

## Executive Summary

This Traffic Report is an update to the SR 429 - Wekiva Parkway/SR 46 Realignment Development and Environment (PD&E) Study Traffic Report dated January 2008 (January 2008 Traffic Report) and the subsequent report Addendum dated March 2008. The traffic forecasts and the analyses reflected in this report are consistent with those in both the January 2008 Traffic Report and March 2008 Addendum. This report has been provided based on recent modifications to the Preferred Alternative described in the January 2008 Traffic Report. Upon consideration of potential funding sources for the Wekiva Parkway project, it was determined that the most likely funding source for the project would be with toll revenues. As a result, this report has been prepared to incorporate a variation of the Preferred Alternative from the January 2008 Traffic Report, referred to as the Preferred Alternative with Service Road Concept, in which Wekiva Parkway is a tolled expressway in Orange, Lake and Seminole Counties. The Preferred Alternative in the January 2008 Traffic Report reflected Wekiva Parkway as a tolled expressway in Orange County only and as a non-tolled expressway in Lake and Seminole Counties. This report contains the traffic forecasts and operational analysis associated with the Preferred Alternative with Service Road Concept.

Under a joint effort of the Florida Department of Transportation (FDOT) and the Orlando-Orange County Expressway Authority (OOCEA), the Wekiva Parkway/SR 46 Realignment PD&E Study was initiated to identify the most appropriate roadway alignment for the completion of SR 429 around the Orlando Area. The PD&E Study area included northwest Orange County, east Lake County and west Seminole County in Central Florida. With the crossing of environmentally sensitive lands a specific concern for both the SR 429-Wekiva Parkway (Wekiva Parkway) and the SR 46 Realignment projects, the final roadway alignments serve the community needs while minimizing social and environmental impacts. The four main goals of the Wekiva Parkway and SR 46 Realignment projects were:

- Improve regional connectivity by completing the Western Beltway and providing a safe, high capacity east-west travel facility
- Meet increased travel demand from population growth in an environmentally sensitive and compatible manner
- Address traffic congestion and safety issues along the SR 46 east-west corridor and the US 441 north-south corridor
- Accomplish the objectives expressed in State legislation, Executive Orders, the Wekiva Protection Act, and from the Wekiva River Basin Coordinating Committee that pertain to SR 429

This report is to presents the design traffic volumes and associated operational analyses that were developed as part of the Wekiva Parkway/SR 46 Realignment PD&E Study. The future year traffic volumes were utilized by the Project Team to assist in the preliminary engineering of the Wekiva Parkway and the SR 46 Realignment project alignments. The traffic analyses also aided in the evaluation of the achievement of the project goals.

This traffic study is focused on the existing and future traffic conditions within the study area. No-Build and Build Alternatives, developed in coordination with the Project Team, were analyzed to determine future traffic conditions. Future year traffic conditions were determined for an opening year (2012), mid year (2022), and a design

year (2032). This traffic study outlines the representative Build Alternatives that were considered throughout the PD&E Study and the development of the Preferred Build Alternative through an alternatives analysis.

#### Preferred Alternative with Service Road Concept

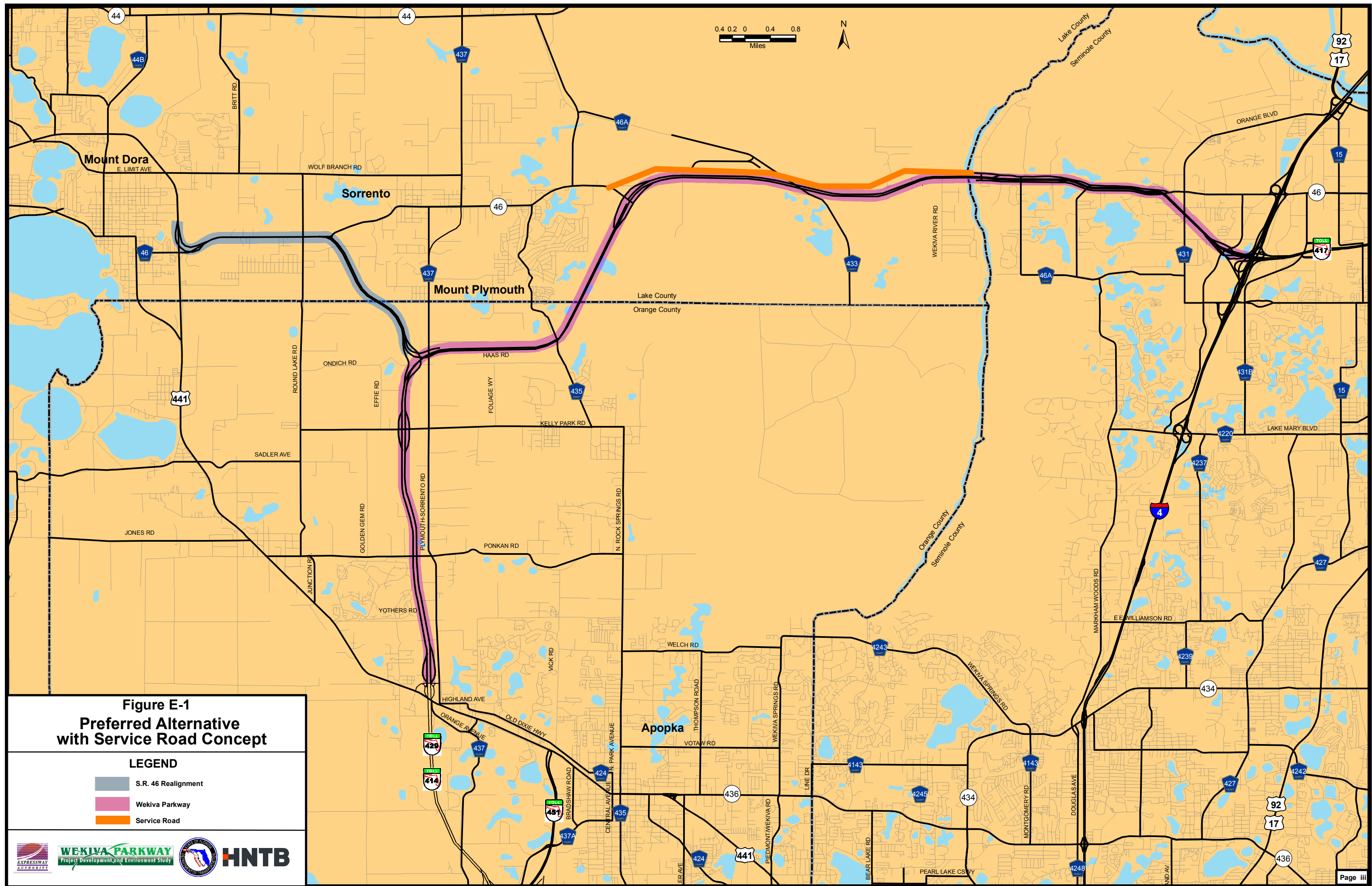
The Wekiva Parkway/SR 46 Realignment PD&E Study resulted in two preferred Build Alternatives, called the Preferred Alternative and the Preferred Alternative with Service Road Concept. Both Build Alternatives achieve the project goals that were set at the beginning of the Study. However, due to funding limitations, the Preferred Alternative with Service Road Concept is considered to be the most cost feasible. Therefore, the Preferred Alternative with Service Road Concept is now considered to be the Preferred Build Alternative.

The Preferred Alternative with Service Road Concept assumes Wekiva Parkway is a tolled expressway in Orange, Lake and Seminole Counties. The Preferred Alternative with Service Road Concept also provides access the existing properties and land uses along the project corridors via a non-tolled service road located along the north side of the Wekiva Parkway alignment in lieu of the two local access interchanges as proposed in the Preferred Alternative. The proposed alignment for the Wekiva Parkway and SR 46 Realignment (SR 46 Bypass) projects in the Preferred Alternative with Service Road Concept is shown in Figure E-1.

Wekiva Parkway is the proposed expressway extension of SR 429. The Wekiva Parkway project begins at the planned terminus of SR 414/SR 429 (John Land Apopka Expressway) at an interchange with US 441 in Orange County in the vicinity of CR 437 (Plymouth Sorrento Road). From this interchange, the preferred Wekiva Parkway alignment extends to the north along an alignment just to the west of Plymouth Sorrento Road. In the Preferred Alternative with Service Road Concept, the local access interchange in Orange County is located at Kelly Park Road just to the west of Plymouth-Sorrento Road. The Orange County portion of Wekiva Parkway is proposed as a four-lane limited access tolled expressway. Auxiliary lanes will be provided north of the Kelly Park Road interchange extending to a systems interchange with the SR 46 Bypass near the Orange/Lake County Line.

From the systems interchange with the SR 46 Bypass near the Orange/Lake County Line, Wekiva Parkway extends east and northeast into Lake County to the existing SR 46 corridor. In east Lake County, Wekiva Parkway is proposed as a replacement to the existing SR 46 between Mount Plymouth and the Wekiva River. As part of the Wekiva Parkway project, CR 46A is expected to be realigned to connect to SR 46 approximately four miles west of its current terminus.

In the Preferred Alternative with Service Road Concept, local access to properties and neighborhoods along the existing corridor in east Lake County will be provided via one local access interchange in the Neighborhood Lakes area. In Lake County, Wekiva Parkway is proposed to be a four-lane limited access tolled expressway from the Orange County Line to the Neighborhood Lakes interchange. From the Neighborhood Lakes interchange to the Seminole County Line it is a six-lane limited access tolled expressway. Local access to properties along the existing SR 46 and CR 46A corridors in east Lake County will be provided via a two lane service road that will be constructed on the north side of the tolled expressway.



The SR 46 Bypass provides a connection from SR 46 to the east of Mount Dora with the Wekiva Parkway. This project begins at the US 441/SR 46 interchange in Lake County and extends to the east along the existing SR 46 corridor. As part of the SR 46 Bypass project, the US 441/SR 46 interchange is proposed to be rebuilt as a signalized intersection with direct ramps between US 441 to the north of the interchange to SR 46 east of the interchange to accommodate the shift in traffic patterns due to Wekiva Parkway. Near Round Lake Road, the project turns southeast into Orange County to a systems interchange with Wekiva Parkway. This project consists of a six-lane divided controlled access roadway along the existing alignment of SR 46 from US 441 to the vicinity of Round Lake Road. From east of Round Lake Road to Wekiva Parkway, the project is expected to be a four-lane limited access facility.

In Seminole County, Wekiva Parkway is a six-lane limited access tolled expressway in the Preferred Alternative with Service Road Concept. Upon crossing the Wekiva River into Seminole County, the expressway continues east to a connection with I-4 at the existing I-4/SR 417 interchange. In general, the preferred alignment of Wekiva Parkway within Seminole County is within the SR 46 corridor to the west of Orange Boulevard and along a new alignment between Orange Boulevard and I-4. Local access to and from Wekiva Parkway within the SR 46 corridor is provided via one-way frontage roads. The frontage road system in both Build Alternatives is located generally between the Wekiva River and Orange Boulevard, where Wekiva Parkway leaves the SR 46 corridor to connect to I-4 at SR 417. Wekiva Parkway has a local access interchange with International Parkway in addition to its systems interchange with I-4 at SR 417. Under the Preferred Alternative with Service Road Concept, traffic from International Parkway would not be able to access I-4 via Wekiva Parkway.

A toll structure concept was developed for Wekiva Parkway in the Preferred Alternative with Service Road Concept. These toll rates are preliminary and were developed for use in support of the PD&E Study. These toll rates may be modified in later phases of the project.

### Study Results

The Wekiva Parkway and SR 46 Bypass project preferred alignments achieve the project goals set at the beginning of the PD&E Study. These projects will provide the transportation capacity needed to accommodate the projected population growth in northwest Orange County, east Lake County and west Seminole County. The Wekiva Parkway will complete the beltway around the Orlando area and the SR 46 Bypass will connect US 441 near Mount Dora to the Wekiva Parkway. The final preferred project alignments reflect the desire to minimize the environmental and social impacts within the study area.

Table E.1 illustrates the level of service (LOS) of the Preferred Alternative with Service Road Concept for the Wekiva Parkway and SR 46 Bypass projects, as well as, the impact that the projects have on the LOS on various study area roadway segments. The roadway segments shown in Table E.1 include state roads and other major roadway segments that experience significant LOS changes in the Preferred Alternative with Service Road Concept. As shown in this document, the Wekiva Parkway and the SR 46 Bypass projects operate under an acceptable level of service (LOS) in the opening year (2012), the mid year (2022) and the design year (2032).

In addition, the diversion of traffic to the Wekiva Parkway alleviates traffic congestion on many parallel north-south and east-west local facilities within the portions of Orange, Lake and Seminole Counties in the study area. In Orange County, the Wekiva Parkway will relieve traffic congestion along US 441 northwest of Apopka. It will also relieve the north-south traffic demand along Round Lake Road and Plymouth Sorrento Road. In Lake County, the Wekiva Parkway and SR 46 Bypass projects provide a high capacity east-west facility between the Mount Dora area and Seminole County. These facilities also result in the diversion of through traffic off of the existing SR 46 through the towns of Mount Plymouth and Sorrento. In Seminole County, the Wekiva Parkway connection to I-4 at SR 417 provides a direct connection for the major east-west travel movement between Wekiva Parkway and SR 417. The diversion of traffic from SR 46 to Wekiva Parkway in Seminole County results in a significant improvement in the operating conditions of SR 46 in the vicinity of the I-4/SR 46 interchange.

TABLE E.1 ROADWAY SEGMENT LOS SUMMARY COMPARISON

Roadway	From	To	2005 Existing LOS	2032 No Build Alt. LOS	2032 Build Pref. Alt. w/Service Rd. LOS
<b>Orange County</b>					
Wekiva Parkway	U.S. 441	Ponkan Rd.	-	-	D
	Ponkan Rd.	Kelly Park Rd.	-	-	D
	Kelly Park Rd.	S.R. 46 Bypass	-	-	C
S.R. 436	U.S. 441	Piedmont-Wekiva Rd.	C	E	D
C.R. 435	Kelly Park Rd.	Lake County Line	C	D	C
C.R. 437	U.S. 441	Ponkan Rd.	D	F	D
Round Lake Rd.	Sadler Ave.	Kelly Park Rd.	C	E	D
	Kelly Park Rd.	Ondich Rd.	C	F	D
	Ondich Rd.	Lake County Line	C	F	D
Ponkan Rd.	Round Lake Rd.	C.R. 437	C	F	E
	C.R. 437	C.R. 435	C	E	D
Kelly Park Rd.	C.R. 437	C.R. 435	C	E	D
Sadler Ave.	U.S. 441	Round Lake Rd.	C	D	C
Vick Rd.	Ponkan Rd.	Lester Rd.	-	D	C
	Lester Rd.	Welch Rd.	-	E	D
	Welch Rd.	Martin St.	-	F	E
Yothers Rd.	U.S. 441	C.R. 437	C	F	C
<b>Lake County</b>					
S.R. 46 Bypass - Limited Access	U.S. 441	S.R. 46 West/S.R. 46 Bypass	-	-	D
	S.R. 46 West/S.R. 46 Bypass	S.R. 429	-	-	D
Wekiva Parkway	S.R. 46 Bypass	Old S.R. 46	-	-	D
	Old S.R. 46	C.R. 46A IC	-	-	C
	C.R. 46A IC	Lake/Seminole Co. Line	-	-	C
S.R. 46	U.S. 441	Round Lake Rd.	C	F	D
	Round Lake Rd.	C.R. 437	C	E	D
	C.R. 437	C.R. 435	E	F	D
C.R. 437	Lake County Line	S.R. 44	D	E	D
C.R. 46A	S.R. 44	S.R. 46	D	F	D
Round Lake Rd.	Lake County Line	S.R. 46	C	D	C
Wolf Branch Rd.	Round Lake Rd.	C.R. 437	D	E	C

Table E.1 Roadway Segment LOS Summary Comparison- (Continued)

Roadway	From	To	2005 Existing LOS	2032 No Build Alt. LOS	2032 Build Pref. Alt. w/Service Rd. LOS
<b>Seminole County</b>					
Wekiva Parkway	Lake/Seminole Co. Line	Longwood-Markham Rd.	-	-	C
	Longwood-Markham Rd.	Lake Markham Rd.	-	-	C
	Lake Markham Rd.	Orange Blvd./S.R. 46	-	-	D
	Orange Blvd./S.R. 46	I-4 South Connection @ S.R. 417	-	-	C
S.R. 46	Lake County Line	Longwood Markham Rd.	F	F	-
	Longwood-Markham Rd.	Lake Markham Rd.	F	F	-
	Lake Markham Rd.	C.R. 431	F	F	-
	C.R. 431	Lake Forest Blvd.	D	F	C
	Lake Forest Blvd.	International Pkwy.	D	F	D
	International Pkwy.	Oregon St/Wayside Dr	D	F	C
	Oregon St/Wayside Dr	Interstate 4	F	F	D
	C.R. 431B	CR 15	C	F	D
C.R. 431	C.R. 46A	Markham Rd.	D	F	E
Rinehart Rd	CR 46A	Town Center Blvd	D	F	E
	Town Center Blvd	SR 417	C	F	D
	SR 417	St Johns Pky	C	F	E
	St Johns Pky	SR 46	C	E	D
Markham Road	Longwood-Markham Rd.	Markham Woods Rd.	C	F	D
	Markham Woods Rd.	Orange Blvd.	C	E	C
Longwood-Markham Rd.	S.R. 46	C.R. 46A	C	D	C
Lake Markham Rd.	S.R. 46	C.R. 46A	C	D	D