

ALIGNMENT STUDY

**For
Homestead Road
From South of Sunrise Boulevard to North of Alabama Road
LEE COUNTY, FLORIDA**

**Project ID: CN-06-17
Contract No. 3806**

Prepared For:

**Lee County Department of Transportation
1500 Monroe Street
Ft. Myers, Florida 33902**



Prepared By:

**HDR ENGINEERING, INC.
2202 N. Westshore Blvd.
Tampa, Florida 33607**

HDR

JULY 2007

B. J.
7/10/07

TABLE OF CONTENTS

SECTION 1.0 SUMMARY	1
SECTION 2.0 INTRODUCTION	2
2.1 Purpose.....	2
2.2 Project Description.....	2
SECTION 3.0 NEED FOR IMPROVEMENT.....	4
3.1 Deficiencies.....	4
3.2 Consistency with Transportation Plans.....	4
SECTION 4.0 EXISTING CONDITIONS	5
4.1 Existing Roadway Characteristics	5
4.1.1 Functional Classification	5
4.1.2 Typical Sections.....	5
4.1.3 Pedestrian and Bicycle Facilities	7
4.1.4 Right-of-Way	7
4.1.5 Horizontal Alignment.....	7
4.1.6 Vertical Alignment.....	8
4.1.7 Drainage.....	8
4.1.8 Intersections and Signalization	9
4.1.9 Lighting.....	9
4.1.10 Utilities.....	10
4.2 Existing Structures/Railroad Facilities	12
4.3 Existing Environmental Characteristics.....	12
4.3.1 Hydrology	12
4.3.2 Vegetation	13
4.3.3 Wildlife	14
4.3.4 Soils	17
4.3.5 Wetland Assessment.....	19
4.3.6 Special Waters	20
4.3.7 Land Use	21
4.3.8 Parks and Recreation Facilities.....	23
SECTION 5.0 DESIGN CONTROLS AND STANDARDS.....	25
SECTION 6.0 TRAFFIC ANALYSIS.....	27
6.1 Existing Conditions.....	27
6.1.1 Existing Traffic Count Data.....	27
6.1.2 Existing Traffic Volumes.....	27
6.1.3 Traffic Characteristics.....	27
6.1.4 Existing Roadway Characteristics	27
6.1.5 Existing Operations Analyses	28

6.2	Future Conditions.....	30
6.2.1	AADT Traffic Projections	30
6.2.2	Peak Hour Traffic Projections.....	30
6.3	Future Operational Analyses.....	31
6.3.1	References.....	32
SECTION 7.0 ALIGNMENT ANALYSIS		39
7.1	Segment 1: Curve South of Sunrise Boulevard	39
7.2	Segment 2: North of the Curve to Bonefish Canal	45
7.3	Segment 3: Bonefish Canal to Alabama Road.....	45
7.4	Segment 4: Alabama Road Intersection.....	49
SECTION 8.0 PRELIMINARY DESIGN ANALYSIS.....		52
8.1	Design Traffic Volumes.....	52
8.2	Typical Sections.....	52
8.3	Intersection Concepts and Signal Analysis	52
8.4	Alignment and Right-of-Way Needs	53
8.5	Relocation	53
8.6	Right-of-Way Costs	53
8.7	Construction Costs.....	53
8.8	User Benefits.....	53
8.9	Pedestrian and Bicycle Facilities	54
8.10	Safety	54
8.11	Environmental Impacts	54
8.12	Utility Impacts.....	55
8.13	Traffic Control Plan	56
8.14	Drainage.....	56
8.14.1	Meetings with Stakeholders	57
8.14.2	Stormwater Management Facilities	57
8.14.3	Base Clearance / Cross Drains / Storm Sewers.....	60
8.14.4	Permitting.....	60
8.14.5	Water Quality.....	60
8.14.6	Water Quantity	61
8.14.7	Floodplain Impacts and Mitigation	61
8.15	Access Management	61
8.16	Lighting.....	62

APPENDIX

APPENDIX A PREFERRED ALIGNMENT PLAN SETS.....A
APPENDIX B OPINION OF PROBABLE COST.....B
APPENDIX C DRAINAGE MEETING MINUTES.....C
APPENDIX D FLORIDA NATURAL AREAS INVENTORY.....D
APPENDIX E TRAFFIC COUNTS.....E

LIST OF TABLES

Table 4-1	EXISTING UTILITIES.....	10
Table 4-2	POTENTIAL LISTED SPECIES.....	16
Table 5-1	DESIGN CRITERIA.....	26
Table 6-1	EXISTING (2007) INTERSECTIONS OPERATIONS ANALYSES	29
Table 6-2	EXISTING (2007) SEGMENT OPERATIONAL ANALYSES	29
Table 6-3	DESIGN YEAR (2030) INTERSECTIONS OPERATIONS ANALYSES	31
Table 6-4	DESIGN YEAR (2030) SEGMENT OPERATIONAL ANALYSES	32
Table 8-1	PROPOSED TYPICAL SECTIONS	52
Table 8-2	ALABAMA RD INTERSECTION – QUEUE LENGTHS.....	52
Table 8-3	MEDIAN OPENING DESIGNS	62

LIST OF FIGURES

FIGURE 2.1	PROJECT LOCATION MAP.....	3
FIGURE 4.1	EXISTING TYPICAL SECTION.....	6
FIGURE 4.2	EXISTING UTILITIES	11
FIGURE 4.3	THREATENED AND ENDANGERED SPECIES MAP	15
FIGURE 4.4	SOIL SURVEY	18
FIGURE 4.5	FLORIDA LAND USE AND LAND COVER.....	22
FIGURE 4.6	PARKS AND RECREATIONAL FACILITIES.....	24
FIGURE 6.1	TRAFFIC COUNT LOCATIONS	33
FIGURE 6.2	EXISTING YEAR (2007) AND DESIGN YEAR (2030) AADT	34
FIGURE 6.3	EXISTING YEAR (2007) PEAK HOUR VOLUMES.....	35
FIGURE 6.4	EXISTING YEAR (2007) CORRIDOR LANE GEOMETRY	36
FIGURE 6.5	DESIGN YEAR (2030) PEAK HOUR VOLUMES	37
FIGURE 6.6	DESIGN YEAR (2030) CORRIDOR LANE GEOMETRY	38
FIGURE 7.1	FULL BUILD THROUGH CURVE.....	41
FIGURE 7.2	MINIMUM RURAL RADIUS	43
FIGURE 7.3	NO CURVE IMPROVEMENTS.....	44
FIGURE 7.4	4-LANE DIVIDED URBAN SECTION	47
FIGURE 7.5	5-LANE URBAN SECTION.....	48
FIGURE 7.6	ALABAMA RD. INTERSECTION – OPTION 1.....	50
FIGURE 7.7	ALABAMA RD. INTERSECTION – OPTION 2.....	51
FIGURE 8.1	DRAINAGE BASINS/STORMWATER MANAGEMENT FACILITIES....	59

SECTION 1.0 SUMMARY

Lee County Department of Transportation (LeeDOT) has retained HDR Engineering, Inc. to design the required improvements for Homestead Road from South of Sunrise Boulevard to North of Alabama Road. The improvements are necessary to accommodate the future traffic demands in a safe and efficient manner. The objective of the Alignment Study is to identify the design for the widening of Homestead Road. The study will also include a detailed analysis of the Homestead Road/Alabama Road/Leeland Heights Boulevard intersection improvements.

SECTION 2.0 INTRODUCTION

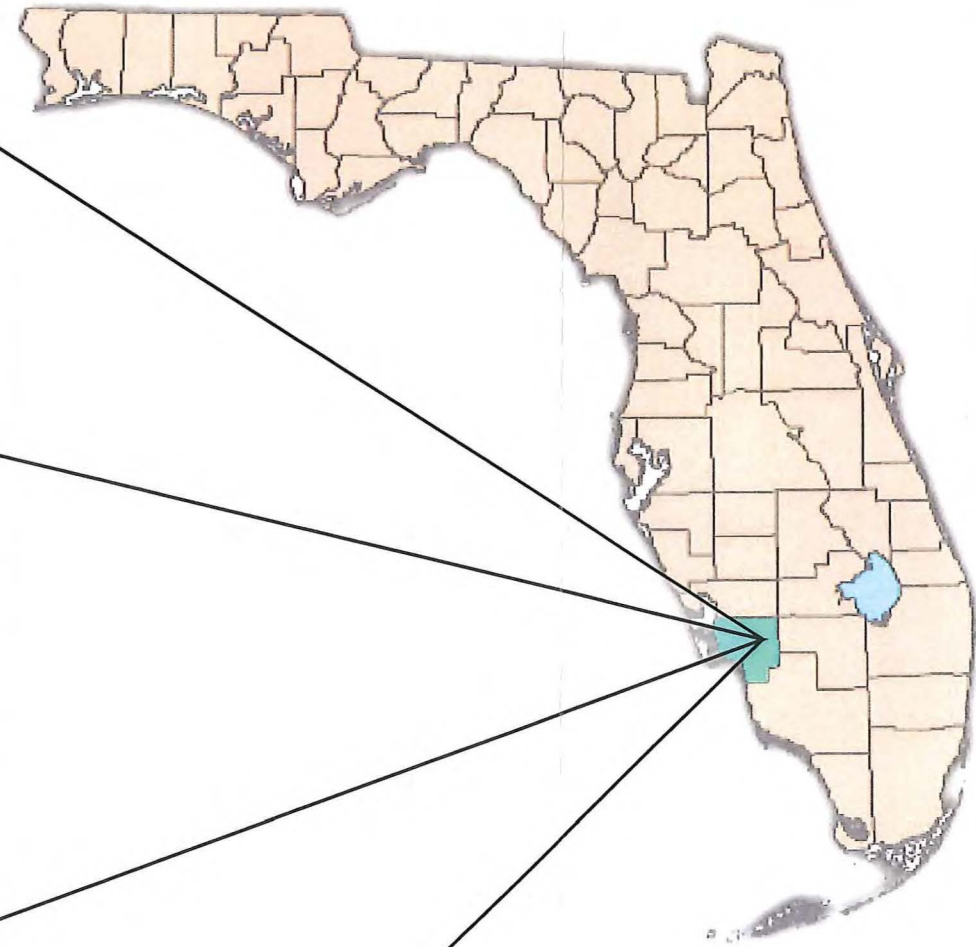
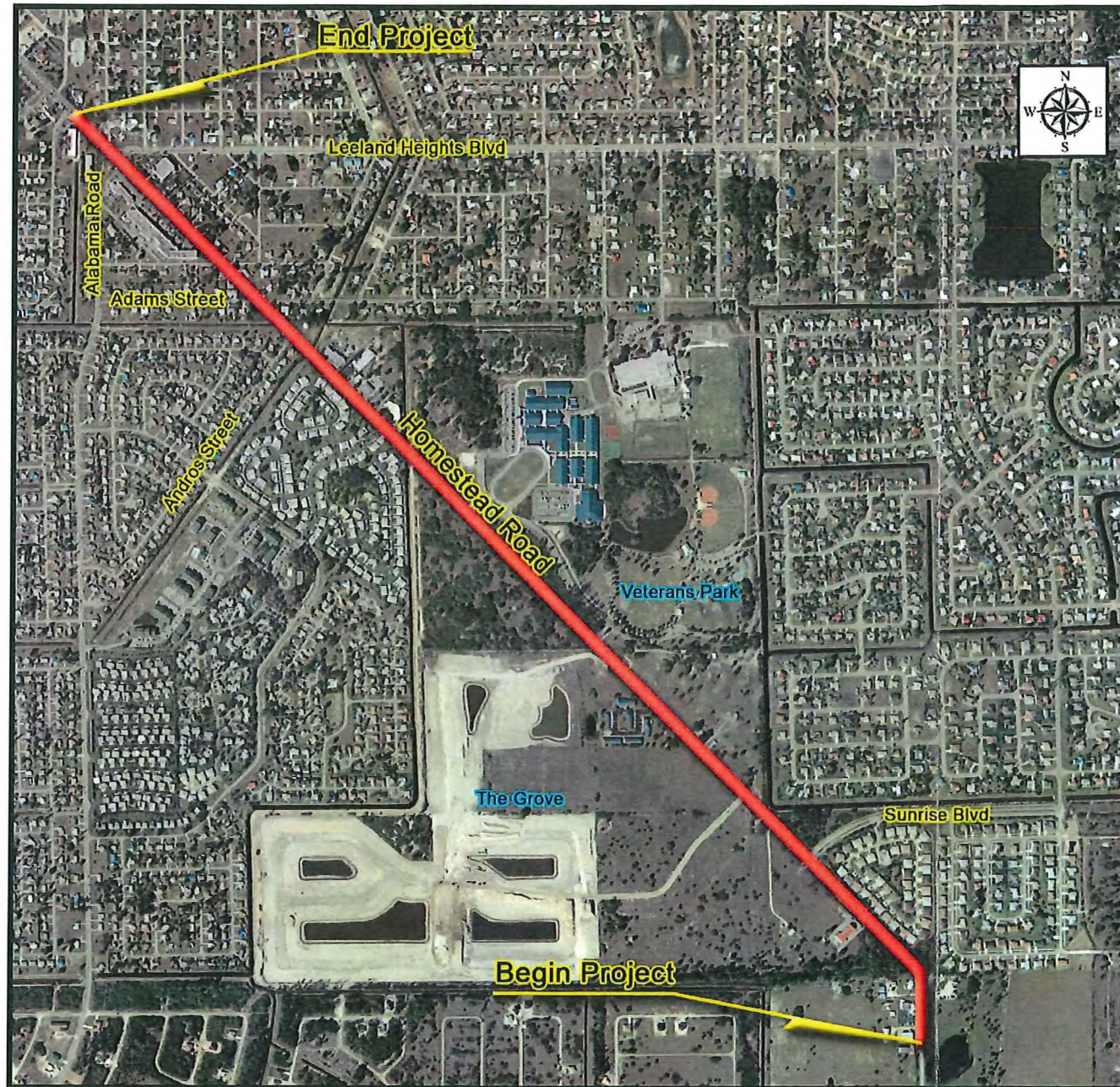
This Alignment Study is part of the overall design to develop construction plans for Homestead Road from South of Sunrise Boulevard to North of Alabama Road.

2.1 Purpose

The purpose of the Alignment Study is to document the engineering and environmental analysis and decisions consistent with Lee County's goals and objectives for the widening of Homestead Road. This study provides the information necessary to confirm the need for this project and documents the design of the improvements. This study will assist LeeDOT in verifying the recommended design and will be utilized as the document of record for support of subsequent engineering decisions during the development of the construction plans.

2.2 Project Description

As shown in **Figure 2.1**, Homestead Road is a south-north roadway traversing the east portion of Lee County. The proposed improvements for Homestead Road are to reconstruct the existing two lane undivided rural section to a divided urban section.



Homestead Road
Alignment Study
Lee County, Florida



PROJECT LOCATION MAP

Figure 2.1

SECTION 3.0 NEED FOR IMPROVEMENT

Lee County's economy is primarily based on tourism, but retirement is becoming a more prominent factor of the economy. Large populations of retirees are buying permanent or second homes in Lee County. This has spurred a growth in retail trade and service industries. Tourism and retirement have produced a population growth over the past 10 years. Specifically there was a population growth of eighteen percent from 2000 to 2005. This population growth and economic expansion is expected to continue over the next twenty five years. The population growth is expected to be 852,200 residents in the year 2030. This is a ninety four percent increase in population from the 440,888 residents in 2000.

3.1 Deficiencies

Based on the Concurrency Report – Inventory and Projection – 2005/2006 – 2006/2007, Homestead Road from Immokalee Road (S.R. 82) to Leeland Heights Boulevard had a Level of Service (LOS) D in 2005, LOS E in 2006, and is projected to have a LOS F in the future. LOS F is forecasted due to increased residential developments near the corridor and the continued home building that is taking place in Lehigh Acres.

3.2 Consistency with Transportation Plans

Homestead Road was listed as a Financially Feasible road to be widened from two lanes to four lanes from Sunrise Boulevard to Alabama Road in the Lee County Metropolitan Planning Organization (MPO) – Transportation Improvement Program – Fiscal Year 2007/2008 through 2011/2012 (Adopted December 7th 2005, 2005 with Amendments on January 20th, & March 17th 2006). It was later updated to “Programmed” in the Adopted 2015 Interim Plan dated August 18th, 2006.

This information was supplied via Lee County in the Adopted Five Year Capital Plan – 2006/2007 – 2011/2012. The project is programmed for construction in 2008/2009.

SECTION 4.0 EXISTING CONDITIONS

4.1 Existing Roadway Characteristics

4.1.1 Functional Classification

According to the Lee County - Future Functional Classification Map, Homestead Road is classified as an Arterial roadway. Based on the American Association of State Highway and Transportation Officials (AASHTO), the functional classification of Homestead Road is an Urban Minor Arterial. This is due to the nature of the road as a system that interconnects with and augments the urban principal arterial system. This minor arterial system distributes travel to small geographic areas and places more emphasis on land access than the principal arterial system. It also can carry local bus routes and provide intercommunity continuity, but does not penetrate identifiable neighborhoods.

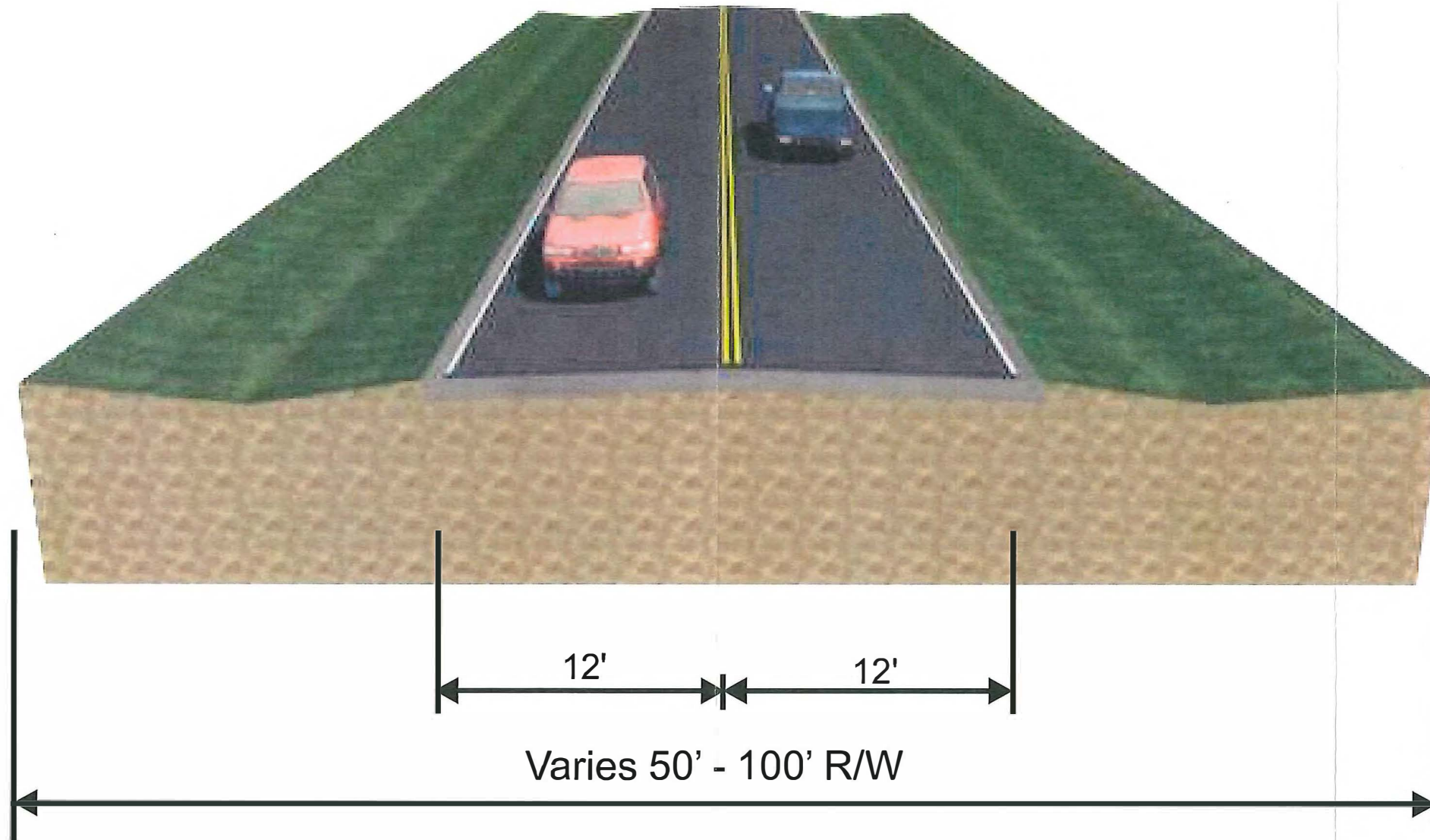
The Homestead Road/Alabama Road/Lecland Heights Boulevard intersection is the only currently signalized intersection within the project limits.

4.1.2 Typical Sections

Homestead Road within the project limits, as shown in **Figure 4.1**, is a two-lane rural roadway typical section with 12-ft lanes and no shoulders. The right-of-way width varies from 50 ft to 100 ft. The roadway is drained by small, grassed, open ditches with no formal stormwater treatment. These ditches drain to lateral ditches or canals that are part of the East County Water Control District (ECWCD) drainage canal system.



Existing 2-Lane Typical Section



Homestead Road
Alignment Study
Lee County, Florida



EXISTING TYPICAL SECTION

Figure 4.1

4.1.3 Pedestrian and Bicycle Facilities

Currently there are no identified bicycle facilities along Homestead Road. Homestead Road is identified as an Alternate Bicycle Route per the Countywide Bicycle Facilities Map: Lee County that was produced by the Southwest Florida Regional Planning Council and Lee County MPO. There is an existing sidewalk on the east side of the road from the north side of the Veterans Park driveway to the Alabama Road intersection. This intersection has sidewalks on all quadrants except the Southwest corner where there is only a small sidewalk connecting the crosswalks. There is also a school crosswalk on the north side of Andros Street. The crossing has a flashing signal with a 20 mph speed limit when flashing.

4.1.4 Right-of-Way

The existing right-of-way from the curve south of Sunrise Boulevard to north of Sunrise Boulevard at approximately Station 91+10 is 100 ft. The right-of-way is approximately 80 ft from Station 97+10 to north of the Alabama Road/Leeland Heights Boulevard intersection. From Station 106+77 to Station 111+38, the right-of-way jogs in and is approximately 50 ft wide.

4.1.5 Horizontal Alignment

Generally Homestead Road's alignment runs northerly from its starting point at S.R. 82. As the alignment enters the project limits at the curve south of Sunrise Boulevard the alignment shifts to a more northwesterly direction. The alignment continues in this northwesterly direction through the project limits north of Alabama Road/Leeland Heights Boulevard intersection. The alignment continues to Beth Stacey Boulevard before it curves back to a northerly direction before terminating at Lee Boulevard (C.R. 884).



Curve south of Sunrise Boulevard

4.1.6 Vertical Alignment

The vertical alignment is on a relatively flat grade with an elevation of 29.35 ft (NGVD 1929) at the curve south of Sunrise Boulevard to an elevation of 27.38 ft (NGVD 1929) at Alabama Road.

4.1.7 Drainage

Corridor / Basin Characteristics:

The existing drainage characteristics for the Homestead Road corridor are typical of a two-lane rural section, consisting of roadside grassed open ditches that collect and convey the roadway stormwater runoff to the nearest outfall facility. For this project corridor, the roadside ditches discharge to lateral ditches or canals that are part of the ECWCD drainage canal system. The current roadside ditches have not been permitted through either South Florida Water Management District (SFWMD) or ECWCD and provide no formal storm water treatment or attenuation. All the canals along the Homestead Road corridor are part of the ECWCD system.

The Homestead Road design project lies entirely within the SFWMD Orange River Watershed and within two ECWCD-defined drainage basins –Yellowtail One and Spur-A, as shown in **Figure 8-1**. The majority of the corridor lies within the Spur-A drainage basin, while the northern 1,800 ft of Homestead Road drains to the Live Oak Canal, which is part of the Yellowtail One drainage basin. Both of these basins contain a series of drainage canals that are interconnected and drain into the Able Canal, which ultimately drains into the Orange River. Within Lehigh Acres, there are areas that have a history of flooding and volume sensitivity, primarily due to flat hydraulic slopes and soil characteristics. Recently, ECWCD has revised its rule to adopt a 30 CSM (cubic feet/second/square mile) limiting discharge criteria to help alleviate flooding problems within the District.

Based on the location of existing outfalls and watershed divides, we have delineated four onsite roadway basins along the project corridor for stormwater management purposes, as follows:

- **Basin 1:** from begin project to midway between the two Veterans Park entrances, 4,000 +/- ft; roadway runoff for this basin drains south along the roadway to the southern bend in Homestead Road. From here, the runoff drains to the west into Canal 57-8-5, which is part of the Spur-A drainage basin.
- **Basin 2:** from midway between the two Veterans Park entrances to the VFW Hall 2,500 +/- ft; roadway runoff for this basin drains north along the roadway and discharges directly into the Bonefish Canal which is part of the Spur-A Drainage Basin.
- **Basin 3:** from the VFW Hall to just north of the water tower, 900 +/- ft; roadway runoff for this basin drains via roadside ditch directly into the Spur-A Canal, which is part of the Spur-A drainage basin.
- **Basin 4:** from just north of the water tower to Alabama Road, 1,800 +/- ft; roadway runoff for this basin drains south from Alabama Road via roadside ditch directly into the Live Oak Canal which is part of the Yellowtail One drainage basin.

According to the Federal Emergency Management Agency (FEMA) Map 125124-0375B, the project is entirely outside of the 100-year floodplain; therefore, floodplain compensation will not be necessary.

The Soil Conservation Service (SCS) Natural Resources Conservation Service (NRCS) Soil Survey for Lee County identifies the following soils within and along the project corridor: Immokalee, Malabar, Matlacha, Oldsmar and Urban Land. The Malabar and Matlacha soils are (HSG C) with seasonal groundwater depths averaging 2.0 to 3.0-ft in depth; these are conducive to dry detention facilities. Additionally, the Immokalee, Malabar, and Oldsmar soils are (HSG B/D) with seasonal ground water depths averaging 0.0 to 1.0-ft in depth; these are conducive to wet detention facilities.

4.1.8 Intersections and Signalization

Presently the only signalized intersection along Homestead Road is the intersection of Homestead Road/Alabama Road/Leeland Boulevard. The plan sheets in **Appendix A** show the proposed geometry at the major and minor intersections within the project limits.



Homestead Road at Alabama Road - signalized intersection

4.1.9 Lighting

Currently the only lighting along the corridor is the decorative corridor lighting from Adams Avenue north through the Homestead Road/Alabama Road/Leeland Boulevard intersection and at the intersection lighting at the Homestead Road/Sunrise Boulevard intersection.



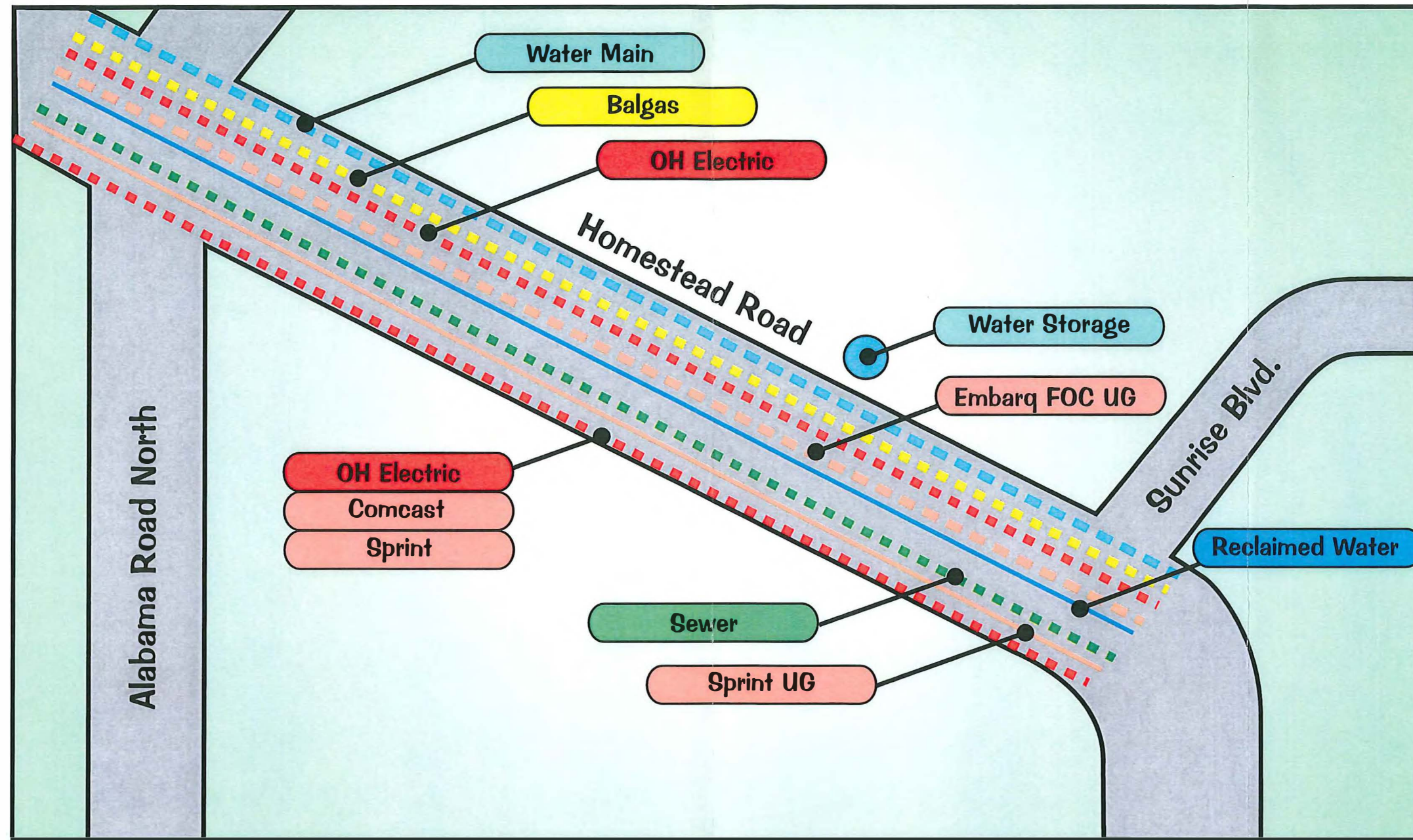
Decorative lighting at north end of the project

4.1.10 Utilities

Table 4-1 lists the utility owners within the corridor that may be affected by this project. Representative locations of these utilities are shown in Figure 4.2.

Table 4-1 EXISTING UTILITIES			
Utility Company	Contact	Phone No./ Fax No.	Type of Service
Comcast Cablevision 45 North Alabama Rd. Suite 5 Lehigh Acres, FL 33936	Carman Luster	941/ 369-0591	Overhead and Underground CATV
Florida Governmental Utilities Authority 1320 N. Homestead Rd. Lehigh Acres, FL 33936	Michael Currier	239/ 368-1615 Ext.14	Reclaimed Water Sanitary Sewer Water Main
Balgas Heritage 2619 Katherine St Ft. Myers, FL 33901	Richard Sharp	239/ 278-3111	Underground Gas
Lee County Signal Depart. 5650 Enterprise Pkwy. Ft. Myers, FL 33905	Joe Foose	239/ 694-7600 Ex. 4145	Signal control devices
Lee County Electric CO-OP P.O. Box 3455 North Fort Myers, FL 33918-3455	Bob Tomlin	239/ 656-2192	Overhead Electric
Embarq (Sprint) 2523 S. Memorial Dr. Avon Park, FL 33825	Gordon Marshall	863/ 452-3132	Overhead and Underground Phone and Fiber Optics

Homestead Road Utility Review



Homestead Road
Alignment Study
Lee County, Florida



EXISTING UTILITIES

Figure 4.2

4.2 Existing Structures/Railroad Facilities

There are no major structures or railroad facilities within the project limits. There is a double 7 ft x 5 ft concrete box culvert associated with Bonefish Canal that crosses under Homestead Road.



Double 7 ft x 5 ft concrete box culvert

4.3 Existing Environmental Characteristics

The natural landscape along the Homestead Road project corridor has been largely altered by urbanization and agricultural improvements. A few small patches of native habitat remain along the roadway corridor although the areas are largely limited in terms of wildlife and habitat value. An extensive network of drainage canals extend throughout the area. An isolated, herbaceous wetland is located at the southern end of the project. The environmental aspects of the Homestead Road project corridor are described in detail in the following sections.

4.3.1 Hydrology

The proposed Homestead Road project extends from south of Sunrise Boulevard to north of Alabama Road and lies entirely within the Orange River Watershed of the greater South West Caloosahatchee Basin. Drainage discharge from the Homestead Road project is directed through the ECWCD canal network. This network initially discharges to the Able Canal and flows into the Orange River. It ultimately discharges to the Caloosahatchee River which is designated as Class III water. The project does not have direct discharge to any Florida Department of Environmental Protection (FDEP) designated Outstanding Florida Waters (OFW). Three distinct drainage features traverse Homestead Road within the project limits: Live Oak, Spur "A" and Bonefish Canal.

4.3.2 Vegetation

Native vegetation was observed within the Homestead Road right-of-way corridor; however, the area has been significantly impacted by the existing roadway, nearby development and nuisance and exotic vegetation. Habitat evaluations consisted of aerial interpretations and field investigations to identify the vegetative communities within and immediately adjacent to the project right-of-way.

The project corridor transitions from predominantly dense urban land use in the northern project limits to a mixture of agricultural and residential land toward the southern extent of the project. Vegetative communities within the right-of-way consist primarily of upland species of low to moderate quality. In general, the predominant vegetation within the right-of-way is maintained sod found within shallow roadside swales, along the slopes of deeply incised, drainage features and over upland stretches of land. A heavily grazed, herbaceous wetland is located at the southern extent of the project.



Maintained right-of-way



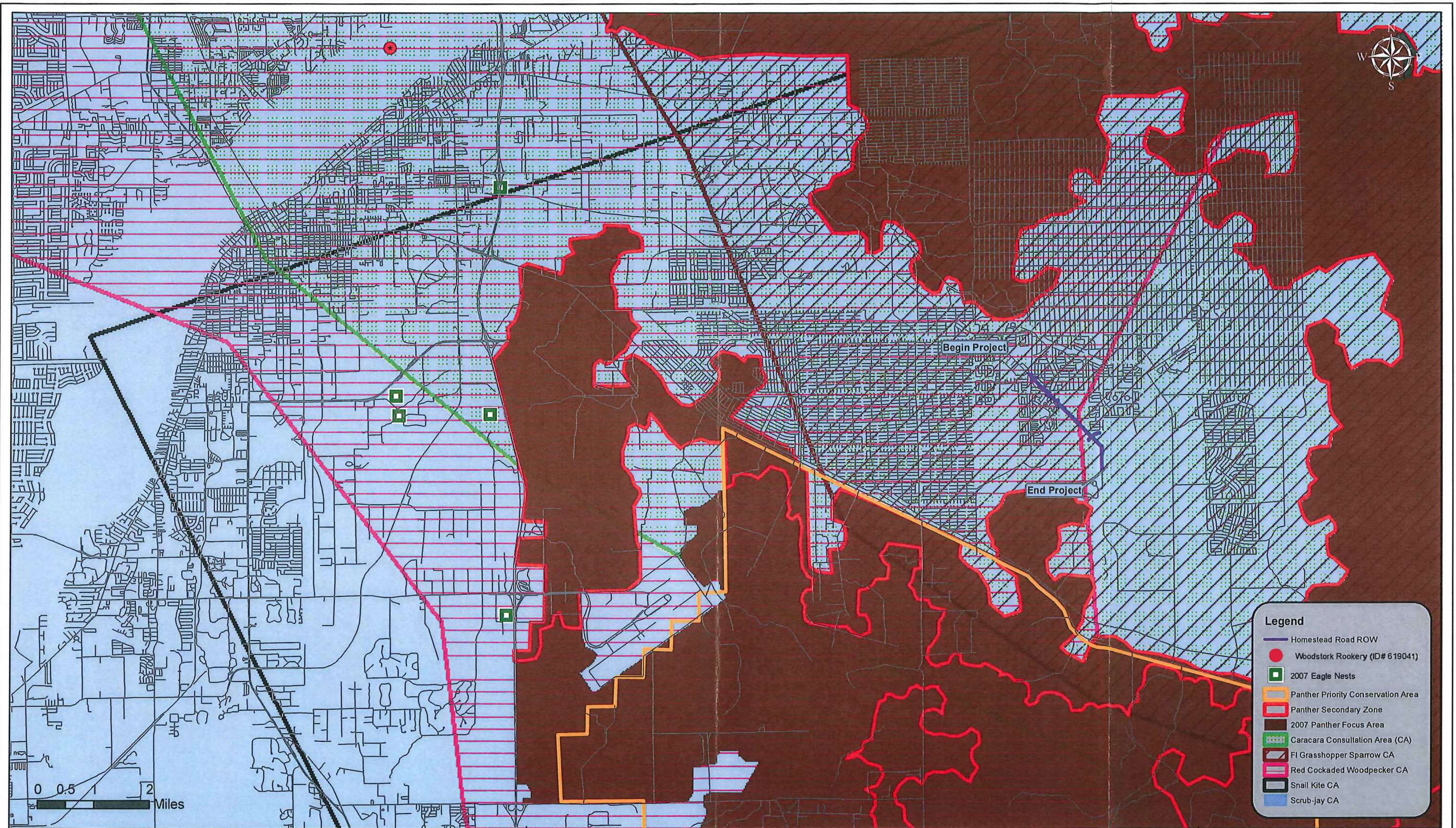
Low quality habitats – nuisance species

Vegetation associations along the roadway corridor contain saw palmetto (*Serenoa repens*), Bahia grass (*Paspalum notatum*), Brazilian pepper (*Shinus terebinthefolius*), eucalyptus (*Eucalyptus sp.*), punk tree (*Melaleuca quinquenervia*), Australian pine (*Casuarina equisetifolia*), and cabbage palm (*Sabal palmetto*). A private preserve exists at the southern limits of the project corridor along the eastern right-of-way. This area is comprised predominantly of laurel oak (*Quercus laurifolia*), slash pine (*Pinus elliottii*), and cabbage palm. The three main drainage features and the shallow roadside swales consist of maintained sod, most notably Bahia grass and St. Augustine grass (*Stenotaphrum secundatum*), as well as common ruderal species. Vegetation within the herbaceous wetland contains dotted smartweed (*Polygonum punctatum*), Carolina willow (*Salix caroliniana*), and various obligate grasses. The wetland is within an active pasture and has been historically disturbed.

4.3.3 Wildlife

The Homestead Road project corridor has been evaluated with regard to impacts to wildlife, specifically, impacts posed to threatened and endangered wildlife and other wildlife species of special concern. The majority of the corridor is maintained right-of-way. There is limited undisturbed, natural habitat within the corridor with the potential to support wildlife. The native habitat patches (both upland and wetland) have been compromised by proximity to the existing roadway, agricultural activities, and encroachment of nuisance and exotic vegetation. The high degree of disturbance typical along the project corridor likely reduces the potential for threatened and endangered wildlife.

The corridor extends through several U.S. Fish and Wildlife Service (USFWS) Wildlife Consultation Areas as shown in **Figure 4.3**. To account for this, the immediate area was assessed for habitat known to support wildlife species identified by the USFWS mapping. Much of the native habitat in this area is in patches, largely disturbed, and isolated. Wildlife occurrences suggested by the USFWS consultation area boundaries were not observed during visits to the project corridor.



**Homestead Road
Alignment Study
Lee County, Florida**



Threatened and Endangered Species Map

Figure 4.3

Source: U. S. Fish and Wildlife Service

The Florida Natural Areas Inventory (FNAI) was contacted for information on element occurrences documented within or in proximity to the Homestead Road project. A standard data report was generated describing the FNAI database findings. This report is included as **Appendix D**. According to the report, wildlife observations documented recently within the vicinity of the project corridor included the bald eagle (*Haliaeetus leucocephalus*), and the wood stork (*Mycteria americana*); however, wildlife was not observed during visits to the project site. **Table 4-2** summarizes the reports findings with regard to wildlife potential within the project area.

The Florida Natural Areas Inventory identified a wood stork foraging area within four miles from the Homestead Road project. In addition, an active wood stork rookery was identified within thirteen miles of the project. Currently, the USFWS recognizes an 18.6-mile core foraging area (CFA) around all known wood stork colonies in south Florida. The U.S. Fish and Wildlife Service references the *Habitat Management Guidelines For The Wood Stork In The Southeast Region* (Service 1990) and the *Draft Supplemental Habitat Management Guidelines for the Wood Stork in South Florida* to assess wood stork impacts. The Service routinely accepts the U.S. Army Corps of Engineers determination of "may affect, not likely to adversely affect" for projects with insignificant impacts or for projects that avoided, minimize, and adequately mitigate loss of foraging habitat.

Table 4-2 POTENTIAL LISTED SPECIES

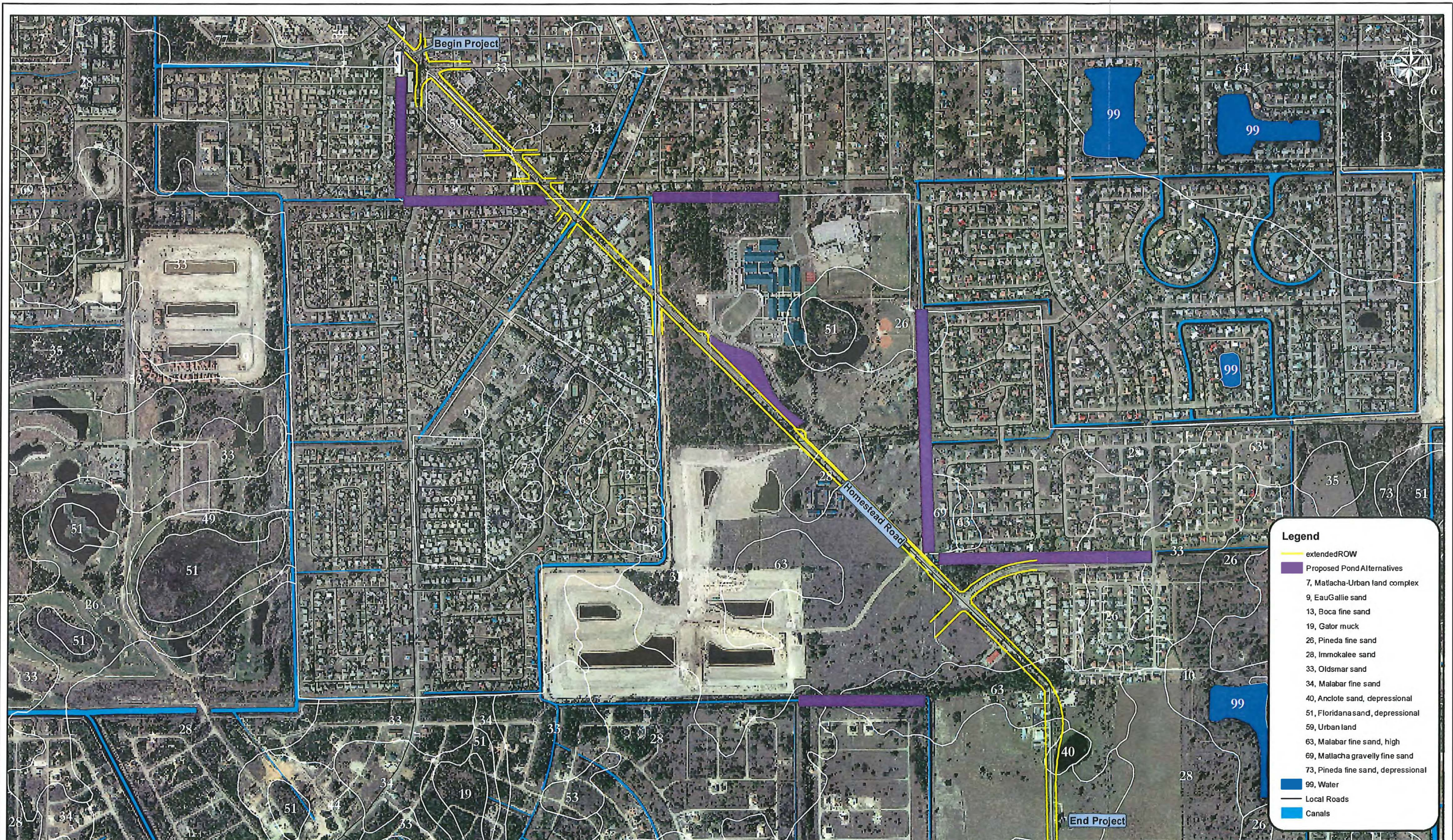
Common Name	Designated Status		Habitat Preference	Potential for Occurrence On-Site	Habitat Present in Area	Element Occurrence
	USFWS	FWC				
AVIAN						
Bachman's Sparrow <i>Aimophila aestivalis</i>	N	N	Oaks and pines bordering shrubby-brushy, overgrown fields	Minimal	N	N
Florida Burrowing Owl <i>Athene cunicularia floridana</i>	N	LS	Open prairies, sand hills, farm land	Minimal	Y	N
Florida Sandhill Crane <i>Grus canadensis pratensis</i>	N	LT	Wet prairies, marshy lake bottoms	Minimal	Y	N
Bald Eagle <i>Haliaeetus leucocephalus</i>	LT, PDL	LT	Close to large water bodies, habitat can be variable	Moderate	Y	N
Wood Stork <i>Mycteria americana</i>	LE	LE	Woody vegetation over standing water; shallow water	Moderate	Y	N
Snail Kite <i>Rostrhamus sociabilis plumbeus</i>	LE	LE	Large open, freshwater marshes & lakes w/ shallow water < 4' deep	Minimal	Y	N
MAMMAL						
Florida Panther <i>Puma concolor coryi</i>	LE	LE	Extensive forested communities; large wetlands	Minimal	N	N
Sherman's Short-tailed Shrew <i>Blarina carolinensis shermani</i>	N	LS	Diverse terrestrial habitats	Minimal	N	N
Florida bonneted bat <i>Eumops floridanus</i>	N	LE	Roosts in tree cavities and buildings	Minimal	Y	N
Florida Long-tailed Weasel <i>Mustela frenata peninsulae</i>	N	N	Pine flatwoods, sandhills, hardwood forests, sand pine scrub	Minimal	Y	N
Round-tailed Muskrat <i>Neofiber alleni</i>	N	N	Shallow marshes of variable size and species composition	Minimal	Y	N
Sherman's Fox Squirrel <i>Sciurus niger shermani</i>	N	LS	Mature, fire maintained long leaf pine turkey oak habitats, flatwoods	Minimal	Y	N
Florida Black Bear	N	LT*	Mixed hardwood, pine palm	Minimal	N	N

<i>Ursus americanus floridanus</i>			hammocks, scrub, forested wetlands			
REPTILE						
Eastern Indigo Snake <i>Drymarchon couperi</i>	LT	LT	Mesic flatwoods, upland pine forest, sandhill scrub	Minimal	Y	N
Gopher Tortoise <i>Gopherus polyphemus</i>	N	LS	Sandhill, scrubby, flatwoods, xeric hammock	Minimal	Y	N
AMPHIBIAN						
Gopher Frog <i>Rana capito</i>	N	LS	Longleaf pine, turkey oak, sandhill, pine flatwoods, sand pine	Minimal	Y	N
FLORA						
Many-flowered Grass-pink <i>Calopogon multiflorus</i>	N	LE	open, damp sandy pinelands & meadows, flatwoods, hammocks	Minimal	Y	N
Sand Butterfly Pea <i>Centrosema arenicola</i>	N	LE	Sandhill, scrubby flatwoods, dry upland woods	Minimal	Y	N
Beautiful Pawpaw <i>Deeringothamnus pulchellus</i>	LE	LE	slash pine-saw palmetto flatwoods; mowed road edges	Minimal	Y	N
Narrow-leaved Carolina Scalystem <i>E. carolinensis var. angustifolia</i>	N	N	Wet flatwoods, wet prairie, marsh recently burned areas	Minimal	N	N
Nodding Pinweed <i>Lachea cernua</i>	N	LT	Scrub	Minimal	N	N
Carter's Large-flowered Flax <i>Linum carteri var. smallii</i>			Pine rocklands	Minimal	N	N
Florida Spiny-pod <i>Malelea floridana</i>	N	LE	Variety of upland hardwood forests; fairly moist woods to dry, and open	Minimal	Y	N
Celestial Lily <i>Nemastylis floridana</i>	N	LE	Wet flatwoods, prairies, marshes, cabbage palm hammocks edges	Minimal	N	N
Florida Beargrass <i>Nolina atopocarpa</i>	N	LT	Wide range-open scrub to hammocks with closed canopies, upland sites	Minimal	Y	N
Yellow Fringeless Orchid <i>Platanthera integra</i>	N	LE	Wet woods, pine barrens, wet sandy soil	Minimal	N	N
Giant Orchid <i>Pteroglossaspis ecristata</i>	N	LT	Sandhill, scrub, pine flatwoods, pine rocklands	Minimal	Y	N
LEGEND						
LE = Endangered, LT = Threatened, LS = Species of Special Concern, PDL = Proposed for Delisting		Minimal = Little or no suitable habitat and no element occurrences		High = Suitable habitat exists w/in the project study area on-site and species observed within project study area		
T(S/A) = Threatened Similarity of Appearance N = Not currently listed, nor being considered		Moderate = Potential suitable habitat exists and/or potential element occurrences				

4.3.4 Soils

According to data generated from the 2006 United States Department of Agriculture (USDA) NRCS website, the majority of the soils in the project area are classified as non-hydric. The Lee County, Florida soil survey (1991), as developed by the SCS, was used to obtain information on the general soil characteristics of soils mapped along the project corridor. This source may not always reflect the current conditions of the area, particularly if recent development has modified drainage patterns in the area, as is the case along the Homestead Road corridor.

According to the soil survey (1991), seven soil types have been identified within the right-of-way limits. These soils are classified as nearly level, very poorly to poorly drained, sandy soils. Two soil types mapped along this roadway corridor are classified by the NRCS as hydric soils. Three of the soils are described as poorly drained, non-hydric soils. The remaining two soil types are characterized as urban soils. The soil types mapped within the limits of the project are described below and are shown in **Figure 4.4**.



- Legend**
- extended ROW
 - Proposed Pond Alternatives
 - 7, Malacha-Urban land complex
 - 9, Eau Gallie sand
 - 13, Boca fine sand
 - 19, Gator muck
 - 26, Pineda fine sand
 - 28, Immokalee sand
 - 33, Oldsmar sand
 - 34, Malabar fine sand
 - 40, Anclote sand, depressional
 - 51, Floridana sand, depressional
 - 59, Urban land
 - 63, Malabar fine sand, high
 - 69, Malacha gravelly fine sand
 - 73, Pineda fine sand, depressional
 - 99, Water
 - Local Roads
 - Canals



**Homestead Road
Alignment Study
Lee County, Florida**



Soil Survey

Figure 4.4

Two soils within the project corridor are considered hydric soils. **Malabar fine sand (34)** is a nearly level, poorly drained, hydric soil associated with sloughs. The soil is comprised of sandy and loamy marine deposits. This soil type is not generally ponded or flooded except during periods of heavy rainfall. Saturation is generally within six inches for at least six months each year. **Anclote sand, depressional** is a nearly level, very poorly drained hydric soil generally associated with freshwater marshes. This soil is comprised of sandy marine deposits. The soil is typically saturated for six months each year and is frequently ponded.

Three soils within the project corridor are classified as nearly level, non-hydric, poorly drained soils: **Immokalee sand (28)**, **Oldsmar sand (33)**, and **Malabar find sand, high (63)**. According to the Hydric Soils of Florida Handbook (2000), these soils may contain hydric inclusions at thirty percent or less. In general, the water table in these soil types remains below the ground surface. Soil saturation may reach 12 inches seasonally during the wetter months. Immokalee sand consists predominantly of sandy marine deposits. Malabar find sand, high and Oldsmar sand are comprised of sandy and loamy marine deposits. All three soil types are associated with South Florida flatwood habitats.

Portions of the area within the project vicinity are classified as **Matlacha-Urban land complex (7)** and **Urban Land (59)**. Both soil mapping units have been altered by anthropogenic activities. Matlacha-Urban land complex areas generally consist of a complex mosaic of Matlacha soil and altered urban land. Materials associated with this map unit vary from concrete to gravel. Twenty to thirty percent of these areas may be paved or ditched. Seasonal soil saturation is around 30 inches. The Urban Land designation is used to describe areas consisting of greater than 85% concrete or buildings.

One additional hydric soil was identified was identified. **Pineda fine sand (26)** was identified within the pond alternative proposed for Canal 57-4-7. In the natural state, this soil is described as a nearly level, poorly drained hydric soil associated with South Florida sloughs. During most years, the water table is within 10 inches for two to four months. This area has been modified by ditching.

4.3.5 Wetland Assessment

The project corridor was assessed for jurisdictional wetlands and other surface waters (OSW). One isolated, herbaceous wetland and three deeply incised drainage ditches were identified within the project right-of-way. Additional drainage canals are also proposed as pond alternatives. None of the ditches are associated with existing wetland systems. One ditch, Live Oak Canal, runs along the southern extent of a hydric soil signature (Malabar fine sand). A small portion of a second ditch (Canal 57-4-7) falls within a hydric soil signature (Pineda fine sand). For permitting purposes, all drainage features should receive a designation of OSW. The wetland will receive a state jurisdictional determination.



57-5-3 Bonefish Canal

Several shallow, maintained swales parallel Homestead Road. Jurisdictional field indicators were not observed in these irregularly sized areas.



Shallow, maintained swale

4.3.6 Special Waters

There are no special waters identified within or adjacent to the Homestead Road project corridor. Drainage associated with the area ultimately discharge to the Caloosahatchee River which is designated as Class III waters.

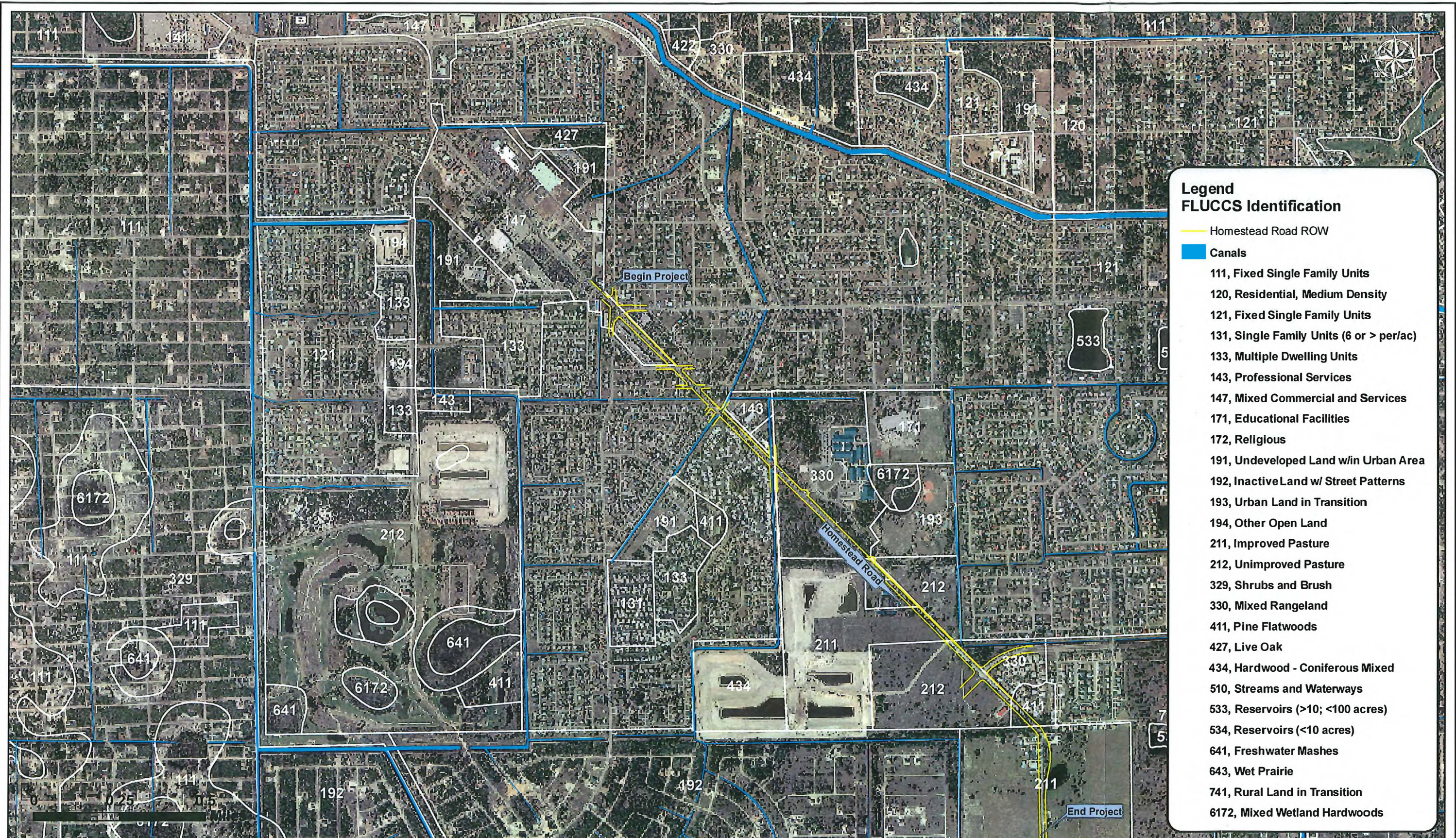
4.3.7 Land Use

The Homestead Road project has been classified in accordance with the Florida Land Use, Cover and Forms Classification System (FLUCFCS) developed by the Florida Department of Transportation (FDOT, 1999/2000). Surrounding land use characteristics were reviewed within approximately 500 ft on either side of the Homestead Road. A map depicting the adjacent land use characteristics within approximately two miles of the Homestead Road project has been shown in **Figure 4.5**, Florida Land Use and Land Cover.

Currently, the 51-acre project right-of-way extends through a predominantly urbanized section of Lehigh Acres. The most prevalent land use/land cover adjacent to the existing roadway is upland, single family residential (FLUCFCS 111 – 133) and professional, mixed commercial use (143 and 147). Several areas characterized as pasture and rangeland as recently as 1999/2000 have since been converted to residential use. One area designated as mixed rangeland (330) has been developed into the local elementary and middle school (171). Pasture and mixed rangeland (211, 212 and 330) was identified along the southern extent of the project limits.

A jointly managed county park and local school are located along the east side of Homestead Road. The areas are managed by Lee County and the Lee County School Board as a community park, recreational facility and primary schools. The areas contain undeveloped, upland pasture, a lake, a school complex, and ball parks. The area is referred to as the Veterans Park Academy for the Arts and Recreation Complex.

Native habitats and undisturbed wetlands are limited along this stretch of roadway. Along the northern limits of the corridor, the project right-of-way is crisscrossed by three deeply incised, man-made drainage features (510) that interconnect with a network of drainage features throughout Lehigh Acres. Several pond alternatives are proposed within sections of the extending network of drainage features. One 0.93 acre private preserve was identified toward the southern reaches of the project limits on the east side of Homestead Road. This area is characterized as pine flatwoods (411) and serves as green space for the Bethany Trace residential community (121). A second area also associated with the Bethany Trace community includes a 0.66 acre vegetative buffer along Homestead Road. Both areas extend an average of ten feet into the Homestead Road right-of-way. A natural herbaceous wetland is located at the southern extent of the Homestead Road project limits.



- Legend**
FLUCCS Identification
- Homestead Road ROW
 - Canals
 - 111, Fixed Single Family Units
 - 120, Residential, Medium Density
 - 121, Fixed Single Family Units
 - 131, Single Family Units (6 or > per/ac)
 - 133, Multiple Dwelling Units
 - 143, Professional Services
 - 147, Mixed Commercial and Services
 - 171, Educational Facilities
 - 172, Religious
 - 191, Undeveloped Land w/in Urban Area
 - 192, Inactive Land w/ Street Patterns
 - 193, Urban Land in Transition
 - 194, Other Open Land
 - 211, Improved Pasture
 - 212, Unimproved Pasture
 - 329, Shrubs and Brush
 - 330, Mixed Rangeland
 - 411, Pine Flatwoods
 - 427, Live Oak
 - 434, Hardwood - Coniferous Mixed
 - 510, Streams and Waterways
 - 533, Reservoirs (>10; <100 acres)
 - 534, Reservoirs (<10 acres)
 - 641, Freshwater Marshes
 - 643, Wet Prairie
 - 741, Rural Land in Transition
 - 6172, Mixed Wetland Hardwoods



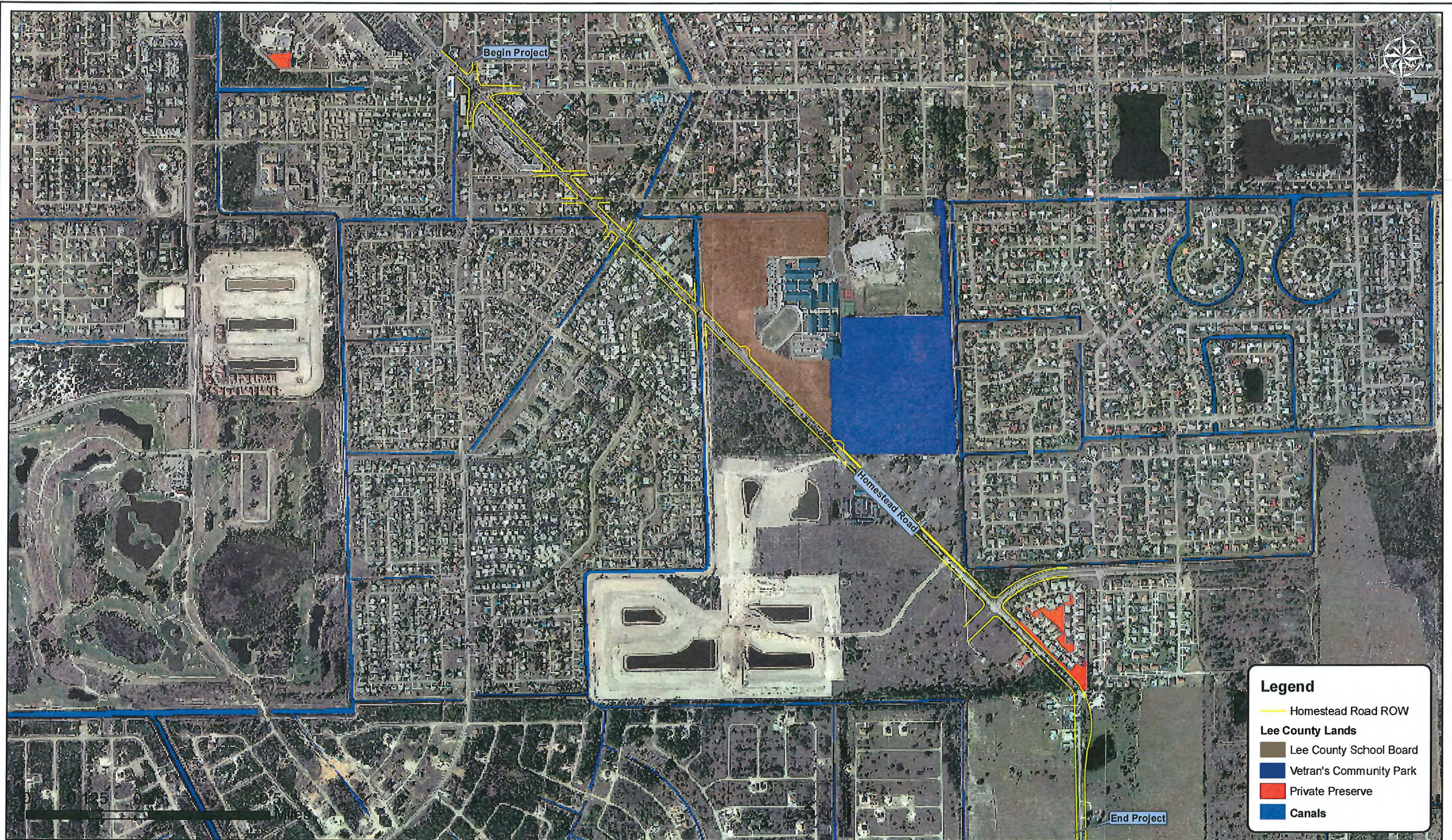
Bethany Trace Preserve

4.3.8 Parks and Recreation Facilities

The Homestead Road project corridor is adjacent to tracts of park land and an indigenous preserve. A map depicting the location of the parks and recreational facilities and the private preserve is shown in **Figure 4.6**.

The Veterans Park Academy for the Arts and Recreation Complex is a Lee County park located along the eastern side of Homestead Road. The multiple-use park parcel is a combination of parcels totaling 81.34 acres. The area is jointly managed by Lee County Parks and the Lee County School Board. The parcel serves as a primary school complex for Lehigh Acres and is concurrently used for recreational purposes including a playground, picnic pavilion, tennis courts, a track, basketball courts, softball fields and an enlarged lake. Large portions of the area contain undeveloped uplands.

A 0.93 acre indigenous preserve is located in the southern limits of the project along the east side of Homestead Road. This area serves as green space for the Bethany Trace residential community. An additional 0.66 acre linear stretch of habitat also exists in this area. The area provides a vegetative buffer between the existing road and the residential community.



Legend

- Homestead Road ROW
- Lee County Lands**
- Lee County School Board
- Vetran's Community Park
- Private Preserve
- Canals



Homestead Road
Alignment Study
Lee County, Florida



Parks and Recreational Facilities

Figure 4.6

SECTION 5.0 DESIGN CONTROLS AND STANDARDS

The design criteria used for this study are the current design standards established by the Florida Department of Transportation (FDOT) and AASHTO. The following references were used to establish the criteria:

- Plans Preparation Manual, Design Criteria and Process (English), Florida Department of Transportation, Second Edition (Revised January 1, 2007)
- A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (2004 Fifth Edition)
- Florida Department of Transportation Design Standards for Design, Construction, Maintenance and Utility Operations on State Highway System (2006)
- Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook) (May 2002)
- Lee County Land Development Code, Lee County Board of County Commissioners (Adopted 1994, Supplement No. 8 2006)

A summary of the roadway design criteria recommended for this study is presented in **Table 5-1**.

Table 5-1 DESIGN CRITERIA

Design Element	Current English Standard	Source/Comments
<ul style="list-style-type: none"> Design Speed Facility Type 	45 mph Urban arterial	
Lane Widths (ft)	11 ft; 15 ft outside lane	Lee County Land Development Code Section 10-707
Grades <ul style="list-style-type: none"> Minimum Maximum 	0.3% 8.0%; 7.0% (<i>rural</i>)	2007 FDOT PPM Table 2.6.4 2007 FDOT PPM Table 2.6.1; Assume flat terrain
Cross Slope <ul style="list-style-type: none"> Travel Lanes Sidewalks 	0.025 0.02	Lee County Preference 2007 FDOT PPM Section 8.6.3
Superelevation	0.05 max. 0.10 max. (<i>rural</i>)	FDOT Standard Index 511 FDOT Standard Index 510
Slope Ratio	1:150; 1:200 (<i>rural</i>)	2007 FDOT PPM Table 2.9.3
Horizontal Alignment <ul style="list-style-type: none"> Collector 	<ul style="list-style-type: none"> Maximum deflection w/o curve: 1° 00' [0° 45' (<i>rural</i>)] Maximum degree of curve: 8° 15' [10° 15' (<i>rural</i>)] Length of curve: 15V des., 400-ft. min. 	2007 FDOT PPM Table 2.8.1a 2007 FDOT PPM Table 2.8.3 2007 FDOT PPM Table 2.8.2a Max degree of curvature w/o superelevation: 2° 45' R=15,726 ft [0° 30' R= 2,865 ft (<i>rural</i>)]
Vertical Alignment <ul style="list-style-type: none"> Collector 	Crest vertical curves: <ul style="list-style-type: none"> Minimum K: 98 135' min. length Sag vertical curves: <ul style="list-style-type: none"> Minimum K: 79 135' min. length 	2007 FDOT PPM Table 2.8.5 2007 FDOT PPM Table 2.8.6
Maximum change in grade w/o vertical curve	0.70	2007 FDOT PPM Table 2.6.2
Stopping Sight Distance	360-ft. min.	2007 FDOT PPM Table 2.7.1; for grades 2% or less
Horizontal Clearance	See Comments	See Section 2.11 of 2007 FDOT PPM
Median	22'; 19.5'; 12'***	2007 FDOT PPM Table 2.2.1; *If there are right-of-way constraints; **Two-way-left-turn lane
Shoulders <ul style="list-style-type: none"> w/o Shoulder Gutter 	Outside <ul style="list-style-type: none"> Full = 10' (<i>rural</i>) Paved = 5' (<i>rural</i>) 	2007 FDOT PPM Table 2.3.4
Vertical Clearance Roadway	16'-6"	2007 FDOT PPM Table 2.10.1
Vertical Clearance Signs	17'-6"	2007 FDOT PPM Table 2.10.2
Clear Zone Width <ul style="list-style-type: none"> Collector 	24'	2007 FDOT PPM Table 2.11.11, Recoverable Terrain for design speed/classification
Border Width <ul style="list-style-type: none"> Collector 	10'	FDOT border width not required criteria for Lee County
Roadside Slopes <ul style="list-style-type: none"> Front Slope Back Slope Transverse Slopes 	1:2 or to suit property owner, not flatter than 1:6. right-of-way cost must be considered for high fill sections. 1:2 or to suit property owner. Not flatter than 1:6 1:4	2007 FDOT PPM Table 2.4.1

SECTION 6.0 TRAFFIC ANALYSIS

6.1 Existing Conditions

Existing conditions traffic analyses were conducted for the traffic characteristics and operating conditions along the study corridor. This section summarizes the assumptions and methodology used to evaluate existing traffic conditions along Homestead Road.

6.1.1 Existing Traffic Count Data

Traffic count data were obtained for pertinent study area locations along the Homestead Road study corridor between April 16th and April 24th, 2007. The following types of traffic counts were collected for the study corridor:

- Eight-hour turning movement counts
- Twenty-four hour bi-directional counts
- Seven-day bi-directional vehicle classification counts

The locations of these counts are shown in **Figure 6.1**.

6.1.2 Existing Traffic Volumes

To obtain annual average daily traffic (AADT) volumes for the study corridor, the daily counts were adjusted by the FDOT seasonal and axle adjustment factors, specific to Lee County. The existing (2007) AADT volumes are shown in **Figure 6.2**. The existing AM and PM peak hour turning movement counts collected for this study were adjusted by the FDOT peak season factor and are shown in **Figure 6.3**.

6.1.3 Traffic Characteristics

The *Traffic Count Report, 2006*¹ was used as a resource to estimate the design hour (30th highest hour) K factor and D (peak directional) factor for the study area. Based on the review of the data, the K₃₀ and D₃₀ factors were determined to be 10.0 percent and 54.0 percent, respectively. The K³⁰ factor (also known as the design hour factors) reflects the proportion of AADT traffic volumes occurring during the 30th highest hour during the design year. The peak directions are northbound and westbound for the AM peak hour. During the PM peak hour, the peak directions are southbound and eastbound. The T (truck) factors were also estimated from the seven-day bi-directional vehicle classification count data. The estimated T₂₄ factor is 6.0 percent and the design hour truck factor is 3.0 percent.

6.1.4 Existing Roadway Characteristics

Currently, Homestead Road is a two lane undivided roadway from south of Sunrise Boulevard to north of Alabama Road/Leeland Heights Boulevard. Lee County lists Homestead Road as an arterial for the existing functional classification. Based on the *The Lee Plan, 2006 Codification* the acceptable LOS standard for this roadway is LOS E.

Seven intersections were evaluated along the study corridor, including six unsignalized intersections and one signalized intersection. The intersections are as follows:

Unsignalized

- Homestead Road/Sunrise Boulevard
- Homestead Road/Caloosa Lakes Boulevard/Veterans Park Entrance
- Homestead Road/School Entrance
- Homestead Road/Pinewood Boulevard
- Homestead Road/Andros Street
- Homestead Road/Adams Avenue

Signalized

- Homestead Road/Alabama Road/Leeland Heights Boulevard

The existing intersections lane geometries are shown in **Figure 6.4**.

6.1.5 Existing Operations Analyses

The operations of each intersection located in the study area were analyzed using the *Highway Capacity Software*³ (HCS) for unsignalized intersections and *Synchro plus SimTraffic 7*⁴ for the signalized intersection.

The following assumptions were used to complete the existing analysis:

- Peak hour turning movement volumes shown in **Figure 6.3**
- Design hour truck percent (3.0 percent)
- Peak Hour Factor (PHF) of 0.95
- Existing lane geometry shown in **Figure 6.4**
- Signal timing plans obtained from Lee County staff

As shown in **Table 6.1**, all the study corridor intersections are operating at or better than the LOS E standard.

Table 6-1 EXISTING (2007) INTERSECTIONS OPERATIONS ANALYSES			
Homestead Road Intersection At	Traffic Control	Existing AM Peak Hour LOS/Delay	Existing PM Peak Hour LOS/Delay
Sunrise Boulevard	Stop Control Westbound Movements	B/12.6	B/10.9
Veterans Park Entrance/Caloosa Lakes Boulevard	Stop Control Eastbound/Westbound Movements	C/15.7	C/15.9
School Entrance	Stop Control Westbound Movements	B/12.8	B/10.8
Pinewood Boulevard	Stop Control Eastbound Movements	C/17.0	C/15.9
Andros Street	Stop Control Eastbound Movements	B/14.0	C/19.4
Adams Avenue	Stop Control Eastbound/Westbound Movements	C/17.8	C/17.2
Alabama Road/Leeland Heights Boulevard	Signal	E/73.3	D/45.5

Notes: Overall LOS and delay are reported for the signalized intersection.

LOS and delay (seconds per vehicle) are reported for the worst unsignalized intersection approach

The peak hour peak directional operational analyses for the existing two-lane undivided roadway segments were conducted by using the *Lee County Generalized Peak Hour Directional Service Volumes*⁵. As shown in **Table 6.2** the study corridor is currently operating at LOS B and C conditions.

Table 6-2 EXISTING (2007) SEGMENT OPERATIONAL ANALYSES		
Homestead Road Segment	2007 AM Peak Hour LOS (NB/SB)	2007 PM Peak Hour LOS (NB/SB)
Sunrise Boulevard to Veterans Park Entrance/Caloosa Lakes Boulevard	C/C	B/C
Veterans Park Entrance/Caloosa Lakes Boulevard to School Entrance	C/B	B/C
School Entrance to Pinewood Boulevard	C/C	C/C
Pinewood Boulevard to Andros Street	C/C	C/C
Andros Street to Adams Avenue	C/C	C/C
Adams Avenue to Alabama Road/Leeland Heights Boulevard	C/C	C/C

Note: Assumed Class I Arterial service volumes provided in the Lee County Generalized Peak Hour Directional Service Volumes table.

NB/SB = northbound/southbound

6.2 Future Conditions

The future traffic conditions were evaluated along the study corridor for the design year (2030). This evaluation process included developing future daily and peak hour traffic projections and conducting operations analyses for the study area intersections. The future traffic conditions were only evaluated for one build condition, which reflects intersection improvements and assumes the following design concepts:

- Homestead Road from Alabama Road/Leeland Heights Boulevard to Bonefish Canal
 - Five-lane typical section with two-way left turn lane
- Homestead Road from Bonefish Canal to Sunrise Boulevard
 - Four-lane divided typical section

6.2.1 AADT Traffic Projections

The Lee/Collier 2030 Cost Feasible Model was used to estimate daily traffic projections for the design year (2030). The model traffic estimates were adjusted from peak season weekday average daily traffic (PSWADT) to AADT, by using the 2005 Lee Countywide Model Output Conversion Factor (MOCF) of 0.91. Since a few of the study area cross streets were not reflected in the model, the 2030 AADT volumes for these streets were estimated by distributing the centroid connector AADT volumes. Centroid connectors are used in the model to provide a general representation of access locations (e.g., minor roadways and driveway) along a roadway corridor. A comparison of the existing (2007) and 2030 AADT volumes shown in **Figure 6.2** reveals that the majority of the study corridor is expected to experience reasonable growth by 2030. However, there is one roadway, Alabama Road west of Homestead Road that is expected to have a negative growth by 2030. Further review indicates that there are a couple of new roadways reflected in the Lee/Collier 2030 Cost Feasible Model that are expected to divert traffic volumes from Alabama Road, hence causing lower AADT volume in 2030. These roadways include:

- Sunrise Boulevard Extension from Alabama Road to Homestead Road
- Beth Stacey Boulevard Extension from SW 23rd Street to Milwaukee Boulevard

6.2.2 Peak Hour Traffic Projections

The future AADT traffic volumes and traffic characteristics discussed in **Section 6.1.3** were used to develop the peak hour traffic projections. The design year (2030) directional design hour volumes (DDHV) were obtained by multiplying the AADT volumes first by the K_{30} factor (10.0 percent) and then by the D_{30} factor (54.0 percent). At the intersections, the design hour AM and PM peak hour turning movement volumes were estimated by using existing turning movement percentages obtained from the traffic count data. Minor adjustments were completed to the peak hour turning movement volumes in order to maintain the appropriate distribution of traffic along the study corridor. **Figure 6.5** displays the AM and PM peak hour turning movement volumes developed for the design year (2030).

6.3 Future Operational Analyses

The same evaluation software used for the existing conditions analyses were used to complete the future operations analyses (i.e., HCS for unsignalized intersections and Synchro for the signalized intersections).

The following assumptions were used to complete the 2030 analyses:

- Peak hour turning movement volumes shown in **Figure 6.5**
- Design hour truck percent (4.0 percent)
- Peak Hour Factor (PHF) of 0.95
- Lane geometry shown in **Figure 6.6**
- Signal timings and phasings were optimized for 2030 conditions

The 2030 analyses results shown in **Table 6.3** indicate that two additional study area intersections are expected to require signalization to operate better than the LOS E standard in 2030. The two locations that are expected to require signalization in 2030 are the intersections of Homestead Road/Sunrise Boulevard and Homestead Road/Veterans Park Entrance/Caloosa Lakes Boulevard. As unsignalized intersections, both of these locations are expected to significantly exceed LOS F conditions during the 2030 AM and PM peak hours. Therefore, the operations results summarized in **Table 6.3** reflect signalization by 2030. Both intersections should be monitored to determine when they will meet the signal warrants in the future. The existing signalized intersection at Homestead Road/Alabama Road/Leeland Heights Boulevard is expected to operate at LOS D with the proposed geometric improvements shown in **Figure 6.6**. Also shown in **Table 6.3**, is that the remaining unsignalized intersections are expected to operate at or better than the LOS E standard in 2030, assuming the proposed geometric improvements displayed in **Figure 6.6**.

Table 6-3 DESIGN YEAR (2030) INTERSECTIONS OPERATIONS ANALYSES			
Homestead Road Intersection At	Traffic Control	2030 AM Peak Hour LOS/Delay	2030 PM Peak Hour LOS/Delay
Sunrise Boulevard	Signal (if warranted)	B/18.3	B/17.9
Veterans Park Entrance/Caloosa Lakes Boulevard	Signal (if warranted)	A/8.0	A/5.1
School Entrance	Stop Control Westbound Movements	C/23.9	C/17.3
Pinewood Boulevard	Stop Control Eastbound Movements	D/31.9	D/29.6
Andros Street	Stop Control Eastbound Movements	C/22.9	E/49.7
Adams Avenue	Stop Control Eastbound/Westbound Movements	D/30.4	D/32.3

Alabama Road/Leeland Heights Boulevard	Signal	D/43.3	D/42.7
--	--------	--------	--------

Notes: Overall LOS and delay are reported for the signalized intersection.

LOS and delay (seconds per vehicle) are reported for the worst unsignalized intersection approach

The peak hour peak directional operational analyses for the corridor roadway segments were conducted by using the *Lee County Generalized Peak Hour Directional Service Volumes* table. The results for the future roadway segments analyses are shown in **Table 6.4**. In 2030, assuming the existing two-lane roadway, the corridor is expected to operate as LOS F conditions during both peak hours; however, by widening Homestead Road to a four-lane roadway these LOS conditions are expected to improve to LOS B.

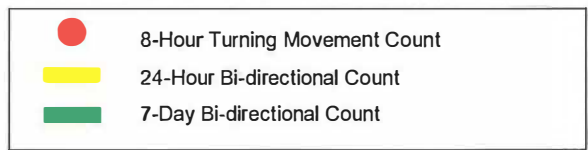
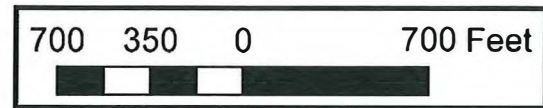
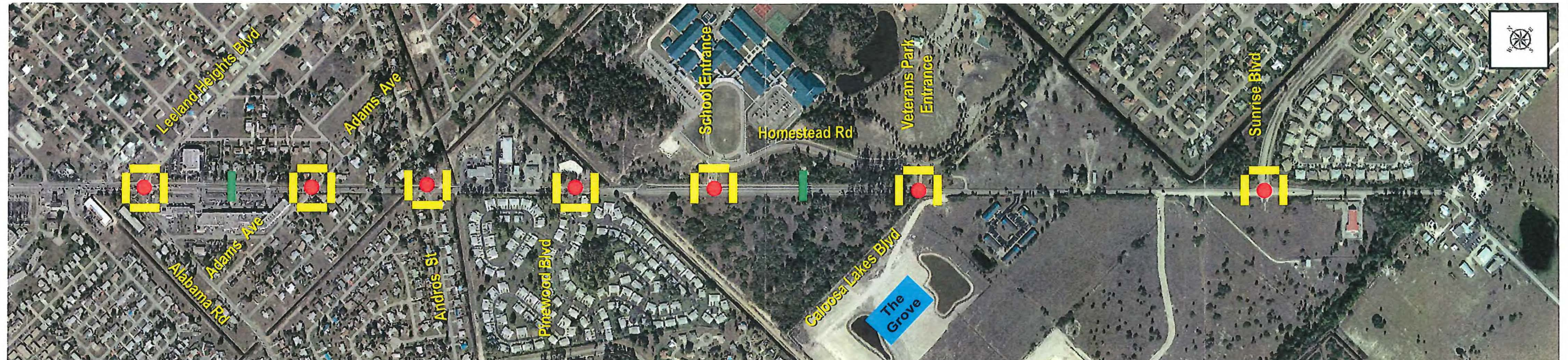
Table 6-4 DESIGN YEAR (2030) SEGMENT OPERATIONAL ANALYSES				
Homestead Road Segment	2030 Directional Peak Hour LOS			
	Two-Lane Roadway		Four-Lane Roadway	
	AM (NB/SB)	PM (NB/SB)	AM (NB/SB)	PM (NB/SB)
Sunrise Boulevard to Veterans Park Entrance/Caloosa Lakes Boulevard	F/F	F/F	B/B	B/B
Veterans Park Entrance/Caloosa Lakes Boulevard to School Entrance	F/F	F/F	B/B	B/B
School Entrance to Pinewood Boulevard	F/F	F/F	B/B	B/B
Pinewood Boulevard to Andros Street	F/F	F/F	B/B	B/B
Andros Street to Adams Avenue	F/F	F/F	B/B	B/B
Adams Avenue to Alabama Road/Leeland Heights Boulevard	F/F	F/F	B/B	B/B

Note: Assumed Class I Arterial service volumes provided in the Lee County Generalized Peak Hour Directional Service Volumes table.

NB/SB = northbound/southbound

6.3.1 References

1. *Traffic Count Report, 2006*; Lee County Department of Transportation; 2006.
2. *The Lee Plan, 2006 Codification*, Lee County Department of Community Services, 2006.
3. *Highway Capacity Software*; McTrans; Plus Version Release 5.21.
4. *Synchro plus SimTraffic 7*; Trafficware Ltd.; Version 7 (Build 746).
5. *Lee County Generalized Peak Hour Directional Service Volumes*; Lee County Department of Transportation; 2005.

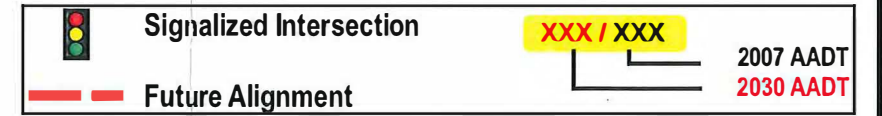
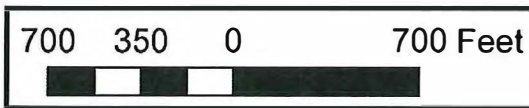


Homestead Road
Alignment Study
Lee County, Florida



TRAFFIC COUNT LOCATIONS

Figure 6.1

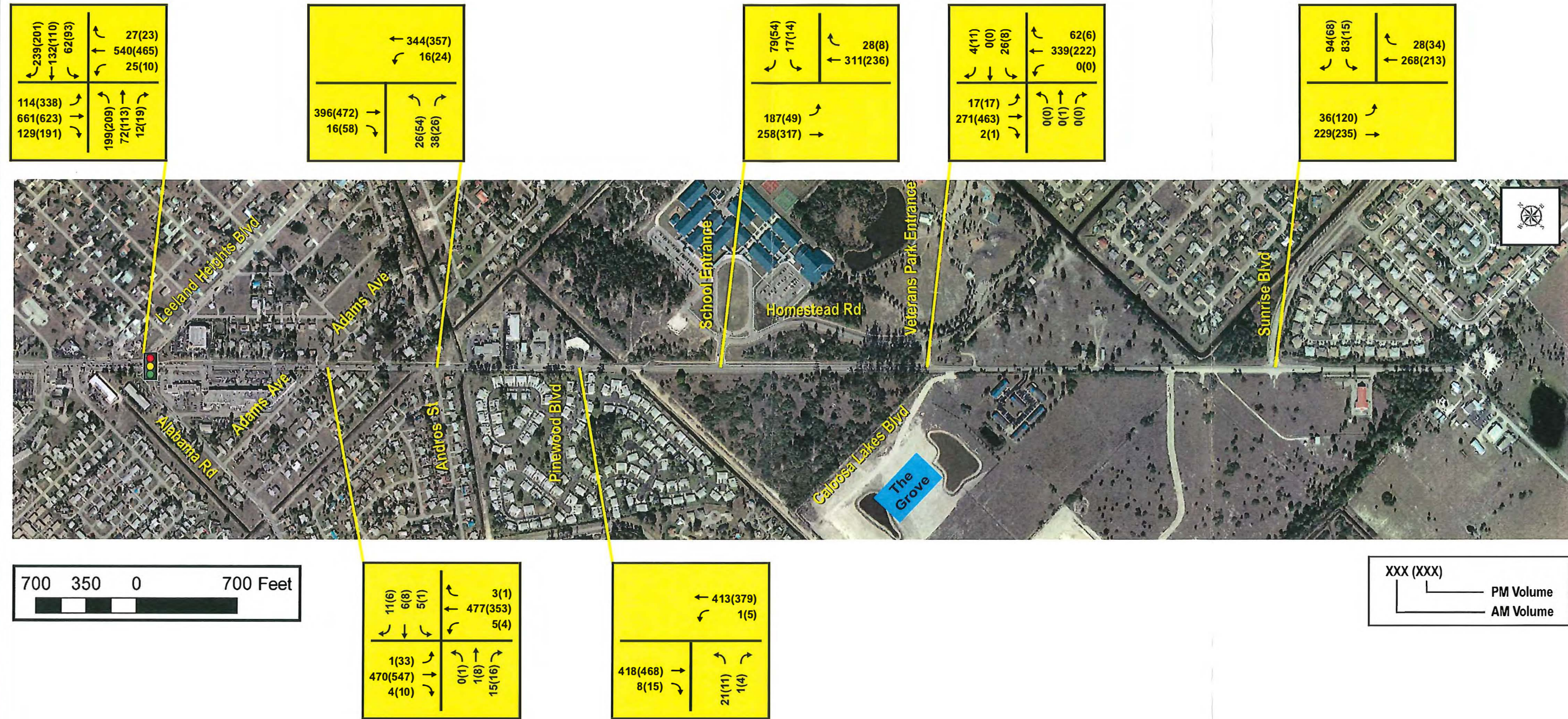


Homestead Road
Alignment Study
Lee County, Florida



EXISTING YEAR (2007) AND DESIGN YEAR (2030) AADT

Figure 6.2

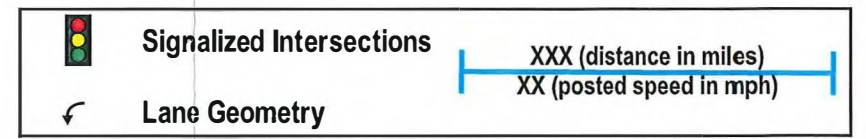
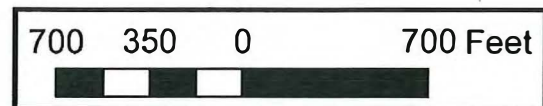
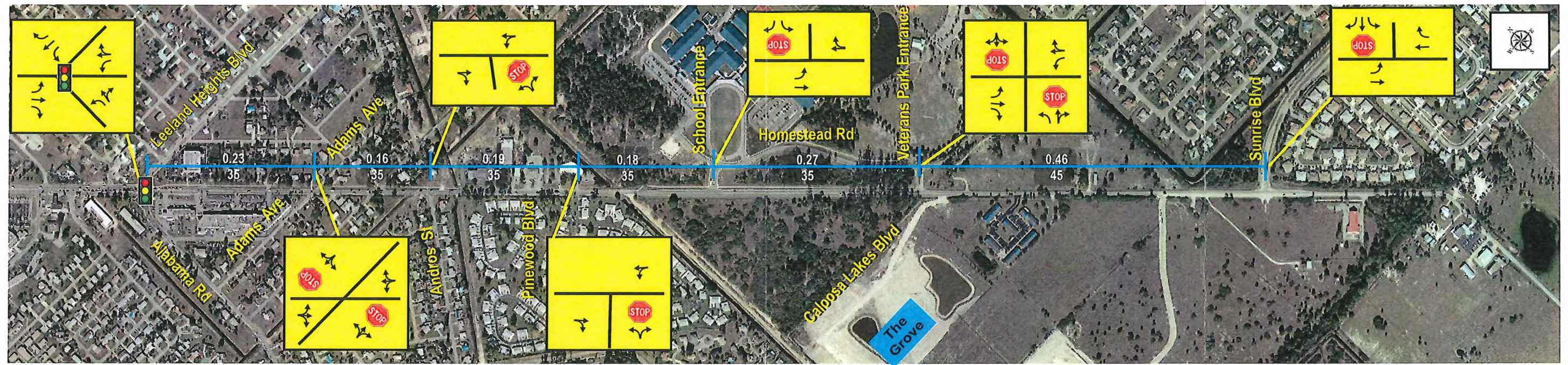


Homestead Road
 Alignment Study
 Lee County, Florida



EXISTING YEAR (2007) PEAK HOUR VOLUMES

Figure 6.3

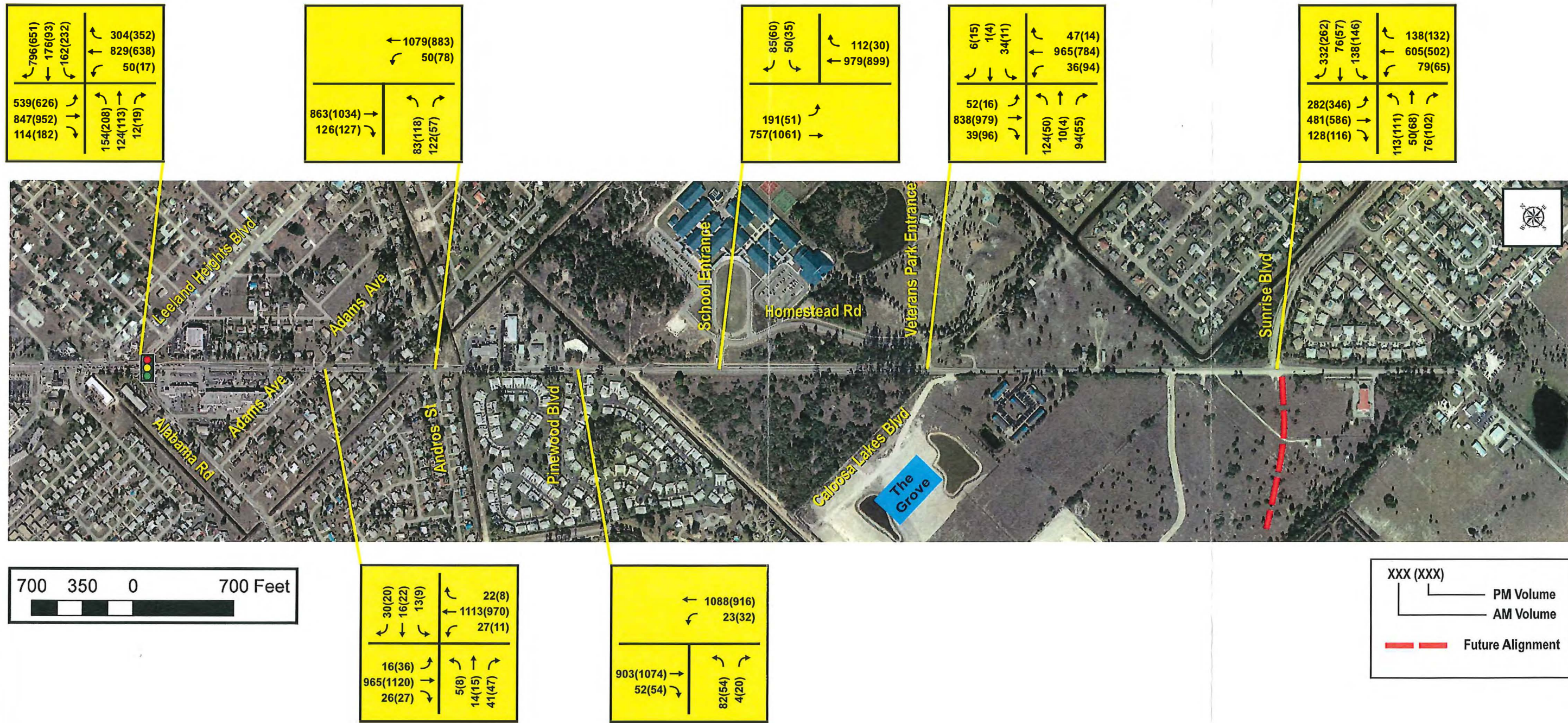


Homestead Road
Alignment Study
Lee County, Florida



EXISTING YEAR (2007) CORRIDOR LANE GEOMETRY

Figure 6.4

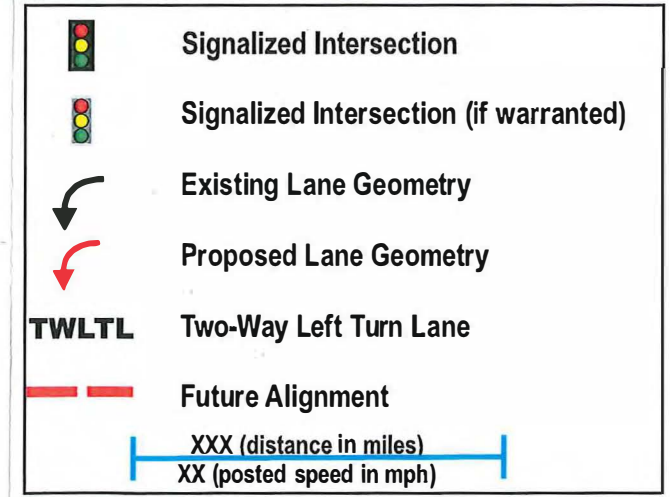
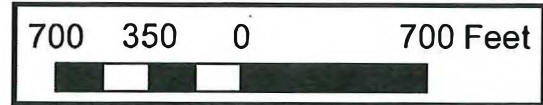
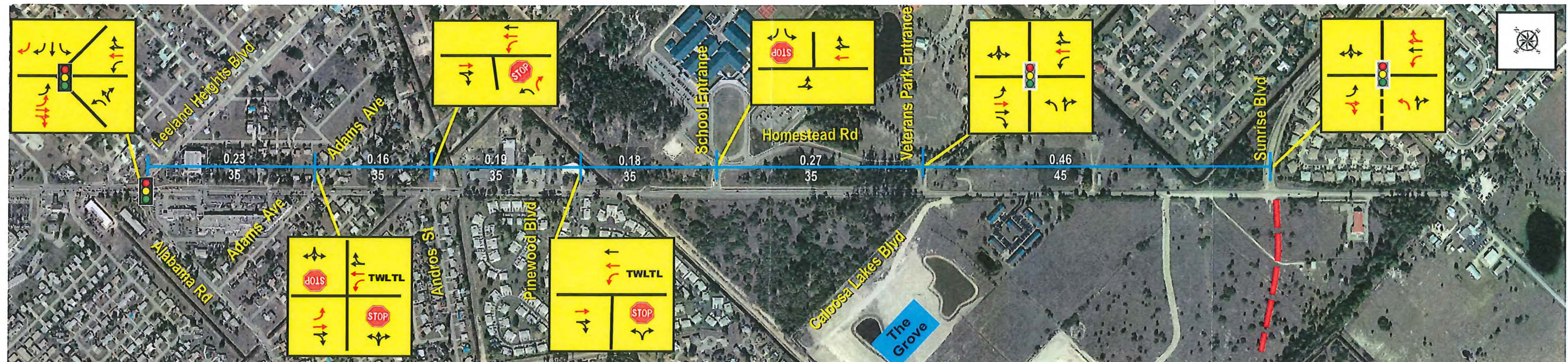


Homestead Road
 Alignment Study
 Lee County, Florida



DESIGN YEAR (2030) PEAK HOUR VOLUMES

Figure 6.5



Homestead Road
Alignment Study
Lee County, Florida



DESIGN YEAR (2030) CORRIDOR LANE GEOMETRY

Figure 6.6

SECTION 7.0 ALIGNMENT ANALYSIS

The corridor evaluation consists of an assessment of the affected physical and natural environments, as well as the area's transportation roadway network and traffic conditions. Since the proposed Homestead Road alignment follows the existing corridor, the primary objective of this study is to affirm that the alignment will minimize environmental and social impacts.

In an attempt to reduce the impacts, options for aligning the proposed typical sections were analyzed for distinct segments within the project corridor. In all cases the typical sections considered had to meet the objectives listed below:

- Minimize the need for additional right-of-way acquisition
- Meet or exceed the minimum design standards discussed in **Section 5.0**
- Minimize project cost
- Minimize environmental impacts
- Facilitate MOT during construction

The Homestead Road corridor was subdivided into four segments based on a variety of key engineering and environmental characteristics common to each segment.

7.1 Segment 1: Curve South of Sunrise Boulevard

The most noticeable feature along Homestead Road occurs at the beginning of the project. While traveling along the existing alignment, drivers face a sharp angle break in the alignment also commonly known as "Dead Man's Curve". Part of the analysis was to determine if the angle break could be modified or reconstructed to create a safer situation for motorists. Due to the 135 degree angle within the baseline, the typical section and the right-of-way impacts were a major factor in determining the proposed layout of the curve. Four options were considered:

Option 1 – Full build through curve (Figure 7.1 and Figure 7.1a)

The first option analyzed started the 4-lane section south of the curve. The urban section was carried through the curve and required a minimum radius of 694 ft with a 5% superelevation. This option became more costly due to the 1,170 ft taper required prior to the curve to match the 2-lane section. Tapering the southbound lanes down to one north of the curve allowed for a shorter transition to the south, but still impacted six parcels adjacent to the curve.

Option 2 – Minimum rural radius (Figure 7.2)

For Option 2, the taper from the 4-lane to the 2-lane section occurred north of the curve. Tapering down to two lanes resulted in using rural criteria through the curve instead of the urban criteria used

throughout the rest of the project. Rural criteria required a 10% superelevated curve with a radius of 323 ft. This resulted in a significant impact to Parcel 99.

Option 3 – No curve improvements (**Figure 7.3**)

The final option analyzed at the curve was to leave it in its current condition. This option eliminated any right-of-way costs and did not alter driver expectancy. Tying the 4-lane section north of the curve allowed for drivers to return to the 2-lane rural section they are currently accustomed to as they reduce their speed to 15 mph through the curve.

Improving the safety of the curve is a primary objective within this segment. Although Option 3 eliminated right-of-way impacts, it was determined to be an unacceptable solution because of the safety issues. Option 2 improved safety through the curve, but it introduced a rural section within the project. The radius of the curve was minimized by using 10% superelevation however this still required the purchase of right-of-way. Additional right-of-way would be required for any future widening of Homestead Road through the curve and there would be the possibility of conflicts with future development in the area. Option 1 eliminated these conflicts by allowing coordination with developers prior to the roadway construction. It also provided for the full width construction and allowed for the required right-of-way width to be obtained. Besides being continuous with the section north of the curve, safety is also improved with Option 3.



1" = 100'



Homestead Road
Alignment Study
Lee County, Florida



OPTION 1 - FULL BUILD THROUGH CURVE

Figure 7.1A





7.2 Segment 2: North of the Curve to Bonefish Canal

The second segment from the curve south of Sunrise Boulevard to Bonefish Canal uses a 4-lane divided section 94-ft wide as shown in **Figure 7.4**. This typical section was selected due to the nominal amount of side street and driveway access points as well as undeveloped land through this segment.

From the curve to 500 ft north of Sunrise Boulevard the existing right-of-way is approximately 100 ft wide and provides plenty of room for the 94-ft typical section. Further north, the right-of-way narrows to approximately 80 ft for the remainder of the corridor. Due to the constricted right-of-way width, impacts were critical when setting the alignment of the proposed roadway. If the typical section was centered within the right-of-way there would be a 7-ft wide take across every parcel on both sides of the roadway within this segment. As stated earlier in this section, one of the objectives was to minimize the need for additional right-of-way acquisition. As a result, the alignment was shifted to the east in order to hold the existing western right-of-way. The western right-of-way was held due to multiple developments planned along the west side of Homestead Road. Another factor why the east side was preferred was the presence of two County owned parcels. These two parcels are also known as the Veterans Park Academy for the Arts and Recreation Complex (Parcel 107) and Veterans Park (Parcel 109). With this design only one parcel (Parcel 112) along the west side showed a right-of-way take. At this location the existing right-of-way jogs in 30-ft to the east and is almost along the edge of the existing pavement. Taking right-of-way at Parcel 112 made the right-of-way in the corridor consistent as well as eliminated the need for a large take on Parcels 113 and 114.

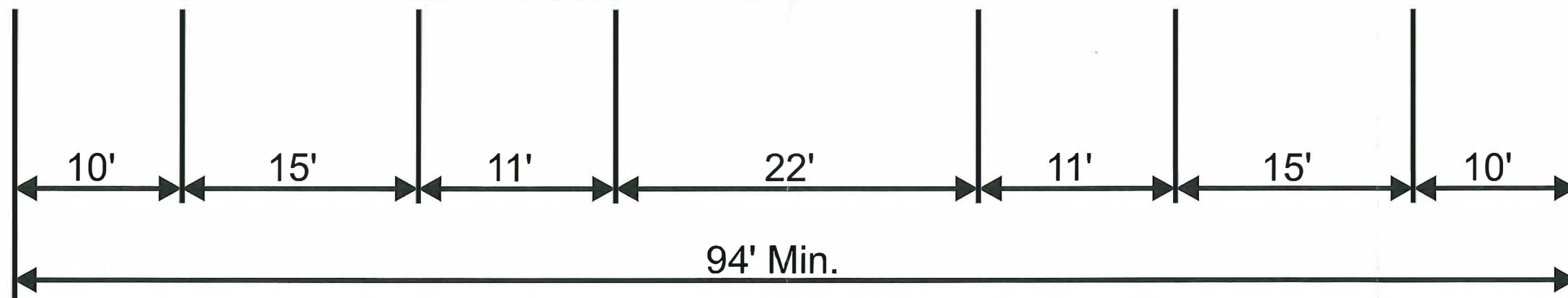
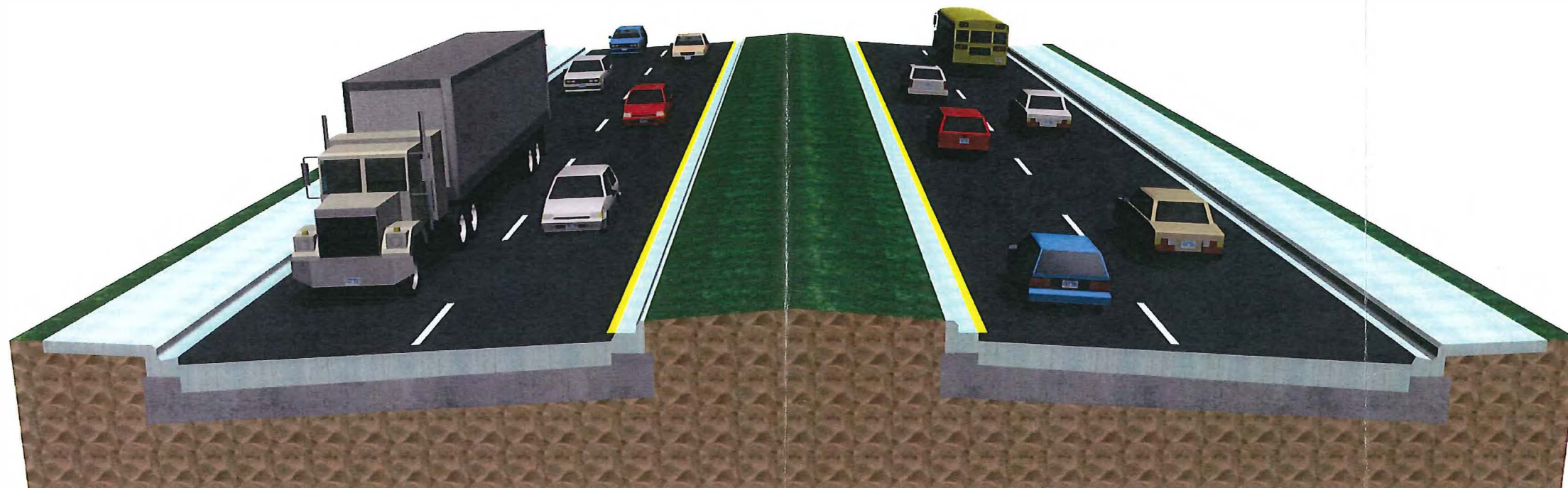
7.3 Segment 3: Bonefish Canal to Alabama Road

The third segment along Homestead Road occurs between Bonefish Canal and Alabama Road. This segment has characteristics quite different than the previous segments due to numerous businesses, more residences and multiple adjoining side streets. The only characteristic that remains constant is the approximate 80-ft right-of-way width. Since the 94-ft divided typical section used in Segment 2 would restrict current movements, limit access, cause more business damages, and create more u-turns, an 84-ft 5-lane section as shown in **Figure 7.5** was selected. This section allowed for existing movements to be maintained as well as minimized the right-of-way impacts.

From the Bonefish Canal to the Spur-A Canal the alignment was shifted to the east. Although this shift affected four businesses and the fire station, it missed five condominiums within the Pinewood Condominiums community. The backs of these condos are already located close to the right-of-way and taking any more of the properties on the west side would have resulted in major damages from the condominium owners. The alignment was shifted to the east on the basis that the businesses along this side were not being as negatively impacted as the condominiums. The proposed roadway provided better access to the businesses with the two-way left turn lane as well as increased capacity along Homestead Road. The fire station would also benefit from the proposed widening for turning movements of their vehicles as well as a proposed flashing signal.

For a short section between the Spur-A Canal and the Live Oak Canal the right-of-way widens to approximately 86-ft. The alignment was shifted back to center through this area to eliminate right-of-way impacts to the water tower (Parcel 117).

North of the Live Oak Canal the right-of-way narrows back down to 80 ft. Although there are more residential parcels along the eastern right-of-way compared to the business parcels along the western right-of-way, the alignment was shifted to the east to considerably reduce the impacts/damages. In fact, six of the residential parcels share a driveway which acts as a frontage road along Homestead Road. The 4-ft right-of-way take reduced the buffer between this frontage and Homestead Road but did not change the access to these properties. The Walgreens on the southeast corner of Leeland Heights Boulevard and Homestead Road is the lone business affected by the shift to the east. At this Walgreens, the right-of-way take did not affect the actual business, parking, or its drainage facilities, but did reduce the existing buffer between the parking lot and roadway.

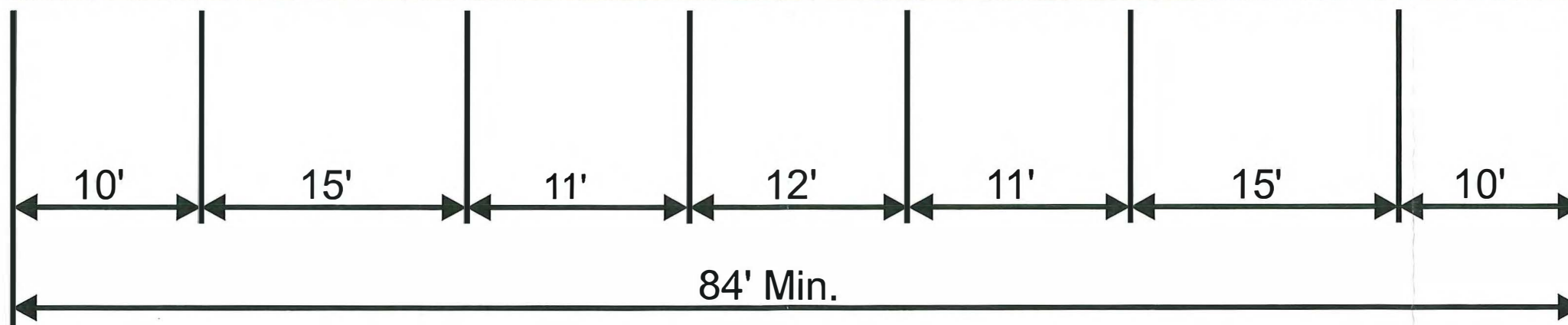
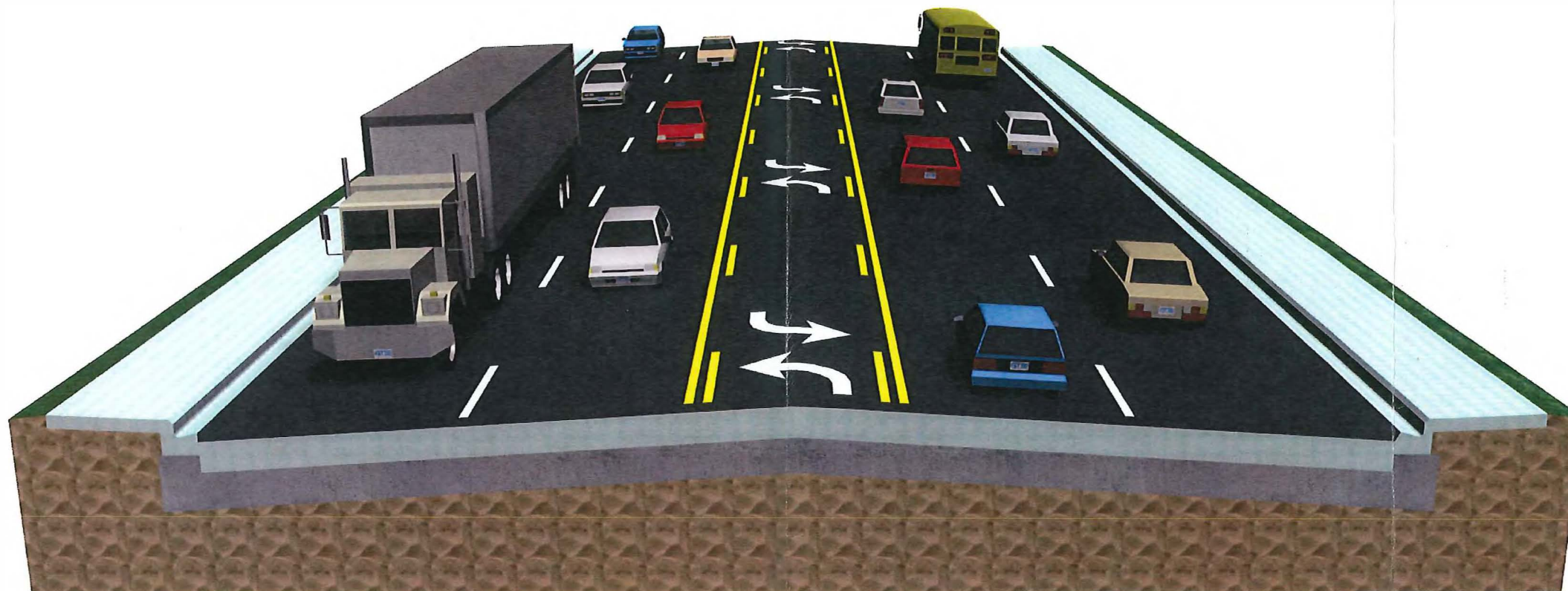


Homestead Road
Alignment Study
Lee County, Florida



4-LANE DIVIDED URBAN SECTION

Figure 7.4



Homestead Road
Alignment Study
Lee County, Florida



5-LANE URBAN SECTION

Figure 7.5

7.4 Segment 4: Alabama Road Intersection

There were two alternatives for the design of the intersection at Alabama Road and Homestead Road. One was developed based on traffic and the other was developed based on right-of-way restrictions.

Option 1 – Traffic Analysis Design (Figure 7.6)

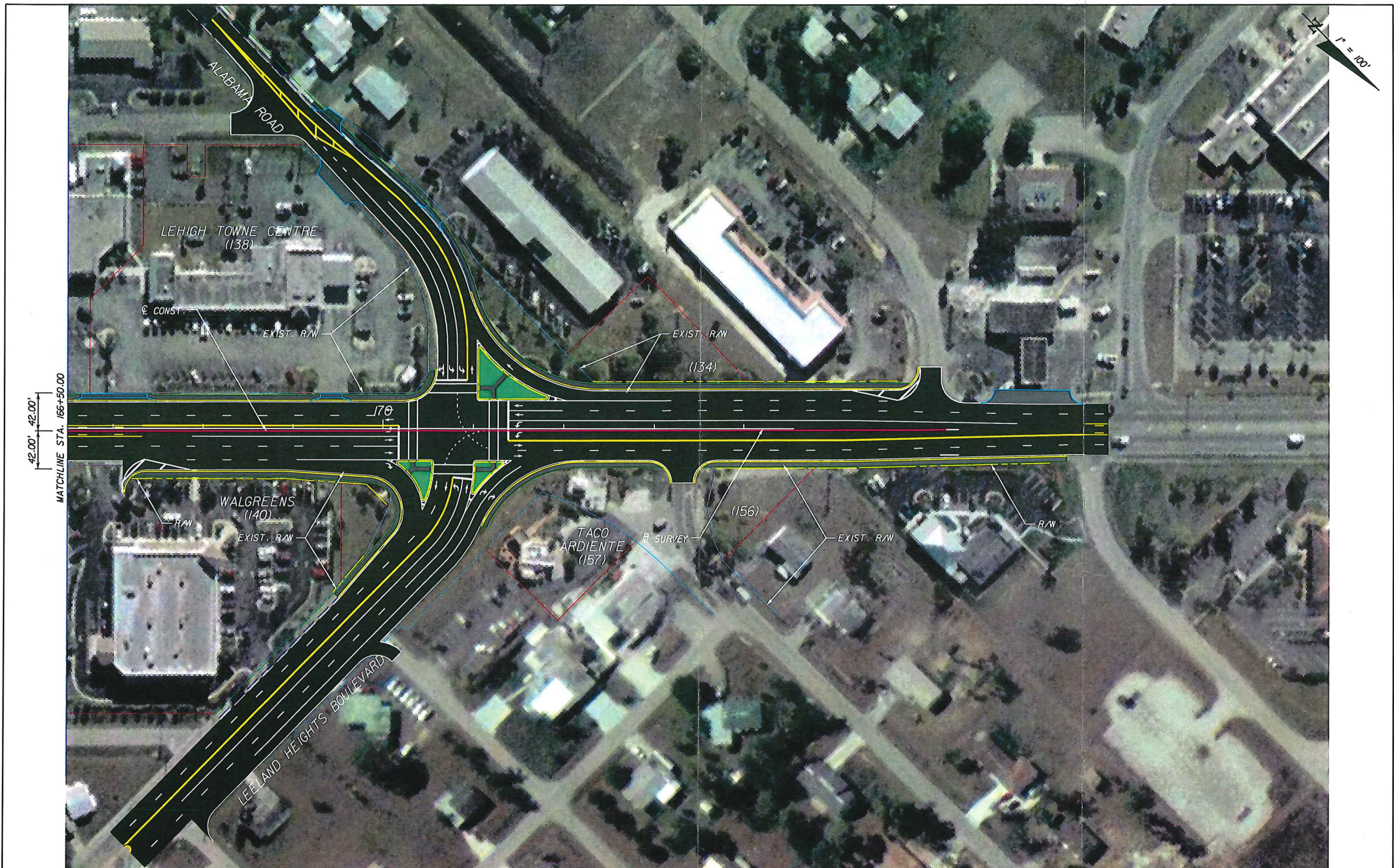
The first alternative based on the traffic analysis showed the ideal amount of lanes to handle the future traffic growth. This option gave the best LOS/Delay (C/34.3) but it required a large amount of additional right-of-way.

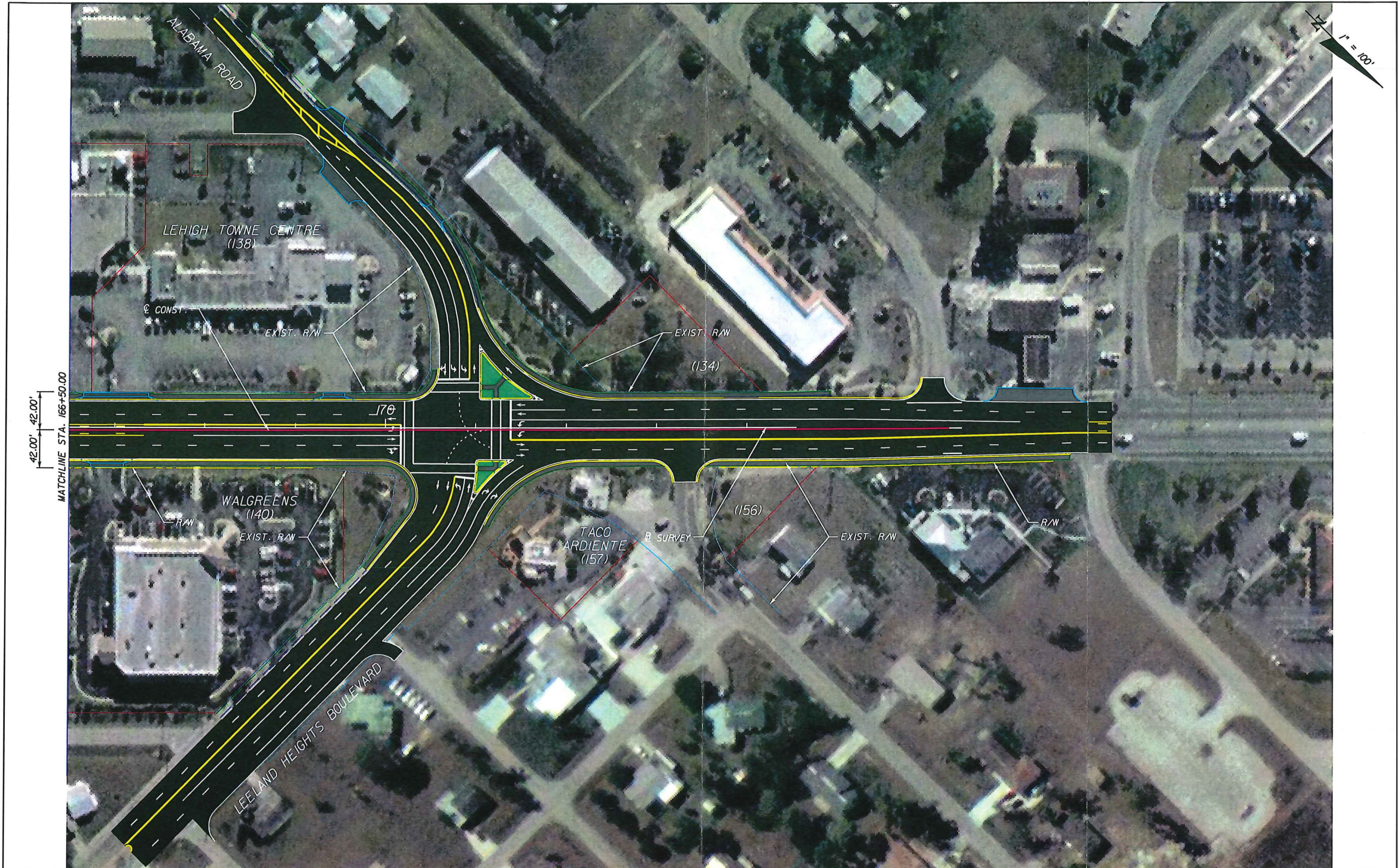
Option 2 – Minimum right-of-way Design (Figure 7.7)

The second alternative was similar to the first but eliminated the northbound and southbound exclusive right turn lanes allowing for a minimization of the right-of-way required to construct the intersection. By adjusting the signal timing, all movements were able to achieve a minimum LOS E with an overall intersection LOS of D.

Based on the large right-of-way costs and business damage claims resulting from Option 1, the preferred intersection concept is Option 2. Not only does Option 2 reduce the right-of-way costs, it provides a sufficient level of service for the future traffic projections.

Appendix A shows the preferred alignment discussed in **Sections 7.2** and **7.3** and shows the recommended options from **Sections 7.1** and **7.4**.





SECTION 8.0 PRELIMINARY DESIGN ANALYSIS

8.1 Design Traffic Volumes

The design traffic volume information is outlined in **Section 6.0** and the future operational analyses details are provided in **Section 6.3**.

8.2 Typical Sections

As discussed in **Section 7.0**, the project corridor is divided into two distinct segments. The differences are based on existing right-of-way width, density, and land use. After analyzing the existing conditions, typical sections that reduced the impacts of the proposed project were selected for each segment.

Table 8-1 lists the recommended typical sections for the different segments within the project corridor.

Table 8-1 PROPOSED TYPICAL SECTIONS			
Segment No.	Segment Description	Typical Section	Figure No.
1	Begin Project to Bonefish Canal	Divided	7-5
2	Bonefish Canal To End Project	5-Lane	7-6

8.3 Intersection Concepts and Signal Analysis

The intersection of Homestead Road/Alabama Road/Leeland Heights Boulevard is currently signalized. Signal warrants are being done for the intersections Veterans Park, and Sunrise Boulevard. The preferred alignment presented in **Appendix A** illustrates the intersection concepts. The recommended queue length requirements for the Alabama Road/Leeland Heights Boulevard intersection are shown in **Table 8-2**.

Table 8-2 ALABAMA RD INTERSECTION – QUEUE LENGTHS			
Turning Movement	Turning Volume (veh/hr)	Number of Lanes	Queue Length (ft)
EBL	208	2	175
WBL	232	1	350
WBR	796	2	300
NBL	50	1	100
SBL	626	2	375

8.4 Alignment and Right-of-Way Needs

The existing right-of-way widths are discussed in **Section 4.1.4**. As discussed in **Section 7.0**, the alignment was set to only take right-of-way from one side depending on the alignment shift. When using the 4-lane divided typical section, a maximum 14-ft strip of additional right-of-way will be required. For the 5-lane typical, a maximum strip of 4-ft will need to be obtained. Corner clips will be required at the side streets to help tie in the radii.

In addition to the roadway requirements, right-of-way will be required for the project's stormwater management facilities. The area in front of the school has already been identified for a possible pond site if the water cannot be treated within the ECWCD canal system.

8.5 Relocation

It is not anticipated that any residents or businesses will be displaced by the construction of the preferred alternative.

8.6 Right-of-Way Costs

As of July 2007 the anticipated right-of-way opinion of probable costs are anticipated to be \$2.4 million. This does not include cost for right-of-way acquisition.

8.7 Construction Costs

The opinion of probable cost for the preferred alternative is \$13.7 million. This includes a contingency allowance of \$135,802. This cost does not include utility relocation costs. A detailed breakdown of the construction costs is presented in **Appendix B**.

8.8 User Benefits

The proposed alternative will benefit the traveling public, businesses, and emergency services. The two additional lanes, as well as the intersection improvements, will reduce travel time and the potential for traffic accidents. The addition of access management elements within the divided typical section will also reduce the potential for traffic accidents.

Pedestrians and bicyclists will benefit from the safety and convenience of continuous facilities throughout the length of the project. The addition of corridor lighting throughout the project will also improve the safety of the motorists, pedestrians, and bicyclists.

Businesses along the project will benefit from the increased capacity of the roadway which should produce more potential customers. The businesses will have safer ingress and egress to their establishment and Homestead Road.

Response time for emergency vehicles will be reduced due to the reduction of congestion and improved traffic flow. Response time is typically important on every project, but is even more

important with this project as the Lehigh Acres Fire Control and Rescue District is located within the project limits. Special considerations will be given to the access management at this location and even the potential for flashing signal.

8.9 Pedestrian and Bicycle Facilities

The proposed typical sections provide 6 ft sidewalks on each side of the road for pedestrian use. The proposed typicals also have 15 ft outside lanes to provide an undesignated bicycle facility.

8.10 Safety

The typical sections proposed as part of the roadway improvements will improve safety due to the implementation of the latest design standards. The access management proposed will limit turning movements which will reduce conflict points. The typicals and access management will increase the capacity of the road, but will also provide a more efficient traffic flow with less congestion. The typical also provides much safer conditions for pedestrians and bicyclists with the placement of 6 ft sidewalks and 4 ft undesignated bike lanes on each side of the road. This will further be made safer by the proposed corridor lighting. The preferred alignment will improve the safety through the curve by using an appropriate radius and superelevation for the design speed.

8.11 Environmental Impacts

The natural landscape along the Homestead Road project corridor has been significantly altered by urbanization, drainage and agricultural improvements. The majority of the project falls within an urbanized section of Lee County. An extensive ECWCD canal network extends throughout the area. The Homestead Road project corridor has been evaluated with regard to avoidance and minimization of impacts to wetlands, other surface waters (OSW), and listed wildlife.

The United States Army Corps of Engineers (USACOE) and SFWMD are the regulatory agencies within jurisdiction over any wetlands identified within the project corridor. USACOE regulates activities in Waters of the United States pursuant to 33 Code of Federal Regulation 320-330 and Public Law 92-500, Section 404 of the Clean Water Act. SFWMD is the regional regulatory agency responsible for regulating activities in Waters of the State pursuant to Chapters 40E and 62-340, Florida Administration Code.

The formal permitting process is initiated through the submittal of a joint Environmental Resource Permit (ERP) application. The Homestead Road Project will require both an ERP and a Section 404 permit or a Nationwide Permit for impacts involving the drainage canals. The permitting of this project will require drainage and environmental evaluations including alternative analysis, avoidance and minimization and finally compensatory mitigation for any unavoidable wetland impacts.

Wetland mitigation will be required to compensate for any impacts proposed to jurisdictional wetlands within the project right-of-way. The need for mitigation will be determined at the sixty percent roadway design stage and reviewed during the ERP permitting process. Reasonable assurances will be provided to ensure that the functions and values of wetlands are adequately

compensated by the mitigation proposal. The type of mitigation and the associated success criteria will be determined during the mitigation negotiation process.

Jurisdictional wetlands were not identified within the project right-of-way, although three deeply incised, canals crisscross the area and several shallow, swales parallel sections of Homestead Road. In addition, several pond alternatives are proposed within the adjacent canal network. A portion of one canal falls within a designated hydric soil signature (Pineda fine sand) and will require further evaluation to determine jurisdiction. In areas where the canals or swales extend into the existing road right-of-way, there will be no practical alternative but to construct within these areas. In areas proposed as pond alternatives, avoidance and minimization options may exist.

For permitting purposes, the three drainage features along the Homestead Road right-of-way should receive a classification of OSW. As proposed, impacts to these OSW canals will be minimal. In addition, jurisdictional field indicators were not observed within the irregularly sized, intermittent swales paralleling the road. Impacts associated with the proposed pond alternatives will vary during permit negotiations. Impacts to all canal or swale areas will primarily involve placement of fill or excavation. An isolated, depression area was identified approximately 650 feet beyond the southern project limits. This area will not be impacted by the current alignment.

Few areas of undisturbed, natural habitat remain within the project corridor with potential to support listed wildlife. The surrounding agricultural lands and native habitat patches have been compromised by proximity to the existing roadway, residential and commercial development, and encroachment of nuisance and exotic vegetation. The high degree of disturbance typical along the project corridor likely reduces the potential for threatened and endangered wildlife. Any discussions regarding impacts to threatened or endangered wildlife will be conducted through the Florida Fish and Wildlife Conservation Commission and the U.S. Fish and Wildlife Service.

8.12 Utility Impacts

The following utilities may be impacted by the project:

- Comcast Communications
- Balgas
- Florida Governmental Utilities Authority
- Lee County Signal Department
- Lee County Electric CO-OP
- Embarq

HDR will coordinate with the utility owners to minimize and define the actual utility impacts and costs associated with these impacts.

8.13 Traffic Control Plan

The proposed improvements will be constructed over the existing facility. MOT during construction will be accomplished by allowing a portion of the traffic to remain on the existing roadway while construction of the new adjacent pavement is completed.

Methods similar to those shown in the FDOT Roadway Design Standard Index Number 600 will be applied. In this manner, traffic disruptions will be held to a minimum and intersecting streets within the project limits could remain open during construction.

The MOT for the Homestead Road project will be accomplished through four phases as described below.

- Phase 1: installation of temporary pavement along one side of the existing roadway
- Phase 2: shift existing traffic to temporary pavement and construct the trunk line and half of the new roadway
- Phase 3: shift traffic onto the new lanes constructed in Phase 2 and construct the other half of the new roadway
- Phase 4: shift traffic to the new two lanes in each direction

The number of travel lanes will be maintained through the corridor and the intersections.

Detailed MOT will be required for the Homestead Road/Alabama Road/Leeland Heights Boulevard intersection. This work will likely be completed by overbuild and widening to minimize impacts to the traveling public and businesses associated with this intersection.

8.14 Drainage

Based on the proposed typical section, the project will incorporate the following drainage infrastructure to meet permitting regulations along with providing a cost effective collection, conveyance, and detention system.

1. Curb and gutter inlets
2. Closed storm sewer system
3. Wet detention facilities
4. Low maintenance detention control structures
5. Permanent erosion control measures
6. Improved cross drains

The proposed drainage system will be designed to minimize impacts while still protecting the receiving basins to meet all regulatory permitting requirements in a cost-effective manner. Stormwater management ponds are necessary to provide water-quality treatment and water-quantity attenuation for the roadway generated roadway runoff.

8.14.1 Meetings with Stakeholders

A meeting was held with the two primary stakeholders, Lee County and the ECWCD, with HDR Engineering Inc in attendance on behalf of LeeDOT. The objective of the meeting was to discuss the possibility of utilizing ECWCD canals for stormwater treatment and attenuation of the Homestead Road rainfall runoff. ECWCD was receptive to the idea of joint use facilities and encouraged LeeDOT to pursue this approach. A copy of the meeting minutes is included in **Appendix C**.

Two consulting engineering firms represent ECWCD in different capacities; Ada Engineering Inc and AIM Engineering & Surveying, Inc. Ada Engineering Inc provides 3-D surface and groundwater modeling (MIKE-SHE software) of the primary canals/basins for ECWCD, while AIM Engineering & Surveying, Inc provides ECWCD infrastructure engineering analysis & design along with permits review of development plans for projects located within the district. Meetings were also held with each of these firms to discuss pertinent information regarding permitting, design criteria and existing & future hydraulic and hydrologic conditions associated with the ECWCD canal system. A copy of the meeting minutes with each firm is included in **Appendix C**.

8.14.2 Stormwater Management Facilities

The Homestead Road stormwater management design will comply with the requirements of the SFWMD Lee County's Stormwater Management regulations, and the ECWCD of Lehigh Acres.

Based on our meetings with ECWCD and the consultant engineering firms for ECWCD wet detention stormwater pond facilities are the desired water management facility of choice. A number of locations for stormwater management have been identified; most are ECWCD canals with one location being a part of County owned park land as shown in **Figure 8.1**. These facilities are defined as follows:

- | | |
|------------------------|--|
| 47-31-9 (Dave): | a north-south dead end canal located near the end of the project corridor west of Homestead Road; lies within the Yellow Tail System. |
| 57-5-2 (Live Oak): | an east-west dead end canal located south of Arthur Avenue near the end of the project corridor west of Homestead Road; lies within the Yellow Tail System. |
| 57-5-1 (Bonefish Ext): | an east-west dead end canal located south of Arthur Avenue near the end of the project corridor east of Homestead Road; lies within the Spur A System. |
| 57-4-6: | an east-west canal located north of Sunrise Boulevard near the beginning of the project corridor east of Homestead Road; lies within the South Boundary / 9-Mile System. |
| 57-4-7: | a north south canal located along the eastern property line of Veterans Park near the middle of the project corridor east of |

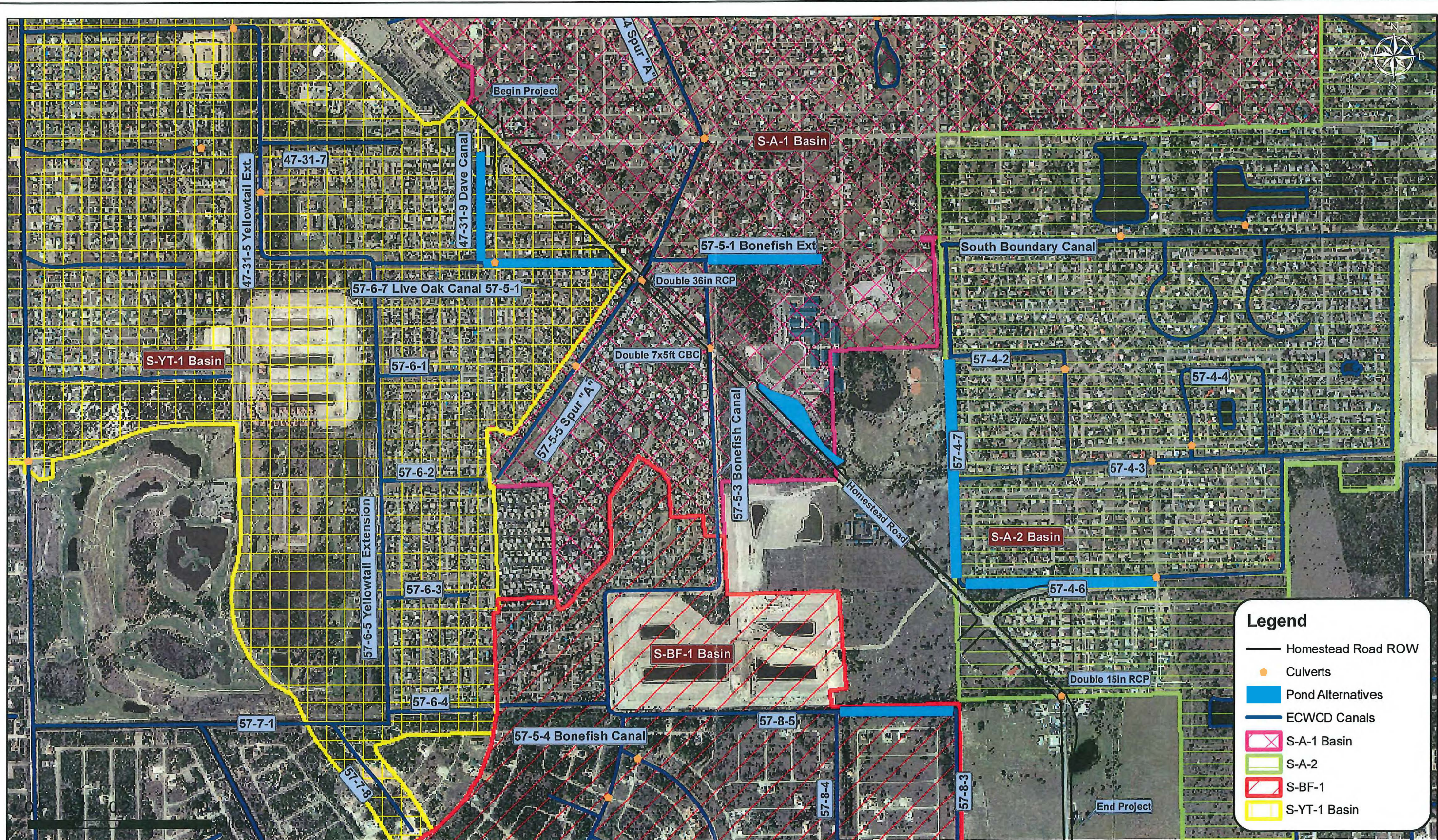
- Homestead Road; lies within the South Boundary / 9-Mile System.
- 57-8-5: an east-west dead end canal located at the beginning of the project corridor west of Homestead Road; lies within the Spur A System.
- Park Property: Veterans Park property frontage that lies between the two park entrances, located near the middle of the project immediately adjacent to Homestead Road; lies within the Spur A System.

The ECWCD canals are being considered because no right-of-way purchase is necessary, the canals are located strategically near Homestead Road, and by providing additional volume to the canals, recharge of the surficial aquifer can be realized. Improvements to the canals will entail widening the canal to provide additional volume and the addition of a control structure for water quality treatment and water quantity attenuation. ECWCD staff also indicated that some canal improvements, though not constructed, are part of a SFWMD issued ERP permit, so permitting would be through a modification.

ECWCD canal design criteria associated with the canal improvements were discussed in conjunction with the proposition of "joint use" facilities. Specific dimensional criteria provided by ECWCD staff include a 12 ft berm width on the short side and a 20 ft berm width on the opposite side; 20 ft on each side is preferred. Slopes are to be based on SFWMD criteria.

The construction costs are anticipated to be incurred by LeeDOT, ECWCD intends to maintain the facilities after construction is complete.

A publicly-owned parcel that is being pursued is the Veterans Park frontage that lies between the two park entrances. The park frontage area is being considered because no right-of-way purchase is necessary; it is strategically located adjacent to Homestead Road and a short distance its outfall, Bonefish Canal. This area is overgrown with exotics and does not appear to have any future benefit to the Park. This pond site would help meet the stormwater needs for this section of the roadway and could include native planting for aesthetics, helping improve the appearance of the park entrance. This facility could be designed as either a wet detention pond or a dry retention pond, depending on County preference. Again, by retaining the runoff in a pond, recharge of the surficial aquifer can be realized.



Homestead Road
Alignment Study
Lee County, Florida



ECWCD Drainage Basins/Stormwater Management Facilities

Figure 8.1

8.14.3 Base Clearance / Cross Drains / Storm Sewers

The elevation of the proposed roadway profile warrants detailed hydraulic evaluation to ensure:

1. Hydraulic conveyance of the roadway runoff to the pond sites,
2. Roadway base / design high water clearance determination, and
3. Design allowable high water clearance determination at the culvert crossings under the road.

Model results will be pivotal in setting the proposed roadway vertical profile.

Cross drain culverts will be designed so no net increase to head-water stages will occur. An in-depth cross drain hydraulic analysis will be performed using the ECWCD current flow data. Additionally, the downstream discharges will be reviewed to ensure no downstream adverse impacts occur from the proposed design.

Storm sewers are necessary to convey on-site runoff to the new stormwater pond facilities and will be designed to the 3-year design storm event. Storm sewer layouts will be compatible with the proposed MOT schemes, minimize temporary drainage construction costs, avoid utility impacts and facilitate construction. In addition, a stormwater pollution prevention plan will be prepared in conjunction with the MOT plans. Best management design and erosion control practices will be included to prevent construction sediments from leaving the construction site.

8.14.4 Permitting

The drainage design will include stormwater treatment and attenuation required to comply with rules of the Florida Department of Environmental Protection, SFWMD, and the ECWCD. The following are stormwater/environmental permits anticipated for the project.

- ERP - SFWMD – Rules 40E-4 and 40E-40, F.A.C.
- ECWCD Drainage Permit
- USACOE Individual Permit.
- National Pollutant Discharge Elimination System Permit (NPDES) – FDEP

The stormwater management systems must be designed in order to meet agency criteria and obtain issued permits. Project specific permit wetland criteria will be established based on wetland quality and quantity impacts (dredge & fill) and other environmental impacts, associated with the improvements. Permitting associated with the ECWCD canals will require modification to the original permit.

8.14.5 Water Quality

Water quality will be provided in accordance with SFWMD Basis of Review (BOR) for ERP Permits, Chapter 5, and Section 5.2.1. a). Furthermore, it is possible that emerging criteria for Total Maximum Daily Load (TMDL) water quality may be required by the regulatory agencies.

Wet Detention (Proposed Stormwater Management Facilities) –

- Wet detention volume shall be provided for the first inch of runoff from the developed project, or the total runoff of 2.5 inches times the percentage of imperviousness, whichever is greater.
- Recovery of ½” of the detention volume shall be recovered within 24 hours
- Systems discharging to receiving water bodies via control structures must be through skimmers, baffles or other mechanisms suitable for preventing hydrocarbons from discharging to or from retention/detention areas

At this time ECWCD accepts the water quality requirements as set forth by SFWMD.

8.14.6 Water Quantity

Because ECWCD is a “298 District”, SFWMD recognizes their jurisdiction and will defer to water quantity requirements as specified by ECWCD either through rule or alternate approval. Water quantity analyses will include flood peak-flow attenuation to meet the currently adopted ECWCD 30 CSM limiting discharge rule because this criterion is more stringent than the SFWMD 25-year / 3-day attenuation requirement. The 100-year / 24-hour storm event will be modeled to ensure proper vehicular passage of the roadway.

8.14.7 Floodplain Impacts and Mitigation

According to the FEMA Map 125124-0375B, the project is entirely outside of the 100-year floodplain; therefore, floodplain compensation will not be necessary.

8.15 Access Management

The project corridor has two distinct segments that control access management for the proposed roadway. From the beginning of the project limits to the Veterans Park Academy for the Arts and Recreation Complex, there are not a lot of direct connections to Homestead Road. The existing Bethany Trace subdivision and proposed The Grove subdivision have access via side streets. The existing conditions allow for a transition into a divided four lane section with minimal disruptions to current traffic movements. This segment will have median openings in the locations listed in **Table 8-3**.

Installation of a raised median on the segment from the Veterans Park Academy for the Arts and Recreation Complex north to Alabama Road would have many impacts to local business and residential access. There is a fire station that needs total access north and south located in the middle of this segment. Providing controlled access to this location would hinder the possible openings in this segment. There are several residences and business parking lots that access Homestead Road directly on either side of the fire station. Also, there are right of way constraints in this segment (see **Appendix A**) that would make u-turns difficult. Therefore, the five lane typical section with non-controlled access management is used for this section of roadway.

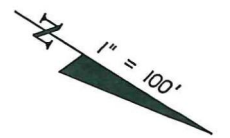
Table 8-3 MEDIAN OPENING DESIGNS		
Location	Connection	Proposed Design
Station 92+50	East/West	Full
Station 110+00	West	None
Station 117+00	East/West	Full
Station 131+00	East	Full

8.16 Lighting

The existing decorative lighting from Adams Avenue to Alabama Road/Leeland Heights Boulevard intersection will be salvaged and relocated within the proposed typical section. Standard corridor lighting is proposed from the beginning of the project to Adams Avenue. This would ensure the entire project is lit.

APPENDIX A
PREFERRED ALIGNMENT PLAN SET



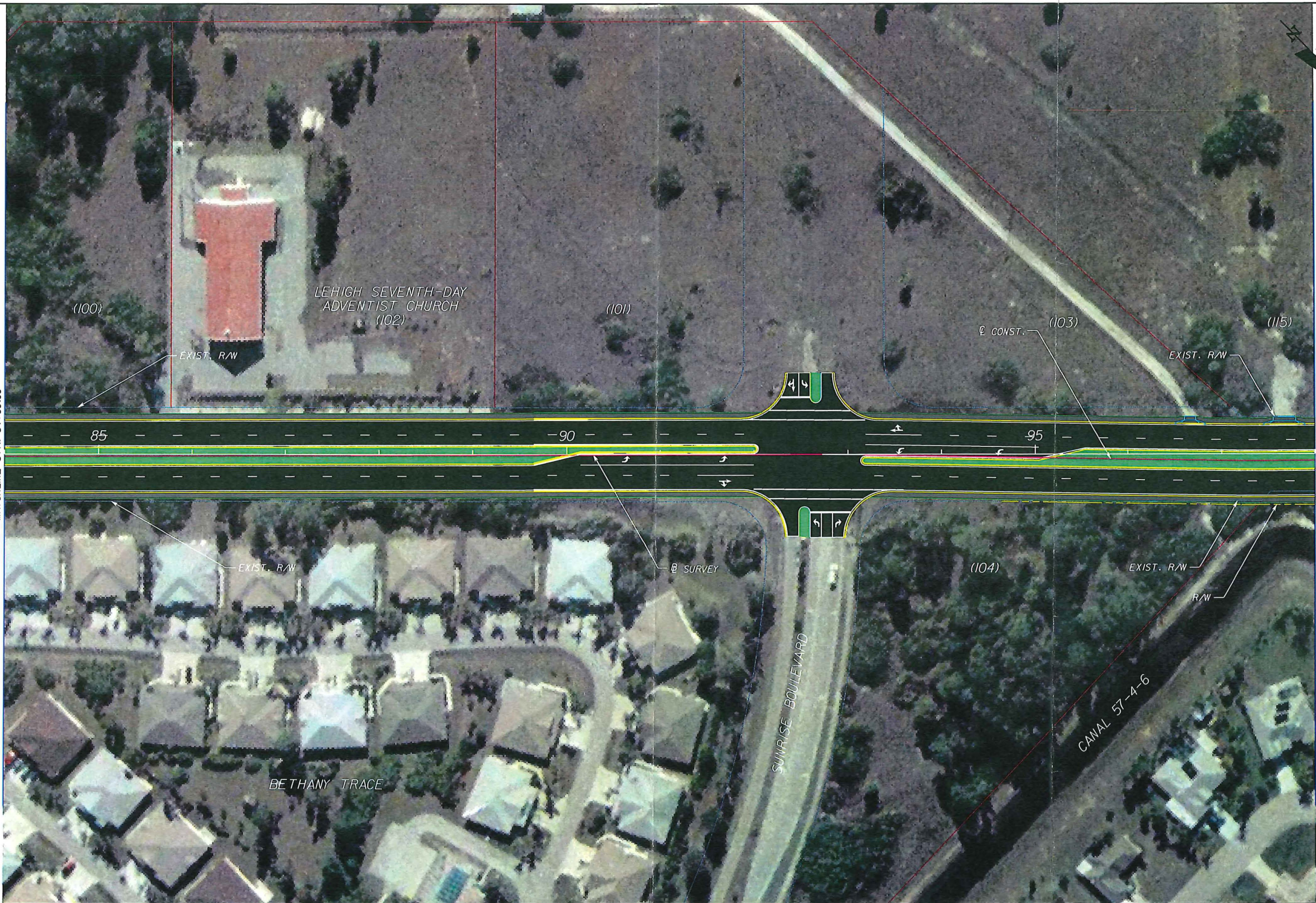


Homestead Road
Alignment Study
Lee County, Florida



PLAN SHEET

A-2



Homestead Road
Alignment Study
Lee County, Florida



PLAN SHEET

A-3



Homestead Road
Alignment Study
Lee County, Florida

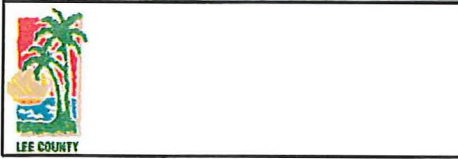


PLAN SHEET

A-4

1" = 100'



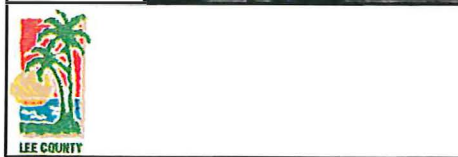


Homestead Road
Alignment Study
Lee County, Florida



PLAN SHEET

A-6



Homestead Road
Alignment Study
Lee County, Florida



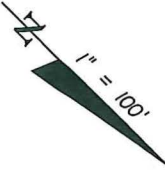
PLAN SHEET

A-7



40.89'
42.01'
MATCHLINE STA. 154+00.00

42.00'
42.00'
MATCHLINE STA. 166+50.00

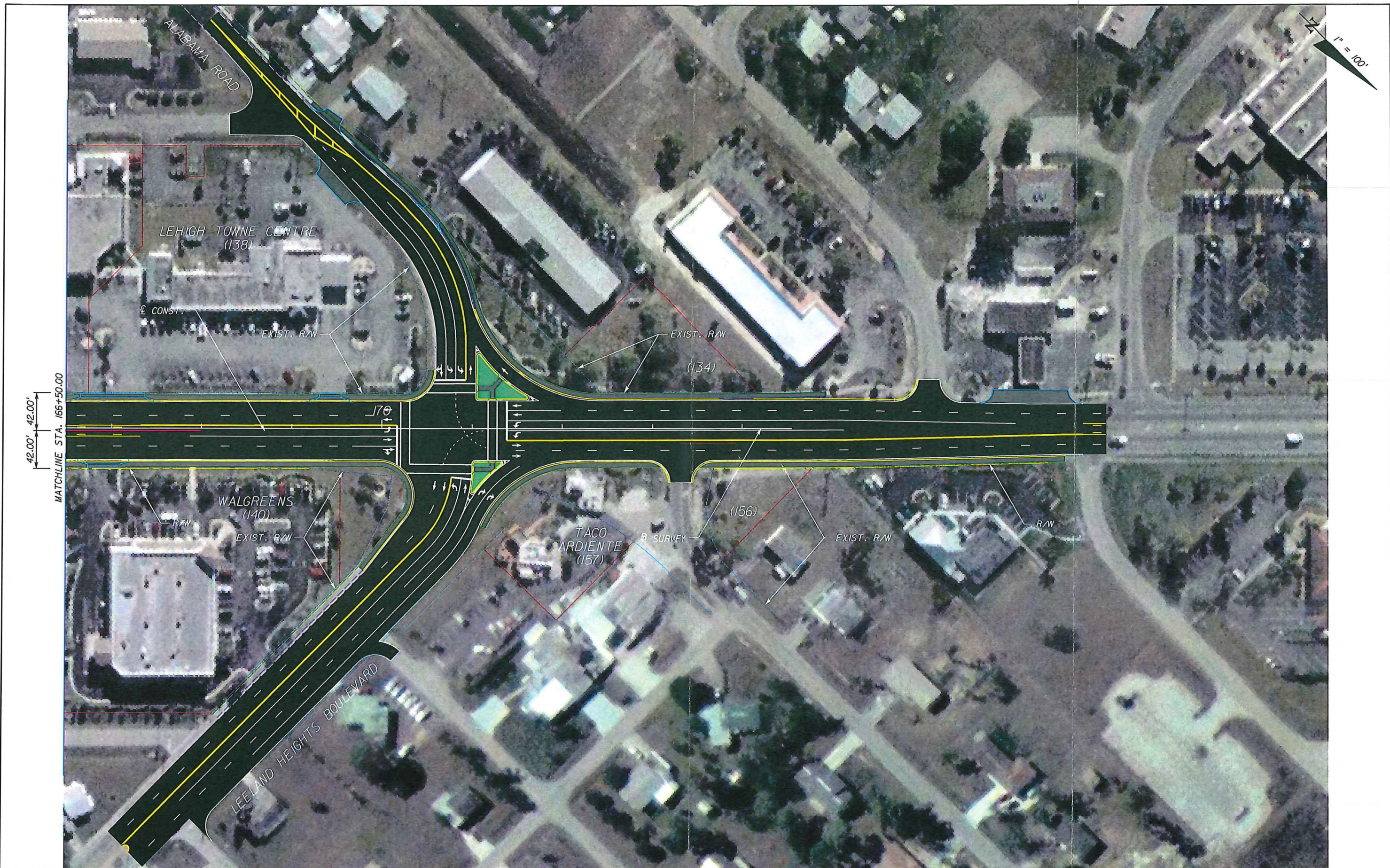


Homestead Road
Alignment Study
Lee County, Florida



PLAN SHEET

A-8



APPENDIX B
OPINION OF PROBABLE COST

HOMESTEAD ROAD
(FROM SOUTH OF SUNRISE BLVD. TO NORTH OF ALABAMA RD.)
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COSTS
JULY 2007

Earthwork Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
110 1 1	CLEARING AND GRUBBING	LS/AC	\$20,000.00	22.05	\$441,000.00
120 6	EMBANKMENT	CY	\$19.34	15,102.37	\$292,079.84
Earthwork Component Total:					\$733,079.84

Roadway Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
160 4	STABILIZATION TYPE B	SY	\$5.14	71,348.11	\$366,729.29
285 709	BASE OPTIONAL (BASE GROUP 09)	SY	\$17.24	60,335.15	\$1,040,177.99
334 1 14	SUPERPAVE ASPHALTIC CONC (TRAFFIC D)	TN	\$110.40	3,318.44	\$366,355.78
337 7 6	ASPH CONC FC (INC BIT/RUBBER) FC 12.5 (FC-6)	TN	\$115.59	4,826.81	\$557,930.97
Pavement Marking Subcomponent:					
706 3	RETRO -REFLECTIVE PAVEMENT	EA	\$4.62	751.00	\$3,469.62
710 6	DIRECTIONAL ARROW (PAINTED)	EA	\$25.81	22.00	\$567.82
710 21	TRAFFIC STRIPE SKIP (WHITE)	GM	\$491.77	3.74	\$1,839.22
710 22	TRAFFIC STRIPE SKIP (YELLOW)	GM	\$444.68	1.60	\$711.49
710 23 61	TRAFFIC STRIPE SOLID (WHITE) (6")	NM	\$1,113.94	7.67	\$8,543.92
711 31	TRAFFIC STRIPE SKIP (6" WHITE, 10' - 30') (THERMO)	GM	\$973.00	3.74	\$3,639.02
711 37 61	TRAFFIC STRIPE SOLID (WHITE, 6") (THERMO)	NM	\$2,667.61	7.67	\$20,460.57
Roadway Component Total:					\$2,370,425.67

Shoulder Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
520 1 10	CURB & GUTTER CONC (TYPE F)	LF	\$30.11	21,151.68	\$636,877.08
522 1	SIDEWALK CONCRETE (4" THICK)	SY	\$54.74	14,101.12	\$771,895.31
575 1	SODDING	SY	\$2.14	11,750.93	\$25,146.99
Erosion Control:					
104 4	MOWING	AC	\$88.46	3.81	\$337.03
104 11	FLOATING TURBIDITY BARRIER	LF	\$10.00	500.75	\$5,007.50
104 12	TURBIDITY BARRIER STAKED	LF	\$3.97	500.75	\$1,987.98
104 13 1	STAKED SILT FENCE (TYPE III)	LF	\$1.36	21151.68	\$28,766.28
104 15	SOIL TRACKING PREVENTION DEVICE	EA	\$3,716.28	4.00	\$14,865.12
104 16	ROCK BAGS	EA	\$13.20	2117.00	\$27,944.40
Shoulder Component Total:					\$1,512,827.70

Median Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
520 1 7	CURB & GUTTER CONC (TYPE E)	LF	\$20.20	14,150.40	\$285,838.08
575 1	SODDING	SY	\$2.14	13,757.33	\$29,440.69
Median Component Total:					\$315,278.77

HOMESTEAD ROAD
(FROM SOUTH OF SUNRISE BLVD. TO NORTH OF ALABAMA RD.)
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COSTS
JULY 2007

Drainage Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
400 2 2	CONC CLASS II (ENDWALLS)	CY	\$1,500.00	36.05	\$54,075.00
400-4-1	CONC CLASS IV (CULVERTS)	CY	\$1,190.37	105.6	\$125,703.07
415 1 1	REINF STEEL (ROADWAY)	LB	\$1.34	14950	\$20,033.00
425 1 351	INLETS (CURB) (TYPE P-5) (<10')	EA	\$6,859.75	74	\$507,621.50
425 1 451	INLETS (CURB) (TYPE J-5) (<10')	EA	\$11,289.78	21	\$237,085.38
425 1 521	INLETS (DT BOT) (TYPE C) (<10')	EA	\$2,988.60	12	\$35,863.20
425 2 41	MANHOLES (P-7) (<10')	EA	\$4,930.56	12	\$59,166.72
430 171 125	PIPE CULV (OPT MATL) (ROUND) (18"SS)	LF	\$38.75	5312	\$205,840.00
430 171 141	PIPE CULV (OPT MATL) (ROUND) (48"SS)	LF	\$197.89	10024	\$1,983,649.36
430 172 138	PIPE CULV (OPT MATL) (ROUND) (36"CD)	LF	\$132.61	488	\$64,713.68
575 1	SODDING	SY	\$2.14	608.91	\$1,303.07
X-Item	DRAINAGE MODIFICATION TO ECWCD CANAL STRUCTURE	LS	\$5,000.00	1.00	\$5,000.00

Basin 1 Component:					
110 1 1	CLEARING AND GRUBBING	LS/AC	\$20,000.00	5.00	\$100,000.00
120 2 2	EXCAVATION BORROW (TRUCK MEASURE)	CY	\$6.17	24,200.00	\$149,314.00
400 2 2	CONC CLASS II (ENDWALLS)	CY	\$1,500.00	30	\$45,000.00
425 1 541	INLETS (DT BOT) (TYPE D) (<10')	EA	\$5,207.71	1.00	\$5,207.71
425 2 71	MANHOLES (J-7) (<10')	EA	\$7,636.79	2.00	\$15,273.58
430 171 140	PIPE CULVERT (OPT MATL) (ROUND) (48"SS)	LF	\$167.44	56.00	\$9,376.64
430 171 142	PIPE CULVERT (OPT MATL) (ROUND) (54"SS)	LF	\$248.03	400.00	\$99,212.00
550 10 220	FENCING, TYPE B (5.1-6.0) STANDARD	LF	\$10.59	1,860.00	\$19,697.40
550 60 234	GATE (TYPE B) SLIDING/CANT (18.1-20' OPEN)	EA	\$1,585.00	2.00	\$3,170.00
575 1	SODDING	SY	\$2.14	24,200.00	\$51,788.00

Basin 2 Component:					
110 1 1	CLEARING AND GRUBBING	LS/AC	\$20,000.00	5.00	\$100,000.00
120 1	EXCAVATION REGULAR	CY	\$6.17	24,200.00	\$149,314.00
400 2 2	CONC CLASS II (ENDWALLS)	CY	\$1,500.00	30	\$45,000.00
425 1 541	INLETS (DT BOT) (TYPE D) (<10')	EA	\$5,207.71	1.00	\$5,207.71
425 2 71	MANHOLES (J-7) (<10')	EA	\$7,636.79	2.00	\$15,273.58
430 171 140	PIPE CULVERT (OPT MATL) (ROUND) (48"SS)	LF	\$167.44	56.00	\$9,376.64
430 171 142	PIPE CULVERT (OPT MATL) (ROUND) (54"SS)	LF	\$248.03	400.00	\$99,212.00
550 10 220	FENCING, TYPE B (5.1-6.0) STANDARD	LF	\$10.59	1,860.00	\$19,697.40
550 60 234	GATE (TYPE B) SLIDING/CANT (18.1-20' OPEN)	EA	\$1,585.00	2.00	\$3,170.00
575 1	SODDING	SY	\$2.14	24,200.00	\$51,788.00

Drainage Component Total: \$4,296,132.64

Signing Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
700 40 1	SIGN SINGLE POST (< 12)	AS	\$269.45	49	\$13,203.05
700 40 2	SIGN SINGLE POST (12-25 SF)	AS	\$894.48	6	\$5,366.88
700 41 10	SIGN MULTI POST (<50)	AS	\$3,061.74	6	\$18,370.44
700 41 10	SIGN MULTI-POST (51-100)	AS	\$5,027.00	6	\$30,162.00

Signing Component Total: \$67,102.37

Lighting Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
715 1 113	CONDUCTORS (F&I) (INSULATED) (NO 6)	LF	\$1.47	38,625.85	\$56,780.00
715 2 115	CONDUIT UNDERGROUND, SCH 40	LF	\$6.03	10,575.84	\$63,772.32
715 2 215	CONDUIT UNDERPAVEMENT, SCH 40	LF	\$24.49	2,099.14	\$51,407.94
714 14 11	PULL BOX (F&I) (ROADSIDE)	EA	\$267.00	71.00	\$18,957.00
715 500 1	POLE CABLE DIST SYS (CONVENTIONAL)	EA	\$717.96	71.00	\$50,975.16
715 511 140	LIGHT POLE COMPLETE (40FT)	EA	\$4,061.77	71.00	\$288,385.67

Lighting Component Total: \$530,278.08

HOMESTEAD ROAD
(FROM SOUTH OF SUNRISE BLVD. TO NORTH OF ALABAMA RD.)
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COSTS
JULY 2007

Signalizations Component:					
ITEM NO.	ITEM	UNIT	UNIT BID PRICE	QTY	AMOUNT
Signalization 1					
630 1 12	CONDUIT (FURNISH & INSTALL) (UNDERGROUND)	LF	\$6.79	750	\$5,092.50
630 1 14	CONDUIT (FURNISH & INSTALL) (UG - JACKED)	LF	\$22.12	200	\$4,424.00
632 7 1	CABLE (SIGNAL) (FURNISH & INSTALL)	PI	\$3,730.40	1	\$3,730.40
634 4 113	SPAN WIRE ASSEMBLY (F&I) (2 WIRE) (BOX)	PI	\$2,911.04	1	\$2,911.04
635 1 11	PULL AND JUNCTION BOXES (FURNISH & INSTALL) (PULL BOX)	EA	\$709.64	14	\$9,934.96
639 1 12	ELECTRICAL POWER SERVICE (OVERHEAD)	AS	\$1,963.11	1	\$1,963.11
639 2 1	ELECTRICAL SERVICE WIRE (F & I)	LF	\$2.69	30	\$80.70
641 15 146	PREST CONC POLE (F&I) (PULL BOX)	EA	\$5,495.00	4	\$21,980.00
650 51 311	TRAFFIC SIGNAL (FURNISH & INSTALL) (3 SEC. 1 WAY) (STD)	AS	\$907.66	12	\$10,891.92
653 111	PEDESTRIAN SIGNAL (FURNISH & INSTALL) (12" INCANDESCENT)	AS	\$400.00	8	\$3,200.00
659 101	SIGNAL HEAD AUX (BACK PLT 3 SECT)	EA	\$110.82	8	\$886.56
660 1 102	LOOP DETECTOR INDUC (FURNISH & INSTALL) (TYPE 2)	EA	\$242.42	14	\$3,393.88
660 2 106	LOOP ASSEMBLY (FURNISH & INSTALL) (TYPE F)	AS	\$848.81	14	\$11,883.34
665 11	PEDESTRIAN DETECTOR (FURNISH & INSTALL) (POLE OR CABINET MOUNTED)	EA	\$192.25	8	\$1,538.00
670 5 111	TRAFFIC CONTROL ASSEMBLY (FURNISH & INSTALL) (NEMA)(PRE ONE)	AS	\$29,649.02	1	\$29,649.02
700 48 19	SIGN PANEL (F&I) (16-100)	EA	\$3,491.38	4	\$13,965.52
Signalization 2					
630 1 12	CONDUIT (FURNISH & INSTALL) (UNDERGROUND)	LF	\$6.79	750	\$5,092.50
630 1 14	CONDUIT (FURNISH & INSTALL) (UG - JACKED)	LF	\$22.12	200	\$4,424.00
632 7 1	CABLE (SIGNAL) (FURNISH & INSTALL)	PI	\$3,730.40	1	\$3,730.40
634 4 113	SPAN WIRE ASSEMBLY (F&I) (2 WIRE) (BOX)	PI	\$2,911.04	1	\$2,911.04
635 1 11	PULL AND JUNCTION BOXES (FURNISH & INSTALL) (PULL BOX)	EA	\$709.64	14	\$9,934.96
639 1 12	ELECTRICAL POWER SERVICE (OVERHEAD)	AS	\$1,963.11	1	\$1,963.11
639 2 1	ELECTRICAL SERVICE WIRE (F & I)	LF	\$2.69	30	\$80.70
641 15 146	PREST CONC POLE (F&I) (PULL BOX)	EA	\$5,495.00	4	\$21,980.00
650 51 311	TRAFFIC SIGNAL (FURNISH & INSTALL) (3 SEC. 1 WAY) (STD)	AS	\$907.66	12	\$10,891.92
653 111	PEDESTRIAN SIGNAL (FURNISH & INSTALL) (12" INCANDESCENT)	AS	\$400.00	8	\$3,200.00
659 101	SIGNAL HEAD AUX (BACK PLT 3 SECT)	EA	\$110.82	8	\$886.56
660 1 102	LOOP DETECTOR INDUC (FURNISH & INSTALL) (TYPE 2)	EA	\$242.42	14	\$3,393.88
660 2 106	LOOP ASSEMBLY (FURNISH & INSTALL) (TYPE F)	AS	\$848.81	14	\$11,883.34
665 11	PEDESTRIAN DETECTOR (FURNISH & INSTALL) (POLE OR CABINET MOUNTED)	EA	\$192.25	8	\$1,538.00
670 5 111	TRAFFIC CONTROL ASSEMBLY (FURNISH & INSTALL) (NEMA)(PRE ONE)	AS	\$29,649.02	1	\$29,649.02
700 48 19	SIGN PANEL (F&I) (16-100)	EA	\$3,491.38	4	\$13,965.52
Signalization 3					
630 1 12	CONDUIT (FURNISH & INSTALL) (UNDERGROUND)	LF	\$6.79	800	\$5,432.00
630 1 14	CONDUIT (FURNISH & INSTALL) (UG - JACKED)	LF	\$22.12	200	\$4,424.00
632 7 1	CABLE (SIGNAL) (FURNISH & INSTALL)	PI	\$3,730.40	1	\$3,730.40
635 1 11	PULL AND JUNCTION BOXES (FURNISH & INSTALL) (PULL BOX)	EA	\$709.64	12	\$8,515.68
639 1 22	ELECTRICAL POWER SERVICE (UNDERGROUND)	AS	\$2,179.60	1	\$2,179.60
639 2 1	ELECTRICAL SERVICE WIRE (F & I)	LF	\$2.69	60	\$161.40
649 423 102	M/ARM (F&I/HL) (1ST(B3) (2ND)(B1) POLE(Q2)	EA	\$24,534.25	4	\$98,137.00
650 51 311	TRAFFIC SIGNAL (FURNISH & INSTALL) (3 SEC. 1 WAY) (STD)	AS	\$907.66	10	\$9,076.60
653 111	PEDESTRIAN SIGNAL (FURNISH & INSTALL) (12" INCANDESCENT)	AS	\$400.00	8	\$3,200.00
659 101	SIGNAL HEAD AUX (BACK PLT 3 SECT)	EA	\$110.82	6	\$664.92
659 109	SIGNAL HEAD AUX (CONC PED TYPE II)	EA	\$791.15	1	\$791.15
660 1 102	LOOP DETECTOR INDUC (FURNISH & INSTALL) (TYPE 2)	EA	\$242.42	10	\$2,424.20
660 2 106	LOOP ASSEMBLY (FURNISH & INSTALL) (TYPE F)	AS	\$848.81	10	\$8,488.10
665 11	PEDESTRIAN DETECTOR (FURNISH & INSTALL) (POLE OR CABINET MOUNTED)	EA	\$192.25	8	\$1,538.00
670 5 111	TRAFFIC CONTROL ASSEMBLY (FURNISH & INSTALL) (NEMA)(PRE ONE)	AS	\$29,649.02	1	\$29,649.02
700 48 19	SIGN PANEL (F&I) (16-100)	EA	\$3,491.38	4	\$13,965.52
Total Signalization Cost:					\$443,427.49

	PROJECT COMPONENTS SUBTOTAL			\$10,268,552.56
102 1	MAINTENANCE OF TRAFFIC	15.00%	\$	1,540,282.88
101 1	MOBILIZATION	15.00%	\$	1,771,325.32
	PROJECT COMPONENTS TOTAL		\$	13,580,160.75
	PROJECT UNKNOWNNS	0.00%	\$	-
	NON-BID COMPONENTS:			
999 25	INITIAL CONTINGENCY	1.00%	\$	135,801.61
PROJECT GRAND TOTAL				\$ 13,715,962.36

APPENDIX C
DRAINAGE MEETING MINUTES

MINUTES

**ADA Engineering / HDR Engineering, Inc. Meeting Minutes
Homestead Road
From South of Sunrise Blvd to North of Alabama Road (Lee County)
County Project Number: CN-06-17
May 11, 2007**

Attendees:

Name	Affiliation	Phone No.
Roger Copp, P.E.	ADA Engineering – Office Manager	813-431-4959
Mike Jaroch, P.E.	HDR – Drainage	813-282-2300

Discussion:

A meeting was held at the ADA Engineering Tampa Office, to discuss possible joint use water retention facilities between Lee County and the East County Water Control District (ECWCD) for the Homestead Road Improvement Project (County Project No. CN-06-17). The purpose of this meeting was to learn more about the current state of the model (MIKE-SHE) that ADA had developed for the drainage canal system governed by the ECWCD and the associated model results, boundary conditions and modeling protocol.

- Mr. Jaroch provided a brief description of the Homestead road project and the associated stormwater management goals. A copy of the initial coordination (ECWCD, LeeDOT, & HDR) meeting minutes, held on February 13, 2007 was provided to Mr. Copp.
- Mr. Copp discussed the MIKE-SHE model that had been developed to this point for the ECWCD. He stated that the model was more of a “global model” because it modeled only the major canals and basins to a specific control point. Based on the limits of the project, Mr. Copp stated that the model did not include any of the canals in proximity to the Homestead Road project corridor, but suggested that we contact Mr. Lee Flynn with AIM Engineering regarding an ICPR model they had developed for the ECWCD that may include more canals and additional hydrologic detail.
- Mr. Copp, stated that the current MIKE-SHE model elevations were all based on the NAVD 1988 vertical datum and that the relationship between the NAVD 1988 vertical datum and the NGVD 1929 vertical datum is as follows:

$$\text{NAVD (1988)} = \text{NGVD (1929)} - 1.4 \text{ (feet)}$$

- Mr. Copp provided model data results for the boundary conditions, for the Yellowtail System, the Able System, and the 9-mile System.

- Mr. Copp stated that the model shows a 70% increase in the runoff volume of 14,000 Ac-ft based on the future land use map which indicated nearly all ¼ Acre residential lots developed out. Based on the results, ECWCD cannot accept anymore runoff for any developments, and they are currently looking for locations to institute regional pond/floodplain facilities to provide some relief from the anticipated future runoff volume increase.
- Mr. Copp said they would not be involved with the ECWCD permitting process nor would they be reviewing any models that were submitted as part of the Homestead Road project.
- Mr. Copp stated that any improvements that can be made would be beneficial to the overall system. He recommended that all proposed stormwater management facilities developed from the existing ECWCD canals be “wet-detention” type facilities. By doing so, the ponds would aid in providing recharge for the artificially lowered groundwater table due to the private water well located on every residential property throughout ECWCD.
- Mr. Copp recommended that the 100-year / 3-day and 10-year / 3-day storm events be modeled to maintain consistency with the current model.

Action Items:

Responsible:	Task
HDR	Compile Meeting Minutes Set-up meeting w/ AIM Engineering to discuss the proposed project improvements, ICPR Model, and associated permitting requirements.

These meeting minutes were prepared by Mike Jaroch. Please contact Mr. Jaroch by phone at (813) 262-2710 or by e-mail at michael.jaroch@hdrinc.com with any edits or additional information



MINUTES

**Lee County Department of Transportation / East County Water Control District
(ECWCD) / HDR Engineering, Inc. Meeting Minutes
Homestead Road
From South of Sunrise Blvd to North of Alabama Road (Lee County)
County Project Number: CN-06-17
February 13, 2007**

Attendees:

Name	Affiliation	Phone No.
Sarah Clarke	Lee County DOT – PM	239-479-8718
David Gilbert	HDR – PM	813-282-2300
Brent Knezacek	HDR – Roadway	941-342-2703
Mike Jaroch	HDR – Drainage	813-282-2300
David Lindsey	ECWCD – District Manager	239-368-0044
Ken Waugh	ECWCD – Field Superintendent	239-368-0044

Discussion:

A meeting was held to discuss possible joint use water retention facilities between the County and the East County Water Control District (ECWCD) and associated permitting through ECWCD for the Homestead Road Improvement Project (County Project no. CN-06-17). An agenda was presented to all in attendance.

- Mr. Gilbert opened the meeting with an overview of the proposed roadway project and the objective of the meeting. He then stated that HDR will be performing a PD&E type of analysis to determine the optimal roadway alignment and traffic patterns prior to moving into the design phase. He also addressed the compressed schedule which includes right-of-way (ROW) acquisition.
 - Mr. Gilbert fielded suggestions from the ECWCD staff regarding suggested improvements to side streets and Homestead Road based on daily use of the project corridor. He stated that these could be studied as part of the preliminary analysis.
 - Ms. Clarke noted that a flooding complaint had been received by the County in the vicinity of the Sunrise Blvd / Homestead Road intersection located at the south end of the project.
- Mr. Jaroch next discussed the idea of utilizing the ECWCD canals located near and adjacent to the Homestead corridor (such as the “Live Oak” canal) for stormwater treatment and attenuation.
 - The ECWCD staff indicated that they would be open to use of their canals, but would be looking for the County to make the appropriate infrastructure improvements to the canals to achieve the necessary water quality and water quantity criteria. The ECWCD staff also indicated that some canals may be of use to the project at the south end of the corridor due to their proximity to the Homestead Road ROW.

- Some District criteria such as desirable and minimum canal design criteria associated with the canal improvements were discussed in conjunction with the proposition of “joint use” facilities. Specific criteria will be provided by ECWCD staff. ECWCD may be receptive to widening canals. Minimum dimensions are 12’ berm on the short side and a 20’ berm on the opposite side. 20’ on each side is preferred. Slopes are based on SFWMD criteria. ECWCD told HDR to consider the system “wet”,
- HDR went over the drainage design and stormwater permitting criteria that would be adhered to for the project. Water Quality will be based on meeting the SFWMD **Basis of Review for Environmental Resource Permit Applications, Dated: 1/2007**. Chapter 5 Water Quality Standards, Section 5.2.1 Volumetric Requirements, as ECWCD does not have specific water Quality criteria.
 - (a) Retention, detention, or both retention and detention in the overall system, including swales, lakes, canals, greenways, etc., shall be provided for one of the three following criteria or equivalent combinations thereof:
 - 1. **Wet detention volume** shall be provided for the first inch of runoff from the developed project, or the total runoff of 2.5 inches times the percentage of imperviousness, whichever is greater.
 - 2. **Dry detention volume** shall be provided equal to 75 percent of the above amounts computed for wet detention.
 - 3. **Retention volume** shall be provided equal to 50 percent of the above amounts computed for wet detention. Retention volume included in flood protection calculations requires a guarantee of long term operation and maintenance of system bleed-down ability.
- HDR noted that the stormwater design objective for Water Quantity would be to meet the recently adopted limiting discharge criteria by ECWCD, but may request a waiver of said criteria should the project experience difficulty in meeting the criteria due to external design constraints. Ms. Clarke pointed out that there had been other recent Lee County projects that the ECWCD had waived the limiting discharge requirement due to the overall benefit of the project to the general public. ECWCD Staff indicated that a waiver would be considered but did not guarantee a commitment to a waiver at this time.
- HDR noted that the project did not lie within or would not have any impacts to the 100-year floodplain. Additionally, outfall points for this project (ECWCD canals) are not considered Outstanding Florida Waters (OFW’s) and therefore would not require any additional treatment volume other than that described above.
- ECWCD Permitting submittal requirements, review time frame, and RAI’s, were discussed to better understand this aspect of the project. ECWCD permit will need to

be submitted at the very beginning of any month to allow adequate time for the engineer to review the application and supporting documentation prior to making a recommendation to the Board (ECWCD). The ECWCD Board generally meets the 4th Monday of each month.

- ECWCD will continue to maintain the facilities after construction is complete.
 - ECWCD expressed concern of water from “out parcels” draining into their system after construction (i.e. Flint)
 - Improvements to ECWCD facilities would be included in HDR’s plan set.
 - The Bonefish culvert is 8-9 years old. The Spur A culvert is approximately 5 years old. Culverts may be looked at being sized down due to currently being oversized (if it helps with the roadway design). ECWCD prefers concrete pipe. May want to connect Live Oak Canal to Spur A.
- Mr. Lindsey WMD) also mentioned that the District had a completed study that includes recommended improvements to the canal system. He said they could get it copied and sent to HDR.

Action Items:

Responsible:	Task
ECWCD	<p>Provide pertinent hardcopy and electronic data to HDR for use in developing and analyzing the existing and proposed stormwater management systems. Items discussed included:</p> <ol style="list-style-type: none"> 1) Electronic GIS data associated with the ECWCD canal system; basin lines, canals, soils, infrastructure (pipe/weir/and control structure) information, and out parcels. 2) Design documents for the canal systems including a copy of the permit(s) that will need to be modified as part of this project. 3) A copy of the completed study of the ECWCD canal system with recommendations and cost estimates for recommended infrastructure improvements. 4) Electronic design files of the canal system <p>Staff to check w/ Legal council to determine arrangement of responsibilities and how to accomplish said efforts. This might include a letter of understanding, permit condition, legal agreement, etc.</p>
Lee County	<p>Provide Internal County Contact information for GIS data and aerial files for the project corridor.</p> <p>Provide Internal County Contact information for approved development documents pertinent to the project corridor.</p> <p>Initiate talks with the appropriate County staff to determine if park property immediately fronting Homestead Road between the two park entrances could be used for stormwater retention/detention for the Homestead Road improvement project.</p>
HDR	<p>Contact Lee County Roads Maintenance staff to discuss project corridor and any associated problems that may have been documented by the County, including the aforementioned flooding problem at Sunrise Blvd and Homestead Road.</p> <p>Contact Roger Copp (ADA Engineering, Inc.) for information on the current MIKE-SHE model of the ECWCD canal system including modeling criteria, tailwater conditions, and other pertinent modeling data. He currently serves as the technical advisor to the ECWCD board and staff as well as the primary modeler of the ECWCD Canal system.</p> <p>Set-up Pre-application meeting w/SFWMD to discuss the proposed project improvements and associated permitting requirements.</p>

These meeting minutes were prepared by Mike Jaroch. Please contact Mr. Jaroch by phone at (813) 262-2710 or by e-mail at michael.jaroch@hdrinc.com with any edits or additional information

MINUTES

AIM Engineering Meeting Minutes
Homestead Road
From South of Sunrise Blvd to North of Alabama Road (Lee County)
County Project Number: CN-06-17
June 05, 2007

Attendees:

Name	Affiliation	Phone No.
Lee Flynn, P.E.	AIM Engineering – Consultant for ECWCD	239.332.4569
Michael Cook	ECWCD – Assistant District Manager	239.368.0044
Ken Waugh	ECWCD – Field Superintendent	239.368.0044
Sarah Clarke	Lee DOT - Project Manager	239.479.8718
Donnie Holcomb, P.E.	HDR – Project Manager	941.342.2700
Brent Knezacck, P.E.	HDR – Roadway Engineer	941.342.2700
Mike Jaroch, P.E.	HDR – Drainage Engineer	813.282.2300

Discussion:

A meeting was held at the AIM Engineering Lehigh Acres Office, to discuss possible joint use water retention facilities between Lee County and the East County Water Control District (ECWCD) for the Homestead Road Improvement Project (County Project No. CN-06-17). The purpose of this meeting was to learn more about the current state of the model (ICPR) that AIM had developed for the drainage canal system governed by the ECWCD and the associated model results, boundary conditions, modeling protocol, and permitting criteria.

- Mr. Jaroch provided an introduction of attendees and a brief description of the Homestead road project and the associated stormwater management goals. An agenda and copy of the initial coordination (ECWCD, LeeDOT, & HDR) meeting minutes, held on February 13, 2007 was provided to all attendees.

PERMITTING:

- Questions were raised concerning the permitting requirements for the roadway project as well as the modification to existing permits. The following points were discussed with input from Mr. Cook, Mr. Waugh, & Mr. Flynn:
 - Because the existing canals will be modified to accommodate additional stormwater runoff, modification of the original ECWCD permit will be required for this project
 - Three storm events will need to be modeled for the project;
 - the 10-year / 3-day,
 - the 25-year / 3-day, &
 - the 100-year / 3-day

The 25-year / 3-day storm is considered the design storm event.

- Treatment volume calculations will be based on SFWMD criteria.
- The rainfall amount for each of the three storm events are as follows:
 - R = 8.70" (10-year / 3-day) from ADA Engineering
 - R = 10.0" (25-year / 3-day) from SFWMD ERP Manual, Figure C-8
 - R = 14.0" (100-year / 3-day) from ADA Engineering
- A peaking factor of 256 will be used in the ICPR modeling for both the pre and post developed conditions.
- T_c and CN calculations will be done using standard engineering practices

SITE HISTORY

- Through the course of discussion, primarily from Mr. Flynn, and Mr. Waugh, it was learned that the 1995 East Lee County Aquifer Recharge Project (ELCARP) study along with the recommended improvements have been permitted through SFWMD, however, funding has not been secured for said improvements. This study has identified specific infrastructure improvements that will result in an increase in groundwater recharge which is a need for the surrounding area. Those infrastructure improvements identified w/in the ELCAP study, but not implemented to date are an opportunity for the Homestead Roadway improvement project to meet stormwater permitting rules for both ECWCD and SFWMD while providing the means of construction for the required control structures.
- Mr. Waugh stated that there are staff gauges located within some canals (A-1, A-2, Bonefish, etc.) and that the gauge data could be provided to HDR.
- Mr. Waugh provided the names of subdivisions within the ECWCD located along the project corridor. He also stated that the original roadway plans from the development phase had been turned over to Lee County, but would need to check and verify this with County staff.

REQUIREMENTS

- Mr. Flynn indicated that modeling of proposed improvements would be necessary and part of the permitting process and that the model would have to show no detrimental impacts to the local subdivisions resulting from improvements within the ECWCD canals.
- ECWCD staff recommended that all proposed stormwater management facilities developed from the existing ECWCD canals be "wet-detention" type facilities. By doing so, the ponds would aid in providing recharge for the artificially lowered groundwater table due to the private water well located on each residential property throughout ECWCD.

Action Items:

Responsible:	Task
AIM Engineering	<p>Provide existing survey data in proximity to the project corridor to HDR; Contact name is Alice Gaines.</p> <p>Provide existing model data directly related to facilities along and within the Homestead project corridor (i.e. Spur A Canal, etc.).</p>
ECWCD	<p>Provide staff gauge data (from canals) to HDR.</p> <p>Check to see if the original Lehigh Acres roadway plans were turned over to Lee County for archiving.</p>
HDR	<p>Compile Meeting Minutes</p> <p>Review all data relative to project corridor and formulate a plan to model section(s) of canal system(s) and present to ECWCD / AIM at future scheduled meeting.</p> <p>Set-up pre-application meeting w/ SFWMD to introduce the project and initiate the permitting process</p>

These meeting minutes were prepared by Mike Jaroch. Please contact Mr. Jaroch by phone at (813) 262-2710 or by e-mail at michael.jaroch@hdrinc.com with any edits or additional information

APPENDIX D
FLORIDA NATURAL AREAS INVENTORY



1019 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-0207
fax 850-681-9364
www.fnai.org

June 20, 2007

Sherri R. Swanson
HDR, Inc.
2601 Cattleman Road
Sarasota, FL 34232

Dear Ms. Swanson:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: Homestead Road Preliminary Engineering Report
Date Received: June 14, 2007
Location: Township 44 S, Range 27 E, Section 32
Township 45 S, Range 27 E, Sections 4 & 5
Lee County

Element Occurrences

A search of our maps and database indicates that currently we have several Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on landcover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the most rare species tracked by the Inventory, including all federally listed species.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Tracking Florida's Biodiversity

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

The Inventory always recommends that professionals familiar with Florida's flora and fauna should conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

Jason A. Griffin

Jason A. Griffin
Data Services Coordinator

encl



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA Natural Areas INVENTORY

Element Occurrences

- Animals
- Plants
- Communities
- Other
- Date Sensitive
- Point Indicates General Vicinity of Element
- U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever
- Board of Trustees Projects

- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad [Inactive railroads shown in Gray]
- Water

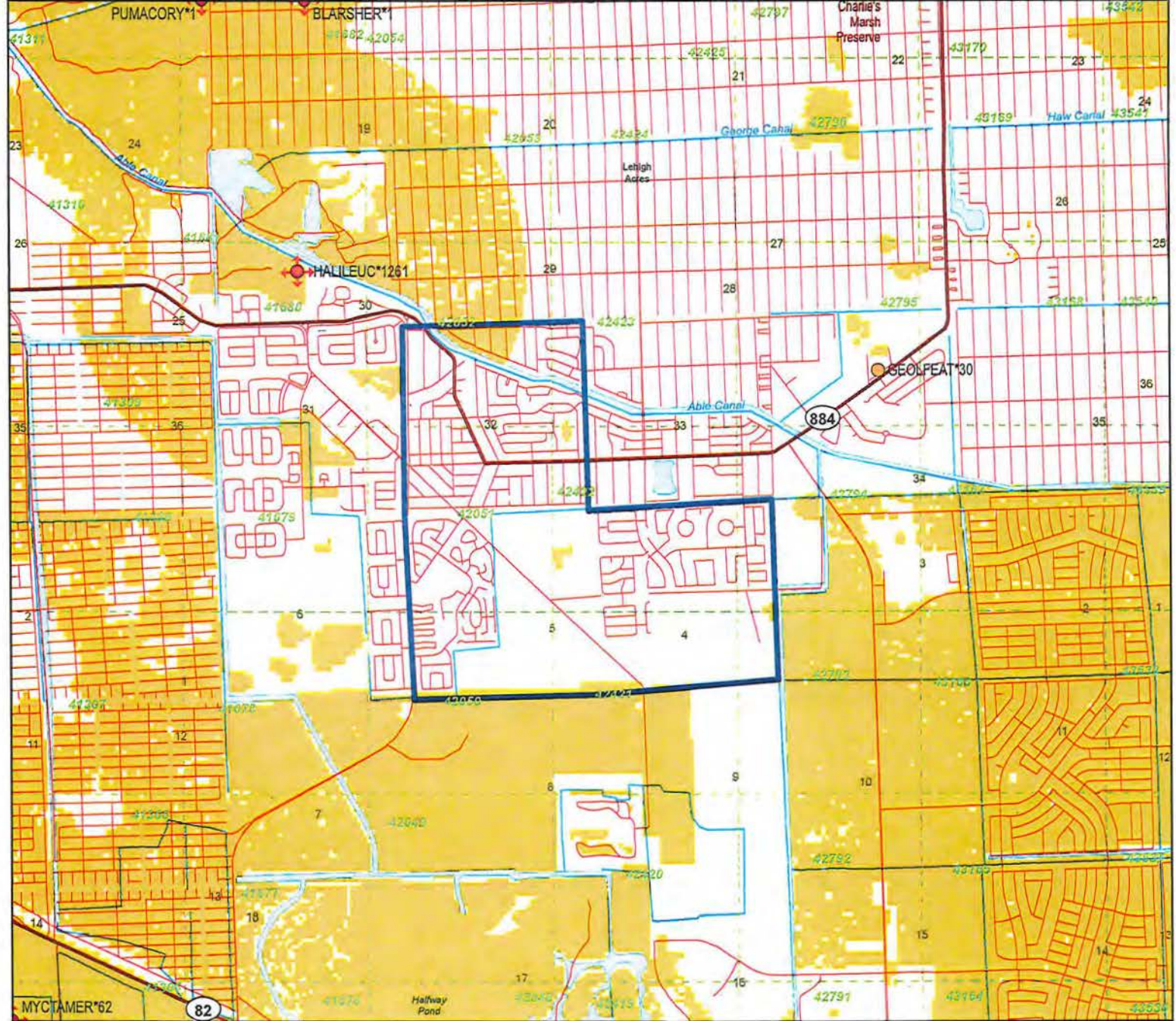


NOTE
Map should not be interpreted without accompanying documents.

Homestead Road Preliminary Engineering Report

Site boundaries are approximate.

Lee County



0 0.5 1 2 3 Miles

Map produced by JAG
Map Date: 20 JUN 2007



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR PROJECT SITE



Map Label	Scientific Name	Common Name	Global State Federal State Observation				Date	Description	EO Comments
			Rank	Rank	Status	Listing			
GEOLFEAT*30	Geological feature		GNR	SNR	N	N	1981-pre	AN EXTREMELY DEEP LAKE FORMED IN A SINK BY LACK OF MARINE SEDIMENT.	THIS IS VERY LIKELY THE DEEPEST LAKE IN FLA. WITH SANDING DOWN TO 208 FEET AND FILLED TO 170 FEET WITH SOFT ORGANIC OOZE. THE LAKE HAS BEEN CONVERTED INTO A COMMUNITY AMENITY BY LANDSCAPING OF ITS SHORES BUT LAKE WATER QUALITY IS ACCEPTABLE.
BLARSHER*1	<i>Blarina carolinensis shermani</i>	Sherman's Short-tailed Shrew	G5T1	S1	N	LS	1955	No general description given	museum specimen
MYCTAMER*62	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	LE	1974-02-09	No general description given	9 STORKS OBSERVED FORAGING ON 15 AND 21 DEC 1973, 49 ON 12 JAN 1974, 82 ON 25-26 JAN 1974, AND 9 FEB 1974. FEEDING SITE ASSOC. WITH NEARBY ROOKERIES; USE OF SITE HIGHLY SEASONAL.
PUMACORY*1	<i>Puma concolor coryi</i>	Florida Panther	G5T1	S1	LE	LE	1990	PART OF BIG CYPRESS SWAMP, INCLUDES SEVERAL WATER COURSES, NUMEROUS PONDS AND LOW "UPLANDS". DIVERSE HABITATS INCLUDE WET AND DRY PRAIRIE, CYPRESS FOREST (LOGGED), MIXED PINES, MIXED HARDWOODS, SEASONALLY FLOOD.	PROBABLY THE LARGEST REMAINING EO, DESPITE FREQUENT ROADKILLS ON S-29 AND S-84 (ALLIGATOR ALLEY); KNOWN ANIMALS (1987) INCLUDE: 3 ADULT FEMALES, 3 ADULT MALES, 1 JUV. FEMALE; ANIMALS TEND TO BE MALNOURISHED, THOUGH SOME ARE HEALTHY; 1 OF 3 "POPULATION CE
HALILEUC*1261	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	LT,PDL	LT	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002, Unknown status or not assessed, 2001, 2000, 1999;(U03FWC01FLUS)

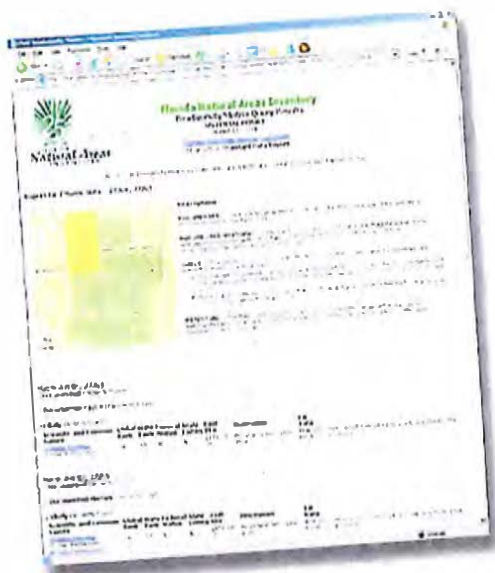


FOR IMMEDIATE RELEASE

FNAI's Biodiversity Matrix Online



The Biodiversity Matrix Map Server is a new **screening tool** from FNAI that provides **immediate, free access** to rare species occurrence information statewide. This tool allows you to zoom to your site of interest and create a report listing documented, likely, and potential occurrences of rare species and natural communities.



The FNAI Biodiversity Matrix offers **built-in interpretation** of the likelihood of species occurrence for each 1-square-mile Matrix Unit across the state. The report includes a site map and list of species and natural communities by occurrence status: Documented, Documented-Historic, Likely, and Potential.

Try it today:

www.fnai.org/biointro.cfm

Please note: FNAI will continue to offer our Standard Data Report service as always. The Standard Data Report offers the most comprehensive information available on rare species, natural communities, conservation lands, and other natural resources.



1018 Thomasville Road
 Suite 200-C
 Tallahassee, FL 32303
 (850) 224-8207
 (850) 681-9364 Fax
 www.fnai.org

FLORIDA
Natural Areas
 INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 42050					
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
Matrix Unit ID: 42051					
Likely					
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	LE
Matrix Unit ID: 42052					
Likely					
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	LE
<i>Puma concolor coryi</i>	Florida Panther	G5T1	S1	LE	LE
Matrix Unit ID: 42421					
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
Matrix Unit ID: 42422					
Likely					
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	LE
Matrix Unit ID: 42423					
Likely					
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	LE
Matrix Unit ID: 42793					
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	LE
Matrix Unit ID: 42794					
Likely					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	LE
Potential from any/all selected units					
<i>Aimophila aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Athene cucularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	LS
<i>Blarina carolinensis shermani</i>	Sherman's Short-tailed Shrew	G5T1	S1	N	LS
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Deeringothamnus pulchellus</i>	Beautiful Pawpaw	G1	S1	LE	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	LT
<i>Elytraria caroliniensis</i> var. <i>angustifolia</i>	Narrow-leaved Carolina Scalystem	G4T2	S2	N	N
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	LS
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Linum carteri</i> var. <i>smallii</i>	Carter's Large-flowered Flax	G2T2	S2	N	LE
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	LT
<i>Platanthera integra</i>	Yellow Fringeless Orchid	G3G4	S3	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Puma concolor coryi</i>	Florida Panther	G5T1	S1	LE	LE
<i>Rana capito</i>	Gopher Frog	G3	S3	N	LS
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	34G5T3C	S2	LE	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	LS
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	LT*

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

- G1** Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** Apparently secure globally (may be rare in parts of range).
- G5** Demonstrably secure globally.
- G#?** Tentative rank (e.g., G2?)
- G#G#** Range of rank; insufficient data to assign specific global rank (e.g., G2G3)
- G#T#** Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
- G#Q** Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
- G#T#Q** Same as above, but validity as subspecies or variety is questioned.
- GH** Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- GNA** Ranking is not applicable because element is not a suitable target for conservation (e.g. as f or hybrid species)
- GNR** Not yet ranked (temporary)
- GNRTNR** Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
- GX** Believed to be extinct throughout range
- GXC** Extirpated from the wild but still known from captivity/cultivation
- GU** Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

**FEDERAL AND STATE LEGAL STATUSES (U.S. Fish and Wildlife Service – USFWS)
PROVIDED BY FNAI FOR INFORMATION ONLY.**

For official definitions and lists of protected species, consult the relevant state or federal agency.

FEDERAL LEGAL STATUS

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

- LE** Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
- LE,XN** A non essential experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants. LE,XN for *Grus americana* (Whooping crane), Federally listed as XN (Non essential experimental population) refers to the Florida experimental population only. Federal listing elsewhere for *Grus americana* is LE.
- PE** Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
- LT** Listed as Threatened Species, defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- LT,PDL** Species currently listed Threatened but has been proposed for delisting.
- PT** Proposed for listing as Threatened Species.
- C** Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
- SAT** Threatened due to similarity of appearance to a threatened species.
- SC** Species of Concern, species is not currently listed but is of management concern to USFWS.
- N** Not currently listed, nor currently being considered for addition to the List of Endangered and Threatened Wildlife and Plants.

**FLORIDA LEGAL STATUSES (Florida Fish and Wildlife Conservation Commission – FFWCC/
Florida Department of Agriculture and Consumer Services – FDACS)**

Animals: Definitions derived from “Florida’s Endangered Species and Species of Special Concern, Official Lists” published by Florida Fish and Wildlife Conservation Commission - FFWCC, 1 August 1997, and subsequent updates.

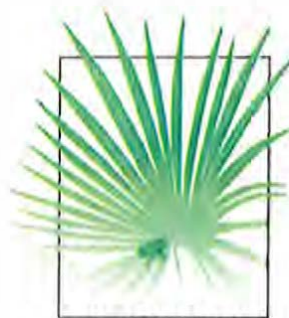
- LE** Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
- LT** Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- LT*** Indicates that a species has LT status only in selected portions of its range in Florida. LT* for *Ursus americanus floridanus* (Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. LT* for *Neovison vison* pop. 1 (Southern mink, South Florida population) state listed as Threatened refers to the Everglades population only (Note: species formerly listed as *Mustela vison* mink pop. 1. Also, priorly listed as *Mustela evergladensis*).
- LS** Listed as Species of Special Concern by the FFWCC, defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification,

environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

- LS*** Indicates that a species has LS status only in selected portions of its range in Florida. LS* for *Pandion haliaetus* (Osprey) state listed as LS (Species of Special Concern) in Monroe County only.
- PE** Proposed for listing as Endangered.
- PT** Proposed for listing as Threatened.
- PS** Proposed for listing as a Species of Special Concern.
- N** Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or please visit: <http://DOACS.State.FL.US/PI/Images/Rule05b.pdf>

- LE** Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.
- PE** Proposed by the FDACS for listing as Endangered Plants.
- LT** Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT* indicates that a species has LT status only in selected portions of its range in Florida.
- PT** Proposed by the FDACS for listing as Threatened Plants.
- N** Not currently listed, nor currently being considered for listing.

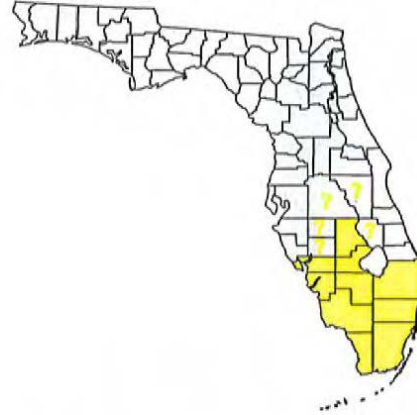


1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FLORIDA
Natural Areas
INVENTORY

FLORIDA PANTHER
Puma concolor coryi

Order: Carnivora
Family: Felidae
FNAI Ranks: G5T1/S1
U.S. Status: Endangered
FL Status: Endangered



© Jerry Lee Gingerich, DVM

Description: A large (70 - 150 lbs. = 32 - 68 kg) cat with a long tail. Fur is dark buff to tawny above and light buff to white below; muzzle and tip of tail are black. The head is broad, and ears are round. Typical track shows four clawless toe pads around a three-lobed heel pad. Defining characteristics of the subspecies are a dorsal hair whorl, a crook in the tail, and white flecking on the neck and shoulders.

FLORIDA PANTHER

Puma concolor coryi

Similar Species: Bobcat (*Lynx rufus*) has a short tail and is approximately half the size of a Florida panther. Western cougars (panthers, pumas; different subspecies) occasionally escape captivity or have been released and can be mistaken for Florida panthers; defining characteristics listed above may be unreliable in distinguishing these close relatives.

Habitat: Requires extensive blocks of mostly forested communities. Large wetlands that are generally inaccessible to humans are important for diurnal refuge. Will tolerate improved areas in a mosaic of natural communities.

Seasonal Occurrence: Year-round resident.

Florida Distribution: Collier, Glades, and Lee counties are the stronghold for the Florida panther; Miami-Dade and Monroe counties are also important. Dispersing individuals may range well north in the peninsula searching for new territories.

Range-wide Distribution: Subspecies formerly found throughout the southeastern U.S. from Arkansas and Louisiana east to Georgia and south to Florida.

Conservation Status: Found on several public conservation lands, including Big Cypress National Preserve, Florida Panther National Wildlife Refuge, Fakahatchee State Park, Picayune Strand State Forest, and Everglades National Park. Apparently, numbers are increasing as a result of genetic improvement project.

Protection and Management: Preserve large natural or slightly modified landscapes. Maintain viable populations of deer. Develop safe places for crossing highways. Maintain public support for recovery projects.

Selected References: Brown 1997, Humphrey (ed.) 1992, Maehr 1997.

SHERMAN'S SHORT-TAILED SHREW

Blarina carolinensis shermani

Order: Insectivora
Family: Soricidae
FNAIRanks: G5T1/S1
U.S. Status: None
FL Status: Species of Special Concern



© Jerry Lee Gingerich, DVM

Description: A small, mouse-like insectivore, but with very small eyes and ears; large (adults > 4 in. = 100 mm total length) relative to other Florida shrew species; slate-gray fur slightly darker on back than on belly. Tail (approximately 1 in. = 25 mm) extends just beyond an extended rear foot. Darker and larger than other related subspecies and lacks their brownish tinge.

Similar Species: Southeastern shrew (*Sorex longirostris*) is generally smaller (3 - 4.2 in. = 76 - 108 mm), with reddish fur, and tail (relatively long) extends at least 0.5 in. (13 mm) beyond an extended rear foot; least shrew (*Cryptotis parva*) is much smaller (2.7 - 3.5 in. = 69 - 89 mm), with gray-brown fur that is distinctly lighter on the underside. All mice have large, conspicuous eyes and ears, longer tails, and less sharply pointed noses.

Habitat: Generally found where there are abundant grasses at the edges of basin and depression marshes and mesic flatwoods; may use other mesic communities or ruderal areas with at least a moderate cover of grasses or forbs.

**SHERMAN'S SHORT-TAILED
SHREW**

*Blarina carolinensis
shermani*

Seasonal Occurrence: No information available; presumed to be active year-round.

Florida Distribution: Recorded only from Lee County in the vicinity of Ft. Myers; may be extinct.

Range-wide Distribution: Same as Florida distribution. Other subspecies occur throughout the southeastern U.S., including Florida (except the Everglades).

Conservation Status: Not known to occur on conservation lands; may be extinct.

Protection and Management: Maintain natural areas with a mosaic of plant communities including mesic flatwoods and basin wetlands. Prescribed fire is probably important for maintaining dense herbaceous cover. Allow fire to burn through ecotones and basins.

Selected References: Brown 1997, Humphrey (ed.) 1992.

APPENDIX E
TRAFFIC COUNTS

CONDITION DIAGRAM

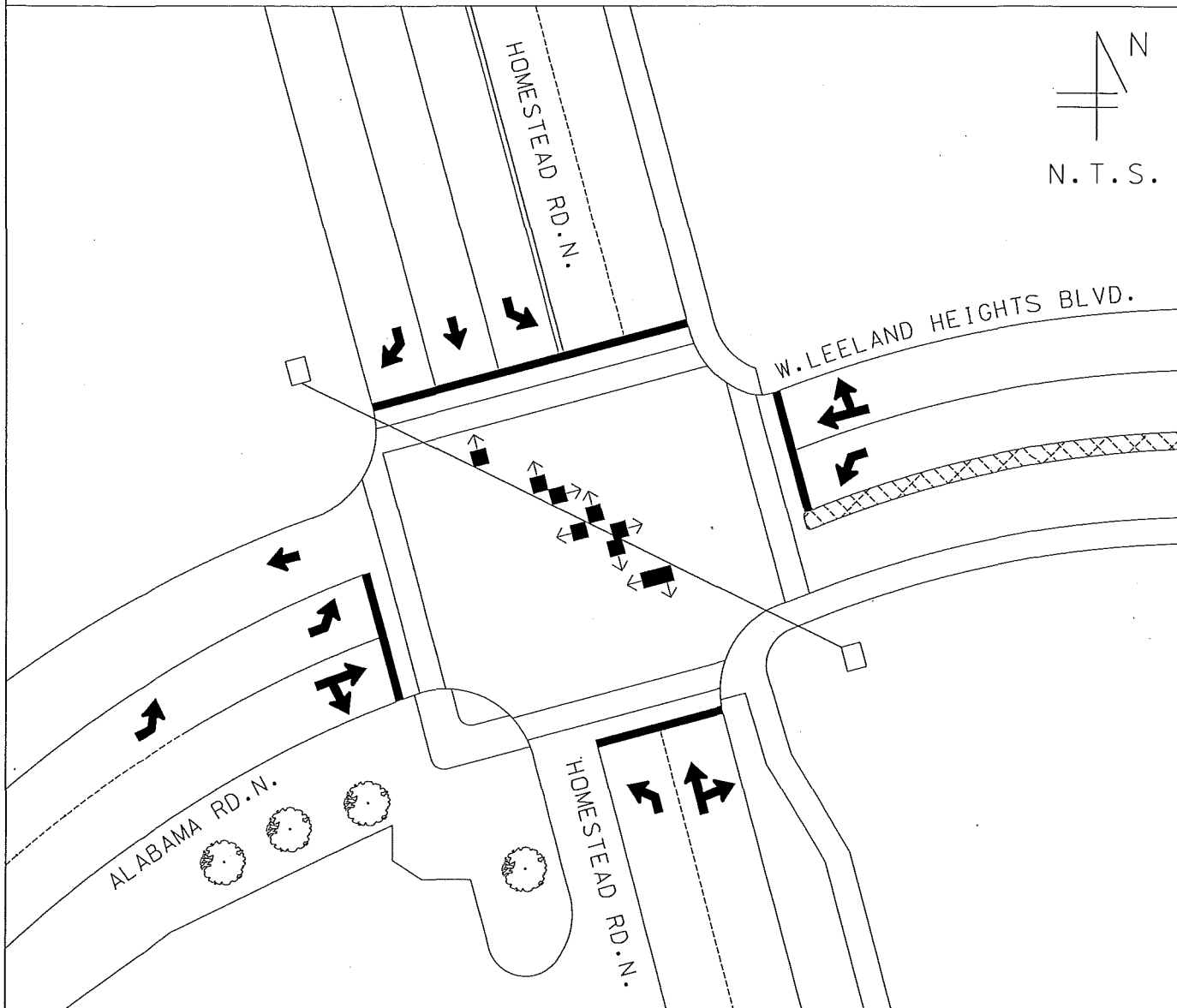
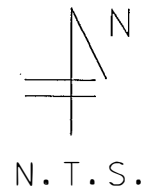
LOCATION ID: ALABAMA/LEELAND HEIGHTS AT HOMESTEAD RD.S.

COUNTY: LEE

CITY: LEIGH ACERS

DRAWN BY: JA

DATE: 4-30-07



SYMBOLS

- | | | |
|-----------|-----------------------|---------------------|
| TREES | POWER POLE | SIGN (1 POST) |
| SHRUBS | TELEPHONE POLE | SIGN (2 POST) |
| HEDGE | COMBINATION POLE | OVERHEAD SIGN |
| BUILDING | TRAFFIC SIGNAL POLE | TRAFFIC SIGNAL HEAD |
| R/W LINE | HYDRANT | PED. SIGNAL HEAD |
| FENCE | CONTROLLER CABINET | PED. PUSHBUTTON |
| GUARDRAIL | VEHICLE DETECTOR LOOP | RR SIGNAL (W/GATE) |

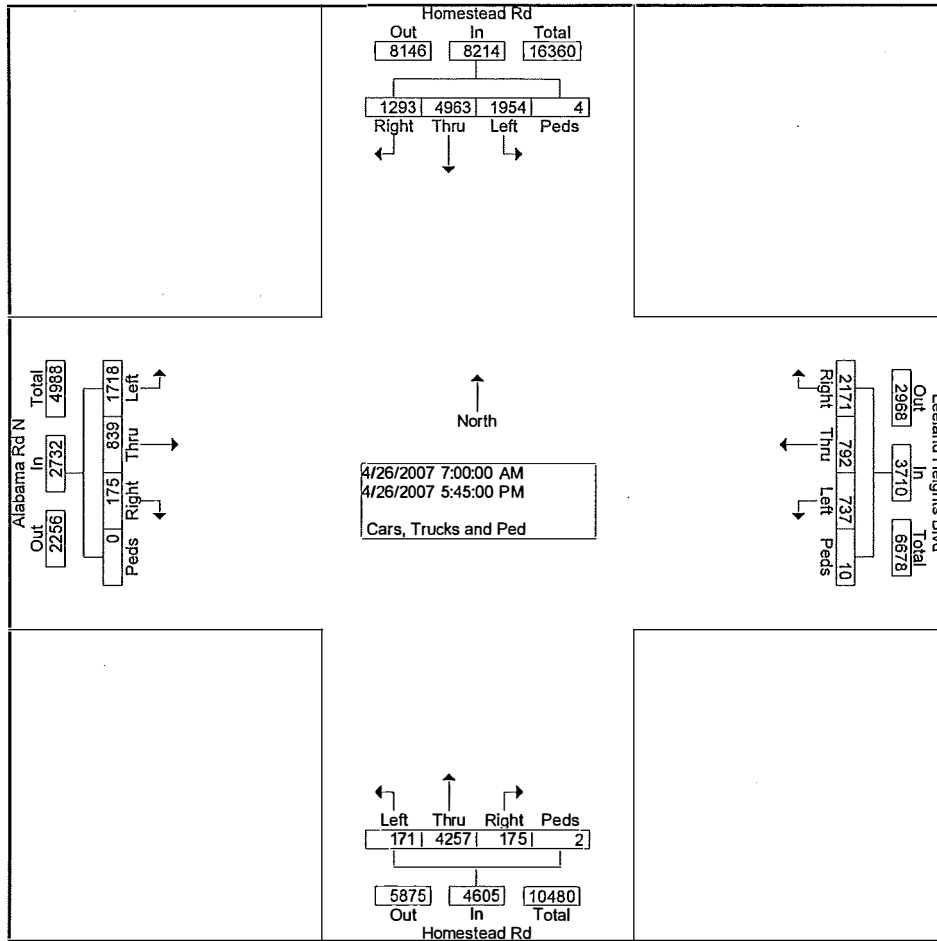
Florida Transportation Engineering, Inc.
8250 Pascal Drive
Punta Gorda, FL 33950
Ph# (941)6392818

Number: 4374
Counted By: NASHA
Weather: GOOD
Other:

File Name : AlabamaRd@Homestead
Site Code : 00004374
Start Date : 4/26/2007
Page No : 1

Groups Printed- Cars, Trucks and Ped

Start Time	Homestead Rd Southbound				Leeland Heights Blvd Westbound				Homestead Rd Northbound				Alabama Rd N Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	32	184	27	0	39	35	15	0	4	130	5	0	2	13	33	0	519
07:15	31	190	33	0	42	37	14	0	2	80	0	0	1	11	38	0	479
07:30	33	165	29	0	73	32	20	0	0	134	2	0	4	24	49	0	565
07:45	28	97	21	0	76	23	11	0	20	175	17	0	5	21	71	0	565
Total	124	636	110	0	230	127	60	0	26	519	24	0	12	69	191	0	2128
08:00	23	94	29	0	111	19	14	0	9	187	6	0	2	14	37	0	545
08:15	14	115	23	0	63	12	44	0	1	171	4	0	4	8	61	0	520
08:30	30	104	46	0	90	16	11	0	4	128	13	0	2	27	54	0	525
08:45	30	133	49	0	50	41	10	0	4	118	0	0	5	42	51	0	533
Total	97	446	147	0	314	88	79	0	18	604	23	0	13	91	203	0	2123
09:00	44	77	42	0	84	29	21	0	2	107	8	0	8	32	58	0	512
09:15	44	105	32	0	87	22	14	0	2	76	6	0	6	14	41	0	449
09:30	40	158	53	0	92	26	25	1	2	142	1	0	3	17	49	0	609
09:45	33	164	38	0	63	28	48	1	5	169	2	0	7	15	40	0	613
Total	161	504	165	0	326	105	108	2	11	494	17	0	24	78	188	0	2183
*** BREAK ***																	
11:00	26	148	54	0	52	32	25	0	9	142	8	0	13	34	56	0	599
11:15	35	131	70	0	71	14	21	4	2	95	6	0	4	19	61	0	533
11:30	43	109	57	0	64	18	10	0	2	88	5	0	4	12	48	0	460
11:45	22	107	35	2	53	11	14	0	2	124	0	0	2	31	61	0	464
Total	126	495	216	2	240	75	70	4	15	449	19	0	23	96	226	0	2056
12:00	46	130	58	0	65	18	19	0	9	104	2	0	6	19	44	0	520
12:15	29	149	55	0	74	6	16	0	2	101	2	0	5	15	39	0	493
12:30	42	156	59	0	64	12	19	0	3	106	6	0	2	12	44	0	525
12:45	44	111	47	0	54	16	16	0	8	101	2	0	10	15	38	0	462
Total	161	546	219	0	257	52	70	0	22	412	12	0	23	61	165	0	2000
* BREAK ***																	
14:00	8	177	53	0	27	11	21	0	4	133	9	1	3	41	50	0	538
14:15	31	157	42	0	45	16	18	0	2	160	8	0	3	24	41	0	547
14:30	36	202	62	0	67	23	18	0	4	181	1	0	6	27	31	0	658
14:45	37	164	65	0	66	13	17	0	5	111	12	0	6	7	46	0	549
Total	112	700	222	0	205	63	74	0	15	585	30	1	18	99	168	0	2292
15:00	32	99	48	0	51	22	23	2	8	83	3	0	11	37	46	0	465
15:15	49	151	78	0	43	11	13	0	5	101	0	1	6	13	32	0	503
15:30	25	95	45	0	53	24	18	0	3	117	7	0	3	31	34	0	455
15:45	23	130	63	2	69	24	25	0	5	93	11	0	8	28	44	0	525
Total	129	475	234	2	216	81	79	2	21	394	21	1	28	109	156	0	1948
16:00	54	162	86	0	58	29	28	0	6	87	4	0	1	37	72	0	624
16:15	54	161	106	0	65	25	28	0	6	131	0	0	2	25	63	0	666
16:30	39	118	68	0	27	23	20	1	4	128	5	0	4	31	59	0	527
16:45	40	144	61	0	42	17	15	0	7	74	3	0	5	20	34	0	462
Total	187	585	321	0	192	94	91	1	23	420	12	0	12	113	228	0	2279
17:00	51	176	90	0	59	41	26	0	5	114	3	0	7	33	45	0	650
17:15	41	146	66	0	41	28	26	1	8	101	3	0	6	38	51	0	556
17:30	52	112	87	0	46	15	25	0	5	83	4	0	1	26	49	0	505
17:45	52	142	77	0	45	23	29	0	6	82	3	0	8	26	48	0	541
Total	196	576	320	0	191	107	106	1	24	380	13	0	22	123	193	0	2252
Grand Total	1293	4963	1954	4	2171	792	737	10	175	4257	171	2	175	839	1718	0	19261
Apprch %	15.7	60.4	23.8	0.0	58.5	21.3	19.9	0.3	3.8	92.4	3.7	0.0	6.4	30.7	62.9	0.0	
Total %	6.7	25.8	10.1	0.0	11.3	4.1	3.8	0.1	0.9	22.1	0.9	0.0	0.9	4.4	8.9	0.0	



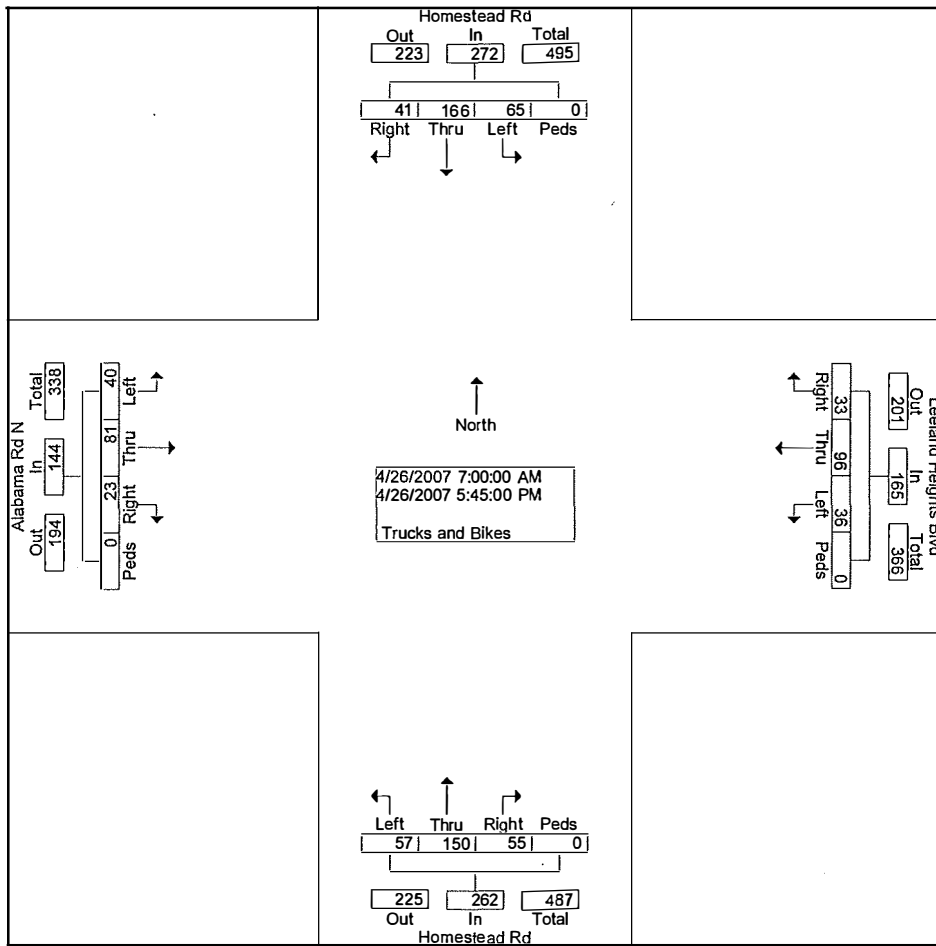
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Counter: 4374
 Counted By: NASHA
 Weather: GOOD
 Other:

File Name : alabamard@homestead
 Site Code : 00004374
 Start Date : 4/26/2007
 Page No : 1

Groups Printed- Trucks and Bikes

Start Time	Homestead Rd Southbound				Leeland Heights Blvd Westbound				Homestead Rd Northbound				Alabama Rd N Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	0	8	2	0	0	2	0	0	2	2	2	0	1	6	1	0	26
07:15	1	7	1	0	2	1	1	0	1	4	1	0	0	5	2	0	26
07:30	0	15	0	0	1	0	0	0	2	12	3	0	1	4	1	0	39
07:45	0	10	2	0	1	2	1	0	1	11	0	0	0	2	4	0	34
Total	1	40	5	0	4	5	2	0	6	29	6	0	2	17	8	0	125
08:00	1	6	1	0	0	1	1	0	1	3	0	0	0	4	2	0	20
08:15	2	5	4	0	0	4	2	0	1	5	1	0	1	5	3	0	33
08:30	1	7	5	0	1	5	1	0	1	6	2	0	0	1	2	0	32
08:45	0	5	1	0	1	4	0	0	0	4	1	0	0	2	0	0	18
Total	4	23	11	0	2	14	4	0	3	18	4	0	1	12	7	0	103
09:00	0	3	2	0	0	1	1	0	0	5	2	0	2	2	0	0	18
09:15	0	2	1	0	0	2	0	0	0	4	1	0	0	1	0	0	11
09:30	0	4	3	0	1	3	2	0	1	2	2	0	0	2	0	0	20
09:45	1	5	0	0	1	2	1	0	0	1	1	0	0	1	0	0	13
Total	1	14	6	0	2	8	4	0	1	12	6	0	2	6	0	0	62
*** BREAK ***																	
11:00	2	3	2	0	1	2	1	0	1	4	2	0	0	2	1	0	21
11:15	1	2	1	0	0	1	0	0	2	2	1	0	1	1	2	0	14
11:30	2	1	4	0	2	2	2	0	1	1	2	0	2	2	0	0	21
11:45	0	5	0	0	1	1	1	0	2	5	1	0	0	1	0	0	17
Total	5	11	7	0	4	6	4	0	6	12	6	0	3	6	3	0	73
12:00	0	4	2	0	2	2	2	0	1	1	4	0	1	3	1	0	23
12:15	1	5	3	0	0	4	0	0	2	6	5	0	1	2	2	0	31
12:30	2	6	2	0	1	5	1	0	1	2	2	0	0	1	1	0	24
12:45	0	4	1	0	2	3	0	0	0	2	1	0	0	2	4	0	19
Total	3	19	8	0	5	14	3	0	4	11	12	0	2	8	8	0	97
*** BREAK ***																	
14:00	2	8	2	0	1	2	2	0	1	1	2	0	1	2	0	0	24
14:15	0	3	1	0	2	3	1	0	2	5	1	0	0	1	1	0	20
14:30	1	10	2	0	0	1	0	0	1	8	2	0	0	2	2	0	29
14:45	0	3	1	0	2	5	1	0	3	11	1	0	1	1	1	0	30
Total	3	24	6	0	5	11	4	0	7	25	6	0	2	6	4	0	103
15:00	1	4	3	0	4	4	0	0	2	10	1	0	0	2	2	0	33
15:15	2	1	1	0	0	6	2	0	4	2	0	0	0	3	0	0	21
15:30	5	1	2	0	1	2	1	0	5	8	1	0	2	1	1	0	30
15:45	4	6	4	0	0	1	3	0	6	6	1	0	0	2	0	0	33
Total	12	12	10	0	5	13	6	0	17	26	3	0	2	8	3	0	117
16:00	2	4	2	0	0	4	2	0	2	5	1	0	1	1	1	0	25
16:15	3	2	1	0	2	5	1	0	1	4	2	0	2	2	0	0	25
16:30	2	3	0	0	0	3	0	0	2	2	1	0	1	1	1	0	16
16:45	1	6	0	0	1	5	1	0	0	1	2	0	0	4	2	0	23
Total	8	15	3	0	3	17	4	0	5	12	6	0	4	8	4	0	89
17:00	0	1	2	0	1	4	2	0	1	0	4	0	1	5	0	0	21
17:15	2	2	1	0	0	2	1	0	2	2	2	0	1	2	1	0	18
17:30	2	1	4	0	1	1	2	0	1	2	1	0	2	1	2	0	20
17:45	0	4	2	0	1	1	0	0	2	1	1	0	1	2	0	0	15
Total	4	8	9	0	3	8	5	0	6	5	8	0	5	10	3	0	74
Grand Total	41	166	65	0	33	96	36	0	55	150	57	0	23	81	40	0	843
Apprch %	15.1	61.0	23.9	0.0	20.0	58.2	21.8	0.0	21.0	57.3	21.8	0.0	16.0	56.3	27.8	0.0	
Total %	4.9	19.7	7.7	0.0	3.9	11.4	4.3	0.0	6.5	17.8	6.8	0.0	2.7	9.6	4.7	0.0	



CONDITION DIAGRAM

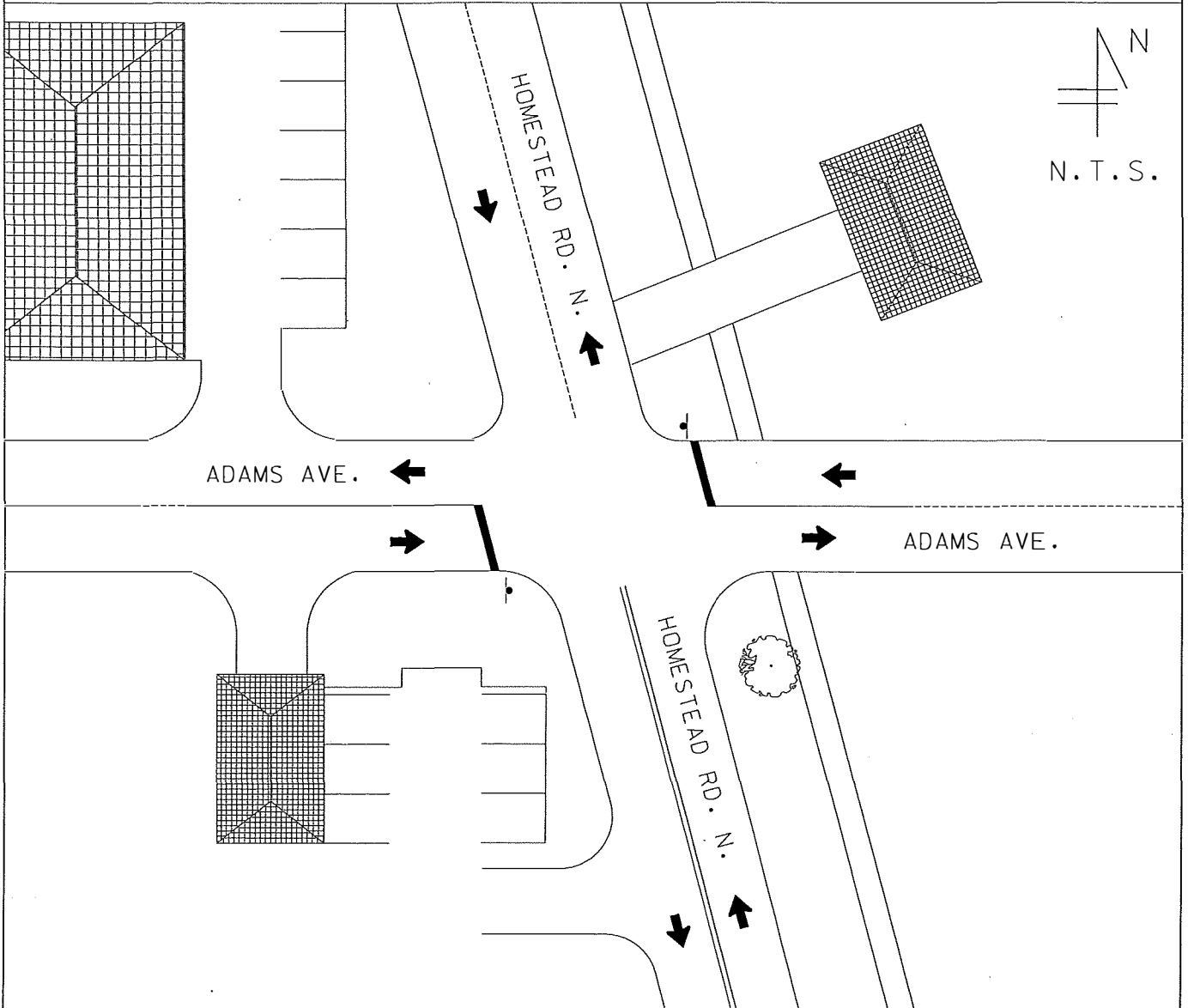
LOCATION ID: ADAMS AVE. & HOMESTEAD RD. N.

COUNTY: LEE

CITY: LEIGH ACERS

DRAWN BY: JA

DATE: 4-30-07



SYMBOLS

- | | | | | | |
|--|-----------|--|-----------------------|--|---------------------|
| | TREES | | POWER POLE | | SIGN (1 POST) |
| | SHRUBS | | TELEPHONE POLE | | SIGN (2 POST) |
| | HEDGE | | COMBINATION POLE | | OVERHEAD SIGN |
| | BUILDING | | TRAFFIC SIGNAL POLE | | TRAFFIC SIGNAL HEAD |
| | R/W LINE | | HYDRANT | | PED. SIGNAL HEAD |
| | FENCE | | CONTROLLER CABINET | | PED. PUSHBUTTON |
| | GUARDRAIL | | VEHICLE DETECTOR LOOP | | RR SIGNAL (W/GATE) |

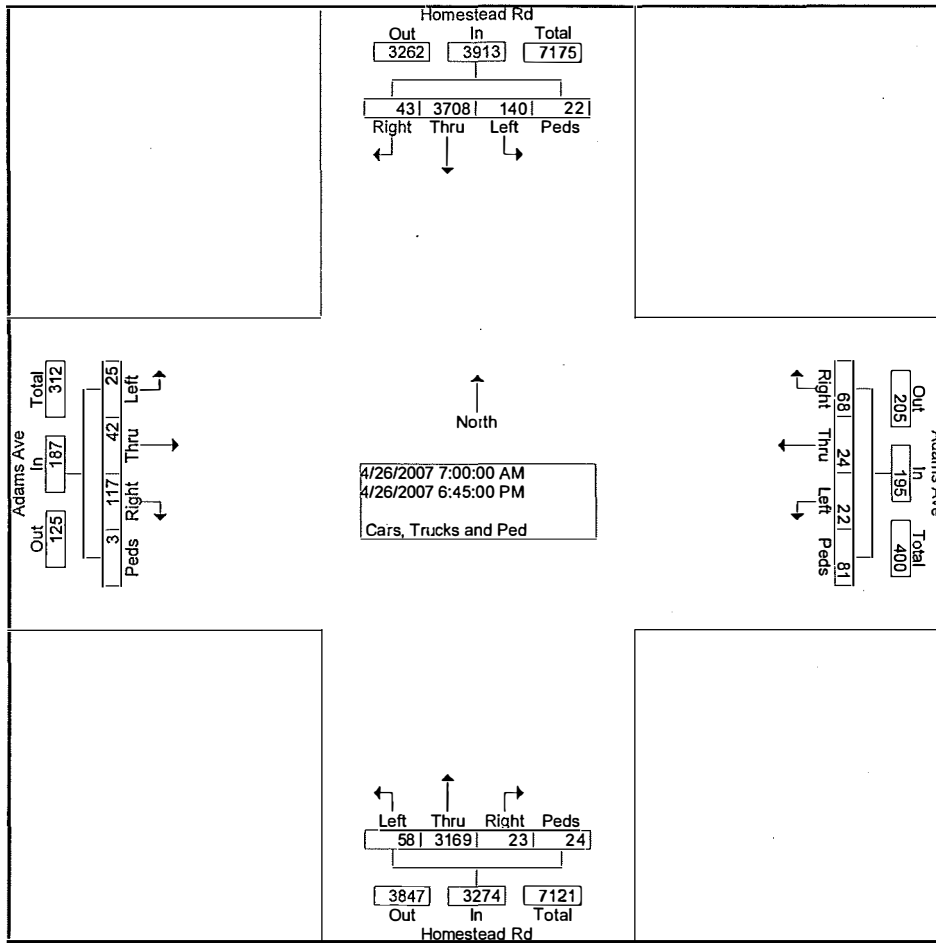
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Counter: 4371
 Counted By: BK
 Weather: GOOD
 Other:

File Name : Adams@Haomestead
 Site Code : 00004371
 Start Date : 4/26/2007
 Page No : 1

Groups Printed- Cars, Trucks and Ped

Start Time	Homestead Rd Southbound				Adams Ave Westbound				Homestead Rd Northbound				Adams Ave Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	0	105	0	0	3	1	1	3	0	93	1	0	0	0	0	0	207
07:15	1	136	0	0	3	1	1	1	0	84	1	0	4	1	0	0	233
07:30	2	130	1	0	2	2	2	2	2	127	2	0	6	0	0	0	278
07:45	1	81	0	0	3	2	1	1	1	155	1	0	4	0	0	0	250
Total	4	452	1	0	11	6	5	7	3	459	5	0	14	1	0	0	968
08:00	0	49	4	1	1	0	1	1	0	134	4	0	1	0	0	0	196
08:15	1	62	0	2	4	1	0	6	0	100	0	0	2	1	1	0	180
08:30	0	39	1	0	2	0	0	2	1	70	2	2	2	1	0	0	122
08:45	0	74	1	0	5	0	0	0	0	64	2	2	2	1	0	0	151
Total	1	224	6	3	12	1	1	9	1	368	8	4	7	3	1	0	649
*** BREAK ***																	
12:00	0	84	5	0	1	0	1	0	0	84	1	1	2	1	0	0	180
12:15	1	77	2	1	3	0	0	2	1	68	1	1	2	1	0	0	160
12:30	1	101	1	0	1	1	0	0	0	96	0	1	6	0	0	0	208
12:45	1	78	4	0	3	2	1	1	1	81	1	0	5	3	2	0	183
Total	3	340	12	1	8	3	2	3	2	329	3	3	15	5	2	0	731
13:00	2	99	0	0	1	0	1	2	1	75	2	3	2	1	0	0	189
13:15	1	93	1	0	0	0	0	0	0	82	2	0	2	1	2	0	184
13:30	1	106	4	0	1	0	0	3	0	73	0	0	3	1	0	0	192
13:45	1	120	5	0	1	0	0	4	0	58	0	0	3	1	2	0	195
Total	5	418	10	0	3	0	1	9	1	288	4	3	10	4	4	0	760
14:00	1	132	7	2	1	0	1	7	0	75	0	1	3	0	0	0	230
14:15	2	119	1	0	3	0	1	4	1	126	3	1	4	1	3	0	269
14:30	1	114	7	9	0	1	0	13	2	132	4	0	1	2	0	0	286
14:45	1	111	5	1	2	0	0	1	4	87	2	0	2	0	2	0	218
Total	5	476	20	12	6	1	2	25	7	420	9	2	10	3	5	0	1003
15:00	1	93	2	0	1	0	0	0	1	84	5	0	4	1	0	2	194
15:15	1	121	5	1	3	1	0	3	0	94	2	0	3	2	1	0	237
15:30	3	110	6	0	1	0	1	1	1	93	3	0	5	2	2	0	228
15:45	1	93	6	1	2	2	1	8	0	79	2	5	4	0	0	0	204
Total	6	417	19	2	7	3	2	12	2	350	12	5	16	5	3	2	863
16:00	1	91	3	0	0	1	0	0	0	99	2	0	1	1	0	0	199
16:15	5	140	17	0	2	3	0	7	1	92	2	1	6	2	0	0	278
16:30	0	105	4	0	1	2	0	2	0	89	0	0	0	2	0	0	205
16:45	1	139	7	4	0	1	0	6	0	75	2	0	2	3	0	0	240
Total	7	475	31	4	3	7	0	15	1	355	6	1	9	8	0	0	922
17:00	4	142	4	0	3	2	1	0	0	83	0	0	7	1	1	0	248
17:15	1	103	7	0	2	0	3	1	0	66	4	3	5	1	0	0	196
17:30	1	123	3	0	0	0	0	0	0	82	1	0	6	5	3	0	224
17:45	0	110	5	0	4	0	1	0	3	56	2	1	3	2	2	0	189
Total	6	478	19	0	9	2	5	1	3	287	7	4	21	9	6	0	857
18:00	3	119	6	0	4	0	0	0	2	70	1	0	4	1	1	1	212
18:15	2	121	6	0	1	0	1	0	0	73	0	0	4	1	1	0	210
18:30	0	101	4	0	1	1	2	0	1	86	2	0	4	1	1	0	204
18:45	1	87	6	0	3	0	1	0	0	84	1	2	3	1	1	0	190
Total	6	428	22	0	9	1	4	0	3	313	4	2	15	4	4	1	816
Grand Total	43	3708	140	22	68	24	22	81	23	3169	58	24	117	42	25	3	7569
Apprch %	1.1	94.8	3.6	0.6	34.9	12.3	11.3	41.5	0.7	96.8	1.8	0.7	62.6	22.5	13.4	1.6	
Total %	0.6	49.0	1.8	0.3	0.9	0.3	0.3	1.1	0.3	41.9	0.8	0.3	1.5	0.6	0.3	0.0	

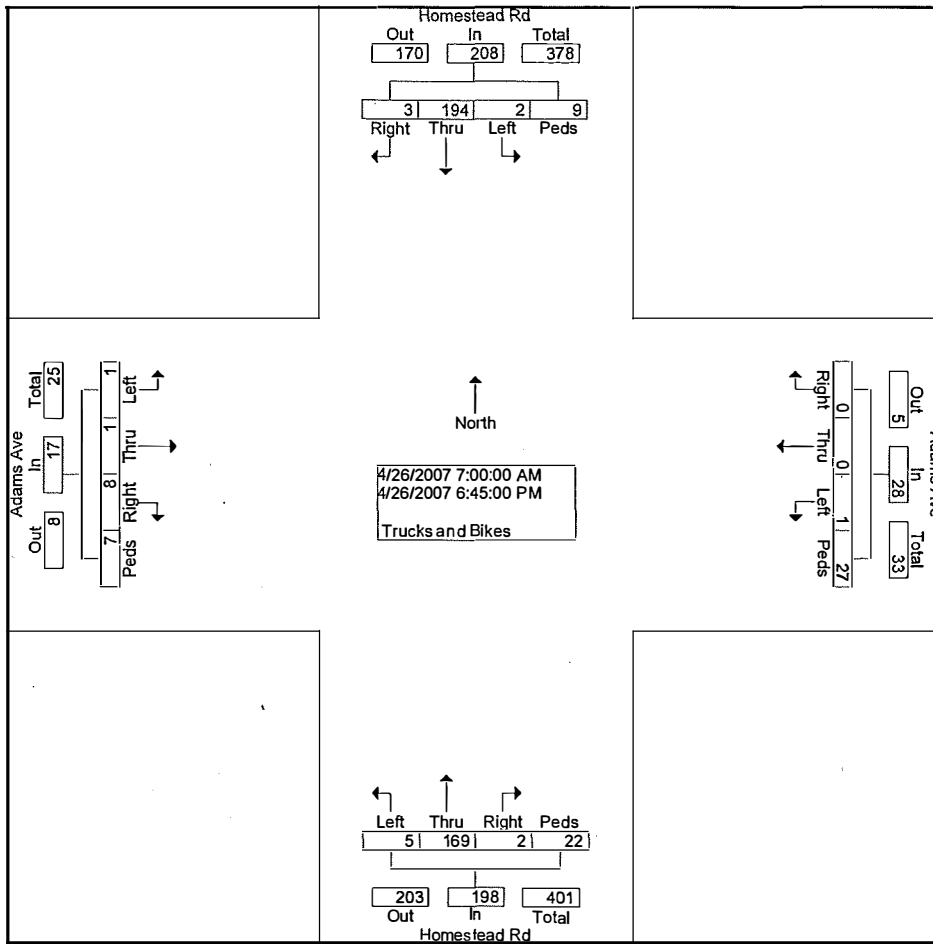


unter: 4371
 uted By: BK
 Weather: GOOD
 Other:

File Name : Adams@Haomestead
 Site Code : 00004371
 Start Date : 4/26/2007
 Page No : 1

Groups Printed- Trucks and Bikes

Start Time	Homestead Rd Southbound				Adams Ave Westbound				Homestead Rd Northbound				Adams Ave Eastbound				Int. Total	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
07:00	0	9	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	12
07:15	0	9	0	0	0	0	0	1	0	3	0	0	0	1	0	0	0	14
07:30	0	18	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	33
07:45	0	11	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	24
Total	0	47	0	0	0	0	0	1	0	34	0	0	0	1	0	0	0	83
08:00	0	7	0	1	0	0	0	1	0	4	0	0	0	0	0	0	0	13
08:15	1	4	0	2	0	0	0	3	0	8	0	0	1	0	0	0	0	19
08:30	0	4	0	0	0	0	0	2	0	5	0	1	0	0	0	0	0	12
08:45	0	7	0	0	0	0	0	0	0	5	0	2	0	0	0	0	0	14
Total	1	22	0	3	0	0	0	6	0	22	0	3	1	0	0	0	0	58
*** BREAK ***																		
12:00	0	1	0	0	0	0	0	0	0	7	0	1	0	0	0	0	0	9
12:15	0	3	0	1	0	0	0	1	0	3	0	1	0	0	0	0	0	9
12:30	0	9	0	0	0	0	0	0	0	3	0	1	3	0	0	0	0	16
12:45	0	3	0	0	0	0	0	1	1	6	0	0	0	0	0	0	0	11
Total	0	16	0	1	0	0	0	2	1	19	0	3	3	0	0	0	0	45
13:00	0	8	0	0	0	0	0	2	0	3	1	0	0	0	0	0	0	14
13:15	0	9	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	15
13:30	0	12	0	0	0	0	0	2	0	3	0	0	1	0	0	0	0	18
13:45	0	11	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	13
Total	0	40	0	0	0	0	0	4	0	13	2	0	1	0	0	0	0	60
14:00	0	9	0	0	0	0	0	0	0	5	0	0	1	0	0	0	0	15
14:15	1	4	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	17
14:30	0	11	0	0	0	0	0	1	0	13	0	0	0	0	0	0	0	25
14:45	0	2	0	1	0	0	0	0	0	2	0	0	0	0	1	0	0	6
Total	1	26	0	1	0	0	0	1	1	31	0	0	1	0	1	0	0	63
15:00	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	7
15:15	1	2	0	0	0	0	0	1	0	9	0	0	0	0	0	0	0	13
15:30	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	8
15:45	0	6	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	9
Total	1	15	0	0	0	0	0	2	0	18	0	0	1	0	0	0	0	37
16:00	0	5	1	0	0	0	0	0	0	8	1	0	0	0	0	0	0	15
16:15	0	3	0	0	0	0	0	1	0	5	1	0	1	0	0	0	0	11
16:30	0	3	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	8
16:45	0	8	0	4	0	0	0	6	0	5	0	0	0	0	0	0	0	23
Total	0	19	1	4	0	0	0	8	0	22	2	0	1	0	0	0	0	57
17:00	0	2	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	5
17:15	0	2	0	0	0	0	1	2	0	2	1	5	0	0	0	0	4	17
17:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
17:45	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	4
Total	0	5	0	0	0	0	1	2	0	4	1	10	0	0	0	5	0	28
18:00	0	1	1	0	0	0	0	1	0	0	0	3	0	0	0	2	0	8
18:15	0	1	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	4
18:30	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5
18:45	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3
Total	0	4	1	0	0	0	0	1	0	6	0	6	0	0	0	2	0	20
Grand Total	3	194	2	9	0	0	1	27	2	169	5	22	8	1	1	7	0	451
Apprch %	1.4	93.3	1.0	4.3	0.0	0.0	3.6	96.4	1.0	85.4	2.5	11.1	47.1	5.9	5.9	41.2	0.0	
Total %	0.7	43.0	0.4	2.0	0.0	0.0	0.2	6.0	0.4	37.5	1.1	4.9	1.8	0.2	0.2	1.6	0.0	



CONDITION DIAGRAM

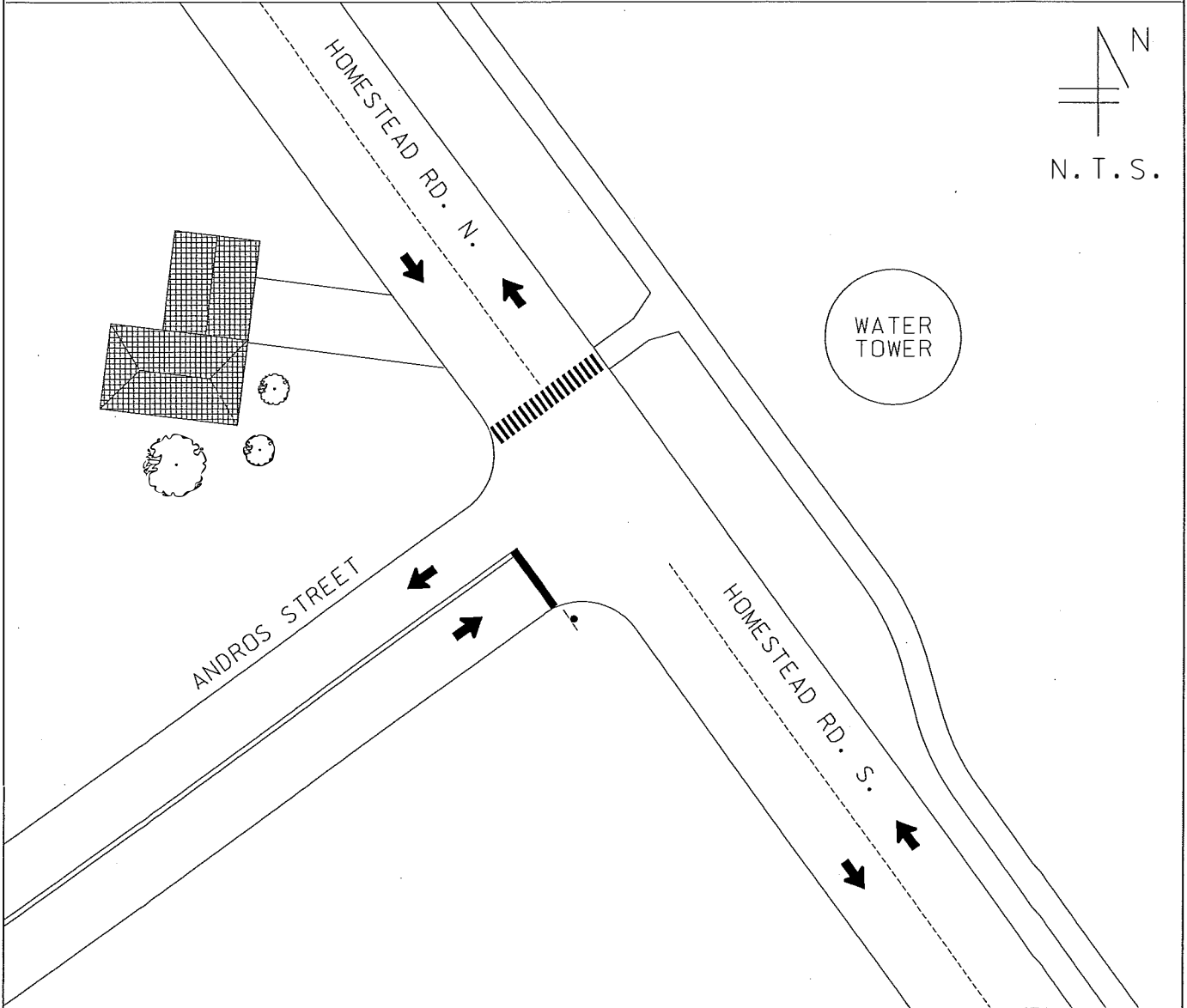
LOCATION ID: ANDROS ST. & HOMESTEAD RD.

COUNTY: LEE

CITY: LEIGH ACERS

DRAWN BY: JA

DATE: 4-30-07



SYMBOLS

TREES	POWER POLE	SIGN (1 POST)
SHRUBS	TELEPHONE POLE	SIGN (2 POST)
HEDGE	COMBINATION POLE	OVERHEAD SIGN
BUILDING	TRAFFIC SIGNAL POLE	TRAFFIC SIGNAL HEAD
R/W LINE	HYDRANT	PED. SIGNAL HEAD
FENCE	CONTROLLER CABINET	PED. PUSHBUTTON
GUARDRAIL	VEHICLE DETECTOR LOOP	RR SIGNAL (W/GATE)

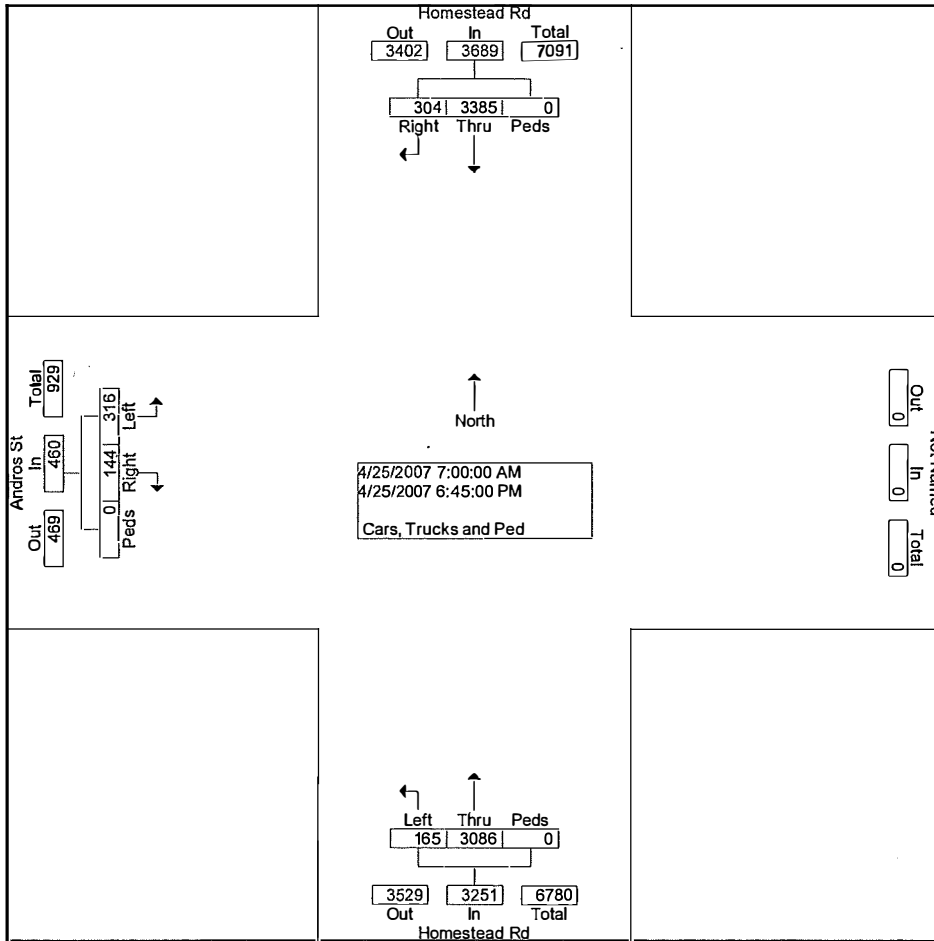
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Number: 4374
 Counted By: NASHA
 Weather: GOOD
 Other:

File Name : AndrosSt@Homestead
 Site Code : 00004374
 Start Date : 4/25/2007
 Page No : 1

Groups Printed- Cars, Trucks and Ped

Start Time	Homestead Rd Southbound			Homestead Rd Northbound			Andros St Eastbound			Int. Total
	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	
07:00	3	108	0	76	1	0	14	12	0	214
07:15	3	130	0	59	0	0	7	6	0	205
07:30	4	75	0	96	6	0	13	3	0	197
07:45	5	68	0	100	8	0	3	4	0	188
Total	15	381	0	331	15	0	37	25	0	804
08:00	8	59	0	113	4	0	3	4	0	191
08:15	2	53	0	71	2	0	1	4	0	133
08:30	9	43	0	97	9	0	2	8	0	168
08:45	5	34	0	89	4	0	3	7	0	142
Total	24	189	0	370	19	0	9	23	0	634
*** BREAK ***										
12:00	8	81	0	82	1	0	7	8	0	187
12:15	8	70	0	92	5	0	3	4	0	182
12:30	9	86	0	72	1	0	3	6	0	177
12:45	8	84	0	76	7	0	1	9	0	185
Total	33	321	0	322	14	0	14	27	0	731
13:00	10	69	0	74	4	0	1	4	0	162
13:15	7	81	0	51	2	0	0	8	0	149
13:30	13	81	0	63	2	0	2	9	0	170
13:45	7	101	0	42	8	0	0	8	0	166
Total	37	332	0	230	16	0	3	29	0	647
14:00	5	112	0	84	1	0	4	12	0	218
14:15	2	80	0	98	4	0	4	5	0	193
14:30	6	87	0	175	13	0	3	13	0	297
14:45	3	93	0	105	4	0	1	3	0	209
Total	16	372	0	462	22	0	12	33	0	917
15:00	4	98	0	79	10	0	4	8	0	203
15:15	5	103	0	102	6	0	3	13	0	232
15:30	8	92	0	94	5	0	1	7	0	207
15:45	4	108	0	84	5	0	3	10	0	214
Total	21	401	0	359	26	0	11	38	0	856
16:00	12	95	0	73	4	0	3	10	0	197
16:15	7	114	0	91	7	0	3	10	0	232
16:30	15	119	0	81	8	0	3	16	0	242
16:45	22	107	0	96	4	0	10	13	0	252
Total	56	435	0	341	23	0	19	49	0	923
17:00	12	114	0	75	4	0	9	13	0	227
17:15	11	114	0	61	4	0	5	13	0	208
17:30	23	100	0	92	5	0	5	8	0	233
17:45	11	116	0	88	1	0	4	11	0	231
Total	57	444	0	316	14	0	23	45	0	899
18:00	9	95	0	75	3	0	8	13	0	203
18:15	9	126	0	81	5	0	3	14	0	238
18:30	14	165	0	112	6	0	3	9	0	309
18:45	13	124	0	87	2	0	2	11	0	239
Total	45	510	0	355	16	0	16	47	0	989
Grand Total	304	3385	0	3086	165	0	144	316	0	7400
Apprch %	8.2	91.8	0.0	94.9	5.1	0.0	31.3	68.7	0.0	
Total %	4.1	45.7	0.0	41.7	2.2	0.0	1.9	4.3	0.0	



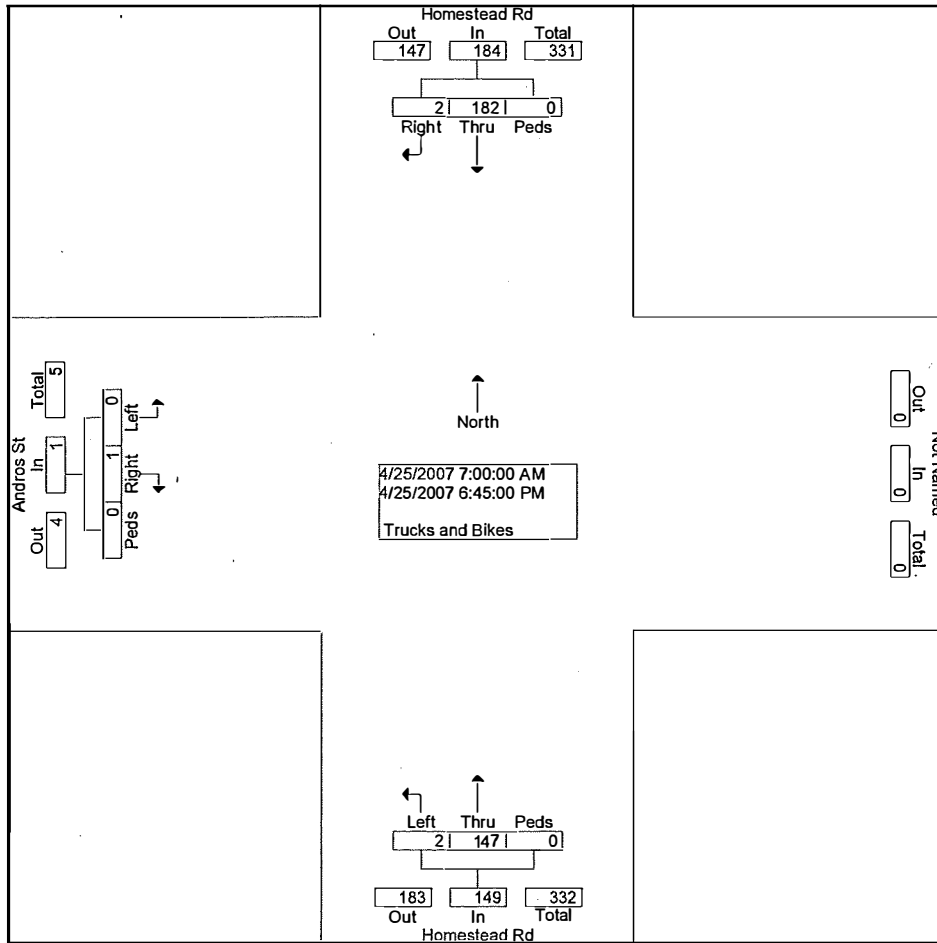
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Counter: 4374
 Counted By: NASHA
 Weather: GOOD
 Other:

File Name : AndrosSt@Homestead
 Site Code : 00004374
 Start Date : 4/25/2007
 Page No : 1

Groups Printed- Trucks and Bikes

Start Time	Homestead Rd Southbound			Homestead Rd Northbound			Andros St Eastbound			Int. Total
	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	
07:00	0	6	0	5	0	0	0	0	0	11
07:15	0	12	0	2	0	0	0	0	0	14
07:30	0	14	0	20	1	0	0	0	0	35
07:45	0	5	0	2	0	0	0	0	0	7
Total	0	37	0	29	1	0	0	0	0	67
08:00	0	6	0	3	0	0	0	0	0	9
08:15	0	4	0	8	0	0	0	0	0	12
08:30	0	3	0	7	0	0	0	0	0	10
08:45	0	2	0	10	0	0	0	0	0	12
Total	0	15	0	28	0	0	0	0	0	43
*** BREAK ***										
12:00	0	8	0	2	0	0	0	0	0	10
12:15	0	6	0	4	0	0	0	0	0	10
12:30	0	5	0	2	0	0	0	0	0	7
12:45	0	4	0	3	0	0	0	0	0	7
Total	0	23	0	11	0	0	0	0	0	34
13:00	0	2	0	7	0	0	0	0	0	9
13:15	0	2	0	1	0	0	0	0	0	3
13:30	0	11	0	1	0	0	0	0	0	12
13:45	0	12	0	0	0	0	0	0	0	12
Total	0	27	0	9	0	0	0	0	0	36
14:00	0	6	0	2	0	0	0	0	0	8
14:15	0	5	0	15	0	0	0	0	0	20
14:30	0	3	0	12	0	0	0	0	0	15
14:45	0	2	0	3	0	0	0	0	0	5
Total	0	16	0	32	0	0	0	0	0	48
15:00	0	4	0	3	0	0	0	0	0	7
15:15	0	5	0	3	0	0	0	0	0	8
15:30	0	4	0	1	0	0	0	0	0	5
15:45	0	2	0	2	0	0	0	0	0	4
Total	0	15	0	9	0	0	0	0	0	24
16:00	0	5	0	1	0	0	0	0	0	6
16:15	0	4	0	6	0	0	0	0	0	10
16:30	0	5	0	4	0	0	0	0	0	9
16:45	1	3	0	2	0	0	0	0	0	6
Total	1	17	0	13	0	0	0	0	0	31
17:00	1	3	0	1	1	0	1	0	0	7
17:15	0	4	0	0	0	0	0	0	0	4
17:30	0	2	0	3	0	0	0	0	0	5
17:45	0	4	0	4	0	0	0	0	0	8
Total	1	13	0	8	1	0	1	0	0	24
18:00	0	3	0	2	0	0	0	0	0	5
18:15	0	5	0	3	0	0	0	0	0	8
18:30	0	6	0	2	0	0	0	0	0	8
18:45	0	5	0	1	0	0	0	0	0	6
Total	0	19	0	8	0	0	0	0	0	27
Grand Total	2	182	0	147	2	0	1	0	0	334
Apprch %	1.1	98.9	0.0	98.7	1.3	0.0	100.0	0.0	0.0	
Total %	0.6	54.5	0.0	44.0	0.6	0.0	0.3	0.0	0.0	



CONDITION DIAGRAM

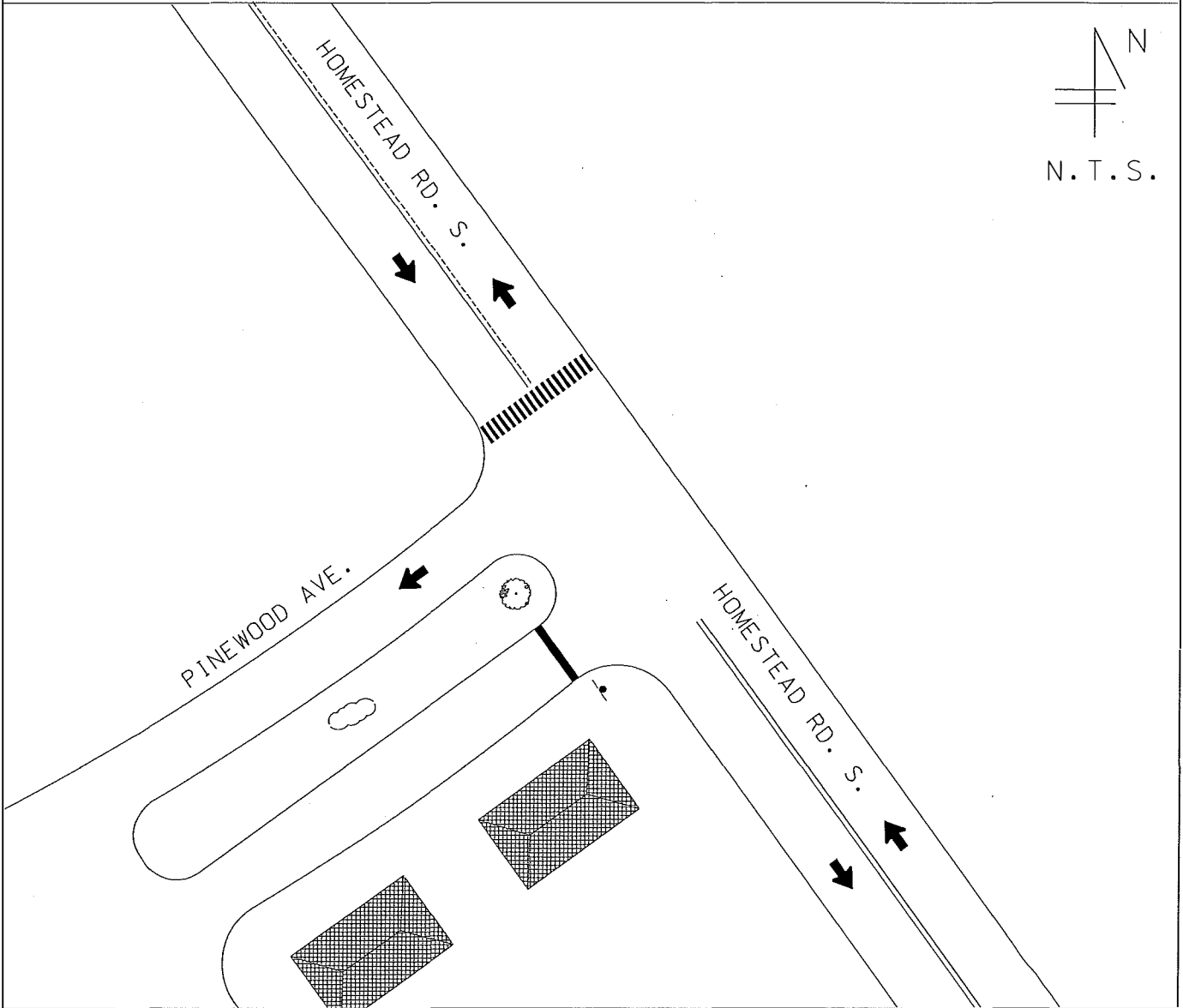
LOCATION ID: PINEWOOD AVE. & HOMESTEAD RD.

COUNTY: LEE






















CITY: LEIGH ACERS

DRAWN BY: JA

DATE: 4-30-07



SYMBOLS

 TREES	 POWER POLE	 SIGN (1 POST)
 SHRUBS	 TELEPHONE POLE	 SIGN (2 POST)
 HEDGE	 COMBINATION POLE	 OVERHEAD SIGN
 BUILDING	 TRAFFIC SIGNAL POLE	 TRAFFIC SIGNAL HEAD
 R/W LINE	 HYDRANT	 PED. SIGNAL HEAD
 FENCE	 CONTROLLER CABINET	 PED. PUSHBUTTON
 GUARDRAIL	 VEHICLE DETECTOR LOOP	 RR SIGNAL (W/GATE)

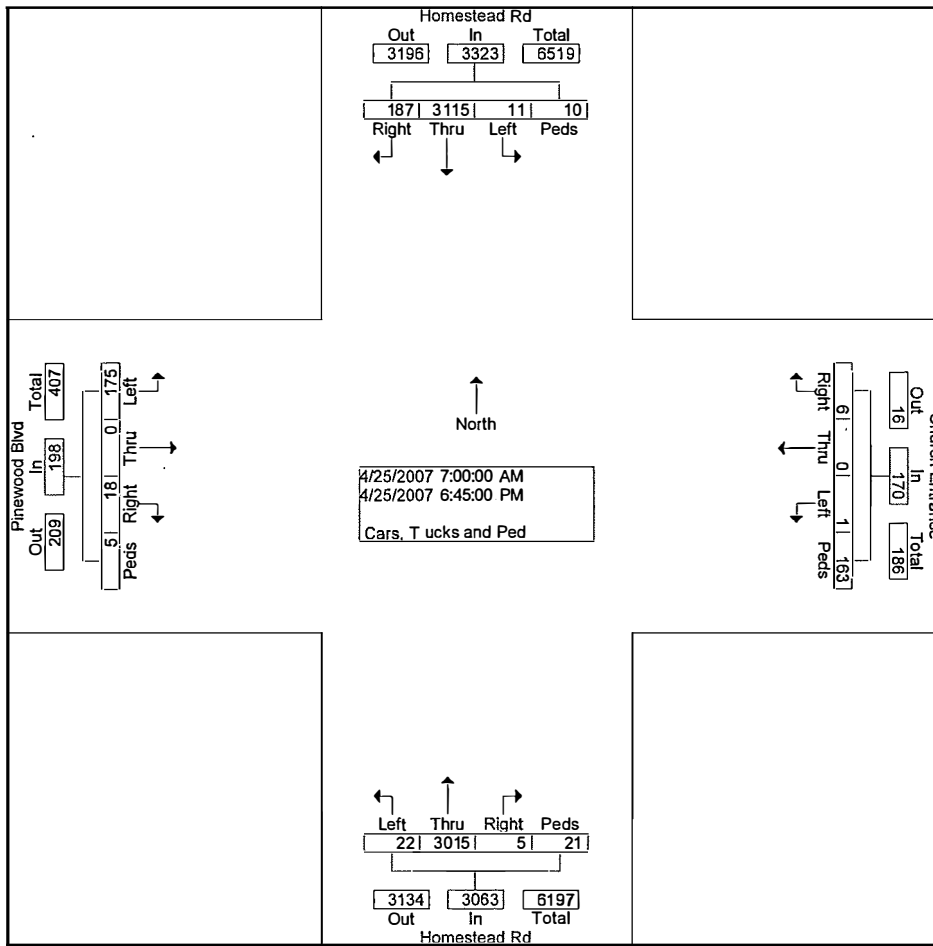
Florida Transportation Engineering, Inc.
8250 Pascal Drive
Punta Gorda, FL 33950
Ph# (941)6392818

Counter: 4371
Counted By: BK
Weather: GOOD
Other:

File Name : Pinewood@Homestead
Site Code : 00004371
Start Date : 4/25/2007
Page No : 1

Groups Printed- Cars, Trucks and Ped

Start Time	Homestead Rd Southbound				Church Entrance Westbound				Homestead Rd Northbound				Pinewood Blvd Eastbound				Int. Total	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
07:00	1	114	0	0	1	0	0	3	1	69	0	0	0	0	0	9	0	198
07:15	4	115	3	1	2	0	0	11	0	58	0	0	0	0	0	4	0	198
07:30	1	98	1	0	0	0	0	12	0	136	1	3	1	0	3	0	0	256
07:45	2	75	2	1	0	0	0	14	0	134	0	0	0	0	4	1	0	233
Total	8	402	6	2	3	0	0	40	1	397	1	3	1	0	20	1	0	885
08:00	2	74	0	0	0	0	0	0	2	114	2	0	0	0	4	0	0	198
08:15	2	47	0	0	0	0	0	0	0	81	0	0	0	0	5	0	0	135
08:30	4	36	0	0	0	0	0	0	0	97	0	0	0	0	7	0	0	144
08:45	5	47	0	0	0	0	0	3	0	70	0	1	0	0	7	0	0	133
Total	13	204	0	0	0	0	0	3	2	362	2	1	0	0	23	0	0	610
*** BREAK ***																		
12:00	9	79	0	0	0	0	0	2	0	68	0	1	2	0	8	0	0	169
12:15	9	60	0	0	0	0	0	1	0	88	1	1	0	0	5	0	0	165
12:30	7	79	0	0	0	0	0	0	0	59	0	0	0	0	4	0	0	149
12:45	13	71	0	0	0	0	0	1	0	69	0	0	0	0	9	0	0	163
Total	38	289	0	0	0	0	0	4	0	284	1	2	2	0	26	0	0	646
13:00	4	64	0	0	0	0	0	0	0	68	2	0	0	0	7	0	0	145
13:15	5	71	0	0	0	0	0	0	0	57	1	0	0	0	4	0	0	138
13:30	6	66	0	0	0	0	0	0	0	57	1	0	0	0	9	0	0	139
13:45	8	81	0	0	0	0	0	3	0	45	0	0	0	0	12	0	0	149
Total	23	282	0	0	0	0	0	3	0	227	4	0	0	0	32	0	0	571
14:00	8	119	0	0	0	0	0	3	1	52	0	1	1	0	10	0	0	195
14:15	10	72	0	1	0	0	0	38	0	103	1	0	2	0	0	1	0	228
14:30	6	73	0	0	0	0	0	13	0	147	1	3	0	0	6	0	0	249
14:45	4	79	0	0	0	0	0	10	0	106	0	2	0	0	3	0	0	204
Total	28	343	0	1	0	0	0	64	1	408	2	6	3	0	19	1	0	876
15:00	3	105	0	0	0	0	0	2	0	85	0	4	0	0	5	0	0	204
15:15	8	73	0	0	0	0	0	1	0	83	1	1	1	0	4	0	0	172
15:30	5	88	0	0	0	0	0	3	0	87	1	0	0	0	2	0	0	186
15:45	7	86	1	0	0	0	0	1	0	95	0	0	0	0	4	0	0	194
Total	23	352	1	0	0	0	0	7	0	350	2	5	1	0	15	0	0	756
16:00	7	77	2	0	1	0	0	0	0	73	1	1	2	0	1	3	0	168
16:15	4	113	0	0	0	0	1	0	0	119	3	0	2	0	4	0	0	246
16:30	3	115	0	0	0	0	0	3	0	78	0	0	1	0	2	0	0	202
16:45	3	117	1	0	0	0	0	5	0	88	1	0	1	0	2	0	0	218
Total	17	422	3	0	1	0	1	8	0	358	5	1	6	0	9	3	0	834
17:00	4	105	0	5	2	0	0	2	0	79	1	0	0	0	3	0	0	201
17:15	6	115	0	2	0	0	0	5	0	68	0	1	0	0	1	0	0	198
17:30	4	101	0	0	0	0	0	4	0	93	2	2	1	0	2	0	0	209
17:45	5	125	0	0	0	0	0	7	0	86	0	0	1	0	3	0	0	227
Total	19	446	0	7	2	0	0	18	0	326	3	3	2	0	9	0	0	835
18:00	3	107	0	0	0	0	0	5	0	81	1	0	2	0	5	0	0	204
18:15	3	102	0	0	0	0	0	10	0	80	1	0	0	0	3	0	0	199
18:30	6	83	0	0	0	0	0	1	1	68	0	0	0	0	9	0	0	168
18:45	6	83	1	0	0	0	0	0	0	74	0	0	1	0	5	0	0	170
Total	18	375	1	0	0	0	0	16	1	303	2	0	3	0	22	0	0	741
Grand Total	187	3115	11	10	6	0	1	163	5	3015	22	21	18	0	175	5	0	6754
Apprch %	5.6	93.7	0.3	0.3	3.5	0.0	0.6	95.9	0.2	98.4	0.7	0.7	9.1	0.0	88.4	2.5	0.0	
Total %	2.8	46.1	0.2	0.1	0.1	0.0	0.0	2.4	0.1	44.6	0.3	0.3	0.3	0.0	2.6	0.1	0.0	



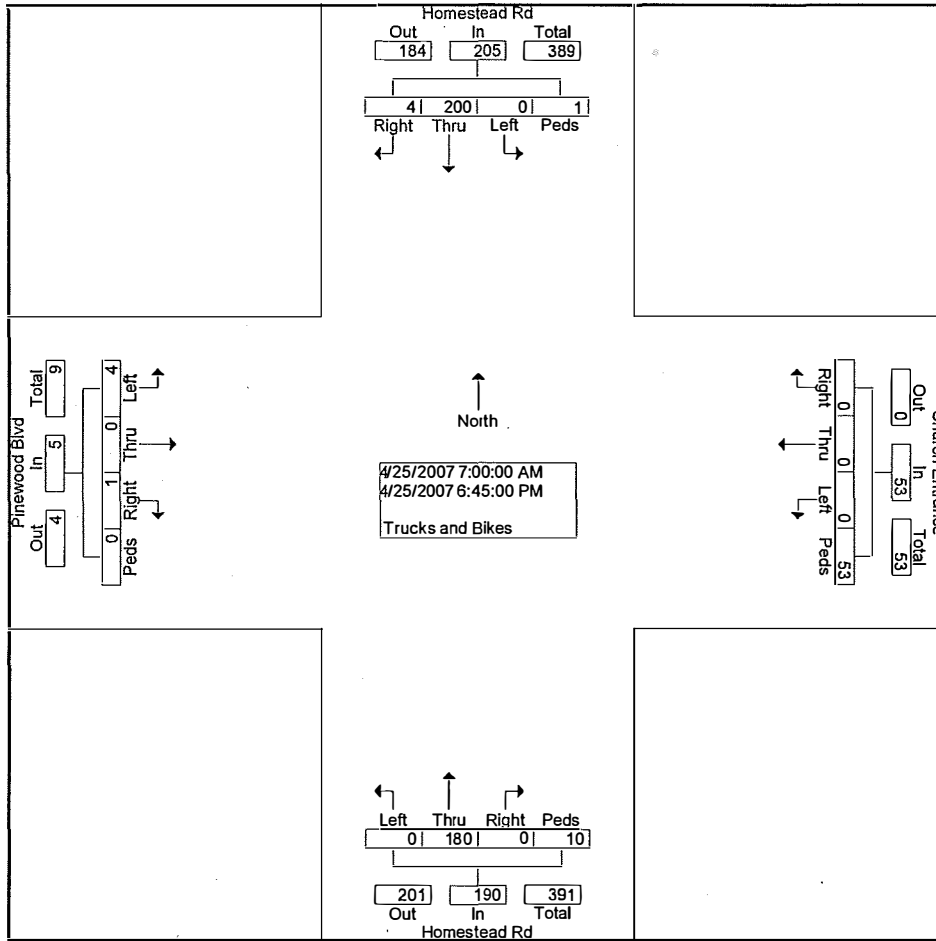
Florida Transportation Engineering, Inc.
8250 Pascal Drive
Punta Gorda, FL 33950
Ph# (941)6392818

unter: 4371
Counted By: BK
Weather: GOOD
Other:

File Name : Pinewood@Homestead
Site Code : 00004371
Start Date : 4/25/2007
Page No : 1

Groups Printed- Trucks and Bikes

Start Time	Homestead Rd Southbound				Church Entrance Westbound				Homestead Rd Northbound				Pinewood Blvd Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
07:15	1	15	0	0	0	0	0	0	2	0	2	0	0	0	0	0	20
07:30	0	16	0	0	0	0	0	0	5	0	24	0	0	0	0	0	45
07:45	0	6	0	0	0	0	0	0	5	0	3	0	0	0	0	1	15
Total	1	44	0	0	0	0	0	0	12	0	29	0	0	0	0	1	87
08:00	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	20
08:15	1	5	0	0	0	0	0	0	0	0	9	0	0	0	0	1	16
08:30	0	2	0	0	0	0	0	0	0	0	11	0	0	0	0	0	13
08:45	1	5	0	0	0	0	0	0	1	0	7	0	1	0	0	0	15
Total	2	22	0	0	0	0	0	0	1	0	37	0	1	0	0	1	64
*** BREAK ***																	
12:00	0	11	0	0	0	0	0	0	2	0	3	0	1	0	0	0	17
12:15	0	3	0	0	0	0	0	0	1	0	7	0	1	0	0	0	12
12:30	0	8	0	0	0	0	0	0	0	0	3	0	0	0	0	0	11
12:45	0	4	0	0	0	0	0	0	0	0	4	0	0	0	0	0	8
Total	0	26	0	0	0	0	0	0	3	0	17	0	2	0	0	0	48
13:00	0	4	0	0	0	0	0	0	0	0	8	0	0	0	0	0	12
13:15	1	14	0	0	0	0	0	0	0	0	0	0	0	0	1	0	16
13:30	0	11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	12
13:45	0	10	0	0	0	0	0	0	2	0	1	0	0	0	0	0	13
Total	1	39	0	0	0	0	0	0	2	0	10	0	0	0	0	1	53
14:00	0	8	0	0	0	0	0	0	1	0	3	0	0	0	0	0	12
14:15	0	5	0	0	0	0	0	0	7	0	20	0	0	0	0	0	32
14:30	0	7	0	0	0	0	0	0	4	0	14	0	1	0	0	0	26
14:45	0	3	0	0	0	0	0	0	3	0	5	0	0	0	0	0	11
Total	0	23	0	0	0	0	0	0	15	0	42	0	1	0	0	0	81
15:00	0	4	0	0	0	0	0	0	0	0	5	0	1	0	0	0	10
15:15	0	2	0	0	0	0	0	0	0	0	4	0	1	0	0	0	7
15:30	0	4	0	0	0	0	0	0	1	0	2	0	0	0	0	0	7
15:45	0	6	0	1	0	0	0	0	2	0	3	0	1	0	0	0	13
Total	0	16	0	1	0	0	0	0	3	0	14	0	3	0	0	0	37
16:00	0	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5
16:15	0	8	0	0	0	0	0	0	0	0	9	0	0	0	0	0	17
16:30	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	7
16:45	0	2	0	0	0	0	0	0	1	0	3	0	0	0	0	0	6
Total	0	16	0	0	0	0	0	0	1	0	18	0	0	0	0	0	35
17:00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
17:15	0	5	0	0	0	0	0	0	3	0	0	0	1	0	0	0	9
17:30	0	0	0	0	0	0	0	0	4	0	6	0	2	0	0	0	12
17:45	0	3	0	0	0	0	0	0	5	0	2	0	0	0	0	0	10
Total	0	9	0	0	0	0	0	0	12	0	9	0	3	0	0	0	33
18:00	0	1	0	0	0	0	0	0	2	0	3	0	0	1	0	1	8
18:15	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
18:30	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
18:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	5	0	0	0	0	0	0	4	0	4	0	0	1	0	1	15
Grand Total	4	200	0	1	0	0	0	0	53	0	180	0	10	1	0	4	453
Approch %	2.0	97.6	0.0	0.5	0.0	0.0	0.0	0.0	100.0	0.0	94.7	0.0	5.3	20.0	0.0	80.0	0.0
Total %	0.9	44.2	0.0	0.2	0.0	0.0	0.0	0.0	11.7	0.0	39.7	0.0	2.2	0.2	0.0	0.9	0.0



CONDITION DIAGRAM

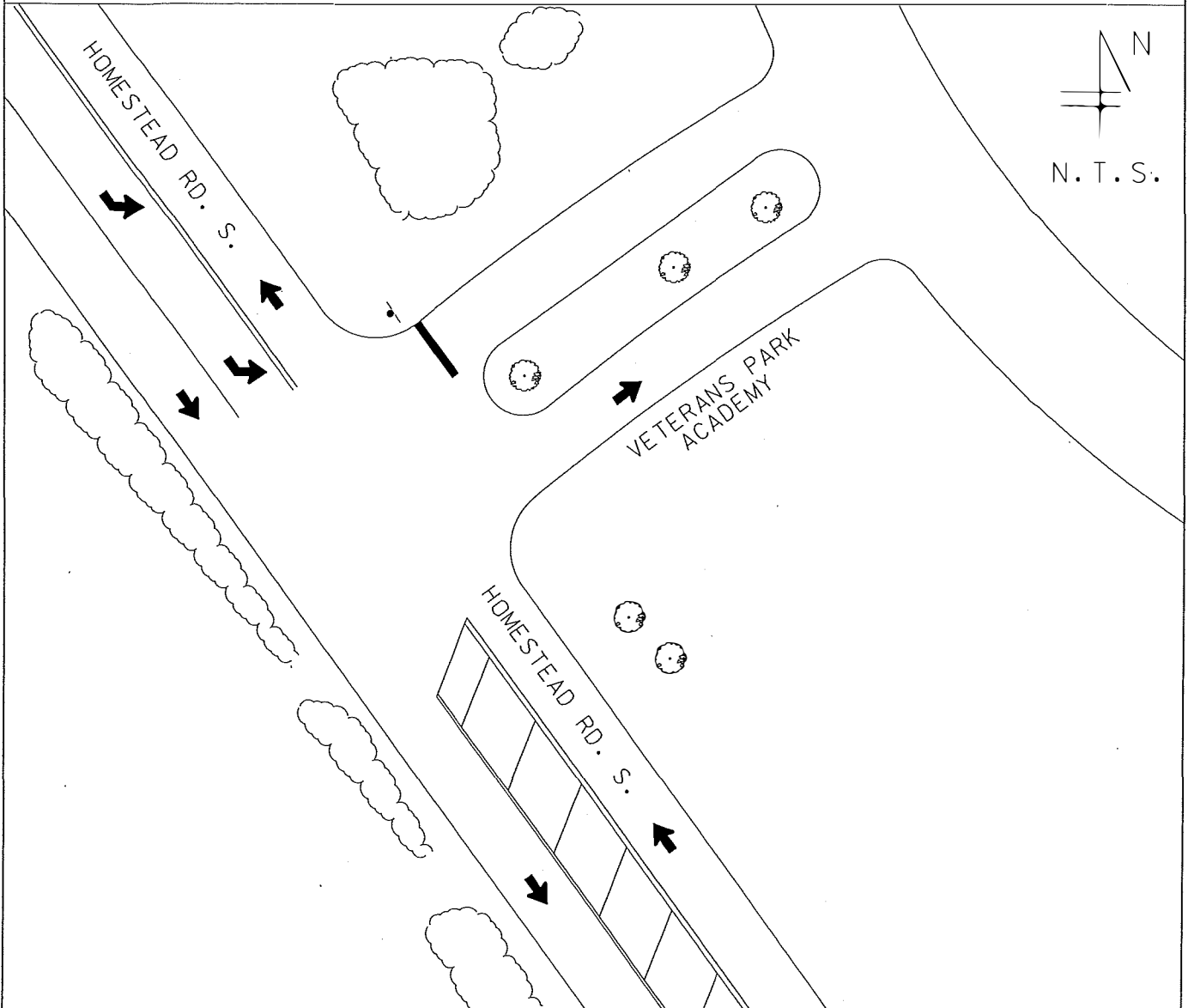
LOCATION ID: VETERANS PARK & HOMESTEAD RD.

COUNTY: LEE






















CITY: LEIGH ACERS

DRAWN BY: JA

DATE: 4-30-07



SYMBOLS

 TREES	 POWER POLE	 SIGN (1 POST)
 SHRUBS	 TELEPHONE POLE	 SIGN (2 POST)
 HEDGE	 COMBINATION POLE	 OVERHEAD SIGN
 BUILDING	 TRAFFIC SIGNAL POLE	 TRAFFIC SIGNAL HEAD
 R/W LINE	 HYDRANT	 PED. SIGNAL HEAD
 FENCE	 CONTROLLER CABINET	 PED. PUSHBUTTON
 GUARDRAIL	 VEHICLE DETECTOR LOOP	 RR SIGNAL (W/GATE)

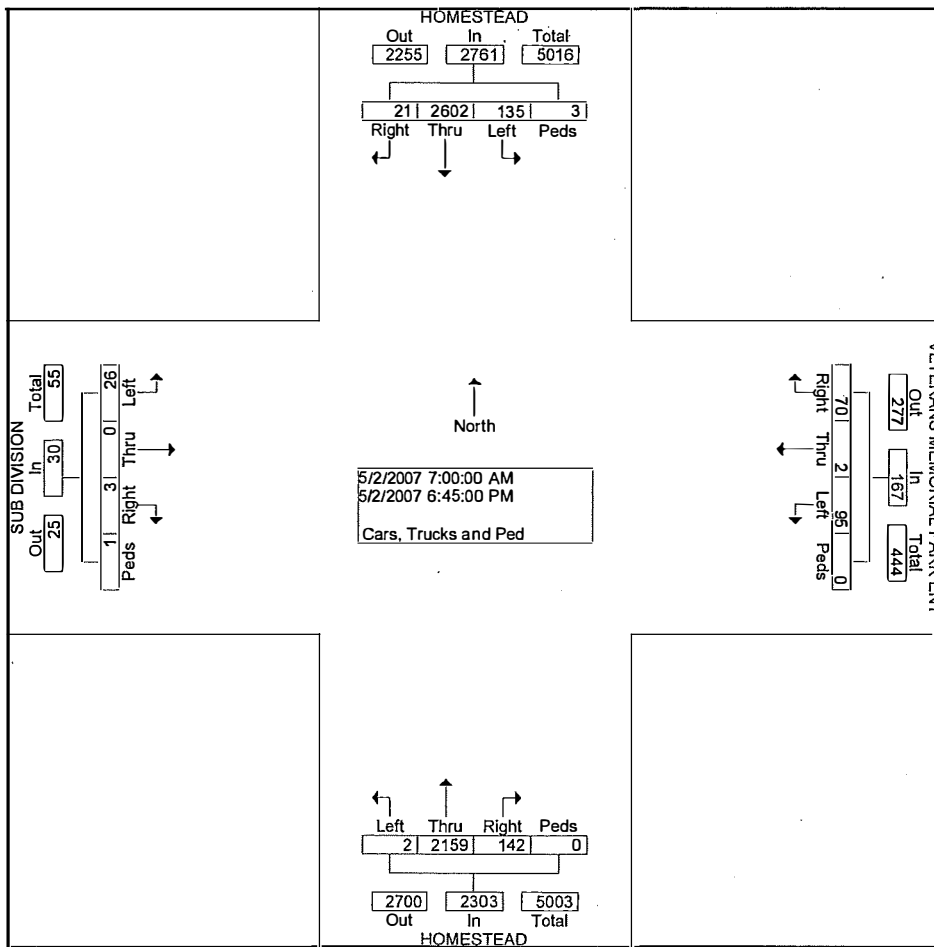
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Counter: 3574
 Counted By: Nasha
 Weather: Good
 Other:

File Name : Park Entrance@Homestead
 Site Code : 00004374
 Start Date : 5/2/2007
 Page No : 1

Groups Printed- Cars, Trucks and Ped

Start Time	HOMESTEAD Southbound				VETERANS MEMORIAL PARK ENT Westbound				HOMESTEAD Northbound				SUB DIVISION Eastbound				Int. Total	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
07:00	1	59	3	0	1	0	2	0	2	70	0	0	0	0	0	0	0	138
07:15	0	76	4	0	0	0	1	0	18	66	0	0	0	0	0	0	0	165
07:30	1	71	3	0	1	0	7	0	19	89	0	0	0	0	0	0	0	191
07:45	0	52	6	0	2	0	15	0	20	98	0	0	0	0	0	0	0	193
Total	2	258	16	0	4	0	25	0	59	323	0	0	0	0	0	0	0	687
08:00	1	58	1	0	2	0	1	0	3	96	0	0	0	0	0	0	0	162
08:15	0	35	0	3	0	0	0	0	0	34	0	0	0	0	0	0	0	72
08:30	1	40	0	0	0	0	1	0	1	29	0	0	0	0	0	0	0	72
08:45	0	54	1	0	2	0	0	0	0	67	0	0	0	0	0	0	0	124
Total	2	187	2	3	4	0	2	0	4	226	0	0	0	0	0	0	0	430
*** BREAK ***																		
12:00	1	48	3	0	2	0	2	0	1	71	0	0	1	0	2	0	0	131
12:15	1	72	1	0	2	0	0	0	0	50	0	0	0	0	1	0	0	127
12:30	2	74	1	0	2	0	0	0	0	63	0	0	0	0	3	0	0	145
12:45	0	51	2	0	0	1	0	0	3	48	0	0	0	0	1	0	0	106
Total	4	245	7	0	6	1	2	0	4	232	0	0	1	0	7	0	0	509
13:00	1	83	1	0	1	0	2	0	5	45	0	0	0	0	2	0	0	140
13:15	2	88	1	0	2	0	1	0	1	45	0	0	0	0	0	0	0	140
13:30	0	56	9	0	0	0	2	0	2	44	0	0	0	0	1	0	0	114
13:45	3	76	4	0	0	0	0	0	2	38	0	0	0	0	1	0	0	124
Total	6	303	15	0	3	0	5	0	10	172	0	0	0	0	4	0	0	518
14:00	0	61	3	0	0	0	1	0	5	56	1	0	0	0	4	0	0	131
14:15	1	77	6	0	5	0	6	0	12	83	0	0	0	0	1	0	0	191
14:30	0	63	1	0	3	0	7	0	6	75	0	0	0	0	0	0	0	155
14:45	0	71	4	0	0	0	4	0	2	55	0	0	0	0	0	0	0	136
Total	1	272	14	0	8	0	18	0	25	269	1	0	0	0	5	0	0	613
15:00	1	71	4	0	3	0	5	0	3	74	0	0	0	0	0	0	0	161
15:15	0	63	0	0	3	0	4	0	0	46	0	0	0	0	0	0	0	116
15:30	1	83	4	0	2	0	1	0	4	66	0	0	0	0	1	0	0	162
15:45	1	62	3	0	2	0	5	0	4	61	0	0	1	0	0	0	0	139
Total	3	279	11	0	10	0	15	0	11	247	0	0	1	0	1	0	0	578
16:00	1	97	1	0	0	0	3	0	3	71	0	0	0	0	0	0	0	176
16:15	0	112	5	0	2	0	3	0	3	68	0	0	0	0	1	0	0	194
16:30	1	111	2	0	5	0	1	0	1	52	0	0	0	0	0	0	0	173
16:45	0	106	3	0	2	0	3	0	2	48	0	0	0	0	0	0	0	164
Total	2	426	11	0	9	0	10	0	9	239	0	0	0	0	1	0	0	707
17:00	0	112	6	0	1	0	1	0	0	43	0	0	0	0	0	0	0	163
17:15	0	84	4	0	0	1	1	0	4	71	0	0	0	0	3	0	0	168
17:30	0	93	7	0	2	0	1	0	0	45	0	0	0	0	0	0	0	148
17:45	0	76	11	0	3	0	7	0	4	56	0	0	0	0	2	0	0	159
Total	0	365	28	0	6	1	10	0	8	215	0	0	0	0	5	0	0	638
18:00	1	73	7	0	4	0	2	0	2	61	1	0	1	0	0	1	0	153
18:15	0	62	9	0	6	0	3	0	3	70	0	0	0	0	1	0	0	154
18:30	0	62	3	0	4	0	2	0	4	56	0	0	0	0	1	0	0	132
18:45	0	70	12	0	6	0	1	0	3	49	0	0	0	0	1	0	0	142
Total	1	267	31	0	20	0	8	0	12	236	1	0	1	0	3	1	0	581
Grand Total	21	2602	135	3	70	2	95	0	142	2159	2	0	3	0	26	1	0	5261
Apprch %	0.8	94.2	4.9	0.1	41.9	1.2	56.9	0.0	6.2	93.7	0.1	0.0	10.0	0.0	86.7	3.3	0.0	
Total %	0.4	49.5	2.6	0.1	1.3	0.0	1.8	0.0	2.7	41.0	0.0	0.0	0.1	0.0	0.5	0.0	0.0	



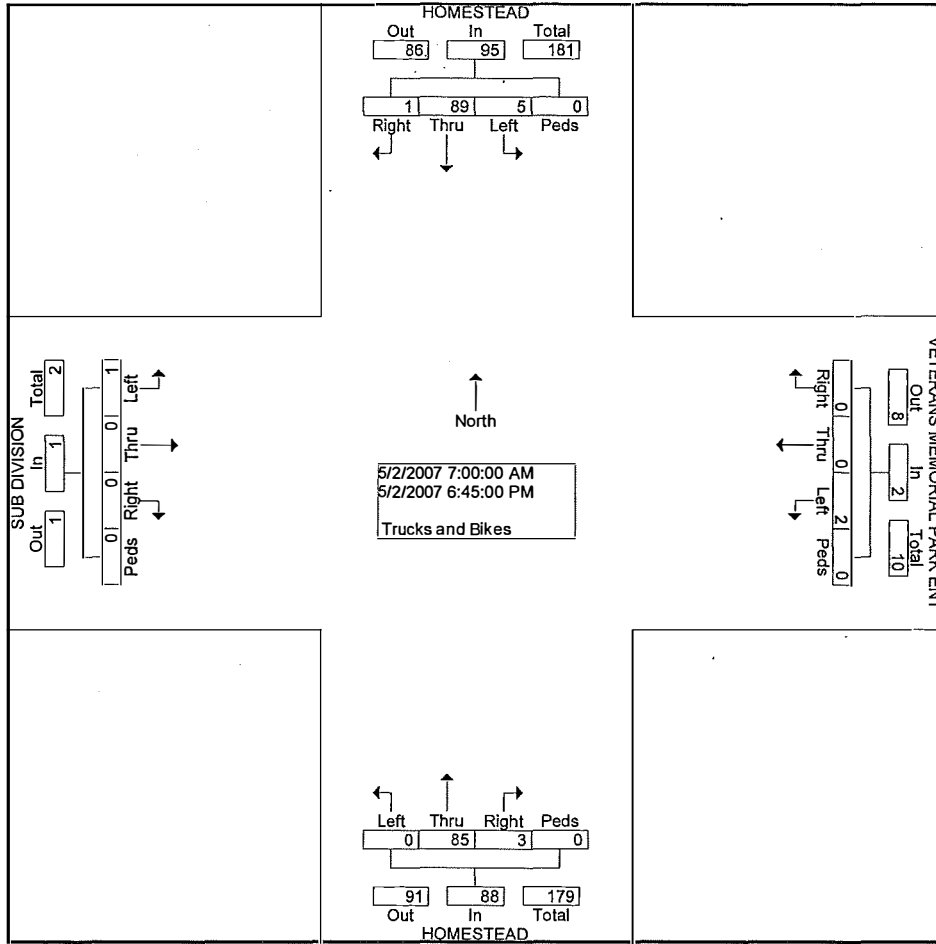
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

File Name : Park Entrance@Homestead
 Site Code : 00004374
 Start Date : 5/2/2007
 Page No : 1

Counter: 3574
 Counted By: Nasha
 Weather: Good
 Other:

Groups Printed- Trucks and Bikes

Start Time	HOMESTEAD Southbound				VETERANS MEMORIAL PARK ENT Westbound				HOMESTEAD Northbound				SUB DIVISION Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
07:15	0	4	0	0	0	0	0	0	0	0	5	0	0	0	0	0	9
07:30	0	6	0	0	0	0	0	0	0	0	4	0	0	0	0	0	10
07:45	0	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	6
Total	0	19	0	0	0	0	0	0	0	0	11	0	0	0	0	0	30
08:00	0	6	0	0	0	0	0	0	0	0	9	0	0	0	0	0	15
08:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45	0	3	0	0	0	0	0	0	0	0	7	0	0	0	0	0	10
Total	0	11	0	0	0	0	0	0	0	0	17	0	0	0	0	0	28
*** BREAK ***																	
12:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
12:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4
12:45	0	7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	8
Total	0	11	0	0	0	0	0	0	0	0	5	0	0	0	0	0	16
13:00	0	5	0	0	0	0	0	0	0	0	2	0	0	0	0	0	7
13:15	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5
13:30	0	1	4	0	0	0	0	0	0	0	2	0	0	0	0	0	7
13:45	1	5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	7
Total	1	15	4	0	0	0	0	0	0	0	6	0	0	0	0	0	26
14:00	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
14:15	0	6	0	0	0	0	0	0	0	0	7	0	0	0	0	0	13
14:30	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	4
14:45	0	2	0	0	0	0	1	0	0	1	3	0	0	0	0	0	7
Total	0	11	0	0	0	0	1	0	0	2	14	0	0	0	0	0	28
15:00	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	0	7
15:15	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
15:30	0	6	0	0	0	0	0	0	0	0	6	0	0	0	1	0	13
15:45	0	3	0	0	0	0	0	0	0	0	3	0	0	0	0	0	6
Total	0	11	0	0	0	0	0	0	0	0	19	0	0	0	1	0	31
16:00	0	2	0	0	0	0	0	0	0	1	4	0	0	0	0	0	7
16:15	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	5
16:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	3
Total	0	5	0	0	0	0	1	0	0	1	9	0	0	0	0	0	16
17:00	0	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5
17:15	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
*** BREAK ***																	
Total	0	4	0	0	0	0	0	0	0	0	3	0	0	0	0	0	7
*** BREAK ***																	
18:15	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
*** BREAK ***																	
18:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	4
Grand Total	1	89	5	0	0	0	2	0	0	3	85	0	0	0	0	1	0
Apprch %	1.1	93.7	5.3	0.0	0.0	0.0	100.0	0.0	0.0	3.4	96.6	0.0	0.0	0.0	0.0	100.0	0.0
Total %	0.5	47.8	2.7	0.0	0.0	0.0	1.1	0.0	0.0	1.6	45.7	0.0	0.0	0.0	0.5	0.0	0.0

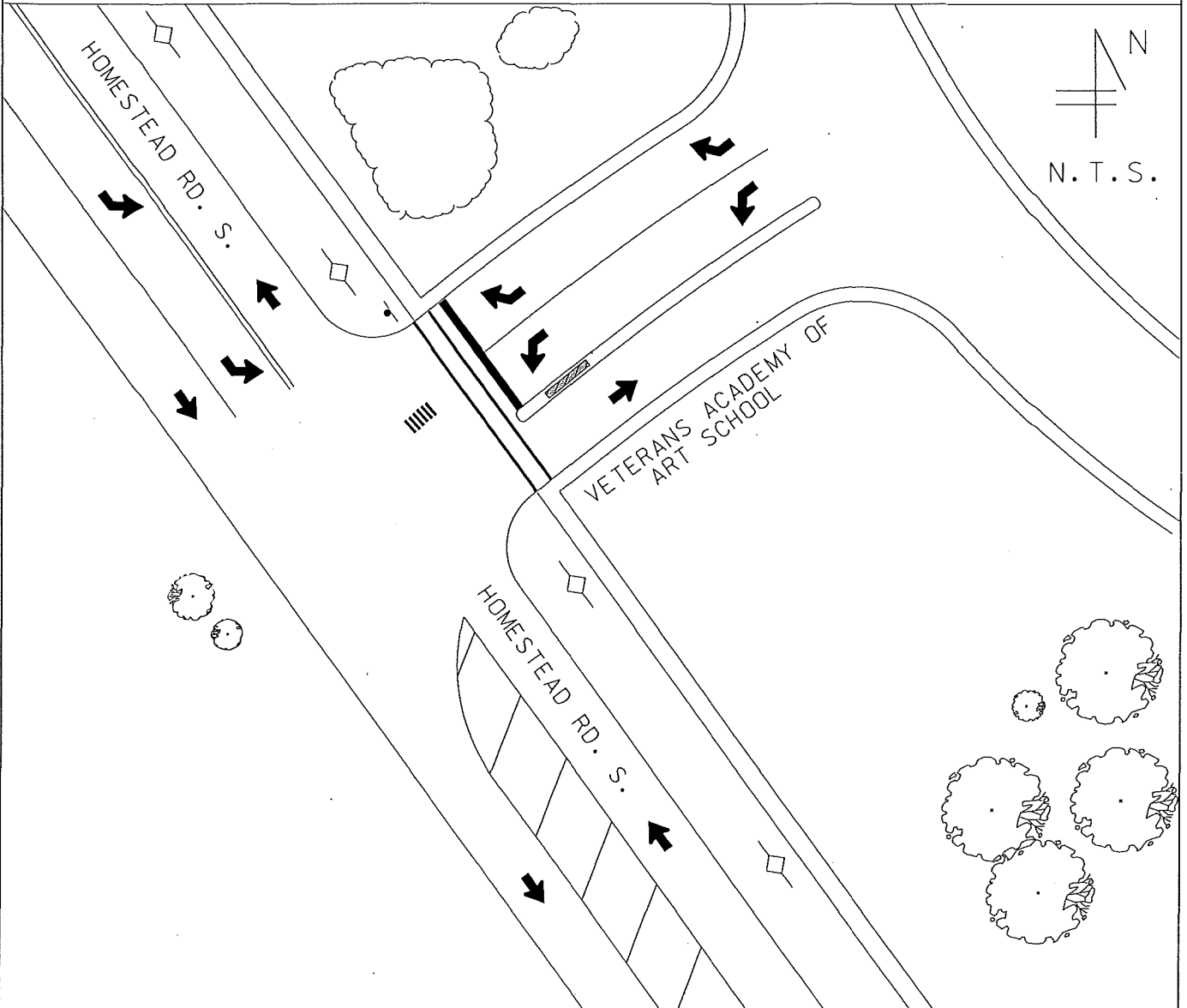


CONDITION DIAGRAM

LOCATION ID: VET ACADEMY OF ART SCHOOL & HOMESTEAD RD.

COUNTY: LEE CITY: LEIGH ACERS

DRAWN BY: JA DATE: 4-30-07



SYMBOLS

- | | | |
|-----------|-----------------------|---------------------|
| TREES | POWER POLE | SIGN (1 POST) |
| SHRUBS | TELEPHONE POLE | SIGN (2 POST) |
| HEDGE | COMBINATION POLE | OVERHEAD SIGN |
| BUILDING | TRAFFIC SIGNAL POLE | TRAFFIC SIGNAL HEAD |
| R/W LINE | HYDRANT | PED. SIGNAL HEAD |
| FENCE | CONTROLLER CABINET | PED. PUSHBUTTON |
| GUARDRAIL | VEHICLE DETECTOR LOOP | RR SIGNAL (W/GATE) |

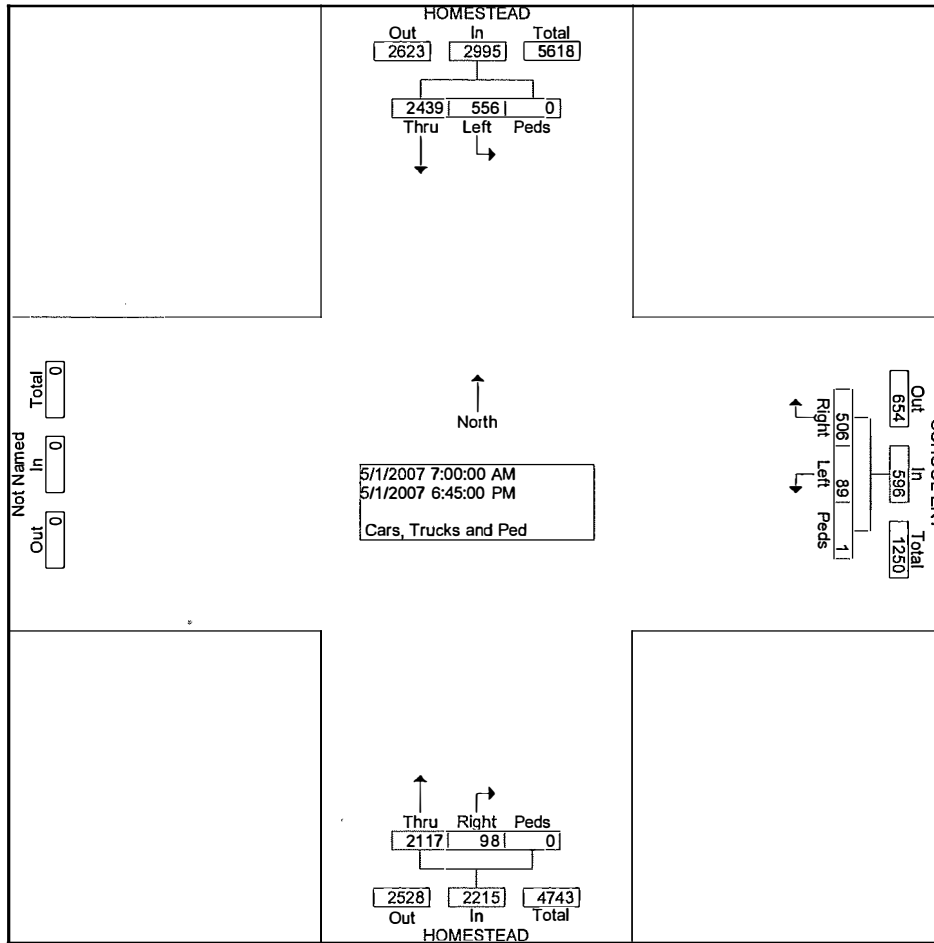
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Counter: 4374
 Counted By: NASHA
 Weather: GOOD
 Other:

File Name : HOMESTEAD AND SCHOOL ENT
 Site Code : 00004374
 Start Date : 5/1/2007
 Page No : 1

Groups Printed- Cars, Trucks and Ped

Start Time	HOMESTEAD Southbound			SCHOOL ENT Westbound			HOMESTEAD Northbound			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00	54	49	0	8	7	0	10	57	0	185
07:15	73	61	0	12	3	0	14	38	0	201
07:30	58	45	0	38	0	0	3	96	0	240
07:45	61	23	0	17	6	0	0	105	0	212
Total	246	178	0	75	16	0	27	296	0	838
08:00	67	11	0	37	3	0	5	64	0	187
08:15	41	10	0	9	2	0	0	83	0	145
08:30	31	6	0	4	1	0	1	51	0	94
08:45	59	5	0	3	1	0	0	54	0	122
Total	198	32	0	53	7	0	6	252	0	548
*** BREAK ***										
12:00	61	2	0	4	0	0	0	72	0	139
12:15	79	3	0	4	1	0	1	67	0	155
12:30	61	10	0	5	1	0	0	57	0	134
12:45	79	7	0	4	0	0	1	59	0	150
Total	280	22	0	17	2	0	2	255	0	578
13:00	46	5	0	12	2	0	3	52	0	120
13:15	91	11	0	1	3	0	2	56	0	164
13:30	55	11	0	1	0	0	1	42	0	110
13:45	69	10	0	3	0	0	2	44	0	128
Total	261	37	0	17	5	0	8	194	0	522
14:00	72	17	0	6	0	0	0	46	0	141
14:15	73	17	0	41	8	0	5	75	0	219
14:30	45	12	0	34	9	0	6	50	0	156
14:45	60	14	0	37	10	0	5	70	0	196
Total	250	60	0	118	27	0	16	241	0	712
15:00	64	6	0	24	2	0	1	52	0	149
15:15	72	6	0	26	2	0	2	43	0	151
15:30	69	8	0	19	2	0	2	59	0	159
15:45	76	12	0	24	3	0	2	59	0	176
Total	281	32	0	93	9	0	7	213	0	635
16:00	68	15	0	20	5	1	1	58	0	168
16:15	73	5	0	12	3	0	3	58	0	154
16:30	83	15	0	12	2	0	2	59	0	173
16:45	50	13	0	8	2	0	3	47	0	123
Total	274	48	0	52	12	1	9	222	0	618
17:00	96	14	0	19	6	0	0	61	0	196
17:15	75	22	0	18	1	0	2	49	0	167
17:30	67	11	0	12	1	0	3	66	0	160
17:45	89	20	0	6	1	0	1	54	0	171
Total	327	67	0	55	9	0	6	230	0	694
18:00	98	15	0	9	0	0	1	57	0	180
18:15	83	29	0	6	0	0	10	52	0	180
18:30	65	24	0	3	0	0	6	59	0	157
18:45	76	12	0	8	2	0	0	46	0	144
Total	322	80	0	26	2	0	17	214	0	661
Grand Total	2439	556	0	506	89	1	98	2117	0	5806
Apprch %	81.4	18.6	0.0	84.9	14.9	0.2	4.4	95.6	0.0	
Total %	42.0	9.6	0.0	8.7	1.5	0.0	1.7	36.5	0.0	



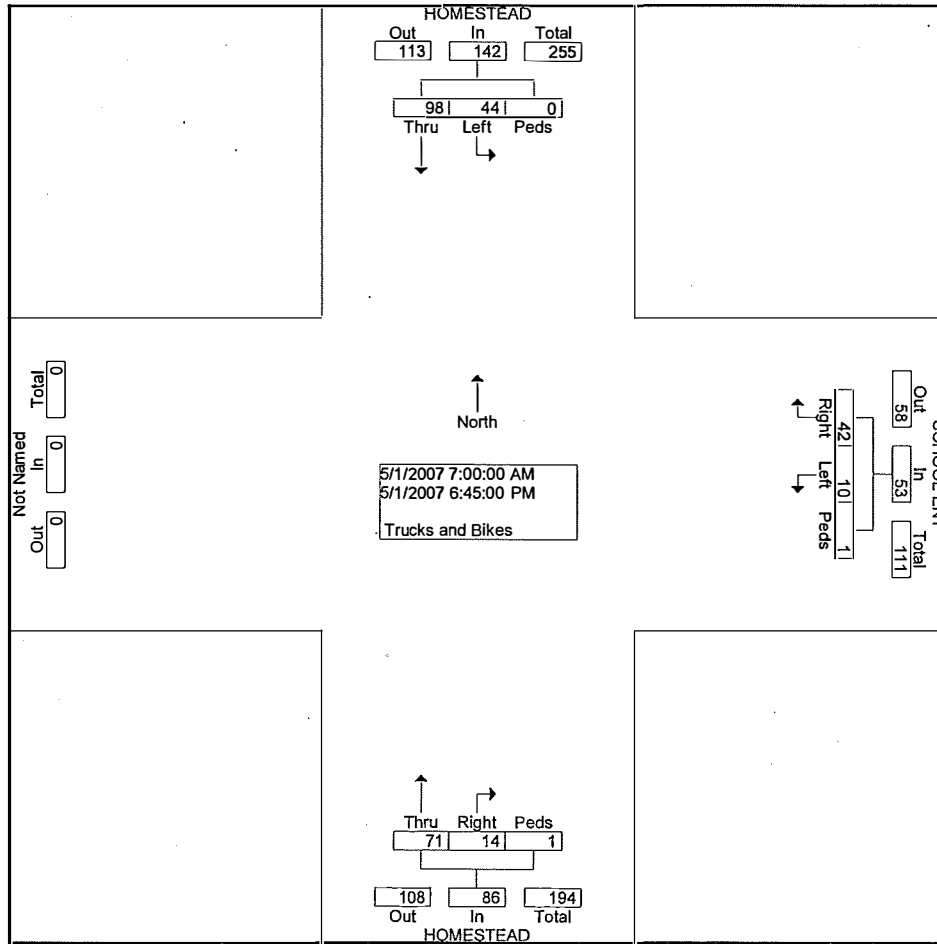
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Counter: 4374
 Counted By: NASHA
 Weather: GOOD
 Other:

File Name : HOMESTEAD AND SCHOOL ENT
 Site Code : 00004374
 Start Date : 5/1/2007
 Page No : 1

Groups Printed- Trucks and Bikes

Start Time	HOMESTEAD Southbound			SCHOOL ENT Westbound			HOMESTEAD Northbound			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00	5	4	0	0	0	0	0	0	0	9
07:15	6	9	0	0	0	0	4	0	0	19
07:30	4	15	0	17	0	0	2	10	0	48
07:45	0	0	0	1	2	0	0	2	0	5
Total	15	28	0	18	2	0	6	12	0	81
08:00	5	0	0	2	0	0	0	4	0	11
08:15	3	0	0	0	0	0	0	5	0	8
08:30	1	0	0	0	0	0	0	5	0	6
08:45	3	0	0	0	0	0	0	3	0	6
Total	12	0	0	2	0	0	0	17	0	31
*** BREAK ***										
12:00	3	0	0	0	0	0	0	3	0	6
12:15	1	0	0	0	0	0	0	3	0	4
12:30	2	0	0	0	0	0	0	2	0	4
12:45	6	0	0	0	0	0	0	2	0	8
Total	12	0	0	0	0	0	0	10	0	22
13:00	3	1	0	1	1	0	0	1	0	7
13:15	9	0	0	0	0	0	2	3	1	15
13:30	9	0	0	0	0	0	0	1	0	10
13:45	7	4	0	0	0	0	0	1	0	12
Total	28	5	0	1	1	0	2	6	1	44
14:00	5	2	0	0	0	0	0	1	0	8
14:15	2	4	0	8	2	0	3	0	0	19
14:30	1	2	0	5	2	0	1	4	0	15
14:45	0	0	0	2	1	0	1	0	0	4
Total	8	8	0	15	5	0	5	5	0	46
15:00	1	1	0	1	0	0	0	1	0	4
15:15	0	0	0	3	0	0	0	2	0	5
15:30	0	0	0	0	0	0	0	1	0	1
15:45	1	2	0	0	0	0	0	1	0	4
Total	2	3	0	4	0	0	0	5	0	14
16:00	6	0	0	0	1	1	0	4	0	12
16:15	6	0	0	0	0	0	0	5	0	11
16:30	4	0	0	1	1	0	0	1	0	7
16:45	0	0	0	0	0	0	0	4	0	4
Total	16	0	0	1	2	1	0	14	0	34
*** BREAK ***										
17:15	1	0	0	0	0	0	0	1	0	2
17:30	0	0	0	0	0	0	1	0	0	1
17:45	0	0	0	1	0	0	0	0	0	1
Total	1	0	0	1	0	0	1	1	0	4
18:00	1	0	0	0	0	0	0	0	0	1
18:15	3	0	0	0	0	0	0	0	0	3
18:30	0	0	0	0	0	0	0	1	0	1
*** BREAK ***										
Total	4	0	0	0	0	0	0	1	0	5
Grand Total	98	44	0	42	10	1	14	71	1	281
Apprch %	69.0	31.0	0.0	79.2	18.9	1.9	16.3	82.6	1.2	
Total %	34.9	15.7	0.0	14.9	3.6	0.4	5.0	25.3	0.4	

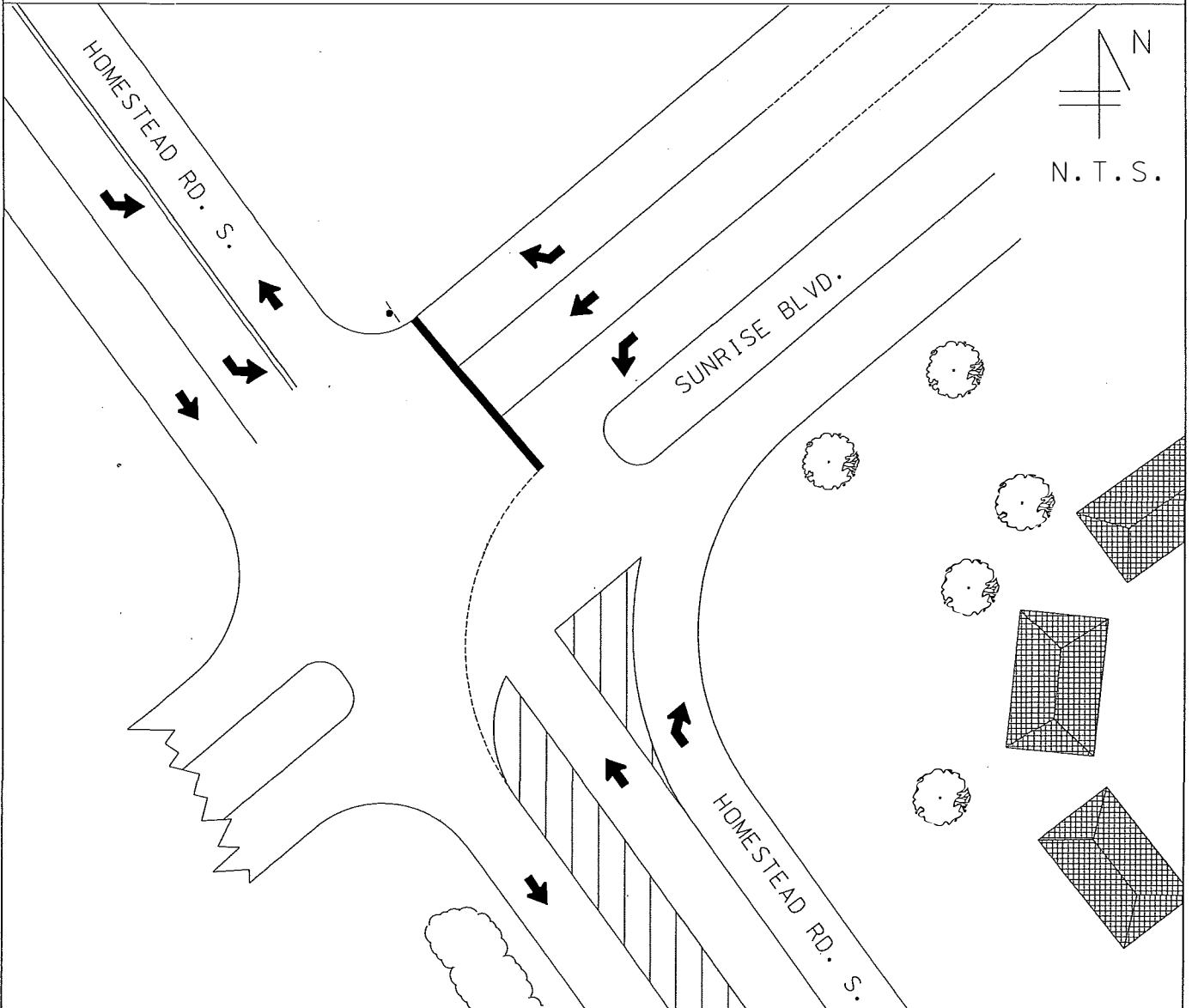


CONDITION DIAGRAM

LOCATION ID: SUNRISE BLVD & HOMESTEAD RD.

COUNTY: LEE CITY: LEIGH ACERS

DRAWN BY: JA DATE: 4-30-07



SYMBOLS

	TREES		POWER POLE		SIGN (1 POST)
	SHRUBS		TELEPHONE POLE		SIGN (2 POST)
	HEDGE		COMBINATION POLE		OVERHEAD SIGN
	BUILDING		TRAFFIC SIGNAL POLE		TRAFFIC SIGNAL HEAD
	R/W LINE		HYDRANT		PED. SIGNAL HEAD
	FENCE		CONTROLLER CABINET		PED. PUSHBUTTON
	GUARDRAIL		VEHICLE DETECTOR LOOP		RR SIGNAL (W/GATE)

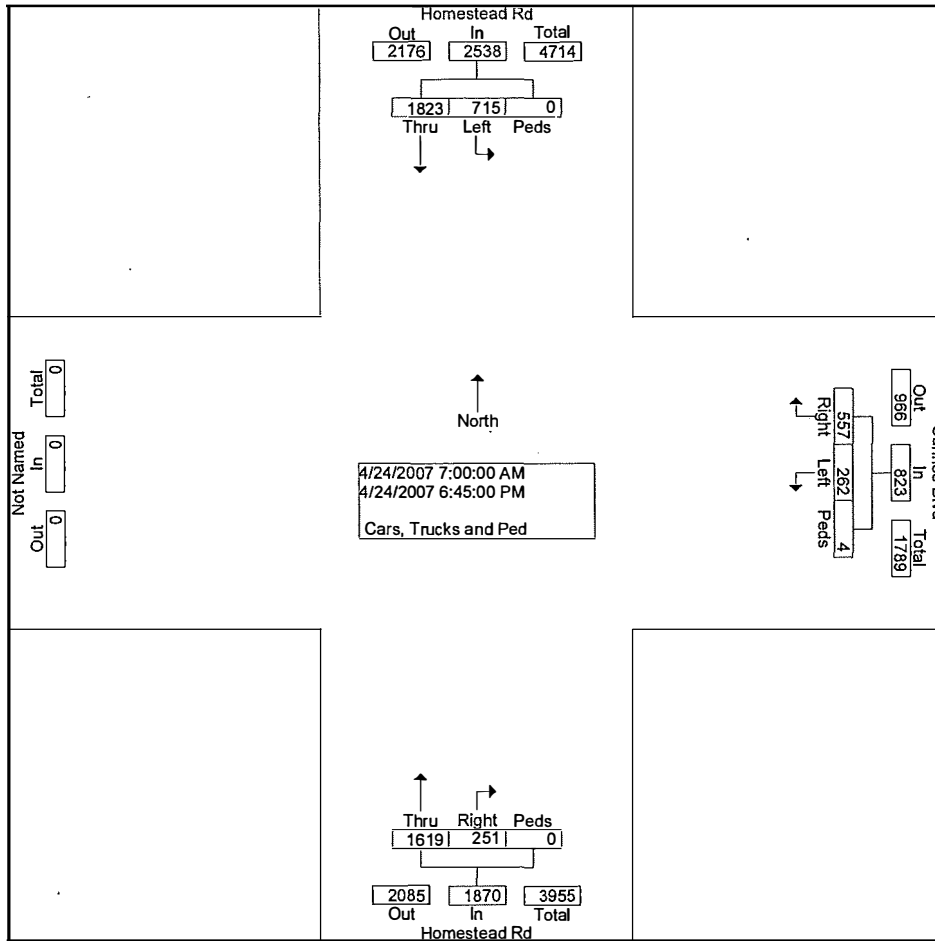
Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

Counter: 4374
 Mounted By: NASHA
 Weather: GOOD
 Other:

File Name : SunriseBlvd@Homestead
 Site Code : 00004374
 Start Date : 4/24/2007
 Page No : 1

Groups Printed- Cars, Trucks and Ped

Start Time	Homestead Rd Southbound			Sunrise Blvd Westbound			Homestead Rd Northbound			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00	59	6	0	18	14	0	4	54	0	155
07:15	53	9	0	23	20	1	1	36	0	143
07:30	47	12	0	22	29	0	12	71	0	193
07:45	61	8	0	27	17	0	10	97	0	220
Total	220	35	0	90	80	1	27	258	0	711
08:00	17	2	0	5	4	0	8	34	0	70
08:15	25	12	0	18	11	2	4	37	0	109
08:30	33	8	0	11	4	0	6	28	0	90
08:45	32	19	0	14	8	0	5	40	0	118
Total	107	41	0	48	27	2	23	139	0	387
*** BREAK ***										
12:00	28	9	0	10	4	0	0	46	0	97
12:15	40	16	0	7	5	0	1	30	0	99
12:30	39	17	0	12	4	0	2	16	0	90
12:45	46	13	0	10	3	0	6	59	0	137
Total	153	55	0	39	16	0	9	151	0	423
13:00	78	22	0	22	6	0	8	55	0	191
13:15	67	12	0	12	6	0	8	21	0	126
13:30	50	8	0	13	4	0	9	32	0	116
13:45	56	15	0	13	7	0	2	36	0	129
Total	251	57	0	60	23	0	27	144	0	562
14:00	45	18	0	17	9	0	4	45	0	138
14:15	64	26	0	25	10	0	9	73	0	207
14:30	81	32	0	21	7	0	12	51	0	204
14:45	49	28	0	18	5	0	9	36	0	145
Total	239	104	0	81	31	0	34	205	0	694
15:00	39	23	0	17	3	0	5	39	0	126
15:15	48	19	0	8	7	0	6	37	0	125
15:30	37	24	0	6	7	0	8	49	0	131
15:45	62	20	0	12	1	0	6	42	0	143
Total	186	86	0	43	18	0	25	167	0	525
16:00	54	24	0	12	3	0	4	42	0	139
16:15	56	26	0	19	3	1	3	55	0	163
16:30	56	28	0	25	3	0	9	45	0	166
16:45	61	32	0	9	2	0	7	46	0	157
Total	227	110	0	65	11	1	23	188	0	625
17:00	53	29	0	12	6	0	14	59	0	173
17:15	61	35	0	15	5	0	9	53	0	178
17:30	51	38	0	11	9	0	17	50	0	176
17:45	68	27	0	18	5	0	12	55	0	185
Total	233	129	0	56	25	0	52	217	0	712
18:00	64	32	0	16	17	0	9	42	0	180
18:15	40	30	0	26	4	0	4	43	0	147
18:30	55	13	0	16	5	0	10	33	0	132
18:45	48	23	0	17	5	0	8	32	0	133
Total	207	98	0	75	31	0	31	150	0	592
Grand Total	1823	715	0	557	262	4	251	1619	0	5231
Apprch %	71.8	28.2	0.0	67.7	31.8	0.5	13.4	86.6	0.0	
Total %	34.8	13.7	0.0	10.6	5.0	0.1	4.8	31.0	0.0	



Florida Transportation Engineering, Inc.
 8250 Pascal Drive
 Punta Gorda, FL 33950
 Ph# (941)6392818

File Name : SunriseBlvd@Homestead
 Site Code : 00004374
 Start Date : 4/24/2007
 Page No : 1

Counter: 4374
 Counted By: NASHA
 Weather: GOOD
 Other:

Groups Printed- Trucks and Bikes

Start Time	Homestead Rd Southbound			Sunrise Blvd Westbound			Homestead Rd Northbound			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00	2	0	0	1	0	0	1	0	0	4
*** BREAK ***										
Total	2	0	0	1	0	0	1	0	0	4
08:00	1	0	0	0	0	0	0	1	0	2
*** BREAK ***										
08:30	2	0	0	0	0	0	0	0	0	2
08:45	0	1	0	0	0	0	0	0	0	1
Total	3	1	0	0	0	0	0	1	0	5
*** BREAK ***										
12:15	0	1	0	0	0	0	0	0	0	1
12:30	0	1	0	0	0	0	0	0	0	1
12:45	0	1	0	0	0	0	0	0	0	1
Total	0	3	0	0	0	0	0	0	0	3
13:00	4	1	0	0	0	0	0	0	0	5
13:15	2	0	0	0	0	0	0	0	0	2
*** BREAK ***										
Total	6	1	0	0	0	0	0	0	0	7
*** BREAK ***										
14:15	1	0	0	0	0	0	0	0	0	1
14:30	2	1	0	1	0	0	0	1	0	5
14:45	0	3	0	1	0	0	2	3	0	9
Total	3	4	0	2	0	0	2	4	0	15
15:00	0	0	0	3	1	0	0	2	0	6
15:15	2	0	0	0	0	0	0	0	0	2
15:30	0	2	0	1	0	0	1	2	0	6
15:45	1	0	0	1	0	0	0	0	0	2
Total	3	2	0	5	1	0	1	4	0	16
16:00	0	0	0	0	0	0	0	1	0	1
*** BREAK ***										
Total	0	0	0	0	0	0	0	1	0	1
*** BREAK ***										
Grand Total	17	11	0	8	1	0	4	10	0	51
Approch %	60.7	39.3	0.0	88.9	11.1	0.0	28.6	71.4	0.0	
Total %	33.3	21.6	0.0	15.7	2.0	0.0	7.8	19.6	0.0	

