Traffic Impact Study

Broadcast Center One

A Mixed-Use Complex
Washington, D.C.

Prepared for:
Broadcast Center Partners, LLC

February 2006
Revised June 2007

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

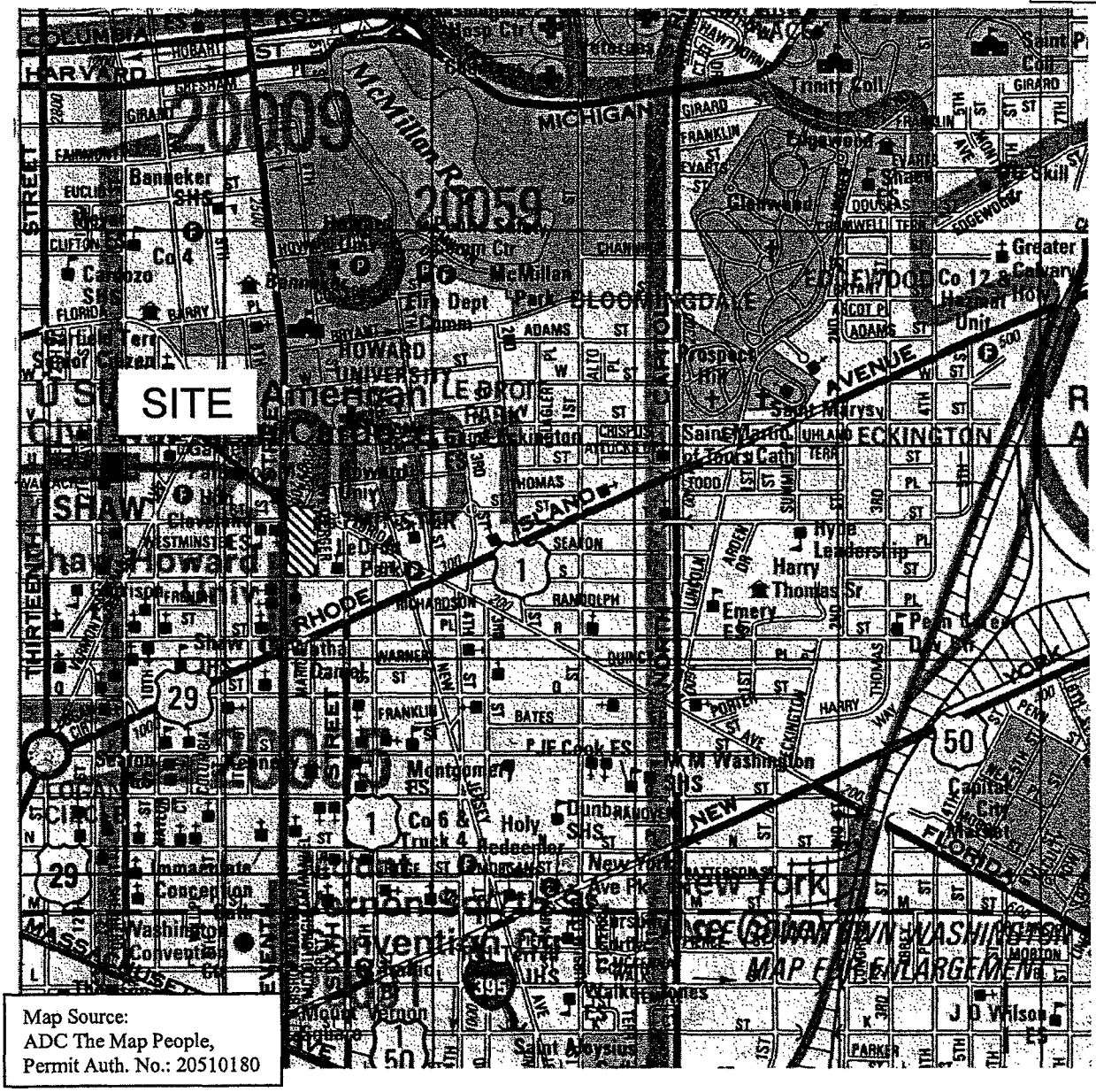
INTRODUCTION

This report presents the results of a traffic impact study for the proposed Broadcast Center One mixed-use development in northwest Washington, D.C., at the Shaw-Howard University Metrorail station. This report is a revision of the February 2006 traffic report and incorporates slight changes in the development quantities and a modification in the vehicle circulation. The site is located along the east side of 7th Street between S Street and T Street. It is bordered by T Street to the north, 7th Street to the west, S Street to the south, and an alley to the east. The property currently contains the Shaw-Howard University Metro Station, retail buildings and a vacant lot. The site location is shown on Figure 1. The proposed development includes 180 residential units, 24,323 SF of retail and 103,083 SF of office space.

The following traffic study was prepared to satisfy the traffic requirements associated with the Planned Unit Development (PUD) application for Broadcast Center One and is in accordance with direction provided by the District of Columbia Department of Transportation (DDOT).

The following sections of this report describe the area transportation system, existing traffic volumes, the calculation of background traffic volumes including estimated traffic generated by approved and unbuilt developments, and the impact of the proposed development.

NOT TO SCALE



Map Source:
ADC The Map People,
Permit Auth. No.: 20510180

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Site Location Map

Broadcast Center One
Washington, DC

Figure
1

AREA TRANSPORTATION SYSTEM

Existing Area Streets

Streets considered in this study included 7th Street NW, S Street NW, T Street NW and Florida Avenue NW. A brief description of the area street system follows:

7th Street – This north-south arterial serves as a commuter route for people commuting to the vicinity of Howard University and destinations to the south. It forms the west boundary of Broadcast Center One. North of the study area, 7th Street is named Georgia Avenue (US Route 29). In the vicinity of the site, 7th Street has a four-lane cross-section with sidewalks on both sides. The study intersection of 7th Street and S Street is signalized. The study intersection of 7th Street and T Street is unsignalized, with the T Street approach being stop controlled.

S Street – This local east-west street, which forms the southern boundary of the site, has a single travel lane in each direction plus on-street parking and sidewalks on both sides. The study intersection of 7th and S Streets is signalized.

T Street – This local east-west street forms the north boundary of Broadcast Center One. It is a one-way eastbound street with a single travel lane and parking and sidewalks on both sides. The junction of T Street with Florida Avenue is offset. East of Florida Avenue, T Street continues as a one-way eastbound street.

Florida Avenue– This arterial serves as a commuter route that provides east-west access within the study area. West of 9th Street, Florida Avenue becomes U Street. In the vicinity of the site, Florida Avenue has a two travel lanes in each direction, no parking, and sidewalks on both sides.

Existing Area Transit Service

Existing transit service in the study area includes the on-site Shaw-Howard University Metrorail station on the Green Line, as well as Metrobus service.

Metrobus service in the study area is provided along 7th Street by the Georgia Avenue - 7th Street Line. (Route 70 and 71). This line serves the area around Howard University. The buses on this line travel north and south along 7th Street on weekdays, weekends, and holidays. There is also Metrobus service along Florida Avenue by the U Street – Garfield Line (Route 90, 92 and 93) and the East Capitol Street – Cordozo Line (Route 96). The buses on this line travel east and west along Florida Avenue on weekdays, weekends, and holidays.

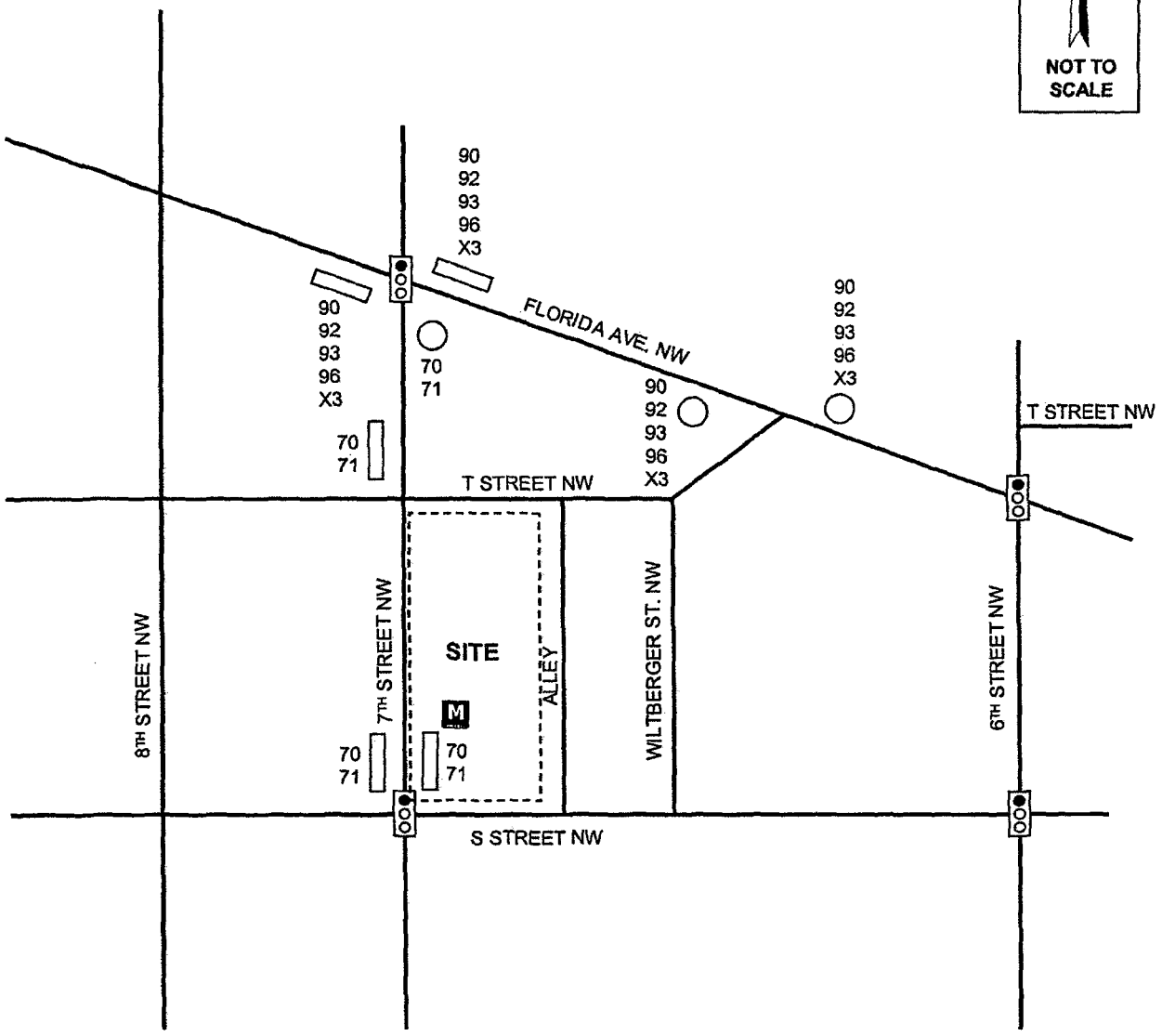
There are bus stops along Florida Avenue and along 7th Street in the study area. Bus shelters are provided at the following locations:

- On the southwest corner of 7th Street and Florida Avenue intersection.
- On the northwest corner of 7th and T Streets.
- On the northwest corner of 7th and S Streets.
- On the northeast corner of 7th and S Streets.

Figure 2 shows the existing bus stop locations at the study area intersections.

Future Transportation Improvements

Based on discussions with the DDOT staff, the intersection of 7th Street and T Street is planned to be signalized. This improvement was assumed to be in place in the analysis of future conditions.



Legend:

- M - Metrorail Station
- Traffic Signal
- Bus Shelter
- XX - Metrobus Route Number
- Bus Stop

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Existing Bus Stop Locations

Broadcast Center One
Washington, DC

Figure 2

DESCRIPTION OF PROPOSED DEVELOPMENT

Location

The proposed Broadcast Center One development is bordered by 7th Street to the west, T Street to the north, S Street to the south, and an alley to the east. The site is located along the east side of 7th Street between S and T Streets within the greater U Street Historic District. The proposed development consists of 180 residential units, 24,323 SF of retail and 103,083 SF of office space. These retail and office quantities represent slight increases from those contained in the February 2006 traffic report. The property currently contains the Shaw-Howard University Metro Station, retail buildings and a vacant lot.

Vehicle Access

Vehicle access is planned to be provided along the alley located along the east side of the property that connects T Street with S Street. This alley will operate one-way northbound north of the garage entrance, and two-way south of the garage entrance. The two-way operation south of the garage entrance was approved by DDOT.

Parking

The proposed development will contain a total of 177 parking spaces. This number of parking spaces will satisfy the zoning requirements and the practical requirements for this property, given its location at the Metrorail station.

Based on the amount of on-site parking being provided, there is expected to be no spillover of parking from this development into the surrounding community.

TRAFFIC VOLUMES

Traffic volumes used in this study include existing traffic volumes, the projection of traffic volumes to obtain background traffic volumes, estimated traffic generated by approved and unbuilt developments, and traffic generated by the proposed Broadcast Center One development to obtain total future traffic volumes. The horizon year for this study is 2009, which represents a year after the expected completion and occupancy of Broadcast Center One. The District of Columbia transportation staff directed that the weekday AM and PM commuter peak hours be studied. Intersections identified for study by District of Columbia Department of Transportation staff are as follows:

- 7th Street and Florida Avenue
- T Street and Florida Avenue
- 7th and T Streets
- 7th and S Streets

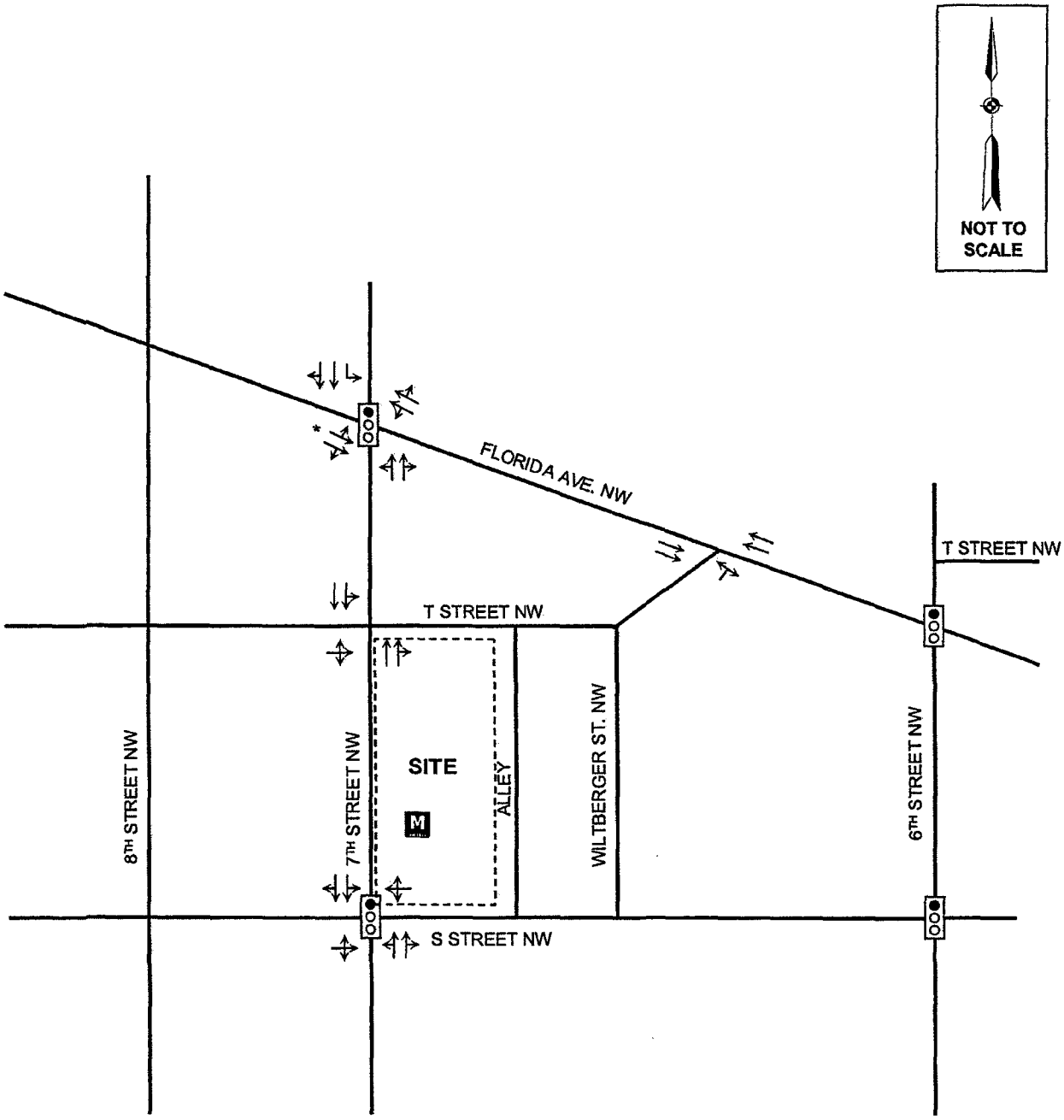
Figure 3 shows the lane designations at the study area intersections. The following sections describe the traffic volumes used in this study.

Existing Traffic Volumes

Traffic and pedestrian counts were conducted at the study area intersections in November 2005 between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM. These counts were used to establish current peak hour traffic conditions. The peak hours at each intersection were established by identifying the peak 60 minutes of traffic during the AM and PM peak hours. From these traffic counts, the peak study hours were identified for each intersection as follows:

- 7th Street and Florida Avenue – 8:00 to 9:00 AM, 4:15 to 5:15 PM
- 7th and T Streets – 8:00 to 9:00 AM, 4:30 to 5:30 PM
- 7th and S Streets – 8:00 to 9:00 AM, 4:30 to 5:30 PM
- Florida Avenue and T Street – 7:45 to 8:45 AM, 4:00 to 5:00 PM

The existing peak hour traffic volumes at the study intersections are shown on Figure 4. The appendix of this report contains the traffic count and pedestrian count summaries.



Legend:

→ - Travel Lane

* - Left Turns Restricted During AM and PM Peak Periods

- Traffic Signal

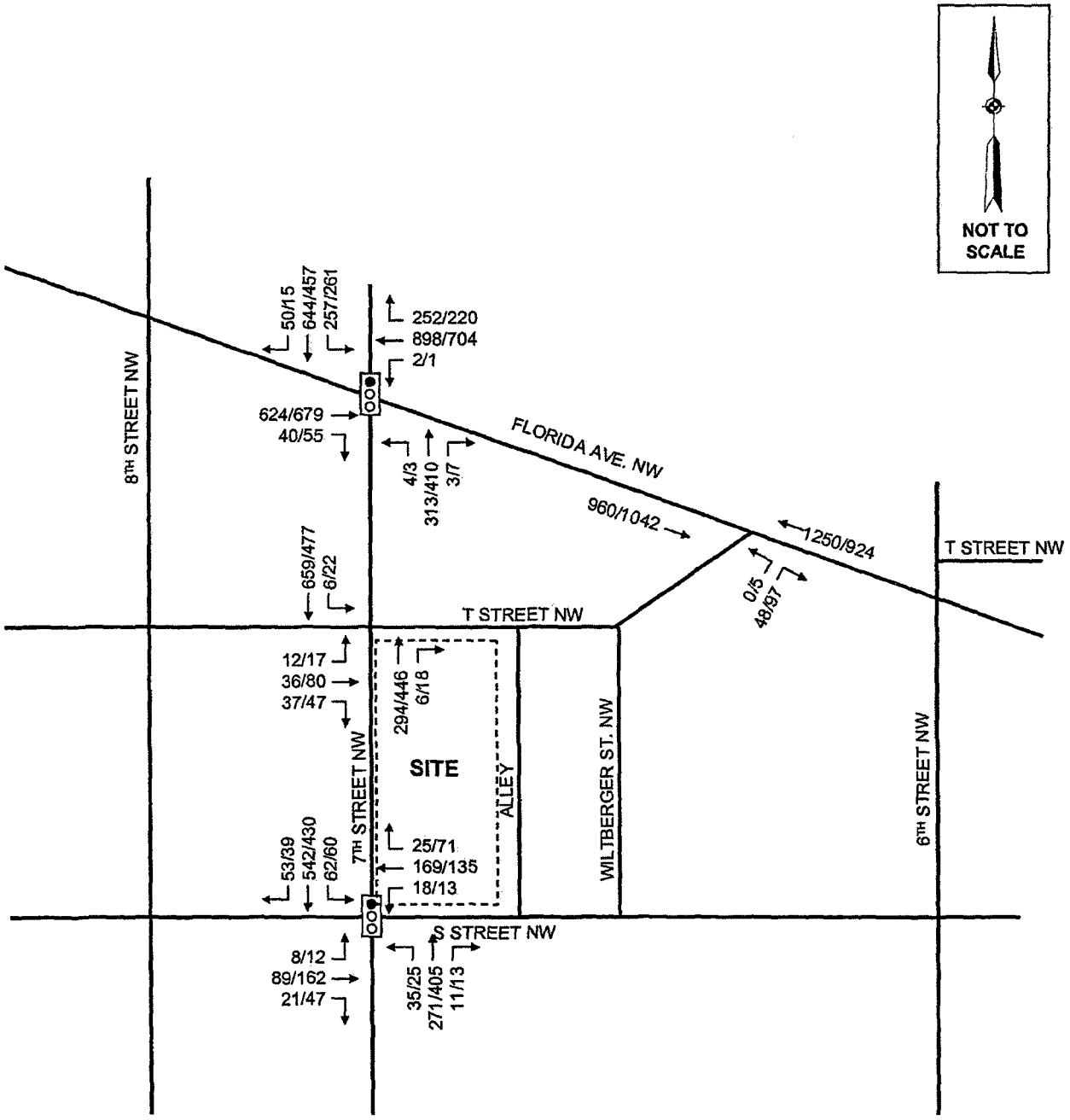
Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Existing Lane Designations

Broadcast Center One
Washington, DC

Figure 3



Legend:

xx/xx - AM/PM Weekday Peak Hour Traffic Volumes

- Traffic Signal

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Existing Peak Hour Traffic Volumes

Broadcast Center One
Washington, DC

Figure 4

Background Traffic Volumes

Background traffic volumes represent future traffic that would travel through the area intersections without the proposed Broadcast Center One development. Since the U Street Greater Historic District is undergoing redevelopment, growth in traffic to the projected horizon year of 2009 was estimated using a combination of yearly growth of through traffic and projected traffic from approved and unbuilt developments within the study area.

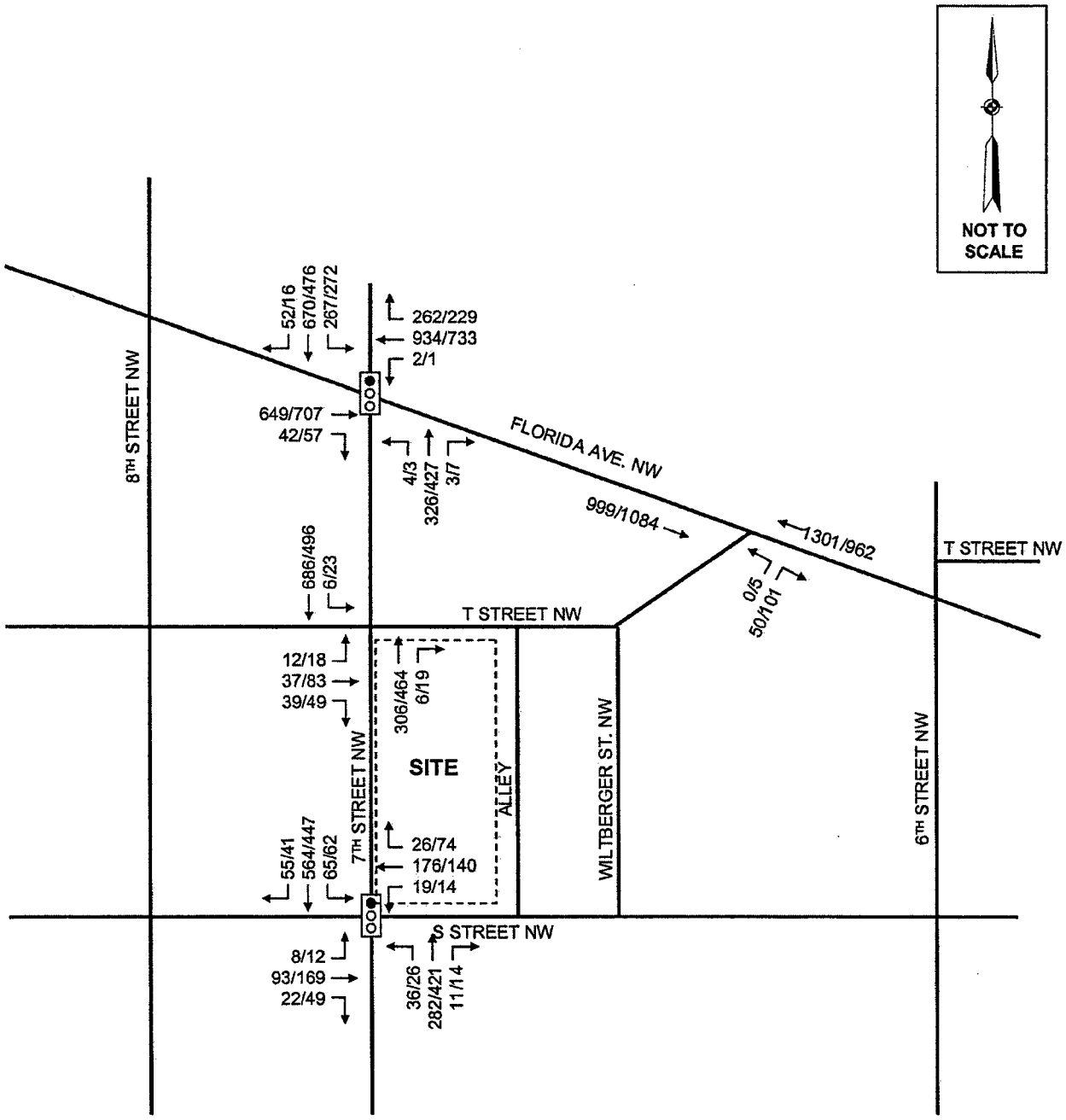
In order to represent the growth of through traffic resulting from development activity outside the study area, traffic volumes for each of the movements at the study intersections were increased by 1% per year to the horizon year of 2009.

The existing traffic volumes adjusted to reflect the yearly growth of through traffic are shown on Figure 5.

Approved and unbuilt developments included in the study were obtained through the District of Columbia Office of Planning. These developments were included due to their proximity to the proposed Broadcast Center One development and since they are imminent. A list of these developments along with their quantities is contained in Table 1. The locations of these developments are depicted on Figure 6.

Traffic generated by these developments was estimated using the *ITE Trip Generation Report* (7^{th} Edition). Reductions in trip generation were taken to reflect the urban setting of the area, the proximity to transit, and the opportunity for non-vehicular travel. The resulting trip generation rates for each approved and unbuilt development for this study are summarized in Table 1. It should be noted that the ITE equations were utilized where applicable, therefore rates for similar land uses will vary based on the quantities of these land uses.

The estimated traffic generated by the approved and unbuilt developments is summarized in Table 2.



Legend:

xx/xx - AM/PM Weekday Peak Hour Traffic Volumes

- Traffic Signal

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Adjusted Existing Traffic to Year 2009

Broadcast Center One
Washington, DC

Figure 5

1. Shaw Library
2. Atlantic Condos
3. Phyllis Wheatley Condos

NOT TO SCALE

Map Source:
ADC The Map People,
Permit Auth. No.: 20510180

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Approved and Unbuilt Development Location Map
Broadcast Center One
Washington, DC

Figure 6

Table 1 Trip Generation Rates Approved and Unbuilt Developments						
	AM Peak Hour			PM Peak Hour		
Land Use	**In**	**Out**	**Total**	**In**	**Out**	**Total**
1. Shaw Library – per 1,000 SF (15,000 SF)	0.20	0.07	0.27	0.88	0.87	1.75
2. Atlantic Condos – per dwelling unit (620 units)	0.02	0.12	0.14	0.12	0.06	0.18
3. Phyllis Wheatley Condos – per dwelling unit (117 units)	0.03	0.17	0.20	0.15	0.08	0.23

Trip rates per thousand square feet adjusted to reflect 75% non-driver mode share for Shaw Library.
Trip rates per residential unit adjusted to reflect 60% non-driver mode share for Atlantic Condos.
Trip rates per residential unit adjusted to reflect 60% non-driver mode share for Phyllis Wheatley Condos.

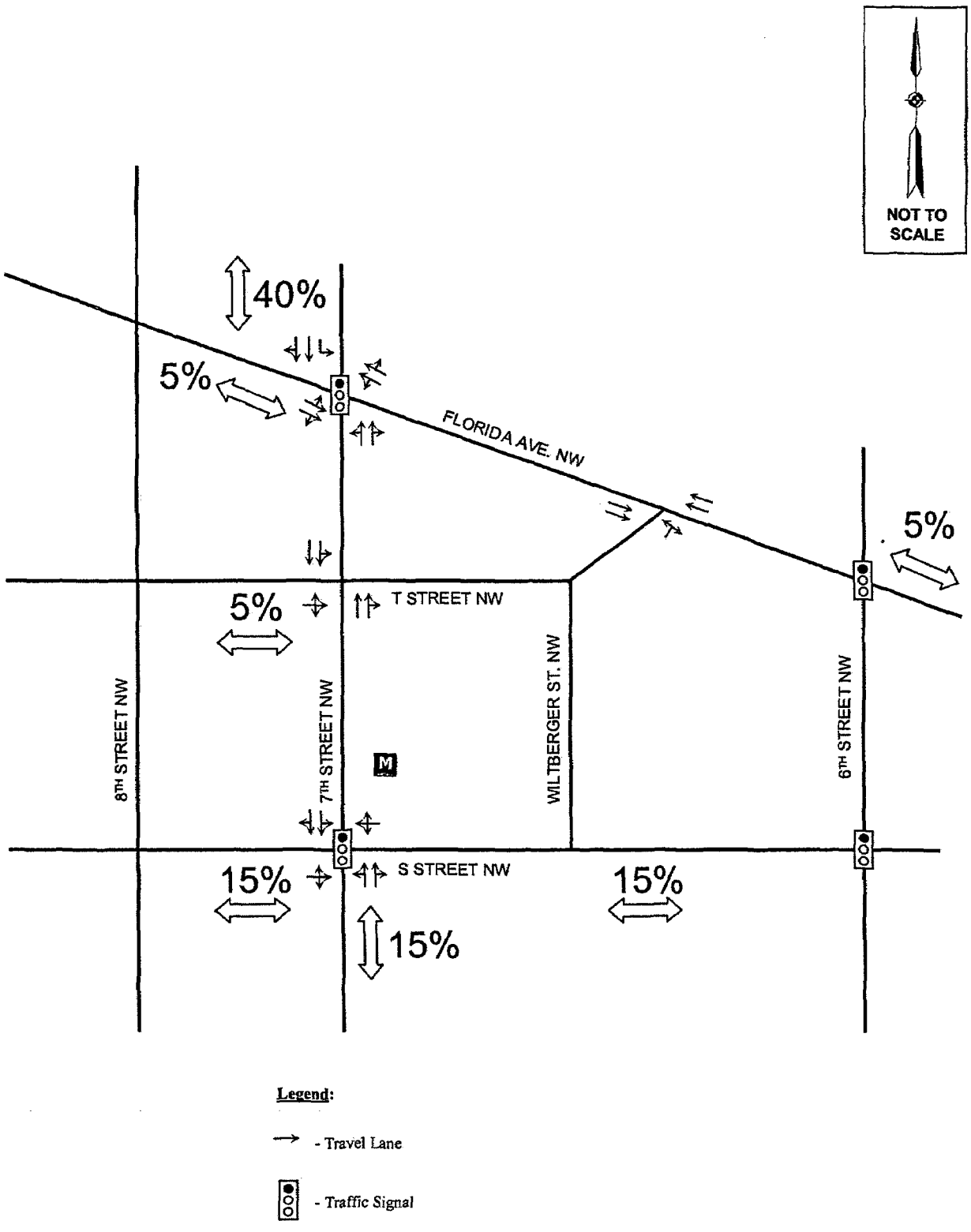
Table 2 Peak Hour Trips Approved and Unbuilt Developments						
	AM Peak Hour			PM Peak Hour		
Land Use	**In**	**Out**	**Total**	**In**	**Out**	**Total**
1. Shaw Library – 15,000 SF	3	1	4	13	13	26
2. Atlantic Condos – 620 residential units	15	74	89	72	36	108
3. Phyllis Wheatley Condos – 117 residential units	4	20	24	18	9	27
Total	**22**	**95**	**117**	**103**	**58**	**161**

The AM and PM peak hour trips generated by the approved and unbuilt developments were assigned to the area streets based upon existing traffic volume patterns in the study area and adjacent land use. The resulting percent distributions of generated trips are depicted on Figures 7 through 9 and summarized in Table 3.

Table 3
Distribution of Approved and Unbuilt Development Traffic

Direction To/From	Residential/Office	Retail
To/From North on 7th Street NW	40%	25%
To/From South on 7th Street NW	15%	25%
To/From West on Florida Avenue NW	5%	5%
To/From East on Florida Avenue NW	5%	5%
To/From West on T Street NW	5%	13%
To/From West on S Street NW	15%	15%
To/From East on S Street NW	15%	12%

The assignments of the trips generated by the approved and unbuilt developments are shown on Figure 10. These trips were added to the adjusted volumes that reflect the growth of existing traffic, shown in Figure 5. The resulting total background peak hour traffic volumes at the study area intersections are shown on Figure 11.

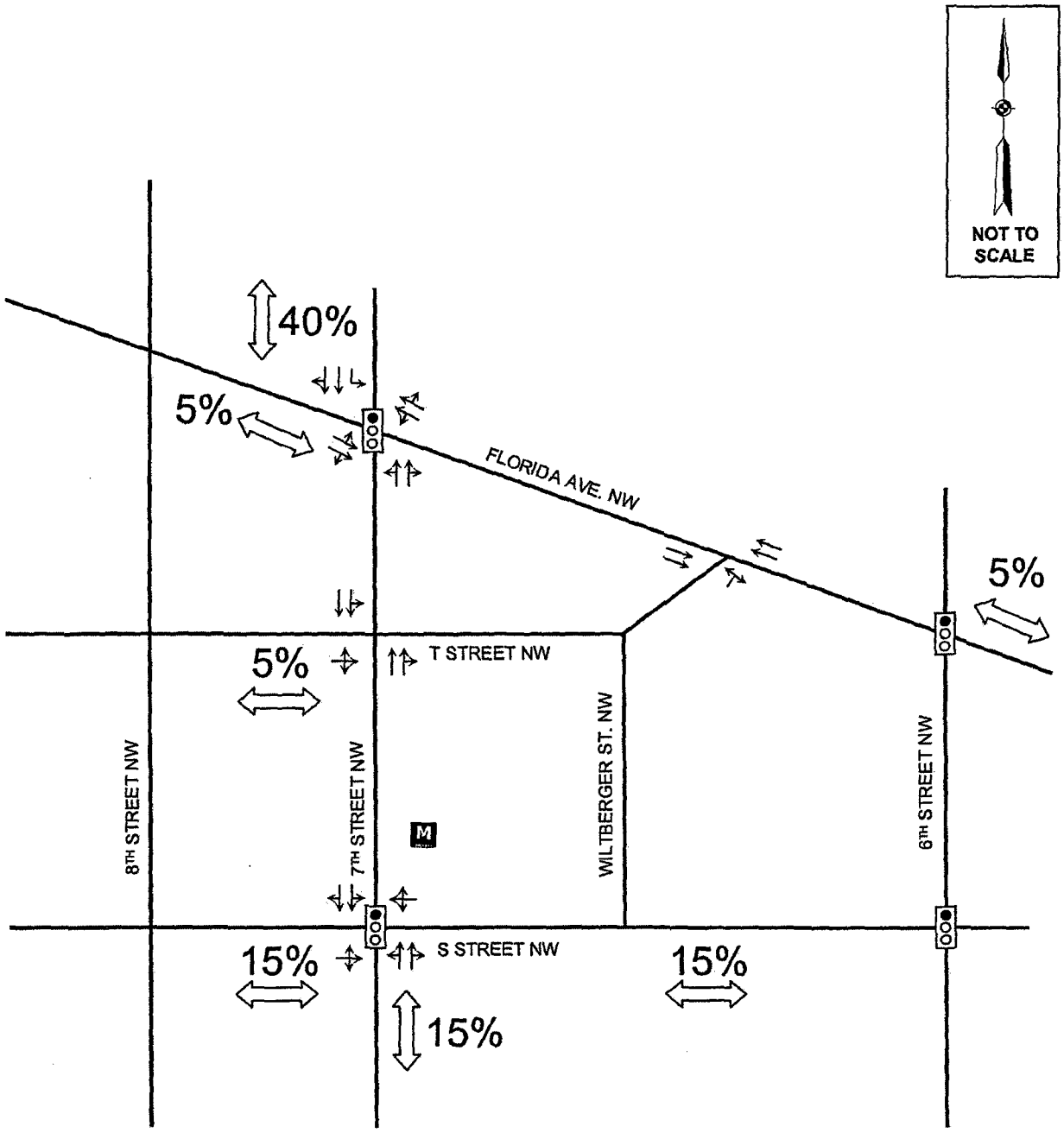


Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Residential Land Use Trip Distribution
Broadcast Center One
Washington, DC

Figure 7



Legend:

→ - Travel Lane

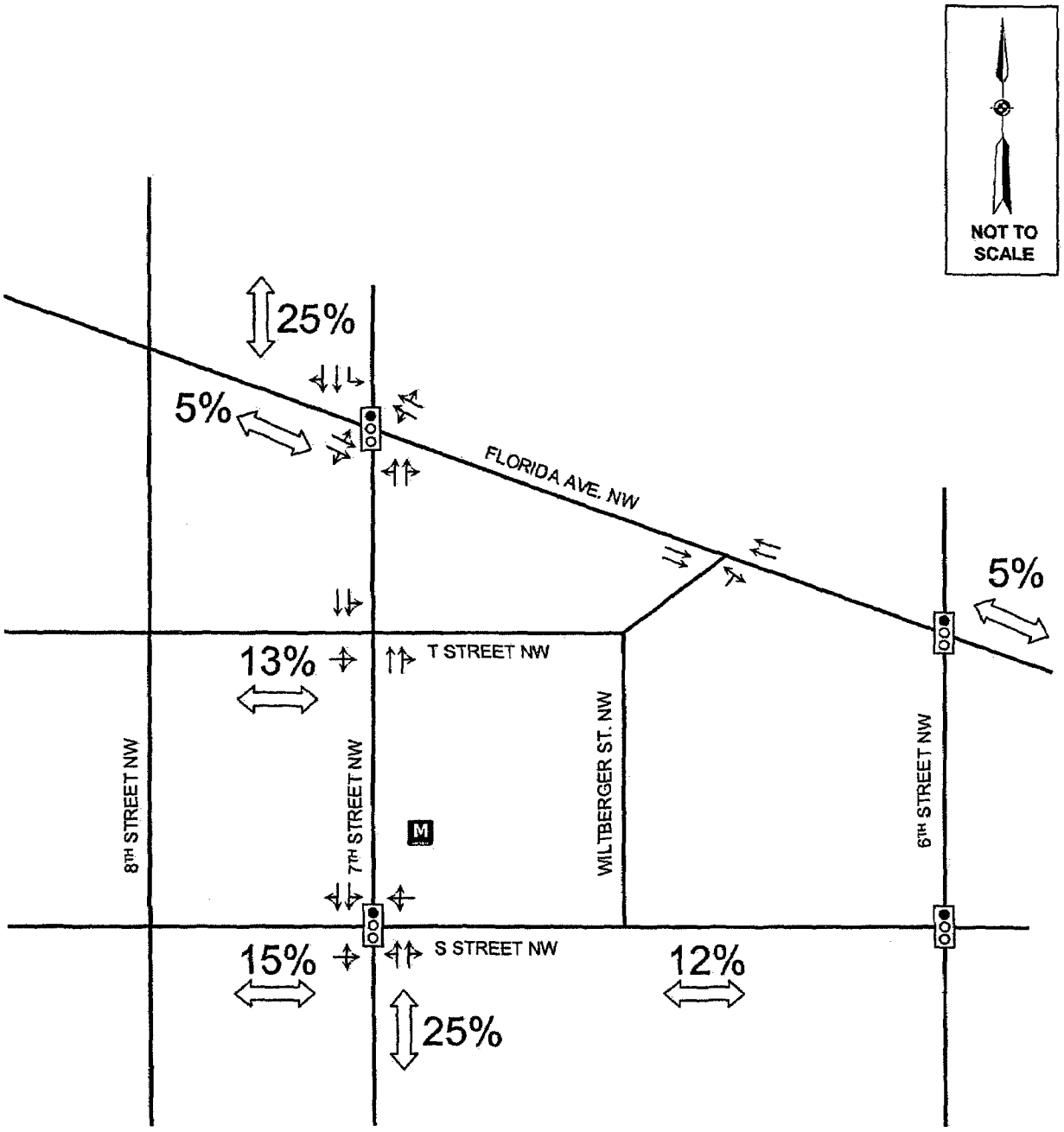
- Traffic Signal

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Office Land Use Trip Distribution
Broadcast Center One
Washington, DC

Figure 8



Legend:

→ - Travel Lane

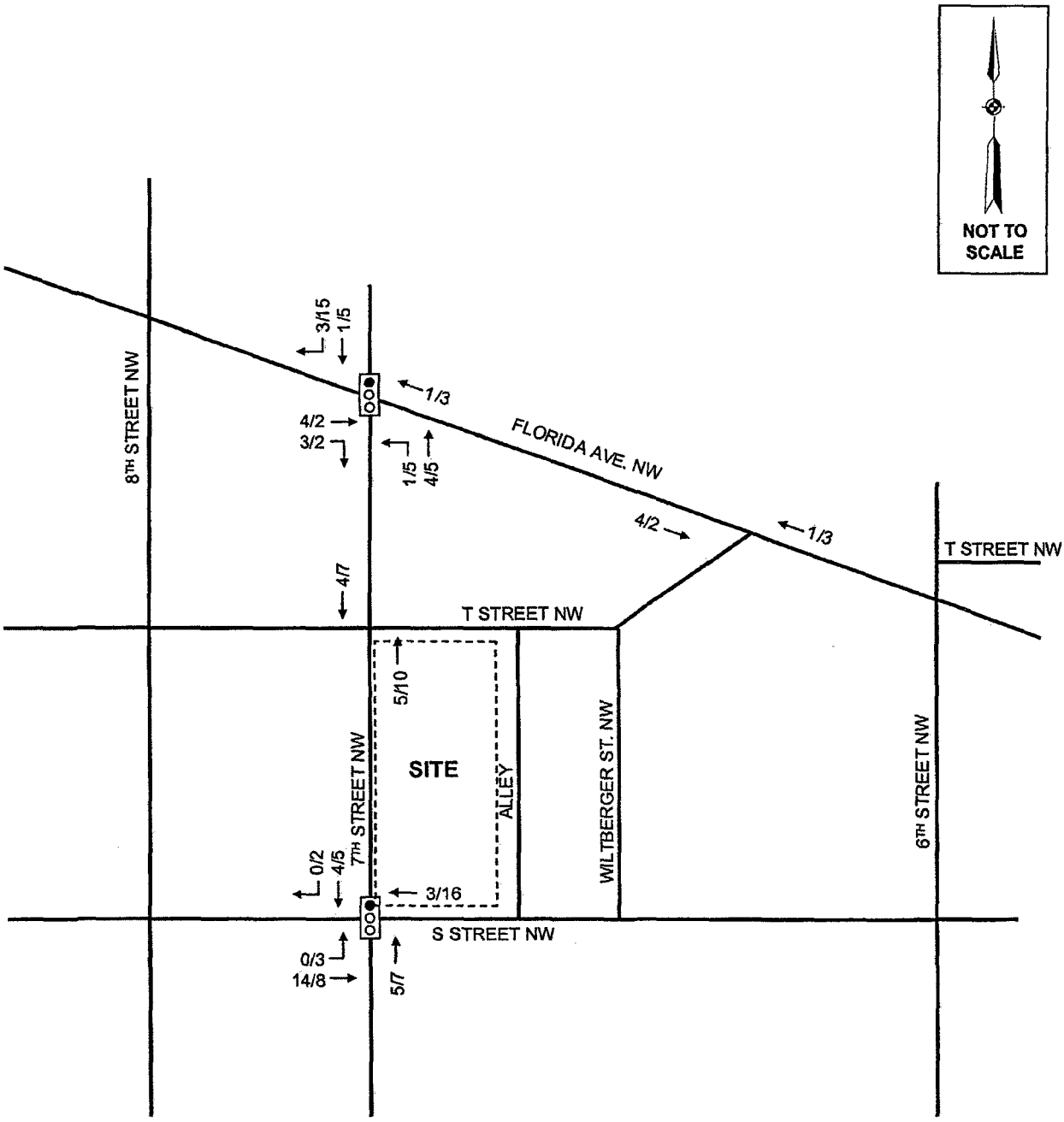
- Traffic Signal

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Retail Land Use Trip Distribution
Broadcast Center One
Washington, DC

Figure 9



Legend:

xx/xx - AM/PM Weekday Peak Hour Traffic Volumes

- Traffic Signal

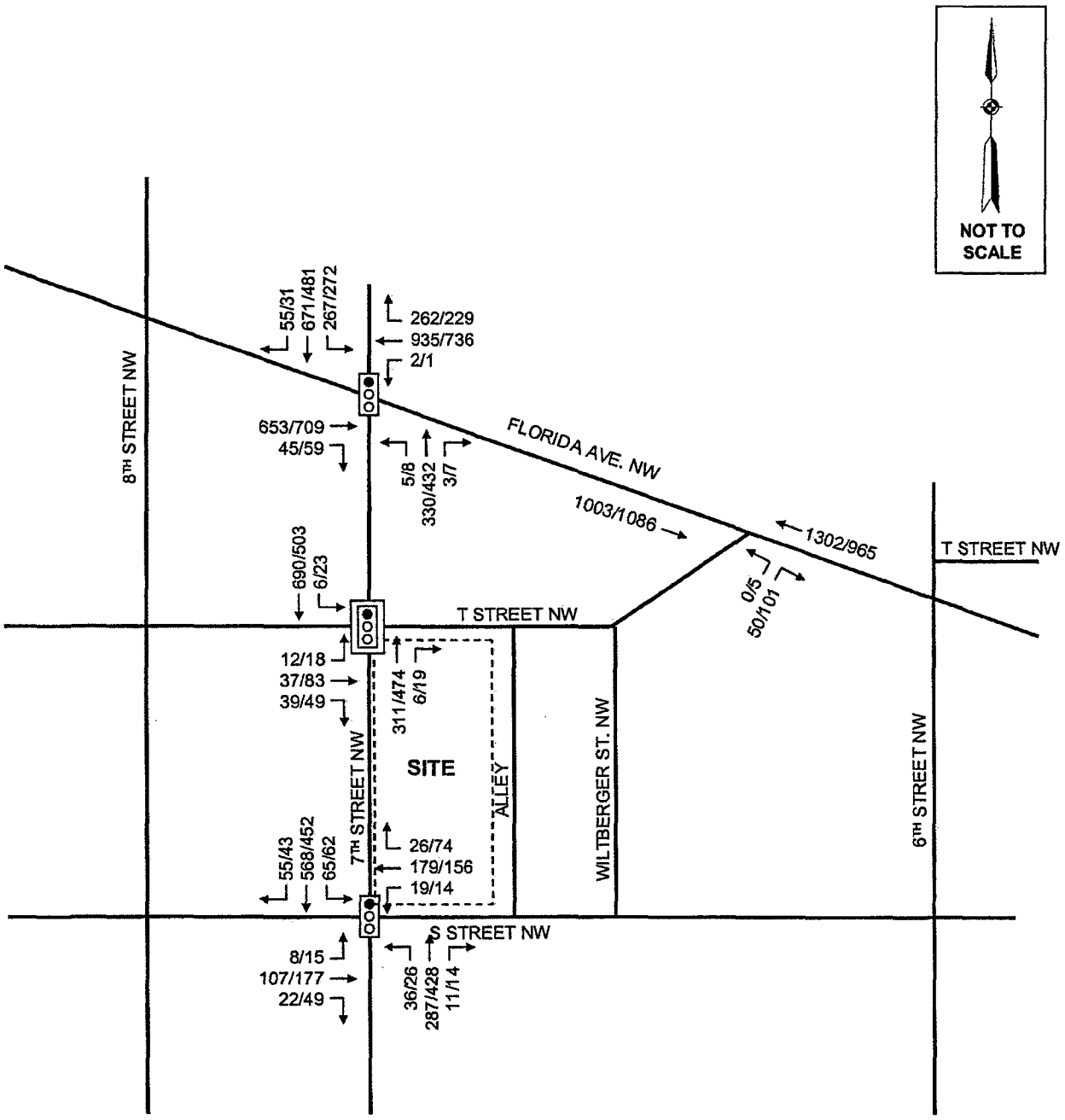
Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Traffic Generated by Approved and Unbuilt Developments

Broadcast Center One
Washington, DC

Figure 10



Legend:

xx/xx - AM/PM Weekday Peak Hour Traffic Volumes

- Traffic Signal

- Future Traffic Signal

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Total Background Peak Hour Traffic Volumes

Broadcast Center One
Washington, DC

Figure 11

Site Generated Traffic Volumes

Peak hour traffic volumes generated by the proposed development were calculated using the trip generation equations for Land Use Codes 230 (residential condominium/townhouse), 814 (specialty retail center) and 710 (general office building) contained in the ITE Trip Generation Report. The resulting trip generation rates for each land use, which includes reduction for non-driver trips similar to the calculations for the approved and unbuilt developments, are shown in Table 4.

Table 4
Trip Generation Rates
Broadcast Center One Development

	AM Peak Hour			PM Peak Hour		
Land Use	**In**	**Out**	**Total**	**In**	**Out**	**Total**
180 Residential Units	0.03	0.15	0.19	0.14	0.07	0.21
24,323 SF Retail	0.21	0.21	0.42	0.74	0.90	1.64
103,083 SF Office	0.81	0.12	0.93	0.16	0.78	0.94

Trip rates per residential unit adjusted to reflect 60% non-driver mode share for Residential.
Trip rates per thousand square feet adjusted to reflect 50% non-driver mode share for Retail.
Trip rates per thousand square feet adjusted to reflect 50% non-driver mode share for Office.

The estimated traffic generated by the Broadcast Center is summarized in Table 5.

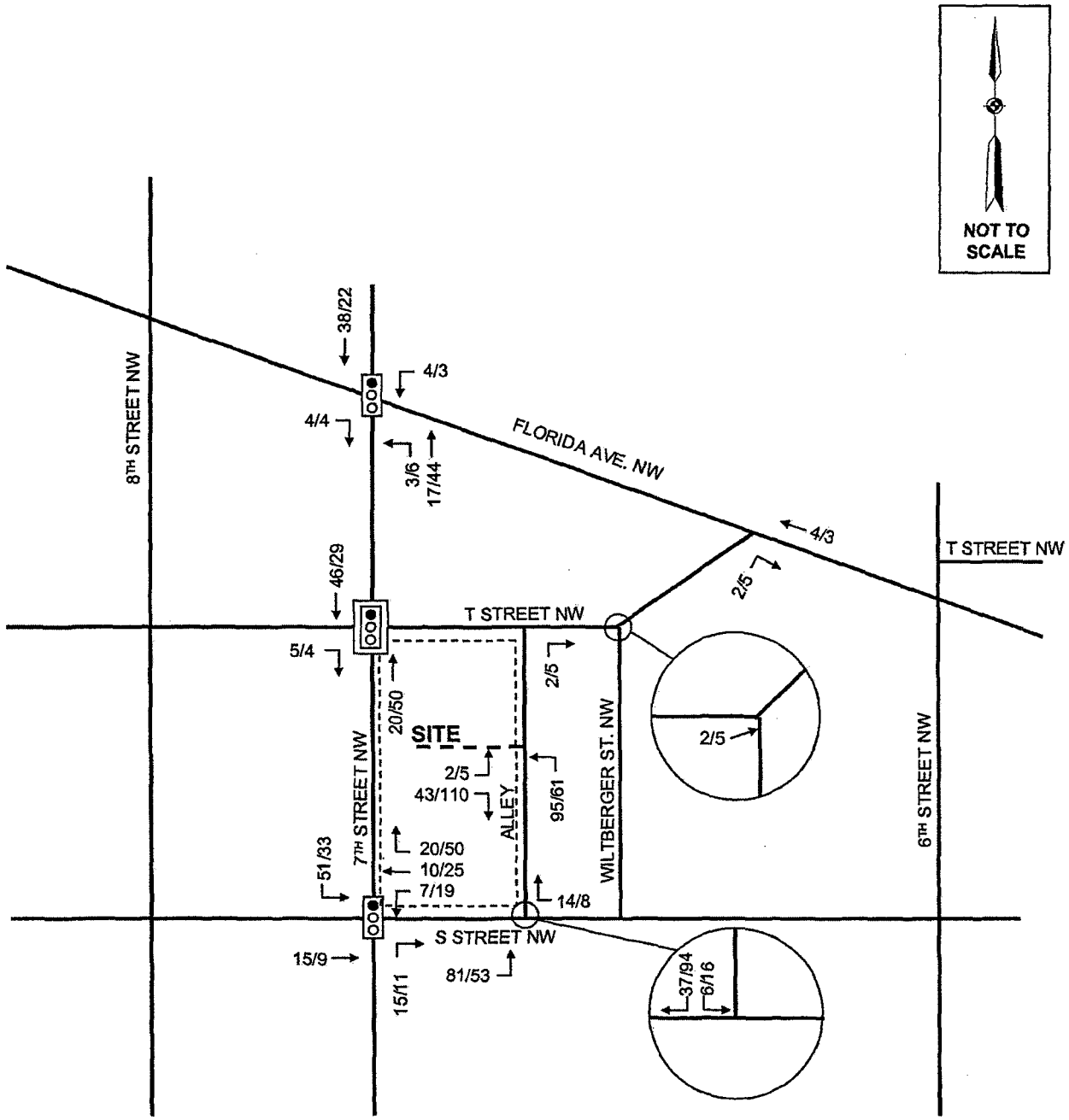
Table 5
Peak Hour Trips
Broadcast Center One Development

	AM Peak Hour			PM Peak Hour		
Land Use	**In**	**Out**	**Total**	**In**	**Out**	**Total**
180 Residential Units	6	28	34	26	13	39
24,323 SF Retail	5	5	10	18	22	40
103,083 SF Office	84	12	96	17	80	97
Total	**95**	**45**	**140**	**61**	**115**	**176**

The trips were assigned to the study area intersections using the distributions depicted on Figures 7 through 9 and summarized in Table 3. Figure 12 shows the site trips at the study area intersections. These trip assignments are based on the two-way operation of the alley south of the garage entrance.

Total Future Traffic Volumes

Total future traffic volumes represent future traffic volumes with the proposed Broadcast Center One development in place. These volumes were calculated by adding the site generated trips (shown on Figure 12) to the background traffic volumes (shown on Figure 11). The resulting total future peak hour traffic volumes are shown on Figure 13.



Legend:

xx/xx - AM/PM Weekday Peak Hour Traffic Volumes

- Traffic Signal

- Future Traffic Signal

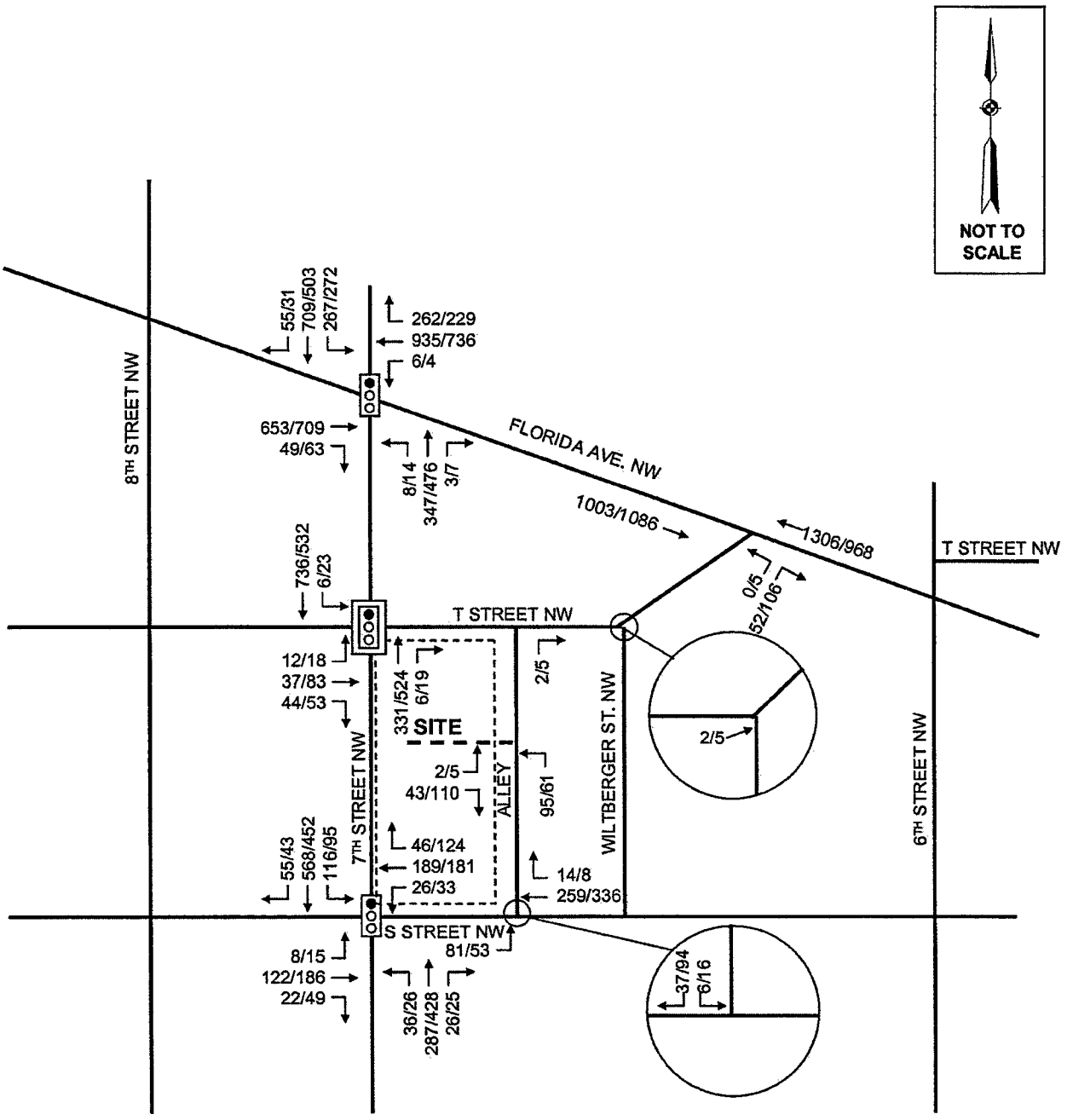
Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Site Generated Peak Hour Traffic Volumes

Broadcast Center One
Washington, DC

Figure 12



Legend:

xx/xx - AM/PM Weekday Peak Hour Traffic Volumes

- Traffic Signal

- Future Traffic Signal

Kimley-Horn and Associates, Inc.

KHA Project # 110081000

Total Future Peak Hour Traffic Volumes

Broadcast Center One
Washington, DC

Figure 13

ASSESSMENT OF TRAFFIC CONDITIONS

The following is a discussion of the assessment of traffic conditions.

Intersection Capacity Analyses

Intersection capacity analyses were conducted for existing, background, and total future traffic volumes. The capacity analyses were conducted using Synchro Software Package, which utilizes methodologies in the *Highway Capacity Manual (2000 Edition)* (HCM) for signalized and unsignalized intersections. The analyses of existing, background, and total future traffic volumes were based on the existing lane uses and existing signal operations at the study area intersections. Under background and total future conditions the 7th Street and T Street intersection was assumed to be signalized.

According to the HCM, capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a fixed time duration. The operating conditions are described by Level-of-Service (LOS), which is defined as a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through F, with A being the best and F the worst. The District attempts to maintain a level of service D and better during the peak traffic hours.

The results of the capacity analyses are summarized in Table 6 for the study area intersections. Analysis results show overall level of service and delay information for each intersection for the existing, background, and total future traffic volumes. The Synchro analysis worksheets are contained in the Appendix.

Table 6 Level of Service Summary at Study Intersections						
Intersection	**Existing 2005 Conditions**		**2009 Background Conditions**		**2009 Total Future Conditions**	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**
Florida Avenue NW and 7th Street NW	C (28.3)	C (20.9)	C (32.2)	C (21.7)	C (32.7)	C (22.0)
Florida Avenue NW and T Street NW	A (0.2)	A (0.7)	A (0.3)	A (0.7)	A (0.3)	A (0.7)
7th Street NW and S Street NW	B (12.0)	B (13.9)	B (12.3)	B (14.3)	B (13.4)	B (15.5)
7th Street NW and T Street NW	A (3.7)	F (85.4)	B (12.9)*	B (12.6)*	B (13.4)*	B (13.2)*

C (28.3) – Level of Service (Seconds of Delay per Vehicle)

* - With Signalization

These results show that under existing conditions, the study area intersections operate at satisfactory levels of service with the exception of the 7th Street and T Street intersection which operates at LOS F during the PM peak hour. Signalizing the intersection of 7th Street and T Street improves the operation by reducing the eastbound approach delay. The capacity analyses of background traffic volumes result in levels of service ranging from A to C.

The addition of the traffic generated by the Broadcast Center One development will result in only a slight change in the operation of the area intersections. The proposed development will result in marginal increases in vehicle delay. There will be no change in the levels of service. The area intersections will continue to operate at levels of service that range from A to C during the AM and PM peak hours, well above the satisfactory level of service D condition.

Pedestrian Impact

There are existing sidewalks along all of the adjacent streets. The proposed Broadcast Center One development will enhance the sidewalk connections to these adjacent streets.

CONCLUSIONS

As a result of this study, it is concluded that the area intersections will all operate at satisfactory conditions with the Broadcast Center One development in place. The proposed development will result in no change in the intersection levels of service. The intersections will continue to operate at better than level of service D. The increases in vehicle delay will be marginal. The proposed development will have a negligible effect on the area intersections.

The site and the surrounding area are well served by transit including Metrorail and Metrobus. Pedestrian connections in the area will be enhanced by this development. As a result, there will be ample opportunities for travel by alternatives to the automobile.

Sufficient parking will be provided to satisfy the demand for Broadcast Center One. As a result, there is expected to be no spillover of parking into the surrounding community.

APPENDIX

Kimley-Horn and Associates, Inc.

Intersection Turning Movement Count Summary

Intersection: Florida Avenue NW and 7th Street NW

Date Counted: 16-Nov-05
Day of Week: Wednesday
Weather: Cloudy and Cool

Jurisdiction: Washington, DC
Counted by: MDB/AW/TJ

	Southbound 7th Street					Westbound Florida Avenue					Northbound 7th Street					Eastbound Florida Avenue					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
7:00 AM	33	118	2	2	*153*	0	178	55	34	*233*	0	57	1	16	*58*	0	110	4	3	*114*	558
7:15 AM	47	112	7	14	*168*	0	203	56	47	*259*	0	60	0	7	*60*	0	140	6	18	*146*	631
7:30 AM	59	119	5	7	*183*	4	234	53	80	*291*	0	61	1	9	*62*	0	151	10	24	*161*	697
7:45 AM	75	142	9	23	*226*	0	257	54	109	*311*	0	67	0	15	*67*	0	147	8	19	*155*	759
8:00 AM	64	158	10	30	*232*	0	225	67	141	*292*	1	76	1	28	*78*	0	160	16	67	*176*	778
8:15 AM	61	160	13	24	*234*	1	245	66	148	*312*	0	68	1	17	*69*	0	174	10	32	*184*	799
8:30 AM	58	160	14	25	*232*	0	213	54	124	*267*	1	80	0	27	*81*	0	146	7	32	*153*	733
8:45 AM	74	166	13	30	*253*	1	215	65	130	*281*	2	89	1	25	*92*	0	144	7	24	*151*	777
Hourly Totals (Start Time)																					
7:00 AM	214	491	23	46	*728*	4	872	218	270	*1094*	0	245	2	47	*247*	0	548	28	64	*576*	2645
7:15 AM	245	531	31	74	*807*	4	919	230	377	*1153*	1	264	2	59	*267*	0	598	40	128	*638*	2865
7:30 AM	259	579	37	84	*875*	5	961	240	478	*1206*	1	272	3	69	*276*	0	632	44	142	*676*	3033
7:45 AM	258	620	46	102	*924*	1	940	241	522	*1182*	2	291	2	67	*295*	0	627	41	150	*668*	3069
8:00 AM	257	644	50	109	*951*	2	868	252	543	*1152*	4	313	3	97	*320*	0	624	40	155	*664*	3087
8:15 AM	193	486	40	79	*719*	2	673	185	402	*860*	3	237	2	69	*242*	0	464	24	88	*488*	2309
8:30 AM	132	326	27	55	*485*	1	428	119	254	*548*	3	169	1	52	*173*	0	290	14	56	*304*	1510
8:45 AM	74	166	13	30	*253*	1	215	65	130	*281*	2	89	1	25	*92*	0	144	7	24	*151*	777
Peak Hour (Start Time)																					
8:00 AM	257	644	50	109	*951*	2	868	252	543	*1152*	4	313	3	97	*320*	0	624	40	155	*664*	3087

	Southbound 7th Street					Westbound Florida Avenue					Northbound 7th Street					Eastbound Florida Avenue					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
4:00 PM	69	118	2	41	*189*	1	158	58	153	*217*	1	80	5	50	*86*	0	195	19	52	*214*	706
4:15 PM	65	117	5	18	*187*	0	173	57	127	*230*	3	93	2	37	*98*	0	157	13	51	*170*	685
4:30 PM	69	110	3	23	*182*	0	167	59	114	*226*	0	102	4	36	*106*	0	189	19	38	*208*	722
4:45 PM	56	101	5	32	*162*	1	177	53	167	*231*	0	104	1	41	*105*	0	170	9	46	*179*	677
5:00 PM	71	129	2	20	*202*	0	187	51	150	*238*	0	111	0	29	*111*	0	163	14	38	*177*	728
5:15 PM	56	92	4	16	*152*	1	180	50	124	*231*	2	71	2	37	*75*	0	185	17	48	*202*	660
5:30 PM	59	112	4	21	*175*	0	162	74	102	*236*	0	86	12	36	*98*	0	182	19	31	*201*	710
5:45 PM	57	84	2	15	*143*	0	178	40	76	*216*	0	90	2	27	*92*	0	145	10	23	*155*	606
Hourly Totals (Start Time)																					
4:00 PM	259	446	15	114	*720*	2	675	227	561	*904*	4	379	12	164	*395*	0	711	60	188	*771*	2790
4:15 PM	261	457	15	93	*733*	1	704	220	558	*925*	3	410	7	143	*420*	0	679	55	174	*734*	2812
4:30 PM	252	432	14	93	*698*	2	711	213	555	*926*	2	388	7	143	*397*	0	707	59	171	*768*	2787
4:45 PM	242	434	15	91	*691*	2	705	228	543	*936*	2	372	15	143	*389*	0	700	59	163	*759*	2775
5:00 PM	243	417	12	74	*672*	1	705	215	452	*921*	2	358	16	129	*376*	0	675	60	140	*735*	2704
5:15 PM	172	288	10	54	*470*	1	518	164	302	*683*	2	247	16	100	*265*	0	512	48	102	*558*	1976
5:30 PM	116	196	6	36	*318*	0	338	114	178	*452*	0	176	14	63	*190*	0	327	29	54	*356*	1316
5:45 PM	57	84	2	15	*143*	0	178	40	76	*216*	0	90	2	27	*92*	0	145	10	23	*155*	606
Peak Hour (Start Time)																					
4:15 PM	261	457	15	93	*733*	1	704	220	558	*925*	3	410	7	143	*420*	0	679	55	174	*734*	2812

Kimley-Horn and Associates, Inc.

Intersection Turning Movement Count Summary

Intersection: Florida Avenue NW and T Street NW

Date Counted: 16-Nov-05
Day of Week: Wednesday
Weather: Cloudy and Cool

Jurisdiction: Washington, DC
Counted by: RD

	Southbound Florida Avenue					Westbound					Northbound Florida Avenue					Eastbound T Street					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
7:00 AM	0	134	0	0	*134*	0	0	0	0	*0*	0	247	0	0	*247*	0	0	5	4	*5*	386
7:15 AM	0	205	1	0	*206*	0	0	0	1	*0*	0	298	0	2	*298*	0	0	7	3	*7*	511
7:30 AM	0	198	0	0	*198*	0	0	0	4	*0*	0	320	0	2	*320*	1	0	11	2	*12*	530
7:45 AM	0	246	0	3	*246*	0	0	0	8	*0*	0	342	0	1	*342*	0	0	6	3	*6*	594
8:00 AM	0	227	0	1	*227*	0	0	0	10	*0*	0	288	0	7	*288*	0	0	6	8	*6*	519
8:15 AM	0	240	0	0	*240*	0	0	0	5	*0*	0	305	0	0	*305*	0	0	17	3	*17*	562
8:30 AM	0	247	0	3	*247*	0	0	0	5	*0*	0	317	0	0	*317*	0	0	19	4	*19*	583
8:45 AM	0	218	0	0	*218*	0	0	0	7	*0*	0	283	0	1	*283*	2	0	14	7	*16*	517
Hourly Totals (Start Time)																					
7:00 AM	0	783	1	3	784	0	0	0	13	0	0	1207	0	5	1207	1	0	29	12	30	2021
7:15 AM	0	876	1	4	877	0	0	0	23	0	0	1246	0	12	1246	1	0	30	16	31	2154
7:30 AM	0	911	0	4	911	0	0	0	27	0	0	1253	0	10	1253	1	0	40	16	41	2205
7:45 AM	0	960	0	7	960	0	0	0	28	0	0	1250	0	8	1250	0	0	48	18	48	2258
8:00 AM	0	932	0	4	932	0	0	0	27	0	0	1191	0	8	1191	2	0	58	22	58	2181
8:15 AM	0	705	0	3	705	0	0	0	17	0	0	905	0	1	905	2	0	50	14	52	1662
8:30 AM	0	465	0	3	465	0	0	0	12	0	0	600	0	1	600	2	0	33	11	35	1109
8:45 AM	0	218	0	0	218	0	0	0	7	0	0	283	0	1	283	2	0	14	7	16	517
Peak Hour (Start Time)																					
7:45 AM	0	960	0	7	960	0	0	0	28	0	0	1250	0	8	1250	0	0	48	18	48	2258

	Southbound Florida Avenue					Westbound					Northbound Florida Avenue					Eastbound T Street					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
4:00 PM	0	272	0	0	*272*	0	0	0	8	*0*	0	226	0	1	*226*	3	0	25	10	*28*	526
4:15 PM	0	252	0	0	*252*	0	0	0	3	*0*	0	231	0	4	*231*	1	0	25	2	*26*	509
4:30 PM	0	273	0	0	*273*	0	0	0	6	*0*	0	233	0	2	*233*	0	0	25	2	*25*	531
4:45 PM	0	245	0	0	*245*	0	0	0	5	*0*	0	234	0	2	*234*	1	0	22	5	*23*	502
5:00 PM	0	240	0	0	*240*	0	0	0	6	*0*	0	212	0	0	*212*	1	0	22	3	*23*	475
5:15 PM	0	230	0	0	*230*	0	0	0	5	*0*	0	240	0	3	*240*	2	0	28	5	*30*	500
5:30 PM	0	235	0	0	*235*	0	0	0	1	*0*	2	242	0	1	*244*	1	0	24	4	*25*	504
5:45 PM	0	223	0	0	*223*	0	0	0	2	*0*	0	229	0	1	*229*	1	0	21	6	*22*	474
Hourly Totals (Start Time)																					
4:00 PM	0	1042	0	0	1042	0	0	0	20	0	0	924	0	9	924	5	0	97	19	102	2068
4:15 PM	0	1010	0	0	1010	0	0	0	20	0	0	910	0	8	910	3	0	94	12	97	2017
4:30 PM	0	988	0	0	988	0	0	0	22	0	0	919	0	7	919	4	0	97	15	101	2008
4:45 PM	0	950	0	0	950	0	0	0	17	0	2	928	0	6	930	5	0	96	17	101	1981
5:00 PM	0	928	0	0	928	0	0	0	14	0	2	923	0	5	925	5	0	95	18	100	1953
5:15 PM	0	688	0	0	688	0	0	0	8	0	2	711	0	5	713	4	0	73	15	77	1478
5:30 PM	0	458	0	0	458	0	0	0	3	0	2	471	0	2	473	2	0	46	10	47	978
5:45 PM	0	223	0	0	223	0	0	0	2	0	0	229	0	1	229	1	0	21	6	22	474
Peak Hour (Start Time)																					
4:00 PM	0	1042	0	0	1042	0	0	0	20	0	0	924	0	9	924	5	0	97	19	102	2068

Kimley-Horn and Associates, Inc.

Intersection Turning Movement Count Summary

Intersection: 7th Street NW and S Street NW

Date Counted: 22-Nov-05
Day of Week: Tuesday
Weather: Cloudy and Cool

Jurisdiction: Washington, DC
Counted by: MDB, TC

	Southbound 7th Street					Westbound S Street					Northbound 7th Street					Eastbound S Street					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
7:00 AM	14	84	10	7	*108*	0	22	3	5	*25*	5	59	1	2	*65*	1	4	4	4	*9*	207
7:15 AM	18	95	3	3	*116*	2	31	5	3	*38*	4	64	2	1	*70*	1	9	3	11	*13*	237
7:30 AM	13	101	7	10	*121*	3	32	9	12	*44*	3	42	0	2	*45*	1	7	5	9	*13*	223
7:45 AM	19	122	14	8	*155*	1	34	16	5	*51*	7	69	3	3	*79*	3	10	5	9	*18*	303
8:00 AM	18	122	8	15	*148*	2	44	7	10	*53*	5	82	4	6	*91*	5	15	6	4	*26*	318
8:15 AM	21	159	18	6	*198*	5	42	4	11	*51*	10	59	3	6	*72*	1	21	8	13	*30*	351
8:30 AM	10	123	14	11	*147*	5	52	9	11	*66*	9	69	2	4	*80*	1	26	5	9	*32*	325
8:45 AM	13	138	13	6	*164*	6	31	5	12	*42*	11	61	2	6	*74*	1	27	2	6	*30*	310
Hourly Totals (Start Time)																					
7:00 AM	64	402	34	28	508	6	119	33	25	158	19	234	6	8	259	6	30	17	33	53	978
7:15 AM	66	440	32	36	540	8	141	37	30	188	19	257	9	12	285	10	41	19	33	70	1081
7:30 AM	71	504	47	39	622	11	152	36	38	199	25	252	10	17	287	10	53	24	35	87	1195
7:45 AM	68	526	54	40	648	13	172	36	37	221	31	279	12	19	322	10	72	24	35	106	1297
8:00 AM	62	542	53	38	657	18	169	25	44	212	35	271	11	22	317	8	89	21	32	118	1304
8:15 AM	44	420	45	23	509	16	125	18	34	159	30	189	7	16	226	3	74	15	28	92	986
8:30 AM	23	261	27	17	311	11	83	14	23	108	20	130	4	10	154	2	53	7	15	62	635
8:45 AM	13	138	13	6	164	6	31	5	12	42	11	61	2	6	74	1	27	2	6	30	310
Peak Hour (Start Time)																					
8:00 AM	62	542	53	38	657	18	169	25	44	212	35	271	11	22	317	8	89	21	32	118	1304

	Southbound 7th Street					Westbound S Street					Northbound 7th Street					Eastbound S Street					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
4:00 PM	11	106	6	14	*123*	4	27	8	19	*39*	5	100	1	15	*106*	0	31	4	9	*35*	303
4:15 PM	15	101	17	6	*133*	5	16	17	7	*38*	8	81	3	5	*92*	2	40	8	14	*49*	311
4:30 PM	11	95	8	7	*114*	1	34	16	21	*51*	4	117	3	11	*124*	4	37	10	17	*51*	340
4:45 PM	17	116	10	3	*143*	4	37	14	8	*55*	8	105	2	5	*113*	1	45	11	16	*57*	368
5:00 PM	19	109	8	6	*136*	4	20	25	13	*49*	9	105	4	10	*118*	4	40	17	14	*61*	364
5:15 PM	13	110	13	3	*136*	4	44	16	21	*64*	8	78	4	8	*88*	3	40	9	16	*52*	340
5:30 PM	14	93	9	6	*116*	5	47	14	17	*66*	6	89	12	10	*107*	0	37	8	4	*45*	334
5:45 PM	15	102	6	3	123	7	37	13	7	*57*	12	100	3	3	*115*	7	40	13	8	*60*	355
Hourly Totals (Start Time)																					
4:00 PM	54	418	41	30	513	14	114	55	56	183	23	403	9	36	435	7	153	31	58	191	1322
4:15 PM	62	421	43	22	528	14	107	72	50	193	27	408	12	31	447	11	162	44	63	217	1383
4:30 PM	60	430	39	19	529	13	135	71	64	219	25	405	13	34	443	12	162	47	65	221	1412
4:45 PM	63	428	40	18	531	17	148	69	60	234	27	377	22	33	426	8	162	45	52	215	1406
5:00 PM	61	414	36	18	511	20	148	68	58	236	33	372	23	31	428	14	157	47	42	218	1393
5:15 PM	42	305	28	12	375	16	128	43	45	187	24	267	19	21	310	10	117	30	28	157	1029
5:30 PM	29	195	15	9	238	12	84	27	24	123	18	189	15	13	222	7	77	21	12	105	689
5:45 PM	15	102	6	3	123	7	37	13	7	57	12	100	3	3	115	7	40	13	8	60	355
Peak Hour (Start Time)																					
4:30 PM	60	430	39	19	529	13	135	71	64	219	25	405	13	34	443	12	162	47	65	221	1412

Kimley-Horn and Associates, Inc.

Intersection Turning Movement Count Summary

Intersection: 7th Street NW and T Street NW

Date Counted: 22-Nov-05
Day of Week: Thursday
Weather: Sunny and Cool

Jurisdiction: Washington, DC
Counted by: RD/KD/AW

	Southbound 7th Street					Westbound T Street					Northbound 7th Street					Eastbound T Street					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
7:00 AM	1	79	0	6	*80*	0	0	0	32	*0*	0	72	3	5	*75*	2	2	3	14	*7*	162
7:15 AM	4	115	0	15	*119*	0	0	0	36	*0*	0	70	1	3	*71*	1	9	8	4	*18*	208
7:30 AM	0	130	0	7	*130*	0	0	0	70	*0*	0	51	2	6	*53*	1	6	5	10	*12*	195
7:45 AM	4	148	0	0	*152*	0	0	0	48	*0*	0	87	4	10	*91*	0	10	3	10	*13*	256
8:00 AM	1	160	0	1	*161*	0	0	0	76	*0*	0	91	3	12	*94*	4	8	3	19	*15*	270
8:15 AM	2	187	0	2	*189*	0	0	0	58	*0*	0	58	2	18	*60*	0	3	10	37	*13*	262
8:30 AM	1	144	0	0	*145*	0	0	0	52	*0*	0	86	0	21	*86*	7	8	12	22	*27*	258
8:45 AM	2	168	0	4	*170*	0	0	0	51	*0*	0	59	1	16	*60*	1	17	12	12	*30*	260
Hourly Totals (Start Time)																					
7:00 AM	9	472	0	28	481	0	0	0	186	0	0	280	10	24	290	4	27	19	38	50	821
7:15 AM	9	553	0	23	562	0	0	0	230	0	0	299	10	31	309	6	33	19	43	58	929
7:30 AM	7	625	0	10	632	0	0	0	252	0	0	287	11	46	298	5	27	21	76	53	983
7:45 AM	8	639	0	3	647	0	0	0	234	0	0	322	9	61	331	11	29	28	88	68	1046
8:00 AM	6	659	0	7	665	0	0	0	237	0	0	294	6	67	300	12	36	37	90	85	1050
8:15 AM	5	499	0	6	504	0	0	0	161	0	0	203	3	55	206	8	28	34	71	70	780
8:30 AM	3	312	0	4	315	0	0	0	103	0	0	145	1	37	146	8	25	24	34	57	518
8:45 AM	2	168	0	4	170	0	0	0	51	0	0	59	1	16	60	1	17	12	12	30	260
Peak Hour (Start Time)																					
8:00 AM	6	659	0	7	665	0	0	0	237	0	0	294	6	67	300	12	36	37	90	85	1050

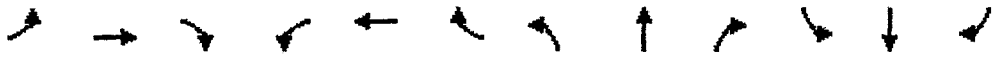
	Southbound 7th Street					Westbound T Street					Northbound 7th Street					Eastbound T Street					Veh.
Start Time	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Left	Thru	Right	Peds	*Total*	Total
4:00 PM	11	99	0	5	*110*	0	0	0	84	*0*	0	105	4	27	*109*	8	17	19	37	*44*	263
4:15 PM	2	111	0	6	*113*	0	0	0	115	*0*	0	102	4	18	*106*	3	22	18	32	*43*	262
4:30 PM	4	104	0	6	*108*	0	0	0	105	*0*	0	122	5	19	*127*	7	15	14	21	*36*	271
4:45 PM	2	126	0	9	*128*	0	0	0	107	*0*	0	121	2	8	*123*	2	11	11	24	*24*	275
5:00 PM	7	121	0	10	*128*	0	0	0	162	*0*	0	115	7	19	*122*	5	28	11	50	*44*	294
5:15 PM	9	126	0	11	*135*	0	0	0	102	*0*	0	88	4	20	*92*	3	26	11	28	*40*	267
5:30 PM	2	100	0	6	*102*	0	0	0	62	*0*	0	121	4	10	*125*	7	10	15	27	*32*	259
5:45 PM	5	106	0	3	*111*	0	0	0	84	*0*	0	126	3	30	*129*	12	17	16	40	*45*	285
Hourly Totals (Start Time)																					
4:00 PM	19	440	0	26	459	0	0	0	411	0	0	450	15	72	465	20	65	62	114	147	1071
4:15 PM	15	462	0	31	477	0	0	0	489	0	0	460	18	64	478	17	76	54	127	147	1102
4:30 PM	22	477	0	36	499	0	0	0	476	0	0	448	16	66	464	17	80	47	123	144	1107
4:45 PM	20	473	0	36	493	0	0	0	433	0	0	445	17	57	462	17	75	46	129	140	1096
5:00 PM	23	453	0	30	476	0	0	0	410	0	0	450	18	79	468	27	81	53	145	161	1105
5:15 PM	16	332	0	20	348	0	0	0	248	0	0	335	11	60	346	22	53	42	95	117	811
5:30 PM	7	206	0	9	213	0	0	0	146	0	0	247	7	40	254	19	27	31	67	77	544
5:45 PM	5	106	0	3	111	0	0	0	84	0	0	126	3	30	129	12	17	16	40	45	285
Peak Hour (Start Time)																					
4:30 PM	22	477	0	36	499	0	0	0	476	0	0	448	16	66	464	17	80	47	123	144	1107

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.96			1.00		1.00	0.97	
Flpb, ped/bikes		1.00			1.00			1.00		0.93	1.00	
Frt		0.99			0.97			1.00		1.00	0.99	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3440			3261			3519		1648	3397	
Flt Permitted		1.00			0.95			0.95		0.52	1.00	
Satd. Flow (perm)		3440			3112			3336		902	3397	
Volume (vph)	0	624	40	2	898	252	4	313	3	257	644	50
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	643	41	2	926	260	4	323	3	265	664	52
Lane Group Flow (vph)	0	684	0	0	1188	0	0	330	0	265	716	0
Confl. Peds. (#/hr)	109		97	97		109	543		155	155		543
Bus Blockages (#/hr)	0	5	0	0	5	0	0	0	0	0	0	0
Parking (#/hr)												10
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		30.0			30.0			25.0		40.0	40.0	
Effective Green, g (s)		31.0			31.0			26.0		41.0	41.0	
Actuated g/C Ratio		0.39			0.39			0.32		0.51	0.51	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Grp Cap (vph)		1333			1206			1084		565	1741	
v/s Ratio Prot		0.20								c0.06	0.21	
v/s Ratio Perm					c0.38			0.10		c0.18		
v/c Ratio		0.51			0.99			0.30		0.47	0.41	
Uniform Delay, d1		18.7			24.3			20.2		14.4	12.0	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		1.4			22.6			0.7		2.8	0.7	
Delay (s)		20.1			46.9			21.0		17.1	12.8	
Level of Service		C			D			C		B	B	
Approach Delay (s)		20.1			46.9			21.0			13.9	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	C
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱		↰	↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.96			1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		0.94	1.00	
Frt		0.99			0.96			1.00		1.00	1.00	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3406			3259			3509		1672	3478	
Flt Permitted		1.00			0.95			0.95		0.46	1.00	
Satd. Flow (perm)		3406			3111			3344		802	3478	
Volume (vph)	0	679	55	1	704	220	3	410	7	261	457	15
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	700	57	1	726	227	3	423	7	269	471	15
Lane Group Flow (vph)	0	757	0	0	954	0	0	433	0	269	486	0
Confl. Peds. (#/hr)	93		143	143		93	558		174	174		558
Bus Blockages (#/hr)	0	5	0	0	5	0	0	0	0	0	0	0
Parking (#/hr)												10
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		30.0			30.0			30.0		40.0	40.0	
Effective Green, g (s)		31.0			31.0			31.0		41.0	41.0	
Actuated g/C Ratio		0.39			0.39			0.39		0.51	0.51	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Grp Cap (vph)		1320			1206			1296		476	1782	
v/s Ratio Prot		0.22								c0.04	0.14	
v/s Ratio Perm					c0.31			0.13		c0.25		
v/c Ratio		0.57			0.79			0.33		0.57	0.27	
Uniform Delay, d1		19.3			21.6			17.2		16.0	11.1	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		1.8			5.3			0.7		4.8	0.4	
Delay (s)		21.1			27.0			17.9		20.8	11.4	
Level of Service		C			C			B		C	B	
Approach Delay (s)		21.1			27.0			17.9			14.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	B
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.96			1.00		1.00	0.97	
Flpb, ped/bikes		1.00			1.00			1.00		0.94	1.00	
Frt		0.99			0.97			1.00		1.00	0.99	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3436			3261			3519		1656	3390	
Flt Permitted		1.00			0.95			0.95		0.50	1.00	
Satd. Flow (perm)		3436			3112			3329		880	3390	
Volume (vph)	0	653	45	2	935	262	5	330	3	267	671	55
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	673	46	2	964	270	5	340	3	275	692	57
Lane Group Flow (vph)	0	719	0	0	1236	0	0	348	0	275	749	0
Confl. Peds. (#/hr)	109		97	97		109	543		155	155		543
Bus Blockages (#/hr)	0	5	0	0	5	0	0	0	0	0	0	0
Parking (#/hr)												10
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		30.5			30.0			25.5		40.5	40.5	
Effective Green, g (s)		31.0			31.0			26.0		41.0	41.0	
Actuated g/C Ratio		0.39			0.39			0.32		0.51	0.51	
Clearance Time (s)		4.5			5.0			4.5		5.0	4.5	
Lane Grp Cap (vph)		1331			1206			1082		558	1737	
v/s Ratio Prot		0.21								c0.07	0.22	
v/s Ratio Perm					c0.40			0.10		c0.18		
v/c Ratio		0.54			1.02			0.32		0.49	0.43	
Uniform Delay, d1		19.0			24.5			20.4		14.9	12.2	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		1.6			32.4			0.8		3.1	0.8	
Delay (s)		20.6			56.9			21.1		18.0	13.0	
Level of Service		C			E			C		B	B	
Approach Delay (s)		20.6			56.9			21.1			14.3	
Approach LOS		C			E			C			B	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	D
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.96			1.00		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		0.95	1.00	
Frt		0.99			0.96			1.00		1.00	0.99	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3404			3260			3503		1682	3420	
Flt Permitted		1.00			0.95			0.95		0.44	1.00	
Satd. Flow (perm)		3404			3112			3315		773	3420	
Volume (vph)	0	709	59	1	736	229	8	432	7	272	481	31
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	731	61	1	759	236	8	445	7	280	496	32
Lane Group Flow (vph)	0	792	0	0	996	0	0	460	0	280	528	0
Conf. Peds. (#/hr)	93		143	143		93	558		174	174		558
Bus Blockages (#/hr)	0	5	0	0	5	0	0	0	0	0	0	0
Parking (#/hr)												10
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		30.0			30.0			30.0		40.0	40.0	
Effective Green, g (s)		31.0			31.0			31.0		41.0	41.0	
Actuated g/C Ratio		0.39			0.39			0.39		0.51	0.51	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Grp Cap (vph)		1319			1206			1285		464	1753	
v/s Ratio Prot		0.23								c0.05	0.15	
v/s Ratio Perm					c0.32			0.14		c0.26		
v/c Ratio		0.60			0.83			0.36		0.60	0.30	
Uniform Delay, d1		19.6			22.1			17.4		16.8	11.2	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.0			6.5			0.8		5.7	0.4	
Delay (s)		21.6			28.6			18.2		22.5	11.7	
Level of Service		C			C			B		C	B	
Approach Delay (s)		21.6			28.6			18.2			15.4	
Approach LOS		C			C			B			B	

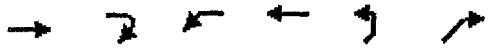
Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	B
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.96			1.00		1.00	0.97	
Flpb, ped/bikes		1.00			1.00			1.00		0.94	1.00	
Frt		0.99			0.97			1.00		1.00	0.99	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3429			3261			3516		1665	3398	
Flt Permitted		1.00			0.95			0.94		0.49	1.00	
Satd. Flow (perm)		3429			3104			3299		854	3398	
Volume (vph)	0	653	49	6	935	262	8	347	3	267	709	55
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	673	51	6	964	270	8	358	3	275	731	57
Lane Group Flow (vph)	0	724	0	0	1240	0	0	369	0	275	788	0
Confl. Peds. (#/hr)	109		97	97		109	543		155	155		543
Bus Blockages (#/hr)	0	5	0	0	5	0	0	0	0	0	0	0
Parking (#/hr)												10
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		30.5			30.0			25.5		40.5	40.5	
Effective Green, g (s)		31.0			31.0			26.0		41.0	41.0	
Actuated g/C Ratio		0.39			0.39			0.32		0.51	0.51	
Clearance Time (s)		4.5			5.0			4.5		5.0	4.5	
Lane Grp Cap (vph)		1329			1203			1072		549	1741	
v/s Ratio Prot		0.21								c0.07	0.23	
v/s Ratio Perm					c0.40			0.11		c0.19		
v/c Ratio		0.54			1.03			0.34		0.50	0.45	
Uniform Delay, d1		19.0			24.5			20.5		15.3	12.4	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		1.6			34.2			0.9		3.2	0.9	
Delay (s)		20.6			58.7			21.4		18.5	13.2	
Level of Service		C			E			C		B	B	
Approach Delay (s)		20.6			58.7			21.4			14.6	
Approach LOS		C			E			C			B	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	D
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕		↰	↕↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.96			1.00		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		0.96	1.00	
Frt		0.99			0.96			1.00		1.00	0.99	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		3398			3260			3498		1698	3425	
Flt Permitted		1.00			0.95			0.94		0.40	1.00	
Satd. Flow (perm)		3398			3105			3279		718	3425	
Volume (vph)	0	709	63	4	736	229	14	476	7	272	503	31
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	731	65	4	759	236	14	491	7	280	519	32
Lane Group Flow (vph)	0	796	0	0	999	0	0	512	0	280	551	0
Confl. Peds. (#/hr)	93		143	143		93	558		174	174		558
Bus Blockages (#/hr)	0	5	0	0	5	0	0	0	0	0	0	0
Parking (#/hr)												10
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		30.0			30.0			30.0		40.0	40.0	
Effective Green, g (s)		31.0			31.0			31.0		41.0	41.0	
Actuated g/C Ratio		0.39			0.39			0.39		0.51	0.51	
Clearance Time (s)		5.0			5.0			5.0		5.0	5.0	
Lane Grp Cap (vph)		1317			1203			1271		441	1755	
v/s Ratio Prot		0.23								c0.05	0.16	
v/s Ratio Perm					c0.32			0.16		c0.28		
v/c Ratio		0.60			0.83			0.40		0.63	0.31	
Uniform Delay, d1		19.6			22.1			17.8		18.0	11.3	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.1			6.7			1.0		6.8	0.5	
Delay (s)		21.7			28.9			18.7		24.8	11.8	
Level of Service		C			C			B		C	B	
Approach Delay (s)		21.7			28.9			18.7			16.2	
Approach LOS		C			C			B			B	

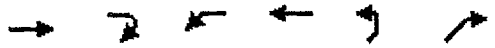
Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	960	0	0	1250	0	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (veh/h)	1011	0	0	1316	0	51
Pedestrians	28			28		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			2		
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	392			140		
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			1011		1696	533
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			854		1648	301
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	91
cM capacity (veh/h)			675		76	586

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2
Volume Total	505	505	658	658	0	51
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	51
cSH	1700	1700	1700	1700	1700	586
Volume to Capacity	0.30	0.30	0.39	0.39	0.00	0.09
Queue Length (ft)	0	0	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.7
Lane LOS					A	B
Approach Delay (s)	0.0		0.0		11.7	
Approach LOS					B	

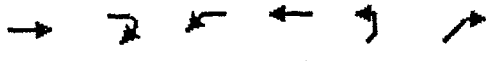
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1042	0	0	924	5	97
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (veh/h)	1063	0	0	943	5	99
Pedestrians	20			20		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			2		
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	392			140		
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			1063		1555	552
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			888		1471	280
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		95	83
cM capacity (veh/h)			639		98	594

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2
Volume Total	532	532	471	471	5	99
Volume Left	0	0	0	0	5	0
Volume Right	0	0	0	0	0	99
cSH	1700	1700	1700	1700	98	594
Volume to Capacity	0.31	0.31	0.28	0.28	0.05	0.17
Queue Length (ft)	0	0	0	0	4	15
Control Delay (s)	0.0	0.0	0.0	0.0	43.9	12.3
Lane LOS					E	B
Approach Delay (s)	0.0		0.0		13.8	
Approach LOS					B	

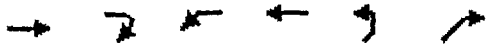
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	46.7%	ICU Level of Service		A



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1003	0	0	1302	0	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (veh/h)	1056	0	0	1371	0	53
Pedestrians	28			28		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			2		
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	392			140		
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			1056		1769	556
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			893		1729	307
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	91
cM capacity (veh/h)			644		66	574

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2
Volume Total	528	528	685	685	0	53
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	53
cSH	1700	1700	1700	1700	1700	574
Volume to Capacity	0.31	0.31	0.40	0.40	0.00	0.09
Queue Length (ft)	0	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.9
Lane LOS					A	B
Approach Delay (s)	0.0		0.0		11.9	
Approach LOS					B	

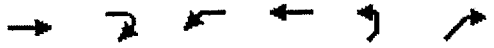
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1086	0	0	965	5	101
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (veh/h)	1108	0	0	985	5	103
Pedestrians	20			20		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			2		
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	392			140		
pX, platoon unblocked			0.83		0.83	0.83
vC, conflicting volume			1108		1621	574
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			927		1543	284
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	82
cM capacity (veh/h)			609		86	583

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2
Volume Total	554	554	492	492	5	103
Volume Left	0	0	0	0	5	0
Volume Right	0	0	0	0	0	103
cSH	1700	1700	1700	1700	86	583
Volume to Capacity	0.33	0.33	0.29	0.29	0.06	0.18
Queue Length (ft)	0	0	0	0	5	16
Control Delay (s)	0.0	0.0	0.0	0.0	49.3	12.5
Lane LOS					E	B
Approach Delay (s)	0.0		0.0		14.2	
Approach LOS					B	

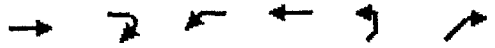
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	48.1%	ICU Level of Service	A



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1003	0	0	1306	0	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (veh/h)	1056	0	0	1375	0	55
Pedestrians	28			28		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			2		
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	392			140		
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			1056		1771	556
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			892		1731	306
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	90
cM capacity (veh/h)			644		66	575

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2
Volume Total	528	528	687	687	0	55
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	55
cSH	1700	1700	1700	1700	1700	575
Volume to Capacity	0.31	0.31	0.40	0.40	0.00	0.10
Queue Length (ft)	0	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.9
Lane LOS					A	B
Approach Delay (s)	0.0		0.0		11.9	
Approach LOS					B	

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1086	0	0	968	5	106
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (veh/h)	1108	0	0	988	5	108
Pedestrians	20			20		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			2		
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	392			140		
pX, platoon unblocked			0.83		0.83	0.83
vC, conflicting volume			1108		1622	574
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			926		1545	282
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	81
cM capacity (veh/h)			609		86	583

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2
Volume Total	554	554	494	494	5	108
Volume Left	0	0	0	0	5	0
Volume Right	0	0	0	0	0	108
cSH	1700	1700	1700	1700	86	583
Volume to Capacity	0.33	0.33	0.29	0.29	0.06	0.19
Queue Length (ft)	0	0	0	0	5	17
Control Delay (s)	0.0	0.0	0.0	0.0	49.5	12.6
Lane LOS					E	B
Approach Delay (s)	0.0		0.0		14.2	
Approach LOS					B	

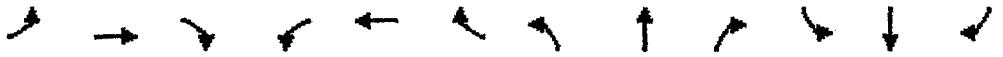
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			0.99	
Frt		0.98			0.98			0.99			0.99	
Flt Protected		1.00			1.00			0.99			1.00	
Satd. Flow (prot)		1524			1540			3439			3388	
Flt Permitted		0.98			0.98			0.84			0.88	
Satd. Flow (perm)		1498			1508			2894			2989	
Volume (vph)	8	89	21	18	169	25	35	271	11	62	542	53
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	9	96	23	19	182	27	38	291	12	67	583	57
Lane Group Flow (vph)	0	128	0	0	228	0	0	341	0	0	707	0
Confl. Peds. (#/hr)	19		22	22		19	44		32	32		44
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)		10			10							
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.4			37.4			42.6			42.6	
Effective Green, g (s)		38.4			38.4			43.6			43.6	
Actuated g/C Ratio		0.43			0.43			0.48			0.48	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		639			643			1402			1448	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.15			0.12			c0.24	
v/c Ratio		0.20			0.35			0.24			0.49	
Uniform Delay, d1		16.2			17.4			13.6			15.7	
Progression Factor		1.00			1.00			1.00			0.44	
Incremental Delay, d2		0.7			1.5			0.4			1.1	
Delay (s)		16.9			19.0			14.0			7.9	
Level of Service		B			B			B			A	
Approach Delay (s)		16.9			19.0			14.0			7.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↑			↕↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			0.99	
Frt		0.97			0.96			1.00			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1510			1485			3185			3362	
Flt Permitted		0.98			0.98			0.91			0.85	
Satd. Flow (perm)		1489			1459			2898			2867	
Volume (vph)	12	162	47	13	135	71	25	405	13	60	430	39
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	12	169	49	14	141	74	26	422	14	62	448	41
Lane Group Flow (vph)	0	230	0	0	229	0	0	462	0	0	551	0
Confl. Peds. (#/hr)	19		34	34		19	64		65	65		64
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)		10			10			10				
Turn Type	Perm		Perm			Perm			Perm			
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.0			40.0			40.0			40.0	
Effective Green, g (s)		41.0			41.0			41.0			41.0	
Actuated g/C Ratio		0.46			0.46			0.46			0.46	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		678			665			1320			1306	
v/s Ratio Prot												
v/s Ratio Perm		0.15			c0.16			0.16			c0.19	
v/c Ratio		0.34			0.34			0.35			0.42	
Uniform Delay, d1		15.8			15.8			15.9			16.5	
Progression Factor		1.00			1.00			1.00			0.48	
Incremental Delay, d2		1.4			1.4			0.7			1.0	
Delay (s)		17.1			17.2			16.6			8.9	
Level of Service		B			B			B			A	
Approach Delay (s)		17.1			17.2			16.6			8.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	A
c Critical Lane Group			

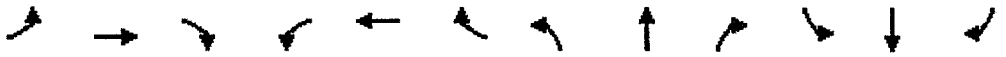


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.98			1.00			0.99	
Flt Protected		1.00			1.00			0.99			1.00	
Satd. Flow (prot)		1530			1541			3443			3390	
Flt Permitted		0.98			0.97			0.83			0.87	
Satd. Flow (perm)		1507			1506			2883			2976	
Volume (vph)	8	107	22	19	179	26	36	287	11	65	568	55
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	9	115	24	20	192	28	39	309	12	70	611	59
Lane Group Flow (vph)	0	148	0	0	240	0	0	360	0	0	740	0
Confl. Peds. (#/hr)	19		22	22		19	44		32	32		44
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)		10			10							
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.4			37.4			42.6			42.6	
Effective Green, g (s)		38.4			38.4			43.6			43.6	
Actuated g/C Ratio		0.43			0.43			0.48			0.48	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		643			643			1397			1442	
v/s Ratio Prot												
v/s Ratio Perm		0.10			c0.16			0.12			c0.25	
v/c Ratio		0.23			0.37			0.26			0.51	
Uniform Delay, d1		16.4			17.6			13.7			15.9	
Progression Factor		1.00			1.00			1.00			0.44	
Incremental Delay, d2		0.8			1.7			0.4			1.2	
Delay (s)		17.2			19.3			14.1			8.3	
Level of Service		B			B			B			A	
Approach Delay (s)		17.2			19.3			14.1			8.3	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
c Critical Lane Group			

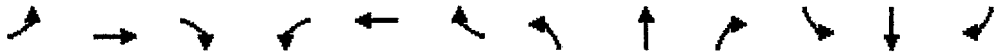
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑↑			↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			0.99	
Frt		0.97			0.96			1.00			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1512			1491			3186			3361	
Flt Permitted		0.98			0.98			0.90			0.84	
Satd. Flow (perm)		1481			1463			2890			2845	
Volume (vph)	15	177	49	14	156	74	26	428	14	62	452	43
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	184	51	15	162	77	27	446	15	65	471	45
Lane Group Flow (vph)	0	251	0	0	254	0	0	488	0	0	581	0
Confl. Peds. (#/hr)	19		34	34		19	64		65	65		64
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.0			40.0			40.0			40.0	
Effective Green, g (s)		41.0			41.0			41.0			41.0	
Actuated g/C Ratio		0.46			0.46			0.46			0.46	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		675			666			1317			1296	
v/s Ratio Prot												
v/s Ratio Perm		0.17			c0.17			0.17			c0.20	
v/c Ratio		0.37			0.38			0.37			0.45	
Uniform Delay, d1		16.1			16.1			16.0			16.8	
Progression Factor		1.00			1.00			1.00			0.49	
Incremental Delay, d2		1.6			1.7			0.8			1.1	
Delay (s)		17.6			17.8			16.9			9.3	
Level of Service		B			B			B			A	
Approach Delay (s)		17.6			17.8			16.9			9.3	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	A
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑↑↑			↑↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			0.99	
Frt		0.98			0.98			0.99			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1535			1523			3409			3375	
Flt Permitted		0.98			0.96			0.83			0.81	
Satd. Flow (perm)		1512			1474			2840			2743	
Volume (vph)	8	122	22	26	189	46	36	287	26	116	568	55
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	9	131	24	28	203	49	39	309	28	125	611	59
Lane Group Flow (vph)	0	164	0	0	280	0	0	376	0	0	795	0
Confl. Peds. (#/hr)	19		22	22		19	44		32	32		44
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)		10			10							
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.4			37.4			42.6			42.6	
Effective Green, g (s)		38.4			38.4			43.6			43.6	
Actuated g/C Ratio		0.43			0.43			0.48			0.48	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		645			629			1376			1329	
v/s Ratio Prot												
v/s Ratio Perm		0.11			c0.19			0.13			c0.29	
v/c Ratio		0.25			0.45			0.27			0.60	
Uniform Delay, d1		16.6			18.3			13.8			16.8	
Progression Factor		1.00			1.00			1.00			0.46	
Incremental Delay, d2		0.9			2.3			0.5			1.8	
Delay (s)		17.5			20.5			14.3			9.5	
Level of Service		B			C			B			A	
Approach Delay (s)		17.5			20.5			14.3			9.5	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
c Critical Lane Group			



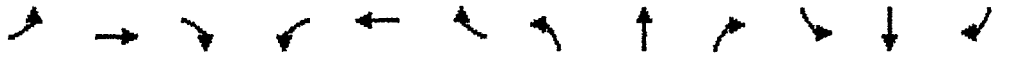
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕			↕↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.98			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			0.99	
Frt		0.97			0.95			0.99			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1515			1469			3163			3345	
Flt Permitted		0.97			0.95			0.90			0.77	
Satd. Flow (perm)		1477			1407			2864			2612	
Volume (vph)	15	186	49	33	181	124	26	428	25	95	452	43
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	194	51	34	189	129	27	446	26	99	471	45
Lane Group Flow (vph)	0	261	0	0	352	0	0	499	0	0	615	0
Confl. Peds. (#/hr)	19		34	34		19	64		65	65		64
Bus Blockages (#/hr)	0	0	0	0	0	0	0	5	0	0	5	0
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		40.0			40.0			40.0			40.0	
Effective Green, g (s)		41.0			41.0			41.0			41.0	
Actuated g/C Ratio		0.46			0.46			0.46			0.46	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		673			641			1305			1190	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.25			0.17			c0.24	
v/c Ratio		0.39			0.55			0.38			0.52	
Uniform Delay, d1		16.2			17.8			16.2			17.4	
Progression Factor		1.00			1.00			1.00			0.50	
Incremental Delay, d2		1.7			3.4			0.9			1.5	
Delay (s)		17.9			21.2			17.0			10.2	
Level of Service		B			C			B			B	
Approach Delay (s)		17.9			21.2			17.0			10.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	12	36	37	0	0	0	0	294	6	6	659	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (veh/h)	12	37	38	0	0	0	0	303	6	6	679	0
Pedestrians		237			90			67			7	
Lane Width (ft)		12.0			0.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		20			0			6			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								527			252	
pX, platoon unblocked	0.88	0.88	0.88	0.88	0.88		0.88					
vC, conflicting volume	1087	1328	644	872	1325	252	916			399		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	968	1241	467	725	1237	252	775			399		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	70	90	100	100	100	100			99		
cM capacity (veh/h)	124	123	364	153	123	744	594			1156		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	88	202	107	233	453
Volume Left	12	0	0	6	0
Volume Right	38	0	6	0	0
cSH	173	1700	1700	1156	1700
Volume to Capacity	0.51	0.12	0.06	0.01	0.27
Queue Length (ft)	62	0	0	0	0
Control Delay (s)	45.5	0.0	0.0	0.3	0.0
Lane LOS	E			A	
Approach Delay (s)	45.5	0.0		0.1	
Approach LOS	E				

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	39.2%	ICU Level of Service	A	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	17	80	47	0	0	0	0	446	18	22	477	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (veh/h)	18	85	50	0	0	0	0	474	19	23	507	0
Pedestrians		476			123			66			36	
Lane Width (ft)		12.0			0.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		40			0			6			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								527			252	
pX, platoon unblocked	0.93	0.93	0.93	0.93	0.93		0.93					
vC, conflicting volume	1303	1647	796	1066	1637	406	983			617		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1252	1621	706	997	1610	406	908			617		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	62	0	75	0	100	100	100			98		
cM capacity (veh/h)	48	56	201	0	57	577	419			959		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	153	316	177	193	338
Volume Left	18	0	0	23	0
Volume Right	50	0	19	0	0
cSH	71	1700	1700	959	1700
Volume to Capacity	2.15	0.19	0.10	0.02	0.20
Queue Length (ft)	357	0	0	2	0
Control Delay (s)	655.1	0.0	0.0	1.3	0.0
Lane LOS	F			A	
Approach Delay (s)	655.1	0.0		0.5	
Approach LOS	F				

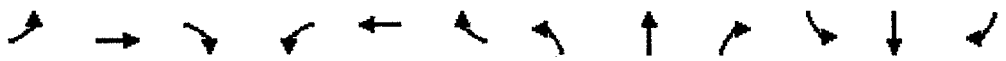
Intersection Summary			
Average Delay	85.4		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		1.00						0.95			0.95	
Frpb, ped/bikes		0.95						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.94						1.00			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		1396						3512			3498	
Flt Permitted		0.99						1.00			0.95	
Satd. Flow (perm)		1396						3512			3333	
Volume (vph)	12	37	39	0	0	0	0	311	6	6	690	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	12	38	40	0	0	0	0	321	6	6	711	0
Lane Group Flow (vph)	0	90	0	0	0	0	0	327	0	0	717	0
Confl. Peds. (#/hr)	7		67	67		7	237		90	90		237
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Parking (#/hr)		10										
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		36.0						44.0			44.0	
Effective Green, g (s)		37.0						45.0			45.0	
Actuated g/C Ratio		0.41						0.50			0.50	
Clearance Time (s)		5.0						5.0			5.0	
Lane Grp Cap (vph)		574						1756			1667	
v/s Ratio Prot								0.09				
v/s Ratio Perm		c0.06									c0.22	
v/c Ratio		0.16						0.19			0.43	
Uniform Delay, d1		16.7						12.4			14.3	
Progression Factor		1.00						0.52			1.00	
Incremental Delay, d2		0.6						0.2			0.8	
Delay (s)		17.3						6.6			15.1	
Level of Service		B						A			B	
Approach Delay (s)		17.3			0.0			6.6			15.1	
Approach LOS		B			A			A			B	

Intersection Summary				
HCM Average Control Delay	12.9	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.31			
Cycle Length (s)	90.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↔			↔↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		1.00						0.95			0.95	
Frpb, ped/bikes		0.96						0.99			1.00	
Flpb, ped/bikes		0.99						1.00			0.99	
Frt		0.96						0.99			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		1434						3471			3475	
Flt Permitted		0.99						1.00			0.92	
Satd. Flow (perm)		1434						3471			3205	
Volume (vph)	18	83	49	0	0	0	0	474	19	23	503	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	88	52	0	0	0	0	504	20	24	535	0
Lane Group Flow (vph)	0	159	0	0	0	0	0	524	0	0	559	0
Confl. Peds. (#/hr)	36		66	66		36	476		123	123		476
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Parking (#/hr)		10										
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		38.0						42.0			42.0	
Effective Green, g (s)		39.0						43.0			43.0	
Actuated g/C Ratio		0.43						0.48			0.48	
Clearance Time (s)		5.0						5.0			5.0	
Lane Grp Cap (vph)		621						1658			1531	
v/s Ratio Prot								0.15				
v/s Ratio Perm		c0.11									c0.17	
v/c Ratio		0.26						0.32			0.37	
Uniform Delay, d1		16.3						14.5			14.9	
Progression Factor		1.00						0.53			1.00	
Incremental Delay, d2		1.0						0.5			0.7	
Delay (s)		17.2						8.2			15.5	
Level of Service		B						A			B	
Approach Delay (s)		17.2			0.0			8.2			15.5	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		1.00						0.95			0.95	
Frpb, ped/bikes		0.94						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.94						1.00			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		1385						3514			3498	
Flt Permitted		0.99						1.00			0.95	
Satd. Flow (perm)		1385						3514			3333	
Volume (vph)	12	37	44	0	0	0	0	331	6	6	736	0
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	12	38	45	0	0	0	0	341	6	6	759	0
Lane Group Flow (vph)	0	95	0	0	0	0	0	347	0	0	765	0
Confl. Peds. (#/hr)	7		67	67		7	237		90	90		237
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Parking (#/hr)		10										
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		36.0						44.0			44.0	
Effective Green, g (s)		37.0						45.0			45.0	
Actuated g/C Ratio		0.41						0.50			0.50	
Clearance Time (s)		5.0						5.0			5.0	
Lane Grp Cap (vph)		569						1757			1667	
v/s Ratio Prot								0.10				
v/s Ratio Perm		c0.07									c0.23	
v/c Ratio		0.17						0.20			0.46	
Uniform Delay, d1		16.8						12.5			14.6	
Progression Factor		1.00						0.58			1.00	
Incremental Delay, d2		0.6						0.2			0.9	
Delay (s)		17.4						7.5			15.5	
Level of Service		B						A			B	
Approach Delay (s)		17.4			0.0			7.5			15.5	
Approach LOS		B			A			A			B	

Intersection Summary				
HCM Average Control Delay	13.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.33			
Cycle Length (s)	90.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	42.1%	ICU Level of Service	A	
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑↱			↰↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		1.00						0.95			0.95	
Frpb, ped/bikes		0.96						0.99			1.00	
Flpb, ped/bikes		0.99						1.00			0.99	
Frt		0.95						0.99			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		1428						3477			3478	
Flt Permitted		0.99						1.00			0.92	
Satd. Flow (perm)		1428						3477			3203	
Volume (vph)	18	83	53	0	0	0	0	524	19	23	532	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	88	56	0	0	0	0	557	20	24	566	0
Lane Group Flow (vph)	0	163	0	0	0	0	0	577	0	0	590	0
Confl. Peds. (#/hr)	36		66	66		36	476		123	123		476
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Parking (#/hr)		10										
Turn Type	Perm									Perm		
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		38.0						42.0			42.0	
Effective Green, g (s)		39.0						43.0			43.0	
Actuated g/C Ratio		0.43						0.48			0.48	
Clearance Time (s)		5.0						5.0			5.0	
Lane Grp Cap (vph)		619						1661			1530	
v/s Ratio Prot								0.17				
v/s Ratio Perm		c0.11									c0.18	
v/c Ratio		0.26						0.35			0.39	
Uniform Delay, d1		16.3						14.7			15.0	
Progression Factor		1.00						0.60			1.00	
Incremental Delay, d2		1.0						0.5			0.7	
Delay (s)		17.3						9.4			15.8	
Level of Service		B						A			B	
Approach Delay (s)		17.3			0.0			9.4			15.8	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
c Critical Lane Group			