TRAFFIC IMPACT STUDY AND ANALYSIS FOR PROPOSED ELEMENTARY SCHOOL SITE

ZONING CASE Z156-195

In Dallas, Texas

Prepared

For

HIGHLAND PARK ISD AND STANTEC

FEBRUARY 24, 2016

Ву





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HIGHLAND PARK ISD TRAFFIC IMPACT STUDY REPORT FOR PROPOSED HPISD ELEMENTARY SCHOOL SITE ON NORTHWEST HIGHWAY BETWEEN AIRLINE ROAD AND DURHAM IN THE CITY OF DALLAS, TEXAS

PURPOSE OF STUDY

The purpose of conducting this traffic impact study is to certify to the city of Dallas that no queuing of vehicles dropping or picking up students will extend onto City of Dallas right-of-way as a result of internal queuing constraints and that the proposed school trips can be accommodated with the existing intersections with an acceptable Level of Service (LOS)

STUDY AREA TRAFFIC CONDTIONS

Roadways:

<u>Northwest Highway</u>: is a six-lane divided roadway (Principal Arterial) adjacent to the north side of the proposed school site with a speed limit of 35 mph.

<u>Airline Road:</u> is a two lane residential roadway adjacent to the west side of the proposed school site with a speed limit of 30 mph.

Wentwood: is a two lane residential roadway south of the proposed site with a speed limit of 30 mph.

Northwest Parkway: is a two-lane, two-way roadway with a roadway width of 20 feet that runs parallel to Northwest Highway. This roadway functions as a frontage road for businesses and residences along Northwest Highway.

<u>Durham Street</u>: is a two lane residential roadway adjacent to the east side of the proposed school site with a speed limit of 30 mph that will serve as the primary access to the school site and parking garage.

Intersections:

- Northwest Highway at Hillcrest Road (Full actuated traffic signal).
- Northwest Parkway at Airline
- Northwest Parkway at Durham
- Wentwood at Airline (All Way Stop)
- Wentwood at Durham

Enrollment capacity and hours of operation.

The enrollment capacity for this new elementary is 770 (Kindergarten through thru 4th grade students).

Traffic volumes and time estimates

Turning movement counts were conducted at Wentwood at Airline and Durham on June 17, 2014. Additional turning movement counts were conducted at Northwest Parkway at Airline, Northwest Parkway at Durham and Northwest Highway at Hillcrest on May 12, 2015. A 24-hour bi-directional machine count was taken on Northwest Parkway between Airline and Durham on May 12, 2015.

TRIP GENERATION

Estimated vehicle trip ends to and from the study area were also calculated utilizing trip generation rates and characteristics collected and compiled by the Institute of Transportation Engineers (ITE) in the ninth edition of their trip generation handbook. **Table 1 and Table 2** have been prepared to summarize the associated trip generation data and the calculated trips that are anticipated to be generated by the proposed elementary school. We have used the higher value of the average ITE rates or the fitted curve equations. Copies of the ITE data sheets used to develop **Tables 1 and 2** have been attached to this report.

TABLE 1
Trip Generation Data

LAND USE	ITE CODE	UNITS	QUANTITY
Elementary School	520	Students	770

The trips indicated in **Table 2** are the total unadjusted traffic volumes for the residential land use proposed for the study site.

TABLE 2
Calculated Trip Ends

LAND USE	A.M. PE	AK HOUR	P.M. PEAK HOUR		
	IN (vph)	OUT (VPH)	IN (vph)	OUT (VPH)	
Elementary School	191	156	57	59	
TOTAL	191	156	57	59	

(ADT = average daily trips; vpd = vehicles per day; vph = vehicles per hour; in = vehicles entering the site; and out = vehicles exiting the site)

INTERSECTION CAPACITY ANALYSIS

Level of Service (LOS) analyses of the traffic operations were performed at the existing signalized and signalized (stop controlled) intersections and the proposed access points. Analyses of the signalized and stop controlled intersections were conducted utilizing the SYNCHRO software which was developed by the Trafficware Corporation. Analyses of the roundabouts were conducted with the 2010 HCS Software. The results of the capacity analyses for the intersections with the resulting delay and levels of service values are summarized by approach in following tables as follows:

- Table 4. AM Peak Hour Level of Service
- Table 5. PM Peak Hour Level of Service

Copies of the computer printouts as well as a description of the various levels of service have been included in the Appendix. Typically the desirable levels of service are "A" through "D" with "E" and "F" being undesirable. For each analysis, the signal timings for any existing or proposed signalized intersections were optimized.

Table 1. AM Peak Hour Level of Service

	E	Eastbound Westbound			No	orthbou	nd	So	uthbou	ınd			
Scenario	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	INT
				Nor	thwest H	lighway	at Hill	crest		-			
Existing		В			D			Е			Е		D
2015		18.9			51.6			66.1			67.9		45.7
Build Out		С			F			Е			Е		Е
2017		22.8			85.9			76.3			70.0		66.7
				No	rthwest l	Highwa	y at Air	line					
Existing		-			Α			D			-		-
2015		-			1.1			33.5			-		-
Build Out	-			Α		Е		-		-			
2017		-		0.9		41.2		-		-			
				Noi	thwest H	lighway	at Dur	ham					
Existing	Α			A		С			E		-		
2015	0.2			2.1		19.5		36.6		-			
Build Out		Α		A		С		E			-		
2017		0.1		3.6		22.2		36.6		-			
					Durham	at Wei	ntwood						
Existing		Α			В			Α			Α		-
2015		10.0			10.1			0.5			0.3		-
Phase 1		В			В			Α			Α		-
2017		10.9			11.3			0.5		0.1		-	
Airline at Wentwood													
Existing		Α			Α			Α			Α		Α
2015		7.4			7.7			7.4			7.9		7.7
Phase 1		Α			Α			Α			Α		Α
2017		7.5			8.6			7.8			8.3		8.3

The LOS for the northbound approaches of Airline and Durham at Northwest Highway is very poor for existing and full build out conditions. The intersection of Northwest Highway at Airline is negatively affected by school traffic going through to turn right onto Durham. The traffic flows

on Airline are very small, but there are some left turning vehicles that impact the overall Airline LOS. School traffic is not expected to use Airline. It would be suggested that northbound left turns be prohibited during peak hours. Traffic desiring to travel westbound would be better served by traveling west on Wentwood Drive and then turn right onto Hillcrest Avenue where they can enter the left turn lane onto Northwest Highway.

The LOS for the intersection of Northwest Highway and Hillcrest Avenue is very poor for all periods. The traffic added by school traffic is a low percentage compared to the current traffic on all approaches so no mitigations are recommended.

The LOS for the intersection of Northwest Highway at Durham for the northbound movements do not change. The impact of school traffic is minimized because all of the school traffic is turning right (eastbound) onto Durham. Northbound left turns should be prohibited during peak hours. This traffic can also use Wentwood to travel westbound

Table 2. PM Peak Hour Level of Service

	Eastbound Westbound			No	Northbound			Southbound					
Scenario	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	INT
				Nort	hwest H	ighwa	y at Hill	crest					
Existing		F			Е			Е			Е		F
2015		97.9			76.6			79.4			72.0		85.3
Build Out		F			Е			F			Е		F
2017		102.2			81.9			83.4			76.9		89.9
				Nor	thwest H	lighwa	ıy at Ai	rline					
Existing		-			Α			F			-		-
2015		-			6.8			108.9			-		-
Build Out	-			А		F		-		-			
2017		-		7.1		112.6		-		-			
				Nort	hwest H	ighwa	y at Du	rham					
Existing	А		A		F		С		-				
2015	0.1		0.8		218.7		21.9			-			
Build Out	Α			Α		F		С			-		
2017		0.1		0.9		235.3		21.9		-			
					Durham	at We	ntwood	t					
Existing		В			Α			Α			Α		-
2015		10.0			9.8			2.2			0.2		-
Phase 1		В		В			Α			A			-
2017		10.4			10.2			2.3			0.1		-
Airline at Wentwood													
Existing		А		A		Α		A			Α		
2015		7.3			7.4			7.4			7.5		7.4
Phase 1		Α			Α			Α			Α		Α
2017		7.4			7.8			7.6			7.7		7.7

The LOS is better than the AM LOS, but the same issues are present. The school traffic impact is the same, but school traffic will not impact the northbound movements. The northbound left turns should be prohibited during peak hours.

The LOS for the intersection of Northwest Highway and Hillcrest Avenue is very poor for all periods. The traffic added by school traffic is a low percentage compared to the current traffic on all approaches so no mitigations are recommended.

QUEUING ANALYSIS

A key issue is the prevention of internal queuing (on school site) onto adjacent city streets of buses and passenger cars

QUEUING ANALYSIS

A key issue is the prevention of internal queuing (on school site) onto adjacent city streets of buses and passenger cars. Following is a discussion of the potential queuing.

QUEUE CALCULATIONS

The afternoon pick-up operations create the largest queues around the campus. Utilizing a queue estimator developed by the North Carolina Department of Transportation estimates were made about the future queues associated with the enrollment and pick-up times for the proposed Elementary School. See **Table 3** for a summary of those estimates.

It is estimated that approximately 770 children (Kindergarten through 4th grade) will attend the proposed school. The arrival and dismissal times are normally staggered to allow one arrival/dismissal for Kindergarten and 1st graders, and then another arrival/dismissal for second, third and fourth graders. Assuming that the number of children is equal per each grade (5 grades), the number of students for each grade is 154 students. The two arrival/dismissal number of students is indicated in **Table 3**.

Table 3. Minimum Queue Length Calculations

Grades &	Number of	Total	Calculated
Release Times	Students	Vehicles	Minimum Queue
			Length (ft.) *
Kindergarten	308	23	515
and 1st grade			
@3:00			
2 nd , 3 rd , and 4 th	462	35	767
@ 3:15			

^{*}School Traffic Calculator form North Carolina State University

Queuing

The probability of queuing for any site is dependent on the arrival service rate (number of units arriving during a time period) and the departure service rates (the number of units that can be served during the same time period).

Observations at other Highland Park ISD schools and at schools in other school districts indicates that the average service rate for discharging/loading a vehicle in a school speed zone is 5 seconds per vehicle with active participation by teachers, student safety patrol, or volunteers in opening and closing car doors for students. This allows 12 vehicles per minute to

be served by each assistant (station). The discharge/loading time extends to up to 20 seconds per vehicle without a school crossing guard or other volunteers.

The storage length in the loading/unloading lane in front of the entrance to the parking garage accessible from Durham Street is 250 feet. The queue lane (discharge/loading lane) will provide enough pavement width for cars to load/discharge and then allow vehicles that have completed their operation to enter a lane available for moving traffic.

The storage length of 250 feet could easily allow 10 loading/discharge stations with a minimum of 22 feet per station. This many stations would allow for discharge of up to 120 vehicles per minute. The estimate minimum queue length is 35 vehicles. With a discharge rate of 12 vehicles per second, even one assistant (station) would allow this queue to be completely discharged in 3 minutes.

TRANSPORTATION MANAGEMENT PLAN

Passenger Car/Day Care Bus Management Plan

Traffic will enter the site through access to a school drive (queue lane) that parallels Durham Street. This traffic will then exit the drive and turn left or right onto Durham Street. The exit will be wide enough to provide a two lane exit.

Teachers/administers/volunteers with possible assistance by school safety patrol (4th graders), should be used to open car doors and allow student (s) to exit/enter the vehicles quickly and safely. Once the student (s) are discharged/loaded, the driver would be notified and then the driver would exit the drop off/pick up zone and travel to Durham Road to turn left or right.

ADA Bus Management Plan

ADA capable buses will load/unload along a specifically designed parking area along Durham Street adjacent to the school. It is suggested that since this area allows children to load/unload off street, it is suggested that the ADA buses not flash their lights during the loading/unloading process because this would require passing vehicles to stop. This could create unnecessary southbound vehicle queues.

Pedestrian (Walking) Management Plan

The need for school crossing guards will be determined after a review of student enrollment records. Key locations to be analyzed would include Wentwood at Airline and Wentwood at Durham. A follow up analysis after school has been open for approximately six (6) weeks should be made to determine if any school crossing guards are needed.

School Administrators, with assistance from the City of Dallas Transportation Department shall develop a Safe Routes to School Map/Plan and distribute this to teacher, students and parents.

Miscellaneous instructions:

- Students should have all their belongings in hand so that they may exit or enter their vehicle safely and quickly.
- Vehicles must face the direction of traffic.

- It is unlawful to open a car door on the traffic side.
- Administrators/teachers/safety patrol personnel should wear orange reflective safety vests when assisting loading/unloading.
- Children should wait in an orderly fashion in the designated waiting area when loading passenger vehicles, school buses, or day care buses.
- Cars/day care buses should enter the loading/unloading queue lane on Durham Street and enter behind the last car in the queue lane.
- Cars/day care buses should continually pull forward until their children are either loaded/ or discharged.
- If cars/day care buses cannot enter the queue lane, driver around the school to re-enter the queue lane. These cars could stage along Northwest Parkway and await an opportunity to enter the queue lane.
- Once children or loaded or discharged, cars/day care buses must exit at Durham Street by either turning left or right.

Institutional goals/tasks

The need for school crossing guards should be determined based on actual pedestrian counts. And an analysis should be conducted after school has been open for about six (6) weeks to determine if a school crossing guard is needed.

Parking must be prohibited along Durham Street in the vicinity of the school driveways during school hours.

RECOMMENDATIONS:

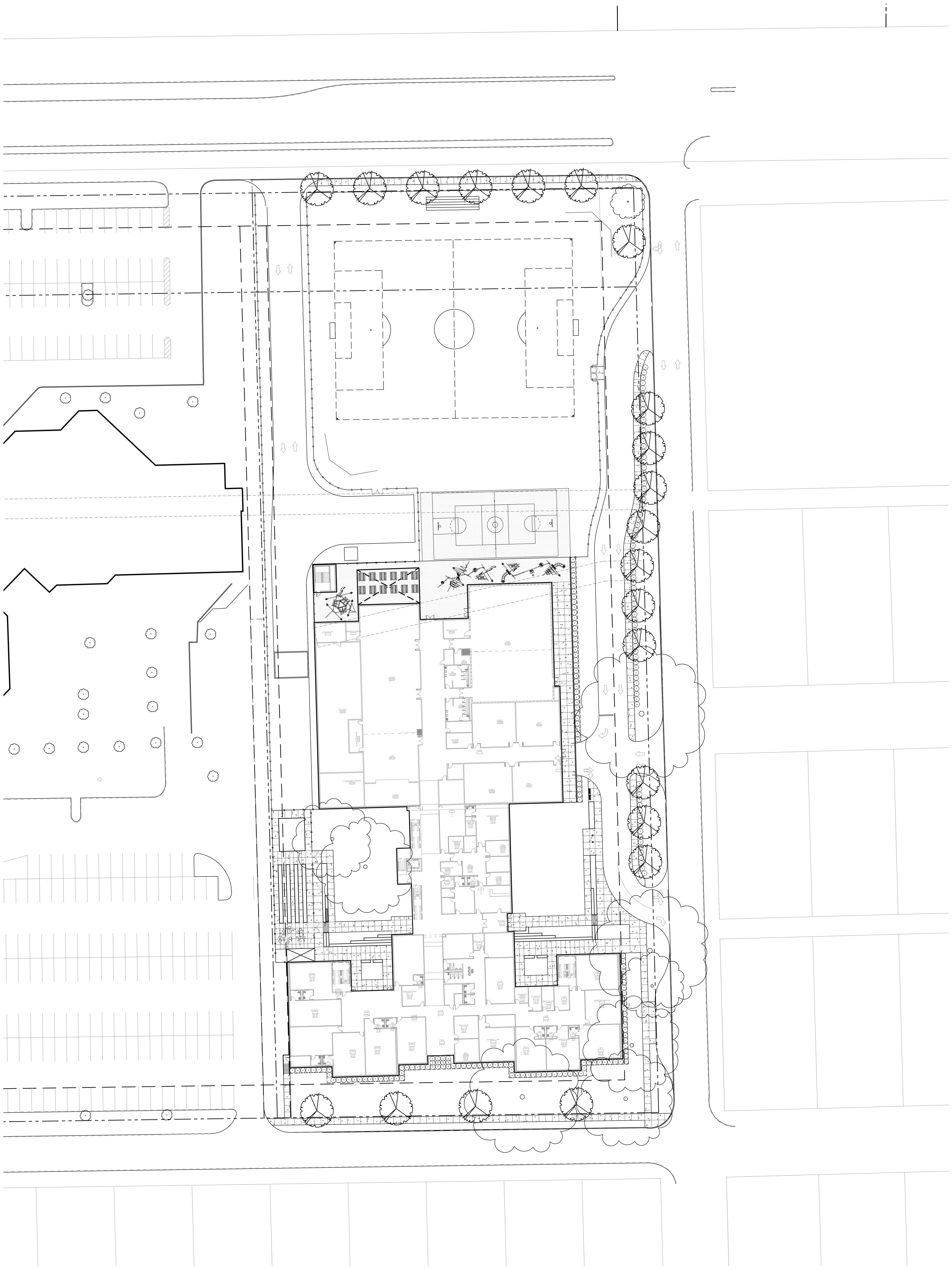
- Prohibit left turns onto Northwest Highway at Airline and Durham during the AM and PM peak hours.
- Prohibit westbound left turns on Northwest Highway onto Airline and Durham during school hours.
- Traffic exiting the school driveway onto Durham must turn right only.
- Suggest traffic exiting the site to travel along Wentwood to then turn left or right onto Hillcrest Avenue to use the traffic signal at Northwest Highway and Hillcrest Avenue.
- Alternatively, suggest that school traffic should travel south on Durham and then turn onto Hillcrest Avenue at Centenary to turn right onto Hillcrest Avenue.
- Traffic desiring to travel south of Hillcrest should travel along Durham to Caruth and then turn left onto Hillcrest to take advantage of a traffic signal.

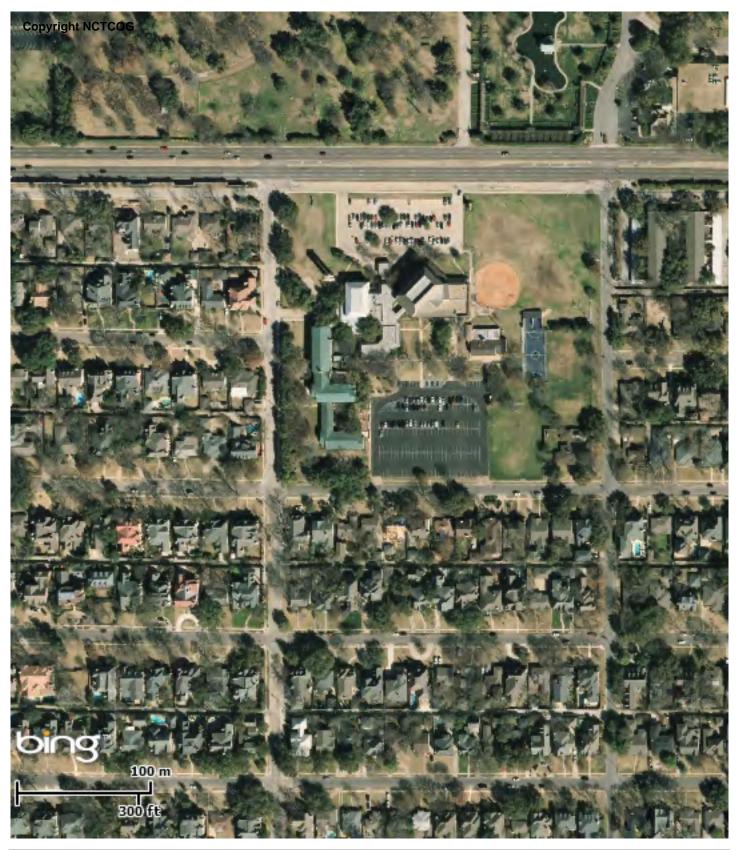
APPENDIX

Concept/Site Plan	1 Page
Aerial of Site	1 Page
Traffic Figures	4 Pages
ITE Trip Generation Sheets	3 Pages
SYNCHRO Output Sheets	8 Pages
HCS Output Sheets	24 Pages
TRAFFIC COUNTS	14 Pages

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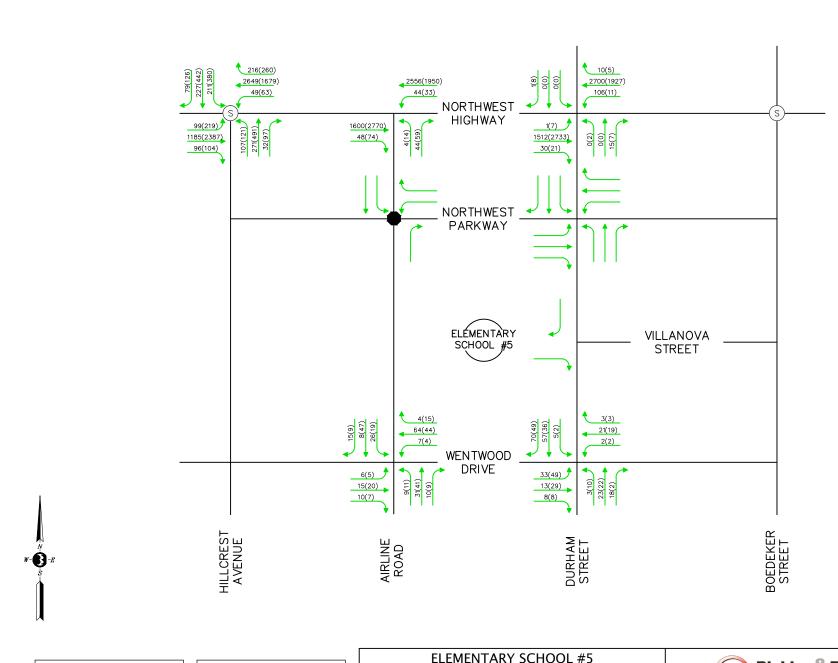


Proposed ES # 5

DFWMaps.com

DISCLAIMER
This data has been compiled for NCTCOG.
Various official and unofficial sources were used to gather this information. Every effort was made to ensure the accuracy of this data, however, no guarantee is given or implied as to the accuracy of said data.





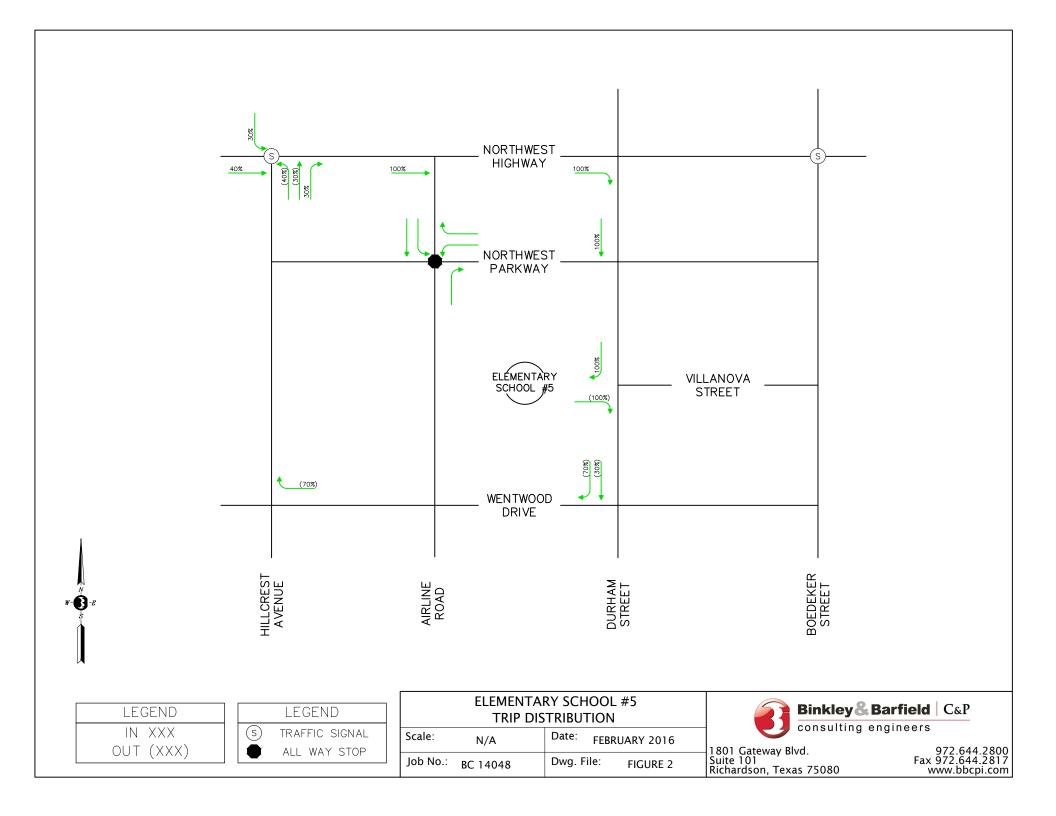
LEGEND
A.M. PEAK XXX
P.M. PEAK (XXX)

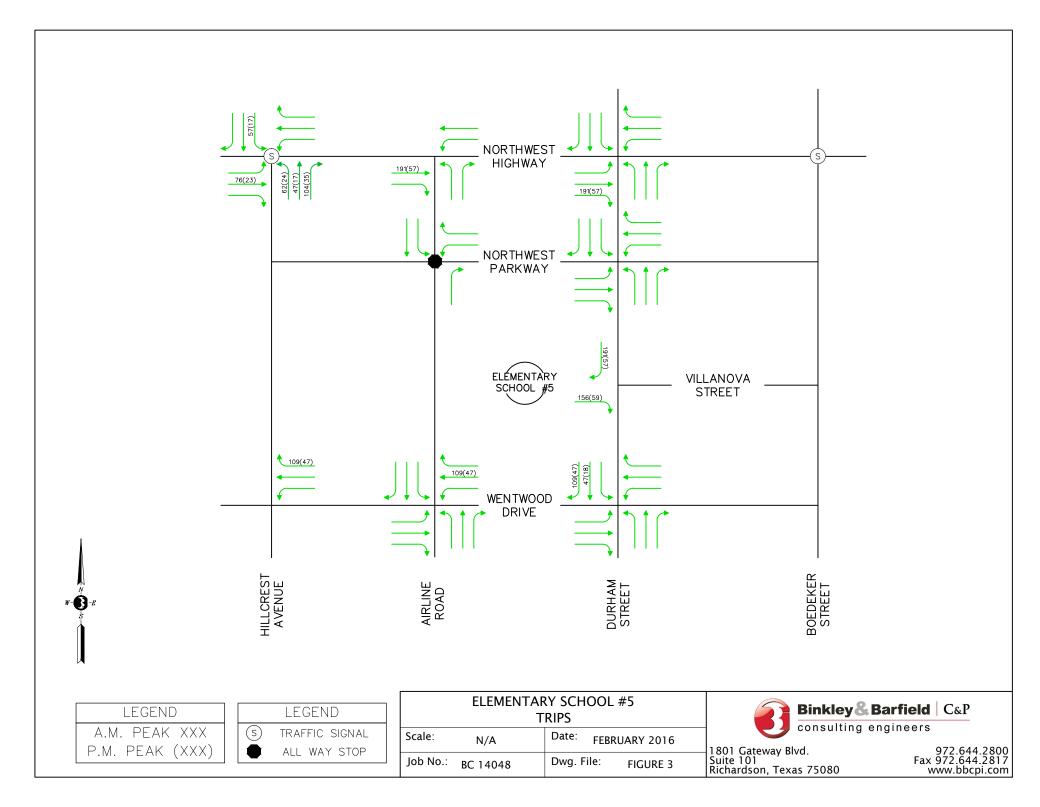
S TRAFFIC SIGNAL
ALL WAY STOP

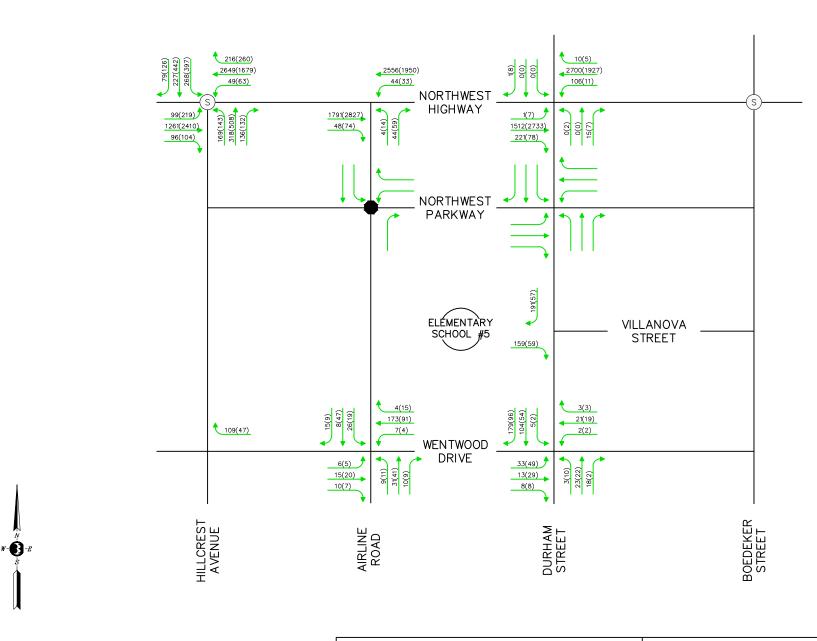
7	ELEMENTARY SCHOOL #5						
	EXISTING TRAFFIC						
	Scale:	N/A	Date: FEBRUARY 2016				
]	Job No.:	BC 14048	Dwg. File: FIGURE 1				



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LEGEND

A.M. PEAK XXX

P.M. PEAK (XXX)

S TRAFFIC SIGNAL
ALL WAY STOP

7	ELEMENTARY SCHOOL #5						
TOTAL TRAFFIC							
	Scale:	N/A	Date: FEBRUARY 2016],			
	Job No.:	BC 14048	Dwg. File: FIGURE 4				



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Elementary School (520)

Average Vehicle Trip Ends vs: Students

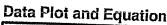
Weekday, On a: A.M. Peak Hour

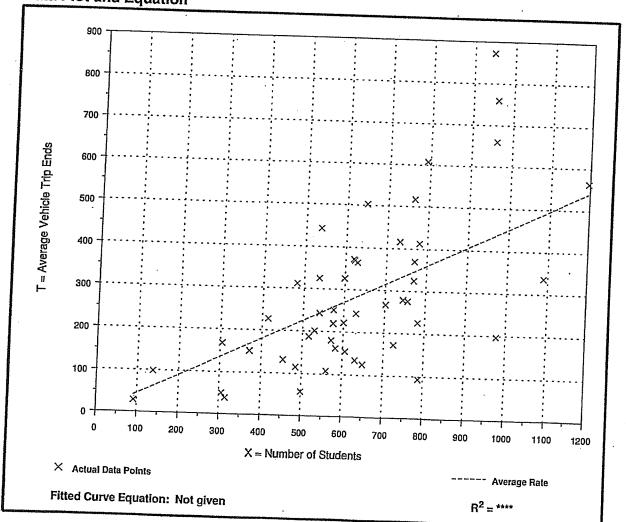
Number of Studies: 49 Average Number of Students: 630

Directional Distribution: 55% entering, 45% exiting

Trip Generation per Student

por Otauciil		
Average Rate	Pango of Datas	
	Range of Rates	Standard Deviation
0.45	0.11 - 0.92	
	0.02	0.70





Elementary School (520)

Average Vehicle Trip Ends vs: Students

On a: Weekday,

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

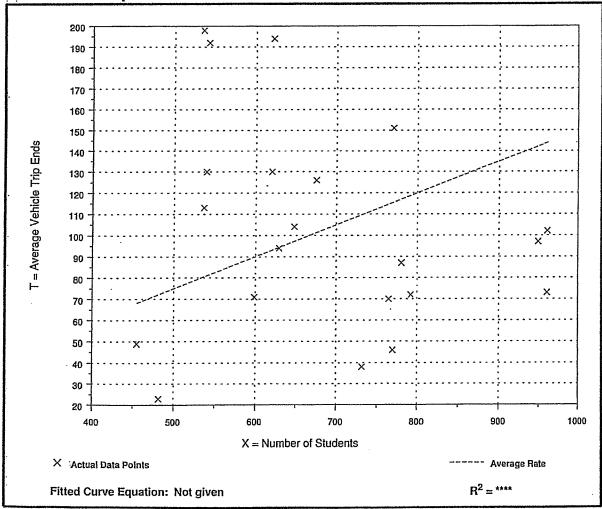
Number of Studies: 21
Average Number of Students: 684

Directional Distribution: 49% entering, 51% exiting

Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation	
0.15	0.05 - 0.37	0.40	

Data Plot and Equation



Elementary School (520)

Average Vehicle Trip Ends vs: Students

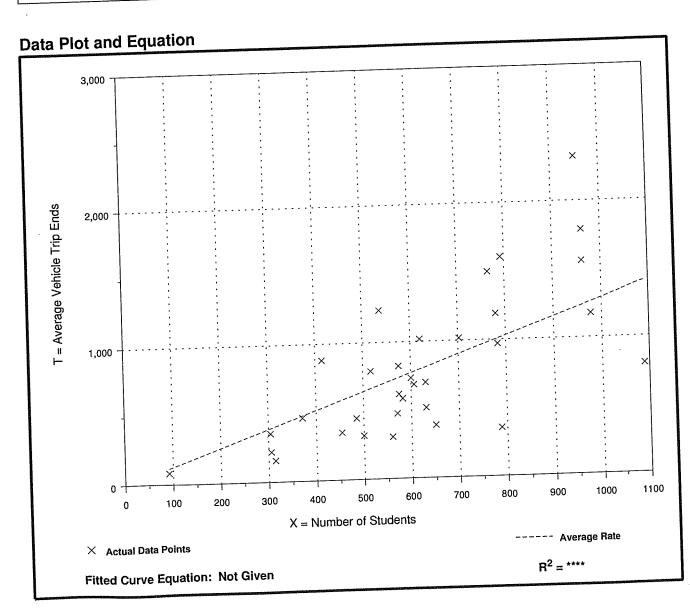
Weekday On a:

Number of Studies: 33 Average Number of Students: 620

Directional Distribution: 50% entering, 50% exiting

Trip Generation per Student

•	Trip Generation per Student		Out of Deviation
	Average Rate	Range of Rates	Standard Deviation
	1.29	0.45 - 2.45	1.26



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ĭ	↑ ↑		7	ተተኈ		¥	↑ ↑		7	ተተኈ	
Traffic Volume (vph)	99	1185	96	49	2649	216	107	271	32	211	227	79
Future Volume (vph)	99	1185	96	49	2649	216	107	271	32	211	227	79
Satd. Flow (prot)	1770	5029	0	1770	5029	0	1770	3483	0	1770	4887	0
Flt Permitted	0.044			0.147			0.437			0.281		
Satd. Flow (perm)	82	5029	0	274	5029	0	814	3483	0	523	4887	0
Satd. Flow (RTOR)		16			16			7			50	
Lane Group Flow (vph)	108	1392	0	53	3114	0	116	330	0	229	333	0
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Total Split (s)	11.8	96.4		10.4	95.0		14.8	23.9		19.3	28.4	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)	97.8	94.0		98.7	90.5		34.2	19.4		34.2	24.2	
Actuated g/C Ratio	0.65	0.63		0.66	0.60		0.23	0.13		0.23	0.16	
v/c Ratio	0.80	0.44		0.22	1.02		0.47	0.72		0.95	0.40	
Control Delay	67.4	15.1		10.1	52.3		51.3	71.3		94.8	49.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	67.4	15.1		10.1	52.3		51.3	71.3		94.8	49.4	
LOS	Е	В		В	D		D	Е		F	D	
Approach Delay		18.9			51.6			66.1			67.9	
Approach LOS		В			D			Ε			Е	
Queue Length 50th (ft)	54	251		16	~1182		91	162		192	91	
Queue Length 95th (ft)	#163	286		31	#1253		149	218		#325	127	
Internal Link Dist (ft)		1407			1573			804			388	
Turn Bay Length (ft)				140			140			100		
Base Capacity (vph)	135	3156		239	3040		253	456		242	831	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.80	0.44		0.22	1.02		0.46	0.72		0.95	0.40	

Cycle Length: 150 Actuated Cycle Length: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 45.7
Intersection Capacity Utilization 96.7%

Intersection LOS: D
ICU Level of Service F

Analysis Period (min) 15

- Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	↑ ↑↑		Ť	ተተ _ጉ		ሻ	∱ }		ሻ	ተተኈ	
Traffic Volume (veh/h)	99	1185	96	49	2649	216	107	271	32	211	227	79
Future Volume (veh/h)	99	1185	96	49	2649	216	107	271	32	211	227	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	108	1288	104	53	2879	235	116	295	35	229	247	86
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	2980	241	287	2907	231	270	414	49	266	614	201
Arrive On Green	0.05	0.62	0.62	0.03	0.61	0.61	0.07	0.13	0.13	0.10	0.16	0.16
Sat Flow, veh/h	1774	4797	387	1774	4803	382	1774	3191	375	1774	3795	1239
Grp Volume(v), veh/h	108	910	482	53	2010	1104	116	162	168	229	219	114
Grp Sat Flow(s),veh/h/ln	1774	1695	1794	1774	1695	1795	1774	1770	1797	1774	1695	1644
Q Serve(g_s), s	4.9	20.8	20.8	1.6	86.0	90.5	8.1	13.2	13.4	14.8	8.7	9.4
Cycle Q Clear(g_c), s	4.9	20.8	20.8	1.6	86.0	90.5	8.1	13.2	13.4	14.8	8.7	9.4
Prop In Lane	1.00		0.22	1.00		0.21	1.00		0.21	1.00		0.75
Lane Grp Cap(c), veh/h	129	2106	1115	287	2051	1086	270	230	233	266	549	266
V/C Ratio(X)	0.83	0.43	0.43	0.18	0.98	1.02	0.43	0.71	0.72	0.86	0.40	0.43
Avail Cap(c_a), veh/h	135	2106	1115	305	2051	1086	274	230	233	266	549	266
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	14.7	14.7	11.1	28.6	29.5	47.9	62.4	62.5	53.7	56.2	56.5
Incr Delay (d2), s/veh	33.3	0.1	0.3	0.3	15.3	31.5	1.1	16.8	17.4	23.9	2.2	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	9.8	10.4	0.8	44.3	54.2	4.0	7.5	7.8	4.0	4.2	4.6
LnGrp Delay(d),s/veh	79.3	14.8	14.9	11.4	43.9	61.0	49.0	79.2	79.8	77.6	58.3	61.4
LnGrp LOS	<u>E</u>	В	В	В	D	F	D	<u>E</u>	E	E	E	<u>E</u>
Approach Vol, veh/h		1500			3167			446			562	
Approach Delay, s/veh		19.5			49.4			71.6			66.8	
Approach LOS		В			D			E			Е	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.3	23.9	8.9	97.4	14.5	28.7	11.4	95.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.8	19.4	5.9	91.9	10.3	23.9	7.3	90.5				
Max Q Clear Time (g_c+I1), s	16.8	15.4	3.6	22.8	10.1	11.4	6.9	92.5				
Green Ext Time (p_c), s	0.0	1.4	0.0	66.2	0.0	3.1	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			44.9									
HCM 2010 LOS			D									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	ተ ተኈ		Ţ	ተተ _ጉ		ň	ħβ		7	↑ ↑₽	
Traffic Volume (vph)	99	1261	96	49	2649	216	169	318	136	268	227	79
Future Volume (vph)	99	1261	96	49	2649	216	169	318	136	268	227	79
Satd. Flow (prot)	1770	5029	0	1770	5029	0	1770	3380	0	1770	4887	0
Flt Permitted	0.051			0.121			0.451			0.203		
Satd. Flow (perm)	95	5029	0	225	5029	0	840	3380	0	378	4887	0
Satd. Flow (RTOR)		14			15			40			54	
Lane Group Flow (vph)	108	1475	0	53	3114	0	184	494	0	291	333	0
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Total Split (s)	10.6	82.2		10.6	82.2		20.4	24.2		23.0	26.8	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)	83.8	79.8		84.7	77.7		38.2	19.7		38.2	23.6	
Actuated g/C Ratio	0.60	0.57		0.60	0.56		0.27	0.14		0.27	0.17	
v/c Ratio	0.84	0.51		0.26	1.11		0.56	0.97		1.01	0.38	
Control Delay	70.7	19.2		13.2	87.1		45.4	87.8		98.6	44.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	70.7	19.2		13.2	87.1		45.4	87.8		98.6	44.9	
LOS	Е	В		В	F		D	F		F	D	
Approach Delay		22.8			85.9			76.3			70.0	
Approach LOS		С			F			Е			Е	
Queue Length 50th (ft)	48	295		17	~1187		130	221		~222	84	
Queue Length 95th (ft)	#160	338		35	#1263		199	#337		#417	118	
Internal Link Dist (ft)		1407			1573			804			388	
Turn Bay Length (ft)				140			140			100		
Base Capacity (vph)	129	2873		203	2797		341	509		287	868	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.84	0.51		0.26	1.11		0.54	0.97		1.01	0.38	

Cycle Length: 140

Actuated Cycle Length: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 66.7

Intersection LOS: E ICU Level of Service G

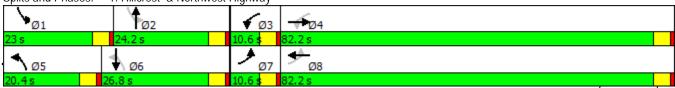
Intersection Capacity Utilization 104.5%

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ተተ _ጉ		7	ተተኈ		ሻ	∱ }		ሻ	ተተ _ጮ	
Traffic Volume (veh/h)	99	1261	96	49	2649	216	169	318	136	268	227	79
Future Volume (veh/h)	99	1261	96	49	2649	216	169	318	136	268	227	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	108	1371	104	53	2879	235	184	346	148	291	247	86
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	2736	208	248	2666	212	344	342	144	286	660	215
Arrive On Green	0.04	0.57	0.57	0.03	0.56	0.56	0.10	0.14	0.14	0.13	0.17	0.17
Sat Flow, veh/h	1774	4823	366	1774	4803	382	1774	2430	1022	1774	3795	1239
Grp Volume(v), veh/h	108	964	511	53	2010	1104	184	250	244	291	219	114
Grp Sat Flow(s), veh/h/ln	1774	1695	1798	1774	1695	1795	1774	1770	1682	1774	1695	1644
Q Serve(g_s), s	4.4	24.1	24.1	1.7	77.7	77.7	11.8	19.7	19.7	18.5	8.0	8.6
Cycle Q Clear(g_c), s	4.4	24.1	24.1	1.7	77.7	77.7	11.8	19.7	19.7	18.5	8.0	8.6
Prop In Lane	1.00		0.20	1.00		0.21	1.00		0.61	1.00		0.75
Lane Grp Cap(c), veh/h	129	1924	1020	248	1882	996	344	249	237	286	589	286
V/C Ratio(X)	0.84	0.50	0.50	0.21	1.07	1.11	0.53	1.01	1.03	1.02	0.37	0.40
Avail Cap(c_a), veh/h	129	1924	1020	270	1882	996	370	249	237	286	589	286
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	18.3	18.3	14.1	31.1	31.2	41.6	60.2	60.2	46.3	51.1	51.3
Incr Delay (d2), s/veh	36.3	0.2	0.4	0.4	41.7	63.0	1.3	58.4	66.3	57.9	1.8	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	11.3	12.0	0.9	47.0	55.6	5.8	13.7	13.5	6.5	3.9	4.3
LnGrp Delay(d),s/veh	74.6	18.5	18.7	14.5	72.8	94.2	42.9	118.5	126.5	104.3	52.9	55.5
LnGrp LOS	Ε	В	В	В	F	F	D	F	F	F	D	Е
Approach Vol, veh/h		1583			3167			678			624	
Approach Delay, s/veh		22.4			79.3			100.9			77.3	
Approach LOS		С			Е			F			Е	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	24.2	8.9	83.9	18.4	28.8	10.6	82.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	19.7	6.1	77.7	15.9	22.3	6.1	77.7				
Max Q Clear Time (q_c+l1), s	20.5	21.7	3.7	26.1	13.8	10.6	6.4	79.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	50.1	0.1	3.8	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			66.6									
HCM 2010 LOS			Е									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	ተ ቀኈ		Ţ	ተ ተኈ		7	ħβ		Ţ	ተተ _ጉ	
Traffic Volume (vph)	219	2387	104	63	1679	260	121	491	97	380	442	126
Future Volume (vph)	219	2387	104	63	1679	260	121	491	97	380	442	126
Satd. Flow (prot)	1770	5055	0	1770	4984	0	1770	3451	0	1770	4917	0
Flt Permitted	0.067			0.056			0.309			0.143		
Satd. Flow (perm)	125	5055	0	104	4984	0	576	3451	0	266	4917	0
Satd. Flow (RTOR)		6			23			13			48	
Lane Group Flow (vph)	238	2708	0	68	2108	0	132	639	0	413	617	0
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Total Split (s)	21.0	76.0		9.5	64.5		16.4	32.5		32.0	48.1	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)	76.5	71.5		76.5	60.0		55.5	28.0		55.5	44.4	
Actuated g/C Ratio	0.51	0.48		0.51	0.40		0.37	0.19		0.37	0.30	
v/c Ratio	0.98	1.12		0.63	1.05		0.44	0.98		1.10	0.41	
Control Delay	94.5	98.2		45.0	77.7		34.2	88.8		119.7	40.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	94.5	98.2		45.0	77.7		34.2	88.8		119.7	40.0	
LOS	F	F		D	Е		С	F		F	D	
Approach Delay		97.9			76.6			79.4			72.0	
Approach LOS		F			Е			Е			Е	
Queue Length 50th (ft)	183	~1117		31	~816		83	325		~408	165	
Queue Length 95th (ft)	#363	#1197		#84	#908		134	#456		#626	205	
Internal Link Dist (ft)		1407			1573			804			388	
Turn Bay Length (ft)				140			140			100		
Base Capacity (vph)	244	2412		108	2007		310	654		374	1490	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.98	1.12		0.63	1.05		0.43	0.98		1.10	0.41	

Cycle Length: 150 Actuated Cycle Length: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.12

Intersection Signal Delay: 85.3 Intersection Capacity Utilization 105.3%

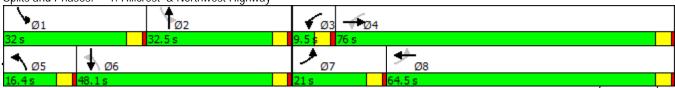
Intersection LOS: F
ICU Level of Service G

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ተተ _ጉ		Ť	ተተ _ጉ		ሻ	∱ ∱		ሻ	ተተኈ	
Traffic Volume (veh/h)	219	2387	104	63	1679	260	121	491	97	380	442	126
Future Volume (veh/h)	219	2387	104	63	1679	260	121	491	97	380	442	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	238	2595	113	68	1825	283	132	534	105	413	480	137
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	2393	103	104	1780	273	328	551	108	378	1212	336
Arrive On Green	0.11	0.48	0.48	0.03	0.40	0.40	0.06	0.19	0.19	0.18	0.31	0.31
Sat Flow, veh/h	1774	4999	215	1774	4449	683	1774	2952	578	1774	3962	1097
Grp Volume(v), veh/h	238	1751	957	68	1386	722	132	319	320	413	409	208
Grp Sat Flow(s),veh/h/ln	1774	1695	1825	1774	1695	1742	1774	1770	1761	1774	1695	1669
Q Serve(g_s), s	16.0	71.8	71.8	2.9	60.0	60.0	7.6	26.9	27.1	27.5	14.3	14.9
Cycle Q Clear(g_c), s	16.0	71.8	71.8	2.9	60.0	60.0	7.6	26.9	27.1	27.5	14.3	14.9
Prop In Lane	1.00		0.12	1.00		0.39	1.00		0.33	1.00		0.66
Lane Grp Cap(c), veh/h	243	1623	873	104	1356	697	328	330	329	378	1037	511
V/C Ratio(X)	0.98	1.08	1.10	0.66	1.02	1.04	0.40	0.97	0.97	1.09	0.39	0.41
Avail Cap(c_a), veh/h	243	1623	873	107	1356	697	355	330	329	378	1037	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	39.1	39.1	35.9	45.0	45.0	33.0	60.5	60.6	46.1	41.1	41.3
Incr Delay (d2), s/veh	51.6	47.1	60.0	13.0	30.2	43.6	0.8	41.7	43.2	73.4	1.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	44.2	50.7	1.8	33.8	37.3	3.8	17.0	17.1	23.4	6.9	7.2
LnGrp Delay(d),s/veh	101.7	86.2	99.1	49.0	75.2	88.6	33.8	102.3	103.8	119.5	42.2	43.7
LnGrp LOS	F	F	F	D	F	F	С	F	F	F	D	D
Approach Vol, veh/h		2946			2176			771			1030	
Approach Delay, s/veh		91.6			78.9			91.2			73.5	
Approach LOS		F			E			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	32.5	9.2	76.3	14.1	50.4	21.0	64.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	28.0	5.0	71.5	11.9	43.6	16.5	60.0				
Max Q Clear Time (g_c+I1), s	29.5	29.1	4.9	73.8	9.6	16.9	18.0	62.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	8.5	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			84.9									
HCM 2010 LOS			F									

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	↑ ↑↑		7	ተተኈ		ň	∱ ∱		7	ተተ _ጉ	
Traffic Volume (vph)	219	2410	104	63	1679	260	143	508	132	397	442	126
Future Volume (vph)	219	2410	104	63	1679	260	143	508	132	397	442	126
Satd. Flow (prot)	1770	5055	0	1770	4984	0	1770	3429	0	1770	4917	0
Flt Permitted	0.072			0.060			0.308			0.148		
Satd. Flow (perm)	134	5055	0	112	4984	0	574	3429	0	276	4917	0
Satd. Flow (RTOR)		6			24			20			51	
Lane Group Flow (vph)	238	2733	0	68	2108	0	155	695	0	432	617	0
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Total Split (s)	19.2	69.0		9.5	59.3		17.2	31.5		30.0	44.3	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)	69.5	66.4		70.4	54.8		52.5	27.0		52.5	40.7	
Actuated g/C Ratio	0.50	0.47		0.50	0.39		0.38	0.19		0.38	0.29	
v/c Ratio	1.00	1.14		0.59	1.07		0.49	1.03		1.15	0.42	
Control Delay	98.0	102.6		39.8	83.3		32.8	94.6		132.8	37.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	98.0	102.6		39.8	83.3		32.8	94.6		132.8	37.8	
LOS	F	F		D	F		С	F		F	D	
Approach Delay		102.2			81.9			83.4			76.9	
Approach LOS		F			F			F			Е	
Queue Length 50th (ft)	169	~1087		30	~775		91	~346		~411	154	
Queue Length 95th (ft)	#350	#1171		#74	#869		143	#476		#628	194	
Internal Link Dist (ft)		1407			1573			804			388	
Turn Bay Length (ft)				140			140			100		
Base Capacity (vph)	238	2400		115	1965		327	677		375	1467	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.00	1.14		0.59	1.07		0.47	1.03		1.15	0.42	

Cycle Length: 140

Actuated Cycle Length: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.15

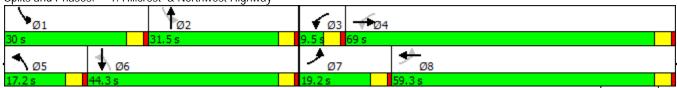
Intersection Signal Delay: 89.9 Intersection LOS: F
Intersection Capacity Utilization 108.3% ICU Level of Service G

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

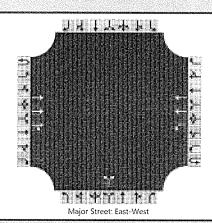
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



	۶	→	•	•	—	•	•	†	~	<u> </u>	+	√
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ř	ተተኈ		Į.	ተተኈ		¥	↑ ↑		Ť	ተተኈ	
Traffic Volume (veh/h)	219	2410	104	63	1679	260	143	508	132	397	442	126
Future Volume (veh/h)	219	2410	104	63	1679	260	143	508	132	397	442	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	238	2620	113	68	1825	283	155	552	143	432	480	137
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	2317	99	110	1742	267	345	537	139	375	1190	330
Arrive On Green	0.11	0.46	0.46	0.03	0.39	0.39	0.07	0.19	0.19	0.18	0.30	0.30
Sat Flow, veh/h	1774	5002	213	1774	4449	683	1774	2786	719	1774	3962	1097
Grp Volume(v), veh/h	238	1767	966	68	1386	722	155	350	345	432	409	208
Grp Sat Flow(s), veh/h/ln	1774	1695	1825	1774	1695	1742	1774	1770	1736	1774	1695	1669
Q Serve(g_s), s	14.7	64.9	64.9	2.8	54.8	54.8	8.4	27.0	27.0	25.5	13.4	14.0
Cycle Q Clear(g_c), s	14.7	64.9	64.9	2.8	54.8	54.8	8.4	27.0	27.0	25.5	13.4	14.0
Prop In Lane	1.00		0.12	1.00		0.39	1.00		0.41	1.00		0.66
Lane Grp Cap(c), veh/h	238	1571	845	110	1327	682	345	341	335	375	1019	502
V/C Ratio(X)	1.00	1.13	1.14	0.62	1.04	1.06	0.45	1.03	1.03	1.15	0.40	0.42
Avail Cap(c_a), veh/h	238	1571	845	115	1327	682	373	341	335	375	1019	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	37.6	37.6	33.5	42.6	42.6	30.8	56.5	56.5	43.5	38.9	39.1
Incr Delay (d2), s/veh	58.7	65.2	78.2	9.0	37.2	50.9	0.9	55.3	57.4	95.2	1.2	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	44.5	51.0	1.7	32.5	36.0	4.1	18.4	18.3	24.4	6.5	6.8
LnGrp Delay(d),s/veh	104.5	102.8	115.8	42.5	79.8	93.5	31.7	111.8	113.9	138.7	40.1	41.7
LnGrp LOS	F	F	F	D	F	F	С	F	F	F	D	D
Approach Vol, veh/h		2971			2176			850			1049	
Approach Delay, s/veh		107.1			83.2			98.1			81.0	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	31.5	9.1	69.4	14.9	46.6	19.2	59.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	27.0	5.0	64.5	12.7	39.8	14.7	54.8				
Max Q Clear Time (g_c+I1), s	27.5	29.0	4.8	66.9	10.4	16.0	16.7	56.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	8.7	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			94.8									
HCM 2010 LOS			F									

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	LWC	Intersection	Northwest Highway at Airl						
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas						
Date Performed	1/26/2016	East/West Street	Northwest Highway						
Analysis Year	2016	North/South Street	Airline						
Time Analyzed	AM Existing	Peak Hour Factor	0.92						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	HIghland Park ISD								

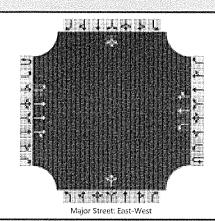


Vehicle Volumes and Adjustments

Approach		Eastb	oound			West	bound			North	bound	-		South	bound	
Movement	U	L	Т	R	U	L	Ť	R	U	L	Т	R	U	Ĺ	Т	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	3	0	0	1	2	0		0	0	0		0_	- 0	Ö
Configuration			Т	TR		L	Т				LR			ĺ		
Volume (veh/h)		en grager	1600	48		66	2566			4		44				gas, i
Percent Heavy Vehicles						3				3		3			Ì	Î
Proportion Time Blocked	1 (1) 4											** ***				
Right Turn Channelized		No No							No No							
Median Type								Left	Only				American de la companya de la compa			
Median Storage	5															

Flow Rate (veh/h)					72					52					
Capacity					158					177		4 7	77		
v/c Ratio					0.46			SANSAN PROGRAMMENT SANSAN		0.29					***************************************
95% Queue Length			1		2.1	ĺ				1.2		ĺ			
Control Delay (s/veh)					45.7					33.5			MARINE MESSAGE AND ASSESSED.		
Level of Service (LOS)	12.1.5				E					D					
Approach Delay (s/veh)		CONTRACTOR AND SAN		THAT THE WAR CONTINUED IN CONTINUED IN	1	.1	Contribution of the second	***************************************	33	3.5	a gumman at this section where the tr		Ó MACCOMPRISON DAS	C.Commonwearcon Massachus (1970)	hanous ammana
Approach LOS			Per C			4		***************************************	[)					

	HCS 2010 Two-Way Stop Control Summary Report										
General Information	The state of the s	Site Information	100 200 200 2 全								
Analyst	LWC	Intersection	Northwest Highway at Durh								
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas								
Date Performed	1/26/2016	East/West Street	Northwest Highway								
Analysis Year	2016	North/South Street	Durham								
Time Analyzed	AM Existing	Peak Hour Factor	0.92								
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25								
Project Description	HIghland Park ISD	обори («Сиптин» объектурной изполня («Кори» объекти на полителення объектичность под под под под под под под п Под под под под под под под под под под п									

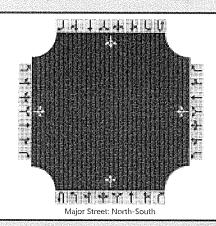


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Approach		Eastb	oound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	Ļ	Т	R	U	L	т	R	Ü	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	2	0	2000	0	1	0		0	1	0
Configuration		L T TR				L	Т	TR			LTR	Î			LTR	
Volume (veh/h)	1	1	1512	30	1	106	2700	10		0	0	15		0	0	1
Percent Heavy Vehicles	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked														1 41 5 1 45 1	1. 143	
Right Turn Channelized		N	lo			N	lo			N	lo	<u> </u>		N	0	
Median Type							***************************************	Left	Only				Sec. 10.		***************************************	ind il Dia vi
Median Storage				***************************************				1	5			***************************************	***************************************			

Flow Rate (veh/h)	- Commission of the Company	2			116					16				1	
Capacity		30			181					264				115	
v/c Ratio		0.07			0.64					0.06		<u> </u>		0.01	
95% Queue Length		0.2			3.7			· ·	1	0.2				0.0	
Control Delay (s/veh)		135.5			54.9					19.5		-	- Park and considerate Million Con-	36.6	
Level of Service (LOS)		F			F					С				E	
Approach Delay (s/veh)		0	.2	Marie para paga paga mara a	2	.1	Santania antonomo arti		19	9.5	. Emerantic productions	(CONTRACTOR CONTRACTO	36	5.6	- Description of the second
Approach LOS	1	·	A		,	4				C				<u> </u>	

	HCS 2010 Two-Way Stop	Control Summary Re	eport
General Information		Site Information	
Analyst	LWC	Intersection	Durham at Wentwood
Agency/Co.	BBCPI	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Durham
Analysis Year	2016	North/South Street	Wentwood
Time Analyzed	AM Existing	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ES # 5 HPISD	ner hand till den stemste hild storke op sidsog fram for enne en stemste skatte en beske han hands skatte hand en beske skatte hand en beske skatte en beske skatte beske skatte en beske skat	бого т теттем и менен и поточно в вениси общее неих и обиском сете водили, в до эконо и пред вениси обиском до вениси общее водили в до обиском оби



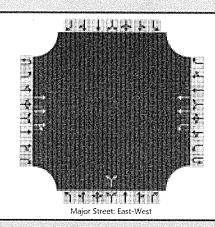
а,			2015	hi	3.317	100	200	1.5											W 55	-	200										
	ъ.		_		-	1 -	110		-			-	-	-	-	76			2 C	n		1 5		-				-		_	
	•	4	-					v				н	Εŧ	-	٠.	20	•	16	100	-		11	* *	•	F	•	-	10	ıŦ	ĸ.	
	2.	400			•		4.33			ж.	•			•	•	45			200			• 1	•		•					J	
																						ж.									

Approach		Eastk	oound			Westb	ound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	7 L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4Ú	4	5	6
Number of Lanes	l i Na	0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration	LTR						LTR				LTR				LTR	
Volume (veh/h)						2	21	3	506 500	3	23	18		5	57	70
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked			14.1 High	CATH WOMENING				A CONTRACTOR OF THE CONTRACTOR	TWO TEN AND AND AND AND AND AND AND AND AND AN	- The second sec				***************************************	***********	
Right Turn Channelized		٨	lo	***************************************		N	0			N	0			N	0	· · · · · · · · · · · · · · · · · · ·
Median Type		WINNESS OF THE WAR		F 1	<u> </u>	**************************************	•	Undi	vided	***************************************	***************************************	***************************************		7 ± 21		
Median Storage				<u> </u>		*****		1 - 1 - 1 1 1 1 1 1 1 1 		***************************************	******	***************************************	***************************************			

Flow Rate (veh/h)			57				28	1	T	3				5		
Capacity			783	Ì			730	ĺ		1438				1555		
v/c Ratio	-		0.07	ĺ	Ì		0.04			0.00				0.00		-
95% Queue Length			0.2				0.1		1 1 1 1	0.0			Î	0.0		
Control Delay (s/veh)			10.0	ĺ	Î		10.1			7.5		***************************************	-	7.3	***************************************	
Level of Service (LOS)			Α				В	ĺ	İ	Α				Α		
Approach Delay (s/veh)		10	0.0	- December of the second		10).1	- Companya ya kata ya	CANAL CONTRACTOR CONTR	0	.5	A CONTRACTOR CONTRACTO	O TOTAL PROPERTY OF THE PARTY O	0	.3	å.
Approach LOS		:	A	***************************************	<u> </u>	<u> </u>	3			/	4	area Maria	1	· · ·	<u> </u>	3

General Information				Site Infor	mation			
Analyst Agency/Co. Date Performed Analysis Time Period	lwc bbcpi 1/27/2 Am ex			Intersection Jurisdiction Analysis Year			e at Wentwood of Dallas	
Project ID ES # 5 HPISD	ete totale de committe de					**************************************		
East/West Street: Wentwood	water was reduced to the real and a reduced			North/South S	Street: Airline			
Volume Adjustments :	and Site C							
Approach Movement	L		Eastbound T	R	L	We	estbound	R
Volume (veh/h)	6	1	15	10	7		64	4
%Thrus Left Lane								
Approach		<u> </u>	Northbound			Soi	uthbound	
Movement	L		Т	R	L		T	R
/olume (veh/h)	9		31	10	26		88	15
%Thrus Left Lane								
	Eas	tbound	Wes	stbound	North	bound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR	1	LTR	-	LTR		LTR	ļ
PHF	1.00		1.00		1.00		1.00	<u> </u>
Flow Rate (veh/h)	31		75		50		129	
% Heavy Vehicles	0		0		0		0	
No. Lanes		1		1	1			1 1
Geometry Group		<u>.</u> 1		1	1			, 1
Ouration, T					25			
Saturation Headway A	diustment	Workshee	ef					
Prop. Left-Turns	0.2		0.1	<u> </u>	0.2		0.2	
Prop. Right-Turns	0.3		0.1		0.2		0.2	<u> </u>
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
nLT-adj	0.0	0.2	0.0	0.2	0.0	0.2	0.0	0.2
nRT-adj		+						ļ
	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	-0.2		-0.0			Selection (Selection of the Selection of	-0.0	THE CONTRACTOR AND ADDRESS OF THE CO
Departure Headway ar		Time						
nd, initial value (s)	3.20		3.20		3.20		3.20	
r, initial	0.03		0.07		0.04		0.11	
id, final value (s)	4.22		4.32		4.19		4.16	
, final value	0.036	<u> </u>	0.090		0.058		0.149	<u></u>
Nove-up time, m (s)		.0		7.0	2.0	U	2.	U
Service Time, t _s (s)	2.2		2.3		2.2		2.2	
Capacity and Level of	Service							
	East	bound	Wes	tbound	North	oound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
apacity (veh/h)	775	<u> </u>	833		833		860	
elay (s/veh)								
	7.4		7.7		7.4		7.9	
OS	Α	<u> </u>	A	<u> </u>	A _		A	_
pproach: Delay (s/veh)		7.4		.7	7.4	4	7.	
LOS		Α	1	4	A		<u> </u>	1
ntersection Delay (s/veh)				7	.7			
tersection LOS					4			

	HCS 2010 Two-Way Stop C	Control Summary Re	port
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Highway at Airl
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2016	North/South Street	Airline
Time Analyzed	PM Existing	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	HIghland Park ISD	en de la composition della com	SECONDARIA DE ESMACARIO ANTO ANTO POR PORTU PORTO ANTO ESTA FRANCIA EL ESTA FRANCIA DE LA CONTRACTICA DEL CONTRACTICA DEL CONTRACTICA DEL CONTRACTICA DE LA CONTRACTICA DE LA CONTRACTICA DEL CONTRACTICA DE LA CONTRACTICA DEL CONTRACTICA DEL CONTRACTICA DEL CONTRACTICA DEL CONTRACTICA DEL CONTRACTICA

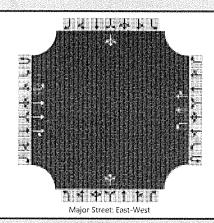


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Approach		Eastb	oound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	T	R
Priority	1 U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	3	0	0	1	2	0		0	0	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)		Α.	2770	74	2	33	1950			14		59				
Percent Heavy Vehicles					3	3				3		3				Ì
Proportion Time Blocked										H	THE PERSON NAMED IN COLUMN		THE REAL PROPERTY AND ADDRESS OF THE PERSON		1 70	
Right Turn Channelized		N	lo			٨	lo			N	0	\$-#-		١	lo	A
Median Type) . 30					*************		Left	Only	* 1 V		waren was week of				
Median Storage									5		#		******	***************************************		

Flow Rate (veh/h)					38					79					
Capacity			s ytaka		33	100			TO S	108	14 (4) 40 (4)				
v/c Ratio					1.17		7-10-10-10-10-10-10-10-10-10-10-10-10-10-			0.73	ĺ			inimonen and a second	
95% Queue Length					4.1			Page 1		3.9		***************************************			<u> </u>
Control Delay (s/veh)					398.2	************************		William Day Commercial	Ì	98.5		STATE OF THE PARTY		2 Marie Construction In Constr	
Level of Service (LOS)					F					F					
Approach Delay (s/veh)	ANNUAL VIOLENCE AND RESERVE	å manutensen av en	Enizon sekeznikolonekan pri	C un transmission de la company de la compan	7.	.0	bear au reconstruire de la construire de	anous tronslation recommends and	98	3.5	Ž.	66/94-37/201 42 -11-44-224	Ž.	European reconstruction and the con-	derenamento menos
Approach LOS						1		PMPH ACTO TAMON COMMUNICO						·····	***************************************

	HCS 2010 Two-Way Stop	Control Summary R	eport
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Highway at Durh
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2016	North/South Street	Durham
Time Analyzed	PM Existing	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	HIghland Park ISD	addar eng ang grupos was na na kanagang na manakan na na kanagang na	### description of the state of

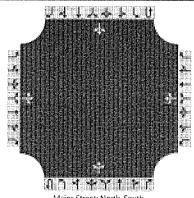


Vehicle Volumes and Adjustments

Approach		Eastb	ound			West	bound			North	bound			South	bound	
Movement	U	Ļ	T	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	Т	TR		L	Т	TR			LTR				LTR	
Volume (veh/h)	***************************************	7	2733	21	ur y Feli.	11	1927	5		2	0	7		0	0	8
Percent Heavy Vehicles		3				3				3	3	3		3	3	3
Proportion Time Blocked	***************************************			TEXT TO SERVICE STATE OF THE S												
Right Turn Channelized		N	0			١	٧o			N	0	·		١	10	Haran Marining
Median Type		***************************************						Left	Only							
Median Storage	***************************************							· ·	5	***************************************	***************************************				*******	

Flow Rate (veh/h)		8				12					10				9	
Capacity		255			Ì	37	4 : 1	ĺ	1,41		25				222	
v/c Ratio		0.03				0.32					0.39				0.04	
95% Queue Length		0.1				1.1		19 - Y	<u>a</u>		1.2		1		0.1	
Control Delay (s/veh)		19.6				141.0					218.7			***************************************	21.9	
Level of Service (LOS)		С	9.6			F					F				С	
Approach Delay (s/veh)		0.1				0	.8			21	8.7	Circumser and Communication	***************************************	21	9	
Approach LOS	A				ļ	4				F			. (

	HCS 2010 Two-Way Stop C	Control Summary Re	eport
General Information		Site Information	生活
Analyst	LWC	Intersection	Durham at Wentwood
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Durham
Analysis Year	2016	North/South Street	Wentwood
Time Analyzed	PM Existing	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ES # 5 HPISD	Содина на «Станий в при дин на родиний выполняющих при	Transference in the control of the c



Major Street: North-South

		le											

Approach		Eastbound U L T R				West	oound			North	bound			South	bound	
Movement	U	L 1	Τ	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	Ö	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		49	29	8		2	19	3		10	22	2		2	36	49
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked		* E							O THE STREET OF STREET		CONTRACTOR SECURIOR S	i i i i i i i i i i i i i i i i i i i				
Right Turn Channelized		No			N	0			N	0			١	10		
Median Type							TO THE PERSON NAMED IN	Undi	vided				October 1985		edantikhenkannennen waseense	rekilleki-izemedaneae

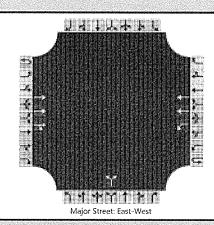
Delay, Queue Length, and Level of Service

Median Storage

Flow Rate (veh/h)			94			26			11				2		
Capacity	9). 1.		811			769		eg tjudi Mari	1495				1580		
v/c Ratio			0.12			0.03			0.01				0.00		
95% Queue Length			0.4			0.1			0.0				0.0		
Control Delay (s/veh)			10.0			9.8			7.4			Telephonoment consensus	7.3		
Level of Service (LOS)	i Na		В			Α			Α		:		Α		
Approach Delay (s/veh)		10.0			9.	.8			2	.2			0	.2	(ATTENÇATION CARROLLES
Approach LOS		В		P	4	***************************************			4				Δ		

General Information			erigi Section	Site Infor	mation			
Analyst Agency/Co. Date Performed Analysis Time Period	LWC BBCPI 10/21/. PM			Intersection Jurisdiction Analysis Yea			e & Wentwood and Park ing	
Project ID Hillcrest High Scho								
East/West Street: Wentwood				North/South 8	Street: Airline			
Volume Adjustments	s and Site Cl							
Approach Movement		l l	astbound T	R	L	VVe	estbound T	R
Volume (veh/h)	5		20	7	4		44	15
%Thrus Left Lane								
Approach		<u>'</u>	lorthbound	***************************************		Soi	uthbound	***************************************
Movement	L		Т	R	L		Т	R
Volume (veh/h)	11		41	9	19		42	9
%Thrus Left Lane								
	East	bound	Wes	stbound	North	bound	Sout	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	32		63		61		70	
% Heavy Vehicles	0		0		0		1 0	
No. Lanes	1	1		1	1	<u> </u>		1 1
Geometry Group	1	•		1	1			1
Duration, T				0.	.25		_1	
Saturation Headway	Adiustment	Workshee	ŕ					
Prop. Left-Turns	0.2		0.1		0.2		0.3	
Prop. Right-Turns	0.2		0.2		0.1		0.1	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
nLT-adi	0.0	0.2	0.0	0.2	0.2	0.2	0.0	0.2
nRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-	
	1.7						-0.6	-0.6
nHV-adj		1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.1					Destructive with the Automatical Street	-0.0	
Departure Headway a		Time			·		-,	
nd, initial value (s)	3.20		3.20		3.20		3.20	
k, initial	0.03		0.06		0.05		0.06	
d, final value (s)	4.15		4.09		4.13	***	4.15	
r, final value	0.037		0.072	<u> </u>	0.070		0.081	
Nove-up time, m (s)	2.	0		.0	2.0	0	2.	0
Service Time, t _s (s)	2.2		2.1		2.1		2.1	
Capacity and Level o	f Service							
	Eastb	ound	Wes	lbound	Northt	oound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
apacity (veh/h)	800		900		871		875	
elay (s/veh)	7.3							
			7.4		7.4		7.5	
os	A		A	<u></u>	A		A	
pproach: Delay (s/veh)	7	7.3	7.	.4	7.4	4	7.	5
LOS		Α	<u> </u>	4	A		ļ ,	<u> </u>
ntersection Delay (s/veh)				7	.4			
ntersection LOS					4			

	HCS 2010 Two-Way Stop C	ontrol Summary Re	port
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Highway at Airl
Agency/Co.	BBCPI	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2016	North/South Street	Airline
Time Analyzed	PM Full Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	HIghland Park ISD	По селения выполняющей применення в применення в применення в применення в применення в применення в примененн	

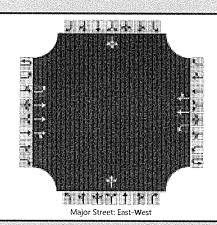


Vehicle Volumes and Adjustments

Approach		Eastl	oound			West	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Mr.	R	· U	L	Т	R	U	L.	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	3	0	0	1	2	0	i da Te	0	0	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			2845	74		33	1950			14		59				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked						Valor National	245, 60	1/8/54-9/5 								
Right Turn Channelized		٨	10	×		١	1 0	A		N	lo	<u> </u>		١	10	
Median Type								Left	Only							
Median Storage									5							

					7	.1		3	11			1			
Level of Service (LOS) Approach Delay (s/veh)					F					F i.	<u></u>				÷
	1 1 1 2	100 (200 100)	3 152 17	iai my			1 4 4 2 4		7 18 7 4 7	1312773		1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	 	100.000	
Control Delay (s/veh)					425.6					112.6		Ì			
95% Queue Length					4.1					4.2					
v/c Ratio					1.19					0.78					
Capacity					30					102					
Flow Rate (veh/h)					36					79					

	HCS 2010 Two-Way Stop (Control Summary Re	port
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Highway at Durh
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2017	North/South Street	Durham
Time Analyzed	PM Full Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	HIghland Park ISD	об степен и поторожни поставления в поченования в поставления поставления поченования поченования поченования п Поставления	

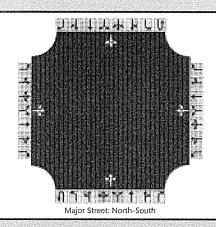


Vehicle Volumes and Adjustments

Approach		Eastl	oound			West	bound			North	bound		Southbound				
Movement	Ü	L	Τ	R	Ü	L	Т	R	U	L	Τ	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	3	0	0	1	2	0		0	1	0		0	1.	0	
Configuration		L	Т	TR		L	T	TR			LTR				LTR		
Volume (veh/h)		7	2733	80		11	1927	5		2	0	7		0	0	8	
Percent Heavy Vehicles		3				3				3	3	3		3	3	3	
Proportion Time Blocked															South and the		
Right Turn Channelized		١	lo	 		١	No.	L		N	ю	2	No				
Median Type	Left Only																
Median Storage	5																

Flow Rate (veh/h)		8			12	T				10		The same of the sa	9	
Capacity		255			35					24			222	30.150
v/c Ratio		0.03		ĺ	0.35			Î		0.42			0.04	
95% Queue Length		0.1			1.1					1.2			0.1	
Control Delay (s/veh)		19.6			156.2					235.5	ĺ		21.9	
Level of Service (LOS)	13.50	С			F					F			С	
Approach Delay (s/veh)		0).1	**************************************	0	.9	2		23	5.5	<u>Surant marintorioni ma</u>	21	1.9	. Lane voncement to be care
Approach LOS			Δ			Δ	W Asi		Y	F			-	

	HCS 2010 Two-Way Stop C	Control Summary Re	port
General Information		Site Information	
Analyst	LWC	Intersection	Durham at Wentwood
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Durham
Analysis Year	2017	North/South Street	Wentwood
Time Analyzed	PM Full Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ES # 5 HPISD	allementaria e transportante de la esta esta esta esta esta esta en la composition de la composition de la comb	от при



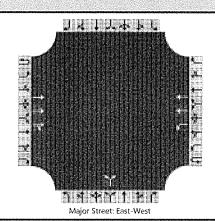
Vehicle Volumes and Adjustments

Approach		Eastb	ound			West	bound			North	bound		Southbound					
Movement	U	L	Τ	R	U	L	Ţ	R	U	L	т	R	U	L	ŢΤ	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	†1	0	0	0	1	0	0	0	1	0		
Configuration			LTR				LTR				LTR			İ	LTR	1		
Volume (veh/h)		49	29	9		2	19	3	109-10	10	22	- 2		2	36	108		
Percent Heavy Vehicles		3	3	3		3	3	3		3				3				
Proportion Time Blocked																		
Right Turn Channelized		N	lo	<u> </u>		N	No No No						.L					
Median Type							86. S.	Undi	vided									
Median Storage																		

Flow Rate (veh/h)		95				26	l	11				2		
Capacity		776				715		1416				1580		
v/c Ratio		0.12		Ì		0.04		0.01				0.00		1
95% Queue Length		0.4				0.1	i sa Sharini.	0.0				0.0		
Control Delay (s/veh)		10.3				10.2	<u> </u>	7.6	Ì			7.3	ĺ	
Level of Service (LOS)		В				В		Α				Α		
Approach Delay (s/veh)	10).3	Naced Street,		10).2		2	.3	Access management and	<u> </u>	0	.1	Žisustovano vanes v m
Approach LOS	E	3			ı	3			4				4	

General Information				Site Infor	nation			
Analyst Agency/Co. Date Performed Analysis Time Period	lwc bbcpi 1/27/2 PM Ft	2016 ull Build		Intersection Jurisdiction Analysis Yea			e at Wentwood of Dallas	
Project ID ES # 5 HPISD				h1-4540-45-6	A			
East/West Street: Wentwood				North/South S	treet: Airline			
Volume Adjustments Approach	and Site C	naracteris	Eastbound			101		
Movement	L		T	R	L	VVE	estbound T	R
Volume (veh/h)	5	i	20	7	4		103	15
%Thrus Left Lane								
Approach			Northbound			So	uthbound	
Movement	L	_	T	R	L		T	R
Volume (veh/h)	1	<u>'</u>	41	9	19		42	9
%Thrus Left Lane								
	Eas	tbound	We	stbound	North	bound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	32		122		61		70	
% Heavy Vehicles	0		0		0		0	
No. Lanes		1		1		1		1
Geometry Group		1		1				1
Duration, T				0.	25			
Saturation Headway .	Adjustment	Workshe	et					
Prop. Left-Turns	0.2		0.0		0.2		0.3	
Prop. Right-Turns	0.2		0.1		0.1		0.1	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
nLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	-0.1		-0.1		-0.1		-0.0	
Departure Headway a		Time		1	1	l	_1	0.00 (0.00) (0.00)
nd, initial value (s)	3.20		3.20		3.20		3.20	
κ, initial	0.03		0.11		0.05		0.06	
nd, final value (s)	4.22		4.16		4.26		4.28	
c, final value	0.038	1	0.141		0.072		0.083	
Nove-up time, m (s)		0		2.0	2.	0		.0
Service Time, t _s (s)	2.2		2.2		2.3		2.3	
Capacity and Level of		<u> </u>	1	1			1	1
zapacity and Level 0	T The state of the			.H			T	
		bound		stbound		oound	<u> </u>	bound
	L1	L2	L1	L2	L1	L2	L1	L2
apacity (veh/h)	800		871		871		875	
elay (s/veh)	7.4		7.8		7.6		7.7	
os	Α		A		A		Α	
pproach: Delay (s/veh)		7.4	7	7.8	7.	6		7
LOS	1	A		A	A		1	
ntersection Delay (s/veh)					7			•
ntersection LOS					1			

	HCS 2010 Two-Way Stop Control Summary Report										
General Information		Site Information									
Analyst	LWC	Intersection	Northwest Highway at Airl								
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas								
Date Performed	1/26/2016	East/West Street	Northwest Highway								
Analysis Year	2016	North/South Street	Airline								
Time Analyzed	AM Full Build	Peak Hour Factor	0.92								
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25								
Project Description	HIghland Park ISD	«Сольность межно из постояние общення на положения в межно положения общене общення в положения в положения в Сольность межно из положения в положения в положения в положения в положения в положения в положения в положен	THE REPORT OF THE PROPERTY OF								

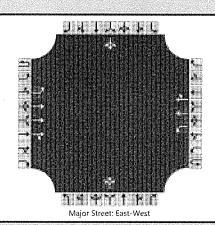


Vehicle Volumes and Adjustments

Approach		Eastl	oound			West	bound			North	bound		Southbound				
Movement	U	L	Т	R	Ü	L	T	R	U	L	T	R	υ	L	Т	R	
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	3	0	0	1	2	0		. 0	0	0 =	100	.0	0	0	
Configuration			Т	TR		L	Т				LR						
Volume (veh/h)			1831	48		66	2566			4		44					
Percent Heavy Vehicles						3				3		3					
Proportion Time Blocked											ing and a second						
Right Turn Channelized	No				No					٨	О	<u> </u>	No				
Median Type					Left Only												
Median Storage									5				***************************************				

Flow Rate (veh/h)				72		 1		52				
Capacity			engles Leine	118				120				
v/c Ratio				0.61				0.43				
95% Queue Length	23. TANÉS 11. TANÉS			3.1				1.9				
Control Delay (s/veh)				75.0				56.0				
Level of Service (LOS)				F				F				
Approach Delay (s/veh)				1	.9		56	5.0			ACOLUMNICO COMPONICO	<u> </u>
Approach LOS					Α			F		1844		

	HCS 2010 Two-Way Stop Control Summary Report											
General Information	- 100 - 100	Site Information										
Analyst	LWC	Intersection	Northwest Hw at Durham									
Agency/Co.	BBCPI	Jurisdiction	City of Dallas									
Date Performed	1/26/2016	East/West Street	Northwest Highway									
Analysis Year	2001	North/South Street	Durham									
Time Analyzed	AM Full Build	Peak Hour Factor	0.92									
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25									
Project Description	Highland Park ISD	anni Curenta Russia. Adam describente persona del como como de contracto de como como como como como como como	The second secon									

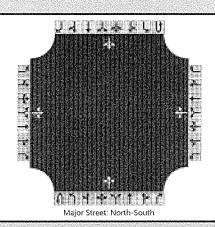


Vehicle Volumes and Adjustments

Approach		Eastl	oound			West	bound			North	bound		Southbound				
Movement	U	L.	T	R	U	L	T	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9	1	10	11	12	
Number of Lanes	0	1 1 1	3	0	0	1	2	0		0	1	0		0	1	0	
Configuration		L	Т	TR		L	т	TR	1		LTR				LTR		
Volume (veh/h)	1	1	1512	221	1	106	2700	10		0	0	15		0	0	1	
Percent Heavy Vehicles	3	3			3	3	ĺ		Ì	3	3	3		3	3	3	
Proportion Time Blocked																	
Right Turn Channelized		١	10	2		<u> </u>	lo ·	S		N	О			۱	٧o	·····	
Median Type	Left Only																
Median Storage		······································		***************************************					5				 				

Flow Rate (veh/h)	2				116					16			1	
Capacity	30			9.4	142			Y.		225			115	
v/c Ratio	0.07				0.82					0.07			0.01	
95% Queue Length	0.2				5.2		14 (24) 14 (4)			0.2			0.0	
Control Delay (s/veh)	135.5				93.8					22.2			36.6	
Level of Service (LOS)	F				F					С			Е	
Approach Delay (s/veh)	C	1.1			3	.6			22	2.2		36	5,6	
Approach LOS		Δ	19 2 12 3 13			Δ					Aran I		-	

	HCS 2010 Two-Way Stop C	ontrol Summary Re	port
General Information		Site Information	
Analyst	LWC	Intersection	Durham at Wentwood
Agency/Co.	BBCPI	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Durham
Analysis Year	2016	North/South Street	Wentwood
Time Analyzed	AM Full Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description.	ES # 5 HPISD		



Vehicle Volumes and Adjustments

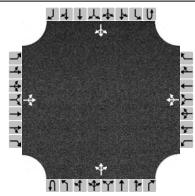
Approach		Eastbound			Westbound				Northbound				Southbound			
Movement	U	L.	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12	 	7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		31	13	8		2	21	3		3	23	18		226	57	70
Percent Heavy Vehicles		3	3	3		3	3	3	<u> </u>	3				3	1	
Proportion Time Blocked		N N														
Right Turn Channelized	No				No				No				No			
Median Type								Undi	vided			o di di s				
Median Storage																

Flow Rate (veh/h)			57			28		3	<u> </u>			246		<u> </u>
Capacity			353			336		1438		eirvisia Raiki e		1555		
v/c Ratio	ALI PROPERTY AND A PERSON NAMED IN COLUMN NAME	n de malamitan alamatan da matalan 0.16			0.08		0.00				0.16			
95% Queue Length		awaren 116 li	0.6			0.3		0.0				0.6		
Control Delay (s/veh)			17.2	ĺ		16.7		7.5				7.8		
Level of Service (LOS)	13.53		С			С	Š 113	Α				Α		
Approach Delay (s/veh)	SCHOOL STREET	17	.2		16	5.7	Acuma excountrisma abe	0	.5			5	.4	2
Approach LOS		((,	4		10 10 10 10		Α	

General Information				Site Inforr	nation			100				
Analyst Agency/Co. Date Performed Analysis Time Period	lwc bbcpi 1/27/2 AM Fi			Intersection Jurisdiction Analysis Year	r		e at Wentwood f Dallas					
Project ID ES # 5 HPISD				I								
East/West Street: Wentwood		-	•	North/South S	Street: Airline							
Volume Adjustments	and Site C		-0-000 c 0-1, 0-2,000 c 000 c									
Approach Movement		·	Eastbound T	R	L	VVe	stbound T	R				
Volume (veh/h)	6	;	15	10	7		220	4				
%Thrus Left Lane												
Approach		ì	Northbound			Sou	thbound					
Movement	L		T	R	L		Т	R				
Volume (veh/h)	9)	31	10	26		88	15				
%Thrus Left Lane												
	Eas	tbound	Wes	tbound	North	bound	South	hbound				
	L1	L2	L1	L2	L1	L2	L1	L2				
Configuration	LTR		LTR		LTR		LTR					
PHF	1.00		1.00		1.00		1.00					
Flow Rate (veh/h)	31		231		50		129					
% Heavy Vehicles	0		0		0		0					
No. Lanes		1		1	1			1				
Geometry Group		1		1	1			1				
Duration, T				<u> </u>	25							
Saturation Headway A	djustmen	Workshe	∍t									
Prop. Left-Turns	0.2		0.0		0.2		0.2					
Prop. Right-Turns	0.3		0.0		0.2		0.1					
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0					
nLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2				
nRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6				
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7				
nadj, computed	-0.2		-0.0		-0.1		-0.0					
Departure Headway ai	nd Service	Time										
nd, initial value (s)	3.20		3.20		3.20		3.20					
κ, initial	0.03		0.21		0.04		0.11					
nd, final value (s)	4.44		4.36		4.58		4.54					
κ, final value	0.038		0.280		0.064		0.163					
Move-up time, m (s)	2	.0	2	.0	2.0)	2.	.0				
Service Time, t _s (s)	2.4		2.4		2.6		2.5					
Capacity and Level of	Service				-							
		bound	Wes	tbound	Northi	oound	South	bound				
	L1	L2	L1	L2	L1	L2	L1	L2				
Capacity (veh/h)	775	<u></u>	825		833		806					
Delay (s/veh)					-							
	7.6		9.0		7.9		8.4	ļ				
.os	A	<u> </u>	A	<u> </u>	A _		A	<u> </u>				
Approach: Delay (s/veh)		7.6		.0	7.9		ļ	8.4				
LOS		Α	<u> </u>	4	A		<i>P</i>	1				
ntersection Delay (s/veh)				8.	.6							
ntersection LOS				A	4							

		ALL WA	1 0101 0	-	ANALYSI	<u> </u>		
General Information				Site Inform	mation			
Analyst	lwc			Intersection			e at Wentwood	
Agency/Co.	bbcpi	.0.40		Jurisdiction Analysis Year	r	City o 2017	f Dallas	
Date Performed Analysis Time Period	1/27/2 AM Fi	1016 ıll Build		Allalysis Teal	l	2017		
Project ID ES # 5 HPISD	AMTO	ili Bullu						
East/West Street: Wentwood	1			North/South S	Stroot: Airlino			
Volume Adjustments		haractoric	tice	INOTHI SOUTH S	oueet. Allille			
Approach	and Site C		Eastbound		T	We	stbound	
Movement	L		Т	R	L		Т	R
Volume (veh/h)	6	3	15	10	7		173	4
%Thrus Left Lane								
Approach			lorthbound			Sou	ıthbound	
Movement	L		T	R	L		T	R
Volume (veh/h)	9)	31	10	26		88	15
%Thrus Left Lane								
	Eas	tbound	Wes	stbound	North	bound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate (veh/h)	31		184		50		129	
% Heavy Vehicles	0		0	ĺ	0		0	
No. Lanes		1		1		1		1
Geometry Group		1		1		1		1
Ouration, T				0.	.25			
Saturation Headway	Adjustment	Workshe	et et					
Prop. Left-Turns	0.2		0.0		0.2		0.2	
Prop. Right-Turns	0.3		0.0		0.2		0.1	
Prop. Heavy Vehicle	0.0		0.0	1	0.0		0.0	1
nLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
nRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
•		1.7	-	1.7	+	1.7	+	1.7
nadj, computed	-0.2	-	-0.0		-0.1		-0.0	
Departure Headway a	T	IIme	T	T	T	T	T	ľ
nd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.03		0.16		0.04		0.11	
nd, final value (s)	4.37	-	4.35		4.46	<u> </u>	4.43	-
x, final value	0.038		0.222	<u> </u>	0.062		0.159	
Move-up time, m (s)		2.0	_	2.0	-	.0	2.	. <i>U</i>
Service Time, t _s (s)	2.4	<u> </u>	2.4		2.5	<u> </u>	2.4	<u> </u>
Capacity and Level o	f Service							
	Eas	tbound	Wes	stbound	North	bound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	775		836		833		806	
Delay (s/veh)	7.5	†	8.6		7.8		8.3	
OS	+							-
	A		A		A		A	
Approach: Delay (s/veh)		7.5		3.6	+	.8	+	.3
LOS		Α		Α	/	4	A	4
Intersection Delay (s/veh)					3.3			
Intersection LOS					Α	·		

	HCS 2010 Two-Way Stop C	ontrol Summary Re	eport
General Information		Site Information	
Analyst	LWC	Intersection	Durham at Wentwood
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Durham
Analysis Year	2016	North/South Street	Wentwood
Time Analyzed	AM Full Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ES # 5 HPISD		



Major Street: North-South

V	ehic	cle	Vol	lumes	and	Ac	įk	usi	tment	ts
---	------	-----	-----	-------	-----	----	----	-----	-------	----

Approach		Eastb	ound			West	oound			North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		33	13	8		2	21	3		3	23	18		5	104	179
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Right Turn Channelized	No No No No															
Median Type								Undi	vided							
Median Storage																

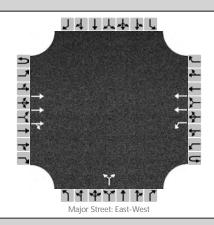
Delay, Queue Length, and Level of Service

Delay, Queue Length, and	Levei	or ser	vice													
Flow Rate (veh/h)			59				28			3				5		
Capacity			666				597			1246				1555		
v/c Ratio			0.09				0.05			0.00				0.00		
95% Queue Length			0.3				0.1			0.0				0.0		
Control Delay (s/veh)			10.9				11.3			7.9				7.3		
Level of Service (LOS)			В				В			А				А		
Approach Delay (s/veh)		10).9			11	1.3			0	.5			0	.1	
Approach LOS	В		В			Α				А						

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HCS 2010™ TWSC Version 6.70 Durham at Wentwood_AM Full Build.xtw Generated: 2/24/2016 7:49:51 AM

	HCS 2010 Two-Way Stop C	ontrol Summary Re	eport
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Highway at Airl
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2016	North/South Street	Airline
Time Analyzed	AM Full Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Highland Park ISD		



Vehicle Volumes and Adjustments

Approach		Eastb	ound			Westl	oound			North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	3	0	0	1	2	0		0	0	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			1791	48		44	2566			4		44				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized	No No No No															
Median Type	Left Only															
Median Storage	5															

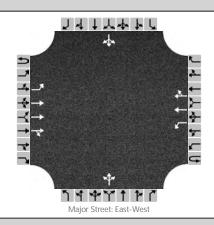
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)					48				52			
Capacity					124				150			
v/c Ratio					0.39				0.35			
95% Queue Length					1.6				1.4			
Control Delay (s/veh)					51.5				41.2			
Level of Service (LOS)					F				E			
Approach Delay (s/veh)				0	.9		41	.2				
Approach LOS					A		I					

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	HCS 2010 Two-Way Stop C	ontrol Summary Re	eport
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Hw at Durham
Agency/Co.	BBCPI	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2001	North/South Street	Durham
Time Analyzed	AM Full Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Highland Park ISD		



V	el	nic	:le	Vo	lumes	and	Α	١d	jus	tmen	ıts
---	----	-----	-----	----	-------	-----	---	----	-----	------	-----

Approach		Eastb	ound			West	oound			North	oound			South	bound	
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	Т	TR		L	Т	TR			LTR				LTR	
Volume (veh/h)	1	1	1512	221	1	106	2700	10		0	0	15		0	0	1
Percent Heavy Vehicles	3	3			3	3				3	3	3		3	3	3
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			N	lo			N	0			N	lo	
Median Type	Left Only															
Median Storage	5															

Delay, Queue Length, and Level of Service

Belay, Queue Eerigin, and	LCVCIOI	oci vicc											
Flow Rate (veh/h)		2			116				16			1	
Capacity		30			142				225			115	
v/c Ratio	С	.07			0.82				0.07			0.01	
95% Queue Length		0.2			5.2				0.2			0.0	
Control Delay (s/veh)	1:	35.5			93.8				22.2			36.6	
Level of Service (LOS)		F			F				С			E	
Approach Delay (s/veh)		0.1			3.	6		22	2		36	0.6	
Approach LOS		А			F	١		()		E		

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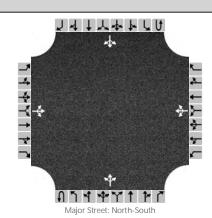
HCS 2010™ TWSC Version 6.70 Northwest Highway at Durham_AM_Full Build.xtw Generated: 2/24/2016 7:48:29 AM

<u> </u>				0'4 1 6	4.							
General Information Analyst Agency/Co. Date Performed	lwc bbcpi 1/27/2	016		Site Inform Intersection Jurisdiction Analysis Year			e at Wentwood of Dallas					
Analysis Time Period	PM Fu	ıll Build					T R 91 15 hbound T R 47 19 Southbound L1 L2 LTR 1.00 85 0 1 1 0.2 0.2 0.0 0.2 0.0 -0.6 -0.6					
Project ID ES # 5 HPISD												
East/West Street: Wentwood				North/South St	treet: Airline							
Volume Adjustments	and Site C	haracteris	tics									
Approach			Eastbound			We	estbound					
Movement Volume (veh/h)	5	;	7 20	R 	L 4							
%Thrus Left Lane		<u>'</u>	20				31	10				
Approach			lorthbound			Soi	uthhound					
Movement	L		T	R	L	301	-	R				
Volume (veh/h)	1	1	41	9	19		47	19				
%Thrus Left Lane												
	Fac	tbound	\/\/\	stbound	North	oound	South	nhound				
		1		1		L2	-	T				
Configuration	L1	L2	L1	L2	L1	L2	_ .					
Configuration PHF	LTR	1	LTR		LTR		-					
PHF Flow Rate (veh/h)	1.00 32	+	1.00 110		1.00 61			<u> </u>				
% Heavy Vehicles	0		0		0							
No. Lanes		1	0	1	1			1				
Geometry Group	-	<u>1</u> 1		1	1			•				
Duration, T	<u> </u>	<u> </u>		·				1				
	A dissature a ref	· Markaba	-4	0.	2.5							
Saturation Headway		VVOIKSIIE	1		1 00		1 00	T				
Prop. Left-Turns	0.2		0.0		0.2		_					
Prop. Right-Turns	0.2	-	0.1		0.1							
Prop. Heavy Vehicle	0.0		0.0		0.0							
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	_				
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6		-0.6				
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7				
nadj, computed	-0.1		-0.1		-0.1		-0.1					
Departure Headway a	nd Service	Time										
nd, initial value (s)	3.20		3.20		3.20		3.20					
x, initial	0.03		0.10		0.05		0.08					
hd, final value (s)	4.24		4.19		4.25		4.19					
x, final value	0.038		0.128		0.072		0.099					
Move-up time, m (s)		2.0		2.0	2.	0	2	.0				
Service Time, t _s (s)	2.2		2.2		2.3		2.2					
Capacity and Level o		<u> </u>										
Japani, and Lovel o	1	tbound	10/	stbound	Northl	a cund	004	nbound				
		T		1				ſ				
	L1	L2	L1	L2	L1	L2	L1	L2				
Capacity (veh/h)	800		846		871		850					
Delay (s/veh)	7.4		7.8		7.6		7.7					
_OS	A		A		Α		Α					
Approach: Delay (s/veh)		7.4	_	7.8	7.	 6		7				
LOS	1	A		A	A		+	4				
ntersection Delay (s/veh)		- 1			7.7	•		-				
ntersection LOS	+				4							

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HCS+TM Version 5.6 Generated: 2/24/2016 7:54 AM

	HCS 2010 Two-Way Stop C	ontrol Summary Re	eport
General Information		Site Information	
Analyst	LWC	Intersection	Durham at Wentwood
Agency/Co.	ВВСРІ	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Durham
Analysis Year	2017	North/South Street	Wentwood
Time Analyzed	PM Full Build	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ES # 5 HPISD		



Vehicle Volumes and Adjustments

Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		49	29	8		2	19	3		10	22	2		2	54	90
Percent Heavy Vehicles		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Right Turn Channelized		N	lo			N	О			N	0			N	lo	
Median Type	Undivided															

Delay, Queue Length, and Level of Service

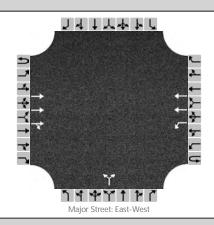
Median Storage

3. 7.													
Flow Rate (veh/h)		94				26		11			2		
Capacity		76	}			714		1415			1580		
v/c Ratio		0.1	2			0.04		0.01			0.00		
95% Queue Length		0.4				0.1		0.0			0.0		
Control Delay (s/veh)		10	4	\Box		10.2		7.6			7.3		
Level of Service (LOS)		В				В		А			А		
Approach Delay (s/veh)	10.4				10	0.2		2	.3		0.	.1	
Approach LOS		В			Г	В		-	Ą		ļ	A	

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HCS 2010™ TWSC Version 6.70 Durham at Wentwood_PM Full Build.xtw Generated: 2/24/2016 7:58:01 AM

	HCS 2010 Two-Way Stop C	Control Summary Re	eport
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Highway at Airl
Agency/Co.	BBCPI	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2016	North/South Street	Airline
Time Analyzed	PM Full Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Highland Park ISD		



Vehicle Volumes and Adjustments

Approach		Eastb	oound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	3	0	0	1	2	0		0	0	0		0	0	0
Configuration			Т	TR		L	Т				LR					
Volume (veh/h)			2827	74		33	1950			14		59				
Percent Heavy Vehicles						3				3		3				
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			N	lo			N	0			N	lo	
Median Type	Left Only															
Median Storage	5															
Delay, Queue Length, and	l evel	of Ser	rvice													

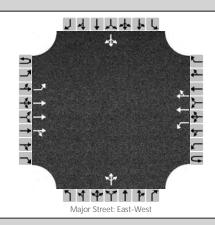
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)					36				79			
Capacity					31				103			
v/c Ratio					1.17				0.77			
95% Queue Length					4.0				4.1			
Control Delay (s/veh)					409.9				108.9			
Level of Service (LOS)					F				F			
Approach Delay (s/veh)					6	.8		10	8.9			
Approach LOS					,	4		ı	-			

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HCS 2010™ TWSC Version 6.70 Northwest Highway at Airline_PM_Full Build.xtw Generated: 2/24/2016 7:55:49 AM

	HCS 2010 Two-Way Stop C	ontrol Summary Re	eport
General Information		Site Information	
Analyst	LWC	Intersection	Northwest Highway at Durh
Agency/Co.	BBCPI	Jurisdiction	City of Dallas
Date Performed	1/26/2016	East/West Street	Northwest Highway
Analysis Year	2017	North/South Street	Durham
Time Analyzed	PM Full Build	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Highland Park ISD		



V	er	nic	le '	Vo	lumes	and	F	١d	jus	tment	S
---	----	-----	------	----	-------	-----	---	----	-----	-------	---

Approach		Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	3	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	Т	TR		L	Т	TR			LTR				LTR	
Volume (veh/h)		7	2733	78		11	1927	5		2	0	7		0	0	8
Percent Heavy Vehicles		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Right Turn Channelized		١	lo			Ν	lo			N	lo			Ν	lo	
Median Type								Left	Only							
Median Storage								į	5							
5 1 6 1 11 1																

Delay, Queue Length, and Level of Service

Belay, Queue Eerigin, and	LOVOI	J. JC.	V100										
Flow Rate (veh/h)		8			12				10			9	
Capacity		255			35				24			222	
v/c Ratio		0.03			0.35				0.41			0.04	
95% Queue Length		0.1			1.1				1.2			0.1	
Control Delay (s/veh)		19.6			155.7				235.3			21.9	
Level of Service (LOS)		С			F				F			С	
Approach Delay (s/veh)		0.	.1		0.	9		23	5.3		21	.9	
Approach LOS		Д	4		F	١		F	:		C		

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HCS 2010™ TWSC Version 6.70 Northwest Highway at Durham_PM_Full build.xtw

Generated: 2/24/2016 7:56:45 AM

9128 Couples Dr.-Plano, TX-75025 Phone/Fax (972) 954-7778

University Park Hillcrest & Northwest Hwy. 6-17-14

With Peds

File Name: C&P6171

Site Code : 00006171 Start Date : 6/17/2014

Page No : 1

Groups	Printer	i. Hns	hifted

	1	· · · · · · · · · · · · · · · · · · ·	Hillcre	st		:	Nort	hwes	t Hwy		<u> </u>		<u>-</u> Hillcre	st			Nort	hwest	Hwy		1
:			uthbo			į		estbo	-				orthbo					stbo		-	
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App Total	Right	, ,		Peds	App. Total	Right			Peds	App, Total	int Total :
07:00 AM	20	43	່ 20 ໍ	` ` `0	83	18	776	17	, 0	811	3	17	15	0	35	18	202	17	Ö	237	1166
07:15 AM	24	45	25	0	94	25	801	18	0	844	4	20	16	Ō	40	20	210	19	ō	249	1227
07:30 AM	23	5 3	45	0	121	42	726	14	0	782	2	28	18	0	48	20	281	16	0	317	1268
07:45 AM	12	66	47	0	125	-63	734	18	0	815	3	38	28	3	72	26	305	26	0	357	1369
Total	79	207	137	0	423	148	3037	67	Q	3252	12	103	77	3	195	84	998	78	0	1160	5030
						•					'										
08:00 AM	25	62	44	0	131	51	667	23	0	741	5	51	26	٥	82	31	375	23	Ð	429	1383
08:15 AM	14	79	69	0	162	53	668	17	0	738	2	54	34	1	91	39	330	28	D	397	1388
08:30 AM	12	85	77	1	175	59	681	16	D	75 6	11	81	3 5	1	128	34	341	24	0	399	1458
08:45 AM	14	82	77	0	173	54	625	29	D	708	11	68	30	1	110	28	331	30	D	389	1380
Total	65	308	267	1	641	217	2641	85	0	2943	29	254	125	3	411	132	1377	105	0	1614	5609
*** BREAK **	*																				
02:00 PM	41	62	56	0	159	25	388	9	٥	422	37	61	35	0	133	22	448	28	Ð	498	1212
02:15 PM	38	70	64	Q	172	35	369	19	Q	423	37	61	40	1	139	28	449	33	0	510	1244
02:30 PM	19	50	70	0	139	40	370	41	0	451	26	77	38	0	141	22	424	38	Ð	484	1215
02:45 PM	39	61	64	0	164	25	349	22	0	396	32	71	40	D	143	33	445	21	0	499	1202
Total	137	243	254	O.	634	125	1476	22 91	" Ö	1692	132	270	153	1	556	105	1766	120	0	1991	4873
03:00 PM	39	64	52	0	155	. 33	381	16	0	430	30	61	43	0	134	14	482	25	٥	521	1240
03:15 PM	34	53	68	0	155	23	338	13	0	374	16	67	39	Đ	122	19	475	51	0	545	1196
03:30 PM	32	53	63	0	148	25	403	14	0	442	31	55	34	0	120	17	502	31	D	550	1260
03:45 PM	35	66	51	2	154	18	333	17	. 0	368	39	71	22	0	132	27	574	34	. 1	636	1290
Total	140	236	234	2	612	99	1455	60	0	1614	116	254	138	0	508	77	2033	141	1	2252	4986
04:00 PM	22	64	63	0	149	44	416	9	0	469	29	88	3 5	^	462	12	EOD	40		CAS	4442
04:00 PM	29	71	72	0	172	44	347	20	. 0	411	29	84	35 41	0	152 147	13 26	59D 60B	40 36	0	643 670	1413 1400
04:30 PM	29	60	69	Ö	158	89	341	16	6	452	18	75	37	Ó	130	18	613	46	ő	677	1417
04:45 PM	15	71	70	ž	158	46	350	29	1	426	21	85	28	1	135	23	622	39	Ö	684	1403
Total	95	266	274	2	637	223	1454	74	7	1758	88	332	141	3	564	80	2433	161		2674	5633
. •	•			_	۱ ، ۵۵		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	• •	•		. 00	UUL	1-41	·	301	QU.	2400		Ū	LUIT	0000
05:00 PM	19	84	72	0	175	54	395	11	0	460	25	122	35	0	182 :	24	629	53	0	706	1523
05:15 PM	28	76	72	0	176	55	416	13	0	484	11	105	26	0	142	21	606	57	0	684	1486
05:30 PM	34	94	91	0	219	32	376	. 22	0	430	25	127	28	0	180	16	611	36	0	663	1492
05:45 PM	30	89	71	0	190	44	333	16	0	393	23	112	36	0	171	17	623	43	0	683	1437
Total	111	343	306	Ō	760	185	1520	62	0	1767	84	466	125	0	675	78	2469	189	Ö	2736	5938
															•						
Grand Total	627	1603	1472	5	3707	997	11583	439	7	13026	461	1679	759	10	2909	556	11076	794	1	12427	32069
Apprch %	16.9	43.2	39.7	0.1		7.7	88.9	3.4	0.1		15.8	57.7	26.1	0.3		4.5	B9.1	6.4	0		
Total %	2	5	4.6	0	11.6	3.1	36.1	1.4	0	40.6	1.4	5.2	2.4	0	9.1	1.7	34.5	2.5	0	38.8	

9128 Couples Dr.-Plano, TX-75025 Phone/Fax (972) 954-7778

University Park Hillcrest & Northwest Hwy. 6-17-14 With Peds

PHF .816 .912 .841 .000 .868 .685 .903 .595 .292 .941 .840 .917 .868 .000 .927 .896 .982 .855 .000

File Name: C&P6171

Site Code : 00006171 Start Date : 6/17/2014

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			Hillore					hwest estbo	-	•			Hillere						Hwy	 •	ĺ
Start Time	Right				App. Tctal	Diaht							rthbo					istboi			
Peak Hour Ar	l Main	From 0	7-00 A	A Fo 11:	App. Total	Pook 1	11110	reit	Peas	App. Total	Right	Thru	Len	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour f	or Enti	re Into	reactio	n Posi	nc at Of	CEST I	J OLI														
08:00 AM	25	62	44	0 11 Degi	131	51		22	_	744	_			_	1				•		
08:15 AM	14	79	69	0		1	667	23	0	741	5	51	26	0	82	31	375	23	0	429	1383
08:30 AM	12	85			162	53	668	17	0	738	2	54	34	1	91	39	330	28	0	397	1388
08:45 AM	14	82	77 77	1	175	59	681	16	0	756	11	81	35	1	128	34	341	24	O	399	1458
Total Volume	65	308	<u>-//</u>	<u>0</u> 1	173 641	54	625	29	0	708	11	68	30	1	110	28	331	30	0	389	1380
				•	041	217	2641	85	0	2943	29	254	125	3	411	132	1377	105	0	1614	5609
% App. Total PHF	.650	48 .906	41.7	0.2		7.4	89.7	2.9	0	- 1-2	7.1	61.8	30.4	0.7		8.2	85.3	6.5	0		
<u></u>	.030	900	.867	.250	.916	.919	.970	.733	.000	.973	.659	.784	.893	.750	.803	.846	.918	.875	.000	.941	.962
Peak Hour Ana Peak Hour for E	llysis Fr	om 07:0	00 AM to	11:45 A	M - Peal	1 of 1															
	DE,CO AN					07:00 AM					E2100 ANS					05:5DAN					
+0 mins.		62	44	0	131	18	776	17	0	811	5	51	26	0	82	31	275	23	0	(2)	!
+15 mins.	14	79	69	0	162	25	201	18	D	BEE	2	54	34		91	5.9	330	28	0	397	
+30 mins.	12	88	_ 77	,	176-	42	726	14	0	782	47	61	26	1	123	34	341	24	0	399	
+45 mins.	14	82	77	. 0	173	_ ==	734	18	0	815	11	68	30	1	110	28	331	>=	D	389	
Total Volume	65	308	267	1	641	148	303 7	67	0	3252	29	254	125	3	411	132	137 7	105	0	1614	
% App. Total	10.1	48	41.7	0.2		4.5	93.4	2.1	0		7.1	61.8	30.4	0.7		8.2	85.3	6.5	0	:	
PHF	.650	.906	.867	.250	.916	.587	.948	.931	.000	.963	.659	784	.893	.750	.803	.846	.918	.875	.000	.941	
Peak Hour A	nalysis	From	12:00	PM to	05:45	M - P	eak 1 c	of 1			1. :	• •			000]	.9-0		.2.2			
Peak Hour fo	or Entir	e Inter	rsectio	n Beair	ns at 05	:00 PA	r R														
05:00 PM	19	84	72	ŏ	175	54	395	11	O	460	25	122	35	0	182	24	629	53	0	706	1523
05:15 PM	28	76	72	ō	176	55	416	13	ő	484	11	105	26	Ö	142	21	606	57	0	684	1486
05:30 PM	34	94	91	Ď	219	32	376	22	õ	430	25	127	28	D.	180	16	611	36	a	663	1492
05:45 PM	30	89	71	Ô	190	44	333	16	ŏ	393	23	112	20 36	0	171	17	623	30 43	0		
Total Volume	111	343	306	Ö	760	185	1520	62	0	1767	84	466	125		675	<u>17</u>			ö	683	1437
% App. Total	14.6	45.1	40.3	n	, 00	10.5	86	3.5	0	1707	12.4	400 69	18.5	0	0/5		2469	189	_	2736	5938
PHF	.816	.912	.841	.000	868	.841	.913	.705		.913	.840	.917	.868	.000	.927	2.9 .813	90.2 .981	6.9 829	. 0 .000	969	.975
Peak Hour Ana Peak Hour for Esc	lysis Fro h Approa	om 12:0	0 PM to			1 of 1						_··					.501	.023			.373
+0 mins.	2500 PM 19	84	72	0	175	64:30 FM	341	16		450	0500 PV	400	20	_	ł	64:20 PM	~-		_		
+15 mins.	28	76	72	Ď	176	46	350	_	1	452	25	122 105	35	0	440	18	613	46	0	677	
+30 mins.				Ď		54	395	29 4.4		426	11		26	0	142	23	622	39	0	684	
+45 mins.	30	89	71	0	190	55		11 13	0	460	25	127	28	0	180	24	E2>	53	0	705	
Total Volume	111	343	306	. س. 0	760	244	150	. 13 69	7	1822	. 23 84	112 466	125	0	171 ! 675	21 86	606 247	195	<u>0</u>	684 2751	
% App. Total	14.6	45.1	40.3	0		13.4	2 82.4	3.8	0.4		12.4	69	18.5	0			0 89.8	7.1	٥	2,01	
DHE	816	012	9/1	000	069	CDE	003	FOE											_	1	

9128 Couples Dr.-Plano,TX-75025 Phone/Fax (972) 954-7778

University Park Airline & Wentwood 6-17-14 With Peds

File Name: C&P6172 Site Code: 00006172

Start Date : 6/17/2014

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	Unshifted

i	····		Airlin	e			W	entwo	ood				Airlin	е		[W	entwo	ood		
:		So	uthbo	und			We	stbo	und			No	rthbo	und		[Ea	stbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	ini. Total
08:00 AM	3	16	1	0	20	0	16	ֿס	´ o ˈ	16	0	10	3	· · · 1	14	0	1	0	1	2	52
08:15 AM	5	23	4	0	32	1	19	1	0	21	0	10	3	0	13	0	0	2	0	2	68
. MA 06:80	4	28	2	Ð	34	2	12	1	2	17	2	9	2	4	17	1	1	0	1	3	71
08:45 AM	2	16	15	2	35	1	18	٥	0	19	5	7	3	0	.15	4	7	4	2	17	86
Total	14	83	22	2	121	4	65	2	2	73	7	36	11	<u>0</u> 5	.15 59	5	~ g	6	4	24	277
09:00 AM	4	21	5	0	30	3	15	2	1	21	3	5	1	0	9	1	7	4	0	12	72
Total	4	21	5	D	30	3	15	2	1	21	3	5	1	Ö	9	1	7	4	0	12	72
*** BREAK **	rst																				
02:30 PM	2	11	2	0	15	2	16	D	0	18	1	16	3	. 0	20	1	7	0	1	9	62
02:45 PM	4	6	11	0	21	5	6	1	0	12	5	10	3	0	18	3	7	3	0	13	64
Total	6	17	13	0	36	7	22	1	0	30	6	26	6	0	38	4	14	3	1	22	126
03:00 PM	3	15	4	2	24	5	15	2	0	22	2	12	2	٥	16	2	4	1	O	7	69
03:15 PM	Ō	10	2	ō	12	3	7	1	ō	11 :		3	3	ō	7	1	,	1	ň	4	34
Grand Total	27	146	46	4	223	22	124	8	3	157 :	19	82	23	5	129	13	36	15	5	69	578
Apprch %	12.1	65.5	20.6	1.8	3-20	14	79	5.1	1.9		14.7	63.6	17.8	3.9	.20	18.8	52.2	21.7	7.2		2.0
Total %	4.7	25.3	8	0.7	38.6	3.8	21.5	1.4	0.5	27.2		14.2	4	0.9	22.3	2.2	6.2	2.6	0.9	11.9	

			Airlin uthbo					entw					Airlin	_				entw			
							AAG	estbo				MO	rthbo	una			La	stbo	una		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour An	alysis F	rom 08	:00 AN	1 to 11:	45 AM -	Peak 1	of 1												· /-	t V	
Peak Hour fo	r Entir	e inter	section	n Begi	ins at 08	:15 AN	1														
08:15 AM	5	23	4	Õ	32	1	19	1	0	21	0	10	3	0	13	0	0	2	0	2	68
08:30 AM	4	28	2	0	34	2	12	1	2	17	2	9	2	4	17	1	1	0	1	3	71
08:45 AM	2	16	15	2	35	1	18	0	0	19	5	7	3	0	15	4	7	4	2	17	86
09:00 AM	4	21	5	0	30	3	15	2	1	21	3	5	1	0	9	1	7	4	0	12	72
Total Volume	15	88	26	2	131	7	64	4	3	78	10	31	9	4	54	6	15	10	3	34 i	297
% App. Total	11.5	67.2	19.8	1.5		9	82.1	5.1	3.8		18.5	57.4	16.7	7.4		17.6	44.1	29.4	8.8	i	
PHF	.750	.786	.433	.250	.936	.583	.842	.500	.375	.929	.500	.775	.750	.250	.794	.375	.536	.625	.375	.500	.863

Peak Hour Analysis From 08:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for E	acn Ap	proacn	Begins a	9t:														-,-,		· <u> </u>
	02:5AN					00:15 AM					\$3.00 AM					C2:15 AM				
+0 mins.		23	4	0	32	1	19	1	0	20	0	19	,	1	14	0	0	2	0	2
+15 mins.	4	26	2	0	34	2	12	1	2	17	0	10	3	0	13	1	- 1	0	1	3
+30 mins,	2	16	15	2	36	1	18	0	0	19	2	9	2		17		7	4	2	17
+45 mins.	4	21	5	0_	30		15	2	1	21	3	7	3	0	15	1	7	4	0	12
Print Vouce	15	88	26	2	131	7	64	4	3	78	7	36	11	5	59	6	15	10	3	34
% App. Totai	11.5	67.2	19.8	1.5		9	82.1	5.1	3.8		11.9	61	18.6	8.5		17.6	44.1	29.4	8.8	
PHF	.750	.786	.433	.250	.936	.583	.842	.500	.375	.929	.350	.900	.917	.313	.868	.375	.536	.625	.375	.500

9128 Couples Dr.-Plano,TX-75025 Phone/Fax (972) 954-7778

University Park Airline & Wentwood 6-17-14 With Peds File Name: C&P6172

Site Code : 00006172 Start Date : 6/17/2014

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			Airlin uthbo	-				entwe estbo					Airlin rthbo	-				entwo			
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru '	Left	Peds	App., Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour An	alysis F	rom 12	:00 PA	/I to 03:	15 PM -	Peak 1	of 1														
Peak Hour fo	or Entir	e Inter	sectio	n Begii	ns at 02	:30 PM	A														
02:30 PM	2	11	2	ŏ	15	2	16	0	0	18	1	16	3	0	20	1	7	0	1	9	62
02:45 PM	4	6	11	0	21	5	6	1	0	12	5	10	3	0	18	3	7	3	a	13	64
03:00 PM	3	15	4	2	24	5	15	2	0	22	2	12	2	0	16	2	4	1	0	7	69
03:15 PM	0	10	2	0	12	3	7	1	0	11	1	3	3	0	7	1	2	1	0	4	34
Total Volume	9	42	19	2	72	15	44	4	0	63	9	41	11	0	61	7	20	5	1	33	229
% App. Total	12.5	58.3	26.4	2.8		23.8	69.8	6.3	0		14.8	67.2	18	٥		21,2	60.6	15.2	3		
PHF	.563	.700	.432	.250	.75D	.750	.688	.500	.000	.716	.450	.641	.917	.000	.763	.583	.714	.417	.250	.635	.830

Peak Hour Analysis From 12:00 PM to 03:15 PM - Peak 1 of 1

Peak Hour for Ea	ich Appr	roach Be	gins at:		,															
	02:20 PM					CC 30 PM				•	01:20 PM					D2 30 PM				:
+0 mins. !	2	-11	2	0	15	2	16	0	0	18	. 1	16	3	a	29	1	7	0	1	9 !
+15 mins.		6	11	0	21		6	1	0	12	6	10	3	0	18	,	7	3	0	(3
+30 mins.	3	15	4	2	24	5	15	2	0	æ	2	12	2	0	16	2	. 4	1	0	7 i
+45 mins.	0	10	2	0	12	3	7	1	0	11	1	3	3	0	7	1	. 2	1.	0	41
Total Volume	9	42	19	2	72	15	44	4	0	63	9	41	11	0	61	7	20	5	1	33
% App. Total	12.5	58.3	26.4	2.8		23.8	69.8	6.3	0		14.8	67.2	18	0		21.2	60.6	15.2	3	
PHF	.563	.700	.432	.250	.750	.750	.688	.500	.000	.716	.450	.641	.917	.000	.763	.583	.714	.417	.250	.635

9128 Couples Dr.-Plano,TX-75025 Phone/Fax (972) 954-7778

University Park Durham & Wentwood 6-17-14 With Peds

File Name: C&P6173

Site Code : 00006173 Start Date : 6/17/2014

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Groups Printed-Unshifted

								ای	oups	Fille	J" UIIS) III LE (4								
		C	urha	m			We	entw	ood			I	Ourha	m			W	entwo	ood		
		Sou	ıthbo	und			We	stbo	und			No	rthbo	und			Ea	stbo	und		İ
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Totai
08:00 AM	10	6	0	0	16	0	6	0	0	6	0	5	.4	2	11	0	1	0	0	1	34
08:15 AM	15	16	0	0	31	1	7	0	0	8	0	5	2	0	7	1	2	1	0	4	50
08:30 AM	14	15	1	1	31	0	6	1	1	8	1	6	6	3	16	1	2	2	0	5	60
08:45 AM	27	14	1	2	44	0	7	0	0	7	2	6	8	0	16	3	7	5	0	15	82
Total	66	51	2	3	122	1	26	1	1	29	3	22	20	5	50	5	12	8	0	25	226
09:00 AM		12	3	0	29	2	1	1	0	4 '	0	6	2	0	8	3	2	23	1	29	70
Total	14	12	3	0	29	2	1	1	0	4	0	6	2	0	8	3	2	23	1	29	70
*** BREAK *	**																				
02:30 PM	19	9	0	0	28	1	6	1	Ð	8	0	6	3	0	9	1	5	5	0	11	56
02:45 PM	21	11	2	0	34	2	7	O	0	9	O	5	6	0	11	2	5	15	0	22	76
Total	40	20	2	. 0	62	3	13	1	0	17	0	11	9	0	20	3	10	20	0	33	132
03:00 PM	5	7	0	2	14	0	4	0	0	4 !	2	6	1	0	9	3	12	19	0	34	61
03:15 PM	4	9	D	0	13	0	2	1	0	3	0	5	0	0	5	: 2	7	10	0	19	40
Grand Total	129	99	7	5	240	6	46	4	1	57	5	50	32	5	92	16	43	80	1	140	529
Apprch %	53.8	41.2	2.9	2.1		10.5	80.7	7	1.8		5.4	54.3	34.8	5.4		11.4	30.7	57.1	0.7		
Total %	24.4	18.7	1.3	0.9	45.4	1.1	8.7	0.8	0.2	10.8	0.9	9.5	6	0.9	17.4	į.	8.1	15.1	0.2	26.5	1

			urha					entwo				_	urha					entwo			•
!	ļ	Sou	ıthbo	und			We	estbo	und			No	rthbo	und			Ea	stbo	ınd		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Tales	int. Total
Peak Hour An	alysis F	rom 08	DO AN	1 to 11:	45 AM -	Peak 1	of 1														
Peak Hour fo	or Entire	e Inters	section	n Begi	ns at 08	:15 AN	1														
08:15 AM	15	16	0	ŏ	31	1	7	0	0	8	0	5	2	0	7	1	2	1	0	4	50
08:30 AM	14	15	1	1	31	0	6	1	1	8	1	6	6	3	16	1	2	2	0	5	60
08:45 AM	27	14	1	2	44	Ō	7	Ö	Ō	7	2	6	8	D	16	3	7	5	.0	15	82
09:00 AM	14	12	3	Ō	29	2	1	1	0	4	0	6	2	0	8	3	2	23	1	29	70
Total Volume	70	57	5	3	135	3	21	2	1	27	3	23	18	3	47	8	13	31	1	53	262
% App. Total	51,9	42.2	3.7	2.2		11.1	77.8	7.4	3.7		6.4	48.9	38.3	6.4		15.1	24.5	58.5	1.9		ĺ
PHF	.648	.891	,417	.375	.767	.375	.750	.500	.250	.844	.375	.958	.563	.250	.734	,667	.484	.337	.250	.457	799

Peak Hour Analysis From 08:00 AM to 11:45 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

	08:15 AM					DE:00 AM					08.00 AM					421544				
+0 mins.	15	15	0	0	31	0	6	0	0	6	0	5	4	2	11	į 1	2	1	0	4
+15 mins.	14	15	1	1	31	١,	,	0	0	8	0	5	2	0	7	1	2	2	0	5
+30 mins.	77	14	1	2	44	0	6	•	,	8	1		6		16	,	7	5	0	15
+45 mins.	14	12	3	0	29	0	7	0	0	7		6		0	16	3	2		!	
Tatal Volumes	70	57	5	3	135	1	26	1	1	29	3	22	20	5	50	8	13	31	1	53
% Арр.	51.9	42.2	37	2.2		3.4	89.7	3.4	3.4		6	44	40	10		15.1	24.5	58.5	1.9	
Total	31.3	72.2	0.1	£ .&		5,7	00.1	0. 1	0.4											
PHF	.648	.891	.417	.375	.767	.250	.929	.250	.250	.906	.375	.917	.625	.417	.781	.667	.464	.337	.250	.457

METROCOUNT

9128 Couples Dr.-Plano,TX-75025 Phone/Fax (972) 954-7778

University Park Durham & Wentwood 6-17-14 With Peds

File Name: C&P6173 Site Code : 00006173

Start Date : 6/17/2014

Page No : 2

			Durha	m			. W	entwo	ood		:	ſ	Durha	m			W	entwo	ood		
			uthbo	und			We	estbo	und			No	rthbo	und	1		Ea	stbou	bnu		
Start Time				Peds	App. Tetal			Left	Peds	App. Yolal	Right	Thru	Left	Peds	Apap. Total	Right	Thru	Left	Peds	App. Total	Int. Tota
eak Hour An	alysis f	From 12	2:00 PN	1 to 03:	15 PM -	Peak 1	of 1														
eak Hour fo	or Entir	e Inter	section	n Begii	ns at 02	:30 PN	1														
02:30 PM	19	9	0	0	28	1	6	1	0	8	0	6	3	0	9	1	5	5	0	11	50
02:45 PM	21	11	2	0	34	2	7	0	0	9	0	5	6	0	11	2	5	15	0	22	70
03:00 PM	5	7	0	2	14	0	4	0	0	4	2	6	1	0	9	3	12	19	D	34	6.
03:15 PM	4	9	0	0	13	0	2	1	0	3	0	5	0	0	5	2	7	10	٥	19	41
Total Volume	49	36	2	2	89	3	19	2	0	24	2	22	10	Ö	34	8-	29	49	0	86	233
2/ Ann Total	55.1	40.4	2.2	2,2		12.5	79.2	8.3	0		5.9	64.7	29.4	0		9.3	33.7	57	0		
мир. года	35.1	70.7	E																		
PHF	.583	.818	.250	.250	.654	.375	.679	.500	.000	.667	L	.917	.417	.000	.773	.667	.604	.645	.000	.632	.76
PHF eak Hour Ana	.583 lysis Fro	.818 om 12:00	.250 PM to	.250		.375 1 of t				.667	.250			.000	.773 ;		.604	.645		.632	.76
PHF eak Hour Ana	.583 lysis Fro to Approa	.818 om 12:00	.250 PM to	.250		.375				.667	L			.000	.773 ;	.667 2230 PM	.604	.645	,000 0	.632	.76
PHF eak Hour Ana sak Hour for Eac	.583 lysis Fro th Approa comm	.818 om 12:00 ich Begin	.250 PM to	.250 03:15 F	'M - Peak 28	.375 1 of t	.679		.000	***************************************	.250				9.						.76
eak Hour Ana Bak Hour for Eac +0 mins.	.583 lysis Fro th Approa Exam 19	.818 om 12:00 ich Begin 9	.250 PM to	.250 03:15 F 0 0	'M - Peak	.375 1 of t	.679		.000	***************************************	.250	.917		0			5 5	5 15	0	11 22	.76
PHF eak Hour Ana sak Hour for Eac +0 mins. +15 mins.	.583 lysis Fro th Approa Exam 19	.818 om 12:00 ich Begin 9	.250 PM to	.250 03:15 F 0	'M - Peak 28 ×	.375 1 of t	.679		.000. 0 0	8	.250	.917		0	9.	©230 РМ 1 2	5	5	0	11	.76
PHF eak Hour Ana sak Hour for Eac +0 mins. +15 mins. +30 mins.	.583 lysis Fro th Approa 19 19	.818 om 12:00 ich Bogin 9 7 9	.250 PM to	.250 03:15 F 0 0	M - Peak 28 14 13	.375 1 of t	.679 6 4 2	.500 0 0	.000. 0 0 0	8 4 3	.250 0 0 0	.917 5 6 5	.417 3 1 0	0 0 0	9 . 9 . 5	©230 PM 1 2 2 3	5 5 7	5 15	0 0 0 0	11 22 19	.76
PHF eak Hour Ana sak Hour for Eac +0 mins. +15 mins. +30 mins. +45 mins.	.583 lysis Fro th Approa Exam 19	.818 om 12:00 sch Bogin 9 7	.250 PM to	.250 03:15 F 0 0	'M - Peak 28 14	.375 1 of t	6 7 4		.000 0 0 0	8	.250	.917		0 0	9 . 9 .	©230 PM 1 2 2 3	5 5	5 15	0 0 0	11 22	.76
PHF eak Hour Ana sak How for Ese +0 mins. +15 mins. +30 mins. +45 mins.	.583 lysis Fro th Approa 19 19	.818 om 12:00 ich Bogin 9 7 9	.250 PM to	.250 03:15 F 0 0	M - Peak 28 14 13	.375 1 of t	.679 6 4 2	.500 0 0	.000. 0 0 0	8 4 3	.250 0 0 0	.917 5 6 5	.417 3 1 0	0 0 0	9 . 9 . 5	©230 PM 1 2 2 3	5 5 7	5 15	0 0 0 0	11 22 19	.76

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane Arlington, TX 76013

File Name: NORTHWEST HWY @ AIRLINE RD

Site Code: 62

Start Date : 5/12/2015

Page No : 1
Groups Printed- Unshifted

		Alf	RLINE	RD		I	NORT	HWES	ST HW	ΙΥ		All	RLINE	RD		1	ORT	HWES	ST HW	ΙΥ	
		So	uthbo	und			W	estbo	und			No	rthbo	und			Ea	astbou	ınd		
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Total
07:00	0	0	0	0	0	3	815	0	0	818	1	0	3	0	4	0	237	2	0	239	1061
07:15	0	0	0	0	0	13	817	0	0	830	2	0	5	0	7	0	292	7	0	299	1136
07:30	0	0	0	0	0	15	637	0	0	652	0	0	2	0	2	0	286	0	0	286	940
07:45	0	0	0	0	0	22	671	0	0	693	0	0	12	0	12	0	384	11_	0	395	1100
Total	0	0	0	0	0	53	2940	0	0	2993	3	0	22	0	25	0	1199	20	0	1219	4237
08:00	0	0	0	0	0	15	645	0	0	660	1	0	9	0	10	0	418	7	0	425	1095
08:15	0	0	0	0	0	16	608	0	0	624	0	0	10	0	10	0	403	11	0	414	1048
08:30	0	0	0	0	0	13	642	0	0	655	3	0	13	0	16	0	395	19	0	414	1085
08:45	0	0	0	0	0	13	641	0	0	654	1	0	10	0	11	0	380	17	0	397	1062
Total	0	0	0	0	0	57	2536	0	0	2593	5	0	42	0	47	0	1596	54	0	1650	4290
	ı				1											ı					ı
16:00	0	0	0	0	0	6	483	0	0	489	3	0	9	0	12	0	639	3	1	643	1144
16:15	0	0	0	0	0	6	420	0	1	427	3	0	10	0	13	0	644	5	0	649	1089
16:30	0	0	0	0	0	9	448	0	1	458	0	0	15	0	15	0	636	7	0	643	1116
16:45	0	0	0	0	0	7	485	0	0	492	2	0	24	0	26	0	641	13	1	655	1173
Total	0	0	0	0	0	28	1836	0	2	1866	8	0	58	0	66	0	2560	28	2	2590	4522
	ı				1						ı				1						ı
17:00	0	0	0	0	0	7	494	0	2	503	2	0	15	0	17	0	743	10	0	753	1273
17:15	0	0	0	0	0	11	478	0	0	489	5	0	16	0	21	0	652	20	2	674	1184
17:30	0	0	0	0	0	8	489	0	0	497	5	0	17	0	22	0	693	19	0	712	1231
17:45	0	0_	0_	0	0	7	489	0	0_	496	2	0	11_	0	13	0	682	25_	2	709	1218
Total	0	0	0	0	0	33	1950	0	2	1985	14	0	59	0	73	0	2770	74	4	2848	4906
	ı				1																ı
Grand Total	0	0	0	0	0	171	9262	0	4	9437	30	0	181	0	211	0	8125	176	6	8307	17955
Apprch %	0	0	0	0		1.8	98.1	0	0		14.2	0	85.8	0		0	97.8	2.1	0.1		
Total %	0	0	0	0	0	1	51.6	0	0	52.6	0.2	0	1	0	1.2	0	45.3	1	0	46.3	

			RLINE			ı		HWES		ΙΥ			RLINE			ı		HWES		ΙΥ	
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Total
Peak Hour /	Analys	is Fro	m 07:	00 to	11:45 -	Peak	1 of 1														
Peak Hour f	or Ent	ire Int	ersect	tion Be	egins at	07:45	5														
07:45	0	0	0	0	0	22	671	0	0	693	0	0	12	0	12	0	384	11	0	395	1100
08:00	0	0	0	0	0	15	645	0	0	660	1	0	9	0	10	0	418	7	0	425	1095
08:15	0	0	0	0	0	16	608	0	0	624	0	0	10	0	10	0	403	11	0	414	1048
08:30	0	0	0	0	0	13	642	0	0	655	3	0	13	0	16	0	395	19	0	414	1085
Total Volume	0	0	0	0	0	66	2566	0	0	2632	4	0	44	0	48	0	1600	48	0	1648	4328
% App. Total	0	0	0	0		2.5	97.5	0	0		8.3	0	91.7	0		0	97.1	2.9	0		
PHF	.000	.000	.000	.000	.000	.750	.956	.000	.000	.949	.333	.000	.846	.000	.750	.000	.957	.632	.000	.969	.984

Arlington, TX 76013

File Name: NORTHWEST HWY @ AIRLINE RD

Site Code: 62

Start Date : 5/12/2015

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		Alf	RLINE	RD		ı	NORT	HWES	NH T	ΙΥ		All	RLINE	RD		1	NORT	HWES	NH T	/Υ	
		So	uthbo	und			We	estbo	und			No	rthbo	und			Ea	astbou	und		
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Total
Peak Hour	Analys	is Fro	m 12:	00 to	17:45 -	Peak	1 of 1														
Peak Hour f	or Ent	ire Int	ersect	tion Be	egins at	17:00)														
17:00	0	0	0	0	0	7	494	0	2	503	2	0	15	0	17	0	743	10	0	753	1273
17:15	0	0	0	0	0	11	478	0	0	489	5	0	16	0	21	0	652	20	2	674	1184
17:30	0	0	0	0	0	8	489	0	0	497	5	0	17	0	22	0	693	19	0	712	1231
17:45	0	0	0	0	0	7	489	0	0	496	2	0	11	0	13	0	682	25	2	709	1218
Total Volume	0	0	0	0	0	33	1950	0	2	1985	14	0	59	0	73	0	2770	74	4	2848	4906
% App. Total	0	0	0	0		1.7	98.2	0	0.1		19.2	0	80.8	0		0	97.3	2.6	0.1		
PHF	.000	.000	.000	.000	.000	.750	.987	.000	.250	.987	.700	.000	.868	.000	.830	.000	.932	.740	.500	.946	.963

Arlington, TX 76013

File Name: NORTHWEST HWY @ DURHAM ST

Site Code: 62

Start Date : 5/12/2015

Page No : 1
Groups Printed- Unshifted

		DU	RHAN	/I ST		ı	NORT	HWES	T HW	ΙΥ		DU	RHAN	/I ST		ı	ORT	HWES	T HW	ΙΥ	
		So	uthbo	und			W	estbo	und			No	rthbo	und			Ea	astbou	ınd		
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Total
07:00	0	0	1	0	1	13	817	2	0	832	0	0	1	0	1	1	313	1	0	315	1149
07:15	0	0	0	0	0	22	816	3	1	842	0	0	2	0	2	0	308	6	1	315	1159
07:30	0	0	0	0	0	22	657	2	0	681	0	0	0	0	0	0	294	3	1	298	979
07:45	0	0	0	0	0	26	700	4	0	730	0	0	1_	0	1	0	295	4	0	299	1030
Total	0	0	1	0	1	83	2990	11	1	3085	0	0	4	0	4	1	1210	14	2	1227	4317
08:00	0	0	0	0	0	20	683	1	1	705	0	0	4	0	4	0	391	1	1	393	1102
08:15	0	0	0	0	0	28	679	3	0	710	0	0	7	0	7	0	441	10	0	451	1168
08:30	0	0	1	0	1	32	638	2	0	672	0	0	3	1	4	1	385	15	0	401	1078
08:45	1_	0	2	0	3	22	594	3	0	619	2	0	8	0	10	0	369	13	0	382	1014
Total	1	0	3	0	4	102	2594	9	1	2706	2	0	22	1	25	1	1586	39	1	1627	4362
16:00	0	0	1	0	1	7	449	2	1	459	0	0	6	0	6	1	701	6	0	708	1174
16:15	0	0	2	0	2	11	486	1	0	498	0	0	3	0	3	1	607	10	1	619	1122
16:30	0	0	3	0	3	5	445	4	0	454	0	0	4	0	4	0	635	6	0	641	1102
16:45	0	0	1	0	1	5	481	0	1	487	0	0	3	0	3	3	666	8	0	677	1168
Total	0	0	7	0	7	28	1861	7	2	1898	0	0	16	0	16	5	2609	30	1	2645	4566
17:00	0	0	4	0	4	4	444	2	0	450	2	0	4	0	6	6	652	7	0	665	1125
17:15	0	0	3	0	3	5	429	1	0	435	0	0	0	0	0	0	661	3	0	664	1102
17:30	0	0	1	0	1	1	533	1	0	535	0	0	3	0	3	1	747	10	0	758	1297
17:45	0	0	0	0	0	1	521	1_	0	523	0	0	0	0	0	0	673	1_	0	674	1197
Total	0	0	8	0	8	11	1927	5	0	1943	2	0	7	0	9	7	2733	21	0	2761	4721
	ı					ı															ı
Grand Total	1	0	19	0	20	224	9372	32	4	9632	4	0	49	1	54	14	8138	104	4	8260	17966
Apprch %	5	0	95	0		2.3	97.3	0.3	0		7.4	0	90.7	1.9		0.2	98.5	1.3	0		
Total %	0	0	0.1	0	0.1	1.2	52.2	0.2	0	53.6	0	0	0.3	0	0.3	0.1	45.3	0.6	0	46	

		_	RHAN uthbo	_		١	_	HWES		ΙΥ		_	RHAN	_		l	_	HWES		ľΥ	
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Tot
Peak Hour	Analys	is Fro	m 07:0	00 to	11:45 -	Peak	1 of 1														
Peak Hour f	or Ent	ire Int	ersect	ion Be	egins at	07:45	5														
07:45	0	0	0	0	0	26	700	4	0	730	0	0	1	0	1	0	295	4	0	299	1030
08:00	0	0	0	0	0	20	683	1	1	705	0	0	4	0	4	0	391	1	1	393	1102
08:15	0	0	0	0	0	28	679	3	0	710	0	0	7	0	7	0	441	10	0	451	1168
08:30	0	0	1	0	1	32	638	2	0	672	0	0	3	1	4	1	385	15	0	401	1078
Total Volume	0	0	1	0	1	106	2700	10	1	2817	0	0	15	1	16	1	1512	30	1	1544	4378
% App. Total	0	0	100	0		3.8	95.8	0.4	0		0	0	93.8	6.2		0.1	97.9	1.9	0.1		
PHF	000	000	250	በበበ	250	828	964	625	250	965	000	000	536	250	571	250	857	500	250	856	03.

Arlington, TX 76013

File Name: NORTHWEST HWY @ DURHAM ST

Site Code: 62

Start Date : 5/12/2015

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		DU	RHAN	/I ST		1	NORT	HWES	WH T	ΙΥ		DU	RHAN	/I ST		1	NORT	HWES	NH T	ΙΥ	
		So	uthbo	und			We	estbo	und			No	rthbo	und			Ea	astbou	ınd		
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Total
Peak Hour	Analys	is Fro	m 12:	00 to 1	17:45 -	Peak	1 of 1														
Peak Hour f	or Ent	ire Int	ersect	tion Be	egins at	17:00)														
17:00	0	0	4	0	4	4	444	2	0	450	2	0	4	0	6	6	652	7	0	665	1125
17:15	0	0	3	0	3	5	429	1	0	435	0	0	0	0	0	0	661	3	0	664	1102
17:30	0	0	1	0	1	1	533	1	0	535	0	0	3	0	3	1	747	10	0	758	1297
17:45	0	0	0	0	0	1	521	1	0	523	0	0	0	0	0	0	673	1_	0	674	1197
Total Volume	0	0	8	0	8	11	1927	5	0	1943	2	0	7	0	9	7	2733	21	0	2761	4721
% App. Total	0	0	100	0		0.6	99.2	0.3	0		22.2	0	77.8	0		0.3	99	0.8	0		
PHF	.000	.000	.500	.000	.500	.550	.904	.625	.000	.908	.250	.000	.438	.000	.375	.292	.915	.525	.000	.911	.910

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File Name: NORTHWEST HWY @ HILLCREST AVE

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		HILL	CRES	T AVE	E	I	NORT	HWES	ST HW	ΙΥ		HILL	CRES	T AVE		1	NORT	HWES	T HW	ΙΥ	
		So	uthbo	und			W	estbo	und			No	rthbo	und			Ea	astbou	ınd		
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Total
07:00	22	32	21	0	75	3	705	34	0	742	23	29	9	0	61	20	233	19	0	272	1150
07:15	42	43	19	0	104	6	769	43	0	818	30	43	8	0	81	16	270	28	0	314	1317
07:30	49	45	16	0	110	4	720	43	0	767	32	73	4	0	109	24	274	15	0	313	1299
07:45	58	72	22	0	152	14	579	63	0	656	22	72	5	0	99	28	298	23	0	349	1256
Total	171	192	78	0	441	27	2773	183	0	2983	107	217	26	0	350	88	1075	85	0	1248	5022
08:00	62	67	22	0	151	25	581	67	0	673	23	83	15	0	121	31	343	30	0	404	1349
08:15	89	67	25	0	181	21	444	79	0	544	14	71	9	0	94	29	326	29	0	384	1203
08:30	79	56	19	0	154	33	536	84	0	653	21	70	9	0	100	28	324	28	0	380	1287
08:45	66	65	19	0	150	31	504	65	0	600	19	51	14	0	84	41	329	33	0	403	1237
Total	296	255	85	0	636	110	2065	295	0	2470	77	275	47	0	399	129	1322	120	0	1571	5076
						i															
16:00	85	105	28	0	218	13	397	55	0	465	46	92	31	0	169	45	521	18	0	584	1436
16:15	71	102	35	0	208	15	358	49	0	422	34	137	27	0	198	72	530	36	0	638	1466
16:30	77	76	19	0	172	22	402	49	0	473	32	90	27	0	149	65	562	26	0	653	1447
16:45	93	137	25	0	255	21	398	48	0	467	34	139	23	0	196	60	553	23	0	636	1554
Total	326	420	107	0	853	71	1555	201	0	1827	146	458	108	0	712	242	2166	103	0	2511	5903
17:00	91	86	34	0	211	12	423	72	0	507	30	132	18	0	180	56	631	20	0	707	1605
17:15	109	126	30	0	265	18	436	59	0	513	25	112	28	0	165	43	585	39	0	667	1610
17:30	107	126	28	0	261	16	363	69	0	448	33	153	21	0	207	63	556	14	0	633	1549
17:45	73	104	34	0	211	17	457	60	0	534	33	94	30	0	157	57	615	31_	0	703	1605
Total	380	442	126	0	948	63	1679	260	0	2002	121	491	97	0	709	219	2387	104	0	2710	6369
Grand Total	1173	1309	396	0	2878	271	8072	939	0	9282	451	1441	278	0	2170	678	6950	412	0	8040	22370
Apprch %	40.8	45.5	13.8	0		2.9	87	10.1	0		20.8	66.4	12.8	0		8.4	86.4	5.1	0		
Total %	5.2	5.9	1.8	0	12.9	1.2	36.1	4.2	0	41.5	2	6.4	1.2	0	9.7	3	31.1	1.8	0	35.9	

	HILLCREST AVE			NORTHWEST HWY Westbound				HILLCREST AVE Northbound				NORTHWEST HWY									
	Southbound											Eastbound									
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int.
Peak Hour	Analys	sis Fro	m 07:	00 to 1	11:45 -	Peak	1 of 1														
Peak Hour f	or Ent	tire Int	ersect	ion Be	egins at	07:15	5														
07:15	42	43	19	0	104	6	769	43	0	818	30	43	8	0	81	16	270	28	0	314	13
07:30	49	45	16	0	110	4	720	43	0	767	32	73	4	0	109	24	274	15	0	313	12
07:45	58	72	22	0	152	14	579	63	0	656	22	72	5	0	99	28	298	23	0	349	12
08:00	62	67	22	0	151	25	581	67	0	673	23	83	15	0	121	31	343	30	0	404	13
Total Volume	211	227	79	0	517	49	2649	216	0	2914	107	271	32	0	410	99	1185	96	0	1380	52
% App. Total	40.8	43.9	15.3	0		1.7	90.9	7.4	0		26.1	66.1	7.8	0		7.2	85.9	7	0		
PHF	851	788	808	000	850	49N	861	806	000	801	836	816	533	000	8/17	708	864	800	000	854	

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	HILLCREST AVE				NORTHWEST HWY				HILLCREST AVE				NORTHWEST HWY								
	Southbound				Westbound				Northbound				Eastbound								
Start Time	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																					
Peak Hour f	or Ent	tire Int	ersect	tion Be	egins at	17:00)														
17:00	91	86	34	0	211	12	423	72	0	507	30	132	18	0	180	56	631	20	0	707	1605
17:15	109	126	30	0	265	18	436	59	0	513	25	112	28	0	165	43	585	39	0	667	1610
17:30	107	126	28	0	261	16	363	69	0	448	33	153	21	0	207	63	556	14	0	633	1549
17:45	73	104	34	0	211	17	457	60	0	534	33	94	30	0	157	57	615	31	0	703	1605
Total Volume	380	442	126	0	948	63	1679	260	0	2002	121	491	97	0	709	219	2387	104	0	2710	6369
% App. Total	40.1	46.6	13.3	0		3.1	83.9	13	0		17.1	69.3	13.7	0		8.1	88.1	3.8	0		
PHF	.872	.877	.926	.000	.894	.875	.918	.903	.000	.937	.917	.802	.808	.000	.856	.869	.946	.667	.000	.958	.989

NORTHWEST PKWY BT AIRLINE AND DURHAM

Start Date: 5/12/2015 Start Time: 12:00:00 AM

Site Code: 708

Date	Time	EB	WB	TOTAL
5/12/2015	12:00 AM	0	0	0
5/12/2015	12:15 AM	0	0	0
5/12/2015	12:30 AM	0	0	0
5/12/2015	12:45 AM	0	0	0
5/12/2015	01:00 AM	0	0	0
5/12/2015	01:15 AM	0	0	0
5/12/2015	01:30 AM	0	0	0
5/12/2015	01:45 AM	0	0	0
5/12/2015	02:00 AM	0	0	0
5/12/2015	02:00 AM	0	0	0
5/12/2015	02:30 AM	0	0	0
5/12/2015	02:45 AM	0	0	0
5/12/2015	03:00 AM	0	0	0
5/12/2015	03:00 AM	0	0	0
5/12/2015	03:30 AM	0	0	0
		0		
5/12/2015 5/12/2015	03:45 AM	_	0	0
	04:00 AM	0	0	0
5/12/2015	04:15 AM	0	0	0
5/12/2015	04:30 AM	0	0	0
5/12/2015	04:45 AM	0	0	0
5/12/2015	05:00 AM	0	0	0
5/12/2015	05:15 AM	0	1	1
5/12/2015	05:30 AM	0	1	1
5/12/2015	05:45 AM	0	0	0
5/12/2015	06:00 AM	0	0	0
5/12/2015	06:15 AM	0	1	1
5/12/2015	06:30 AM	0	1	1
5/12/2015	06:45 AM	0	2	2
5/12/2015	07:00 AM	0	3	3
5/12/2015	07:15 AM	0	8	8
5/12/2015	07:30 AM	0	5	5
5/12/2015	07:45 AM	0	7	7
5/12/2015	08:00 AM	2	3	5
5/12/2015	08:15 AM	0	4	4
5/12/2015	08:30 AM	2	3	5
5/12/2015	08:45 AM	1	4	5
5/12/2015	09:00 AM	0	1	1
5/12/2015	09:15 AM	1	2	3
5/12/2015	09:30 AM	3	0	3
5/12/2015	09:45 AM	2	1	3
5/12/2015	10:00 AM	0	0	0
5/12/2015	10:15 AM	1	1	2
5/12/2015	10:30 AM	1	0	1
5/12/2015	10:45 AM	4	0	4
5/12/2015	11:00 AM	0	1	1
5/12/2015	11:15 AM	1	0	1
5/12/2015	11:30 AM	0	0	0
5/12/2015	11:45 AM	0	1	1
5/12/2015	12:00 PM	2	1	3

5/12/2015	12:15 PM	2	0	2
5/12/2015	12:30 PM	1	0	1
5/12/2015		2	0	2
5/12/2015	01:00 PM	1	0	1
5/12/2015	01:15 PM	0	0	0
5/12/2015	01:30 PM	1	0	1
	01:45 PM	2	1	
5/12/2015				3
5/12/2015	02:00 PM	0	0	0
5/12/2015	02:15 PM	1	0	1
5/12/2015	02:30 PM	2	0	2
5/12/2015	02:45 PM	0	0	0
5/12/2015	03:00 PM	1	0	1
5/12/2015	03:15 PM	2	0	2
5/12/2015	03:30 PM	0	0	0
5/12/2015	03:45 PM	5	0	5
5/12/2015	04:00 PM	1	0	1
5/12/2015	04:15 PM	2	0	2
5/12/2015		3	1	4
5/12/2015		2	0	2
5/12/2015	05:00 PM	4	0	4
5/12/2015	05:15 PM	14	0	14
5/12/2015	05:30 PM	14	0	14
	05:45 PM			
5/12/2015		10	1	11
5/12/2015	06:00 PM	12	0	12
5/12/2015	06:15 PM	10	0	10
5/12/2015	06:30 PM	6	0	6
5/12/2015	06:45 PM	2	0	2
5/12/2015	07:00 PM	0	0	0
5/12/2015	07:15 PM	1	0	1
5/12/2015	07:30 PM	2	1	3
5/12/2015	07:45 PM	0	0	0
5/12/2015	08:00 PM	2	0	2
5/12/2015	08:15 PM	1	0	1
5/12/2015	08:30 PM	0	0	0
5/12/2015	08:45 PM	0	0	0
5/12/2015		0	0	0
5/12/2015	09:15 PM	3	0	3
5/12/2015	09:30 PM	0		0
	09:45 PM	1	0	1
5/12/2015			0	
	10:00 PM	2	0	2
5/12/2015	10:15 PM	0	0	0
5/12/2015	10:30 PM	0	0	0
5/12/2015	10:45 PM	0	0	0
5/12/2015	11:00 PM	0	0	0
5/12/2015	11:15 PM	0	0	0
5/12/2015	11:30 PM	0	0	0
5/12/2015	11:45 PM	0	0	0
		132	55	187