

April 2004

Tripson Trail

Traffic Impact Analysis

Prepared for:

Adrian Home Communities, Ltd.
2450 S.W. 137th Avenue, Suite 228
Miami, FL 33175

Prepared by:

Kimley-Horn and Associates, Inc.
601 21st Street, Suite 400
Vero Beach, FL 32960



Kimley-Horn
and Associates, Inc.

Stan Boling

From: Jeanne Bresett
Sent: Tuesday, August 17, 2004 1:15 PM
To: Stan Boling
Cc: Chris Mora; Geoff Bass
Subject: FW: Tripson Trail

In addition to the below improvements, the developer must enter into a formal agreement to share in the cost of upcoming improvements to the 43rd Avenue and SR60 intersection.

Jeanne

-----Original Message-----

From: Jeanne Bresett
Sent: Tuesday, August 17, 2004 9:26 AM
To: Stan Boling
Cc: Chris Mora; Geoff Bass
Subject: RE: Tripson Trail

Stan:

The required improvements for the above referenced project are as follows and need to be included as conditions of site plan approval:

- 1) Southbound right-turn on 43rd Avenue at 21st Street SW
- 2) Northbound left-turn lane on 43rd Avenue at 21st Street SW
- 3) Eastbound left-turn lane on 21st Street SW at 43rd Avenue
- 4) Westbound left-turn lane on 21st Street SW to serve south project entrance
- 5) Westbound right-turn lane at project entrance to serve north project entrance
- 6) Dual egress lanes at both of the project entrances on 21st Street SW
- 7) 40' corner clip at 25th Street SW and 43rd Avenue (northwest corner)
- 8) 40' corner clips at 21st Street SW and 43rd Avenue (northwest and southwest corners)
- 9) \$25,000.00 developer's contribution for future traffic signal at 21st Street SW and 43rd Avenue

If you have any questions, please contact me.

Jeanne Bresett, Traffic Analyst
 Indian River County Traffic Engineering
 1840 25th Street
 Vero Beach, FL 32960
 (772) 567-8000, ext. 1326

-----Original Message-----

From: Stan Boling
Sent: Tuesday, August 17, 2004 8:52 AM
To: Jeanne Bresett
Subject: RE: Tripson Trail

Yes. It'll go to PZC next week; I'm writing it up this week. Could you let me know all conditions? Thanks.....Stan

-----Original Message-----

From: Jeanne Bresett
Sent: Monday, August 16, 2004 10:10 AM
To: Stan Boling
Subject: Tripson Trail

Based on results of the traffic study and in accordance with IRCLDR's, a southbound left-turn lane is required on 43rd Avenue at the project entrance. In addition, dual egress lanes are required at the project entrance.

8/17/2004

Tripson Trail Traffic Impact Analysis

Prepared for:
Adrian Home Communities, Ltd.
Miami, FL 33175

Prepared by:
Kimley-Horn and Associates, Inc.
Vero Beach, Florida

April 2004



Date: 4/22/04
Brian Good, P.E.
Florida Registration No. 56939
Engineering Business No. 696

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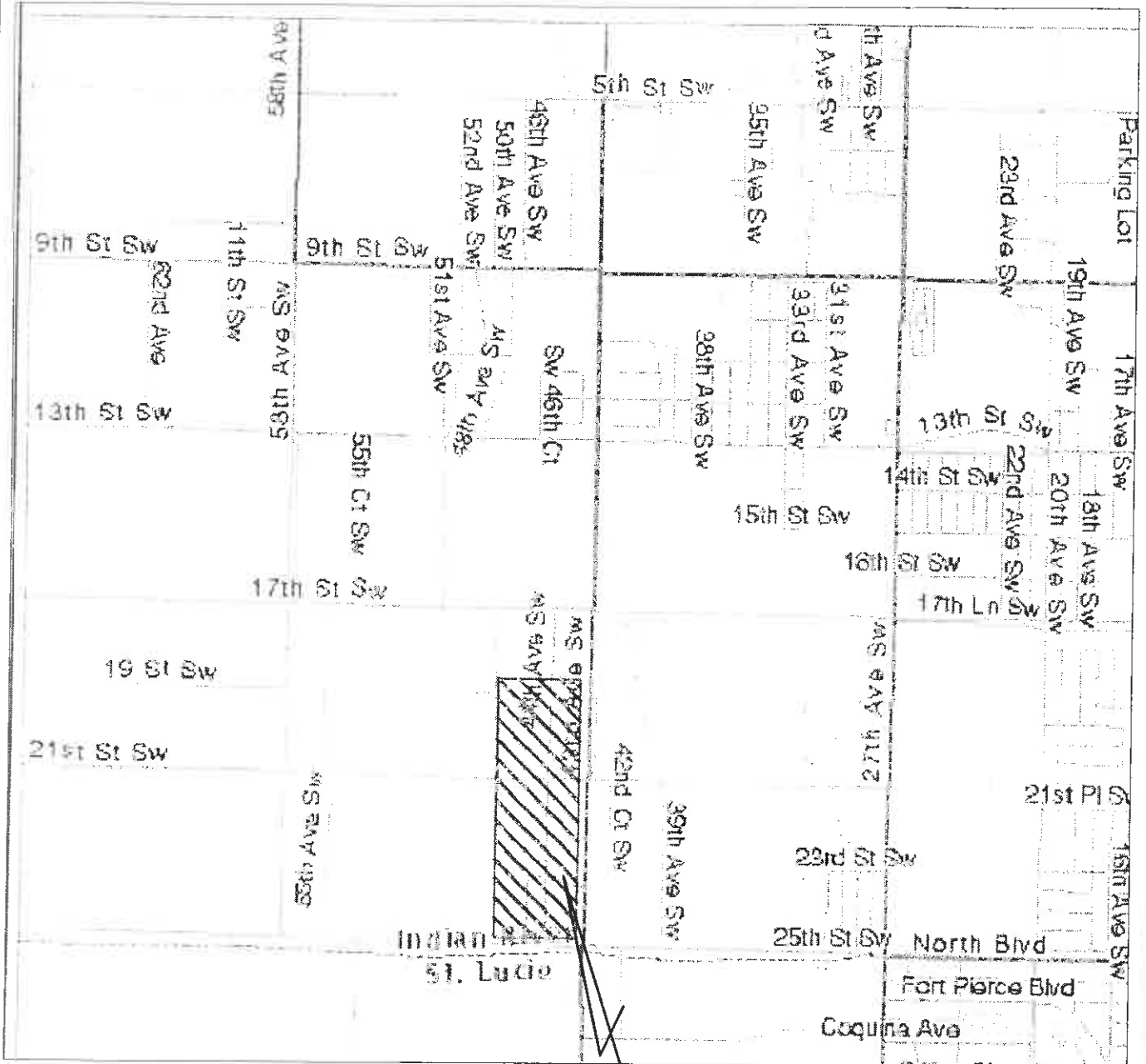
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Introduction

Adrian Home Communities is proposing to construct 288 single family residences. The parcel proposed for development is located on the west side of 43rd Avenue south of Oslo Road at 21st Street S.W. A location map depicting the proposed project is provided as *Figure 1*. In accordance with Indian River County Land Development Regulations, a traffic impact analysis is required to document the external traffic impacts of this proposed development.



PROJECT LOCATION

G:\47550000\Tripson Trail\TRIPSON.dwg FIG-1 Apr 22, 2004 7:39am By: Brian Good



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TRIPSON TRAIL
LOCATION MAP

FIGURE NO
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PAGE

Project Traffic

The anticipated traffic impacts associated with the proposed development were derived using a process of trip generation, distribution, and assignment in accordance with the requirements of the FDOT and Indian River County Land Development Regulations for the proposed development.

Trip Generation

A projection of the new trips associated with the proposed development was derived.

The estimate of these new trips was developed using the methodology and equations contained in the Institute of Transportation Engineers (ITE) *Trip Generation*, Seventh Edition, 2003 and the Indian River County Land Development Regulations. The trip generation characteristics of the 288 single family dwelling units were based on ITE Land Use 210: Single Family Detached Housing. The anticipated number of daily and PM peak hour trips is shown in *Table 1*.

Table 1 - Total Project Traffic

ITE	Land Use	Scale (d.u.)	Daily	PM Peak Hour		
				Enter	Exit	Total
210	Single Family	288	2,756	175	103	278
New Project Trips			2,756	175	103	278

Project trips were determined for the buildout conditions. Entering and exiting percentages were based on those provided by ITE *Trip Generation* 7th Edition.

Trip Distribution and Assignment

The distribution and assignment of project trips was derived through a gravity model based on the transportation planning modeling programs contained in the Florida Standard Urban Transportation Modeling Structure (FSUTMS). The FSUTMS programs were employed to provide an objective distribution and assignment of project trips on the roadway network.

Area of Influence

In accordance with the Indian River County Land Development Regulations, an Area of Influence was determined for the project. This Area of Influence includes all thoroughfare network links impacted by the lesser of 5% of project traffic or 50 daily trips. For this project, 50 daily trips was the more restrictive criteria, therefore, it was the determining volume. PM peak-season peak-hour directional project traffic projections are provided under separate cover on the Concurrency Management System's Project Trip Assignment Form for the entire area of influence.

Study Area

The determination of study area intersections was also based on Indian River County Land Development Regulation criteria. Each intersection at which project traffic will exceed 2% of the FDOT Generalized level of service (LOS) capacities for LOS C of any approach link was included in the study area.

A table developed to identify study intersections is provided as *Table 2*.

Table 2 - Determination of Study Intersections

Intersection	Classification	LOS C Volume	2% LOS C	Approach Direction	Project Traffic	Project > 2% LOS C
20 th Avenue / Oslo Road	2 Ln Undiv	480	10	NB	0	No
	2 Ln Undiv	480	10	SB	2	No
	2 Ln Undiv	480	10	EB	10	Yes
	2 Ln Undiv	480	10	WB	16	Yes
27 th Avenue / Oslo Road	2 Ln Undiv	480	10	NB	0	No
	2 Ln Undiv	480	10	SB	0	No
	2 Ln Undiv	480	10	EB	20	Yes
	2 Ln Undiv	480	10	WB	18	Yes
27 th Avenue / 4 th Street	2 Ln Undiv	480	10	NB	7	Yes
	2 Ln Undiv	480	10	SB	12	Yes
	2 Ln Undiv	480	10	EB	0	No
	2 Ln Undiv	480	10	WB	0	No
27 th Avenue / 8 th Street	2 Ln Undiv	480	10	NB	7	No
	2 Ln Undiv	480	10	SB	9	No
	2 Ln Undiv	480	10	EB	0	No
	2 Ln Undiv	480	10	WB	4	No
27 th Avenue / 12 th Street	2 Ln Undiv	480	10	NB	5	No
	2 Ln Undiv	480	10	SB	7	No
	2 Ln Undiv	480	10	EB	0	No
	2 Ln Undiv	480	10	WB	2	No
43 rd Avenue / Oslo Road	2 Ln Undiv	480	10	NB	81	Yes
	2 Ln Undiv	480	10	SB	67	Yes
	2 Ln Undiv	480	10	EB	35	Yes
	2 Ln Undiv	480	10	WB	35	Yes
43 rd Avenue / 4 th Street	2 Ln Undiv	480	10	NB	38	Yes
	2 Ln Undiv	480	10	SB	61	Yes
	2 Ln Undiv	480	10	EB	0	No
	2 Ln Undiv	480	10	WB	4	No
43 rd Avenue / 8 th Street	2 Ln Undiv	480	10	NB	36	Yes
	2 Ln Undiv	480	10	SB	54	Yes
	2 Ln Undiv	480	10	EB	4	No
	2 Ln Undiv	480	10	WB	4	No
43 rd Avenue / 12 Street	2 Ln Undiv	480	10	NB	32	Yes
	2 Ln Undiv	480	10	SB	47	Yes
	2 Ln Undiv	480	10	EB	4	No
	2 Ln Undiv	480	10	WB	4	No
43 rd Avenue / 16 th Street	2 Ln Undiv	480	10	NB	28	Yes
	2 Ln Undiv	480	10	SB	40	Yes
	2 Ln Undiv	480	10	EB	4	No
	2 Ln Undiv	480	10	WB	4	No
43 rd Avenue / SR 60	2 Ln Undiv	480	10	NB	23	Yes
	2 Ln Undiv	480	10	SB	5	No
	6 Ln Div	2720	54	EB	18	No
	6 Ln Div	2720	54	WB	18	No
43 rd Avenue / 26 th Street	2 Ln Undiv	480	10	NB	3	No
	2 Ln Undiv	480	10	SB	5	No
	2 Ln Undiv	480	10	EB	0	No
	2 Ln Undiv	480	10	WB	0	No
Old Dixie Highway / Oslo Road	2 Ln Undiv	480	10	NB	5	No
	2 Ln Undiv	480	10	SB	2	No
	2 Ln Undiv	480	10	EB	6	No
	4 Ln Div	1120	22	WB	4	No
58 th Avenue / Oslo Road	2 Ln Undiv	480	10	NB	0	No
	4 Ln Div	1120	22	SB	30	Yes
	2 Ln Undiv	480	10	EB	5	No
	2 Ln Undiv	480	10	WB	21	Yes
66 th Avenue / Oslo Road	2 Ln Undiv	480	10	NB	0	No
	2 Ln Undiv	480	10	SB	0	No
	2 Ln Undiv	480	10	EB	5	No
	2 Ln Undiv	480	10	WB	3	No

Based on *Table 2*, the following intersections were determined to comprise the extent of the study area where detailed intersection analyses were required:

58th Avenue / Oslo Road
 43rd Avenue / Oslo Road
 43rd Avenue / 4th Street
 43rd Street / 8th Street
 43rd Avenue / 12th Street

43rd Street / 16th Street
 43rd Avenue / SR 60
 27th Avenue / Oslo Road
 27th Avenue / 4th Street
 20th Avenue / Oslo Road

Existing Traffic Conditions

Indian River County Land Development Regulations require that ten intersections be analyzed. A summary of pertinent information regarding these counts is provided in the following table:

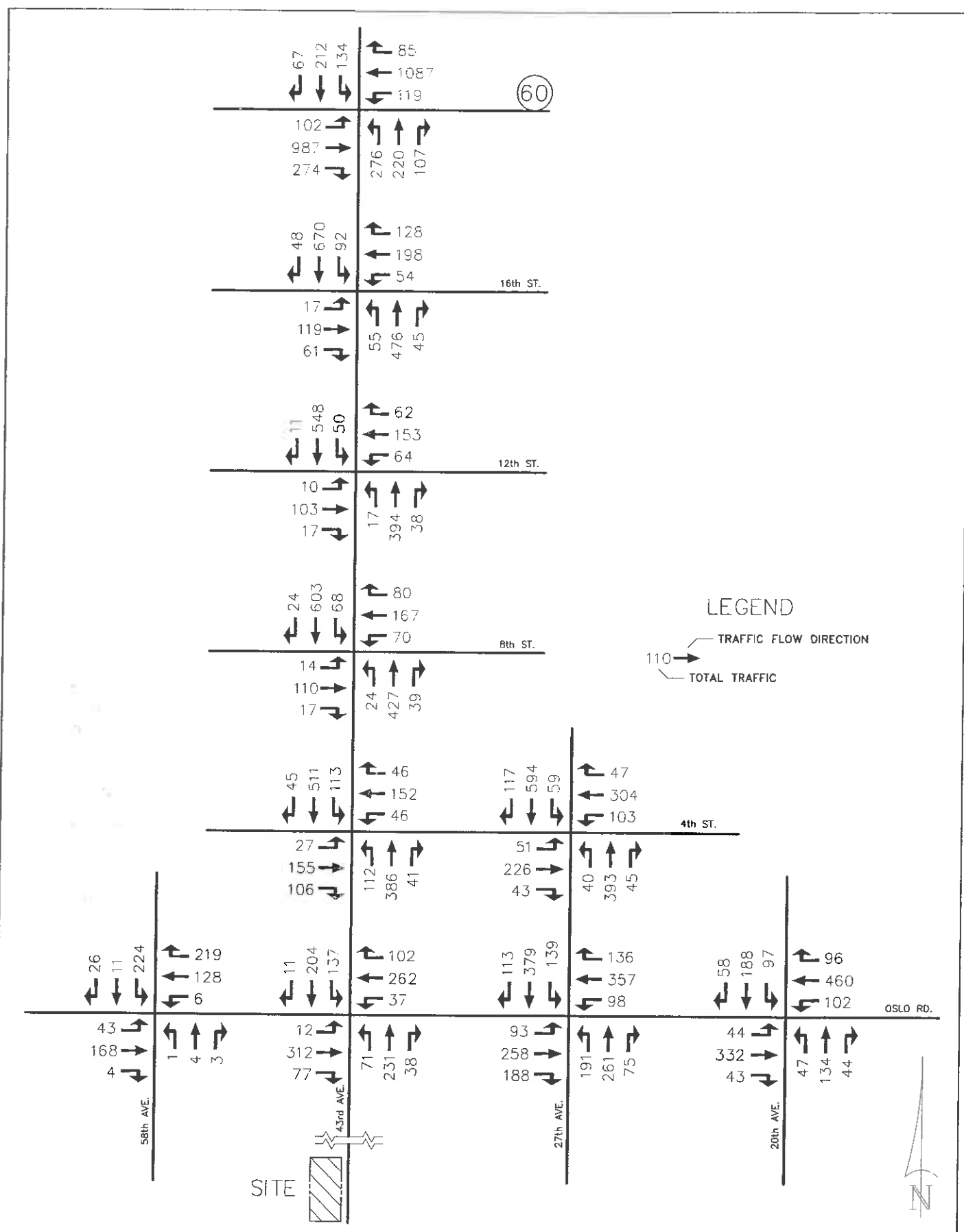
Traffic Count Information

Intersection	Count Date	PM Peak Hour	Peak Season Factor
58 th Avenue / Oslo Road	12/15/03	4:15 – 5:15	1.05
43 rd Avenue / Oslo Road	4/14/04	4:30 – 5:30	1.02
43 rd Avenue / 4 th Street	6/5/03	4:15 – 5:15	1.06
43 rd Avenue / 8 th Street	12/18/03	4:45 – 5:45	1.05
43 rd Avenue / 12 th Street	2/24/04	4:45 – 5:45	.98
43 rd Avenue / 16 th Street	5/29/03	5:00 – 6:00	1.06
43 rd Avenue / SR 60	7/29/03	3:15 – 4:15	1.07
27 th Avenue / Oslo Road	4/13/04	5:00 – 6:00	1.01
27 th Avenue / 4 th Street	9/9/03	4:45 – 5:45	1.06
20 th Avenue / Oslo Road	4/13/04	4:00 – 5:00	1.01

The peak hour volumes were the basis of the existing conditions analysis as well as the future traffic analysis as required by the Indian River County Land Development Regulations. The raw turning movement counts, which are included in the *Appendix* for reference, were converted to peak season levels using FDOT weekly adjustment factors as required by Indian River County and FDOT. *Figure 2* illustrates the existing peak-season peak-hour volumes at the study intersections.

Peak season volumes were used to perform an analysis of existing intersection operating conditions. These intersection analyses were performed using the signalized methodology contained in the *2000 Highway Capacity Manual*. The intersections were each analyzed as signalized. It was found that the study intersections are operating at acceptable levels of service during the existing peak season as shown in *Table 3*. Intersection analysis worksheets are included in the *Appendix*.

G:\47550000\Tripsom Trails\TRIPSON.dwg FIG-2 Apr 22, 2004 7:47am by: Brian Good



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TRIPSON TRAIL
EXISTING PEAK-SEASON PEAK-HOUR
INTERSECTION VOLUMES

FIGURE NO.
2

PAGE

Table 3 - Existing Peak-Season Peak-Hour Intersection Conditions

Intersection	Existing LOS
58 th Avenue / Oslo Road	C
43 rd Avenue / Oslo Road ¹	C
43 rd Avenue / 4 th Street	B
43 rd Avenue / 8 th Street	B
43 rd Avenue / 12 th Street	B
43 rd Avenue / 16 th Street	B
43 rd Avenue / SR 60	D
27 th Avenue / Oslo Road	D
27 th Avenue / 4 th Street	C
20 th Avenue / Oslo Road	C

Notes: 1. Intersections improvements presently under construction have been incorporated into intersection analysis.

A summary of the peak-season peak-hour volumes and corresponding levels of service for the roadway links in the study area are shown in *Table 4*. This summary demonstrates that there are adequate levels of service on the roadway links. Level of service on all facilities is based on a Class Ia two-way arterial for state designated roadway segments and non-state roadways for city/county roadways.

Table 4 - Existing Peak-Season Peak-Hour Roadway Conditions

Roadway	Direction	PM Peak Hour Volume	LOS
58th Avenue:			
North of Oslo Road	NB	266	C
	SB	261	C
South of Oslo Road	NB	8	B
	SB	21	B
43rd Avenue:			
North of SR 60	NB	447	C
	SB	454	C
SR 60 to 16 th Street	NB	674	D
	SB	776	E
16 th Street to 12 th Street	NB	521	D
	SB	722	D
12 th Street to 8 th Street	NB	485	D
	SB	687	D
8 th Street to 4 th Street	NB	475	C
	SB	680	D
4 th Street to Oslo Road	NB	442	C
	SB	508	D
South of Oslo Road	NB	340	C
	SB	318	C
27th Avenue:			
North of 4 th Street	NB	491	D
	SB	770	E
4 th Street to Oslo Road	NB	484	D
	SB	686	D
South of Oslo Road	NB	527	D
	SB	665	D
20th Avenue:			
North of Oslo Road	NB	274	C
	SB	343	C
South of Oslo Road	NB	225	C
	SB	333	C
Oslo Road:			
West of 58 th Avenue	EB	214	C
	WB	155	C

Table 4 - Existing Peak-Season Peak-Hour Roadway Conditions (continued)

Roadway	Direction	PM Peak Hour Volume	LOS
58 th Avenue to 43 rd Avenue	EB	398	C
	WB	349	C
43 rd Avenue to 27 th Avenue	EB	513	D
	WB	531	D
27 th Avenue to 20 th Avenue	EB	446	C
	WB	578	D
East of 20 th Avenue	EB	473	C
	WB	658	D
4th Street			
West of 43 rd Avenue	EB	288	C
	WB	309	C
43 rd to 27 th Avenue	EB	315	C
	WB	352	C
East of 27 th Avenue	EB	330	C
	WB	454	C
8th Avenue			
West of 43 rd Avenue	EB	141	C
	WB	215	C
East of 43 rd Avenue	EB	217	C
	WB	317	C
12th Street			
West of 43 rd Avenue	EB	130	C
	WB	171	C
East of 43 rd Avenue	EB	191	C
	WB	279	C
16th Street			
West of 43 rd Avenue	EB	197	C
	WB	301	C
East of 43 rd Avenue	EB	256	C
	WB	380	C
SR 60			
West of 43 rd Avenue	EB	1363	C
	WB	1430	C
East of 43 rd Avenue	EB	1228	C
	WB	1291	C

Future Traffic Conditions

Tripson Trail Development is targeted to be complete in 2007. Accordingly, traffic conditions in 2007, with and without traffic from the proposed development, were evaluated.

Non-Project Traffic

Future traffic without the project was derived for 2007 peak season conditions. Existing peak season volumes were increased to reflect three years of projected growth in traffic volumes. An annual growth rate of 3.22% was utilized for the study area based on historical traffic data prepared by Indian River County for 43rd Avenue and Oslo Road. Growth rates were compounded annually to buildout.

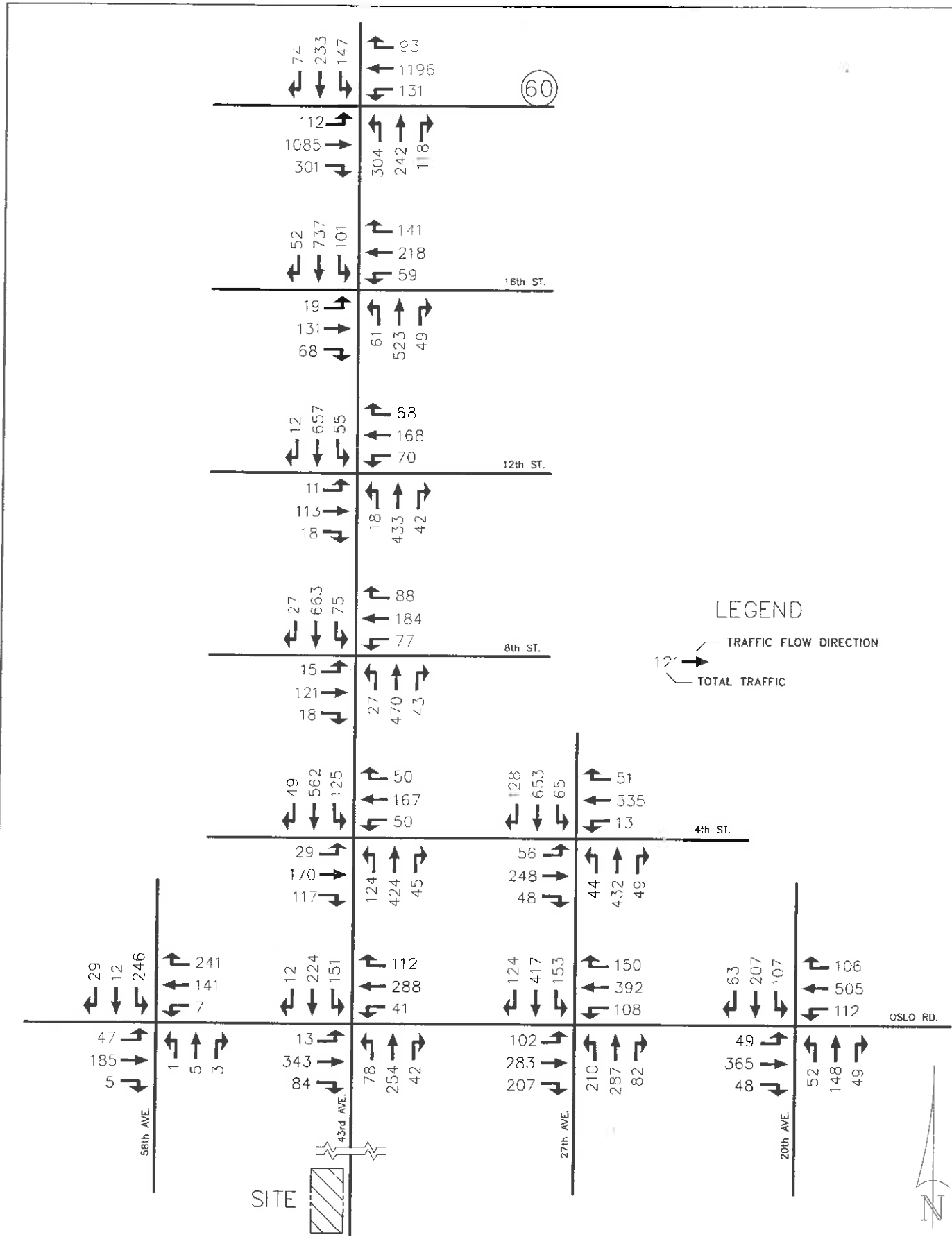
Non-project traffic volume projections at the study intersection was analyzed using the signalized methodology contained in the 2000 *Highway Capacity Manual*. The 2007 peak-season hour volumes at the study intersection is provided in *Figure 3*. A summary of the future non-project level of service at the study intersection is provided in *Table 5*, while 2007 without project roadway conditions are provided in *Table 6*.

Table 5 - 2007 Peak-Season Peak-Hour Intersection Conditions Without Project

Intersection	LOS
58 th Avenue / Oslo Road	C
43 rd Avenue / Oslo Road ¹	C
43 rd Avenue / 4 th Street	B
43 rd Avenue / 8 th Street	B
43 rd Avenue / 12 th Street	B
43 rd Avenue / 16 th Street	C
43 rd Avenue / SR 60	D
27 th Avenue / Oslo Road	D
27 th Avenue / 4 th Street	D
20 th Avenue / Oslo Road	D

Notes: 1. Intersections improvements presently under construction have been incorporated into intersection analysis.

G:\47550000\Tripson Trails\TRIPSON.dwg FIG-3 Apr 22, 2004 7:36am by: Brian.Good



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 2007 PEAK-SEASON PEAK-HOUR
 INTERSECTION VOLUMES WITHOUT PROJECT

FIGURE NO: 3
 PAGE

Table 6 – 2007 Peak-Season Peak-Hour Roadway Conditions Without Project

Roadway	Direction	PM Peak Hour Volume	LOS
58th Avenue:			
North of Oslo Road	NB	293	C
	SB	287	C
South of Oslo Road	NB	9	B
	SB	24	B
43rd Avenue:			
North of SR 60	NB	447	C
	SB	454	C
SR 60 to 16 th Street	NB	665	D
	SB	776	E
16 th Street to 12 th Street	NB	573	D
	SB	794	E
12 th Street to 8 th Street	NB	533	D
	SB	755	D
8 th Street to 4 th Street	NB	522	D
	SB	747	D
4 th Street to Oslo Road	NB	486	D
	SB	558	D
South of Oslo Road	NB	374	C
	SB	349	C
27th Avenue:			
North of 4 th Street	NB	539	D
	SB	846	E
4 th Street to Oslo Road	NB	532	D
	SB	704	D
South of Oslo Road	NB	579	D
	SB	732	D
20th Avenue:			
North of Oslo Road	NB	303	C
	SB	377	C
South of Oslo Road	NB	249	C
	SB	367	C
Oslo Road:			
West of 58 th Avenue	EB	237	C
	WB	171	C

Table 6 – 2007 Peak-Season Peak-Hour Roadway Conditions Without Project

(continued)

Roadway	Direction	PM Peak Hour Volume	LOS
58 th Avenue to 43 rd Avenue	EB	437	C
	WB	384	C
43 rd Avenue to 27 th Avenue	EB	564	D
	WB	584	D
27 th Avenue to 20 th Avenue	EB	490	D
	WB	635	D
East of 20 th Avenue	EB	521	D
	WB	723	D
4th Street			
West of 43 rd Avenue	EB	316	C
	WB	340	C
43 rd Avenue to 27 th Avenue	EB	346	C
	WB	387	C
East of 27 th Avenue	EB	362	C
	WB	399	C
8th Avenue			
West of 43 rd Avenue	EB	154	C
	WB	238	C
East of 43 rd Avenue	EB	239	C
	WB	349	C
12th Street			
West of 43 rd Avenue	EB	142	C
	WB	198	C
East of 43 rd Avenue	EB	210	C
	WB	306	C
16th Street			
West of 43 rd Avenue	EB	218	C
	WB	331	C
East of 43 rd Avenue	EB	281	C
	WB	418	C
SR 60			
West of 43 rd Avenue	EB	1498	B
	WB	1574	C
East of 43 rd Avenue	EB	1350	B
	WB	1420	B

Total Traffic

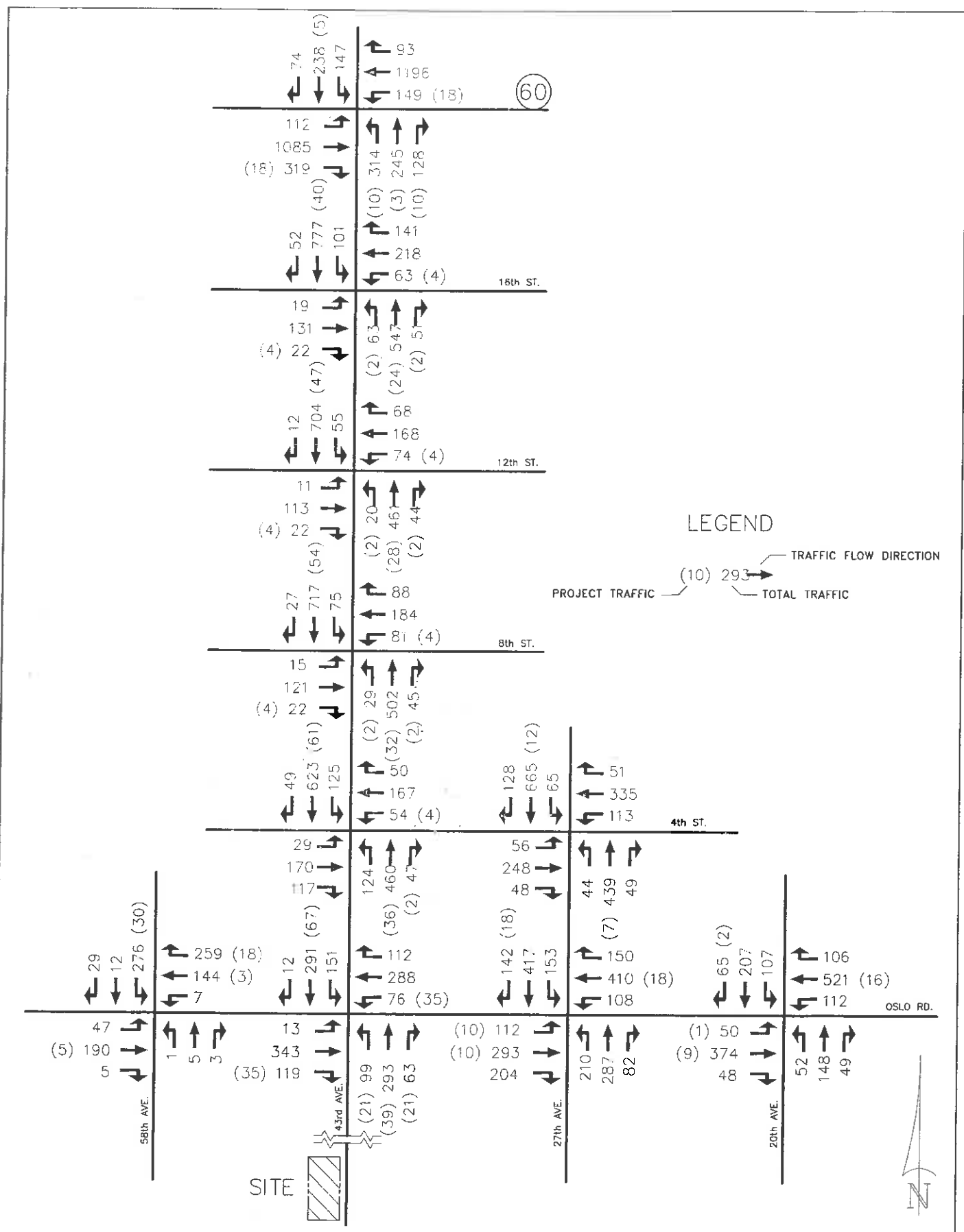
Non-project future traffic and project trips were combined to provide 2007 peak season-peak hour traffic volumes. Project volumes and total volumes in 2007 are illustrated in *Figure 4*. These total volumes at the study intersection were evaluated using methodology contained in the *2000 Highway Capacity Manual*. The level of the study intersection at buildout is summarized in Table 7. Analysis worksheets are included in the Appendix.

Table 7 - 2007 Peak-Season Peak-Hour Intersection Conditions With Project

Intersection	LOS
58 th Avenue / Oslo Road	C
43 rd Avenue / Oslo Road ¹	C
43 rd Avenue / 4 th Street	B
43 rd Avenue / 8 th Street	B
43 rd Avenue / 12 th Street	B
43 rd Avenue / 16 th Street	C
43 rd Avenue / SR 60	D
27 th Avenue / Oslo Road	D
27 th Avenue / 4 th Street	D
20 th Avenue / Oslo Road	D

Notes: 1. Intersections improvements presently under construction have been incorporated into intersection analysis.

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 2007 PEAK-SEASON PEAK-HOUR
 INTERSECTION VOLUMES WITH PROJECT

FIGURE NO: 4
 PAGE

Table 8 – 2007 Peak-Season Peak-Hour Roadway Conditions With Project

Roadway	Direction	PM Peak Hour Volume	LOS
58th Avenue:			
North of Oslo Road	NB	311	C
	SB	317	C
South of Oslo Road	NB	9	B
	SB	24	B
43rd Avenue:			
North of SR 60	NB	450	C
	SB	459	C
SR 60 to 16 th Street	NB	697	D
	SB	818	B*
16 th Street to 12 th Street	NB	601	D
	SB	842	B*
12 th Street to 8 th Street	NB	565	D
	SB	808	D
8 th Street to 4 th Street	NB	558	D
	SB	809	D
4 th Street to Oslo Road	NB	525	D
	SB	624	D
South of Oslo Road	NB	455	C
	SB	486	D
27th Avenue:			
North of 4 th Street	NB	546	D
	SB	858	B*
4 th Street to Oslo Road	NB	541	D
	SB	769	B*
South of Oslo Road	NB	579	D
	SB	729	D
20th Avenue:			
North of Oslo Road	NB	304	C
	SB	379	C
South of Oslo Road	NB	249	C
	SB	367	C
Oslo Road:			
West of 58 th Avenue	EB	242	C
	WB	174	C

Table 8 – 2007 Peak-Season Peak-Hour Roadway Conditions With Project

(continued)

Roadway	Direction	PM Peak Hour Volume	LOS
58 th Avenue to 43 rd Avenue	EB	472	C
	WB	405	C
43 rd Avenue to 27 th Avenue	EB	583	D
	WB	619	D
27 th Avenue to 20 th Avenue	EB	500	D
	WB	653	D
East of 20 th Avenue	EB	530	D
	WB	739	D
4th Street			
West of 43 rd Avenue	EB	316	C
	WB	340	C
43 rd Avenue to 27 th Avenue	EB	347	C
	WB	389	C
East of 27 th Avenue	EB	362	C
	WB	499	D
8th Avenue			
West of 43 rd Avenue	EB	158	C
	WB	240	C
East of 43 rd Avenue	EB	241	C
	WB	353	C
12th Street			
West of 43 rd Avenue	EB	146	C
	WB	200	C
East of 43 rd Avenue	EB	212	C
	WB	270	C
16th Street			
West of 43 rd Avenue	EB	222	C
	WB	333	C
East of 43 rd Avenue	EB	283	C
	WB	422	C
SR 60			
West of 43 rd Avenue	EB	1516	B
	WB	1584	C
East of 43 rd Avenue	EB	1360	B
	WB	1438	B

Note: * Demonstrated to operate at a higher level of service than the generalized tables as a result of arterial analysis.

Arterial Analysis

Traffic Volumes on Oslo Road, 27th Avenue and 43rd Avenue, exceed 70% of LOS “E”, as such, a more detailed arterial analysis was performed using *HCS 2000 Version 4.1d*, which is based on methodologies outlined in the *Highway Capacity Manual*. The analysis was performed on Oslo Road from 43rd Avenue to 20th Avenue in the eastbound direction, Old Dixie Highway to 43rd Avenue in the westbound direction, 27th Avenue from 8th Street to Oslo Road in the northbound and southbound directions, and 43rd Avenue from SR 60 to Oslo Road in the northbound and southbound directions.

The results of the detailed arterial analysis are reported in Table 9. The links that failed to meet the Generalized Level of Services are expected to operate at an acceptable level of service as demonstrated by the detailed arterial analysis. Analysis sheets are included in the Appendix.

Table 9 – HCS Arterial Level of Service Evaluation – 2007 Peak Season-Peak Hour with Project

Roadway Link	Direction	Speed (MPH)	LOS
Oslo Road between 43 rd Avenue and 20 th Avenue	Eastbound	25.1	C
Oslo Road between Old Dixie Highway and 43 rd Avenue	Westbound	20.2	D
27 th Avenue between 8 th Street and Oslo Road	Northbound	33.9	B
27 th Avenue between 8 th Street and Oslo Road	Southbound	33.6	B
43 rd Avenue between SR 60 and Oslo Road	Northbound	26.7	C
43 rd Avenue between SR 60 and Oslo Road	Southbound	30.0	B

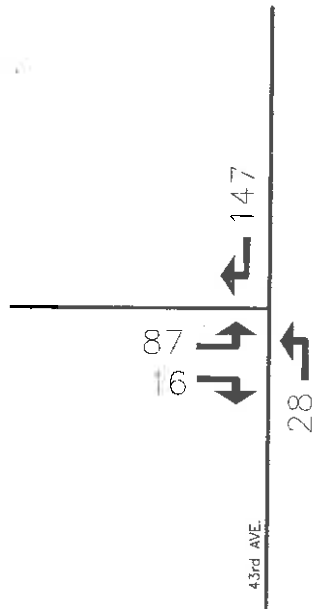
Site Access

The Tripson Trail Development has one access drive onto 43rd Avenue. *Figure 5* depicts the total project trips in the immediate vicinity of the project.

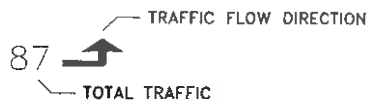
At buildout, the improvements required at the site access are as follows:

- Project Access / 43rd Avenue – Southbound right-turn lane

PROJECT



LEGEND



C:\7550000\Tripson Trail\TRIPSON.dwg FIG-5 Apr. 22, 2004 7:41am by: Brian Good



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**Kimley-Horn
and Associates, Inc.**
601 21st Street, Suite 400, Vero Beach, FL 32960
Phone (772)562-7981 Fax (772)562-9689

DATE:
MAR 26
SCALE:
NTS
DN

TRIPSON TRAIL
TOTAL DRIVEWAY VOLUMES

FIGURE NO
5
PAGE

Conclusions

Adrian Home Communities proposes to develop 288 single family residences. The property is located on the west side of 43rd Avenue south of Oslo Road at 21st Street S.W. An analysis of the traffic impacts associated with the proposed development was performed in accordance with FDOT and Indian River County requirements. The roadways in the vicinity of the site, as well as the study intersections, were evaluated to determine the existing and future levels of service.

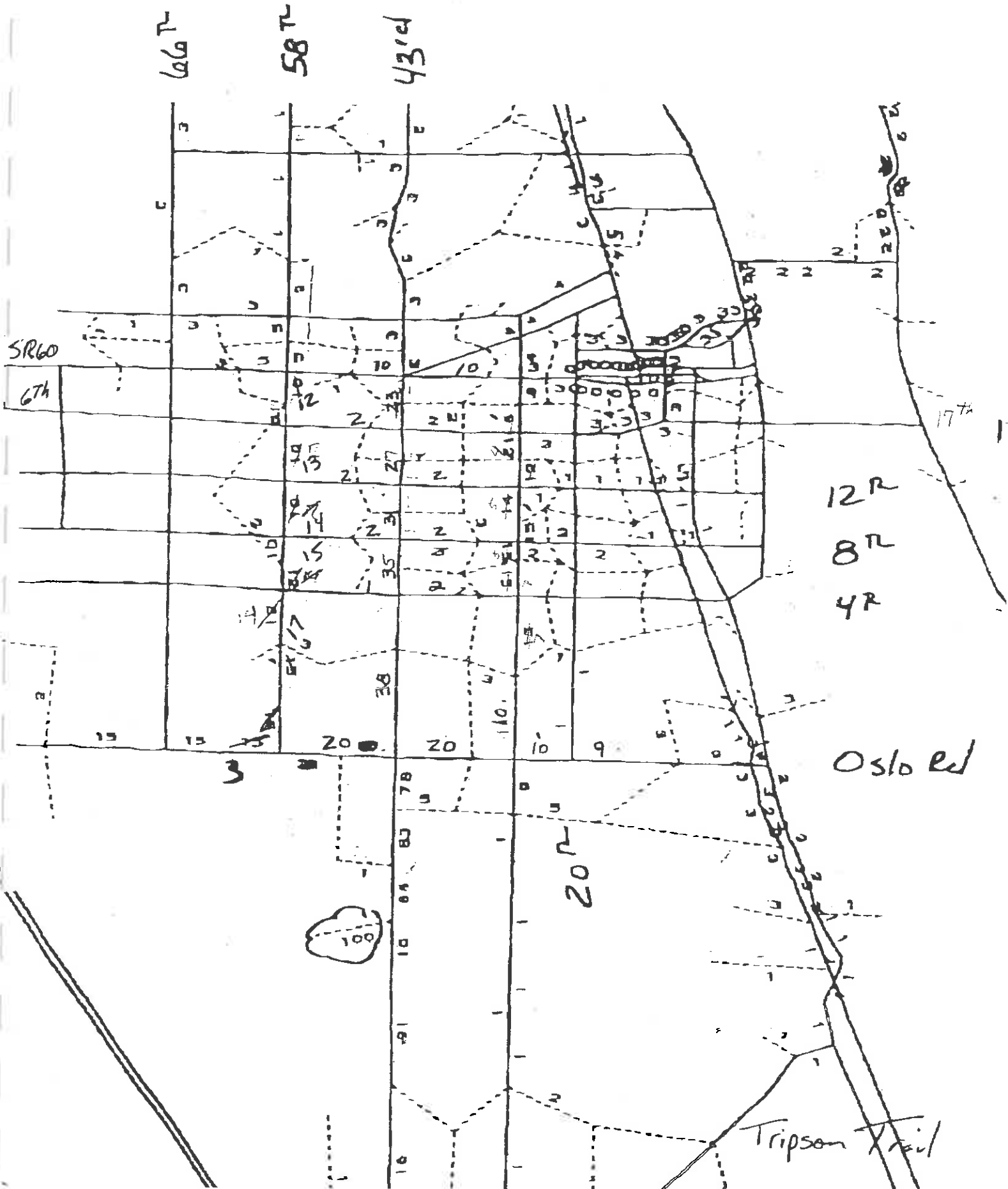
The results of this analysis indicate that acceptable levels of service will be maintained at all study intersections and roadways serving the project. Furthermore, the project meets the requirements of Indian River County Concurrency Management System.

G:\47550000\Tripson Trails\Tripson Trail TIA.doc

Appendix

Appendix

STANLEY-BORD 4FB FL



These Are The Default Titles
 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

Project Name : 58 AV @ OSLO ROAD
 Site Code : 03000112
 Start Date : 12/15/2003
 Page : 1

Comment Line 1
 Comment Line 2
 Comment Line 3
 Comment Line 4

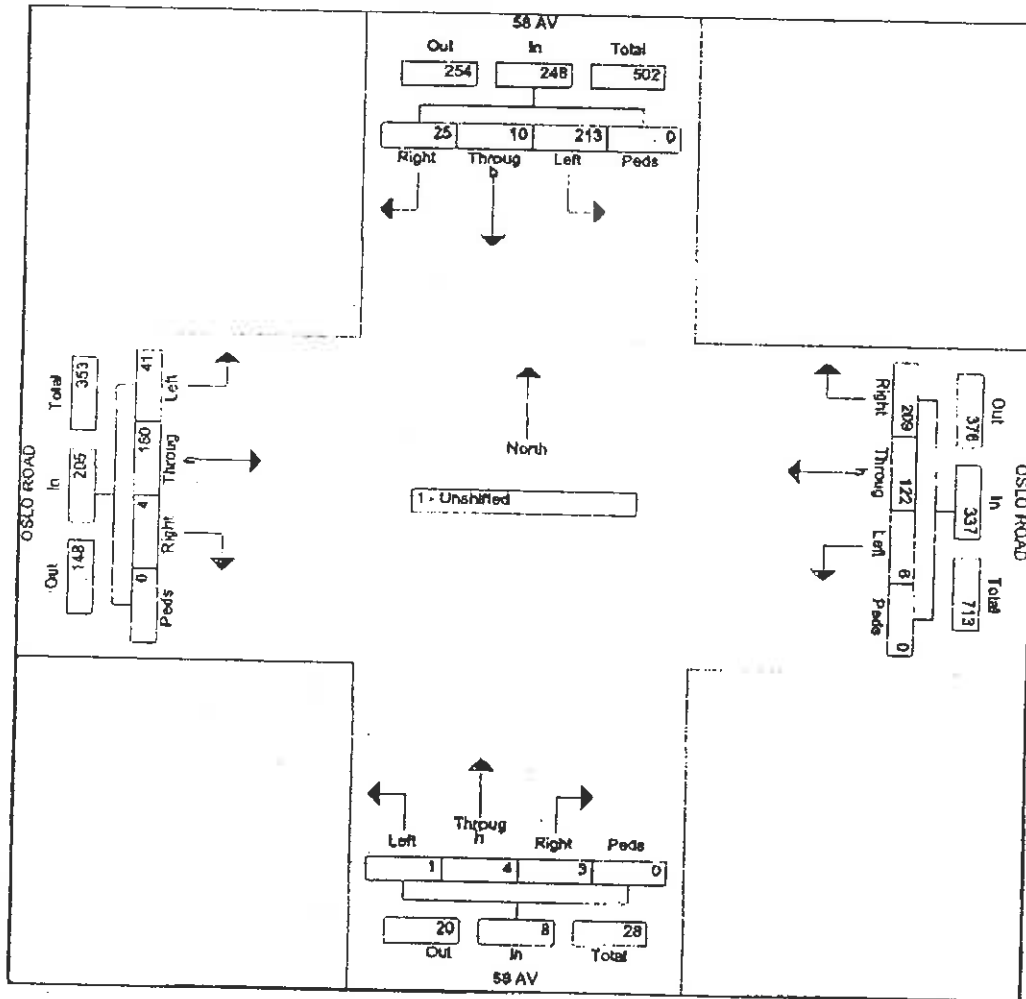
Groups Printed: 1 - Unshifted

Start Time	58 AV Southbound					OSLO ROAD Westbound					58 AV Northbound					OSLO ROAD Eastbound					Int. Total
	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45 AM	28	1	11	0	40	0	46	35	0	81	0	0	0	0	0	3	21	0	0	24	145
Total	28	1	11	0	40	0	46	35	0	81	0	0	0	0	0	3	21	0	0	24	145
07:00 AM	25	1	8	0	34	1	55	29	0	85	0	0	1	0	1	4	25	0	0	29	149
07:15 AM	29	1	5	0	35	1	48	37	0	86	0	1	2	0	3	2	28	0	0	30	154
07:30 AM	31	2	5	0	38	1	42	47	0	90	0	3	2	0	5	7	53	0	0	60	193
Total	85	4	18	0	107	3	145	113	0	261	0	4	5	0	9	13	106	0	0	119	496
04:15 PM	44	4	13	0	61	0	23	49	0	72	0	1	1	0	2	7	31	0	0	38	173
04:30 PM	70	2	2	0	74	0	35	50	0	85	1	0	1	0	2	7	28	1	0	36	197
04:45 PM	49	4	4	0	57	3	36	59	0	98	0	1	0	0	1	12	40	2	0	54	210
Total	163	10	19	0	192	3	94	158	0	255	1	2	2	0	5	26	99	3	0	128	580
05:00 PM	50	0	6	0	56	3	28	51	0	82	0	2	1	0	3	15	61	1	0	77	218
Grand Total	326	15	54	0	395	9	313	357	0	879	1	8	8	0	17	57	287	4	0	348	1439
Approch %	82.5	3.8	13.7	0.0		1.3	46.1	52.6	0.0		5.9	47.1	47.1	0.0		16.4	82.5	1.1	0.0		
Total %	22.7	1.0	3.8	0.0	27.4	0.6	21.8	24.8	0.0	47.2	0.1	0.8	0.6	0.0	1.2	4.0	19.9	0.3	0.0	24.2	

These Are The Default Titles
 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

File Name : 58 AV @ OSLO ROAD
 Site Code : 03000112
 Start Date : 12/15/2003
 Page : 2

Start Time	58 AV Southbound					OSLO ROAD Westbound					58 AV Northbound					OSLO ROAD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From Intersection 04:15 PM to 05:15 PM - Peak 1 of 1																					
Volume	213	10	25	0	248	6	122	209	0	337	1	4	3	0	8	41	160	4	0	205	798
Percent	85.9	4.0	10.1	0.0		1.8	36.2	62.0	0.0		12.5	50.0	37.5	0.0		20.0	78.0	2.0	0.0		
High Int.	04:30 PM																				
Volume	70	4	13	0	74	3	38	59	0	98	1	2	1	0	3	15	61	2	0	77	218
Peak Factor	0.838					0.860					0.667					0.666					0.915



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 5

Controller Type: Peek 3000

Intersection Name: OSLO RD @ 58 AVE

Date: 08/26/03

PHASE	1	2	3	4	5	6	7	8
APPROACH	EB/LT	W/B	SB/LT	N/B	WB/LT	E/B		S/B
INITIAL	5	20	5	6	5	20		6
PASSAGE	3	5	3	4	3	5		4
YELLOW	4	4	4	4	4	4		4
ALL RED	2	2	1.7	2	2	2		2
MAX 1	15	45	25	20	15	45		25
MAX 2								
WALK		7						7
PED CLEAR		21						12
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
NON LOCK	X		X	X	X			X
CNA 1								

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2-6	NO	YES	YES	2-6	4-8
				1-5		

TIMING BY: ANKENY

APPROVED BY: _____

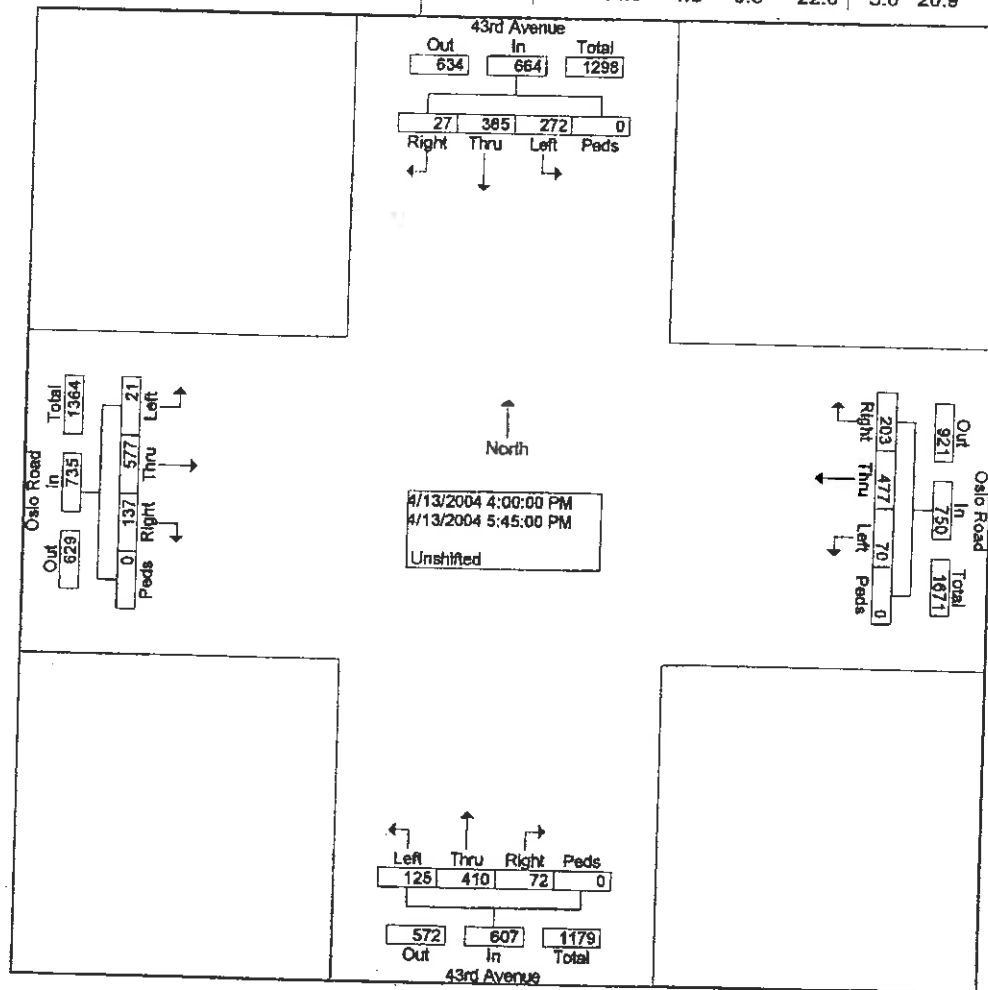
Kimley-Horn and Associates, Inc.
601 21st Street
Vero Beach, Florida 32960

Weather: Clear
Counted By: R.S.
Board No.: 047050
Location: 43rd Avenue & Oslo Road

File Name : 43rd Ave_Oslo Road
Site Code : 44444441
Start Date : 04/13/2004
Page No : 1

Groups Printed- Unshifted

Start Time	43rd Avenue From North					Oslo Road From East					43rd Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	6	53	35	0	94	22	57	13	0	92	5	50	22	0	77	22	68	4	0	94	
04:15 PM	3	36	32	0	71	22	50	6	0	78	13	37	10	0	60	10	71	2	0	83	357
04:30 PM	4	47	29	0	80	26	65	9	0	100	5	51	20	0	76	22	77	2	0	101	292
04:45 PM	2	40	31	0	73	25	66	10	0	101	12	56	14	0	82	15	77	1	0	93	357
Total	15	176	127	0	318	95	238	38	0	371	35	194	66	0	295	69	293	9	0	371	349
05:00 PM	3	48	37	0	88	21	67	11	0	99	8	51	17	0	76	20	83	6	0	109	1355
05:15 PM	2	67	39	0	108	29	61	7	0	97	13	71	19	0	103	19	72	3	0	94	372
05:30 PM	6	37	39	0	82	26	54	6	0	86	9	53	14	0	76	16	67	1	0	84	402
05:45 PM	1	37	30	0	68	32	57	8	0	97	7	41	9	0	57	13	62	2	0	77	328
Total	12	189	145	0	346	108	239	32	0	379	37	216	59	0	312	68	284	12	0	364	299
Grand Total	27	365	272	0	664	203	477	70	0	750	72	410	125	0	607	137	577	21	0	735	2756
Apprch %	4.1	55.0	41.0	0.0		27.1	63.6	9.3	0.0		11.9	67.5	20.6	0.0		18.6	78.5	2.9	0.0		
Total %	1.0	13.2	9.9	0.0	24.1	7.4	17.3	2.5	0.0	27.2	2.6	14.9	4.5	0.0	22.0	5.0	20.9	0.8	0.0	26.7	

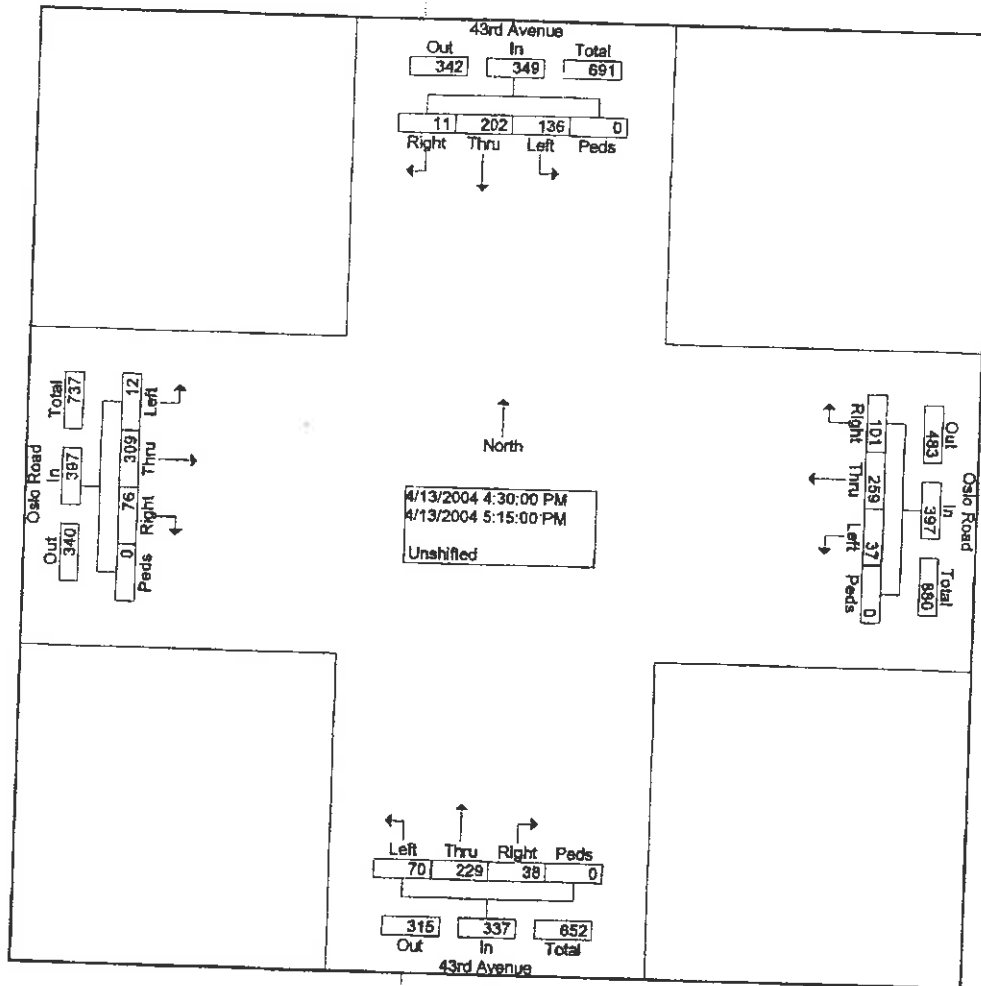


Kimley-Horn and Associates, Inc.
601 21st Street
Vero Beach, Florida 32960

Weather: Clear
Counted By: R.S.
Board No.: 047050
Location: 43rd Avenue & Oslo Road

File Name : 43rd Ave_Oslo Road
Site Code : 44444441
Start Date : 04/13/2004
Page No : 2

Start Time	43rd Avenue From North					Oslo Road From East					43rd Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection 04:30 PM																					
Volume	11	202	136	0	349	101	259	37	0	397	38	229	70	0	337	76	309	12	0	397	1480
Percent	3.2	57.9	39.0	0.0		25.4	65.2	9.3	0.0		11.3	68.0	20.8	0.0		19.1	77.8	3.0	0.0		
05:15 Volume	2	67	39	0	108	29	61	7	0	97	13	71	19	0	103	19	72	3	0	94	402
Peak Factor																					0.920
High Int. Volume	05:15 PM					04:45 PM					05:15 PM					05:00 PM					
Peak Factor	2	67	39	0	108	25	66	10	0	101	13	71	19	0	103	20	83	6	0	109	0.911
	0.808					0.983					0.818										

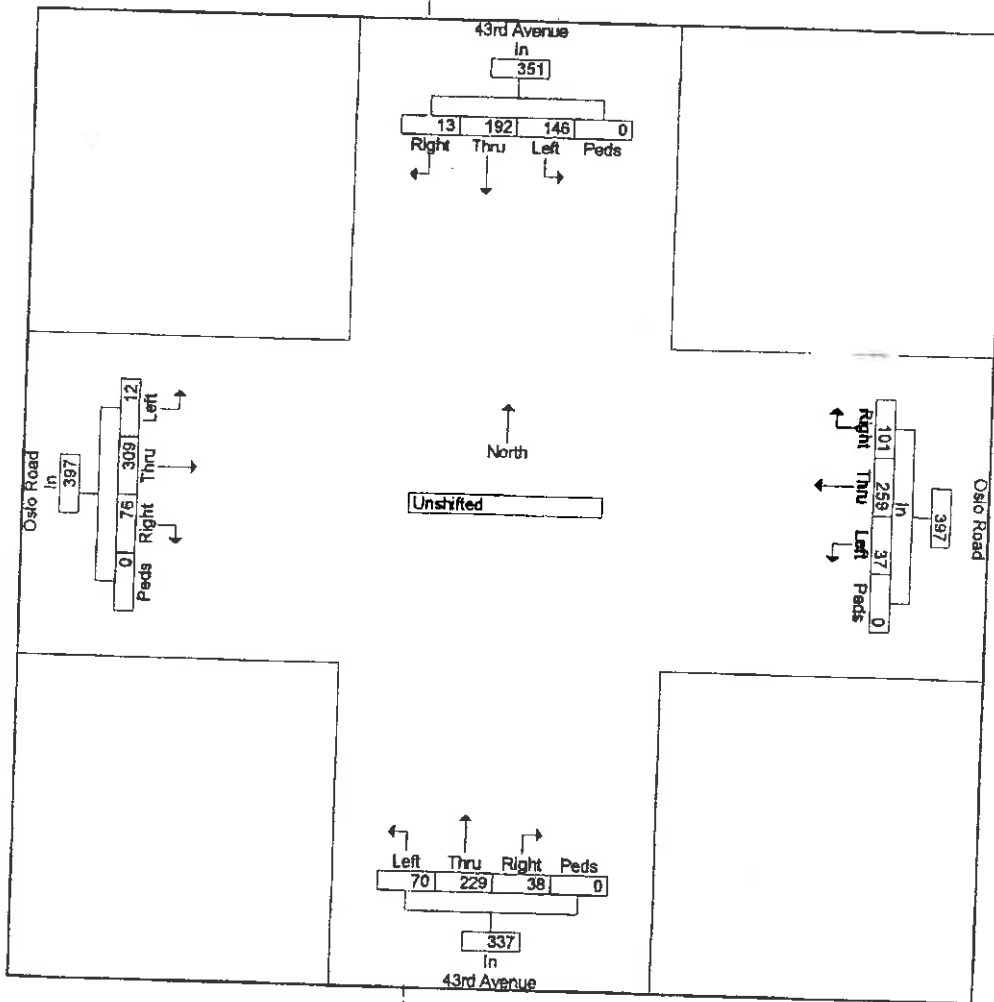


Kimley-Horn and Associates, Inc.
601 21st Street
Vero Beach, Florida 32960

Weather: Clear
Counted By: R.S.
Board No.: 047050
Location: 43rd Avenue & Oslo Road

File Name : 43rd Ave_Oslo Road
Site Code : 44444441
Start Date : 04/13/2004
Page No : 3

Start Time	43rd Avenue From North					Oslo Road From East					43rd Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
By Approach	04:45 PM					04:30 PM					04:30 PM					04:30 PM					
Volume	13	192	146	0	351	101	259	37	0	397	38	229	70	0	337	76	309	12	0	397	
Percent	3.7	54.7	41.6	0.0		25.4	65.2	9.3	0.0		11.3	68.0	20.8	0.0		19.1	77.8	3.0	0.0		
High Int.	05:15 PM					04:45 PM					05:15 PM					05:00 PM					
Volume	2	87	38	0	108	25	66	10	0	101	13	71	19	0	103	20	83	6	0	109	
Peak Factor	0.813					0.983					0.818					0.911					



Kimley-Horn and Associates, Inc.

601 21st Street

Vero Beach, Florida 32960

Weather:
Counted By:
Board No.:
Location:

File Name : 43rd AVE_4th Street

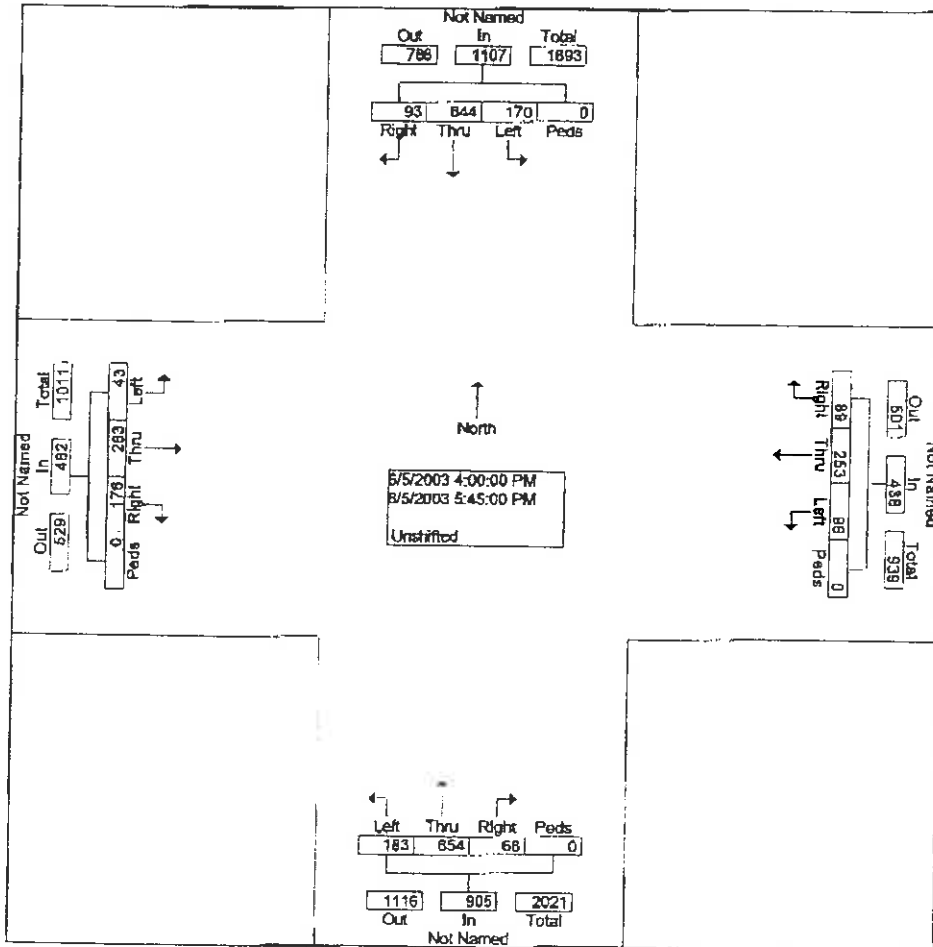
Site Code : 66662222

Start Date : 06/05/2003

Page No : 1

Groups Printed- Unshifted

Start Time	From North					From East					From South					From West					Int. Total
	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	17	110	10	0	137	11	29	12	0	52	19	79	5	0	103	6	31	23	0	60	352
04:15 PM	30	115	12	0	157	5	24	7	0	36	29	89	6	0	124	5	30	26	0	61	378
04:30 PM	25	121	8	0	154	13	41	12	0	66	25	84	9	0	118	12	44	24	0	80	418
04:45 PM	32	106	8	0	146	9	29	14	0	52	31	86	9	0	136	6	48	25	0	79	413
Total	104	452	38	0	594	38	123	45	0	206	104	348	29	0	481	29	153	98	0	280	1561
05:00 PM	20	140	14	0	174	16	49	10	0	75	21	95	15	0	131	2	24	25	0	51	431
05:15 PM	19	105	15	0	139	20	35	14	0	69	15	74	7	0	96	2	16	8	0	26	330
05:30 PM	13	61	21	0	95	15	26	3	0	44	24	72	7	0	103	4	30	19	0	53	295
05:45 PM	14	86	5	0	105	7	20	17	0	44	19	65	10	0	94	6	40	26	0	72	315
Total	66	392	55	0	513	58	130	44	0	232	79	306	39	0	424	14	110	78	0	202	1371
Grand Total	170	844	93	0	1107	96	253	89	0	438	183	654	68	0	905	43	263	176	0	482	2932
Apprch %	15.4	76.2	8.4	0.0		21.9	57.8	20.3	0.0		20.2	72.3	7.5	0.0		8.9	54.6	36.5	0.0		
Total %	5.8	28.8	3.2	0.0	37.8	3.3	8.6	3.0	0.0	14.9	6.2	22.3	2.3	0.0	30.8	1.5	9.0	6.0	0.0	16.4	



Comment Line 1
 Comment Line 2
 Comment Line 3
 Comment Line 4

These Are The Default Titles
 Change These In The Preferences Window
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File Name : 8 ST @ 43 AV
 Site Code : 03000010
 Start Date : 12/18/2003
 Page : 1

Groups Printed: 1 - Unshifted

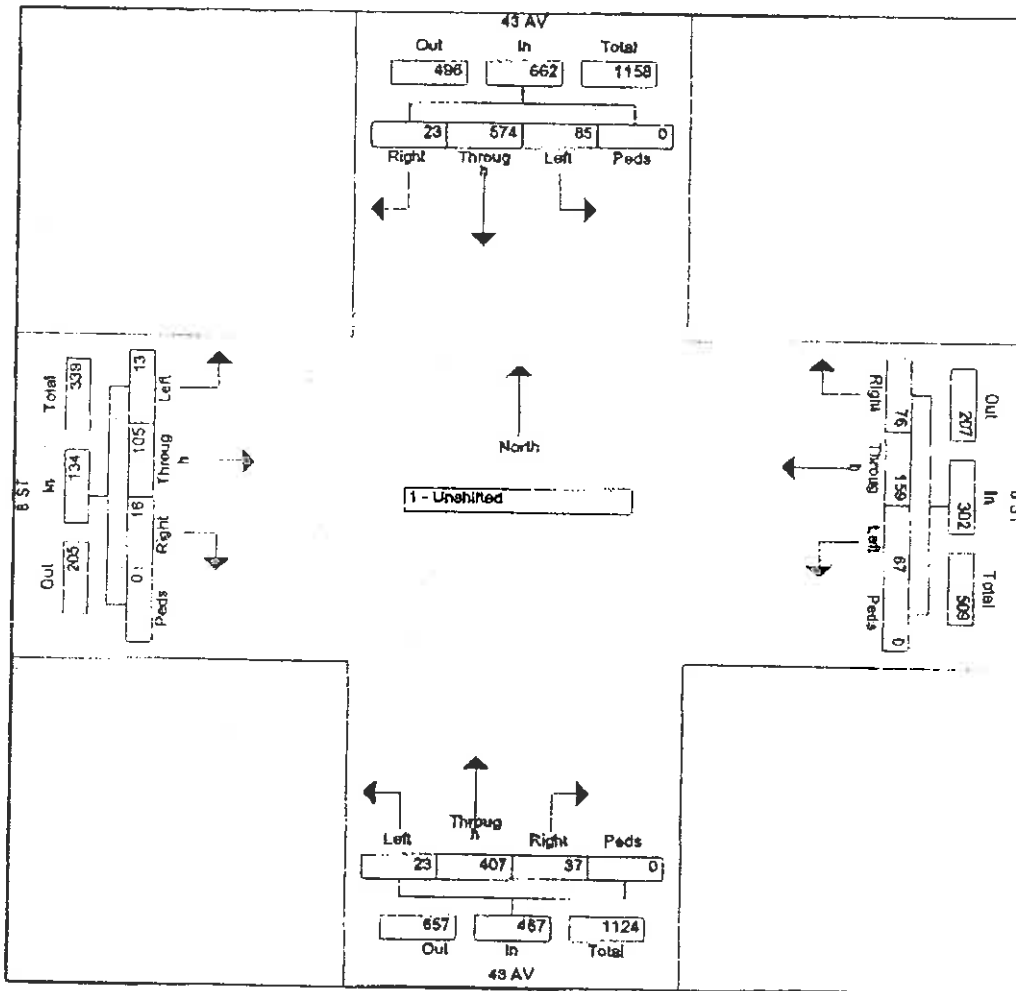
Start Time	43 AV Southbound					8 ST Westbound					43 AV Northbound					8 ST Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:45 AM	16	94	10	0	120	9	38	19	0	66	12	128	27	0	167	13	28	6	0	47	400
Total	16	94	10	0	120	9	38	19	0	66	12	128	27	0	167	13	28	6	0	47	400
08:00 AM	23	69	17	0	109	10	30	29	0	69	14	139	13	0	166	15	31	7	0	53	397
08:15 AM	11	63	19	0	93	5	44	21	0	70	20	124	21	0	185	16	40	11	0	67	395
08:30 AM	15	67	26	0	108	9	49	30	0	88	18	116	31	0	165	19	36	15	0	70	431
Total	49	199	62	0	310	24	123	80	0	227	52	379	65	0	496	50	107	33	0	190	1223
04:45 PM	18	131	3	0	152	9	39	18	0	66	9	101	7	0	117	4	20	4	0	28	363
Total	18	131	3	0	152	9	39	18	0	66	9	101	7	0	117	4	20	4	0	28	363
05:00 PM	16	132	3	0	151	20	42	17	0	79	3	107	15	0	125	3	22	4	0	29	384
05:15 PM	11	150	11	0	172	21	41	16	0	78	5	112	9	0	126	4	30	6	0	40	416
05:30 PM	20	161	6	0	187	17	37	25	0	79	6	87	6	0	99	2	33	2	0	37	402
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	47	443	20	0	510	58	120	59	0	237	14	308	30	0	350	9	85	12	0	106	1203
Grand Total	130	867	95	0	1092	100	320	176	0	596	87	914	129	0	1130	76	240	55	0	371	3189
Approch %	11.9	79.4	8.7	0.0		16.8	53.7	29.5	0.0		7.7	80.9	11.4	0.0		20.5	64.7	14.8	0.0		
Total %	4.1	27.2	3.0	0.0	34.2	3.1	10.0	5.5	0.0	18.7	2.7	28.7	4.0	0.0	35.4	2.4	7.5	1.7	0.0	11.6	

4:45 - 5:45

These Are The Default Titles
 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

File Name : 8 ST @ 43 AV
 Site Code : 03000010
 Start Date : 12/18/2003
 Page : 2

Start Time	43 AV Southbound					8 ST Westbound					43 AV Northbound					8 ST Eastbound					Int. Total
	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	
Peak Hour From 04:45 PM to 05:45 PM - Peak 1 of 1																					
Intersection 04:45 PM	65	574	23	0	662	67	159	76	0	302	23	407	37	0	467	13	105	16	0	134	1565
Volume	9.8	86.7	3.5	0.0		22.2	52.6	25.2	0.0		4.9	87.2	7.9	0.0		9.7	78.4	11.9	0.0		
Percent																					
High Int. 05:30 PM	20	161	11	0	187	21	42	25	0	79	9	112	15	0	126	4	33	6	0	40	416
Volume																					
Peak Factor	0.885					0.956					0.927					0.837					0.941



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 74
 Intersection Name: 8th St @ 43 Ave

Controller Type: TRANSYT 1880EL
 Date: 06/26/03

PHASE	1	2	3	4	5	6	7	8
APPROACH	E/WB	S/NB						
INITIAL	6	15						
PASSAGE	4	5						
YELLOW	4	4						
ALL RED	1.2	1.2						
MAX 1	25	45						
MAX 2								
WALK	7							
PED CLEAR	10							
MIN RECALL		X						
MAX RECALL								
PED RECALL								
NON LOCK								
CNA 1		X						

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2	NO	YES	NO	2	1

REMOVED NON-LOCK ON EB/WB

FLASH 00:00 - 06:00

TIMING BY: ANKENY

APPROVED BY: _____

Indian River County Traffic Engineering Traffic Signal Timing Sheet

74
8th St @ 43 Ave

COORDINATION

CYCLE	1	2	3	4	5	6
SECONDS	70	80	90			

SPLIT #	1	2	3	4	5	6	7	8
PHASE 1	40%	40%	40%	40%	40%			
PHASE 2	60%	60%	60%	60%	60%			
PHASE 3								
PHASE 4								
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

	70	80	90	0	0	0
OFFSET %	CYCLE 1	CYCLE 2	CYCLE 3	CYCLE 4	CYCLE 5	CYCLE 6
MID		54	64			
AM	80	28				
PM		16	2			
AMO	62	48				
PMO	16	16				

	70	80	90	0	0	0
SPLIT #	CYCLE 1	CYCLE 2	CYCLE 3	CYCLE 4	CYCLE 5	CYCLE 6
MID		1	1			
AM	2	2				
PM		3	3			
AMO	4	4				
PMO	5	5				

Comment Line 1
 Comment Line 2
 Comment Line 3
 Comment Line 4

These Are The Default Titles
 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

File Name : 43rd AVENUE @ 12th STREET
 Site Code : 04000016
 Start Date : 02/24/2004
 Page : 1

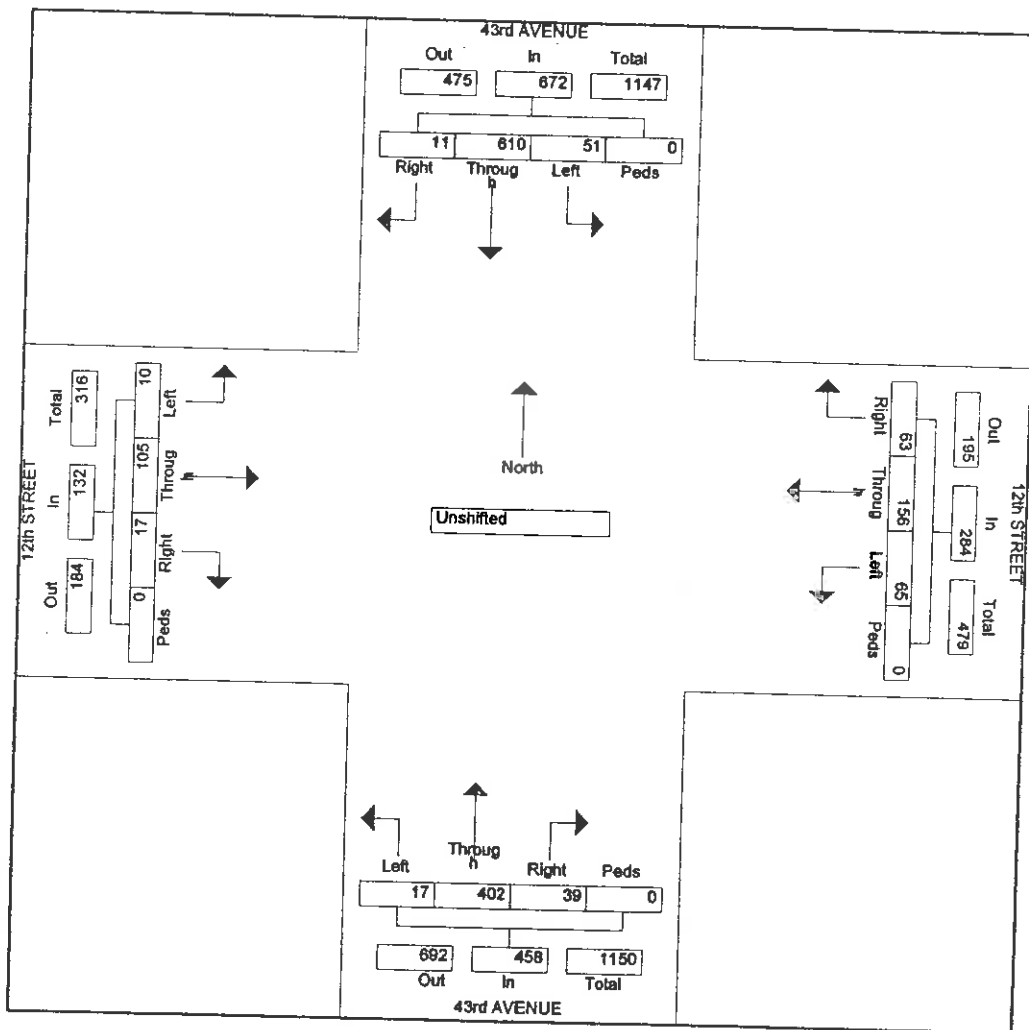
Groups Printed: Unshifted

Start Time	43rd AVENUE Southbound				12th STREET Westbound				43rd AVENUE Northbound				12th STREET Eastbound				Int. Total
	Left	Throu g h	Right	Peds	Left	Throu g h	Right	Peds	Left	Throu g h	Right	Peds	Left	Throu g h	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	7	69	0	0	6	15	13	0	3	109	19	0	3	15	4	0	263
07:15 AM	15	62	2	0	14	21	9	0	6	151	29	0	7	34	5	0	355
07:30 AM	7	87	3	0	11	25	22	0	11	173	16	0	4	24	4	0	387
07:45 AM	14	95	2	0	16	32	14	0	9	163	7	0	10	31	8	0	401
Total	43	313	7	0	47	93	58	0	29	596	71	0	24	104	21	0	1406
04:45 PM	15	147	5	0	15	42	11	0	4	94	10	0	4	37	3	0	387
Total	15	147	5	0	15	42	11	0	4	94	10	0	4	37	3	0	387
05:00 PM	8	134	4	0	17	34	13	0	3	93	7	0	2	21	3	0	339
05:15 PM	10	170	1	0	15	39	19	0	6	98	12	0	3	29	9	0	411
05:30 PM	18	159	1	0	18	41	20	0	4	117	10	0	1	18	2	0	409
Total	36	463	6	0	50	114	52	0	13	308	29	0	6	68	14	0	1159
Grand Total	94	923	18	0	112	249	121	0	46	998	110	0	34	209	38	0	2952
Apprch %	9.1	89.2	1.7	0.0	23.2	51.7	25.1	0.0	4.0	86.5	9.5	0.0	12.1	74.4	13.5	0.0	
Total %	3.2	31.3	0.6	0.0	3.8	8.4	4.1	0.0	1.6	33.8	3.7	0.0	1.2	7.1	1.3	0.0	

4:45 5:45

These Are The Default Titles
 Change These In The Preferences Window:
 Site Name: 43rd AVENUE @ 12th STREET
 Site Code: 04000016
 Start Date: 02/24/2004
 Page: 2

Start Time	43rd AVENUE Southbound					12th STREET Westbound					43rd AVENUE Northbound					12th STREET Eastbound					Int. Total
	Left	Thro u g h	Righ t	Ped s	App. Total	Left	Thro u g h	Righ t	Ped s	App. Total	Left	Thro u g h	Righ t	Ped s	App. Total	Left	Thro u g h	Righ t	Ped s	App. Total	
Peak Hour From Intersection	04:45 PM to 05:45 PM - Peak 1 of 1																				
04:45 PM	51	610	11	0	672	65	156	63	0	284	17	402	39	0	458	10	105	17	0	132	1546
Volume Percent	7.6	90.8	1.6	0.0		22.9	54.9	22.2	0.0		3.7	87.8	8.5	0.0		7.6	79.5	12.9	0.0		
High int.	05:15 PM																				
05:30 PM	18	170	5	0	181	18	42	20	0	79	6	117	12	0	131	4	37	9	0	44	05:15
Volume Peak Factor	0.928					0.899					0.874					0.750					0.940



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 73
 Intersection Name: 12 ST @ 43 AVE

Controller Type: TRANSYT 3000
 Date: 06/26/03

PHASE	1	2	3	4	5	6	7	8
APPROACH		SB		WB		NB		EB
INITIAL		15		6		15		6
PASSAGE		5		4		5		4
YELLOW		4		4		4		4
ALL RED		1.3		1.1		1.3		1.1
MAX 1		45		25		45		25
MAX 2								
WALK		10		5		10		5
PED CLEAR				12				11
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
NON LOCK				X				X
CNA 1		X				X		

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2-6	YES	YES	NO	2-6	4-8

FLASH 00:00 - 06:00

TIMING BY: ANKENY

APPROVED BY: _____

Indian River County Traffic Engineering Traffic Signal Timing Sheet

73

12 ST @ 43 AVE

COORDINATION

CYCLE	1	2	3	4	5	6
SECONDS	70	80	90			

SPLIT >>>	1	2	3	4	5	6	7	8
0 PH 1								
SB PH 2	60%	60%	60%	60%	60%			
0 PH 3								
WB PH 4	40%	40%	40%	40%	40%			
0 PH 5								
NB PH 6	60%	60%	60%	60%	60%			
0 PH 7								
EB PH 8	40%	40%	40%	40%	40%			

	70	80	90	0	0	0
OFFSET %	CYCLE 1	CYCLE 2	CYCLE 3	CYCLE 4	CYCLE 5	CYCLE 6
MID OFFSET 1		4	9			
AM OFFSET 2	40	78				
PM OFFSET 3		67	59			
AMO OFFSET 4	18	0				
PMO OFFSET 5	44	70				

	70	80	90	0	0	0
SPLIT #	CYCLE 1	CYCLE 2	CYCLE 3	CYCLE 4	CYCLE 5	CYCLE 6
MID OFFSET 1		1	1			
AM OFFSET 2	2	2				
PM OFFSET 3		3	3			
AMO OFFSET 4	4	4				
PMO OFFSET 5	5	5				

LOCATION: 43RD AV @ 16TH ST
 COUNTED BY: RANDALL BRENNAN
 DAY OF WEEK: THURSDAY
 WEATHER: CLEAR

INDIAN RIVER COUNTY
 TRAFFIC ENGINEERING
 1840 25th STREET
 VERO BEACH, FL. 32960

59

File Name : untitled2
 Site Code : 03000026
 Start Date : 05/29/2003
 Page : 1

Groups Printed: Unshifted

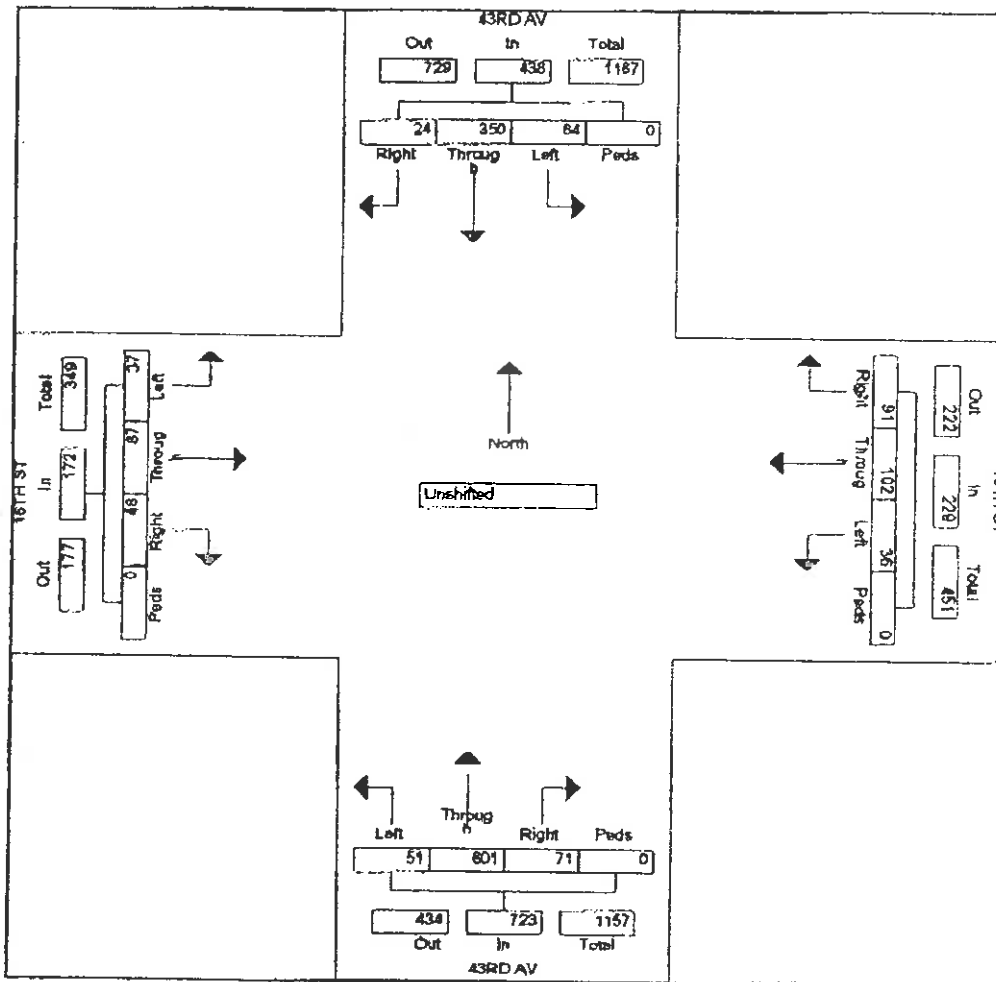
End Time	43RD AV From North				16TH ST From East				43RD AV From South				16TH ST From West				Int. Total
	Right	Throu g h	Left	Peds	Right	Throu g h	Left	Peds	Right	Throu g h	Left	Peds	Right	Throu g h	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
08:00	7	99	17	0	20	22	4	0	17	191	14	0	11	20	8	0	430
Total	7	99	17	0	20	22	4	0	17	191	14	0	11	20	8	0	430
08:15	8	87	20	0	20	20	9	0	15	128	14	0	14	15	10	0	361
08:30	7	92	11	0	30	25	12	0	18	155	13	0	9	15	8	0	393
08:45	2	72	18	0	21	35	11	0	23	126	10	0	14	37	11	0	378
Total	17	251	47	0	71	80	32	0	54	410	37	0	37	67	29	0	1132
17:00	7	149	21	0	26	43	10	0	11	97	11	0	15	29	6	0	425
Total	7	149	21	0	26	43	10	0	11	97	11	0	15	29	6	0	425
17:15	14	162	22	0	28	43	17	0	15	109	8	0	14	23	7	0	454
17:30	13	166	26	0	33	54	13	0	6	127	16	0	18	32	5	0	509
17:45	11	155	18	0	38	47	11	0	10	116	17	0	11	28	4	0	484
Total	38	483	66	0	95	144	41	0	31	352	41	0	43	83	10	0	1427
Grand Total	69	982	151	0	212	289	87	0	113	1050	103	0	106	199	53	0	3414
Approch %	5.7	81.7	12.6	0.0	36.1	49.1	14.8	0.0	8.9	82.9	8.1	0.0	29.6	55.6	14.8	0.0	
Total %	2.0	28.8	4.4	0.0	6.2	8.5	2.5	0.0	3.3	30.8	3.0	0.0	3.1	5.8	1.6	0.0	

5-6

INDIAN RIVER COUNTY
 TRAFFIC ENGINEERING
 1840 25th STREET
 VERO BEACH, FL. 32960

File Name : untitled2
 Site Code : 03000026
 Start Date : 05/29/2003
 Page : 2

End Time	43RD AV From North					16TH ST From East					43RD AV From South					16TH ST From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour From 08:00 to 09:00 - Peak 1 of 1																					
Intersection 08:00																					
Volume	24	350	64	0	438	91	102	36	0	229	71	601	51	0	723	48	87	37	0	172	1562
Percent	5.5	79.9	14.8	0.0		39.7	44.5	15.7	0.0		9.8	83.1	7.1	0.0		27.9	50.6	21.5	0.0		
High Int. 08:00																					
Volume 08:30	8	99	20	0	123	30	35	12	0	67	23	191	14	0	222	14	37	11	0	62	430
Peak Factor	0.890					0.854					0.814					0.694					0.908

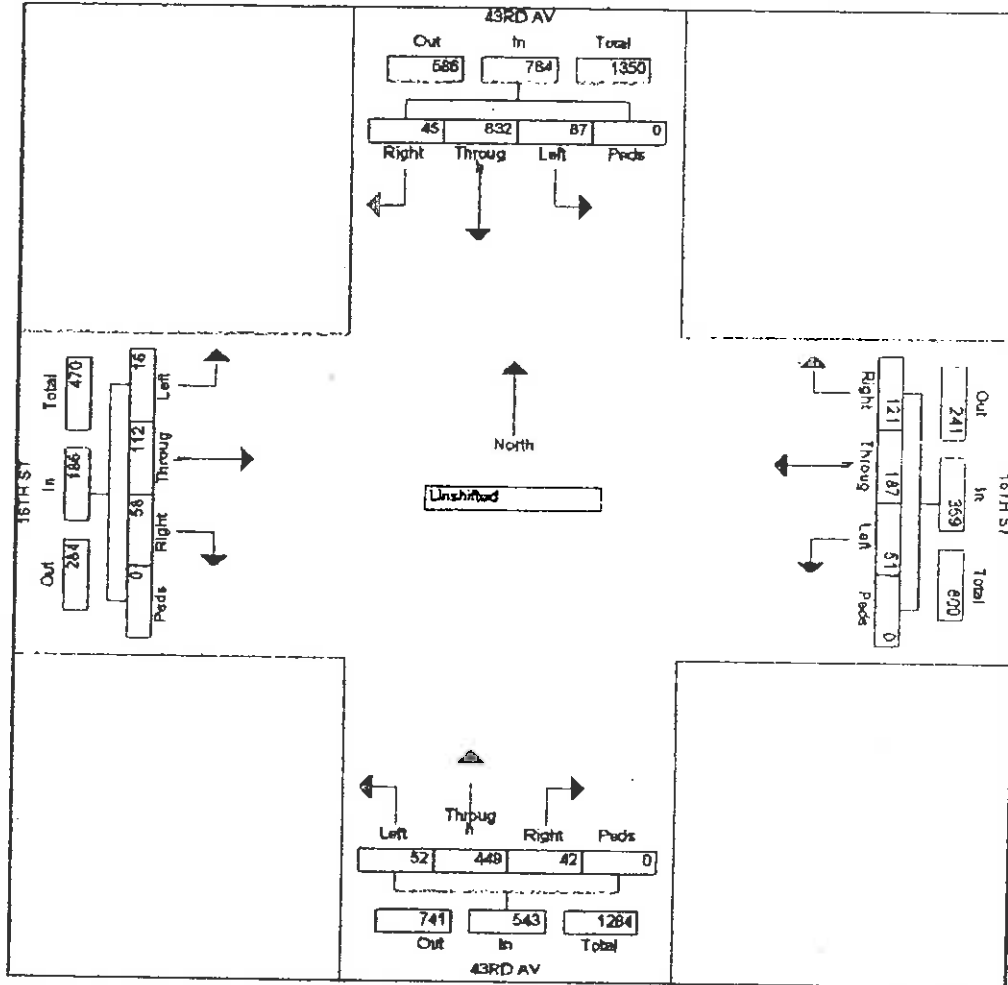


INDIAN RIVER COUNTY
 TRAFFIC ENGINEERING
 1840 25th STREET
 VERO BEACH, FL. 32960

File Name : untitled2
 Site Code : 03000026
 Start Date : 05/29/2003
 Page : 3

Peak Hour From 17:00 to 18:00 - Peak 1 of 1
 Intersection 17:00
 Volume 45 832 87 0 784
 Percent 5.9 82.7 11.4 0.0
 High Int. 17:30
 Volume 14 166 26 0 205
 Peak Factor 0.932

121	187	51	0	359	42	449	52	0	543	58	112	16	0	186	1852
33.7	52.1	14.2	0.0		7.7	82.7	9.6	0.0		31.2	60.2	8.6	0.0		
17:30					17:30					17:30					17:30
36	54	17	0	100	15	127	17	0	149	18	32	6	0	55	509
				0.897					0.911					0.845	0.910



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 59
 Intersection Name: 16th ST @ 43 Ave

Controller Type TRANSYT 1880EL
 Date: 07/10/01

PHASE	1	2	3	4	5	6	7	8
APPROACH		NB/SB		EB/WB				
INITIAL		15		6				
PASSAGE		5		4				
YELLOW		4		4				
ALL RED		1.8		1				
MAX 1		45		25				
MAX 2								
WALK		7		5				
PED CLEAR		7		16				
MIN RECALL		X						
MAX RECALL								
PED RECALL								
NON LOCK				X				
CNA 1		X						

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2	NO	YES	NO	2	4

FLASH 00:00 - 06:00

TIMING BY: ANKENY

APPROVED BY: _____



Indian River County Traffic Engineering Traffic Signal Timing Sheet

59

COORDINATION

16th ST @ 43 Ave

CYCLE	1	2	3	4	5	6
SECONDS	70	80	90			

SPLIT #	1	2	3	4	5	6	7	8
PHASE 1								
PHASE 2	60%	60%	60%	60%	60%			
PHASE 3								
PHASE 4	40%	40%	40%	40%	40%			
PHASE 5								
PHASE 6								
PHASE 7								
PHASE 8								

	70	80	90	0	0	0
OFFSET %	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE
	1	2	3	4	5	6
MID AM PM AMO PMO	OFFSET 1	44	68			
	OFFSET 2	7	40			
	OFFSET 3		3	6		
	OFFSET 4	35	58			
	OFFSET 5	63	7			

	70	80	90	0	0	0
SPLIT #	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE
	1	2	3	4	5	6
MID AM PM AMO PMO	OFFSET 1	1	1			
	OFFSET 2	2	2			
	OFFSET 3	3	3			
	OFFSET 4	4	4			
	OFFSET 5	5	5			



Comment Line 1
 Comment Line 2
 Comment Line 3
 Comment Line 4

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 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

File Name : SR 60 @ 43 A
 Site Code : 03000083
 Start Date : 07/29/2003
 Page : 1

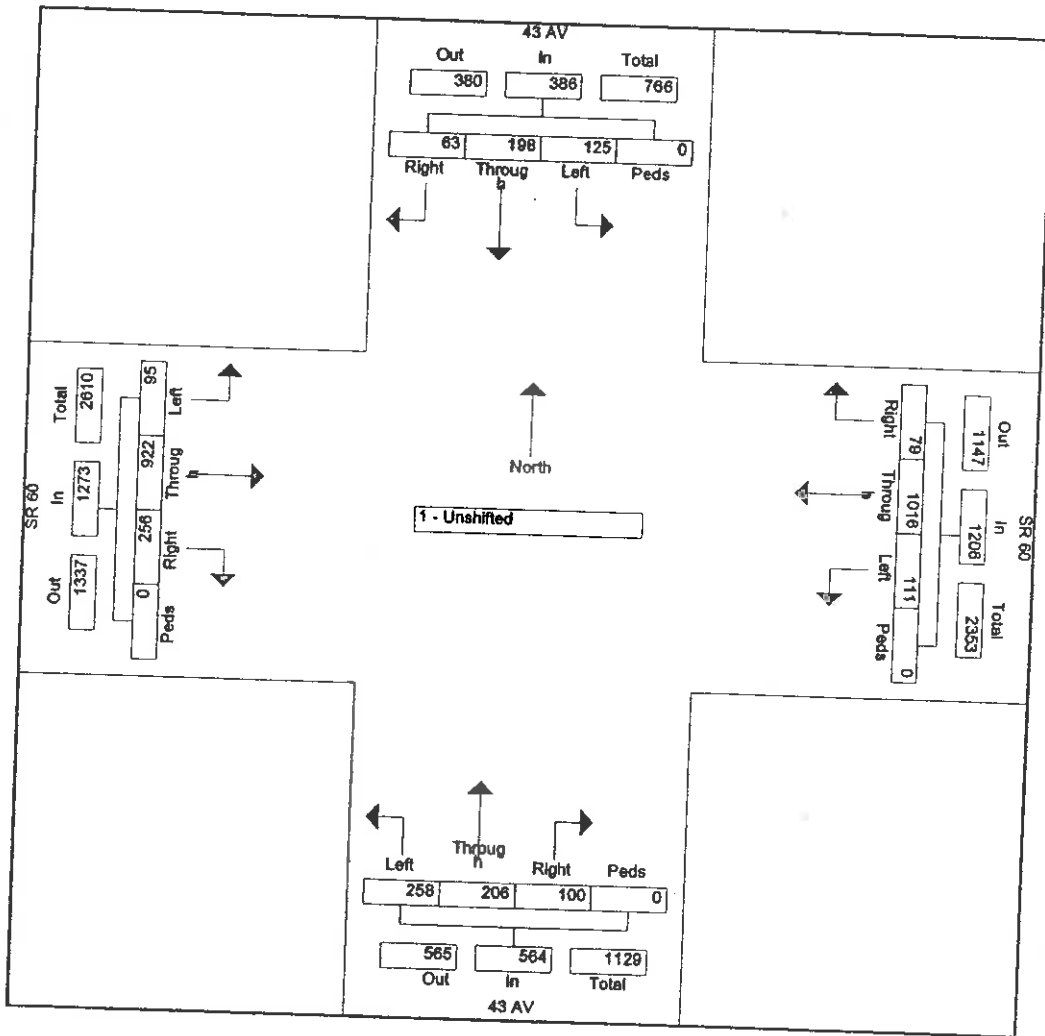
Groups Printed: 1 - Unshifted

Start Time	43 AV Southbound				SR 60 Westbound				43 AV Northbound				SR 60 Eastbound				Int. Total
	Left	Throug h	Right	Peds	Left	Throug h	Right	Peds	Left	Throug h	Right	Peds	Left	Throug h	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
11:00 AM	27	42	26	0	35	293	13	0	67	40	23	0	18	175	42	0	801
11:15 AM	27	29	11	0	13	241	20	0	51	31	39	0	32	221	50	0	765
11:30 AM	20	32	15	0	18	264	17	0	67	37	35	0	24	245	47	0	821
11:45 AM	22	47	15	0	20	288	14	0	77	42	29	0	28	219	58	0	859
Total	96	150	67	0	86	1086	64	0	262	150	126	0	102	860	197	0	3246
03:15 PM	24	36	17	0	27	254	24	0	58	55	23	0	24	258	59	0	859
03:30 PM	38	58	12	0	22	197	10	0	61	55	25	0	23	200	62	0	763
03:45 PM	30	51	10	0	27	302	24	0	72	50	25	0	26	246	70	0	933
Total	92	145	39	0	76	753	58	0	191	160	73	0	73	704	191	0	2555
04:00 PM	33	53	24	0	35	263	21	0	67	46	27	0	22	218	65	0	874
Grand Total	221	348	130	0	197	2102	143	0	520	356	226	0	197	1782	453	0	6675
Apprch %	31.6	49.8	18.6	0.0	8.1	86.1	5.9	0.0	47.2	32.3	20.5	0.0	8.1	73.3	18.6	0.0	
Total %	3.3	5.2	1.9	0.0	3.0	31.5	2.1	0.0	7.8	5.3	3.4	0.0	3.0	26.7	6.8	0.0	

These Are The Default Titles
 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

File Name : SR 60 @ 43 A
 Site Code : 03000083
 Start Date : 07/29/2003
 Page : 2

Start Time	43 AV Southbound					SR 60 Westbound					43 AV Northbound					SR 60 Eastbound					Int. Total
	Left	Thro u g h	Righ t	Ped s	App. Total	Left	Thro u g h	Righ t	Ped s	App. Total	Left	Thro u g h	Righ t	Ped s	App. Total	Left	Thro u g h	Righ t	Ped s	App. Total	
Peak Hour From 03:15 PM to 04:15 PM - Peak 1 of 1																					
Intersection 03:15 PM																					
Volume	125	198	63	0	386	111	1016	79	0	1206	258	206	100	0	564	95	922	256	0	1273	3429
Percent	32.4	51.3	16.3	0.0		9.2	84.2	6.6	0.0		45.7	36.5	17.7	0.0		7.5	72.4	20.1	0.0		
High Int. 04:00 PM																					
Volume	38	58	24	0	110	35	302	24	0	353	72	55	27	0	147	26	258	70	0	342	933
Peak Factor					0.877					0.854					0.959					0.931	0.919



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 16
 Intersection Name: SR60 @ 43 AVE

Controller Type: TRANSYT 3000
 Date: 06/26/03

PHASE	1	2	3	4	5	6	7	8
APPROACH	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
INITIAL	5	20	5	6	5	20	5	6
PASSAGE	4	4	3	4	4	4	3	4
YELLOW	4	4	4	4	4	4	4	4
ALL RED	1.5	2	1.4	1.5	1.6	2	1.2	1.5
MAX 1	25	45	25	40	30	45	30	40
MAX 2								
WALK		6		6		6		6
PED CLEAR		9		20		14		20
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
NON LOCK	X		X	X	X		X	X
CNA 1		X				X		

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2-6	YES	YES	YES	2-6	4-8
				3-7		

AUTO PERMISSIVE ACTIVATED

EASTBOUND LEFT = LAG; WESTBOUND LEFT = LEAD

TIMING BY: ANKENY

APPROVED BY: _____

Indian River County Traffic Engineering Traffic Signal Timing Sheet

16

SR60 @ 43 AVE

COORDINATION

CYCLE	1	2	3	4	5	6
SECONDS	140	160	180			

SPLIT #	1	2	3	4	5	6	7	8
PHASE 1	17%	15%	15%	15%	15%			
PHASE 2	39%	33%	35%	33%	35%			
PHASE 3	20%	22%	22%	22%	22%			
PHASE 4	24%	30%	28%	30%	28%			
PHASE 5	17%	15%	15%	15%	15%			
PHASE 6	39%	33%	35%	33%	35%			
PHASE 7	20%	22%	22%	22%	22%			
PHASE 8	24%	30%	28%	30%	28%			

	140	160	180	0	0	0
OFFSET %	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE
	1	2	3	4	5	6
MID		50	55			
AM	31	46				
PM		61	30			
AMO	56	56				
PMO	61	68				

	140	160	180	0	0	0
SPLIT #	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE	CYCLE
	1	2	3	4	5	6
MID		1	1			
AM	2	2				
PM		3	3			
AMO	4	4				
PMO	5	5				

Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 16
 Intersection Name: SR60 @ 43 AVE
 SPECIAL DAY PLAN

SPECIAL D. 1		SPECIAL D. 2		SPECIAL D. 3		SPECIAL D. 4		SPECIAL D. 5		SPECIAL D. 6		SPECIAL D. 7			
TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S		
		0:00	FREE	0:00	FREE			0:00	FREE	0:00	FREE				
		9:00	1/4/M	11:00	1/5/M			9:00	2/4/M	11:00	2/5/M				
		12:00	1/5/M	16:00	FREE			12:00	2/5/M	16:00	FREE				
		17:00	FREE					17:00	FREE						
SAT SUMR				SUN SUMR				SAT WINTR				SUN WINTR			

SPECIAL DAY IMPLEMENT FOR YEAR 2003-2004

Date	Week	Day	Special	Type	Special Day Plan	Base Day	TOD
9/1/2003	36	2	Labor	Sat - S	2		2
11/11/2003	46	3	Veteran's	Sat - S	2		2
11/27/2003	48	5	Thanksgiving	Sun - S	3		3
12/25/2003	52	5	Christmas	Sun - W	6		6
1/1/2004	1	5	New Year's	Sun - W	6		6
5/31/2004	23	2	Memorial	Sat - S	2		2
7/5/2004	28	2	4-Jul	Sat - S	2		2

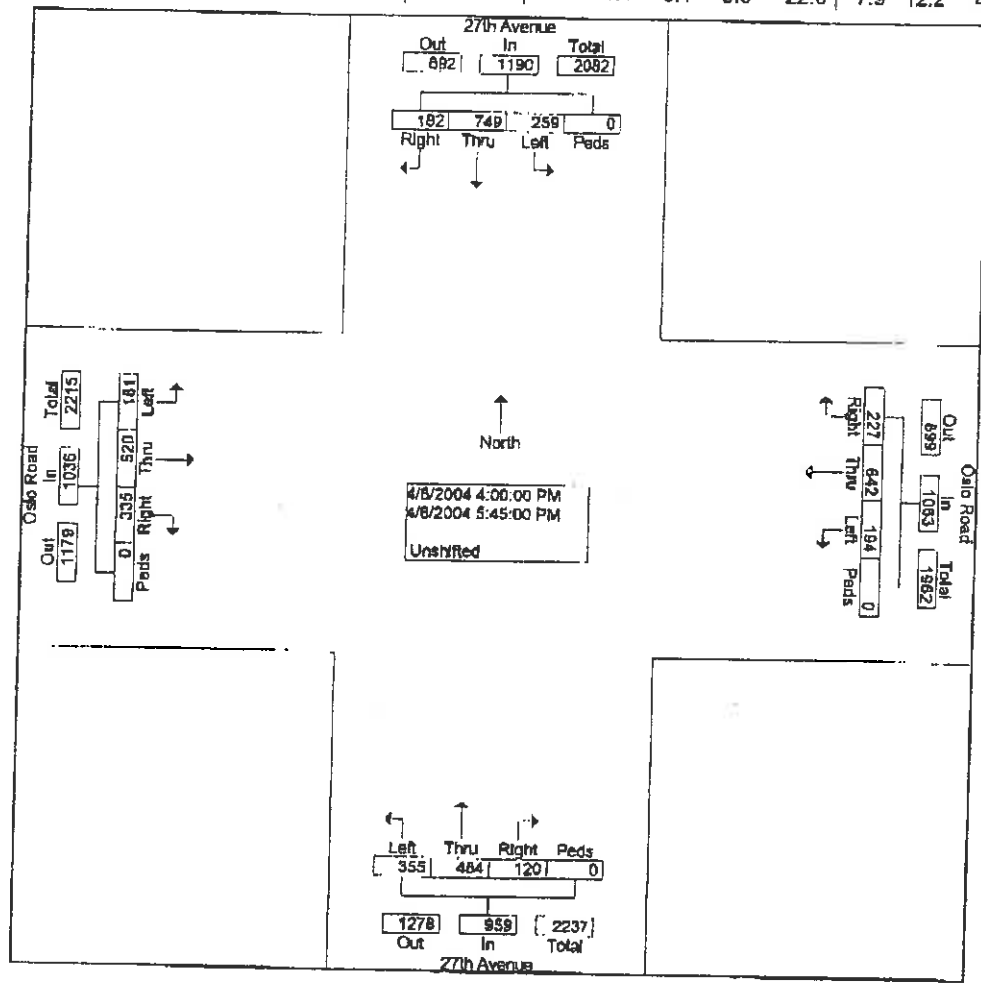
Kimley-Horn and Associates, Inc.
601 21st Street
Vero Beach, Florida 32980

Weather: Clear
Counted By: R.S.
Board No.: 047050
Location: 27th Avenue & Oslo Road

File Name : 27th Avenue_Oslo Road(1)
Site Code : 77711171
Start Date : 04/08/2004
Page No : 1

Groups Printed- Unshifted

Start Time	27th Avenue From North					Oslo Road From East					27th Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	12	94	30	0	136	17	72	26	0	115	12	58	42	0	112	42	67	22	0	131	494
04:15 PM	16	107	35	0	158	23	89	30	0	122	8	46	51	0	105	39	59	25	0	123	508
04:30 PM	16	82	31	0	129	24	80	14	0	118	16	65	39	0	120	31	65	15	0	111	478
04:45 PM	26	91	25	0	142	26	68	27	0	123	10	57	34	0	101	37	74	27	0	138	504
Total	70	374	121	0	565	92	289	97	0	478	46	226	166	0	438	149	265	89	0	503	1984
05:00 PM	31	72	37	0	140	31	93	23	0	147	16	73	52	0	141	60	69	32	0	161	589
05:15 PM	30	105	42	0	177	41	98	32	0	171	25	73	44	0	142	45	51	19	0	115	605
05:30 PM	35	103	31	0	169	36	77	28	0	141	19	49	45	0	113	47	67	21	0	135	556
05:45 PM	16	95	28	0	139	27	85	14	0	126	14	63	48	0	125	34	68	20	0	122	512
Total	112	375	138	0	625	135	353	97	0	585	74	258	189	0	521	186	255	92	0	533	2264
Grand Total	182	749	259	0	1190	227	642	194	0	1063	120	484	355	0	959	335	520	181	0	1036	4248
Approch %	15.3	62.9	21.8	0.0		21.4	60.4	18.3	0.0		12.5	50.5	37.0	0.0		32.3	50.2	17.5	0.0		
Total %	4.3	17.6	6.1	0.0	28.0	5.3	15.1	4.6	0.0	25.0	2.8	11.4	8.4	0.0	22.6	7.9	12.2	4.3	0.0	24.4	



Kimley-Horn and Associates, Inc.

601 21st Street

Vero Beach, Florida 32960

Weather: Clear

Counted By: R.S.

Board No.: 047050

Location: 27th Avenue & Oslo Road

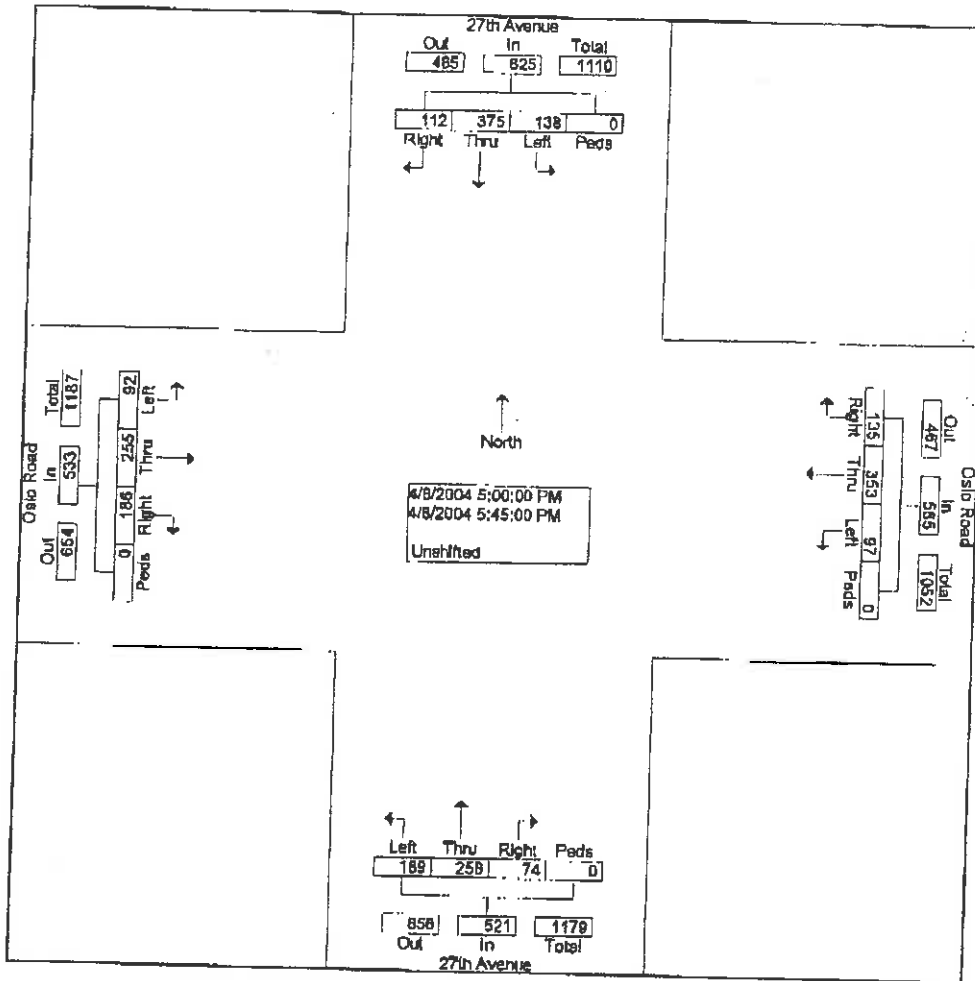
File Name : 27th Avenue_Oslo Road(1)

Site Code : 77711171

Start Date : 04/08/2004

Page No : 2

Start Time	27th Avenue From North					Oslo Road From East					27th Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	112	375	138	0	625	135	353	97	0	585	74	259	189	0	521	186	255	92	0	533	2264
Percent	17.9	60.0	22.1	0.0		23.1	60.3	16.6	0.0		14.2	49.5	36.3	0.0		34.9	47.8	17.3	0.0		
Volume	30	105	42	0	177	41	98	32	0	171	25	73	44	0	142	45	51	19	0	115	605
Peak Factor																					
High Int. Volume	05:15 PM					05:15 PM					05:15 PM					05:00 PM					
Peak Factor	30	105	42	0	177	41	98	32	0	171	25	73	44	0	142	60	69	32	0	161	0.936
						0.883					0.855					0.917					
																0.828					

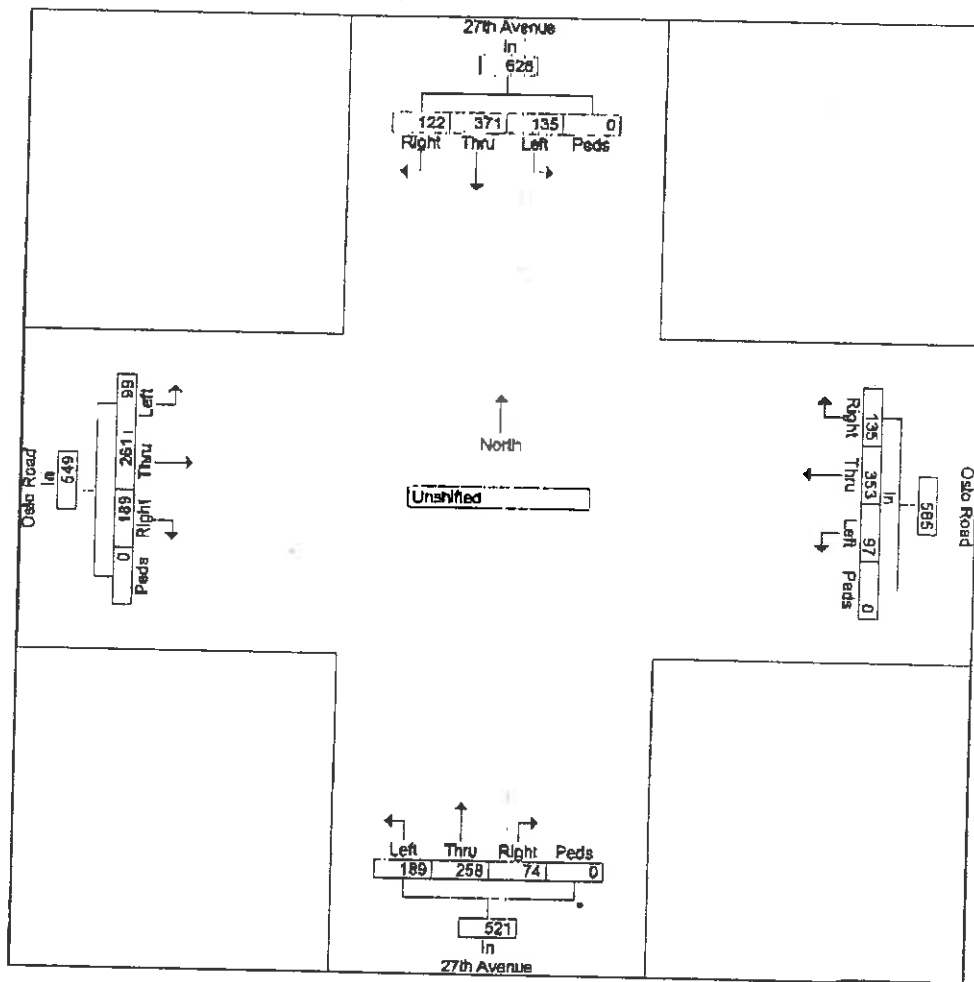


Kimley-Horn and Associates, Inc.
 601 21st Street
 Vero Beach, Florida 32960

Weather: Clear
 Counted By: R.S.
 Board No.: 047050
 Location: 27th Avenue & Oslo Road

File Name : 27th Avenue_Oslo Road(1)
 Site Code : 77711171
 Start Date : 04/08/2004
 Page No : 3

Start Time	27th Avenue From North					Oslo Road From East					27th Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
By Approach	04:45 PM					05:00 PM					05:00 PM					04:45 PM					
Volume	122	371	135	0	628	135	353	97	0	585	74	258	189	0	521	189	261	99	0	549	
Percent	19.4	59.1	21.5	0.0		23.1	60.3	16.6	0.0		14.2	49.5	36.3	0.0		34.4	47.5	18.0	0.0		
High Int.	05:15 PM					05:15 PM					05:15 PM					05:00 PM					
Volume	30	105	42	0	177	41	98	32	0	171	25	73	44	0	142	60	69	32	0	161	
Peak Factor	0.887					0.855					0.917					0.852					



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 3

Controller Type: 1B80EL

Intersection Name: Oslo Road @ 27 Avenue

Date: 06/15/99

PHASE	1	2	3	4	5	6	7	8
APPROACH	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
INITIAL	5	15	5	15	5	15	5	15
PASSAGE	3	4	3	4	3	4	3	4
YELLOW	4	4	4	4	4	4	4	4
ALL RED	1.7	1.5	1.4	1.9	1.5	1.5	1.1	1.9
MAX 1	20	40	15	40	15	40	15	40
MAX 2								
WALK		7		7		7		7
PED CLEAR		15		14		11		14
MIN RECALL		X		X		X		
MAX RECALL								
PED RECALL								
NON LOCK	X		X		X		X	X
CNA 1								

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2-6	YES	YES	YES	2-6	4-8
				1-3-5-7		

TIMING BY: _____

APPROVED BY: _____

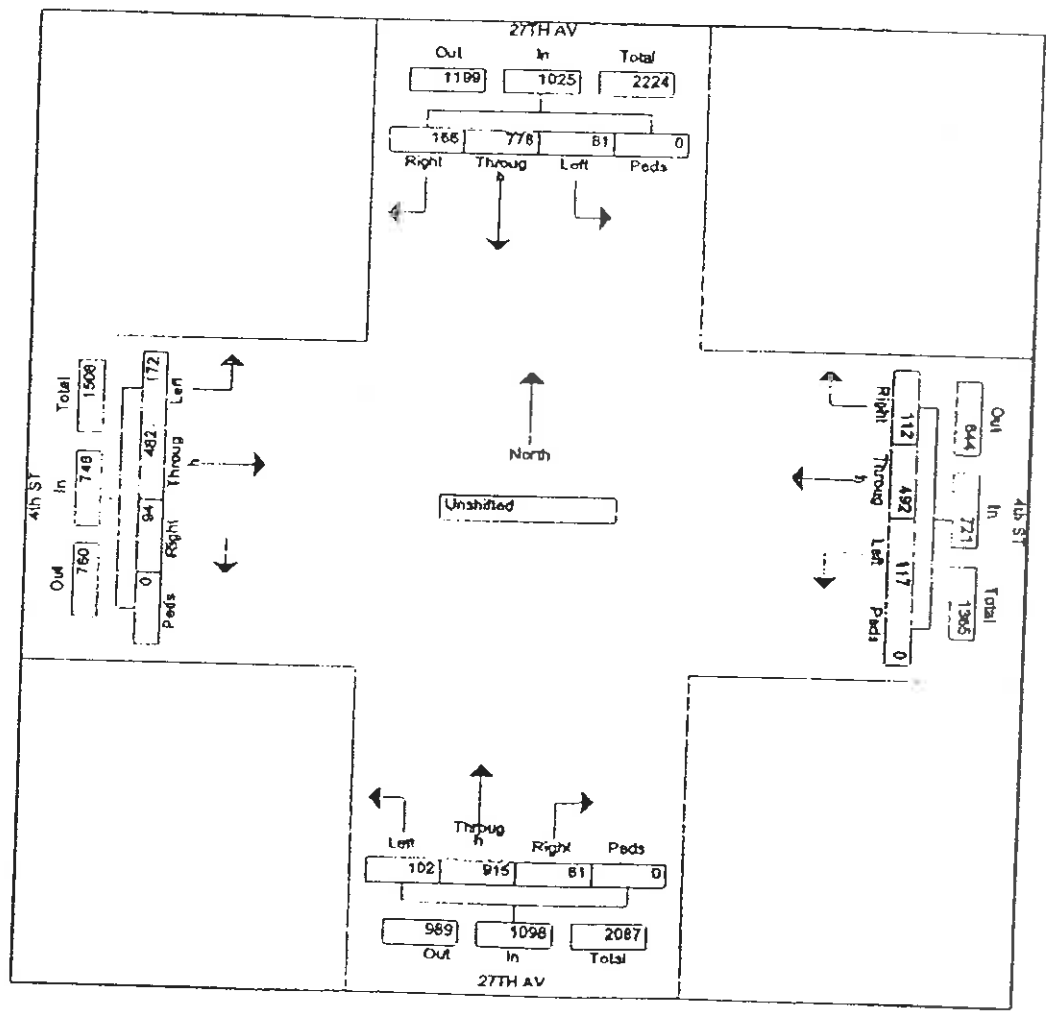
These Are The Default Titles
 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

File Name : 4th ST @ 27th AV
 Site Code : 03000002
 Start Date : 09/09/2003
 Page : 1

Comment Line 1
 Comment Line 2
 Comment Line 3
 Comment Line 4

Groups Printed: Unshifted

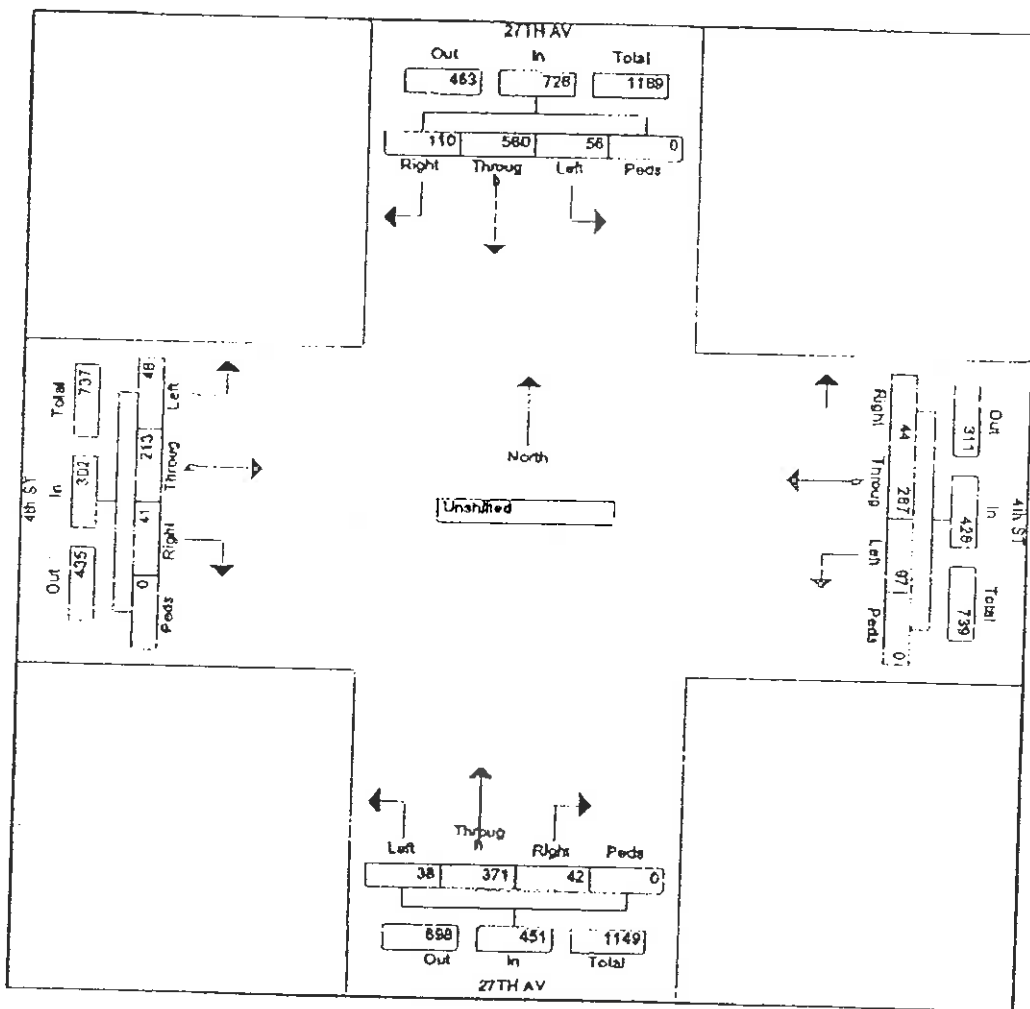
Start Time	27TH AV Southbound				4th ST Westbound				27TH AV Northbound				4th ST Eastbound				Int.	Total
	Left	Throug h	Right	Peds	Left	Throug h	Right	Peds	Left	Throug h	Right	Peds	Left	Throug h	Right	Peds		
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:30 AM	10	71	8	0	6	46	74	0	15	140	11	0	32	60	10	0	0	
07:45 AM	7	46	11	0	7	55	18	0	15	144	10	0	32	74	13	0	423	
Total	17	117	19	0	13	101	32	0	30	284	21	0	64	134	23	0	432	
08:00 AM	3	52	17	0	4	54	21	0	23	127	11	0	35	75	20	0	855	
08:15 AM	5	49	20	0	3	50	15	0	11	133	7	0	25	60	10	0	442	
Total	8	101	37	0	7	104	38	0	34	260	18	0	60	135	30	0	388	
04:45 PM	15	119	21	0	20	60	14	0	7	100	6	0	9	45	11	0	427	
Total	15	119	21	0	20	60	14	0	7	100	6	0	9	45	11	0	427	
05:00 PM	14	143	16	0	18	50	13	0	8	78	7	0	15	55	7	0	424	
05:15 PM	16	163	32	0	28	90	10	0	11	98	17	0	9	59	13	0	546	
05:30 PM	11	135	41	0	31	87	7	0	12	95	12	0	15	54	10	0	510	
Total	41	441	89	0	77	227	30	0	31	271	36	0	39	168	30	0	1480	
Grand Total	81	778	166	0	117	492	112	0	102	915	81	0	172	482	94	0	3592	
Apprch %	7.9	75.9	16.2	0.0	16.2	68.2	15.5	0.0	9.3	83.3	7.4	0.0	23.0	64.4	12.6	0.0		
Total %	2.3	21.7	4.6	0.0	3.3	13.7	3.1	0.0	2.8	25.5	2.3	0.0	4.8	13.4	2.6	0.0		



These Are The Default Titles
 Change These In The Preferences Window
 Press the 'Saved Titles' Right Arrow
 To Add A New Set of Titles

File Name : 4th ST @ 27th AV
 Site Code : 03000002
 Start Date : 09/09/2003
 Page : 2

Start Time	27TH AV Southbound					4th ST Westbound					27TH AV Northbound					4th ST Eastbound					Int. Total
	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	Left	Thro ugh	Righ t	Ped s	App. Total	
Peak Hour From Intersection	04:45 PM to 05:45 PM - Peak 1 of 1																				
Volume	56	580	110	0	726	87	287	44	0	428	38	371	42	0	451	48	213	41	0	302	1907
Percent	7.7	77.1	15.2	0.0		22.7	67.1	10.3	0.0		8.4	82.3	9.3	0.0		15.9	70.5	13.6	0.0		
High Int.	05:15 PM																				
Volume	16	163	41	0	211	31	90	14	0	128	12	100	17	0	126	15	58	13	0	61	05:15
Peak Factor	0.660					0.836					0.895					0.932					0.873



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 58
Intersection Name: 4 ST @ 27 AVE

Controller Type: TRANSYT 1880EL
Date: 06/27/03

PHASE	1	2	3	4	5	6	7	8
APPROACH	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
INITIAL	5	15	5	6	5	15	5	6
PASSAGE	3	4	3	4	3	4	3	4
YELLOW	4	4	4	4	4	4	4	4
ALL RED	1.5	1.8	1.4	1.6	1.5	1.8	1.6	1.6
MAX 1	20	45	20	30	20	45	20	30
MAX 2								
WALK		7		7		7		7
PED CLEAR		10		10		10		10
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
NON LOCK	X		X	X	X		X	X
CNA 1		X				X		

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2-6	YES	YES	YES	2-6	4-8
				1-3-5-7		

Mid day, C2/S1 Hold phase 4 & 8 18seconds (Guaranteed green)

TIMING BY: ANKENY

APPROVED BY: _____

Indian River County Traffic Engineering Traffic Signal Timing Sheet

58
4 ST @ 27 AVE

COORDINATION

CYCLE	1	2	3	4	5	8
SECONDS	80	90	100			

SPLIT >>>	1	2	3	4	5	6	7	8
NBLT ϕ 1	18%	14%	14%					
SB ϕ 2	34%	33%	40%					
EBLT ϕ 3	18%	20%	14%					
WB ϕ 4	30%	33%	32%					
SBLT ϕ 5	18%	14%	14%					
NB ϕ 6	34%	33%	40%					
WBLT ϕ 7	18%	14%	14%					
EB ϕ 8	30%	39%	32%					

		80	90	100	0	0	0
OFFSET %		CYCLE 1	CYCLE 2	CYCLE 3	CYCLE 4	CYCLE 5	CYCLE 8
MID	OFFSET 1		90				
AM	OFFSET 2			70			
PM	OFFSET 3			51			
AMO	OFFSET 4						
PMO	OFFSET 5						

		80	90	100	0	0	0
SPLIT #		CYCLE 1	CYCLE 2	CYCLE 3	CYCLE 4	CYCLE 5	CYCLE 6
MID	OFFSET 1		1				
AM	OFFSET 2			2			
PM	OFFSET 3			3			
AMO	OFFSET 4						
PMO	OFFSET 5						

Indian River County Traffic Engineering Traffic Signal Timing Sheet

58

4 ST @ 27 AVE
TIME OF DAY PLAN

NOTE: TRANSYT 1880EL BASE DAY NUMBER STARTS AT #0
TRANSYT 3000 BASE DAY NUMBER STARTS AT #1

BASE DAY 0		BASE DAY 1		BASE DAY 2		BASE DAY 3		BASE DAY 4		BASE DAY 5		BASE DAY 6	
TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S	TIME	C/O/S
0:00	FREE	0:00	FREE	0:00	FREE								
6:30	3/2/M	9:00	2/1/M	11:00	2/1/M								
9:00	2/1/M	17:00	FREE	16:00	FREE								
15:45	3/3/M												
18:15	2/1/M												
19:30	FREE												
WEEK		SAT		SUN									

WEEK PLAN

WEEK PLAN 0	SUN	MON	TUE	WED	THU	FRI	SAT
BASE DAY	2	0	0	0	0	0	1

NOTE:
1880EL START AT #0
3000 START AT #1

WEEK PLAN 1	SUN	MON	TUE	WED	THU	FRI	SAT
BASE DAY							

WEEK PLAN 2	SUN	MON	TUE	WED	THU	FRI	SAT
BASE DAY							

WEEK PLAN 3	SUN	MON	TUE	WED	THU	FRI	SAT
BASE DAY							

WEEK PLAN 4	SUN	MON	TUE	WED	THU	FRI	SAT
BASE DAY							

YEAR PLAN

WEEK #	PLAN #
ALL YEAR	0

WEEK #	PLAN #

OFF SEASON
SECOND WEEK IN
MAY
SEASON SECOND
WEEK IN DECEMBER

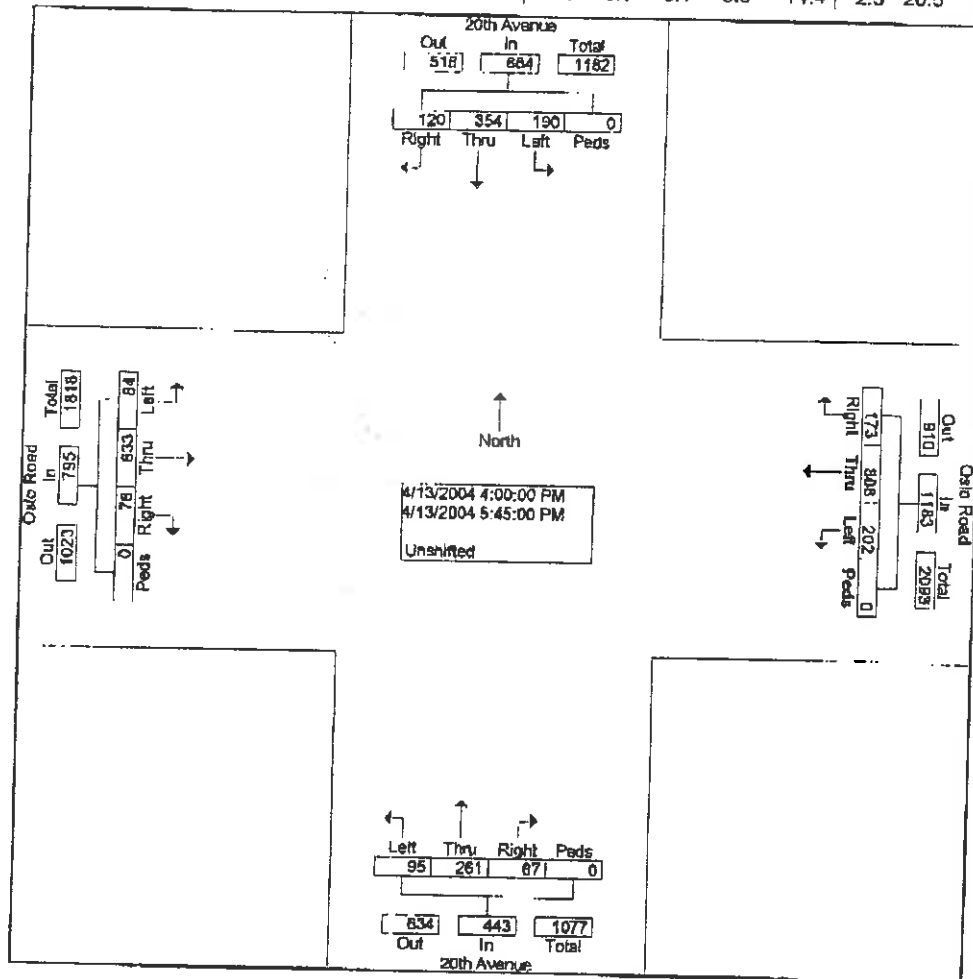
Kimley-Horn and Associates, Inc.
601 21st Street
Vero Beach, Florida 32980

Weather: Clear
Counted By: J.O.
Board No.: 047050
Location: 20th Avenue & Oslo Road

File Name : 20th Avenue_Oslo Road(3)
Site Code : 44444444
Start Date : 04/13/2004
Page No : 1

Groups Printed- Unshifted

Start Time	20th Avenue From North				App. Total	Oslo Road From East				App. Total	20th Avenue From South				App. Total	Oslo Road From West				Int. Total	
	Rig ht	Thr u	Left	Ped s		Rig ht	Thr u	Left	Ped s		Rig ht	Thr u	Left	Ped s		Rig ht	Thr u	Left	Ped s		App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	13	24	24	0	61	14	85	13	0	112	6	27	13	0	46	12	70	3	0	85	304
04:15 PM	12	52	31	0	95	21	81	28	0	130	11	17	11	0	39	8	83	12	0	103	367
04:30 PM	15	43	24	0	82	22	104	22	0	148	11	34	13	0	58	12	93	14	0	119	407
04:45 PM	11	52	18	0	81	27	125	17	0	169	6	31	13	0	50	7	69	12	0	88	388
Total	51	171	97	0	319	84	395	80	0	559	34	109	50	0	193	39	315	41	0	395	1466
05:00 PM	17	44	26	0	87	25	116	27	0	168	13	39	8	0	60	11	83	9	0	103	418
05:15 PM	14	47	28	0	89	21	110	35	0	166	14	29	13	0	56	13	84	9	0	106	417
05:30 PM	21	51	27	0	99	18	85	34	0	137	13	36	18	0	65	7	76	13	0	96	397
05:45 PM	17	41	12	0	70	25	102	26	0	153	13	48	8	0	69	8	75	12	0	95	387
Total	69	183	93	0	345	89	413	122	0	624	53	152	45	0	250	39	318	43	0	400	1619
Grand Total	120	354	190	0	664	173	808	202	0	1183	87	261	95	0	443	78	633	84	0	795	3085
Apprch %	18.1	53.3	28.6	0.0		14.6	68.3	17.1	0.0		19.6	58.9	21.4	0.0		9.8	79.8	10.6	0.0		
Total %	3.9	11.5	6.2	0.0	21.5	5.6	26.2	6.5	0.0	38.3	2.8	8.5	3.1	0.0	14.4	2.5	20.5	2.7	0.0	25.8	

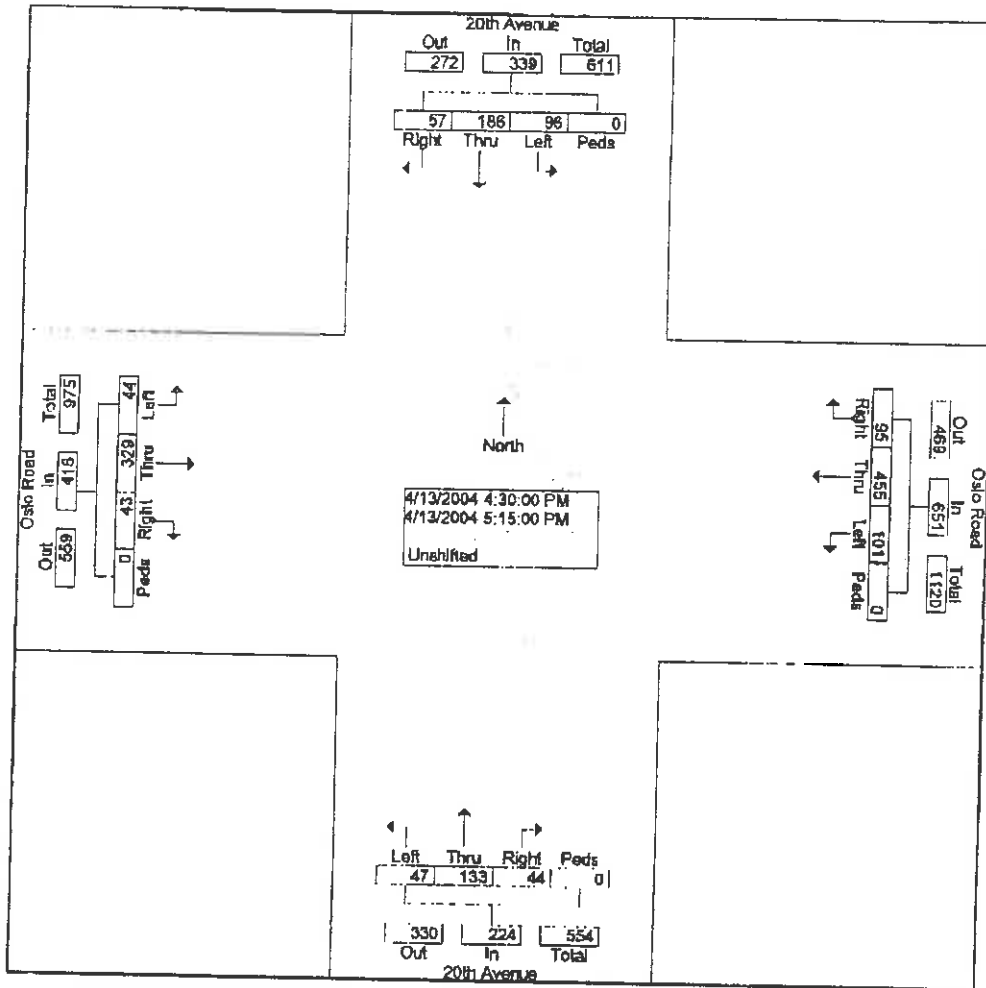


Kimley-Horn and Associates, Inc.
 601 21st Street
 Vero Beach, Florida 32960

Weather: Clear
 Counted By: J.O.
 Board No.: 047050
 Location: 20th Avenue & Oslo Road

File Name : 20th Avenue_Oslo Road(3)
 Site Code : 44444444
 Start Date : 04/13/2004
 Page No : 2

Start Time	20th Avenue From North					Oslo Road From East					20th Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection																					
04:30 PM																					
Volume	57	186	96	0	339	95	455	101	0	651	44	133	47	0	224	43	329	44	0	416	1630
Percent	16.8	54.9	28.3	0.0		14.6	69.9	15.5	0.0		19.6	59.4	21.0	0.0		10.3	79.1	10.6	0.0		416
05:00																					
Volume	17	44	26	0	87	25	116	27	0	188	13	39	8	0	60	11	83	9	0	103	418
Peak Factor																					
High Int.																					
05:15 PM						04:45 PM					05:00 PM					04:30 PM					
Volume	14	47	28	0	89	27	125	17	0	189	13	39	8	0	60	12	93	14	0	119	
Peak Factor	0.952					0.963					0.933					0.874					

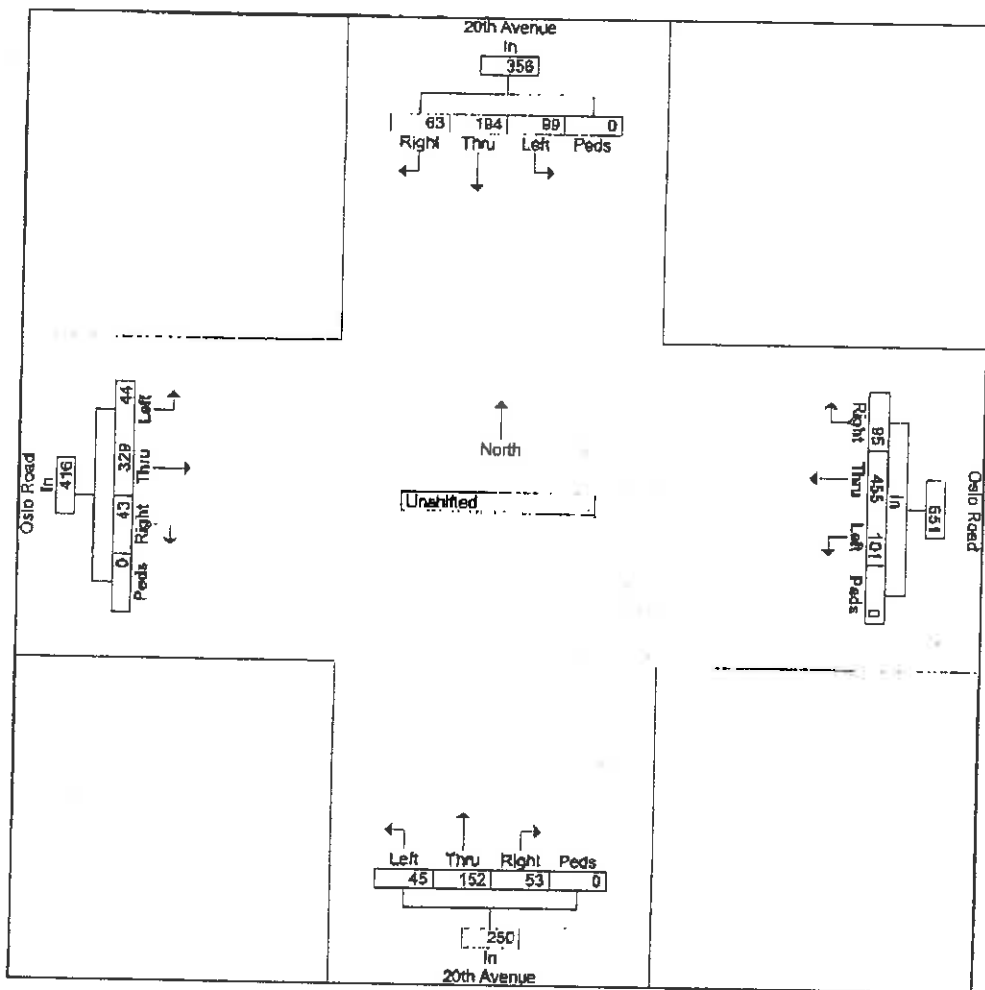


Kimley-Horn and Associates, Inc.
601 21st Street
Vero Beach, Florida 32960

Weather: Clear
Counted By: J.O.
Board No.: 047050
Location: 20th Avenue & Oslo Road

File Name : 20th Avenue_Oslo Road(3)
Site Code : 44444444
Start Date : 04/13/2004
Page No : 3

Start Time	20th Avenue From North					Oslo Road From East					20th Avenue From South					Oslo Road From West					Int. Total
	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
By Approach	04:45 PM					04:30 PM					05:00 PM					04:30 PM					
Volume	63	194	99	0	356	95	455	101	0	651	53	152	45	0	250	43	329	44	0	416	
Percent	17.7	54.5	27.8	0.0		14.6	69.9	15.5	0.0		21.2	60.8	18.0	0.0		10.3	79.1	10.6	0.0		
High Int.	05:30 PM					04:45 PM					05:45 PM					04:30 PM					
Volume	21	51	27	0	99	27	125	17	0	169	13	48	8	0	69	12	93	14	0	119	
Peak Factor	0.899					0.963					0.906					0.874					



Indian River County Traffic Engineering Traffic Signal Timing Sheet

Intersection Number: 2
 Intersection Name: Oslo Road @ 20 Avenue

Controller Type: 1880EL
 Date: 10/27/97

PHASE	1	2	3	4	5	6	7	8
APPROACH	EBLT	WB		NB	WBLT	EB		SB
INITIAL	5	15		6	5	15		6
PASSAGE	3	4		4	3	4		4
YELLOW	4	4		4	4	4		4
ALL RED	1.2	1.2		1.2	1.2	1.2		1.2
MAX 1	20	45		35	15	45		35
MAX 2								
WALK		7		7				
PED CLEAR		10		11				
MIN RECALL		X				X		
MAX RECALL								
PED RECALL								
NON LOCK	X			X	X			X
CNA 1								

PRE-EMPTION TIMING	GREEN BEFORE	TRCK CL GREEN	TRCK CL YELL	MIN DWELL	YELL AFTER	
PHASE						
TIMING						

SPECIAL FUNCTION	START PHASE	DUAL ENTRY	INT+ PASS	DETECT SWITCH	OUT OF FLASH	INTO FLASH
	2-6	YES	YES	YES	2-6	4-8
				1-5		

TIMING BY: _____

APPROVED BY: _____

HCS2000: Urban Streets Release 4.1d

Kimley-Horn and Associates, Inc.
 KHA
 4431 Embarcadero Drive
 West Palm Beach, FL 33407

Phone: 561-845-0665
 E-Mail:

Fax: 561-863-8175

OPERATIONAL ANALYSIS

Analyst:
 Agency/Co.: KHA
 Date Performed: 4/16/2004
 Analysis Time Period: 2007 PM PK with project
 Urban Street: Oslo Road
 Direction of Travel: East-bound
 Jurisdiction:
 Analysis Year: 2007
 Project ID: Tripson Trail

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	43rd Avenue					
1	27th Avenue	0.94	2	40	84.9	1
2	20th Avenue	0.47	2	40	44.1	2

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	137.1	0.292	0.566	544		3	1.000	3.0	0	42.6	0.0	D
2	115.6	0.38	0.620	713		3	0.802	3.0	0	30.2*	0.0	C

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	84.9	42.6	0.0	127.5	0.94	26.5	C
2	2	44.1	30.2*	0.0	74.3	0.47	22.8	C

Total travel time (x) = 201.8 sec
 Total length (y) = 1.41 miles
 Total travel speed, Sa = 3600 x (y)/(x) = 25.1 mph
 Total urban street LOS (Exhibit 15-2) = C

Intersection Files in the Analysis

- 1: P:\0475\50002\2007 with proj HCS\27&oslo with proj.hcs
- 2: P:\0475\50002\2007 with proj HCS\20th-Oslo with proj .hcs

Kimley-Horn and Associates, Inc.
 KHA
 4431 Embarcadero Drive
 West Palm Beach, FL 33407

Phone: 561-845-0665
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OPERATIONAL ANALYSIS

Analyst:
 Agency/Co.:
 Date Performed: 4/16/2004
 Analysis Time Period: 2007 PM PK with project
 Urban Street: Oslo Road
 Direction of Travel: West-bound
 Jurisdiction:
 Analysis Year: 2007
 Project ID: Tripson Trail

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Old Dixie Highway					
1	20th Avenue	0.78	2	40	71.2	1
2	27th Avenue	0.47	2	40	44.1	2
3	43rd Avenue	0.94	2	40	84.9	3

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-	Unit ext. (veh)	Init. queue (sec)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	115.6	0.389	0.930	707		3	1.000	3.0	0	53.3*	0.0	D
2	137.1	0.292	1.130	522		3	0.251	3.0	0	113.9	0.0	F
3	90.0	0.344	0.470	642		3	0.090	3.0	0	23.6*	0.0	C

Arterial Level of Service

Seg.	Section	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of section section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	71.2	53.3*	0.0	124.5	0.78	22.5	C
2	2	44.1	113.9	0.0	158.0	0.47	10.7	F
3	3	84.9	23.6*	0.0	108.5	0.94	31.2	B

Total travel time (x) = 391.1 sec
 Total length (y) = 2.19 miles
 Total travel speed, Sa = 3600 x (y)/(x) = 20.2 mph
 Total urban street LOS (Exhibit 15-2) = D

Intersection Files in the Analysis

- 1: P:\0475\50002\2007 with proj HCS\20th-Oslo with proj .hcs
- 2: P:\0475\50002\2007 with proj HCS\27&oslo with proj.hcs
- 3: P:\0475\50002\2007 with proj HCS\43&oslo with proj.hcs

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OPERATIONAL ANALYSIS

Analyst:
 Agency/Co.: KHA
 Date Performed: 4/16/2004
 Analysis Time Period: 2007 PM Pk with project
 Urban Street: 27th Avenue
 Direction of Travel: North-bound
 Jurisdiction:
 Analysis Year: 2007
 Project ID: Tripson Trail

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Oslo Road					
1	4th Street	1.37	2	40	123.3	1
2	8th Street	0.47	2	40	44.1	2

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac- tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	90.0	0.538	0.539	988		3	1.000	3.0	0	14.1	0.0	B
2	90.0	0.542	0.542	997		3	0.826	3.0	0	13.9	0.0	B

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control delay (sec)	Other delay (sec)	Sum of time section (sec)	Sum of length section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	123.3	14.1	0.0	137.4	1.37	35.9	A
2	2	44.1	13.9	0.0	58.0	0.47	29.2	B

Total travel time (x) = 195.4 sec
 Total length (y) = 1.84 miles
 Total travel speed, $S_a = 3600 \times (y)/(x)$ = 33.9 mph
 Total urban street LOS (Exhibit 15-2) = B

Intersection Files in the Analysis

- 1: P:\0475\50002\2007 with proj HCS\43&4 with proj.hcs
- 2: P:\0475\50002\2007 with proj HCS\43&8 with proj.hcs

HCS2000: Urban Streets Release 4.1d

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OPERATIONAL ANALYSIS

Analyst:
 Agency/Co.: KHA
 Date Performed: 4/16/2004
 Analysis Time Period: 2007 PM PK with project
 Urban Street: 27th Avenue
 Direction of Travel: South-bound
 Jurisdiction:
 Analysis Year: 2007
 Project ID: Tripson Trail

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	8th Street					
1	4th Street	0.47	2	40	44.1	1
2	Oslo Road	1.37	2	40	123.3	2

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac- tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	90.0	0.538	0.714	991		3	1.000	3.0	0	18.1	0.0	B
2	90.0	0.544	0.320	1008		3	0.630	3.0	0	11.5*	0.0	B

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	44.1	18.1	0.0	62.2	0.47	27.2	C
2	2	123.3	11.5*	0.0	134.8	1.37	36.6	A

Total travel time (x) = 197.0 sec
 Total length (y) = 1.84 miles
 Total travel speed, Sa = 3600 x (y)/(x) = 33.6 mph
 Total urban street LOS (Exhibit 15-2) = B

Intersection Files in the Analysis

- 1: P:\0475\50002\2007 with proj HCS\43&4 with proj.hcs
- 2: P:\0475\50002\2007 with proj HCS\43&oslo with proj.hcs

HCS2000: Urban Streets Release 4.1d

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OPERATIONAL ANALYSIS

Analyst:
Agency/Co.: KHA
Date Performed: 4/16/2004
Analysis Time Period: 2007 PM Pk with project
Urban Street: 43rd Avenue
Direction of Travel: North-bound
Jurisdiction:
Analysis Year: 2007
Project ID: Tripson Trail

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Oslo Road					
1	4th Street	1.37	2	40	123.3	1
2	8th Street	0.47	2	40	44.1	2
3	12th Street	0.47	2	40	44.1	3
4	16th Street	0.47	2	40	44.1	4
5	SR 60	0.47	2	40	44.1	5

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG Input	Arr. type AT	I fac- tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	90.0	0.538	0.539	988		3	1.000	3.0	0	14.1	0.0	B
2	90.0	0.542	0.542	997		3	0.826	3.0	0	13.9	0.0	B
3	90.0	0.538	0.537	989		3	0.824	3.0	0	14.0	0.0	B
4	90.0	0.538	0.637	989		3	0.828	3.0	0	15.8	0.0	B
5	180.0	0.316	0.949	589		3	0.728	3.0	0	80.4	0.0	F

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	123.3	14.1	0.0	137.4	1.37	35.9	A
2	2	44.1	13.9	0.0	58.0	0.47	29.2	B
3	3	44.1	14.0	0.0	58.1	0.47	29.1	B
4	4	44.1	15.8	0.0	59.9	0.47	28.2	B
5	5	44.1	80.4	0.0	124.5	0.47	13.6	E

Total travel time (x) = 438.0 sec
 Total length (y) = 3.25 miles
 Total travel speed, $S_a = 3600 \times (y)/(x)$ = 26.7 mph
 Total urban street LOS (Exhibit 15-2) = C

Intersection Files in the Analysis

- 1: P:\0475\50002\2007 with proj HCS\43&4 with proj.hcs
- 2: P:\0475\50002\2007 with proj HCS\43&8 with proj.hcs
- 3: P:\0475\50002\2007 with proj HCS\43&12 with proj.hcs
- 4: P:\0475\50002\2007 with proj HCS\43&16th with proj.hcs
- 5: P:\0475\50002\2007 with proj HCS\SR60-43rd w-proj.hcs

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OPERATIONAL ANALYSIS

Analyst:
 Agency/Co.: KHA
 Date Performed: 4/16/2004
 Analysis Time Period: 2007 PM PK with project
 Urban Street: 43rd Avenue
 Direction of Travel: South-bound
 Jurisdiction:
 Analysis Year: 2007
 Project ID: Tripson Trail

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	SR 60					
1	16th Street	0.47	2	40	44.1	1.
2	12th Street	0.47	2	40	44.1	2
3	8th Street	0.47	2	40	44.1	3
4	4th Street	0.47	2	40	44.1	4
5	Oslo Road	1.37	2	40	123.3	5

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	90.0	0.538	0.880	992	3		1.000	3.0	0	27.5	0.0	C
2	90.0	0.538	0.755	999	3		0.354	3.0	0	17.4	0.0	B
3	90.0	0.542	0.723	1004	3		0.572	3.0	0	17.0	0.0	B
4	90.0	0.538	0.714	991	3		0.618	3.0	0	17.2	0.0	B
5	90.0	0.544	0.320	1008	3		0.630	3.0	0	11.5*	0.0	B

19.5
20.3
18.1
 Meter Adjust Factor

Arterial Level of Service

Seg.	Section	Running time (sec)	Inter. control delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	44.1	27.5	0.0	71.6	0.47	23.6	C
2	2	44.1	17.4	0.0	61.5	0.47	27.5	C
3	3	44.1	17.0	0.0	61.1	0.47	27.7	C
4	4	44.1	17.2	0.0	61.3	0.47	27.6	C
5	5	123.3	11.5*	0.0	134.8	1.37	36.6	A

Total travel time (x) = 390.4 sec
 Total length (y) = 3.25 miles
 Total travel speed, Sa = 3600 x (y)/(x) = 30.0 mph
 Total urban street LOS (Exhibit 15-2) = B

Intersection Files in the Analysis

- 1: P:\0475\50002\2007 with proj HCS\43&16th with proj.hcs
- 2: P:\0475\50002\2007 with proj HCS\43&12 with proj.hcs
- 3: P:\0475\50002\2007 with proj HCS\43&8 with proj.hcs
- 4: P:\0475\50002\2007 with proj HCS\43&4 with proj.hcs
- 5: P:\0475\50002\2007 with proj HCS\43&oslo with proj.hcs

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 58th Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/23/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM PK HR PK Season			Analysis Year	2004		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	0	1	0	1	1	1
Lane group	L	TR		L	TR			LTR		L	T	R
Volume (vph)	43	168	4	6	128	219	1	4	3	224	11	26
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Arrival type	3	3		3	3			3		3	3	3
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0			12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Timing	Excl. Left	EW Perm	03	04	SB Only	NS Perm	07	08				
	G = 15.0	G = 45.0	G =	G =	G = 25.0	G = 20.0	G =	G =				
	Y = 6	Y = 6	Y =	Y =	Y = 5.7	Y = 6	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 128.7						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	45	181		6	366		8			236	12	27
Lane group cap.	439	649		594	590		270			591	734	624
Capacity ratio	0.10	0.28		0.01	0.62		0.03			0.40	0.02	0.04
Green ratio	0.51	0.35		0.51	0.35		0.16			0.39	0.39	0.39
Uniform delay d1	17.5	30.2		15.7	34.8		46.1			27.4	23.8	24.0
Delay factor k	0.11	0.11		0.11	0.20		0.11			0.11	0.11	0.11
Incremental delay d2	0.1	0.2		0.0	2.0		0.0			0.4	0.0	0.0
Delay factor	1.000	1.000		1.000	1.000		1.000			1.000	1.000	1.000
Control delay	17.6	30.4		15.7	36.8		46.2			27.9	23.8	24.1
Lane group LOS	B	C		B	D		D			C	C	C
Approach delay	27.9			36.4			46.2			27.3		
Approach LOS	C			D			D			C		
Intersec. delay	31.5			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/15/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM PK HR PK Season			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	12	312	77	37	262	102	71	231	38	137	204	11
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3	3	3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Med/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	SB Only	NS Perm	07	08				
Timing:	G = 31.0	G =	G =	G =	G = 15.0	G = 30.0	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	13	409		39	276	107	75	283		144	227	
Lane group cap.	309	622		201	642	545	383	608		572	1006	
vc ratio	0.04	0.66		0.19	0.43	0.20	0.20	0.47		0.25	0.23	
Green ratio	0.34	0.34		0.34	0.34	0.34	0.33	0.33		0.54	0.54	
Unif. delay d1	19.6	25.0		20.7	22.7	20.7	21.4	23.7		11.0	10.6	
Delay factor k	0.11	0.23		0.11	0.11	0.11	0.11	0.11		0.11	0.11	
Incram. delay d2	0.1	2.5		0.5	0.5	0.2	0.3	0.6		0.2	0.1	
F factor	1.000	1.000		1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	19.7	27.6		21.2	23.2	20.9	21.7	24.2		11.2	10.8	
Lane group LOS	B	C		C	C	C	C	C		B	B	
Approch. delay	27.3			22.4			23.7			10.9		
Approach LOS	C			C			C			B		
Intersec. delay	21.3			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	4th St & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/23/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM PK HR PK Season			Analysis Year	2004		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	27	155	106	46	152	46	112	386	41	113	511	45
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Controlled (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Timing	EW Perm	02	03	04	NS Perm	06	07	08				
	G = 30.4	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5.6	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	28	275		48	208		118	449		119	585	
Lane group cap.	366	591		309	607		312	987		418	990	
Capacity ratio	0.08	0.47		0.16	0.34		0.38	0.45		0.28	0.59	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Control delay d1	20.3	23.4		20.8	22.3		12.1	12.7		11.4	14.1	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.11		0.11	0.18	
Incremental delay d2	0.1	0.6		0.2	0.3		0.8	0.3		0.4	0.9	
Factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	20.3	24.0		21.1	22.7		12.8	13.1		11.7	15.0	
Lane group LOS	C	C		C	C		B	B		B	B	
Approach delay	23.7			22.4			13.0			14.5		
Approach LOS	C			C			B			B		
Intersection delay	16.6			Intersection LOS						B		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	8th St & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/23/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM PK HR PK Season			Analysis Year	2004		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	14	110	17	70	167	80	24	427	39	68	603	24
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 30.8	G =	G =	G =	G = 48.8	G =	G =	G =				
	Y = 5.2	Y =	Y =	Y =	Y = 5.2	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
adj. flow rate	15	134		74	260		25	490		72	660	
Lane group cap.	322	625		428	606		258	997		387	1004	
svc ratio	0.05	0.21		0.17	0.43		0.10	0.49		0.19	0.66	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
minif. delay d1	19.8	21.0		20.7	22.8		10.0	12.9		10.5	14.7	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.11		0.11	0.23	
Incram. delay d2	0.1	0.2		0.2	0.5		0.2	0.4		0.2	1.6	
W factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	19.8	21.2		20.9	23.3		10.1	13.2		10.7	16.2	
Lane group LOS	B	C		C	C		B	B		B	B	
Aprch. delay	21.0			22.8			13.1			15.7		
Approach LOS	C			C			B			B		
Intersec. delay	16.7			Intersection LOS						B		

SHORT REPORT

General Information

Analyst: *KHA User*
 Agency or Co.: *Kimley-Horn & Associates*
 Date Performed: *3/23/2004*
 Time Period: *Existing PM PK HR PK Season*

Site Information

Intersection: *12th St & 43rd Ave*
 Area Type: *All other areas*
 Jurisdiction: *Tripson Trail*
 Analysis Year: *2004*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	10	103	17	64	153	62	17	394	38	50	598	11
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Act. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Timing	EW Perm	02	03	04	NS Perm	06	07	08
	G = 31.0	G =	G =	G =	G = 48.4	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	11	126		67	226		18	455		53	641	
Lane group cap.	352	628		434	614		271	988		414	999	
Capacity ratio	0.03	0.20		0.15	0.37		0.07	0.46		0.13	0.64	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Uniform delay d1	19.5	20.8		20.4	22.1		10.0	12.8		10.3	14.7	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.11		0.11	0.22	
Incremental delay d2	0.0	0.2		0.2	0.4		0.1	0.3		0.1	1.4	
Factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	19.6	20.9		20.6	22.5		10.1	13.1		10.5	16.1	
Lane group LOS	B	C		C	C		B	B		B	B	
Approach delay	20.8			22.1			13.0			15.7		
Approach LOS	C			C			B			B		
Intersec. delay	16.5			Intersection LOS						B		

SHORT REPORT

General Information				Site Information			
Analyst	Kimley-Horn & Associates			Intersection	16th St & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/16/2004			Jurisdiction	SR 60 & 90th Ave, 25 acre		
Time Period	Existing PM PK HR PK Season			Analysis Year	2004		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	17	119	61	54	198	128	55	476	45	92	670	48
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 31.0	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	18	189		57	343		58	548		97	756	
Lane group cap.	254	609		384	604		187	989		340	992	
Req. ratio	0.07	0.31		0.15	0.57		0.31	0.55		0.29	0.76	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Unif. delay d1	19.8	21.7		20.4	24.0		11.5	13.7		11.4	16.3	
Delay factor k	0.11	0.11		0.11	0.16		0.11	0.15		0.11	0.31	
Increment. delay d2	0.1	0.3		0.2	1.3		0.9	0.7		0.5	3.5	
W factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	19.9	21.9		20.6	25.3		12.5	14.4		11.8	19.8	
Lane group LOS	B	C		C	C		B	B		B	B	
Approach. delay	21.8			24.6			14.2			18.9		
Approach LOS	C			C			B			B		
Intersec. delay	18.9			Intersection LOS						B		

SHORT REPORT

General Information				Site Information			
Analyst	KHA			Intersection	SR 60 & 43rd Avenue		
Agency or Co.				Area Type	All other areas		
Date Performed	4/15/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM Peak Hr Pk Season			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Lane group	L	TR		L	TR		L	T	R	L	TR	
Volume (vph)	102	987	274	119	1087	85	276	220	107	134	212	67
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	3	3		3	3		3	3	3	3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Red/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Timing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08				
	G = 16.5	G = 61.0	G =	G =	G = 23.4	G = 56.9	G =	G =				
	Y = 5.5	Y = 6	Y =	Y =	Y = 5.2	Y = 5.5	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 180.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	107	1327		125	1233		291	232	113	141	294	
Lane group cap.	221	1667		207	1705		459	589	500	509	567	
Capacity ratio	0.48	0.80		0.60	0.72		0.63	0.39	0.23	0.28	0.52	
Green ratio	0.46	0.34		0.46	0.34		0.47	0.32	0.32	0.47	0.32	
Conf. delay d1	33.8	53.9		36.9	52.1		31.9	48.1	45.3	28.0	50.3	
Delay factor k	0.11	0.34		0.19	0.28		0.21	0.11	0.11	0.11	0.12	
Increment. delay d2	1.7	2.8		4.9	1.5		2.9	0.4	0.2	0.3	0.8	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000	1.000	1.000	1.000	
Control delay	35.5	56.7		41.9	53.7		34.7	48.5	45.6	28.3	51.2	
Lane group LOS	D	E		D	D		C	D	D	C	D	
Approach. delay	55.1			52.6			41.7			43.8		
Approach LOS	E			D			D			D		
Intersec. delay	50.7			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 27th Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/14/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM PK Hr. PK Season			Analysis Year	2004		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	93	258	188	98	357	136	191	261	75	139	379	113
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	3	3	3	3	3		3	3		3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Timing	Excl. Left	EW Perm	03	04	Excl. Left	NB Only	NS Perm	08				
	G = 15.0	G = 40.0	G =	G =	G = 15.0	G = 5.0	G = 40.0	G =				
	Y = 5.4	Y = 5.5	Y =	Y =	Y = 5.7	Y = 0	Y = 5.5	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 137.1						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	98	272	198	103	519		201	354		146	399	119
Lane group cap.	248	544	462	420	521		420	591		445	544	462
Capacity ratio	0.40	0.50	0.43	0.25	1.00		0.48	0.60		0.33	0.73	0.26
Green ratio	0.44	0.29	0.29	0.44	0.29		0.48	0.33		0.40	0.29	0.29
Initial delay d1	28.8	40.3	39.3	24.0	48.5		24.5	38.5		27.0	43.7	37.2
Delay factor k	0.11	0.11	0.11	0.11	0.50		0.11	0.19		0.11	0.29	0.11
Incremental delay d2	1.0	0.7	0.6	0.3	38.4		0.9	1.7		0.4	5.1	0.3
F factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	1.000
Control delay	29.9	41.0	39.9	24.3	86.9		25.3	40.2		27.4	48.8	37.5
Lane group LOS	C	D	D	C	F		C	D		C	D	D
Approach delay	38.7			76.5			34.8			42.1		
Approach LOS	D			E			C			D		
Intersec. delay	48.5			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	27th Avenue & 4th Street		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/14/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM PK Hr. PK Season			Analysis Year	2004		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	51	226	43	103	304	47	40	393	45	59	594	117
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
IF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	Excl. Left	Thru & RT	03	04	SB Only	NS Perm	07	08				
Timing	G = 8.6	G = 26.4	G =	G =	G = 8.5	G = 34.2	G =	G =				
	Y = 5.4	Y = 5.6	Y =	Y =	Y = 5.5	Y = 5.8	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	Adj. flow rate	54	283		108	369		42	461		62	748
Lane group cap.	152	480		152	482		122	627		308	876	
Capacity ratio	0.36	0.59		0.71	0.77		0.34	0.74		0.20	0.85	
Green ratio	0.09	0.26		0.09	0.26		0.34	0.34		0.48	0.48	
Conf. delay d1	43.1	32.1		44.5	33.9		24.5	28.9		16.7	22.8	
Delay factor k	0.11	0.18		0.27	0.32		0.11	0.29		0.11	0.39	
Creem. delay d2	1.4	1.9		14.4	7.2		1.7	4.5		0.3	8.2	
IF factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	44.5	34.0		58.8	41.2		26.2	33.4		17.0	31.0	
Lane group LOS	D	C		E	D		C	C		B	C	
Approch. delay	35.7			45.2			32.8			30.0		
Approach LOS	D			D			C			C		
Intersec. delay	35.0			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst				Intersection	20th Avenue & Oslo Road		
Agency or Co.	KHA			Area Type	All other areas		
Date Performed	4/14/2004			Jurisdiction	Tripson Trail		
Time Period	Existing PM PK Season			Analysis Year	2004		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	44	332	43	102	460	96	47	134	44	97	188	58
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Interval type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Timing	Excl. Left	EW Perm	03	04	NS Perm	06	07	08				
	G = 20.0	G = 45.0	G =	G =	G = 35.0	G =	G =	G =				
	Y = 5.2	Y = 5.2	Y =	Y =	Y = 5.2	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 115.6						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Sat. flow rate	46	394		107	585		49	187		102	259	
Lane group cap.	422	713		565	707		257	543		318	544	
Capacity ratio	0.11	0.55		0.19	0.83		0.19	0.34		0.32	0.48	
Green ratio	0.61	0.39		0.61	0.39		0.30	0.30		0.30	0.30	
Control delay d1	14.4	27.5		11.4	31.8		29.8	31.4		31.1	32.8	
Delay factor k	0.11	0.15		0.11	0.37		0.11	0.11		0.11	0.11	
Preemption delay d2	0.1	0.9		0.2	8.1		0.4	0.4		0.6	0.7	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	14.6	28.4		11.6	39.9		30.2	31.8		31.7	33.5	
Lane group LOS	B	C		B	D		C	C		C	C	
Approach delay	27.0			35.5			31.4			33.0		
Approach LOS	C			D			C			C		
Intersec. delay	32.2			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 58th Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/24/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK HR without project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	0	1	0	1	1	1
Lane group	L	TR		L	TR			LTR		L	T	R
Volume (vph)	47	185	5	7	141	241	1	5	3	246	12	29
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Arrival type	3	3		3	3			3		3	3	3
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0			12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Phasing	Excl. Left	EW Perm	03	04	SB Only	NS Perm	07	08				
Timing	G = 15.0	G = 45.0	G =	G =	G = 25.0	G = 20.0	G =	G =				
	Y = 6	Y = 6	Y =	Y =	Y = 5.7	Y = 6	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 128.7						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Sat. flow rate	49	200		7	402			9		259	13	31
Lane group cap.	411	649		577	590			272		591	734	624
Capacity ratio	0.12	0.31		0.01	0.68			0.03		0.44	0.02	0.05
Green ratio	0.51	0.35		0.51	0.35			0.16		0.39	0.39	0.39
Conf. delay d1	18.1	30.5		15.8	35.7			46.1		27.9	23.8	24.1
Delay factor k	0.11	0.11		0.11	0.25			0.11		0.11	0.11	0.11
Perm. delay d2	0.1	0.3		0.0	3.2			0.0		0.5	0.0	0.0
PF factor	1.000	1.000		1.000	1.000			1.000		1.000	1.000	1.000
Control delay	18.2	30.8		15.8	38.9			46.2		28.4	23.8	24.1
Lane group LOS	B	C		B	D			D		C	C	C
Approach delay	28.3			38.5			46.2			27.7		
Approach LOS	C			D			D			C		
Intersec. delay	32.6			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/15/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK HR without project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	13	343	84	41	288	112	78	254	42	151	224	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3	3	3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	SB Only	NS Perm	07	08				
Timing	G = 31.0	G =	G =	G =	G = 15.0	G = 30.0	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	14	449		43	303	118	82	311		159	249	
Lane group cap.	287	623		171	642	545	375	608		549	1006	
Capacity ratio	0.05	0.72		0.25	0.47	0.22	0.22	0.51		0.29	0.25	
Green ratio	0.34	0.34		0.34	0.34	0.34	0.33	0.33		0.54	0.54	
Conf. delay d1	19.7	25.7		21.2	23.1	20.9	21.6	24.1		11.3	10.8	
Delay factor k	0.11	0.28		0.11	0.11	0.11	0.11	0.12		0.11	0.11	
Increment. delay d2	0.1	4.1		0.8	0.6	0.2	0.3	0.7		0.3	0.1	
Delay factor	1.000	1.000		1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	19.7	29.8		22.0	23.6	21.1	21.9	24.9		11.6	10.9	
Lane group LOS	B	C		C	C	C	C	C		B	B	
Approch. delay	29.5			22.8			24.2			11.2		
Approach LOS	C			C			C			B		
Intersec. delay	22.2			Intersection LOS						C		

SHORT REPORT

General Information	Site Information
Analyst: <i>KHA User</i>	Intersection: <i>4th St & 43rd Ave</i> Area Type: <i>All other areas</i> Jurisdiction: <i>Tripson Trail</i> Analysis Year: <i>2007</i>
Agency or Co.: <i>Kimley-Horn & Associates</i>	
Date Performed: <i>3/23/2004</i>	
Time Period: <i>2007 PM PK HR without project</i>	

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	29	170	117	50	167	50	124	424	45	125	562	49
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 30.4	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5.6	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 90.0					

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	31	302		53	229		131	493		132	644	
Lane group cap.	348	591		286	607		268	987		383	990	
vc ratio	0.09	0.51		0.19	0.38		0.49	0.50		0.34	0.65	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Conf. delay d1	20.3	23.9		21.1	22.6		13.0	13.1		11.8	14.8	
Delay factor k	0.11	0.12		0.11	0.11		0.11	0.11		0.11	0.23	
Increment. delay d2	0.1	0.8		0.3	0.4		1.4	0.4		0.5	1.5	
W factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	20.5	24.6		21.4	23.0		14.4	13.5		12.3	16.3	
Lane group LOS	C	C		C	C		B	B		B	B	
Apprch. delay	24.2			22.7			13.7			15.6		
Approach LOS	C			C			B			B		
Intersec. delay	17.5			Intersection LOS						B		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	8th St & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/23/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK HR without project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	15	121	18	77	184	88	27	470	43	75	663	27
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 30.8	G =	G =	G =	G = 48.8	G =	G =	G =				
	Y = 5.2	Y =	Y =	Y =	Y = 5.2	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
adj. flow rate	16	146		81	287		28	540		79	726	
Lane group cap.	299	625		423	606		211	997		348	1004	
vc ratio	0.05	0.23		0.19	0.47		0.13	0.54		0.23	0.72	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
min. delay d1	19.8	21.2		20.8	23.2		10.2	13.4		10.8	15.5	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.14		0.11	0.28	
Increment. delay d2	0.1	0.2		0.2	0.6		0.3	0.6		0.3	2.6	
F factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	19.9	21.4		21.1	23.8		10.4	14.0		11.1	18.1	
Lane group LOS	B	C		C	C		B	B		B	B	
Apprch. delay	21.2			23.2			13.8			17.4		
Approach LOS	C			C			B			B		
Intersec. delay	17.8			Intersection LOS						B		

SHORT REPORT

General Information	Site Information
Analyst: <i>KHA User</i>	Intersection: <i>12th St & 43rd Ave</i>
Agency or Co.: <i>Kimley-Horn & Associates</i>	Area Type: <i>All other areas</i>
Date Performed: <i>3/23/2004</i>	Jurisdiction: <i>Tripson Trail</i>
Time Period: <i>2007 PM PK HR without project</i>	Analysis Year: <i>2007</i>

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	11	113	18	70	168	68	18	433	42	55	657	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Controlled (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Timing	EW Perm	02	03	04	NS Perm	06	07	08				
	G = 31.0	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Sat. flow rate	12	138		74	249		19	500		58	705	
Lane group cap.	332	628		429	614		224	988		378	999	
Capacity ratio	0.04	0.22		0.17	0.41		0.08	0.51		0.15	0.71	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Control delay d1	19.6	20.9		20.6	22.5		10.1	13.2		10.5	15.5	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.11		0.11	0.27	
Preemption delay d2	0.0	0.2		0.2	0.4		0.2	0.4		0.2	2.3	
Control factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	19.6	21.1		20.8	22.9		10.2	13.6		10.7	17.8	
Lane group LOS	B	C		C	C		B	B		B	B	
Approach delay	21.0			22.4			13.5			17.3		
Approach LOS	C			C			B			B		
Intersec. delay	17.4			Intersection LOS						B		

SHORT REPORT

General Information	Site Information
Analyst Agency or Co. <i>Kimley-Horn & Associates</i> Date Performed <i>3/23/2004</i> Time Period <i>2007 PM PK HR without project</i>	Intersection <i>16th St & 43rd Ave</i> Area Type <i>All other areas</i> Jurisdiction <i>SR 60 & 90th Ave, 25 acre</i> Analysis Year <i>2007</i>

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	19	131	68	59	218	141	61	523	49	101	737	52
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 31.0	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	20	210		62	377		64	603		106	831	
Lane group cap.	227	609		366	604		134	989		298	992	
Capacity ratio	0.09	0.34		0.17	0.62		0.48	0.61		0.36	0.84	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Inf. delay d1	19.9	21.9		20.5	24.6		12.9	14.3		11.9	17.5	
Delay factor k	0.11	0.11		0.11	0.21		0.11	0.20		0.11	0.37	
Inc. delay d2	0.2	0.3		0.2	2.0		2.7	1.1		0.7	6.4	
Weighting factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	20.1	22.3		20.8	26.7		15.6	15.4		12.6	23.9	
Lane group LOS	C	C		C	C		B	B		B	C	
Approach delay	22.1			25.8			15.4			22.6		
Approach LOS	C			C			B			C		
Intersec. delay	21.1			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst				Intersection	SR 60 & 43rd Avenue		
Agency or Co.	KHA			Area Type	All other areas		
Date Performed	4/15/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM Peak Hr without proj			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Lane group	L	TR		L	TR		L	T	R	L	TR	
Volume (vph)	112	1085	301	131	1196	93	304	242	118	147	233	74
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	3	3		3	3		3	3	3	3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Red/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Timing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08				
	G = 16.5	G = 61.0	G =	G =	G = 23.4	G = 56.9	G =	G =				
	Y = 5.5	Y = 6	Y =	Y =	Y = 5.2	Y = 5.5	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 180.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	118	1459		138	1357		320	255	124	155	323	
Lane group cap.	203	1667		203	1705		436	589	500	490	567	
Capacity ratio	0.58	0.88		0.68	0.80		0.73	0.43	0.25	0.32	0.57	
Green ratio	0.46	0.34		0.46	0.34		0.47	0.32	0.32	0.47	0.32	
Conf. delay d1	38.5	55.9		45.6	53.9		33.2	48.8	45.7	28.5	51.3	
Delay factor k	0.17	0.40		0.25	0.34		0.29	0.11	0.11	0.11	0.16	
Increment. delay d2	4.2	5.6		8.9	2.7		6.3	0.5	0.3	0.4	1.4	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000	1.000	1.000	1.000	
Control delay	42.7	61.5		54.4	56.6		39.5	49.3	45.9	28.9	52.7	
Lane group LOS	D	E		D	E		D	D	D	C	D	
Approach. delay	60.1			56.4			44.2			45.0		
Approach LOS	E			E			D			D		
Intersec. delay	54.5			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 27th Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/14/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK Hr. without project			Analysis Year	2007 Modified phasing		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	102	283	207	108	392	150	210	287	82	153	417	124
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Controlled (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
act. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	3	3	3	3	3		3	3		3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Phasing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08				
Timing	G = 8.0	G = 45.0	G =	G =	G = 11.0	G = 51.0	G =	G =				
	Y = 5.4	Y = 5.5	Y =	Y =	Y = 5.7	Y = 5.5	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 137.1						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	107	298	218	114	571		221	388		161	439	131
Lane group cap.	157	611	520	355	586		342	670		381	693	589
λ ratio	0.68	0.49	0.42	0.32	0.97		0.65	0.58		0.42	0.63	0.22
Green ratio	0.43	0.33	0.33	0.43	0.33		0.49	0.37		0.49	0.37	0.37
Unif. delay d1	31.5	36.8	35.9	25.5	45.5		23.7	34.5		21.8	35.4	29.5
Delay factor k	0.25	0.11	0.11	0.11	0.48		0.22	0.17		0.11	0.21	0.11
Increment. delay d2	11.4	0.6	0.5	0.5	30.7		4.2	1.3		0.8	1.9	0.2
Factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	1.000
Control delay	43.0	37.4	36.4	26.0	76.1		27.9	35.7		22.5	37.3	29.7
Lane group LOS	D	D	D	C	E		C	D		C	D	C
Approach delay	38.0			67.8			32.9			32.7		
Approach LOS	D			E			C			C		
Intersec. delay	43.1			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	27th Avenue & 4th Street		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/14/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK Hr. without project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	56	248	48	113	335	51	44	432	49	65	653	128
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	Excl. Left	Thru & RT	03	04	SB Only	NS Perm	07	08				
Timing	G = 8.6	G = 26.4	G =	G =	G = 8.5	G = 34.2	G =	G =				
	Y = 5.4	Y = 5.6	Y =	Y =	Y = 5.5	Y = 5.8	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	59	312		119	407		46	507		68	822	
Lane group cap.	152	480		152	482		75	627		273	876	
Capacity ratio	0.39	0.65		0.78	0.84		0.61	0.81		0.25	0.94	
Green ratio	0.09	0.26		0.09	0.26		0.34	0.34		0.48	0.48	
Uniform delay d1	43.2	32.7		44.8	34.9		27.4	29.9		17.6	24.5	
Delay factor k	0.11	0.23		0.33	0.38		0.20	0.35		0.11	0.45	
Incremental delay d2	1.6	3.1		22.9	13.0		14.0	7.8		0.5	17.4	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	44.9	35.8		67.7	47.8		41.4	37.7		18.0	41.9	
Lane group LOS	D	D		E	D		D	D		B	D	
Approach delay	37.2			52.3			38.0			40.1		
Approach LOS	D			D			D			D		
Intersection delay	41.9			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst				Intersection	20th Avenue & Oslo Road		
Agency or Co.	KHA			Area Type	All other areas		
Date Performed	4/14/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK Hr without project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	49	365	48	112	505	106	52	148	49	107	207	63
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Red/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	Excl. Left	EW Perm	03	04	NS Perm	06	07	08				
Timing	G = 20.0	G = 45.0	G =	G =	G = 35.0	G =	G =	G =				
	Y = 5.2	Y = 5.2	Y =	Y =	Y = 5.2	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 115.6						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	52	435		118	644		55	208		113	284	
Lane group cap.	379	712		534	706		237	543		300	544	
Capacity ratio	0.14	0.61		0.22	0.91		0.23	0.38		0.38	0.52	
Green ratio	0.61	0.39		0.61	0.39		0.30	0.30		0.30	0.30	
Weighted delay d1	16.4	28.3		12.1	33.4		30.2	31.8		31.7	33.4	
Delay factor k	0.11	0.20		0.11	0.43		0.11	0.11		0.11	0.13	
Incremental delay d2	0.2	1.5		0.2	16.2		0.5	0.5		0.8	0.9	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	16.5	29.8		12.3	49.6		30.7	32.2		32.5	34.3	
Lane group LOS	B	C		B	D		C	C		C	C	
Approach delay	28.4			43.8			31.9			33.8		
Approach LOS	C			D			C			C		
Intersection delay	36.2			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 58th Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/24/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK HR with project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	0	1	0	1	1	1
Lane group	L	TR		L	TR			LTR		L	T	R
Volume (vph)	47	190	5	7	144	259	1	5	3	276	12	29
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Act. eff. green	2.0	2.0		2.0	2.0			2.0		2.0	2.0	2.0
Arrival type	3	3		3	3			3		3	3	3
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0			12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0		0	0	0
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Timing	Excl. Left	EW Perm	03	04	SB Only	NS Perm	07	08				
	G = 15.0	G = 45.0	G =	G =	G = 25.0	G = 20.0	G =	G =				
	Y = 6	Y = 6	Y =	Y =	Y = 5.7	Y = 6	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 128.7					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	49	205		7	425			9		291	13	31
Lane group cap.	393	649		573	588			272		591	734	624
Capacity ratio	0.12	0.32		0.01	0.72			0.03		0.49	0.02	0.05
Green ratio	0.51	0.35		0.51	0.35			0.16		0.39	0.39	0.39
Initial delay d1	18.4	30.6		15.8	36.4			46.1		28.5	23.8	24.1
Delay factor k	0.11	0.11		0.11	0.28			0.11		0.11	0.11	0.11
Incremental delay d2	0.1	0.3		0.0	4.4			0.0		0.6	0.0	0.0
Delay factor	1.000	1.000		1.000	1.000			1.000		1.000	1.000	1.000
Control delay	18.6	30.9		15.8	40.8			46.2		29.1	23.8	24.1
Lane group LOS	B	C		B	D			D		C	C	C
Approach delay	28.5			40.4			46.2			28.4		
Approach LOS	C			D			D			C		
Intersec. delay	33.6			Intersection LOS						C		

SHORT REPORT

General Information

Analyst: KHA User
 Agency or Co.: Kimley-Horn & Associates
 Date Performed: 4/15/2004
 Time Period: 2007 PM PK HR with project

Site Information

Intersection: Oslo & 43rd Ave
 Area Type: All other areas
 Jurisdiction: Tripson Trail
 Analysis Year: 2007

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Lane group	L	TR		L	T	R	L	TR		L	TR	
Volume (vph)	13	343	119	76	288	112	99	293	63	151	291	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Start. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Priority type	3	3		3	3	3	3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Timing	EW Perm	02	03	04	SB Only	NS Perm	07	08				
	G = 31.0	G =	G =	G =	G = 15.0	G = 30.0	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	14	486		80	303	118	104	374		159	319	
Lane group cap.	287	617		143	642	545	352	604		499	1008	
Volume ratio	0.05	0.79		0.56	0.47	0.22	0.30	0.62		0.32	0.32	
Green ratio	0.34	0.34		0.34	0.34	0.34	0.33	0.33		0.54	0.54	
Uniform delay d1	19.7	26.5		24.0	23.1	20.9	22.2	25.2		11.9	11.3	
Delay factor k	0.11	0.33		0.16	0.11	0.11	0.11	0.20		0.11	0.11	
Increment. delay d2	0.1	6.8		4.9	0.6	0.2	0.5	1.9		0.4	0.2	
Factor	1.000	1.000		1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	19.7	33.3		28.8	23.6	21.1	22.7	27.2		12.3	11.5	
Lane group LOS	B	C		C	C	C	C	C		B	B	
Approach delay	32.9			23.9			26.2			11.7		
Approach LOS	C			C			C			B		
Intersec. delay	23.8			Intersection LOS						C		

SHORT REPORT

General Information	Site Information
Analyst: <i>KHA User</i>	Intersection: <i>4th St & 43rd Ave</i>
Agency or Co.: <i>Kimley-Horn & Associates</i>	Area Type: <i>All other areas</i>
Date Performed: <i>3/24/2004</i>	Jurisdiction: <i>Tripson Trail</i>
Time Period: <i>2007 PM PK HR with project</i>	Analysis Year: <i>2007</i>

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	29	170	117	54	167	50	124	460	47	125	623	49
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 30.4	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5.6	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	31	302		57	229		131	533		132	708	
Lane group cap.	348	591		286	607		222	988		352	991	
Capacity ratio	0.09	0.51		0.20	0.38		0.59	0.54		0.38	0.71	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Uniform delay d1	20.3	23.9		21.2	22.6		14.1	13.5		12.0	15.6	
Delay factor k	0.11	0.12		0.11	0.11		0.18	0.14		0.11	0.28	
Incremental delay d2	0.1	0.8		0.3	0.4		4.1	0.6		0.7	2.5	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	20.5	24.6		21.5	23.0		18.2	14.1		12.7	18.1	
Lane group LOS	C	C		C	C		B	B		B	B	
Approach delay	24.2			22.7			14.9			17.2		
Approach LOS	C			C			B			B		
Intersec. delay	18.4			Intersection LOS						B		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	8th St & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/24/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK HR with project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	15	121	22	81	184	88	29	502	45	75	717	27
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 30.8	G =	G =	G =	G = 48.8	G =	G =	G =				
	Y = 5.2	Y =	Y =	Y =	Y = 5.2	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	16	150		85	287		31	575		79	783	
Lane group cap.	299	623		419	606		170	998		322	1005	
Capacity ratio	0.05	0.24		0.20	0.47		0.18	0.58		0.25	0.78	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Conf. delay d1	19.8	21.2		20.9	23.2		10.5	13.7		10.9	16.3	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.17		0.11	0.33	
Increment. delay d2	0.1	0.2		0.2	0.6		0.5	0.8		0.4	4.0	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	19.9	21.4		21.2	23.8		11.0	14.5		11.3	20.3	
Lane group LOS	B	C		C	C		B	B		B	C	
Approach. delay	21.3			23.2			14.4			19.5		
Approach LOS	C			C			B			B		
Intersec. delay	18.8			Intersection LOS						B		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	12th St & 43rd Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	3/24/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK HR with project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	11	113	22	74	168	68	20	461	44	55	704	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Act. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Timing	EW Perm	02	03	04	NS Perm	06	07	08				
	G = 31.0	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	12	142		78	249		21	531		58	754	
Lane group cap.	332	626		427	614		189	989		353	999	
Flow ratio	0.04	0.23		0.18	0.41		0.11	0.54		0.16	0.75	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Uniform delay d1	19.6	21.0		20.6	22.5		10.2	13.5		10.5	16.2	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.14		0.11	0.31	
Incremental delay d2	0.0	0.2		0.2	0.4		0.3	0.6		0.2	3.3	
Factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	19.6	21.2		20.8	22.9		10.5	14.1		10.8	19.5	
Lane group LOS	B	C		C	C		B	B		B	B	
Approach delay	21.0			22.4			14.0			18.9		
Approach LOS	C			C			B			B		
Intersec. delay	18.2			Intersection LOS						B		

SHORT REPORT

General Information	Site Information
Analyst Agency or Co. <i>Kimley-Horn & Associates</i> Date Performed <i>3/24/2004</i> Time Period <i>2007 PM PK HR with project</i>	Intersection <i>16th St & 43rd Ave</i> Area Type <i>All other areas</i> Jurisdiction <i>Tripson Trail</i> Analysis Year <i>2007</i>

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	19	131	72	63	218	141	63	547	51	101	777	52
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	EW Perm	02	03	04	NS Perm	06	07	08				
Timing	G = 31.0	G =	G =	G =	G = 48.4	G =	G =	G =				
	Y = 5	Y =	Y =	Y =	Y = 5.6	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	20	214		66	377		66	630		106	873	
Lane group cap.	227	608		362	604		104	989		279	992	
Capacity ratio	0.09	0.35		0.18	0.62		0.63	0.64		0.38	0.88	
Green ratio	0.34	0.34		0.34	0.34		0.54	0.54		0.54	0.54	
Inf. delay d1	19.9	22.0		20.6	24.6		14.6	14.6		12.1	18.3	
Delay factor k	0.11	0.11		0.11	0.21		0.21	0.22		0.11	0.41	
Increment. delay d2	0.2	0.4		0.2	2.0		12.0	1.4		0.9	9.2	
F factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	20.1	22.4		20.9	26.7		26.6	16.0		12.9	27.5	
Lane group LOS	C	C		C	C		C	B		B	C	
Approach. delay	22.2			25.8			17.0			25.9		
Approach LOS	C			C			B			C		
Intersec. delay	22.9			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst	KHA			Intersection	SR 60 & 43rd Avenue		
Agency or Co.				Area Type	All other areas		
Date Performed	3/29/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM Peak Hr with project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Lane group	L	TR		L	TR		L	T	R	L	TR	
Volume (vph)	19	132	86	78	220	142	71	531	59	102	749	53
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	3	3		3	3		3	3	3	3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Med/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Phasing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08				
Timing	G = 16.5	G = 61.0	G =	G =	G = 23.4	G = 56.9	G =	G =				
	Y = 5.5	Y = 6	Y =	Y =	Y = 5.2	Y = 5.5	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 180.0						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	adj. flow rate	20	230		82	381		75	559	62	107	844
Lane group cap.	465	1621		539	1622		271	589	500	271	583	
vc ratio	0.04	0.14		0.15	0.23		0.28	0.95	0.12	0.39	1.45	
Green ratio	0.46	0.34		0.46	0.34		0.47	0.32	0.32	0.47	0.32	
minif. delay d1	26.7	41.3		27.5	42.7		35.7	60.1	43.8	35.8	61.5	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.46	0.11	0.11	0.50	
Increment. delay d2	0.0	0.0		0.1	0.1		0.6	25.0	0.1	1.0	211.0	
F factor	1.000	1.000		1.000	1.000		1.000	1.000	1.000	1.000	1.000	
Control delay	26.8	41.4		27.6	42.8		36.2	85.2	43.9	36.8	272.5	
Lane group LOS	C	D		C	D		D	F	D	D	F	
Approch. delay	40.2			40.1			76.2			246.0		
Approach LOS	D			D			E			F		
Intersec. delay	133.7			Intersection LOS						F		

SHORT REPORT

General Information				Site Information			
Analyst				Intersection	SR 60 & 43rd Avenue		
Agency or Co.	KHA			Area Type	All other areas		
Date Performed	4/15/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM Peak Hr with project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Lane group	L	TR		L	TR		L	T	R	L	TR	
Volume (vph)	112	1085	319	149	1196	93	314	245	128	147	238	74
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Arrival type	3	3		3	3		3	3	3	3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Phasing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08				
Timing	G = 16.5	G = 61.0	G =	G =	G = 23.4	G = 56.9	G =	G =				
	Y = 5.5	Y = 6	Y =	Y =	Y = 5.2	Y = 5.5	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 180.0						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	Adj. flow rate	118	1478		157	1357		331	258	135	155	329
Lane group cap.	214	1692		213	1733		442	599	509	498	578	
Capacity ratio	0.55	0.87		0.74	0.78		0.75	0.43	0.27	0.31	0.57	
Green ratio	0.47	0.34		0.47	0.34		0.48	0.32	0.32	0.48	0.32	
Conf. delay d1	37.2	55.3		49.6	53.0		32.9	48.1	45.3	28.0	50.7	
Delay factor k	0.15	0.40		0.29	0.33		0.30	0.11	0.11	0.11	0.16	
Increment. delay d2	3.1	5.4		12.6	2.4		7.0	0.5	0.3	0.4	1.3	
Capacity factor	1.000	1.000		1.000	1.000		1.000	1.000	1.000	1.000	1.000	
Control delay	40.2	60.7		62.2	55.4		39.9	48.6	45.6	28.3	52.0	
Lane group LOS	D	E		E	E		D	D	D	C	D	
Approach delay	59.2			56.1			44.0			44.4		
Approach LOS	E			E			D			D		
Intersec. delay	53.9			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	Oslo & 27th Ave		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/15/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK Hr. with project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	112	293	204	108	410	150	210	287	82	153	417	153
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Arrival type	3	3	3	3	3		3	3		3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Timing	Excl. Left	EW Perm	03	04	Excl. Left	NB Only	NS Perm	08				
	G = 15.0	G = 43.0	G =	G =	G = 10.0	G = 10.0	G = 37.0	G =				
	Y = 5.4	Y = 5.5	Y =	Y =	Y = 5.7	Y = 0	Y = 5.5	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 137.1						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	118	308	215	114	590		221	388		161	439	161
Lane group cap.	261	598	508	434	574		399	631		379	516	439
Capacity ratio	0.45	0.52	0.42	0.26	1.03		0.55	0.61		0.42	0.85	0.37
Green ratio	0.47	0.32	0.32	0.47	0.32		0.46	0.35		0.36	0.28	0.28
Conf. delay d1	28.3	37.9	36.6	22.1	46.6		28.9	36.9		31.3	46.9	39.9
Delay factor k	0.11	0.12	0.11	0.11	0.50		0.15	0.20		0.11	0.38	0.11
Increment. delay d2	1.2	0.8	0.6	0.3	44.9		1.7	1.8		0.8	12.8	0.5
Delay factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	1.000
Control delay	29.6	38.6	37.1	22.4	91.4		30.6	38.7		32.0	59.7	40.4
Lane group LOS	C	D	D	C	F		C	D		C	E	D
Approach. delay	36.5			80.2			35.7			49.8		
Approach LOS	D			F			D			D		
Intersec. delay	51.4			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	KHA User			Intersection	27th Avenue & 4th Street		
Agency or Co.	Kimley-Horn & Associates			Area Type	All other areas		
Date Performed	4/14/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK Hr. with project			Analysis Year	2007		

Volume and Timing Input													
	EB			WB			NB			SB			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0	
Lane group	L	TR		L	TR		L	TR		L	TR		
Volume (vph)	56	248	48	113	335	51	44	439	49	65	665	128	
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2	
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A	
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		
Arrival type	3	3		3	3		3	3		3	3		
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Red/Bike/RTOR Volume	0		0	0		0	0		0	0		0	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0		
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N	
Parking/hr													
Bus stops/hr	0	0		0	0		0	0		0	0		
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Phasing	Excl. Left	Thru & RT	03			04		SB Only		NS Perm		07	08
Timing	G = 8.6	G = 26.4	G =	G =	G = 8.5		G = 34.2		G =	G =		G =	
	Y = 5.4	Y = 5.6	Y =	Y =	Y = 5.5		Y = 5.8		Y =	Y =		Y =	
Duration of Analysis (hrs) = 0.25							Cycle Length C = 100.0						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	Adj. flow rate	59	312		119	407		46	514		68	835
Lane group cap.	152	480		152	482		75	627		268	876	
Capacity ratio	0.39	0.65		0.78	0.84		0.61	0.82		0.25	0.95	
Green ratio	0.09	0.26		0.09	0.26		0.34	0.34		0.48	0.48	
Conf. delay d1	43.2	32.7		44.8	34.9		27.4	30.1		17.7	24.8	
Delay factor k	0.11	0.23		0.33	0.38		0.20	0.36		0.11	0.46	
Increment. delay d2	1.6	3.1		22.9	13.0		14.0	8.5		0.5	19.9	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	44.9	35.8		67.7	47.8		41.4	38.6		18.2	44.8	
Lane group LOS	D	D		E	D		D	D		B	D	
Approach. delay	37.2			52.3			38.8			42.8		
Approach LOS	D			D			D			D		
Intersec. delay	43.1			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst				Intersection	20th Avenue & Oslo Road		
Agency or Co.	KHA			Area Type	All other areas		
Date Performed	4/15/2004			Jurisdiction	Tripson Trail		
Time Period	2007 PM PK Hr with project			Analysis Year	2007		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	50	374	48	112	521	106	52	148	49	107	207	65
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
HF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	3	3		3	3		3	3		3	3	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Phasing	Excl. Left	EW Perm	03	04	NS Perm	06	07	08				
Timing	G = 20.0	G = 45.0	G =	G =	G = 35.0	G =	G =	G =				
	Y = 5.2	Y = 5.2	Y =	Y =	Y = 5.2	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 115.6						

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate	53	445		118	660		55	208		113	286	
Lane group cap.	370	713		526	707		235	543		300	544	
Capacity ratio	0.14	0.62		0.22	0.93		0.23	0.38		0.38	0.53	
Green ratio	0.61	0.39		0.61	0.39		0.30	0.30		0.30	0.30	
Conf. delay d1	16.9	28.5		12.2	33.9		30.2	31.8		31.7	33.4	
Delay factor k	0.11	0.21		0.11	0.45		0.11	0.11		0.11	0.13	
Increment. delay d2	0.2	1.7		0.2	19.4		0.5	0.5		0.8	0.9	
Delay factor	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Control delay	17.1	30.2		12.4	53.3		30.8	32.2		32.5	34.4	
Lane group LOS	B	C		B	D		C	C		C	C	
Approach. delay	28.8			47.1			31.9			33.8		
Approach LOS	C			D			C			C		
Intersec. delay	37.6			Intersection LOS						D		

TRIPSON TRAIL
INDIAN RIVER COUNTY
CONCURRENCY DETERMINATION NETWORK
PROJECT TRIP ASSIGNMENT BY SEGMENT

LINK	VOLUME	ON STREET	FROM STREET	TO STREET
1010N		S.R. A1A	S. COUNTY LINE	S. VB CITY L.
1010S		S.R. A1A	S. COUNTY LINE	S. VB CITY L.
1020N		S.R. A1A	S. VB CITY L.	17TH STREET
1020S		S.R. A1A	S. VB CITY L.	17TH STREET
1030N		S.R. A1A	17TH STREET	S.R. 60
1030S		S.R. A1A	17TH STREET	S.R. 60
1040N		S.R. A1A	S.R. 60	N. VB CITY L.
1040S		S.R. A1A	S.R. 60	N. VB CITY L.
1050N		S.R. A1A	N. VB CITY L.	FRED TUERK RD.
1050S		S.R. A1A	N. VB CITY L.	FRED TUERK RD.
1060N		S.R. A1A	FRED TUERK RD.	OLD WINTER BEACH RD
1060S		S.R. A1A	FRED TUERK RD.	OLD WINTER BEACH RD
1070N		S.R. A1A	OLD WINTER BEACH RD	N. IRS L.
1070S		S.R. A1A	OLD WINTER BEACH RD	N. IRS L.
1080N		S.R. A1A	N. IRS LN.	C.R. 510
1080S		S.R. A1A	N. IRS LN.	C.R. 510
1090N		S.R. A1A	C.R. 510	N. COUNTY LINE
1090S		S.R. A1A	C.R. 510	N. COUNTY LINE
1110N		INDIAN RIVER BLVD.	4TH ST. @ US1	12TH STREET
1110S		INDIAN RIVER BLVD.	4TH ST. @ US1	12TH STREET
1120N		INDIAN RIVER BLVD.	12TH STREET	S. VB CITY L.
1120S		INDIAN RIVER BLVD.	12TH STREET	S. VB CITY L.
1130N		INDIAN RIVER BLVD.	S. VB CITY L.	17TH STREET
1130S		INDIAN RIVER BLVD.	S. VB CITY L.	17TH STREET
1140N		INDIAN RIVER BLVD.	17TH STREET	21ST STREET
1140S		INDIAN RIVER BLVD.	17TH STREET	21ST STREET
1150N		INDIAN RIVER BLVD.	21ST STREET	S.R. 60
1150S		INDIAN RIVER BLVD.	21ST STREET	S.R. 60
1160N		INDIAN RIVER BLVD.	S.R. 60	W. VB CITY L.
1160S		INDIAN RIVER BLVD.	S.R. 60	W. VB CITY L.
1170N		INDIAN RIVER BLVD.	W. VB CITY L.	US 1 @ 53RD ST.
1170S		INDIAN RIVER BLVD.	W. VB CITY L.	US 1 @ 53RD ST.
1210N		I-95	N. COUNTY LINE	C.R. 512
1210S		I-95	N. COUNTY LINE	C.R. 512
1220N		I-95	C.R. 512	S.R. 60
1220S		I-95	C.R. 512	S.R. 60
1230N		I-95	S.R. 60	OSLO ROAD
1230S		I-95	S.R. 60	OSLO ROAD
1240N		I-95	OSLO ROAD	S. COUNTY LINE
1240S		I-95	OSLO ROAD	S. COUNTY LINE
1305N		U.S.1	S. COUNTY LINE	OSLO ROAD
1305S		U.S.1	S. COUNTY LINE	OSLO ROAD
1310N		U.S.1	OSLO ROAD	4TH ST. @ IR BLVD.
1310S		U.S.1	OSLO ROAD	4TH ST. @ IR BLVD.
1315N		U.S.1	4TH ST. @ IR BLVD.	8TH STREET
1315S		U.S.1	4TH ST. @ IR BLVD.	8TH STREET
1320N		U.S.1	8TH STREET	12TH STREET
1320S		U.S.1	8TH STREET	12TH STREET
1325N		U.S.1	12TH STREET	S. VB CITY L.
1325S		U.S.1	12TH STREET	S. VB CITY L.
1330N		U.S.1	S. VB CITY L.	17TH STREET
1330S		U.S.1	S. VB CITY L.	17TH STREET
1335N		U.S.1	17TH STREET	S.R. 60
1335S		U.S.1	17TH STREET	S.R. 60
1340N		U.S.1	S.R. 60	ROYAL PALM PL
1340S		U.S.1	S.R. 60	ROYAL PALM PL
1345N		U.S.1	ROYAL PALM PL	ATLANTIC BLVD.
1345S		U.S.1	ROYAL PALM PL	ATLANTIC BLVD.
1350N		U.S.1	ATLANTIC BLVD.	N. VB CITY L.
1350S		U.S.1	ATLANTIC BLVD.	N. VB CITY L.

TRIPSON TRAIL
INDIAN RIVER COUNTY
CONCURRENCY DETERMINATION NETWORK
PROJECT TRIP ASSIGNMENT BY SEGMENT

LINK	VOLUME	ON STREET	FROM STREET	TO STREET
1355N		U.S.1	N. VB CITY L.	OLD DIXIE HWY
1355S		U.S.1	N. VB CITY L.	OLD DIXIE HWY
1360N		U.S.1	OLD DIXIE HWY	41ST STREET
1360S		U.S.1	OLD DIXIE HWY	41ST STREET
1365N		U.S.1	41ST STREET	45TH STREET
1365S		U.S.1	41ST STREET	45TH STREET
1370N		U.S.1	45TH STREET	49TH STREET
1370S		U.S.1	45TH STREET	49TH STREET
1375N		U.S.1	49TH STREET	65TH STREET
1375S		U.S.1	49TH STREET	65TH STREET
1380N		U.S.1	65TH STREET	69TH STREET
1380S		U.S.1	65TH STREET	69TH STREET
1385N		U.S.1	69TH STREET	OLD DIXIE HWY
1385S		U.S.1	69TH STREET	OLD DIXIE HWY
1390N		U.S.1	OLD DIXIE HWY	SCHUMANN DR.
1390S		U.S.1	OLD DIXIE HWY	SCHUMANN DR.
1395N		U.S.1	SCHUMANN DR.	C.R. 512
1395S		U.S.1	SCHUMANN DR.	C.R. 512
1400N		U.S.1	C.R. 512	N. SEB. CITY L.
1400S		U.S.1	C.R. 512	N. SEB. CITY L.
1405N		U.S.1	N. SEB. CITY L.	ROSELAND RD.
1405S		U.S.1	N. SEB. CITY L.	ROSELAND RD.
1410N		U.S.1	ROSELAND RD.	N. COUNTY LINE
1410S		U.S.1	ROSELAND RD.	N. COUNTY LINE
1510N		SCHUMANN DR.	C.R. 510 @ 66TH AVE.	S. SEB. CITY L.
1510S		SCHUMANN DR.	C.R. 510 @ 66TH AVE.	S. SEB. CITY L.
1520N		SCHUMANN DR.	S. SEB. CITY L.	U.S.1
1520S		SCHUMANN DR.	S. SEB. CITY L.	U.S.1
1610E		ROSELAND RD.	S.R. 512	N. SEB. CITY L.
1610W		ROSELAND RD.	S.R. 512	N. SEB. CITY L.
1620E		ROSELAND RD.	N. SEB. CITY L.	U.S.1
1620W		ROSELAND RD.	N. SEB. CITY L.	U.S.1
1710E		C.R. 512	S.R. 60	I-95
1710W		C.R. 512	S.R. 60	I-95
1720E		C.R. 512	I-95	C.R. 510
1720W		C.R. 512	I-95	C.R. 510
1730E		C.R. 512	C.R. 510	W. SEB. CITY L.
1730W		C.R. 512	C.R. 510	W. SEB. CITY L.
1740E		C.R. 512	W. SEB. CITY L.	ROSELAND RD.
1740W		C.R. 512	W. SEB. CITY L.	ROSELAND RD.
1750E		C.R. 512	ROSELAND RD.	U.S.1
1750W		C.R. 512	ROSELAND RD.	U.S.1
1810E		C.R. 510	C.R. 512	66TH AVE.
1810W		C.R. 510	C.R. 512	66TH AVE.
1820E		C.R. 510	66TH AVE.	58TH AVE.
1820W		C.R. 510	66TH AVE.	58TH AVE.
1830E	18	C.R. 510	58TH AVE.	U.S.1
1830W	10	C.R. 510	58TH AVE.	U.S.1
1840E		C.R. 510	U.S.1	S.R. A1A
1840W		C.R. 510	U.S.1	S.R. A1A
1905E		S.R. 60	W. COUNTY LINE	C.R. 512
1905W		S.R. 60	W. COUNTY LINE	C.R. 512
1910E		S.R. 60	C.R. 512	I-95
1910W		S.R. 60	C.R. 512	I-95
1915E		S.R. 60	I-95	82ND AVE.
1915W		S.R. 60	I-95	82ND AVE.
1920E		S.R. 60	82ND AVE.	66TH AVE.
1920W		S.R. 60	82ND AVE.	66TH AVE.
1925E	5	S.R. 60	66TH AVE.	58TH AVE.
1925W	3	S.R. 60	66TH AVE.	58TH AVE.

TRIPSON TRAIL
INDIAN RIVER COUNTY
CONCURRENCY DETERMINATION NETWORK
PROJECT TRIP ASSIGNMENT BY SEGMENT

LINK	VOLUME	ON STREET	FROM STREET	TO STREET
1930E	18	S.R. 60	58TH AVE.	43RD AVE.
1930W	10	S.R. 60	58TH AVE.	43RD AVE.
1935E	10	S.R. 60	43RD AVE.	27TH AVE.
1935W	18	S.R. 60	43RD AVE.	27TH AVE.
1940E		S.R. 60	27TH AVE.	20TH AVE.
1940W		S.R. 60	27TH AVE.	20TH AVE.
1945E		S.R. 60	20TH AVE.	OLD DIXIE HWY
1945W		S.R. 60	20TH AVE.	OLD DIXIE HWY
1950E		S.R. 60	OLD DIXIE HWY	10TH AVE.
1950W		S.R. 60	OLD DIXIE HWY	10TH AVE.
1955E		S.R. 60	10TH AVE.	U.S.1
1955W		S.R. 60	10TH AVE.	U.S.1
1960E		S.R. 60	U.S.1	INDIAN RIVER BLVD.
1960W		S.R. 60	U.S.1	INDIAN RIVER BLVD.
1965E		S.R. 60	INDIAN RIVER BLVD.	ICWW
1965W		S.R. 60	INDIAN RIVER BLVD.	ICWW
1970E		S.R. 60	ICWW	S.R. A1A
1970W		S.R. 60	ICWW	S.R. A1A
2020E	4	16TH STREET	58TH AVE.	43RD AVE.
2020W	2	16TH STREET	58TH AVE.	43RD AVE.
2030E	2	16TH STREET	43RD AVE.	27TH AVE.
2030W	4	16TH STREET	43RD AVE.	27TH AVE.
2040E		16TH STREET	27TH AVE.	20TH AVE.
2040W		16TH STREET	27TH AVE.	20TH AVE.
2050E		16TH STREET	20TH AVE.	OLD DIXIE HWY
2050W		16TH STREET	20TH AVE.	OLD DIXIE HWY
2060E		16TH/17TH STREET	OLD DIXIE HWY	U.S.1
2060W		16TH/17TH STREET	OLD DIXIE HWY	U.S.1
2110E		17TH STREET	U.S.1	INDIAN RIVER BLVD.
2110W		17TH STREET	U.S.1	INDIAN RIVER BLVD.
2120E		17TH STREET	INDIAN RIVER BLVD.	S.R. A1A
2120W		17TH STREET	INDIAN RIVER BLVD.	S.R. A1A
2210E		12TH STREET	82ND AVE.	58TH AVE.
2210W		12TH STREET	82ND AVE.	58TH AVE.
2220E	2	12TH STREET	58TH AVE.	43RD AVE.
2220W	4	12TH STREET	58TH AVE.	43RD AVE.
2230E	2	12TH STREET	43RD AVE.	27TH AVE.
2230W	4	12TH STREET	43RD AVE.	27TH AVE.
2240E		12TH STREET	27TH AVE.	20TH AVE.
2240W		12TH STREET	27TH AVE.	20TH AVE.
2250E		12TH STREET	20TH AVE.	OLD DIXIE HWY
2250W		12TH STREET	20TH AVE.	OLD DIXIE HWY
2260E		12TH STREET	OLD DIXIE HWY	U.S.1
2260W		12TH STREET	OLD DIXIE HWY	U.S.1
2305N		OLD DIXIE HWY	S. COUNTY LINE	OSLO ROAD
2305S		OLD DIXIE HWY	S. COUNTY LINE	OSLO ROAD
2310N		OLD DIXIE HWY	OSLO ROAD	4TH STREET
2310S		OLD DIXIE HWY	OSLO ROAD	4TH STREET
2315N		OLD DIXIE HWY	4TH STREET	8TH STREET
2315S		OLD DIXIE HWY	4TH STREET	8TH STREET
2320N		OLD DIXIE HWY	8TH STREET	12TH STREET
2320S		OLD DIXIE HWY	8TH STREET	12TH STREET
2325N		OLD DIXIE HWY	12TH STREET	S. VB CITY L.
2325S		OLD DIXIE HWY	12TH STREET	S. VB CITY L.
2330N		OLD DIXIE HWY	S. VB CITY L.	16TH STREET
2330S		OLD DIXIE HWY	S. VB CITY L.	16TH STREET
2335N		OLD DIXIE HWY	16TH STREET	S.R. 60
2335S		OLD DIXIE HWY	16TH STREET	S.R. 60
2345N		OLD DIXIE HWY	41ST STREET	45TH STREET
2345S		OLD DIXIE HWY	41ST STREET	45TH STREET

TRIPSON TRAIL
INDIAN RIVER COUNTY
CONCURRENCY DETERMINATION NETWORK
PROJECT TRIP ASSIGNMENT BY SEGMENT

LINK	VOLUME	ON STREET	FROM STREET	TO STREET
2350N		OLD DIXIE HWY	45TH STREET	49TH STREET
2350S		OLD DIXIE HWY	45TH STREET	49TH STREET
2355N		OLD DIXIE HWY	49TH STREET	65TH STREET
2355S		OLD DIXIE HWY	49TH STREET	65TH STREET
2360N		OLD DIXIE HWY	65TH STREET	69TH STREET
2360S		OLD DIXIE HWY	65TH STREET	69TH STREET
2365N		OLD DIXIE HWY	69TH STREET	C.R. 510
2365S		OLD DIXIE HWY	69TH STREET	C.R. 510
2410N		27TH AVENUE	S. COUNTY LINE	OSLO ROAD
2410S		27TH AVENUE	S. COUNTY LINE	OSLO ROAD
2420N	7	27TH AVENUE	OSLO ROAD	4TH STREET
2420S	18	27TH AVENUE	OSLO ROAD	4TH STREET
2430N	7	27TH AVENUE	4TH STREET	8TH STREET
2430S	12	27TH AVENUE	4TH STREET	8TH STREET
2440N		27TH AVENUE	8TH STREET	12TH STREET
2440S		27TH AVENUE	8TH STREET	12TH STREET
2450N		27TH AVENUE	12TH STREET	S. VB CITY L.
2450S		27TH AVENUE	12TH STREET	S. VB CITY L.
2460N		27TH AVENUE	S. VB CITY L.	16TH STREET
2460S		27TH AVENUE	S. VB CITY L.	16TH STREET
2470N		27TH AVENUE	16TH STREET	S.R. 60
2470S		27TH AVENUE	16TH STREET	S.R. 60
2480N		27TH AVENUE	S.R. 60	ATLANTIC BLVD.
2480S		27TH AVENUE	S.R. 60	ATLANTIC BLVD.
2510N		27TH AVENUE	ATLANTIC BLVD.	AVIATION BLVD.
2510S		27TH AVENUE	ATLANTIC BLVD.	AVIATION BLVD.
2530E	5	OSLO ROAD	82ND AVE.	58TH AVE.
2530W	3	OSLO ROAD	82ND AVE.	58TH AVE.
2540E	35	OSLO ROAD	58TH AVE.	43RD AVE.
2540W	21	OSLO ROAD	58TH AVE.	43RD AVE.
2550E	21	OSLO ROAD	43RD AVE.	27TH AVE.
2550W	35	OSLO ROAD	43RD AVE.	27TH AVE.
2560E	10	OSLO ROAD	27TH AVE.	20TH AVE.
2560W	18	OSLO ROAD	27TH AVE.	20TH AVE.
2570E	9	OSLO ROAD	20TH AVE.	OLD DIXIE HWY
2570W	16	OSLO ROAD	20TH AVE.	OLD DIXIE HWY
2580E		OSLO ROAD	OLD DIXIE HWY	U.S.1
2580W		OSLO ROAD	OLD DIXIE HWY	U.S.1
2610E		6TH AVENUE	17TH STREET	S. VB CITY L.
2610W		6TH AVENUE	17TH STREET	S. VB CITY L.
2620N		6TH AVENUE	S. VB CITY L.	S.R. 60
2620S		6TH AVENUE	S. VB CITY L.	S.R. 60
2710N		10TH AVENUE	S.R. 60	ROYAL PALM BLVD.
2710S		10TH AVENUE	S.R. 60	ROYAL PALM BLVD.
2720N		10TH AVENUE	ROYAL PALM BLVD.	17TH STREET
2720S		10TH AVENUE	ROYAL PALM BLVD.	17TH STREET
2810N	1	20TH AVENUE	OSLO ROAD	4TH STREET
2810S	2	20TH AVENUE	OSLO ROAD	4TH STREET
2820N		20TH AVENUE	4TH STREET	8TH STREET
2820S		20TH AVENUE	4TH STREET	8TH STREET
2830N		20TH AVENUE	8TH STREET	12TH STREET
2830S		20TH AVENUE	8TH STREET	12TH STREET
2840N		20TH AVENUE	12TH STREET	S. VB CITY L.
2840S		20TH AVENUE	12TH STREET	S. VB CITY L.
2850N		20TH AVENUE	S. VB CITY L.	16TH STREET
2850S		20TH AVENUE	S. VB CITY L.	16TH STREET
2860N		20TH AVENUE	16TH STREET	S.R. 60
2860S		20TH AVENUE	16TH STREET	S.R. 60
2870N		20TH AVENUE	S.R. 60	ATLANTIC BLVD.
2870S		20TH AVENUE	S.R. 60	ATLANTIC BLVD.

TRIPSON TRAIL
INDIAN RIVER COUNTY
CONCURRENCY DETERMINATION NETWORK
PROJECT TRIP ASSIGNMENT BY SEGMENT

LINK	VOLUME	ON STREET	FROM STREET	TO STREET
2905N	81	43RD AVENUE	S. COUNTY LINE	OSLO ROAD
2905S	137	43RD AVENUE	S. COUNTY LINE	OSLO ROAD
2910N	38	43RD AVENUE	OSLO ROAD	4TH STREET
2910S	67	43RD AVENUE	OSLO ROAD	4TH STREET
2915N	36	43RD AVENUE	4TH STREET	8TH STREET
2915S	61	43RD AVENUE	4TH STREET	8TH STREET
2920N	32	43RD AVENUE	8TH STREET	12TH STREET
2920S	54	43RD AVENUE	8TH STREET	12TH STREET
2925N	28	43RD AVENUE	12TH STREET	16TH STREET
2925S	47	43RD AVENUE	12TH STREET	16TH STREET
2930N	23	43RD AVENUE	16TH STREET	S.R. 60
2930S	40	43RD AVENUE	16TH STREET	S.R. 60
2935N	3	43RD AVENUE	S.R. 60	26TH STREET
2935S	5	43RD AVENUE	S.R. 60	26TH STREET
2940N		43RD AVENUE	26TH STREET	41ST STREET
2940S		43RD AVENUE	26TH STREET	41ST STREET
2945N		43RD AVENUE	41ST STREET	45TH STREET
2945S		43RD AVENUE	41ST STREET	45TH STREET
2950N		43RD AVENUE	45TH STREET	49TH STREET
2950S		43RD AVENUE	45TH STREET	49TH STREET
3005N	18	58TH AVENUE	OSLO ROAD	4TH STREET
3005S	30	58TH AVENUE	OSLO ROAD	4TH STREET
3010N		58TH AVENUE	4TH STREET	8TH STREET
3010S		58TH AVENUE	4TH STREET	8TH STREET
3015N		58TH AVENUE	8TH STREET	12TH STREET
3015S		58TH AVENUE	8TH STREET	12TH STREET
3020N		58TH AVENUE	12TH STREET	16TH STREET
3020S		58TH AVENUE	12TH STREET	16TH STREET
3025N		58TH AVENUE	16TH STREET	S.R. 60
3025S		58TH AVENUE	16TH STREET	S.R. 60
3030N		58TH AVENUE	S.R. 60	41ST STREET
3030S		58TH AVENUE	S.R. 60	41ST STREET
3035N		58TH AVENUE	41ST STREET	45TH STREET
3035S		58TH AVENUE	41ST STREET	45TH STREET
3040N		58TH AVENUE	45TH STREET	49TH STREET
3040S		58TH AVENUE	45TH STREET	49TH STREET
3045N		58TH AVENUE	49TH STREET	65TH STREET
3045S		58TH AVENUE	49TH STREET	65TH STREET
3050N		58TH AVENUE	65TH STREET	69TH STREET
3050S		58TH AVENUE	65TH STREET	69TH STREET
3055N		58TH AVENUE	69TH STREET	C.R. 510
3055S		58TH AVENUE	69TH STREET	C.R. 510
3120N		66TH AVENUE	S.R. 60	26TH STREET
3120S		66TH AVENUE	S.R. 60	26TH STREET
3130N		66TH AVENUE	26TH STREET	41ST STREET
3130S		66TH AVENUE	26TH STREET	41ST STREET
3140N		66TH AVENUE	41ST STREET	45TH STREET
3140S		66TH AVENUE	41ST STREET	45TH STREET
3150N		66TH AVENUE	45TH STREET	65TH STREET
3150S		66TH AVENUE	45TH STREET	65TH STREET
3160N		66TH AVENUE	65TH STREET	69TH STREET
3160S		66TH AVENUE	65TH STREET	69TH STREET
3170N		66TH AVENUE	69TH STREET	C.R. 510
3170S		66TH AVENUE	69TH STREET	C.R. 510
3310N		82ND AVENUE	OSLO ROAD	4TH STREET
3310S		82ND AVENUE	OSLO ROAD	4TH STREET
3320N		82ND AVENUE	4TH STREET	12TH STREET
3320S		82ND AVENUE	4TH STREET	12TH STREET
3330N		82ND AVENUE	12TH STREET	S.R. 60
3330S		82ND AVENUE	12TH STREET	S.R. 60

TRIPSON TRAIL
INDIAN RIVER COUNTY
CONCURRENCY DETERMINATION NETWORK
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LINK	VOLUME	ON STREET	FROM STREET	TO STREET
3340N		82ND AVENUE	S.R. 60	65TH STREET
3340S		82ND AVENUE	S.R. 60	65TH STREET
3350N		82ND AVENUE	65TH STREET	69TH STREET
3350S		82ND AVENUE	65TH STREET	69TH STREET
3610E		77TH STREET	66TH AVE.	U.S.1
3610W		77TH STREET	66TH AVE.	U.S.1
3710E		69TH STREET	82ND AVE.	66TH AVE.
3710W		69TH STREET	82ND AVE.	66TH AVE.
3720E		69TH STREET	66TH AVE.	58TH AVE.
3720W		69TH STREET	66TH AVE.	58TH AVE.
3730E		69TH STREET	58TH AVE.	OLD DIXIE HWY
3730W		69TH STREET	58TH AVE.	OLD DIXIE HWY
3740E		69TH STREET	OLD DIXIE HWY	U.S.1
3740W		69TH STREET	OLD DIXIE HWY	U.S.1
3820E		65TH STREET	66TH AVE.	58TH AVE.
3820W		65TH STREET	66TH AVE.	58TH AVE.
3830E		65TH STREET	58TH AVE.	OLD DIXIE HWY
3830W		65TH STREET	58TH AVE.	OLD DIXIE HWY
3840E		65TH STREET	OLD DIXIE HWY	U.S.1
3840W		65TH STREET	OLD DIXIE HWY	U.S.1
4220E		49TH STREET	66TH AVE.	58TH AVE.
4220W		49TH STREET	66TH AVE.	58TH AVE.
4230E		49TH STREET	58TH AVE.	43RD AVE.
4230W		49TH STREET	58TH AVE.	43RD AVE.
4240E		49TH STREET	43RD AVE.	OLD DIXIE HWY
4240W		49TH STREET	43RD AVE.	OLD DIXIE HWY
4250E		49TH STREET	OLD DIXIE HWY	U.S.1
4250W		49TH STREET	OLD DIXIE HWY	U.S.1
4320E		45TH STREET	66TH AVE.	58TH AVE.
4320W		45TH STREET	66TH AVE.	58TH AVE.
4330E		45TH STREET	58TH AVE.	43RD AVE.
4330W		45TH STREET	58TH AVE.	43RD AVE.
4340E		45TH STREET	43RD AVE.	OLD DIXIE HWY
4340W		45TH STREET	43RD AVE.	OLD DIXIE HWY
4350E		45TH STREET	OLD DIXIE HWY	INDIAN RIVER BLVD.
4350W		45TH STREET	OLD DIXIE HWY	INDIAN RIVER BLVD.
4420E		41ST STREET	66TH AVE.	58TH AVE.
4420W		41ST STREET	66TH AVE.	58TH AVE.
4430E		41ST STREET	58TH AVE.	43RD AVE.
4430W		41ST STREET	58TH AVE.	43RD AVE.
4440E		41ST STREET	43RD AVE.	OLD DIXIE HWY
4440W		41ST STREET	43RD AVE.	OLD DIXIE HWY
4450E		41ST STREET	OLD DIXIE HWY	INDIAN RIVER BLVD.
4450W		41ST STREET	OLD DIXIE HWY	INDIAN RIVER BLVD.
4460E		37TH STREET	U.S.1	INDIAN RIVER BLVD.
4460W		37TH STREET	U.S.1	INDIAN RIVER BLVD.
4720E		26TH STREET	66TH AVE.	58TH AVE.
4720W		26TH STREET	66TH AVE.	58TH AVE.
4730E		26TH STREET	58TH AVE.	43RD AVE.
4730W		26TH STREET	58TH AVE.	43RD AVE.
4740E		26TH STREET	43RD AVE.	AVIATION BLVD.
4740W		26TH STREET	43RD AVE.	AVIATION BLVD.
4750E		26TH STREET	AVIATION BLVD.	27TH AVE.
4750W		26TH STREET	AVIATION BLVD.	27TH AVE.
4830E	4	8TH STREET	58TH AVE.	43RD AVE.
4830W	2	8TH STREET	58TH AVE.	43RD AVE.
4840E	2	8TH STREET	43RD AVE.	27TH AVE.
4840W	4	8TH STREET	43RD AVE.	27TH AVE.
4850E		8TH STREET	27TH AVE.	20TH AVE.
4850W		8TH STREET	27TH AVE.	20TH AVE.

TRIPSON TRAIL
INDIAN RIVER COUNTY
CONCURRENCY DETERMINATION NETWORK
PROJECT TRIP ASSIGNMENT BY SEGMENT

LINK	VOLUME	ON STREET	FROM STREET	TO STREET
4860E		8TH STREET	20TH AVE.	OLD DIXIE HWY
4860W		8TH STREET	20TH AVE.	OLD DIXIE HWY
4870E		8TH STREET	OLD DIXIE HWY	U.S.1
4870W		8TH STREET	OLD DIXIE HWY	U.S.1
4880E		8TH STREET	U.S.1	INDIAN RIVER BLVD.
4880W		8TH STREET	U.S.1	INDIAN RIVER BLVD.
4910E		4TH STREET	82ND AVE.	58TH AVE.
4910W		4TH STREET	82ND AVE.	58TH AVE.
4930E		4TH STREET	58TH AVE.	43RD AVE.
4930W		4TH STREET	58TH AVE.	43RD AVE.
4940E	2	4TH STREET	43RD AVE.	27TH AVE.
4940W	4	4TH STREET	43RD AVE.	27TH AVE.
4950E		4TH STREET	27TH AVE.	20TH AVE.
4950W		4TH STREET	27TH AVE.	20TH AVE.
4960E		4TH STREET	20TH AVE.	OLD DIXIE HWY
4960W		4TH STREET	20TH AVE.	OLD DIXIE HWY
4970E		4TH STREET	OLD DIXIE HWY	U.S.1
4970W		4TH STREET	OLD DIXIE HWY	U.S.1
5610E		FRED TUERK DR.	A1A	W. OF COCONUT DR.
5610W		FRED TUERK DR.	A1A	W. OF COCONUT DR.
5710E		WINTER BEACH RD.	A1A	JUNGLE TRAIL
5710W		WINTER BEACH RD.	A1A	JUNGLE TRAIL
5810E		ATLANTIC BLVD.	27TH AVE.	20TH AVE.
5810W		ATLANTIC BLVD.	27TH AVE.	20TH AVE.
5820E		ATLANTIC BLVD.	20TH AVE.	U.S.1
5820W		ATLANTIC BLVD.	20TH AVE.	U.S.1
5910E		AVIATION BLVD.	26TH STREET	27TH AVE.
5910W		AVIATION BLVD.	26TH STREET	27TH AVE.
6010E		ROYAL PALM BLVD.	ROYAL PALM PL.	INDIAN RIVER BLVD.
6010W		ROYAL PALM BLVD.	ROYAL PALM PL.	INDIAN RIVER BLVD.
6110E		ROYAL PALM PL.	U.S.1	INDIAN RIVER BLVD.
6110W		ROYAL PALM PL.	U.S.1	INDIAN RIVER BLVD.

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