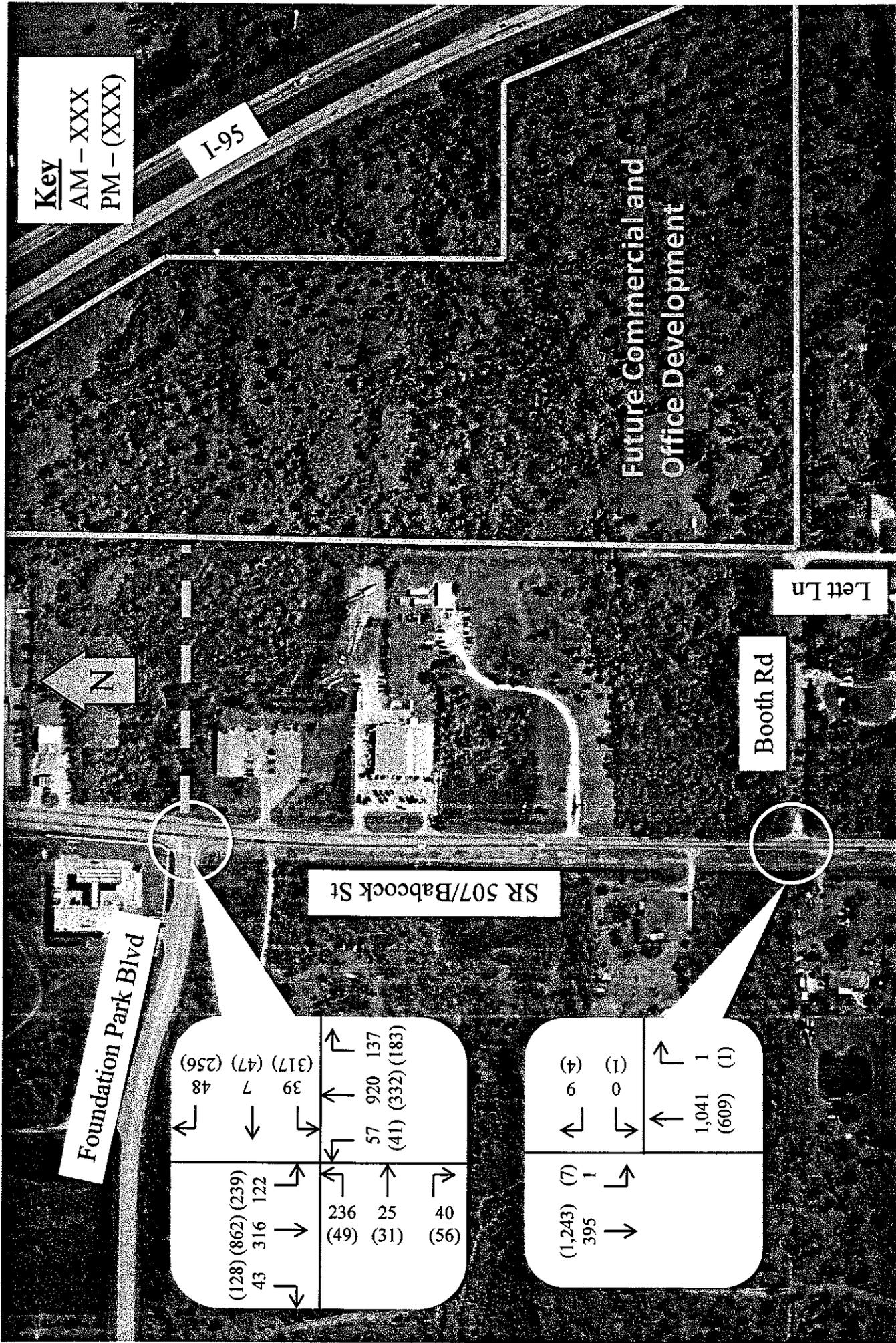


Figure 16
 Alternative 2B - Total Traffic
 Foundation Park Blvd Extension Feasibility Study
 Malabar, Florida



**Table 2
AM Peak Hour Traffic Operational Analysis**

Scenario	Intersection	Approach	Approach		Overall Intersection	
			Average Delay (s)	LOS	Average Delay (s)	LOS
Existing Conditions	Foundation Park Blvd at Babcock St	EB	26.9	C	16.6	B
		NB	16.4	B		
		SB	9.2	A		
	Booth Rd at Babcock St	WB	17.8	C	0.1	A
		NB	0.0	A		
		SB	0.0	A		
Alternative 1A - No Foundation Park Boulevard Extension/ No improvements to existing roadway network	Foundation Park Blvd at Babcock St	EB	27.5	C	17.0	B
		NB	17.2	B		
		SB	9.9	A		
	Booth Rd at Babcock St	WB	0.0	A	9.1	A
		NB	0.0	A		
		SB	6.8	A		
Alternative 1B - No Foundation Park Boulevard Extension/ Signalization and intersection improvements to Booth Road	Foundation Park Blvd at Babcock St	EB	43.7	D	13.2	B
		NB	5.6	A		
		SB	10.3	B		
	Booth Rd at Babcock St	WB	39.8	D	11.9	B
		NB	11.7	B		
		SB	6.5	A		
Alternative 2A - With Foundation Park Boulevard Extension/ Project traffic utilizes both Foundation Park Boulevard and Booth Road	Foundation Park Blvd at Babcock St	EB	40.5	D	32.0	C
		WB	45.1	D		
		NB	33.7	C		
	Booth Rd at Babcock St	WB	19.4	C	0.4	A
		NB	0.0	A		
		SB	0.7	A		
Alternative 2B - With Foundation Park Boulevard Extension/ Project traffic utilizes Foundation Park Boulevard only	Foundation Park Blvd at Babcock St	EB	40.5	D	32.8	C
		WB	45.1	D		
		NB	34.6	C		
	Booth Rd at Babcock St	WB	20.2	C	0.1	A
		NB	0.0	A		
		SB	0.1	A		

Table 3
PM Peak Hour Traffic Operational Analysis

Scenario	Intersection	Approach	Approach		Overall Intersection	
			Average Delay (s)	LOS	Average Delay (s)	LOS
Existing Conditions	Foundation Park Blvd at Babcock St	EB	32.2	C	11.0	B
		NB	3.1	A		
		SB	12.1	B		
	Booth Rd at Babcock St	WB	17.0	C	0.2	A
NB		0.0	A			
SB		0.2	A			
Alternative 1A - No Foundation Park Boulevard Extension/ No improvements to existing roadway network	Foundation Park Blvd at Babcock St	EB	36.3	D	15.7	B
		NB	5.9	A		
		SB	18.8	B		
	Booth Rd at Babcock St	WB				
NB		0.0	A			
SB		9.2	A			
Alternative 1B - No Foundation Park Boulevard Extension/ Signalization and intersection improvements to Booth Road	Foundation Park Blvd at Babcock St	EB	39.5	D	14.6	B
		NB	3.7	A		
		SB	17.8	B		
	Booth Rd at Babcock St	WB	38.7	D	18.3	B
NB		20.6	C			
SB		6.7	A			
Alternative 2A - Foundation Park Boulevard Extension/ Project traffic utilizes both Foundation Park Boulevard and Booth Road	Foundation Park Blvd at Babcock St	EB	44.2	D	30.7	C
		WB	46.8	D		
		NB	17.1	B		
	Booth Rd at Babcock St	WB	14.7	B	1.1	A
NB		0.0	A			
SB		1.4	A			
Alternative 2B - Foundation Park Boulevard Extension/ Project traffic utilizes Foundation Park Boulevard only	Foundation Park Blvd at Babcock St	EB	37.4	D	31.3	C
		WB	38.1	D		
		NB	17.6	B		
	Booth Rd at Babcock St	WB	23.2	C	0.3	A
NB		0.0	A			
SB		0.4	A			

3.0 WETLAND IMPACTS

A review of the U.S. Fish and Wildlife Service (FWS) Nation Wetlands Inventory database and the Florida Fish and Wildlife Conservation Commission (FFWCC) habitat mapping data was conducted to determine if there are indications that the proposed project may involve jurisdictional wetland habitat. The FWS and the FFWCC databases have indentified wetlands within the site. See **Attachment E** *National Wetland Inventory Map* and **Attachment F** *FFWCC Habitat Map*. A review of the current aerial photograph and site photographs supports this mapping information. See **Attachment G** *Aerial Photograph* and **Attachment H** *Subject Property Photographs*. In particular, forested and shrub freshwater habitat was identified.

Wetland resources are regulated by the Federal government through the U.S. Army Corps of Engineers (ACOE) and by the State through the Water Management Districts or the Department of Environmental Protection; in Malabar the St. Johns River Water Management District (SJRWMD) is the applicable District. The Town's Code of Ordinances also has adopted wetland development restrictions and interpretations which would apply to any development proposed within a jurisdictional wetland. The ACOE, the SJRWMD and the Town of Malabar will be the agencies to coordinate with regarding any potential wetland impacts that may occur with the implementation of the proposed project.

The Town's pending Comprehensive Plan has a policy stating they will "utilize the wetland definition and delineation methodology utilized by the U.S. Army Corps of Engineers (ACOE), the St. John's River Water Management District and the Florida Department of Environmental Protection when addressing wetland issues. Where there is a discrepancy between a developer or owner's wetland delineation and that of one of the above agencies, the Town shall employ the definition that delineates the larger area." A jurisdictional wetland, as defined in subsection 373.019(25) of the Florida Statutes is those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils.

Jurisdictional wetlands do not necessarily require standing water to be present. Wetlands are determined by assessing the type of vegetation that is present, along with the characteristics of the soil and the hydrologic conditions. Careful site inspections will need to be conducted to confirm if wetlands characteristics are present and delineate the specific limits of any wetland habitat. Consultation with the wetland jurisdictional agencies should be conducted early in the project planning stages to confirm if the agencies may or may not consider any portion of a site as wetlands.

Should an agency claim a portion of the site as jurisdictional wetlands and if the identified wetland area will be directly or indirectly impacted by the proposed development, then an Environmental Resource Permit (ERP) from the agency will be required. A formal or informal jurisdictional delineation may be requested, prior to the submittal of the ERP application to each

agency, to establish and agree upon the jurisdictional wetland line and specific wetland area to facilitate permit processing.

The goal of wetland resource regulations is a no net loss in function or value of wetland resources. This is accomplished through the avoidance of impacts as the first priority, minimization of impacts as the second, and mitigation as the third. When wetland impacts are unavoidable, mitigation is required. Mitigation can be provided through the creation, restoration, or enhancement of wetland resources on-site; through the creation, restoration, or enhancement of wetland resources off-site; or through the purchase of mitigation credits from a licensed wetland mitigation bank.

A wetland mitigation assessment methodology known as the Uniform Mitigation Assessment Method (UMAM), codified in Chapter 62-345 of the Florida Administrative Code (F.A.C.), has been adopted in the state of Florida to be utilized by all State and local agencies. In August of 2005 the ACOE also adopted this methodology for their use within the State of Florida. The UMAM provides a quantitative methodology for assessing the Functional Loss (FL) of an impacted wetland resource and the methodology to determine the Relative Function Gain (RFG) of an enhanced or created mitigation area to determine the adequacy of the proposed mitigation. If on-site or off-site mitigation is proposed to offset wetland impacts, the adequacy of the mitigation will need to be evaluated by conducting a UMAM assessment of both the impact and mitigation sites.

If wetland impacts are to be mitigated through the purchase of credits from a licensed mitigation bank, the exact number of credits to be purchased will be determined by the specific methodology the Bank was originally permitted under. Credits can only be purchase from a bank whose service area covers the impact site.

It is important to note that the ACOE does not regulate "isolated" wetlands. The wetland is not regulated by the ACOE under Section 404 of the Clean Water Act, if there are no ditches, canals, tributaries or other waters of the U.S. connecting to or adjacent to the subject area (as a rule of thumb, adjacency is within 200 feet of the subject areas). However, pursuant to the ACOE, if a canal or ditch replaces flow that previously occurred through a slough system, or through sheet flow across the landscape, that canal or ditch has replaced the former water flow and becomes a tributary water of the U.S. Culverts under roads and other upland features, weirs, drop structures and other structures do not eliminate the tributary connection, provided there is some conveyance of water from upstream to downstream. Coordination with the ACOE will be required to determine if the ACOE has jurisdiction and will require a permit and mitigation.

Should the ACOE require permitting, specific to their permitting criteria is the requirement that when considering the development capacity of a wetland resource, an analysis of alternative sites will have to be prepared to clarify what alternative sites have been considered and why those sites are not practical for the proposed project. Should an alternate site not be a feasible option,

an analysis will need to be prepared to discuss and clarify how the proposed on-site development has been designed to avoid or minimize wetland resource impacts.

Should any areas on the site meeting the statutory definition of a wetland be impacted by the proposed development, permitting through the SJRWMD will be required, and the Town's Ordinance will apply. Chapter 40C-4 of the Florida Administrative Code contains the St. Johns River Water Management District's Environmental Resource Permitting criteria. The District website provides the application forms and handbook which can be found at www.sjrwmd.com/regulatory/permitforms.html and www.sjrwmd.com/handbooks/index.html.

Within the Town's Code of Ordinances, under the Land Development Regulations in Section 1-7.2 G. *Considerations in the Review of Site Plans* it states:

- G. *Flood Prone Land and Wetland Preservation.* In order to promote and preserve natural hydrological conditions and to preserve water recharge areas, water supply and water quality, and natural habitats, the following regulations shall be applied to wetland areas.
1. *Flood Prone Land.* Construction in flood prone areas shall comply with the Town's flood plain management policies.
 2. *Wetland Defined.* Wetland areas shall include hydric soils and wetland species identified by the DER pursuant to § 17-4.022, F.A.C. Site specific investigations shall confirm the existence of wetland systems based on on-site soil and vegetative analysis with assistance of appropriate representatives of the State Department of Environmental Regulation, the St. John's River Water Management District, U.S. Army Corps of Engineers, and the U. S. Soil Conservation Service.
 3. *Wetland Development Restrictions and Interpretations.* No development other than approved passive recreation, open space, restricted accessway, bird sanctuary, natural stormwater retention/detention, or natural preserve shall be allowed in a wetland area unless "competent evidence" indicates that:
 - (a) Dominant vegetation is no longer comprised of wetland types normally found in the specified soil; and
 - (b) The water regime has been permanently altered artificially or naturally in a manner to preclude its associated watershed areas from functioning as wetlands. Applicants for site plan review shall have an opportunity to so demonstrate that any wetland designations within the confines of their property no longer function as wetlands as defined above. The County urban forester, the soil conservationist as well as representatives of the State Department of Environmental Regulation, U.S. Army Corps of Engineers and the St. John's River Water Management District may be made a part of the site plan review process to assist in identifying

and delineating wetlands. The applicant may request that a waiver of the provisions of this section be granted by the Planning and Zoning Board for small isolated marginal wetlands for which the developer shall provide viable compensatory preserve areas which mitigate against a loss of viable wetland systems. The Planning and Zoning Board shall consider the recommendation of the Town Engineer prior to taking action on such a request and shall grant the same only in the case of an overriding public interest. Finally, this section shall not prevent the construction of one single family home on existing lots of record.

Technical service coordination letters from the U.S. Fish and Wildlife Service and from the Florida Fish and Wildlife Conservation Commission regarding information on database locations for listed species for the subject property will be also required as a part of ERP permitting. As a component of any on-site environmental site assessments that are conducted, an examination should be included to determine if vegetative communities are present which may serve as suitable habitat for listed wildlife and to determine the direct or indirect presence of listed plant or animal species or to determine any potential impacts to Essential Fish Habitat. If listed wildlife species are present, again, the regulatory first priority is avoidance of impacts, minimization of impacts is second, and mitigation is the third. Should there be negative impacts to any listed wildlife species and impacts to a level the agencies would consider a 'taking' of habitat, the FWS or the FFWCC will require the developer obtain an 'Incidental Take Permit' (ITP). A Federal ITP will require a Habitat Conservation Plan. Attachment I identifies the listed species that have the potential to occur within the Town of Malabar.

4.0 CONCLUSION

The future commercial and office development identified in the Town of Malabar Future Land Use Map east of Lett Lane and south of I-95 will generate approximately 7,560 daily net new vehicle trips on the surrounding roadway network. Under the existing roadway configurations, all traffic produced from the future development will be forced to utilize the intersection of Babcock Street at Booth Road. This will create significant delays and vehicular queuing for this intersection particularly for westbound vehicles if intersection improvements are not undertaken. However, signalization of the intersection of Booth Road and Babcock Street will result in acceptable operating LOS at the intersection even without the extension of Foundation Park Boulevard.

With the extension of Foundation Park Boulevard east of Babcock Street, the intersections of Babcock Street at Foundation Park Boulevard and Booth Road will operate at an acceptable LOS during both peak hours with the proposed development vehicle trips even if all new development trips utilize only Foundation Park Boulevard.

5.0 RECOMMENDATION

Traffic associated with proposed development east of Lett Lane and south of I-95 can be accommodated by implementing either of the following options:

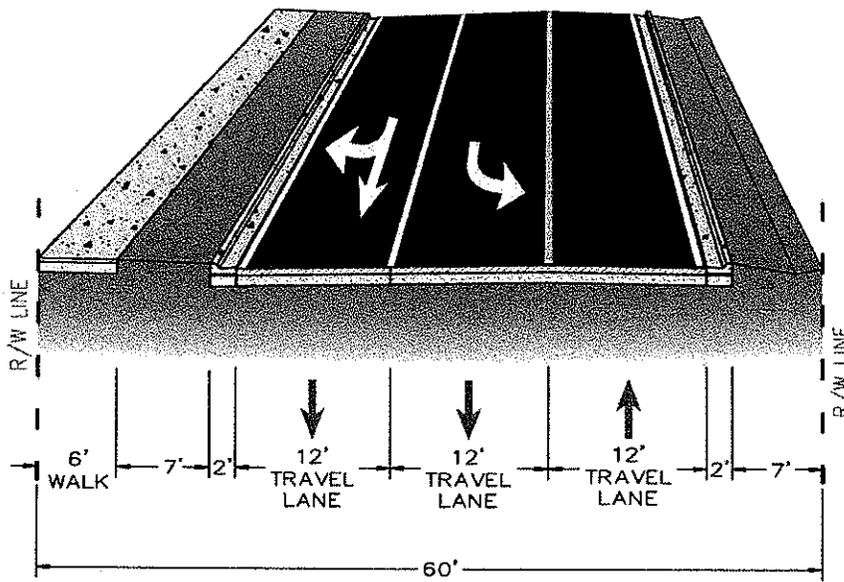
1. Extension of Foundation Park Boulevard east of Babcock Street. Recommended intersection improvements include construction of a southbound left-turn lane, a northbound right-turn lane and a westbound left-turn lane.
2. Signalization of the intersection of Babcock Street and Booth Road. Recommended intersection improvements include construction of a southbound left-turn lane, a northbound right-turn lane, and a westbound left-turn lane.

5.1 Foundation Park Boulevard Extension Cross Section

This section documents the typical section and right-of-way associated with the extension of Foundation Park Boulevard east of Babcock Street.

The westbound approach on Foundation Park Boulevard at Babcock Street will include one exclusive left-turn lane and one shared/through right-turn lane. The proposed cross section for the east leg of the Foundation Park Boulevard at Babcock Street intersection is to consist of a 60-foot right-of-way to include a total of three travel lanes as well as a 6-foot sidewalk along the north side of the roadway. The recommended length of the westbound left-turn lane at this intersection is 200 feet long with an additional 50 feet of taper length. The cross section for the east leg of the Foundation Park Boulevard/Babcock Street intersection is depicted on **Figure 17**.

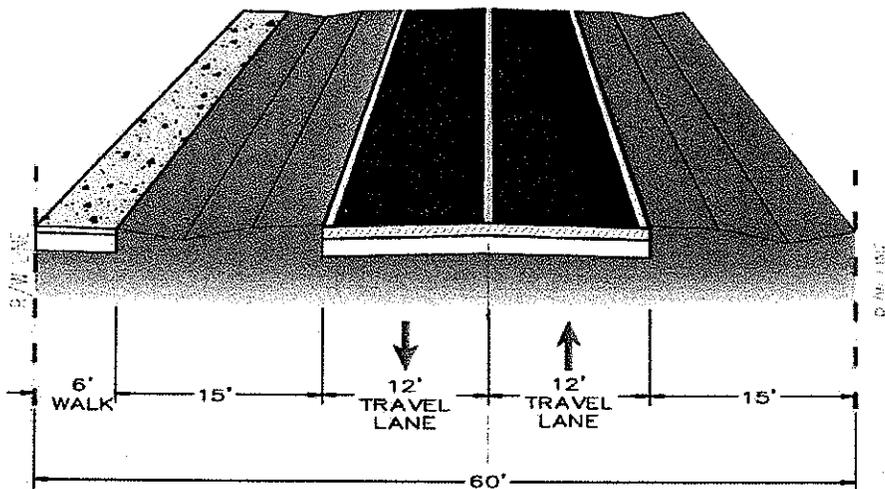
Figure 17



FOUNDATION PARK BLVD AT BABCOCK STREET
PAVEMENT SECTION
60' SECTION WIDTH

The proposed cross section for the Foundation Park Boulevard Extension from 250 feet east of Babcock Street to Lett Lane consists of a 60-foot right-of-way including a two-lane undivided roadway with 12-foot travel lanes and 15-foot drainage swales. A 6-foot sidewalk is also proposed along the north side of the roadway. This cross section is depicted on **Figure 18**

Figure 18



TYPICAL PAVEMENT SECTION
2-LANE UNDIVIDED 60' SECTION WIDTH