Traffic Impact Study

Uplift Luna Primary School
Z145-327

Dallas, Texas

September 21, 2015

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

Prepared for
Uplift Education

Prepared by

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September 2015

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INTRODUCTION

Uplift Education is proposing to begin the operations for a primary charter school at the northwest corner of the intersection of IH 30 and Ferguson Road, north of Samuell Boulevard. Valley Glen Drive provides the western boundary to the site as well as the main point of ingress and egress for the site. A second driveway will be provided on Ferguson Road. The school proposes to have 600 primary school students in grades kindergarten through five. Figure 1 provides a site location map of the proposed school campus and Figure 2 provides a site plan.

TRAFFIC STUDY

Staff from the City of Dallas requested a traffic study to evaluate the traffic conditions during peak periods of drop-off and pick-up. Turning movement counts were collected at the following locations on Thursday, June 18, 2015 from 7:15 AM to 8:45 AM in the AM peak period, and 3:00 PM to 4:30 PM in the PM peak period of the proposed school.

- Samuell Boulevard at Valley Glen Drive (Stop controlled for Valley Glen Drive)
- Samuell Boulevard at Lawnview Avenue (Signalized)
- IH 30 Eastbound Exit Ramp at Lawnview Avenue (Stop controlled for IH 30 exit ramp)
- Samuell Boulevard at Ferguson Road (Signalized)
- IH 30 Eastbound Ramp at Ferguson Road (Signalized)
- IH 30 Westbound Ramp at Ferguson Road (Signalized)
- Ferguson Road at Proposed School Driveway (Stop controlled for the driveway)

The Existing (Summer 2015) AM and PM peak hour volumes are illustrated on Figure 3 and Figure 4, respectively. These counts were collected during the summer. There are currently no schools in the study area, however, in order to account for the additional traffic from motorists who may have been on vacation and one year of annual growth, the existing counts were increased by a factor of 10% to calculate the Background 2016 AM and PM peak hour counts. The Background 2016 AM and PM peak hour volumes are illustrated in Figure 5 and Figure 6, respectively. The Proposed School Driveway is currently being used as an access point for vehicles entering the existing gas station to the northeast direction of the proposed school site as there is an ingress and egress easement at this location between the two properties. The existing traffic counts are included under TAB ONE.

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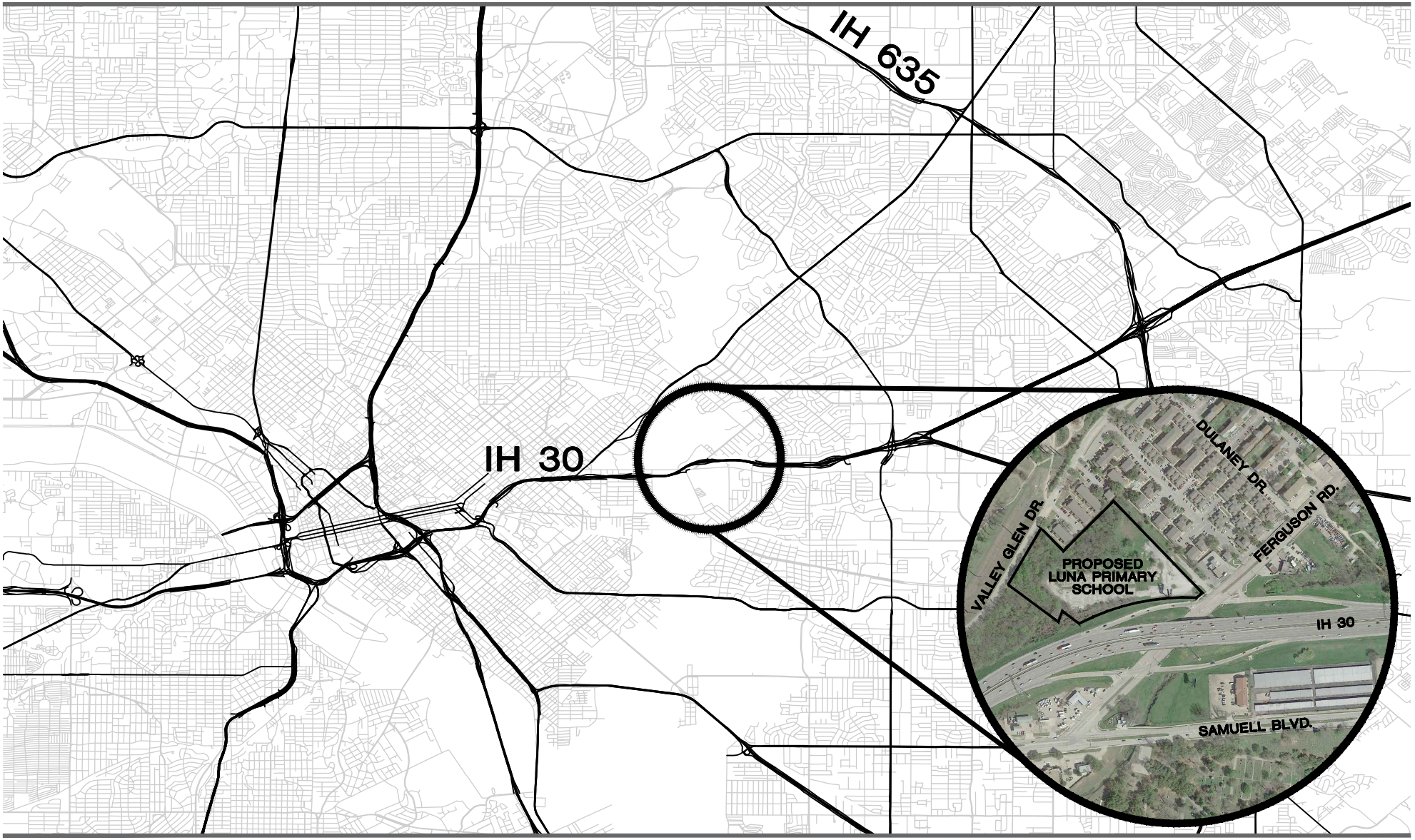

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SITE LOCATION MAP

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FIGURE 1

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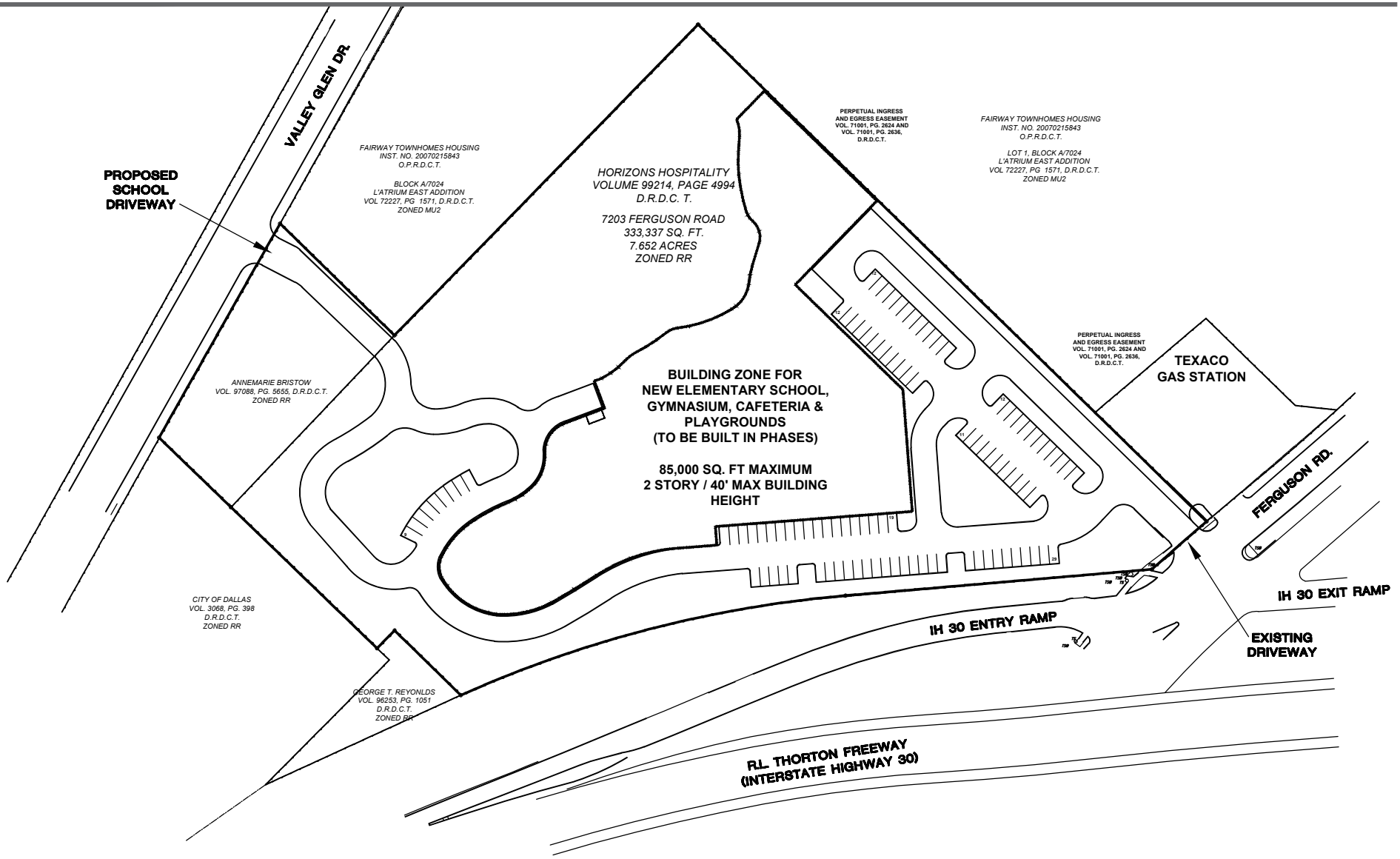

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SITE PLAN

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FIGURE 2

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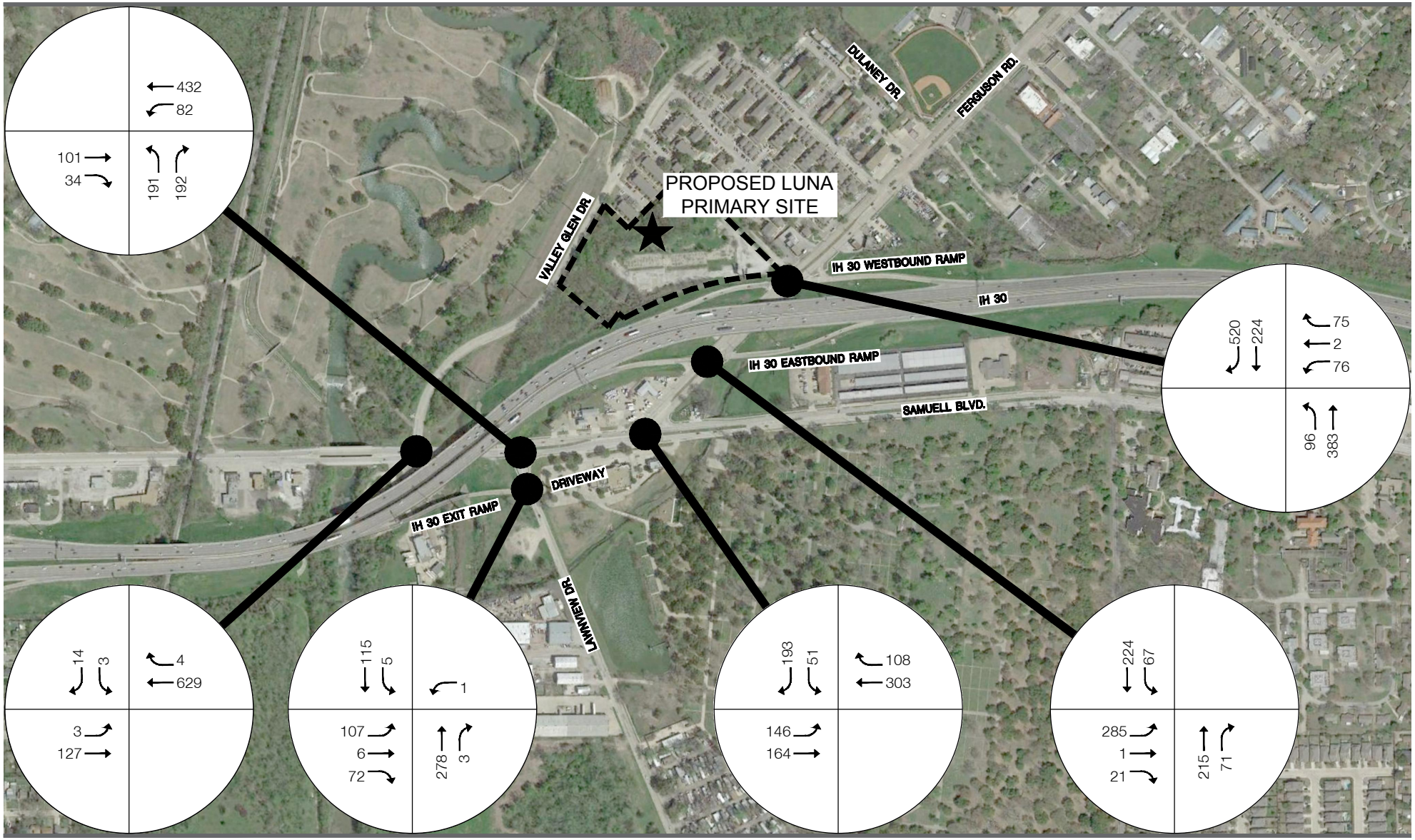

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EXISTING 2015 AM PEAK HOUR TRAFFIC VOLUMES, VPH

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FIGURE 3

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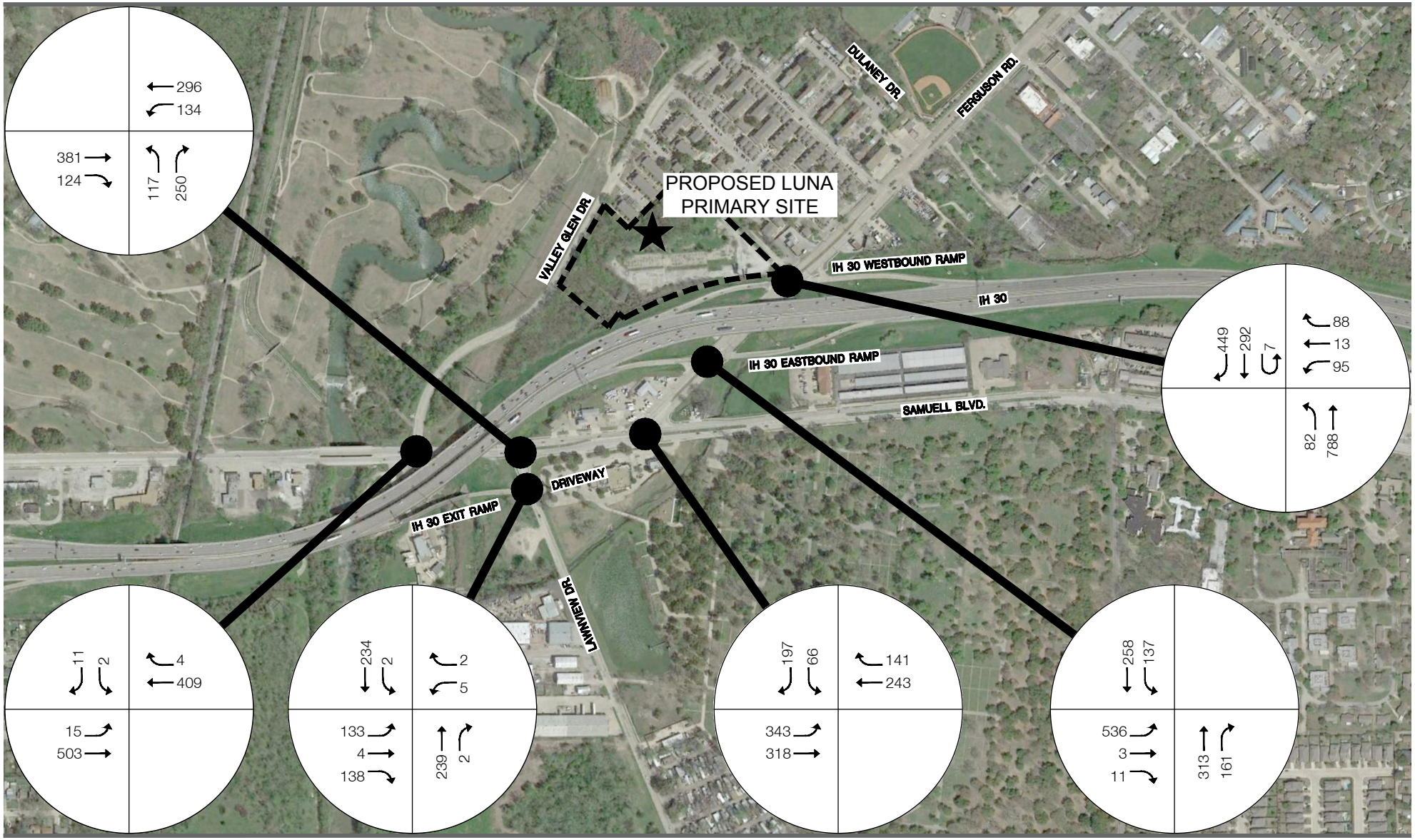

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FIGURE 4

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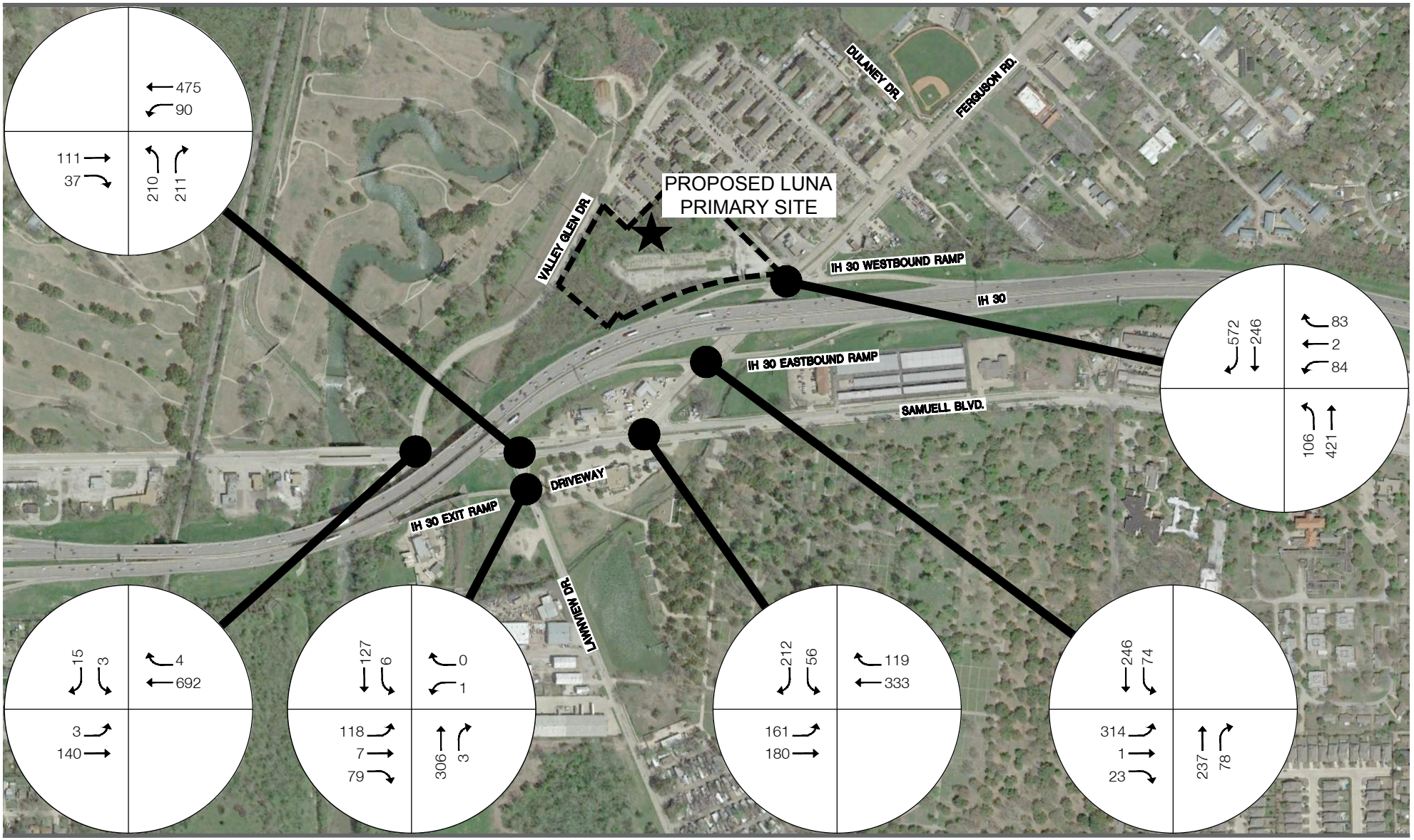

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BACKGROUND 2016 AM PEAK HOUR TRAFFIC VOLUMES, VPH

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FIGURE 5

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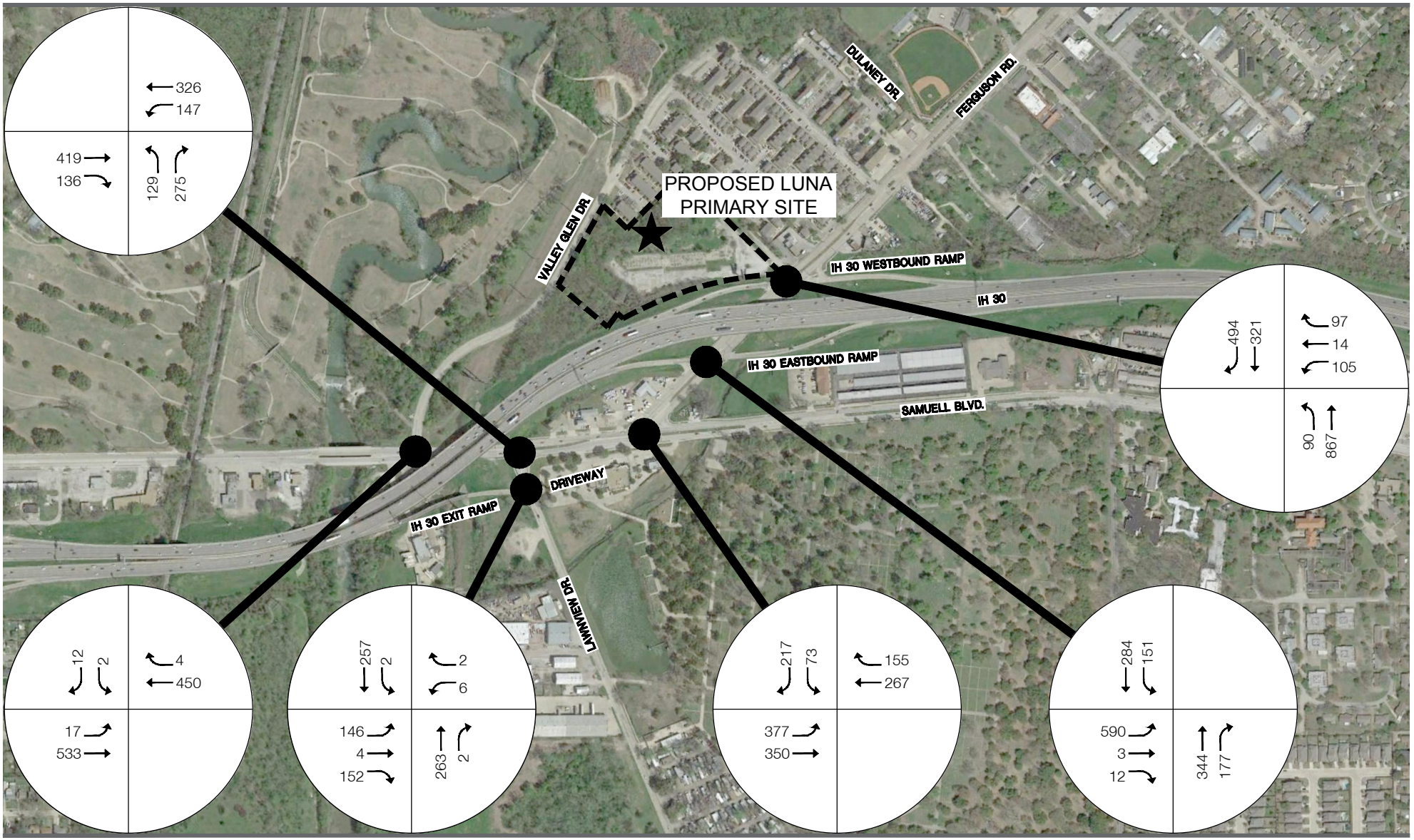

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FIGURE 6

Trip Generation

Trip generation for the proposed number of students was calculated using the fitted curve equations for the Private School (K-8) from the Institute of Transportation Engineers (ITE) publication, *Trip Generation*, 9th edition. Table 1 provides a summary of the trips estimated to be generated.

Table 1. Trip Generation – Uplift Luna Primary School, Texas

ITE Code	Grade Level	Number of Students	Trip Generation (vehicles per hour)					
			Weekday Peak Hour					
			A.M.			P.M.		
			Total	Enter	Exit	Total	Enter	Exit
534 – Private School (K-8)	K-5	648	586	322	264	391	184	207

Study Intersections

The City of Dallas staff concurred with the scope for this traffic study. The intersections and driveways that were analyzed include all the intersections that were counted as well as the Proposed School Driveway #1 at Valley Glen Drive.

Traffic Analysis

To determine the impact of the school on adjacent traffic operations, the following scenarios were studied:

- Background 2016 (Existing 2015 volumes grown by 10% to account for traffic counts collected during summer 2015 and a year of annual growth)
- Full Build 2016 (Added site generated trips to the Background 2016 volumes)
- Background Horizon 2036 (Background 2016 volumes grown by 1% annually for 20 years)
- Full Build Horizon 2036 (Added site generated trips to the Background Horizon 2036 volumes)

The year 2016 was assumed as the Full Build year when the school operations would be initiated. To forecast Horizon 2036 traffic conditions, a 1% annual growth rate was applied to the Background 2016 traffic volumes for 20 years. Intersection operations were analyzed using *Synchro 8.0* software developed to automate procedures found in the *Highway Capacity Manual*. Since *Highway Capacity*

Manual 2010 does not provide the unsignalized intersection analysis for the major street with four through lanes, *Highway Capacity Manual 2000* was utilized in the *Synchro* analysis.

Figure 7 and Figure 8 illustrate the trip distribution percentages for trips entering the school campus for the AM and School PM peak hours, respectively. The trip distribution percentages for trips exiting the school campus are illustrated in Figure 9. The trip distribution percentages were determined after evaluating the existing travel patterns from the existing traffic volumes and geographical locations of the existing Uplift Education campuses. The general trip distribution percentages for entering the school campus are 35% from the east, 25% from the west, and 20% each from the north and south. A higher trip distribution percentage of 35% is predicted for entering and exiting site trips from the east, as this site is the furthest east that an Uplift Education campus has been located.

Figure 10 and Figure 11 illustrate the AM and School PM peak hour trips associated with the school for AM and PM peak hours, respectively. The peak hour trips associated with the school were added to the forecasted 2016 and 2036 volumes, to produce the Full Build 2016 and Full Build Horizon 2036 analysis volumes. Figure 12 and Figure 13 illustrate the total AM and School PM peak hour volumes for Full Build 2016 scenario, respectively. The Background Horizon 2036 volumes are illustrated in Figure 14 and Figure 15. Figure 16 and Figure 17 illustrate the total AM and School PM peak hour volumes for Full Build 2036 scenario.

The peak hour volumes for the Background 2016, Full Build 2016, Background Horizon 2036, and Full Build Horizon 2036 conditions were utilized in the *Synchro* analysis. The existing signal timings and offsets were utilized for the capacity analysis of the four signalized intersections in the Background 2016 and Background Horizon 2036 scenarios. The cycle lengths of 80 seconds and 90 seconds were utilized for the AM and PM peak hours, respectively. The signal timing splits were optimized during the Background scenarios. The four intersections were analyzed as a coordinated system to optimize the offsets, cycle lengths and splits during the Full Build 2016 and Full Build Horizon 2036 scenarios. The optimized cycle lengths, offsets, and signal timings for the Full Build 2016 and Full Build Horizon 2036 scenarios are included in the Appendix.

Table 2 through Table 5 provide a summary of the peak hour traffic analysis results and the full *Synchro* reports can be found under TAB TWO, TAB THREE, TAB FOUR, AND TAB FIVE for the Background 2016, Full Build 2016, Background Horizon 2036, and Full Build Horizon 2036 conditions, respectively.

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LUNA PRIMARY TRAFFIC IMPACT ANALYSIS

Sheet Title:
TRIP DISTRIBUTION - INBOUND (AM PEAK HOUR)

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FIGURE 7

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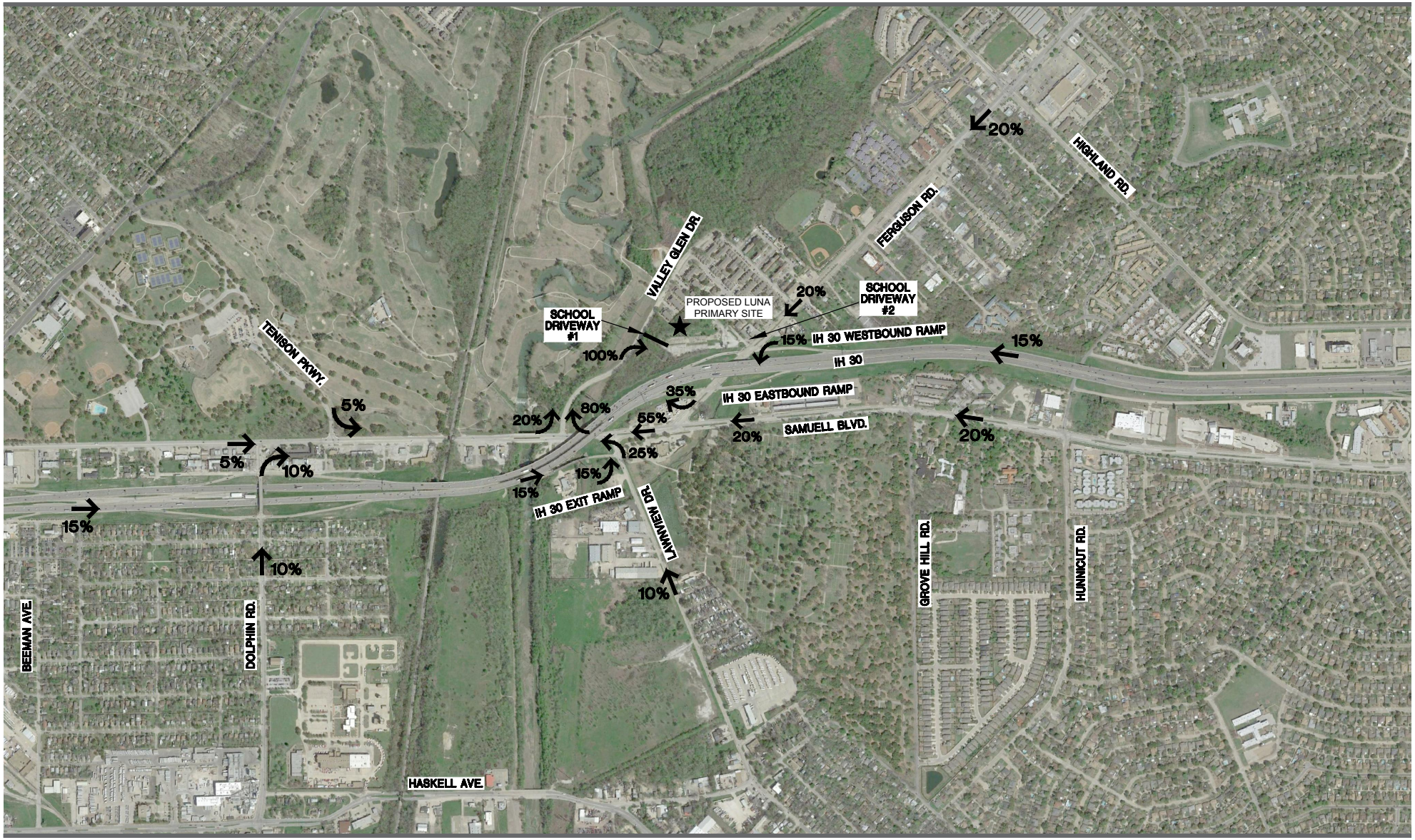

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LUNA PRIMARY TRAFFIC IMPACT ANALYSIS

Sheet Title:
TRIP DISTRIBUTION - INBOUND (PM PEAK HOUR)

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FIGURE 8

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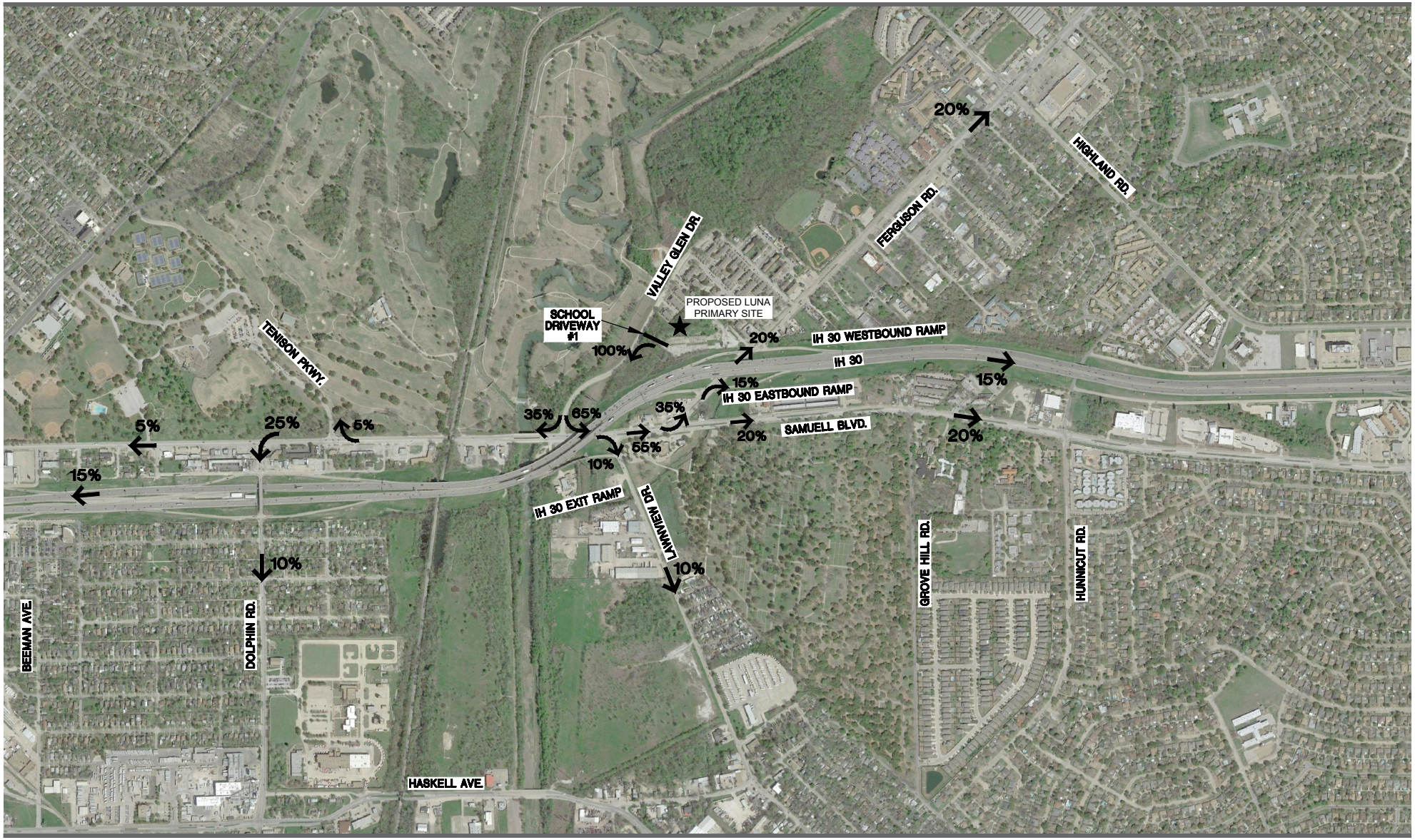

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LUNA PRIMARY TRAFFIC IMPACT ANALYSIS

Sheet Title:
TRIP DISTRIBUTION - OUTBOUND

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FIGURE 9

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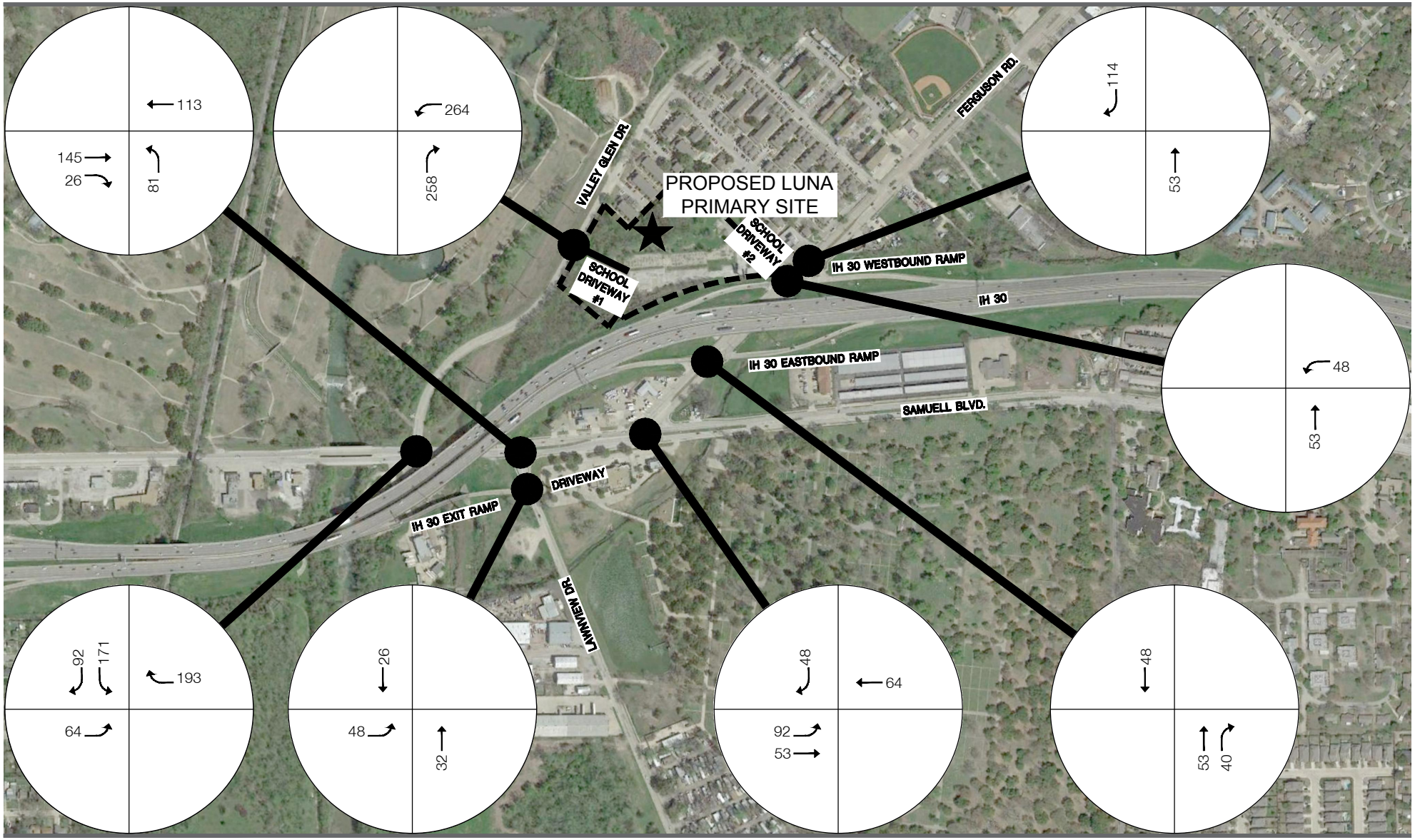

*INCLUDES 50 STAFF/ADMIN INBOUND TRIPS

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Project Name:
LUNA PRIMARY TRAFFIC IMPACT ANALYSIS

Sheet Title:
AM PEAK HOUR SITE GENERATED TRIPS

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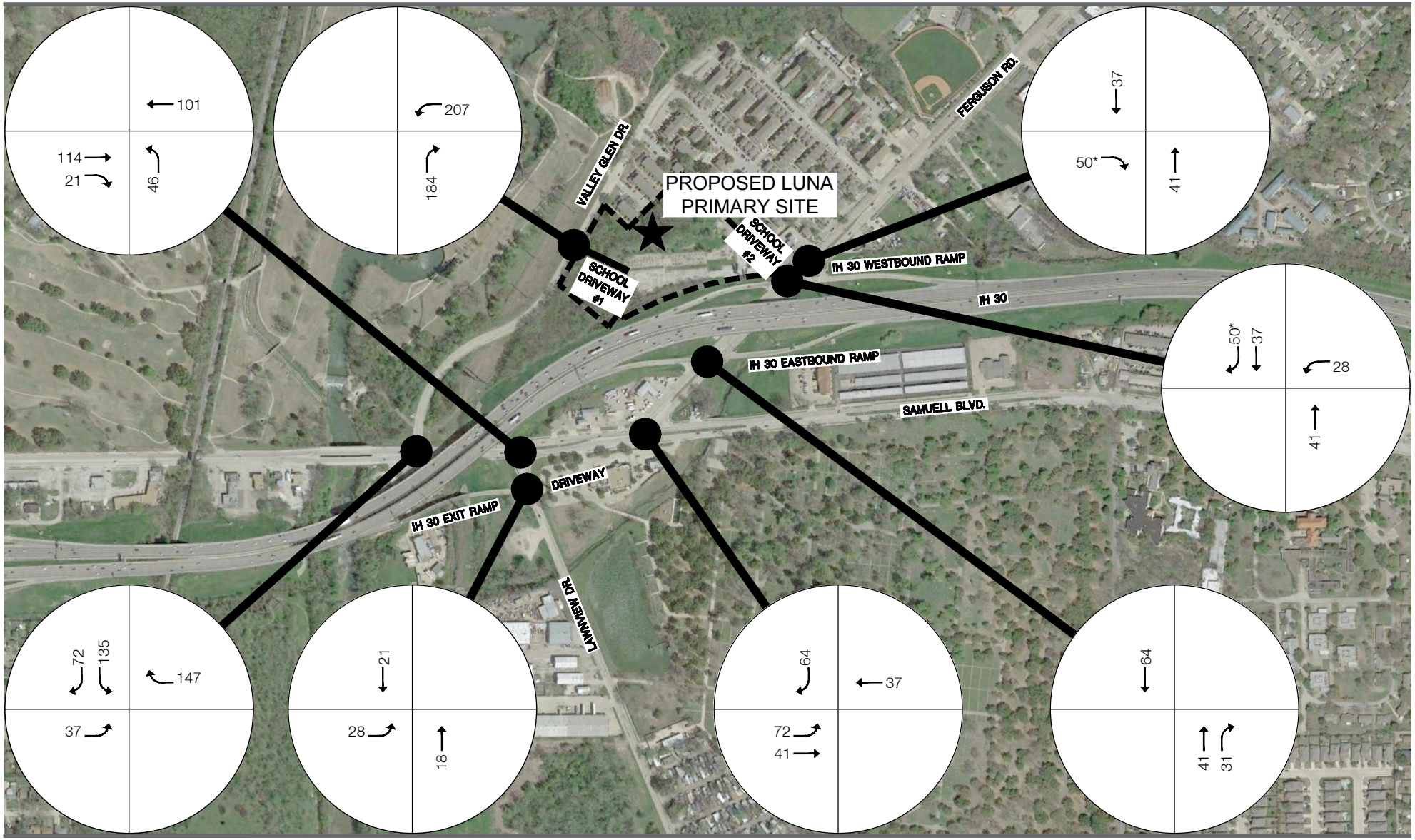
FIGURE 10

Sep 21, 2015 - 3:13pm P:\T04\2015\15011-00 Luna Primary TIA and TMP\Cad\Traffic\TIA Figures\T04-15011-00-TIA-FIGURE-11.dwg



*INCLUDES 50 STAFF/ADMIN OUTBOUND TRIPS

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Project Name:
LUNA PRIMARY TRAFFIC IMPACT ANALYSIS

Sheet Title:
PM PEAK HOUR SITE GENERATED TRIPS

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FIGURE 11

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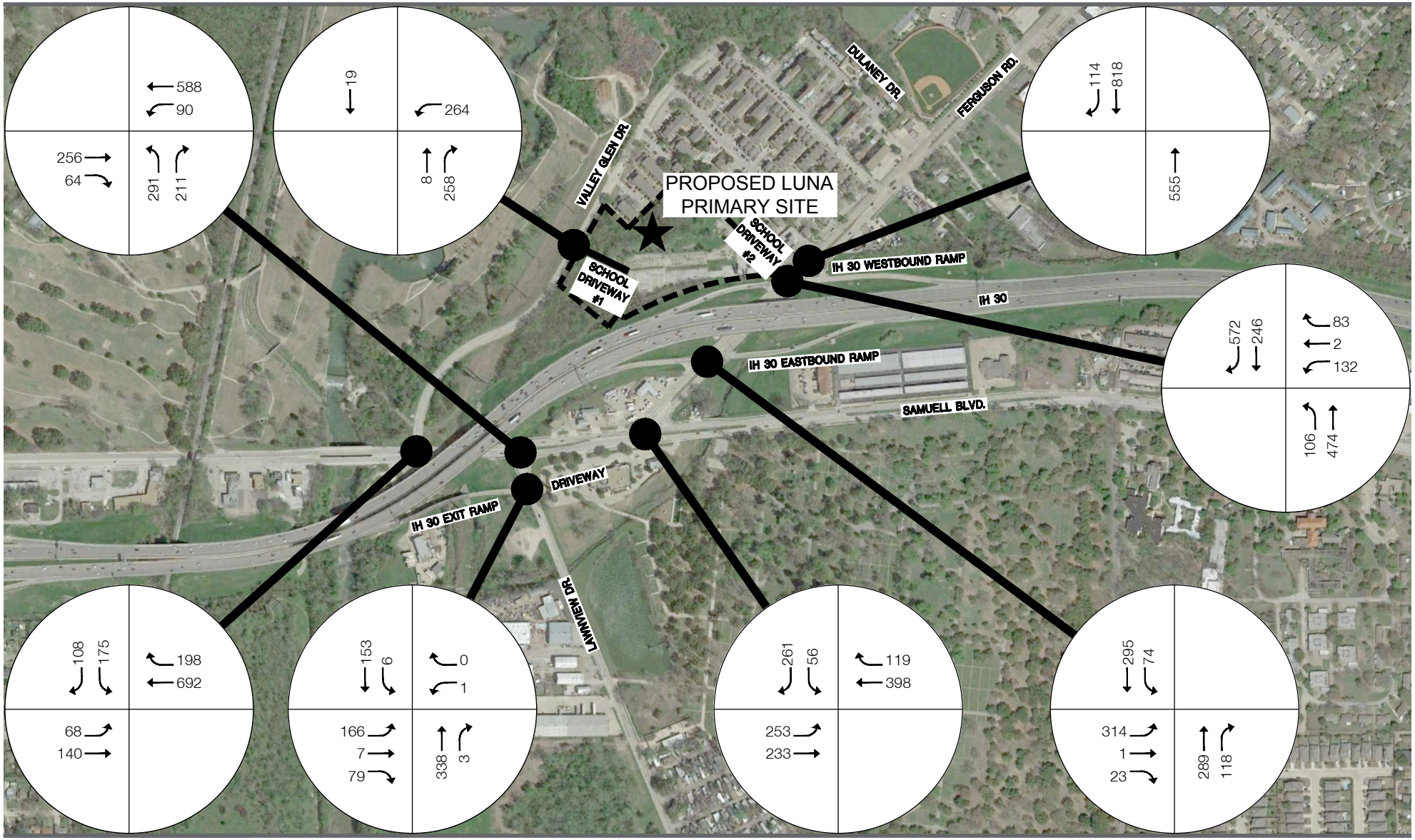

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LUNA PRIMARY TRAFFIC IMPACT ANALYSIS

Sheet Title:
FULL BUILD 2016 AM PEAK HOUR VOLUMES, VPH

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FIGURE 12

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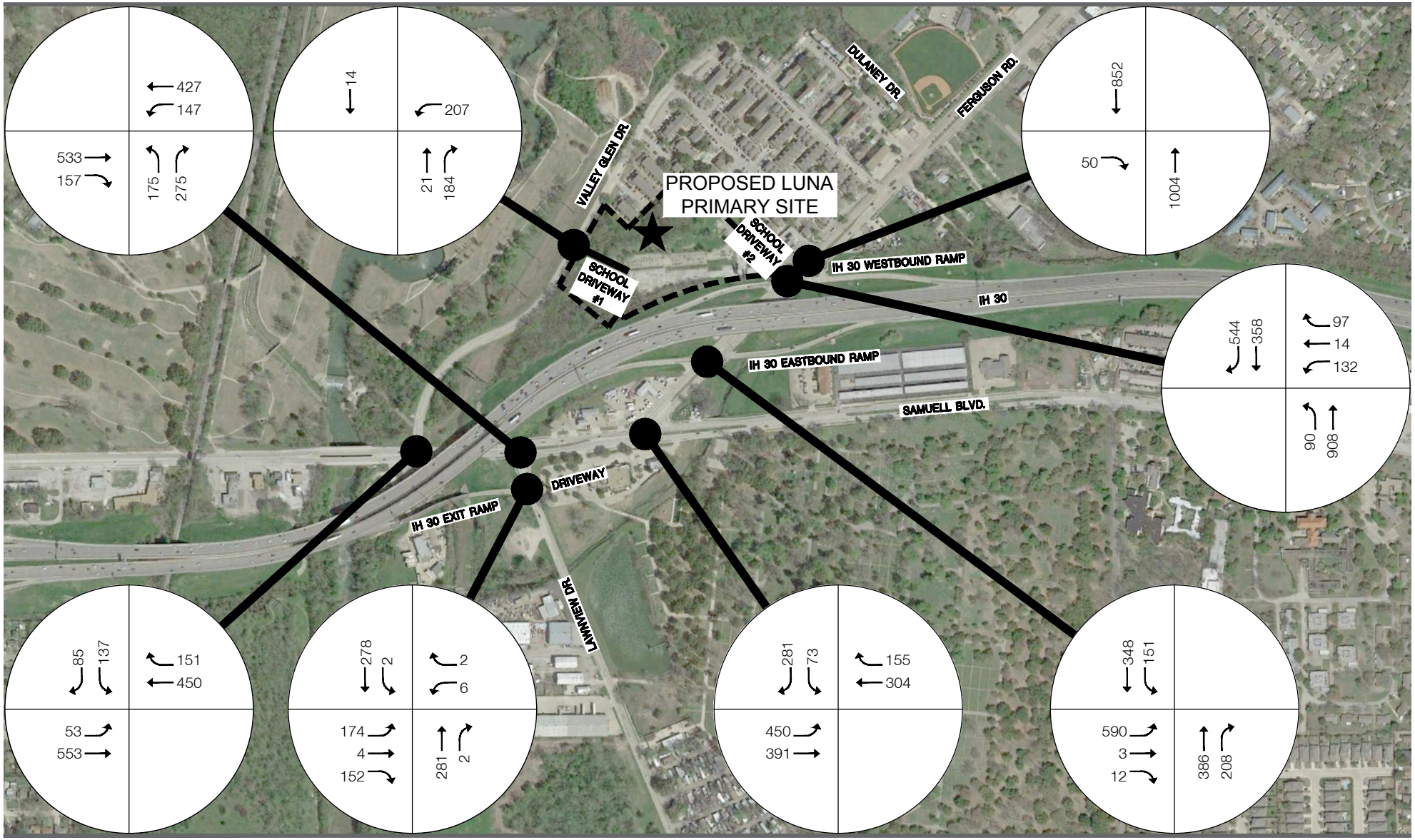

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FULL BUILD 2016 PM PEAK HOUR VOLUMES, VPH

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FIGURE 13

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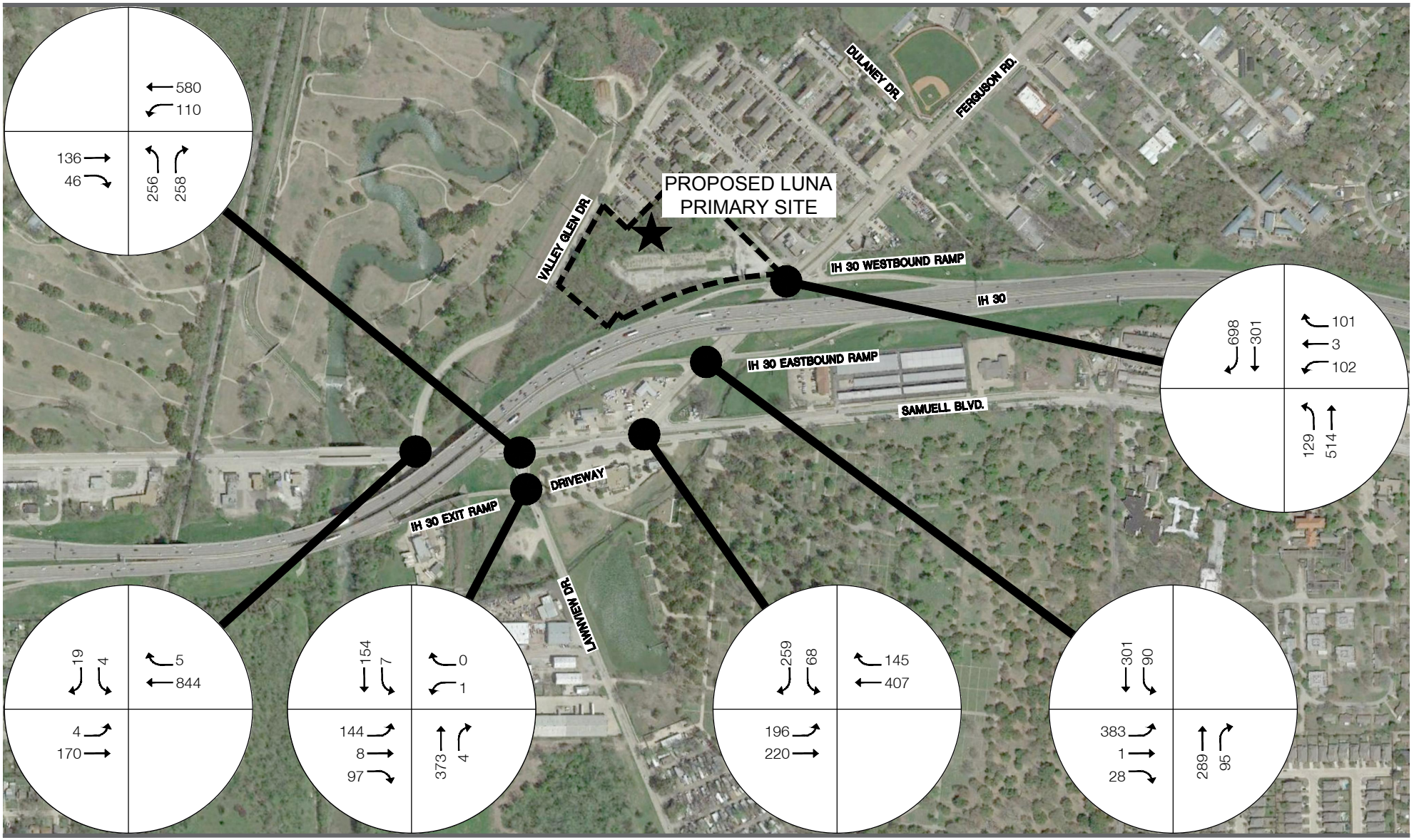

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BACKGROUND HORIZON 2036 AM PEAK HOUR VOLUMES, VPH

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FIGURE 14

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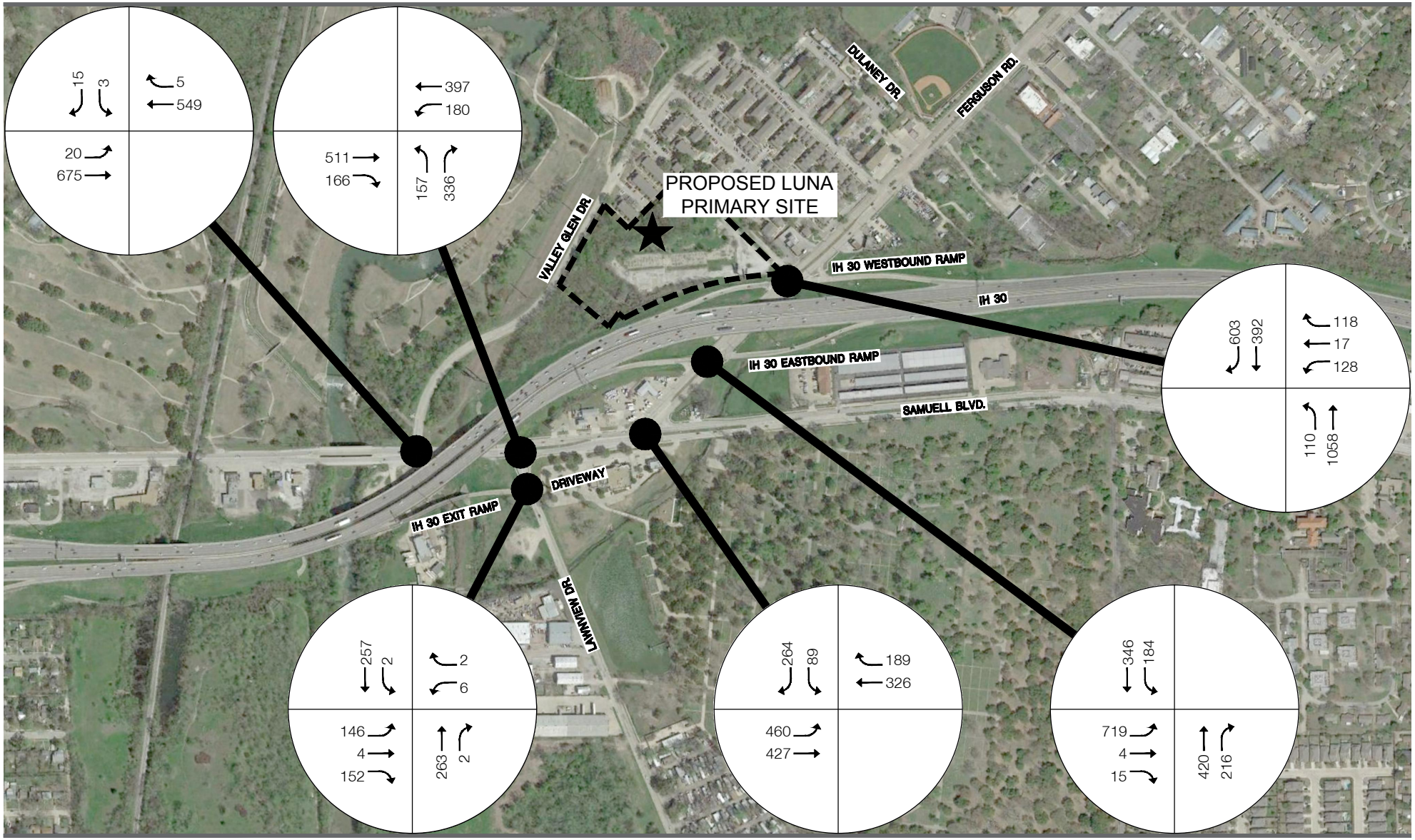

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FIGURE 15

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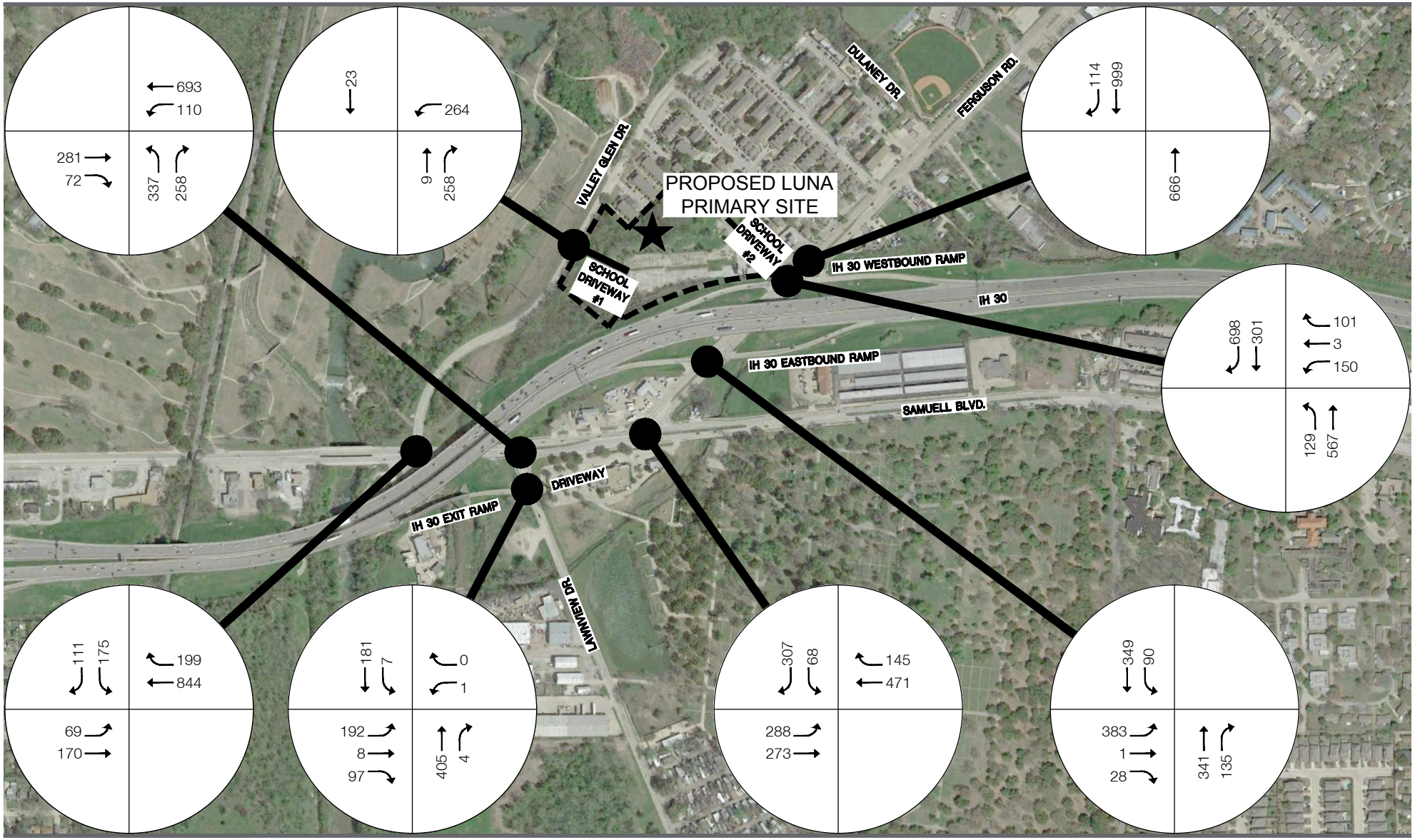

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FULL BUILD HORIZON 2036 AM PEAK HOUR VOLUMES

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FIGURE 16

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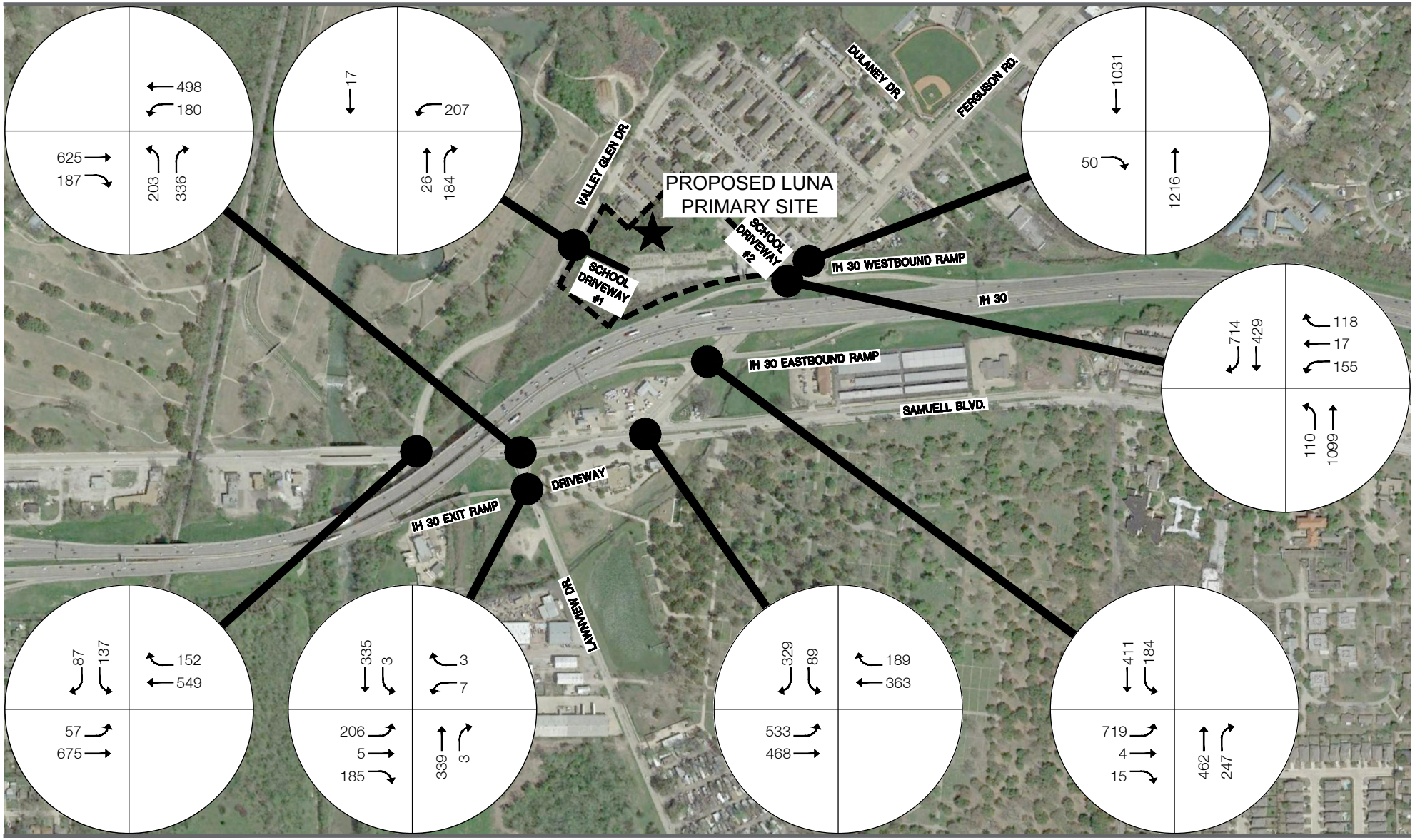

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FIGURE 17

TABLE 2: AM Peak Hour Level of Service Comparison- Unsignalized Intersections

Scenario	Level of Service (delay in seconds) by Approach and Movement												
	Eastbound			Westbound			Northbound			Southbound			Int.
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	LOS
Samuell Boulevard at Valley Glen Drive													
Background 2016	A	A	N/A	N/A	A	A	N/A			B	N/A	B	A
	9.3	0.0			0.0	0.0				12.1		12.1	0.3
Full Build 2016	B	A	N/A	N/A	A	A	N/A			F	N/A	F	E
	10.7	0.3			0.0	0.0				178.6		178.6	37.2
Mitigated Full Build 2016	B	A	N/A	N/A	A	A	N/A			F	N/A	B	C
	10.6	0.0			0.0	0.0				118.4		13.7	16.6
Background Horizon 2036	A	A	N/A	N.A	A	A	N/A			B	N/A	B	A
	9.9	0.0			0.0	0.0				13.6		13.6	0.3
Full Build Horizon 2036	B	A	N/A	N.A	A	A	N/A			F	N/A	F	F
	11.7	0.4			0.0	0.0				352.7		352.7	64.9
Mitigated Full Build Horizon 2036	B	A	N/A	N.A	A	A	N/A			F	N/A	C	D
	11.7	0.0			0.0	0.0				260.5		15.4	30.7
IH 30 Eastbound Exit Ramp at Lawnview Avenue													
Background 2016	B	B	B	B	B	B	N/A	A	A	A	A	N/A	A
	12.4	12.4	12.4	12.8	12.8	12.8		0.0	0.0	8.0	8.0		4.0
Full Build 2016	B	B	B	B	B	B	N/A	A	A	A	A	N/A	A
	14.7	14.7	14.7	13.5	13.5	13.5		0.0	0.0	8.1	0.0		5.0
Background Horizon 2036	B	B	B	B	B	B	N/A	A	A	A	A	N/A	A
	14.5	14.5	14.5	14.3	14.3	14.3		0.0	0.0	8.2	0.0		4.7
Full Build Horizon 2036	C	C	C	C	C	C	N/A	A	A	A	A	N/A	A
	18.3	18.3	18.3	15.1	15.1	15.1		0.0	0.0	8.3	0.0		6.2
Valley Glen Drive at Proposed School Driveway #1													
Full Build 2016	N/A			B	N/A	B	N/A	A	A	A	A	N/A	A
				11.7		11.7		0.0	0.0	0.0	0.0		5.6
Full Build Horizon 2036	N/A			B	N/A	B	N/A	A	A	A	A	N/A	A
				11.8		11.8		0.0	0.0	0.0	0.0		5.6
Ferguson Road at Proposed School Driveway #2													
Full Build 2016	N/A		A	N/A			N/A	A	N/A	N/A	A	A	A
			0.0					0.0			0.0	0.0	0.0
Full Build Horizon 2036	N/A		A	N/A			N/A	A	N/A	N/A	A	A	A
			0.0					0.0			0.0	0.0	0.0

N/A: Not Applicable

TABLE 3: AM Peak Hour Level of Service Comparison- Signalized Intersections

Scenario	Level of Service (delay in seconds) by Approach and Movement												
	Eastbound			Westbound			Northbound			Southbound			Int.
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	LOS
Samuell Boulevard at Lawnview Avenue													
Background 2016	N/A	A	A	A	A	N/A	D	N/A	B	N/A			B
		7.2	2.8	2.4	5.7		35.9		10.4				11.9
Full Build 2016	N/A	A	A	A	A	N/A	C	N/A	A	N/A			B
		9.0	3.2	2.1	6.3		30.9		8.3				11.4
Background Horizon 2036	N/A	A	A	A	A	N/A	D	N/A	B	N/A			B
		7.9	3.0	3.0	6.9		36.5		10.0				12.6
Full Build Horizon 2036	N/A	A	A	A	B	N/A	C	N/A	A	N/A			B
		9.9	3.4	2.2	6.7		31.2		8.1				11.7
Samuell Boulevard at Ferguson Road													
Background 2016	D	A	N/A	N/A	B	A	N/A			D	N/A	A	B
	38.2	4.7			12.0	3.3				35.2		8.9	14.4
Full Build 2016	D	A	N/A	N/A	B	A	N/A			D	N/A	A	B
	38.5	3.8			11.8	3.1				51.2		5.4	15.1
Background Horizon 2036	D	A	N/A	N/A	B	A	N/A			C	N/A	A	B
	40.4	5.3			13.6	3.1				33.9		7.6	14.9
Full Build Horizon 2036	D	A	N/A	N/A	B	A	N/A			D	N/A	A	B
	44.0	4.3			13.6	3.1				53.2		5.2	16.7
IH 30 Eastbound Ramp and Ferguson Road													
Background 2016	D	D	D	N/A			N/A	A	A	A	A	N/A	B
	41.8	39.0	39.0					2.3	2.3	3.9	3.9		16.1
Full Build 2016	D	C	C	N/A			N/A	A	A	A	A	N/A	B
	35.6	32.8	32.8					1.9	1.9	4.2	4.2		12.5
Background Horizon 2036	D	D	D	N/A			N/A	A	A	A	A	N/A	B
	41.6	39.0	39.0					2.6	2.6	4.5	4.5		16.3
Full Build Horizon 2036	D	C	C	N/A			N/A	A	A	A	A	N/A	B
	35.4	32.8	32.8					2.1	2.1	4.8	4.8		12.9
IH 30 Westbound Ramp and Ferguson Road													
Background 2016	N/A			C	B	N/A	A	A	N/A	N/A	A	A	A
				30.2	10.2		5.6	5.6			8.6	2.8	6.6
Full Build 2016	N/A			C	B	N/A	A	A	N/A	N/A	A	A	A
				28.8	10.5		4.7	4.7			9.4	3.3	7.0
Background Horizon 2036	N/A			C	A	N/A	A	A	N/A	N/A	A	A	A
				28.8	9.1		6.9	6.9			9.9	3.6	7.4
Full Build Horizon 2036	N/A			C	A	N/A	A	A	N/A	N/A	B	A	A
				27.4	8.9		5.8	5.8			10.9	4.2	7.7

N/A: Not Applicable

TABLE 4: PM Peak Hour Level of Service Comparison- Unsignalized Intersections

Scenario	Level of Service (delay in seconds) by Approach and Movement												
	Eastbound			Westbound			Northbound			Southbound			Int.
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	LOS
Samuell Boulevard at Valley Glen Drive													
Background 2016	A	A	N/A	N/A	A	A	N/A			B	N/A	B	A
	8.4	0.1			0.0	0.0				11.0		11.0	0.3
Full Build 2016	A	A	N/A	N/A	A	A	N/A			E	N/A	E	A
	9.1	0.4			0.0	0.0				53.7		53.7	8.9
Mitigated Full Build 2016	A	A	N/A	N/A	A	A	N/A			E	N/A	B	A
	9.1	0.0			0.0	0.0				45.9		11.2	5.4
Background Horizon 2036	B	B	N/A	N/A	A	A	N/A			B	N/A	B	A
	8.8	0.2			0.0	0.0				12.2		12.2	0.4
Full Build Horizon 2036	A	A	N/A	N/A	A	A	N/A			F	N/A	F	C
	9.6	0.5			0.0	0.0				124.5		124.5	17.4
Mitigated Full Build Horizon 2036	A	A	N/A	N/A	A	A	N/A			F	N/A	B	A
	9.6	0.0			0.0	0.0				90.9		11.9	8.4
IH 30 Eastbound Exit Ramp at Lawnview Avenue													
Background 2016	C	C	C	B	B	B	N/A	A	A	A	A	N/A	A
	16.2	16.2	16.2	12.8	12.8	12.8		0.0	0.0	7.8	0.0		6.0
Full Build 2016	C	C	C	B	B	B	N/A	A	A	A	A	N/A	A
	19.2	19.2	19.2	13.2	13.2	13.2		0.0	0.0	7.9	0.0		7.2
Background Horizon 2036	C	C	C	B	B	B	N/A	A	A	A	A	N/A	A
	16.2	16.2	16.2	12.8	12.8	12.8		0.0	0.0	0.0	0.0		6.6
Full Build Horizon 2036	D	D	D	B	B	B	N/A	A	A	A	A	N/A	B
	33.7	33.7	33.7	14.8	14.8	14.8		0.0	0.0	8.1	0.0		12.5
Valley Glen Drive at Proposed School Driveway #1													
Full Build 2016	N/A			B	N/A	B	N/A	A	A	A	A	N/A	A
				10.7		10.7		0.0	0.0	0.0	0.0		5.2
Full Build Horizon 2036	N/A			B	N/A	B	N/A	A	A	A	A	N/A	A
				10.8		10.8		0.0	0.0	0.0	0.0		5.2
Ferguson Road at Proposed School Driveway #2													
Full Build 2016	N/A		B	N/A			N/A	A	N/A	N/A	A	A	A
			13.7					0.0			0.0	0.0	0.4
Full Build Horizon 2036	N/A		C	N/A			N/A	A	N/A	N/A	A	A	A
			15.3					0.0			0.0	0.0	0.3

N/A: Not Applicable

TABLE 5: PM Peak Hour Level of Service Comparison- Signalized Intersections

Scenario	Level of Service (delay in seconds) by Approach and Movement												
	Eastbound			Westbound			Northbound			Southbound			Int.
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	LOS
Samuell Boulevard at Lawnview Avenue													
Background 2016	N/A	A	A	A	A	N/A	D	N/A	B	N/A			A
		7.8	1.8	2.9	4.2		38.3		12.1				9.5
Full Build 2016	N/A	A	A	A	A	N/A	C	N/A	B	N/A			A
		9.1	2.0	2.8	4.5		34.4		10.8				9.6
Background Horizon 2036	N/A	A	A	A	A	N/A	D	N/A	B	N/A			A
		8.7	2.0	3.8	4.1		38.8		12.2				9.9
Full Build Horizon 2036	N/A	B	A	A	A	N/A	C	N/A	B	N/A			B
		10.3	2.5	4.1	4.8		34.6		10.8				10.2
Samuell Boulevard at Ferguson Road													
Background 2016	D	A	N/A	N/A	B	A	N/A			C	N/A	A	B
	42.6	3.8			16.5	3.9				34.9		9.9	18.8
Full Build 2016	D	A	N/A	N/A	B	A	N/A			C	N/A	A	B
	36.6	1.5			11.6	2.7				30.2		8.3	15.4
Background Horizon 2036	D	A	N/A	N/A	B	A	N/A			D	N/A	A	B
	42.1	3.7			18.4	4.0				35.9		10.2	19.2
Full Build Horizon 2036	D	A	N/A	N/A	B	A	N/A			D	N/A	A	B
	41.7	2.7			17.6	3.8				40.6		5.2	18.2
IH 30 Eastbound Ramp and Ferguson Road													
Background 2016	D	D	D	N/A			N/A	A	A	A	A	N/A	B
	42.9	42.8	42.8					0.8	0.8	6.7	6.7		18.8
Full Build 2016	D	D	D	N/A			N/A	A	A	A	A	N/A	B
	39.2	39.1	39.1					0.9	0.9	6.6	6.6		16.2
Background Horizon 2036	D	D	D	N/A			N/A	A	A	A	A	N/A	B
	41.0	41.1	41.1					1.1	1.1	8.1	8.1		18.5
Full Build Horizon 2036	D	D	D	N/A			N/A	A	A	A	A	N/A	B
	39.1	39.3	39.3					1.0	1.0	1.0	7.7		16.8
IH 30 Westbound Ramp and Ferguson Road													
Background 2016	N/A			C	A	N/A	B	B	N/A	N/A	B	B	B
				26.2	8.9		13.5	13.5			14.8	14.8	11.5
Full Build 2016	N/A			C	A	N/A	B	B	N/A	N/A	B	A	B
				24.4	9.0		10.9	10.9			13.7	3.7	10.2
Background Horizon 2036	N/A			C	B	N/A	B	B	N/A	N/A	B	A	B
				23.5	16.0		17.9	17.9			17.0	4.3	14.5
Full Build Horizon 2036	N/A			C	B	N/A	B	B	N/A	N/A	B	A	B
				22.4	15.3		13.6	13.6			15.5	5.0	12.1

N/A: Not Applicable

With the exception of the southbound movement from Valley Glen Drive to Samuell Boulevard, there is no significant delay to any of the unsignalized intersections due to the added school traffic. The level of service during the AM peak hour for the southbound vehicles exiting Valley Glen Drive on to Samuell Boulevard is LOS F with an estimated 95th percentile queue of 15 and 21 vehicles during Full Build 2016 and Full Build Horizon 2036 conditions, respectively. The level of service for this southbound movement during the school PM peak hour is LOS F with an estimated 95th percentile queue of 11 vehicles during Full Build Horizon 2036 scenario.

A mitigated scenario for the intersection of Samuell Boulevard and Valley Glen Drive was analyzed. There are currently no pavement markings along Valley Glen Drive or at the approach to the Samuell Boulevard intersection. At the approach to the intersection, the 40 feet wide Valley Glen Drive is recommended to be restriped to include a northbound lane, a southbound left turn lane, and a southbound right turn lane. It is also recommended that when this intersection is restriped, an eastbound left turn lane be provided. When the school initiates operations, a policeman could be positioned at this intersection to assist the motorists exiting from southbound Valley Glen Drive to eastbound Samuell Boulevard if needed.

There is no significant delay to the signalized intersections with the addition of site generated trips during either the AM or school PM peak hour. The intersection LOS remains at LOS B or better for all signalized intersections through the Horizon 2036 scenario.

OBSERVATIONS

During site investigation, the following conditions were observed. The northbound left turn movement and southbound left turn movement are permitted-only at the intersections of Ferguson Road at IH 30 Westbound Frontage Road and IH 30 Eastbound Frontage Road, respectively. However, no signage is posted to alert the motorists of these conditions.

It is recommended for the City of Dallas to add signs for northbound and southbound left turns at IH 30 and Ferguson Road. A “Left-turn-yield-on-green” sign (MUTCD sign R10-12) at these intersections supplementing the left-turn signal heads is recommended.

An illegal traffic movement was observed for the northbound direction at the intersection of IH 30 westbound at Ferguson Road. A northbound motorist was observed entering the “School” driveway to access the adjacent gas station as shown in the photograph below.

Existing counts included incidence of such illegal movements occurring. With the presence of the proposed school campus driveway at this location, it is recommended for the City of Dallas to install a no left turn sign for this northbound approach. The median on the north side of the intersection is a potential location for installation of such signage.

Valley Glen Drive is an undivided 40 foot wide roadway. The following photograph is taken from northbound Valley Glen Drive just north of the proposed school driveway. Existing conditions do not have pavement markings and parking is allowed along the curb.

As Valley Glen Drive is proposed as the main ingress and egress point for parent drop-off and pick-up operations, it is recommended for parking to be restricted for 200 feet south of the proposed school driveway. No right turn deceleration lane is recommended due to the existing width and the low traffic volume on the roadway.

No lane markings are currently provided at the intersection of Valley Glen Drive at Samuel Boulevard. Striping to provide a left turn lane and a right turn lane is recommended as a mitigation measure for the southbound approach.

SUMMARY

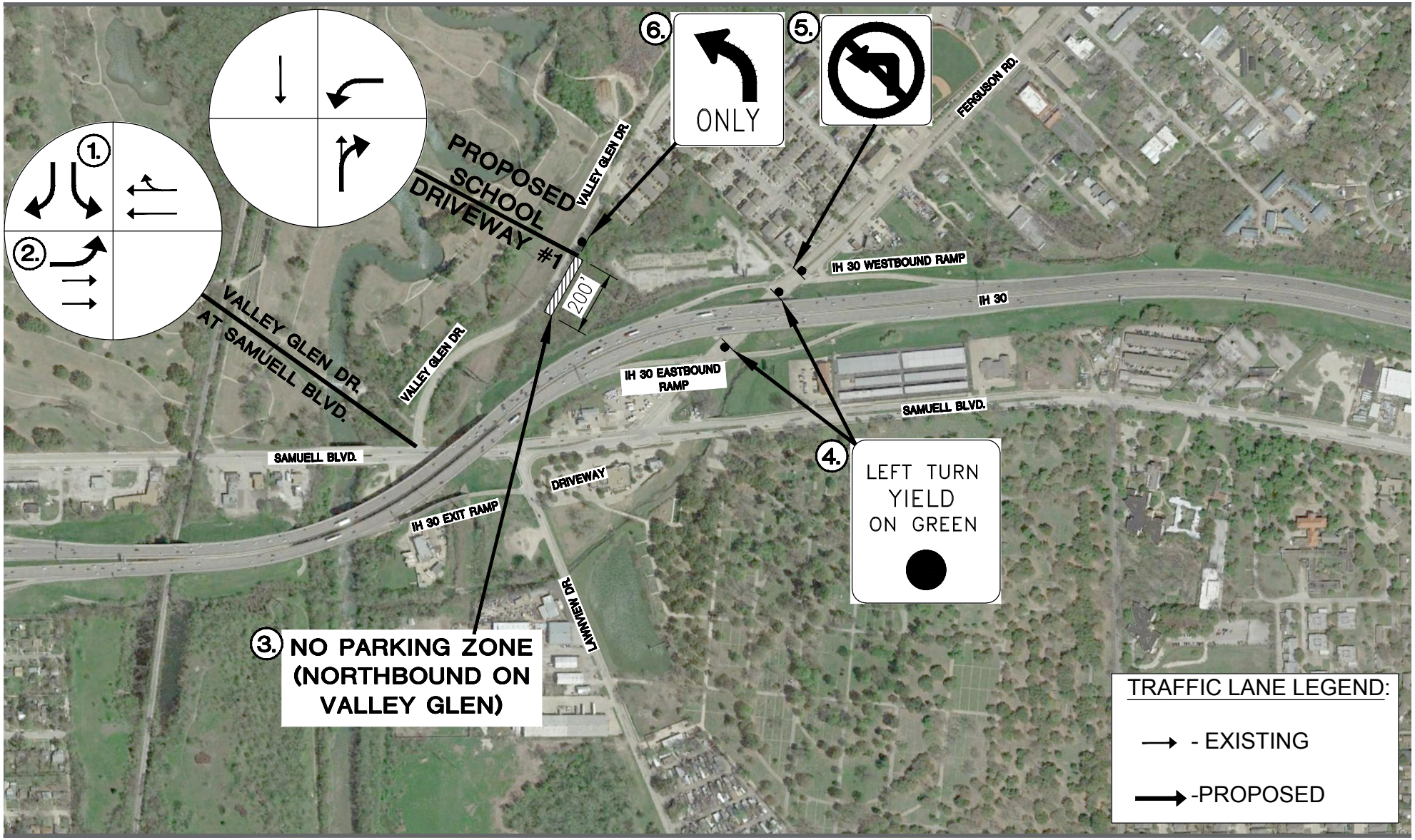
The proposed assignment of school related traffic has minimal impact to the overall LOS at the signalized intersections with all operating at LOS C or better during Background, Full-Build, and Full-Build Horizon conditions. The impact of the school related traffic to the unsignalized intersection of Samuell Boulevard and Valley Glen Drive is shown to be mitigated with restriping the intersection and the potential for police assistance.

RECOMMENDATIONS

Figure 18 illustrates the following recommendations provided to improve traffic operations and safety in the study area:

1. *Valley Glen Drive Pavement Markings:* At the intersection with Samuell Boulevard, Valley Glen Drive is recommended to be striped to a 16 feet wide northbound lane, a 12 feet wide southbound left turn lane, and a 12 feet wide southbound right turn lane.
2. *Samuell Boulevard Pavement Markings:* At the eastbound approach to the intersection with Valley Glen Drive, Samuell Boulevard is recommended to be restriped to provide an eastbound left turn lane and two through lanes.
3. *Restrict Parking:* Parking is recommended to be restricted for 200 feet south of the proposed school driveway along northbound Valley Glen Drive.
4. *Ferguson Road Left Turn Signage:* It is recommended for the City of Dallas to add signs for northbound and southbound left turns at IH 30 and Ferguson. A "Left-turn-yield-on-green" sign (MUTCD sign R10-12) at these intersections supplementing the left-turn signal heads is recommended.
5. *Northbound Ferguson Road at westbound IH 30 intersection*: It is recommended for the City of Dallas to install a no left turn sign (MUTCD sign R3-2) for this northbound approach to discourage left turn movements into the school driveway #2. The sign could be placed on the median on the north side of the intersection.
6. *"Left-turn Only" for School Driveway #1:* It is recommended to install a "Left-turn only" (MUTCD R3-5) at the westbound approach of the proposed School Driveway #1 at Valley Glen Drive.

Sep 21, 2015 - 3:16pm P:\T04\2015\15011-00 Luna Primary TIA and TMP\Cad\Traffic\TIA Figures\T04-15011-00-TIA-FIGURE-18.dwg



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N.T.S.

Project Name:
LUNA PRIMARY TRAFFIC IMPACT ANALYSIS

Sheet Title:
RECOMMENDED IMPROVEMENTS

WPMA P.N.:	Designed by:	Sheet No.
T04-15011-00	ECC	
Date:	Drawn by:	
SEPTEMBER 2015	TME	

FIGURE 18

REFERENCES

1. *Trip Generation Manual, 9th Edition.* Institute of Transportation Engineers, Washington, D.C., 2012.
2. *Texas Manual on Uniform Traffic Control Devices, 2011 Edition*. Texas Department of Transportation, Austin, Texas.

APPENDIX

TAB ONE

Existing 2015 Traffic Counts

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane
Arlington, TX 76013

File Name : VALLEYGLEN @ SAMUEL
Site Code : 00000010
Start Date : 6/18/2015
Page No : 1

Groups Printed- Unshifted

	VALLEYGLEN Southbound					SAMUEL Westbound					Northbound					SAMUEL Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:15	0	0	6	0	6	0	162	1	0	163	0	0	0	0	0	1	32	0	0	33	202
07:30	1	0	3	0	4	0	167	1	0	168	0	0	0	0	0	0	23	0	0	23	195
07:45	2	0	1	0	3	0	142	1	0	143	0	0	0	0	0	1	31	0	0	32	178
Total	3	0	10	0	13	0	471	3	0	474	0	0	0	0	0	2	86	0	0	88	575
08:00	0	0	4	0	4	0	158	1	0	159	0	0	0	0	0	1	41	0	0	42	205
08:15	0	0	2	0	2	0	124	3	0	127	0	0	0	0	0	0	35	0	0	35	164
08:30	0	0	5	0	5	0	114	0	0	114	0	0	0	0	0	1	38	0	0	39	158
Total	0	0	11	0	11	0	396	4	0	400	0	0	0	0	0	2	114	0	0	116	527
15:00	3	0	5	2	10	0	155	2	0	157	0	0	0	0	0	5	97	0	0	102	269
15:15	1	0	5	0	6	0	95	2	0	97	0	0	0	0	0	3	99	0	0	102	205
15:30	2	0	4	0	6	0	106	2	0	108	0	0	0	0	0	0	108	1	0	109	223
15:45	0	0	2	0	2	0	89	2	0	91	0	0	0	0	0	4	115	0	0	119	212
Total	6	0	16	2	24	0	445	8	0	453	0	0	0	0	0	12	419	1	0	432	909
16:00	0	0	3	0	3	0	103	0	0	103	0	0	0	0	0	4	120	0	0	124	230
16:15	0	0	2	0	2	0	111	0	0	111	0	0	0	0	0	7	160	0	0	167	280
Grand Total	9	0	42	2	53	0	1526	15	0	1541	0	0	0	0	0	27	899	1	0	927	2521
Apprch %	17	0	79.2	3.8		0	99	1	0		0	0	0	0		2.9	97	0.1	0		
Total %	0.4	0	1.7	0.1	2.1	0	60.5	0.6	0	61.1	0	0	0	0	0	1.1	35.7	0	0	36.8	

	VALLEYGLEN Southbound					SAMUEL Westbound					Northbound					SAMUEL Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	0	**6**	0	**6**	0	162	**1**	0	163	0	0	0	0	0	**1**	32	0	0	33	202
07:30	1	0	3	0	4	0	**167**	1	0	**168**	0	0	0	0	0	0	23	0	0	23	195
07:45	**2**	0	1	0	3	0	142	1	0	143	0	0	0	0	0	1	31	0	0	32	178
08:00	0	0	4	0	4	0	158	1	0	159	0	0	0	0	0	1	**41**	0	0	**42**	**205**
Total Volume	3	0	14	0	17	0	629	4	0	633	0	0	0	0	0	3	127	0	0	130	780
% App. Total	17.6	0	82.4	0		0	99.4	0.6	0		0	0	0	0		2.3	97.7	0	0		
PHF	.375	.000	.583	.000	.708	.000	.942	1.00	.000	.942	.000	.000	.000	.000	.000	.750	.774	.000	.000	.774	.951
Peak Hour Analysis From 12:00 to 16:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:30																					
15:30	**2**	0	**4**	0	**6**	0	106	**2**	0	108	0	0	0	0	0	0	108	**1**	0	109	223
15:45	0	0	2	0	2	0	89	2	0	91	0	0	0	0	0	4	115	0	0	119	212
16:00	0	0	3	0	3	0	103	0	0	103	0	0	0	0	0	4	120	0	0	124	230
16:15	0	0	2	0	2	0	**111**	0	0	**111**	0	0	0	0	0	**7**	**160**	0	0	**167**	**280**
Total Volume	2	0	11	0	13	0	409	4	0	413	0	0	0	0	0	15	503	1	0	519	945
% App. Total	15.4	0	84.6	0		0	99	1	0		0	0	0	0		2.9	96.9	0.2	0		
PHF	.250	.000	.688	.000	.542	.000	.921	.500	.000	.930	.000	.000	.000	.000	.000	.536	.786	.250	.000	.777	.844

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane
Arlington, TX 76013

File Name : FERGUSON @ IH 30 EBFR
Site Code : 00000010
Start Date : 6/18/2015
Page No : 1

Groups Printed- Unshifted

	FERGUSON Southbound					IH 30 EBFR Westbound					FERGUSON Northbound					IH 30 EBFR Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:15	9	51	0	0	60	0	0	0	0	0	0	50	8	0	58	73	0	1	0	74	192
07:30	12	72	0	0	84	0	0	0	0	0	0	39	7	0	46	65	0	0	0	65	195
07:45	20	60	0	0	80	0	0	0	0	0	0	48	15	0	63	94	0	8	0	102	245
Total	41	183	0	0	224	0	0	0	0	0	0	137	30	0	167	232	0	9	0	241	632
08:00	12	61	0	0	73	0	0	0	0	0	0	61	19	0	80	49	0	4	0	53	206
08:15	16	53	0	0	69	0	0	0	0	0	0	53	15	0	68	62	0	5	0	67	204
08:30	19	50	0	0	69	0	0	0	0	0	0	53	22	0	75	80	1	4	0	85	229
Total	47	164	0	0	211	0	0	0	0	0	0	167	56	0	223	191	1	13	0	205	639
15:00	28	76	0	0	104	0	0	0	0	0	0	84	32	0	116	135	1	10	0	146	366
15:15	21	58	0	0	79	0	0	0	0	0	0	88	32	0	120	146	1	6	0	153	352
15:30	43	68	0	0	111	0	0	0	0	0	0	66	37	0	103	131	1	2	0	134	348
15:45	24	67	0	0	91	0	0	0	0	0	0	72	37	0	109	141	0	4	0	145	345
Total	116	269	0	0	385	0	0	0	0	0	0	310	138	0	448	553	3	22	0	578	1411
16:00	39	61	0	0	100	0	0	0	0	0	0	95	41	0	136	127	1	1	0	129	365
16:15	31	62	0	0	93	0	0	0	0	0	0	80	46	0	126	137	1	4	0	142	361
Grand Total	274	739	0	0	1013	0	0	0	0	0	0	789	311	0	1100	1240	6	49	0	1295	3408
Apprch %	27	73	0	0		0	0	0	0		0	71.7	28.3	0		95.8	0.5	3.8	0		
Total %	8	21.7	0	0	29.7	0	0	0	0	0	0	23.2	9.1	0	32.3	36.4	0.2	1.4	0	38	

	FERGUSON Southbound					IH 30 EBFR Westbound					FERGUSON Northbound					IH 30 EBFR Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	**20**	60	0	0	**80**	0	0	0	0	0	0	48	15	0	63	**94**	0	**8**	0	**102**	**245**
08:00	12	**61**	0	0	73	0	0	0	0	0	0	**61**	19	0	**80**	49	0	4	0	53	206
08:15	16	53	0	0	69	0	0	0	0	0	0	53	15	0	68	62	0	5	0	67	204
08:30	19	50	0	0	69	0	0	0	0	0	0	53	**22**	0	75	80	**1**	4	0	85	229
Total Volume	67	224	0	0	291	0	0	0	0	0	0	215	71	0	286	285	1	21	0	307	884
% App. Total	23	77	0	0		0	0	0	0		0	75.2	24.8	0		92.8	0.3	6.8	0		
PHF	.838	.918	.000	.000	.909	.000	.000	.000	.000	.000	.000	.881	.807	.000	.894	.758	.250	.656	.000	.752	.902
Peak Hour Analysis From 12:00 to 16:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:30																					
15:30	**43**	**68**	0	0	**111**	0	0	0	0	0	0	66	37	0	103	131	**1**	2	0	134	348
15:45	24	67	0	0	91	0	0	0	0	0	0	72	37	0	109	**141**	0	**4**	0	**145**	345
16:00	39	61	0	0	100	0	0	0	0	0	0	**95**	41	0	**136**	127	1	1	0	129	**365**
16:15	31	62	0	0	93	0	0	0	0	0	0	80	**46**	0	126	137	1	4	0	142	361
Total Volume	137	258	0	0	395	0	0	0	0	0	0	313	161	0	474	536	3	11	0	550	1419
% App. Total	34.7	65.3	0	0		0	0	0	0		0	66	34	0		97.5	0.5	2	0		
PHF	.797	.949	.000	.000	.890	.000	.000	.000	.000	.000	.000	.824	.875	.000	.871	.950	.750	.688	.000	.948	.972

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane
Arlington, TX 76013

File Name : FERGUSON @ IH 30 WBFR
Site Code : 00000010
Start Date : 6/18/2015
Page No : 1

Groups Printed- WBFR

	FERGUSON Southbound					IH 30 WBFR Westbound					FERGUSON Northbound					IH 30 WBFR Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:15	0	51	125	0	176	14	0	16	0	30	29	95	0	0	124	0	0	0	0	0	330
07:30	0	59	129	0	188	27	1	14	0	42	21	82	0	0	103	0	0	0	0	0	333
07:45	0	61	137	0	198	13	0	29	0	42	19	120	0	0	139	0	0	0	0	0	379
Total	0	171	391	0	562	54	1	59	0	114	69	297	0	0	366	0	0	0	0	0	1042
08:00	0	53	129	0	182	22	1	16	0	39	27	86	0	0	113	0	0	0	0	0	334
08:15	0	50	118	0	168	11	0	23	0	34	20	97	0	0	117	0	0	0	0	0	319
08:30	0	50	95	1	146	24	0	21	0	45	20	114	0	0	134	0	0	0	0	0	325
Total	0	153	342	1	496	57	1	60	0	118	67	297	0	0	364	0	0	0	0	0	978
15:00	0	61	96	1	158	47	9	27	0	83	15	210	0	0	225	0	0	0	0	0	466
15:15	0	55	148	2	205	19	3	22	0	44	19	203	0	0	222	0	0	0	0	0	471
15:30	0	99	100	4	203	13	1	17	0	31	24	177	0	0	201	0	0	0	0	0	435
15:45	0	77	105	0	182	16	0	22	0	38	24	198	0	0	222	0	0	0	0	0	442
Total	0	292	449	7	748	95	13	88	0	196	82	788	0	0	870	0	0	0	0	0	1814
16:00	0	80	110	0	190	15	0	22	0	37	27	188	0	0	215	0	0	0	0	0	442
16:15	0	74	105	3	182	22	0	25	0	47	20	195	0	1	216	0	0	0	0	0	445
Grand Total	0	770	1397	11	2178	243	15	254	0	512	265	1765	0	1	2031	0	0	0	0	0	4721
Apprch %	0	35.4	64.1	0.5		47.5	2.9	49.6	0		13	86.9	0	0		0	0	0	0		
Total %	0	16.3	29.6	0.2	46.1	5.1	0.3	5.4	0	10.8	5.6	37.4	0	0	43	0	0	0	0	0	

	FERGUSON Southbound					IH 30 WBFR Westbound					FERGUSON Northbound					IH 30 WBFR Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	51	125	0	176	14	0	16	0	30	**29**	95	0	0	124	0	0	0	0	0	330
07:30	0	59	129	0	188	**27**	**1**	14	0	**42**	21	82	0	0	103	0	0	0	0	0	333
07:45	0	**61**	**137**	0	**198**	13	0	**29**	0	42	19	**120**	0	0	**139**	0	0	0	0	0	**379**
08:00	0	53	129	0	182	22	1	16	0	39	27	86	0	0	113	0	0	0	0	0	334
Total Volume	0	224	520	0	744	76	2	75	0	153	96	383	0	0	479	0	0	0	0	0	1376
% App. Total	0	30.1	69.9	0		49.7	1.3	49	0		20	80	0	0		0	0	0	0		
PHF	.000	.918	.949	.000	.939	.704	.500	.647	.000	.911	.828	.798	.000	.000	.862	.000	.000	.000	.000	.000	.908
Peak Hour Analysis From 12:00 to 16:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:00																					
15:00	0	61	96	1	158	**47**	**9**	**27**	0	**83**	15	**210**	0	0	**225**	0	0	0	0	0	466
15:15	0	55	**148**	2	**205**	19	3	22	0	44	19	203	0	0	222	0	0	0	0	0	**471**
15:30	0	**99**	100	**4**	203	13	1	17	0	31	**24**	177	0	0	201	0	0	0	0	0	435
15:45	0	77	105	0	182	16	0	22	0	38	24	198	0	0	222	0	0	0	0	0	442
Total Volume	0	292	449	7	748	95	13	88	0	196	82	788	0	0	870	0	0	0	0	0	1814
% App. Total	0	39	60	0.9		48.5	6.6	44.9	0		9.4	90.6	0	0		0	0	0	0		
PHF	.000	.737	.758	.438	.912	.505	.361	.815	.000	.590	.854	.938	.000	.000	.967	.000	.000	.000	.000	.000	.963

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane
Arlington, TX 76013

File Name : FERGUSON @ SAMUEL
Site Code : 00000010
Start Date : 6/18/2015
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Groups Printed- Unshifted

	FERGUSON Southbound					SAMUEL Westbound					FERGUSON Northbound					SAMUEL Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:15	9	0	50	0	59	0	76	15	0	91	0	0	0	0	0	35	30	0	0	65	215
07:30	11	0	61	0	72	0	84	23	0	107	0	0	0	0	0	23	34	0	0	57	236
07:45	16	0	40	0	56	0	80	29	0	109	0	0	0	0	0	38	34	0	0	72	237
Total	36	0	151	0	187	0	240	67	0	307	0	0	0	0	0	96	98	0	0	194	688
08:00	15	0	52	0	67	0	73	26	0	99	0	0	0	0	0	44	51	0	0	95	261
08:15	9	0	40	0	49	0	66	30	0	96	0	0	0	0	0	41	45	0	0	86	231
08:30	23	0	37	0	60	0	64	27	0	91	0	0	0	0	0	43	35	0	0	78	229
Total	47	0	129	0	176	0	203	83	0	286	0	0	0	0	0	128	131	0	0	259	721
15:00	14	0	79	0	93	0	60	39	0	99	0	0	0	0	0	74	65	0	0	139	331
15:15	15	0	48	0	63	0	59	42	0	101	0	0	0	0	0	71	57	0	0	128	292
15:30	19	0	47	0	66	0	63	26	0	89	0	0	0	0	0	77	70	0	0	147	302
15:45	18	0	51	0	69	0	53	41	0	94	0	0	0	0	0	77	75	0	0	152	315
Total	66	0	225	0	291	0	235	148	0	383	0	0	0	0	0	299	267	0	0	566	1240
16:00	13	0	50	0	63	0	51	40	0	91	0	0	0	0	0	86	87	0	0	173	327
16:15	16	0	49	0	65	0	76	34	0	110	0	0	0	0	0	103	86	0	0	189	364
Grand Total	178	0	604	0	782	0	805	372	0	1177	0	0	0	0	0	712	669	0	0	1381	3340
Apprch %	22.8	0	77.2	0		0	68.4	31.6	0		0	0	0	0		51.6	48.4	0	0		
Total %	5.3	0	18.1	0	23.4	0	24.1	11.1	0	35.2	0	0	0	0	0	21.3	20	0	0	41.3	

	FERGUSON Southbound					SAMUEL Westbound					FERGUSON Northbound					SAMUEL Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	11	0	**61**	0	**72**	0	**84**	23	0	107	0	0	0	0	0	23	34	0	0	57	236
07:45	**16**	0	40	0	56	0	80	29	0	**109**	0	0	0	0	0	38	34	0	0	72	237
08:00	15	0	52	0	67	0	73	26	0	99	0	0	0	0	0	**44**	**51**	0	0	**95**	**261**
08:15	9	0	40	0	49	0	66	**30**	0	96	0	0	0	0	0	41	45	0	0	86	231
Total Volume	51	0	193	0	244	0	303	108	0	411	0	0	0	0	0	146	164	0	0	310	965
% App. Total	20.9	0	79.1	0		0	73.7	26.3	0		0	0	0	0		47.1	52.9	0	0		
PHF	.797	.000	.791	.000	.847	.000	.902	.900	.000	.943	.000	.000	.000	.000	.000	.830	.804	.000	.000	.816	.924
Peak Hour Analysis From 12:00 to 16:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:30																					
15:30	**19**	0	47	0	66	0	63	26	0	89	0	0	0	0	0	77	70	0	0	147	302
15:45	18	0	**51**	0	**69**	0	53	**41**	0	94	0	0	0	0	0	77	75	0	0	152	315
16:00	13	0	50	0	63	0	51	40	0	91	0	0	0	0	0	86	**87**	0	0	173	327
16:15	16	0	49	0	65	0	**76**	34	0	**110**	0	0	0	0	0	**103**	86	0	0	**189**	**364**
Total Volume	66	0	197	0	263	0	243	141	0	384	0	0	0	0	0	343	318	0	0	661	1308
% App. Total	25.1	0	74.9	0		0	63.3	36.7	0		0	0	0	0		51.9	48.1	0	0		
PHF	.868	.000	.966	.000	.953	.000	.799	.860	.000	.873	.000	.000	.000	.000	.000	.833	.914	.000	.000	.874	.898

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane
Arlington, TX 76013

File Name : LAWNVIEW @ IH 30 EB EXIT RAMP
Site Code : 00000010
Start Date : 6/18/2015
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Groups Printed- Unshifted

	LAWNVIEW Southbound					DRIVEWAY Westbound					LAWNVIEW Northbound					IH 30 EB EXIT RAMP Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:15	1	28	0	0	29	0	0	0	0	0	0	78	0	0	78	14	0	14	0	28	135
07:30	0	33	0	0	33	0	0	0	0	0	0	65	0	0	65	24	2	22	0	48	146
07:45	1	29	0	0	30	0	0	0	0	0	0	73	1	0	74	21	0	15	0	36	140
Total	2	90	0	0	92	0	0	0	0	0	0	216	1	0	217	59	2	51	0	112	421
08:00	2	22	0	0	24	0	0	0	0	0	0	73	2	0	75	35	4	21	0	60	159
08:15	2	31	0	0	33	1	0	0	0	1	0	67	0	0	67	27	0	14	0	41	142
08:30	0	29	0	0	29	0	0	1	0	1	0	55	1	0	56	22	4	15	0	41	127
Total	4	82	0	0	86	1	0	1	0	2	0	195	3	0	198	84	8	50	0	142	428
15:00	0	62	0	0	62	1	0	1	0	2	0	63	2	0	65	38	1	38	0	77	206
15:15	0	52	0	0	52	3	0	0	0	3	0	56	0	0	56	28	1	37	0	66	177
15:30	0	55	0	0	55	1	0	0	0	1	0	68	0	0	68	39	2	32	0	73	197
15:45	2	65	0	0	67	0	0	1	0	1	0	52	0	0	52	28	0	31	0	59	179
Total	2	234	0	0	236	5	0	2	0	7	0	239	2	0	241	133	4	138	0	275	759
16:00	0	63	0	0	63	1	0	0	0	1	0	59	1	0	60	29	1	22	0	52	176
16:15	0	73	0	0	73	1	0	1	0	2	0	64	1	0	65	28	1	29	0	58	198
Grand Total	8	542	0	0	550	8	0	4	0	12	0	773	8	0	781	333	16	290	0	639	1982
Apprch %	1.5	98.5	0	0		66.7	0	33.3	0		0	99	1	0		52.1	2.5	45.4	0		
Total %	0.4	27.3	0	0	27.7	0.4	0	0.2	0	0.6	0	39	0.4	0	39.4	16.8	0.8	14.6	0	32.2	

	LAWNVIEW Southbound					DRIVEWAY Westbound					LAWNVIEW Northbound					IH 30 EB EXIT RAMP Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	**33**	0	0	**33**	0	0	0	0	0	0	65	0	0	65	24	2	**22**	0	48	146
07:45	1	29	0	0	30	0	0	0	0	0	0	**73**	1	0	74	21	0	15	0	36	140
08:00	**2**	22	0	0	24	0	0	0	0	0	0	73	**2**	0	**75**	**35**	**4**	21	0	**60**	**159**
08:15	2	31	0	0	33	**1**	0	0	0	**1**	0	67	0	0	67	27	0	14	0	41	142
Total Volume	5	115	0	0	120	1	0	0	0	1	0	278	3	0	281	107	6	72	0	185	587
% App. Total	4.2	95.8	0	0		100	0	0	0		0	98.9	1.1	0		57.8	3.2	38.9	0		
PHF	.625	.871	.000	.000	.909	.250	.000	.000	.000	.250	.000	.952	.375	.000	.937	.764	.375	.818	.000	.771	.923
Peak Hour Analysis From 12:00 to 16:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:00																					
15:00	0	62	0	0	62	1	0	**1**	0	2	0	63	**2**	0	65	38	1	**38**	0	**77**	**206**
15:15	0	52	0	0	52	**3**	0	0	0	**3**	0	56	0	0	56	28	1	37	0	66	177
15:30	0	55	0	0	55	1	0	0	0	1	0	**68**	0	0	**68**	**39**	**2**	32	0	73	197
15:45	**2**	**65**	0	0	**67**	0	0	1	0	1	0	52	0	0	52	28	0	31	0	59	179
Total Volume	2	234	0	0	236	5	0	2	0	7	0	239	2	0	241	133	4	138	0	275	759
% App. Total	0.8	99.2	0	0		71.4	0	28.6	0		0	99.2	0.8	0		48.4	1.5	50.2	0		
PHF	.250	.900	.000	.000	.881	.417	.000	.500	.000	.583	.000	.879	.250	.000	.886	.853	.500	.908	.000	.893	.921

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane
Arlington, TX 76013

File Name : LAWNVIEW @ SAMUEL
Site Code : 00000010
Start Date : 6/18/2015
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Groups Printed- Unshifted

	Southbound					SAMUEL Westbound					LAWNVIEW Northbound					SAMUEL Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:15	0	0	0	0	0	22	101	0	0	123	52	0	40	0	92	0	25	7	0	32	247
07:30	0	0	0	0	0	21	119	0	0	140	49	0	40	0	89	0	12	12	0	24	253
07:45	0	0	0	0	0	22	101	0	0	123	42	0	52	0	94	0	25	8	0	33	250
Total	0	0	0	0	0	65	321	0	0	386	143	0	132	0	275	0	62	27	0	89	750
08:00	0	0	0	0	0	17	111	0	0	128	48	0	60	0	108	0	39	7	0	46	282
08:15	0	0	0	0	0	23	85	0	0	108	42	0	52	0	94	0	30	10	0	40	242
08:30	0	0	0	0	0	23	78	0	0	101	36	0	42	0	78	0	37	6	0	43	222
Total	0	0	0	0	0	63	274	0	0	337	126	0	154	0	280	0	106	23	0	129	746
15:00	0	0	0	0	0	31	122	0	0	153	35	0	66	0	101	0	69	31	0	100	354
15:15	0	0	0	0	0	30	70	0	0	100	27	0	57	0	84	0	78	22	0	100	284
15:30	0	0	0	0	0	32	80	0	0	112	28	0	79	0	107	0	87	23	0	110	329
15:45	0	0	0	0	0	38	63	0	0	101	28	0	53	0	81	0	86	29	0	115	297
Total	0	0	0	0	0	131	335	0	0	466	118	0	255	0	373	0	320	105	0	425	1264
16:00	0	0	0	0	0	32	73	0	0	105	30	0	57	1	88	0	89	31	0	120	313
16:15	0	0	0	0	0	32	80	0	0	112	31	0	61	0	92	0	119	41	0	160	364
Grand Total	0	0	0	0	0	323	1083	0	0	1406	448	0	659	1	1108	0	696	227	0	923	3437
Apprch %	0	0	0	0		23	77	0	0		40.4	0	59.5	0.1		0	75.4	24.6	0		
Total %	0	0	0	0	0	9.4	31.5	0	0	40.9	13	0	19.2	0	32.2	0	20.3	6.6	0	26.9	

	Southbound					SAMUEL Westbound					LAWNVIEW Northbound					SAMUEL Eastbound					
Start Time	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	U-turn	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	0	0	0	0	**22**	101	0	0	123	**52**	0	40	0	92	0	25	7	0	32	247
07:30	0	0	0	0	0	21	**119**	0	0	**140**	49	0	40	0	89	0	12	**12**	0	24	253
07:45	0	0	0	0	0	22	101	0	0	123	42	0	52	0	94	0	25	8	0	33	250
08:00	0	0	0	0	0	17	111	0	0	128	48	0	**60**	0	**108**	0	**39**	7	0	**46**	**282**
Total Volume	0	0	0	0	0	82	432	0	0	514	191	0	192	0	383	0	101	34	0	135	1032
% App. Total	0	0	0	0		16	84	0	0		49.9	0	50.1	0		0	74.8	25.2	0		
PHF	.000	.000	.000	.000	.000	.932	.908	.000	.000	.918	.918	.000	.800	.000	.887	.000	.647	.708	.000	.734	.915
Peak Hour Analysis From 12:00 to 16:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:30																					
15:30	0	0	0	0	0	32	**80**	0	0	**112**	28	0	**79**	0	**107**	0	87	23	0	110	329
15:45	0	0	0	0	0	**38**	63	0	0	101	28	0	53	0	81	0	86	29	0	115	297
16:00	0	0	0	0	0	32	73	0	0	105	30	0	57	**1**	88	0	89	31	0	120	313
16:15	0	0	0	0	0	32	80	0	0	112	**31**	0	61	0	92	0	**119**	**41**	0	**160**	**364**
Total Volume	0	0	0	0	0	134	296	0	0	430	117	0	250	1	368	0	381	124	0	505	1303
% App. Total	0	0	0	0		31.2	68.8	0	0		31.8	0	67.9	0.3		0	75.4	24.6	0		
PHF	.000	.000	.000	.000	.000	.882	.925	.000	.000	.960	.944	.000	.791	.250	.860	.000	.800	.756	.000	.789	.895

TAB TWO

Background 2016 Capacity Analysis

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	118	7	79	1	0	0	0	306	3	6	127	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	8	86	1	0	0	0	333	3	7	138	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	317	487	69	420	485	168	138	0	0	336	0	0
Stage 1	151	151	-	334	334	-	-	-	-	-	-	-
Stage 2	166	336	-	86	151	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	612	479	980	517	481	847	1443	-	-	1220	-	-
Stage 1	836	771	-	653	642	-	-	-	-	-	-	-
Stage 2	820	640	-	912	771	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	609	476	980	464	478	847	1443	-	-	1220	-	-
Mov Cap-2 Maneuver	609	476	-	464	478	-	-	-	-	-	-	-
Stage 1	836	766	-	653	642	-	-	-	-	-	-	-
Stage 2	820	640	-	819	766	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	12.8	0	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1443	-	-	706	464	1220	-	-
HCM Lane V/C Ratio	-	-	-	0.314	0.002	0.005	-	-
HCM Control Delay (s)	0	-	-	12.4	12.8	8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	3	140	692	4	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	152	752	4	3	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	757	0	-	0	837	378
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	850	-	-	-	305	620
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	850	-	-	-	304	620
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	927	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	850	-	-	-	528
HCM Lane V/C Ratio	0.004	-	-	-	0.037
HCM Control Delay (s)	9.3	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

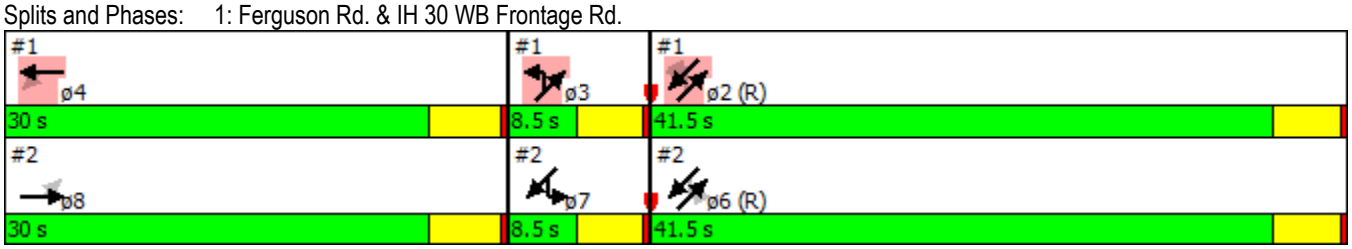
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	84	2	83	106	421	0	0	246	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.866							0.850
Flt Protected				0.950	0.996			0.990				
Satd. Flow (prot)	0	0	0	1681	1526	0	0	5034	0	0	3539	1583
Flt Permitted				0.950	0.996			0.820				
Satd. Flow (perm)	0	0	0	1681	1526	0	0	4170	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					90							622
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			1808	
Travel Time (s)		17.8			22.7			8.7			30.8	
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
Adj. Flow (vph)	0	0	0	91	2	90	115	458	0	0	267	622
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	0	0	82	101	0	0	573	0	0	267	622
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		D.P+P	NA			NA	Perm
Protected Phases					4		3	2 3			2	
Permitted Phases				4			2					2
Detector Phase				4	4		3	2 3			2	2

Lane Group	ø6	ø7	ø8
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	6	7	8
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				15.0	15.0
Minimum Split (s)				28.8	28.8		8.5				22.5	22.5
Total Split (s)				30.0	30.0		8.5				41.5	41.5
Total Split (%)				37.5%	37.5%		10.6%				51.9%	51.9%
Maximum Green (s)				25.2	25.2		4.0				37.0	37.0
Yellow Time (s)				4.3	4.3		4.0				4.0	4.0
All-Red Time (s)				0.5	0.5		0.5				0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0		0.2				2.5	2.5
Recall Mode				None	None		None				C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				13.3	13.3			52.9			47.1	47.1
Actuated g/C Ratio				0.17	0.17			0.66			0.59	0.59
v/c Ratio				0.29	0.31			0.20			0.13	0.52
Control Delay				30.2	10.2			5.6			8.6	2.8
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				30.2	10.2			5.6			8.6	2.8
LOS				C	B			A			A	A
Approach Delay					19.1			5.6			4.6	
Approach LOS					B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 39 (49%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 64.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø6	ø7	ø8
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	41.5	8.5	30.0
Total Split (%)	52%	11%	38%
Maximum Green (s)	37.0	4.0	25.2
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

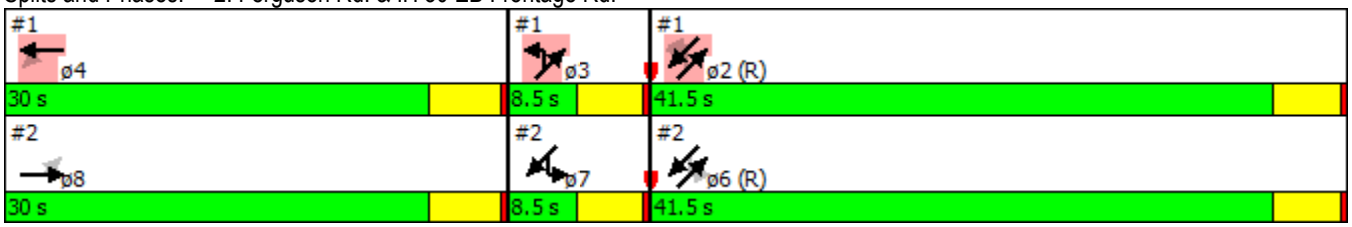
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	314	1	23	0	0	0	0	237	78	74	246	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.980						0.963				
Flt Protected	0.950	0.959									0.989	
Satd. Flow (prot)	1681	1663	0	0	0	0	0	4897	0	0	5029	0
Flt Permitted	0.950	0.959									0.811	
Satd. Flow (perm)	1681	1663	0	0	0	0	0	4897	0	0	4124	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10						85				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	341	1	25	0	0	0	0	258	85	80	267	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	184	183	0	0	0	0	0	343	0	0	347	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		D.P+P	NA	
Protected Phases		8						6		7	6 7	
Permitted Phases	8									6		
Detector Phase	8	8						6		7	6 7	

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0		4.0		
Minimum Split (s)	28.8	28.8						22.5		8.5		
Total Split (s)	30.0	30.0						41.5		8.5		
Total Split (%)	37.5%	37.5%						51.9%		10.6%		
Maximum Green (s)	25.2	25.2						37.0		4.0		
Yellow Time (s)	4.3	4.3						4.0		4.0		
All-Red Time (s)	0.5	0.5						0.5		0.5		
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5		0.2		
Recall Mode	None	None						C-Max		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	13.3	13.3						47.1			52.9	
Actuated g/C Ratio	0.17	0.17						0.59			0.66	
v/c Ratio	0.66	0.64						0.12			0.12	
Control Delay	41.8	39.0						2.3			3.9	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	41.8	39.0						2.3			3.9	
LOS	D	D						A			A	
Approach Delay		40.4						2.3			3.9	
Approach LOS		D						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 39 (49%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 33.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.



Lane Group	ø2	ø3	ø4
Switch Phase			
Minimum Initial (s)	15.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	41.5	8.5	30.0
Total Split (%)	52%	11%	38%
Maximum Green (s)	37.0	4.0	25.2
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	161	180	333	119	56	212	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				129		230	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	175	196	362	129	61	230	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	175	196	362	129	61	230	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	custom	
Protected Phases	1	6	2		7	4	8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	4	

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	8.0	13.0
Total Split (s)	15.0	53.0	38.0	38.0	14.0	13.0	13.0
Total Split (%)	18.8%	66.3%	47.5%	47.5%	17.5%	16.3%	16%
Maximum Green (s)	10.0	47.0	31.1	31.1	8.4	9.0	9.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.5	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	4.0	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			6.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	8.2	56.3	42.2	42.2	6.9	13.7	
Actuated g/C Ratio	0.10	0.70	0.53	0.53	0.09	0.17	
v/c Ratio	0.50	0.08	0.19	0.14	0.40	0.34	
Control Delay	38.2	4.7	12.0	3.3	35.2	8.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	38.2	4.7	12.0	3.3	35.2	8.9	
LOS	D	A	B	A	D	A	
Approach Delay		20.5	9.7		14.4		
Approach LOS		C	A		B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 11 (14%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			

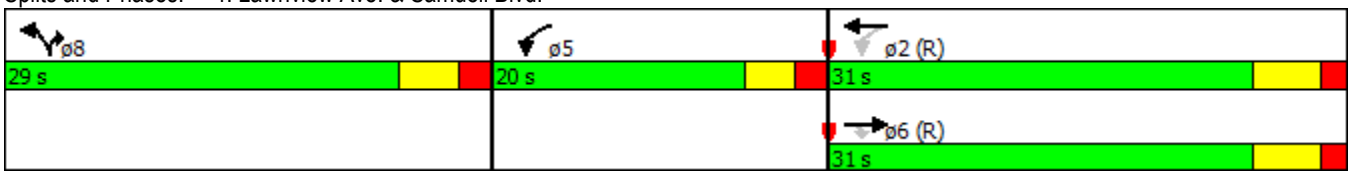
Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	111	37	90	475	210	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	180		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.675		0.950	
Satd. Flow (perm)	3539	1583	1257	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		40				229
Link Speed (mph)	35			35	35	
Link Distance (ft)	464			551	234	
Travel Time (s)	9.0			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	40	98	516	228	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	40	98	516	228	229
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	1.0	1.0	3.0	1.0	10.0	10.0
Minimum Split (s)	22.7	22.7	20.0	6.7	26.6	26.6
Total Split (s)	31.0	31.0	20.0	31.0	29.0	29.0
Total Split (%)	38.8%	38.8%	25.0%	38.8%	36.3%	36.3%
Maximum Green (s)	25.3	25.3	15.0	25.3	23.4	23.4
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	10.0	10.0			14.0	14.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	49.5	49.5	54.7	49.5	10.7	10.7
Actuated g/C Ratio	0.62	0.62	0.68	0.62	0.13	0.13
v/c Ratio	0.06	0.04	0.11	0.24	0.50	0.56
Control Delay	7.2	2.8	2.4	5.7	35.9	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	2.8	2.4	5.7	35.9	10.4
LOS	A	A	A	A	D	B
Approach Delay	6.1			5.2	23.1	
Approach LOS	A			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 35 (44%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 30.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.



Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	146	4	152	6	0	2	0	263	2	2	257	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	159	4	165	7	0	2	0	286	2	2	279	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	427	572	140	433	571	144	279	0	0	288	0	0
Stage 1	284	284	-	287	287	-	-	-	-	-	-	-
Stage 2	143	288	-	146	284	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	512	429	882	507	429	877	1281	-	-	1271	-	-
Stage 1	699	675	-	696	673	-	-	-	-	-	-	-
Stage 2	845	672	-	842	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	510	428	882	408	428	877	1281	-	-	1271	-	-
Mov Cap-2 Maneuver	510	428	-	408	428	-	-	-	-	-	-	-
Stage 1	699	674	-	696	673	-	-	-	-	-	-	-
Stage 2	843	672	-	679	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	12.8	0	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	645	471	1271	-	-
HCM Lane V/C Ratio	-	-	-	0.509	0.018	0.002	-	-
HCM Control Delay (s)	0	-	-	16.2	12.8	7.8	0	-
HCM Lane LOS	A	-	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.9	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	17	553	450	4	2	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	601	489	4	2	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	493	0	-	0	829	247
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	338	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1067	-	-	-	309	753
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1067	-	-	-	301	753
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	677	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1067	-	-	-	620
HCM Lane V/C Ratio	0.017	-	-	-	0.025
HCM Control Delay (s)	8.4	0.1	-	-	11
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

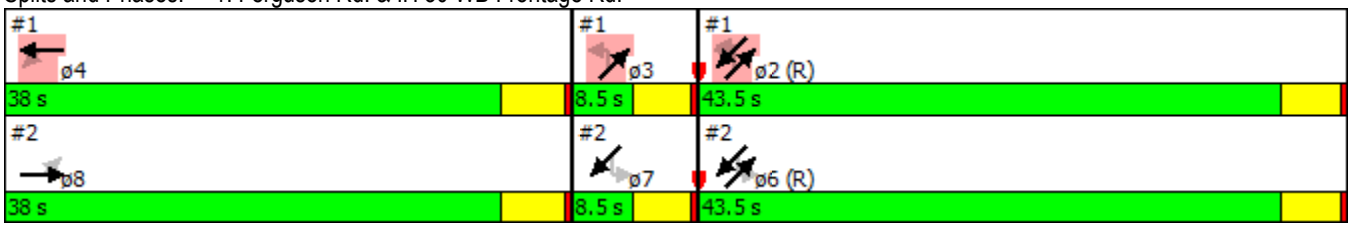
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	105	14	97	90	867	0	0	321	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.880							0.850
Flt Protected				0.950	0.996			0.995				
Satd. Flow (prot)	0	0	0	1681	1551	0	0	5060	0	0	3539	1583
Flt Permitted				0.950	0.996			0.814				
Satd. Flow (perm)	0	0	0	1681	1551	0	0	4139	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					102							537
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			1808	
Travel Time (s)		17.8			22.7			8.7			30.8	
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
Adj. Flow (vph)	0	0	0	114	15	105	98	942	0	0	349	537
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	0	0	103	131	0	0	1040	0	0	349	537
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					4			2 3			2	
Permitted Phases				4			2 3					2
Detector Phase				4	4		2 3	2 3			2	2

Lane Group	ø3	ø6	ø7	ø8
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	3	6	7	8
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0						15.0	15.0
Minimum Split (s)				28.8	28.8						22.5	22.5
Total Split (s)				38.0	38.0						43.5	43.5
Total Split (%)				42.2%	42.2%						48.3%	48.3%
Maximum Green (s)				33.2	33.2						39.0	39.0
Yellow Time (s)				4.3	4.3						4.0	4.0
All-Red Time (s)				0.5	0.5						0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.5	2.5
Recall Mode				None	None						C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				22.7	22.7			58.0			43.6	43.6
Actuated g/C Ratio				0.25	0.25			0.64			0.48	0.48
v/c Ratio				0.24	0.28			0.39			0.20	0.51
Control Delay				26.2	8.9			13.5			14.8	3.5
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				26.2	8.9			13.5			14.8	3.5
LOS				C	A			B			B	A
Approach Delay					16.5			13.5			7.9	
Approach LOS					B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 75 (83%), Referenced to phase 2:NESW and 6:, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø3	ø6	ø7	ø8
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	22.5	8.5	28.8
Total Split (s)	8.5	43.5	8.5	38.0
Total Split (%)	9%	48%	9%	42%
Maximum Green (s)	4.0	39.0	4.0	33.2
Yellow Time (s)	4.0	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	0.2	2.5	0.2	2.0
Recall Mode	None	C-Max	None	None
Walk Time (s)		7.0		7.0
Flash Dont Walk (s)		10.0		17.0
Pedestrian Calls (#/hr)		0		0
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				

Intersection Summary

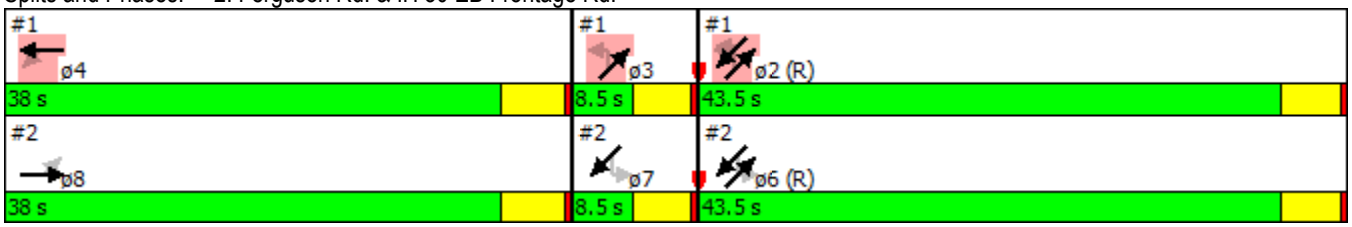
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	590	3	12	0	0	0	0	344	177	151	284	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.994						0.949				
Flt Protected	0.950	0.955									0.983	
Satd. Flow (prot)	1681	1680	0	0	0	0	0	4826	0	0	4999	0
Flt Permitted	0.950	0.955									0.663	
Satd. Flow (perm)	1681	1680	0	0	0	0	0	4826	0	0	3372	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						183				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	641	3	13	0	0	0	0	374	192	164	309	0
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	327	330	0	0	0	0	0	566	0	0	473	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		8						6			6 7	
Permitted Phases	8									6 7		
Detector Phase	8	8						6		6 7	6 7	

Lane Group	ø2	ø3	ø4	ø7
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	2	3	4	7
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0				
Minimum Split (s)	28.8	28.8						22.5				
Total Split (s)	38.0	38.0						43.5				
Total Split (%)	42.2%	42.2%						48.3%				
Maximum Green (s)	33.2	33.2						39.0				
Yellow Time (s)	4.3	4.3						4.0				
All-Red Time (s)	0.5	0.5						0.5				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	22.7	22.7						43.6			58.0	
Actuated g/C Ratio	0.25	0.25						0.48			0.64	
v/c Ratio	0.77	0.77						0.23			0.22	
Control Delay	42.9	42.8						0.8			6.7	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	42.9	42.8						0.8			6.7	
LOS	D	D						A			A	
Approach Delay		42.9						0.8			6.7	
Approach LOS		D						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 75 (83%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 18.8		Intersection LOS: B	
Intersection Capacity Utilization 47.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.



Lane Group	ø2	ø3	ø4	ø7
Switch Phase				
Minimum Initial (s)	15.0	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8	8.5
Total Split (s)	43.5	8.5	38.0	8.5
Total Split (%)	48%	9%	42%	9%
Maximum Green (s)	39.0	4.0	33.2	4.0
Yellow Time (s)	4.0	4.0	4.3	4.0
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	2.5	0.2	2.0	0.2
Recall Mode	C-Max	None	None	None
Walk Time (s)	7.0		7.0	
Flash Dont Walk (s)	10.0		17.0	
Pedestrian Calls (#/hr)	0		0	
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	377	350	267	155	73	217	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				168		236	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	410	380	290	168	79	236	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	410	380	290	168	79	236	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	custom	
Protected Phases	1	6	2		7	4	8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	4	

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	8.0	11.0
Total Split (s)	24.0	62.0	38.0	38.0	17.0	11.0	11.0
Total Split (%)	26.7%	68.9%	42.2%	42.2%	18.9%	12.2%	12%
Maximum Green (s)	19.0	56.0	31.1	31.1	11.4	7.0	7.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.5	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	4.0	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			4.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	15.0	62.7	41.8	41.8	8.3	17.3	
Actuated g/C Ratio	0.17	0.70	0.46	0.46	0.09	0.19	
v/c Ratio	0.72	0.15	0.18	0.20	0.49	0.32	
Control Delay	42.6	3.8	16.5	3.9	34.9	9.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.6	3.8	16.5	3.9	34.9	9.9	
LOS	D	A	B	A	C	A	
Approach Delay		23.9	11.9		16.2		
Approach LOS		C	B		B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 45 (50%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 18.8		Intersection LOS: B	
Intersection Capacity Utilization 41.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	419	136	147	326	129	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	150		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.490		0.950	
Satd. Flow (perm)	3539	1583	913	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		148				299
Link Speed (mph)	35			35	35	
Link Distance (ft)	453			551	234	
Travel Time (s)	8.8			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	455	148	160	354	140	299
Shared Lane Traffic (%)						
Lane Group Flow (vph)	455	148	160	354	140	299
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	10.0	10.0
Minimum Split (s)	25.7	25.7	20.0	25.7	18.6	18.6
Total Split (s)	34.0	34.0	23.0	34.0	33.0	33.0
Total Split (%)	37.8%	37.8%	25.6%	37.8%	36.7%	36.7%
Maximum Green (s)	28.3	28.3	18.0	28.3	27.4	27.4
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			6.0	6.0
Flash Dont Walk (s)	10.0	10.0			7.0	7.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	56.7	56.7	63.5	56.7	10.9	10.9
Actuated g/C Ratio	0.63	0.63	0.71	0.63	0.12	0.12
v/c Ratio	0.20	0.14	0.23	0.16	0.34	0.66
Control Delay	7.8	1.8	2.9	4.2	38.3	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	1.8	2.9	4.2	38.3	12.1
LOS	A	A	A	A	D	B
Approach Delay	6.3			3.8	20.4	
Approach LOS	A			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 50 (56%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 46.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.

TAB THREE

Full Build 2016 Capacity Analysis

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	166	7	79	1	0	0	0	338	3	6	153	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	180	8	86	1	0	0	0	367	3	7	166	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	363	550	83	469	548	185	166	0	0	371	0	0
Stage 1	179	179	-	369	369	-	-	-	-	-	-	-
Stage 2	184	371	-	100	179	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	568	441	960	477	442	826	1410	-	-	1184	-	-
Stage 1	805	750	-	623	619	-	-	-	-	-	-	-
Stage 2	800	618	-	895	750	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	565	438	960	426	439	826	1410	-	-	1184	-	-
Mov Cap-2 Maneuver	565	438	-	426	439	-	-	-	-	-	-	-
Stage 1	805	745	-	623	619	-	-	-	-	-	-	-
Stage 2	800	618	-	801	745	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	13.5	0	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1410	-	-	643	426	1184	-	-
HCM Lane V/C Ratio	-	-	-	0.426	0.003	0.006	-	-
HCM Control Delay (s)	0	-	-	14.7	13.5	8.1	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.1	0	0	-	-

Intersection	
Int Delay, s/veh	37.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	68	140	692	198	175	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	152	752	215	190	117

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	967	0	-	0	1084	484
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	224	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	708	-	-	-	211	529
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	708	-	-	-	~ 187	529
Mov Cap-2 Maneuver	-	-	-	-	~ 187	-
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	702	-

Approach	EB	WB	SB
HCM Control Delay, s	3.7	0	178.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	708	-	-	-	248
HCM Lane V/C Ratio	0.104	-	-	-	1.24
HCM Control Delay (s)	10.7	0.3	-	-	178.6
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	15.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	16.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	68	140	692	198	175	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	152	752	215	190	117

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	967	0	-	0	1084	484
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	224	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	708	-	-	-	211	529
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	708	-	-	-	~ 189	529
Mov Cap-2 Maneuver	-	-	-	-	~ 189	-
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	709	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	78.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	708	-	-	-	189	529
HCM Lane V/C Ratio	0.104	-	-	-	1.006	0.222
HCM Control Delay (s)	10.7	-	-	-	118.4	13.7
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	8.5	0.8

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	264	0	8	258	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	0	9	280	0	21

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	170	149	0	0	289	0
Stage 1	149	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	820	898	-	-	1273	-
Stage 1	879	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	820	898	-	-	1273	-
Mov Cap-2 Maneuver	820	-	-	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	820	1273	-
HCM Lane V/C Ratio	-	-	0.35	-	-
HCM Control Delay (s)	-	-	11.7	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.6	0	-

Intersection	
Int Delay, s/veh	0

Movement	SEL	SER	NEL	NET	SWT	SWR
Vol, veh/h	0	0	0	555	818	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	603	889	124

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1192	507	1013	0	-	0
Stage 1	951	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	248	437	386	-	-	-
Stage 1	259	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	248	437	386	-	-	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	259	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	386	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

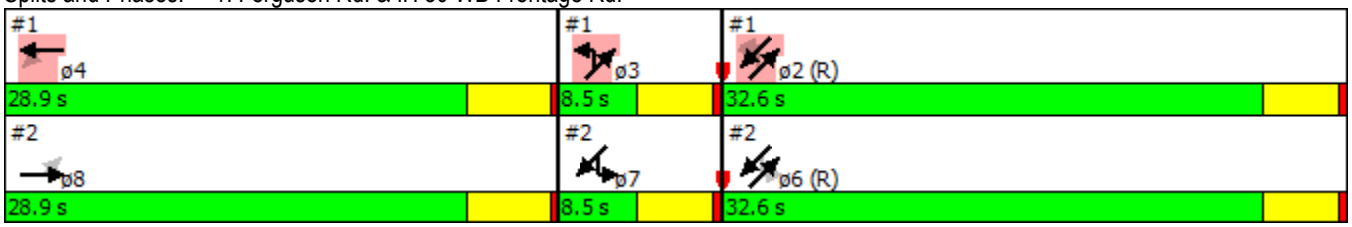
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	132	2	83	106	474	0	0	246	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.879							0.850
Flt Protected				0.950	0.991			0.991				
Satd. Flow (prot)	0	0	0	1681	1541	0	0	5040	0	0	3539	1583
Flt Permitted				0.950	0.991			0.831				
Satd. Flow (perm)	0	0	0	1681	1541	0	0	4226	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					90							622
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			136	
Travel Time (s)		17.8			22.7			8.7			2.3	
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
Adj. Flow (vph)	0	0	0	143	2	90	115	515	0	0	267	622
Shared Lane Traffic (%)				14%								
Lane Group Flow (vph)	0	0	0	123	112	0	0	630	0	0	267	622
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		D.P+P	NA			NA	Perm
Protected Phases					4		3	2 3			2	
Permitted Phases				4			2					2
Detector Phase				4	4		3	2 3			2	2

Lane Group	ø6	ø7	ø8
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	6	7	8
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				15.0	15.0
Minimum Split (s)				28.8	28.8		8.5				22.5	22.5
Total Split (s)				28.9	28.9		8.5				32.6	32.6
Total Split (%)				41.3%	41.3%		12.1%				46.6%	46.6%
Maximum Green (s)				24.1	24.1		4.0				28.1	28.1
Yellow Time (s)				4.3	4.3		4.0				4.0	4.0
All-Red Time (s)				0.5	0.5		0.5				0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0		0.2				2.5	2.5
Recall Mode				None	None		None				C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				12.2	12.2			44.0			38.1	38.1
Actuated g/C Ratio				0.17	0.17			0.63			0.54	0.54
v/c Ratio				0.42	0.33			0.23			0.14	0.54
Control Delay				28.8	10.5			4.7			9.4	3.3
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				28.8	10.5			4.7			9.4	3.3
LOS				C	B			A			A	A
Approach Delay					20.1			4.7			5.1	
Approach LOS					C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 41 (59%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø6	ø7	ø8
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	32.6	8.5	28.9
Total Split (%)	47%	12%	41%
Maximum Green (s)	28.1	4.0	24.1
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

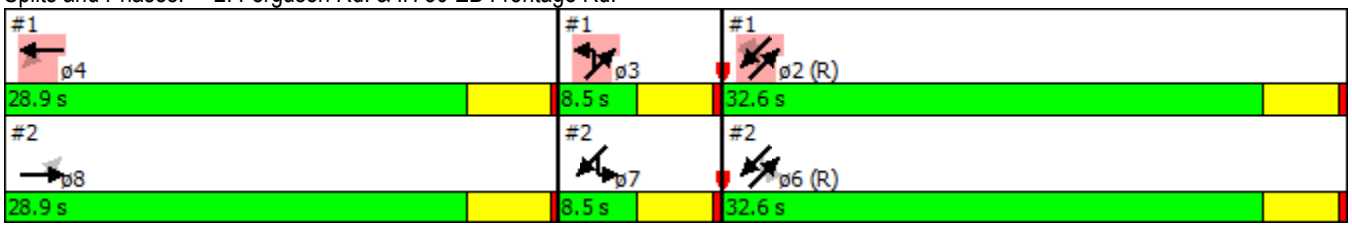
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	314	1	23	0	0	0	0	289	118	74	295	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.980						0.957				
Flt Protected	0.950	0.959									0.990	
Satd. Flow (prot)	1681	1663	0	0	0	0	0	4867	0	0	5034	0
Flt Permitted	0.950	0.959									0.811	
Satd. Flow (perm)	1681	1663	0	0	0	0	0	4867	0	0	4124	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12						128				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	341	1	25	0	0	0	0	314	128	80	321	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	184	183	0	0	0	0	0	442	0	0	401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		D.P+P	NA	
Protected Phases		8						6		7	6 7	
Permitted Phases	8									6		
Detector Phase	8	8						6		7	6 7	

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0		4.0		
Minimum Split (s)	28.8	28.8						22.5		8.5		
Total Split (s)	28.9	28.9						32.6		8.5		
Total Split (%)	41.3%	41.3%						46.6%		12.1%		
Maximum Green (s)	24.1	24.1						28.1		4.0		
Yellow Time (s)	4.3	4.3						4.0		4.0		
All-Red Time (s)	0.5	0.5						0.5		0.5		
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5		0.2		
Recall Mode	None	None						C-Max		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	12.2	12.2						38.1			44.0	
Actuated g/C Ratio	0.17	0.17						0.54			0.63	
v/c Ratio	0.63	0.61						0.16			0.15	
Control Delay	35.6	32.8						1.9			4.2	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	35.6	32.8						1.9			4.2	
LOS	D	C						A			A	
Approach Delay		34.2						1.9			4.2	
Approach LOS		C						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 41 (59%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 36.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.



Lane Group	ø2	ø3	ø4
Switch Phase			
Minimum Initial (s)	15.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	32.6	8.5	28.9
Total Split (%)	47%	12%	41%
Maximum Green (s)	28.1	4.0	24.1
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	253	233	398	119	56	261	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				129		284	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	275	253	433	129	61	284	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	275	253	433	129	61	284	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	custom	
Protected Phases	1	6	2		7	4	8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	4	

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	8.0	13.0
Total Split (s)	13.0	46.8	33.8	33.8	10.2	13.0	13.0
Total Split (%)	18.6%	66.9%	48.3%	48.3%	14.6%	18.6%	19%
Maximum Green (s)	8.0	40.8	26.9	26.9	4.6	9.0	9.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.5	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	4.0	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			6.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	7.8	48.3	34.6	34.6	4.6	11.7	
Actuated g/C Ratio	0.11	0.69	0.49	0.49	0.07	0.17	
v/c Ratio	0.72	0.10	0.25	0.15	0.53	0.41	
Control Delay	38.5	3.8	11.8	3.1	51.2	5.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	38.5	3.8	11.8	3.1	51.2	5.4	
LOS	D	A	B	A	D	A	
Approach Delay		21.9	9.8		13.5		
Approach LOS		C	A		B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 0 (0%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 37.6%		ICU Level of Service A	
Analysis Period (min) 15			

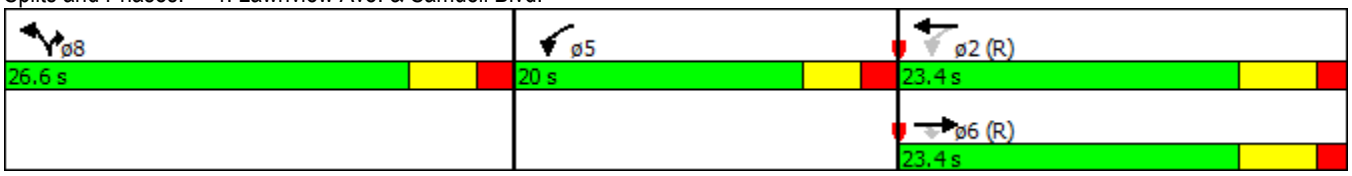
Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	256	64	90	588	291	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	180		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.581		0.950	
Satd. Flow (perm)	3539	1583	1082	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		70				229
Link Speed (mph)	35			35	35	
Link Distance (ft)	461			551	234	
Travel Time (s)	9.0			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	70	98	639	316	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	278	70	98	639	316	229
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	3.0	10.0	10.0	10.0
Minimum Split (s)	22.7	22.7	20.0	25.7	26.6	26.6
Total Split (s)	23.4	23.4	20.0	23.4	26.6	26.6
Total Split (%)	33.4%	33.4%	28.6%	33.4%	38.0%	38.0%
Maximum Green (s)	17.7	17.7	15.0	17.7	21.0	21.0
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	10.0	10.0			14.0	14.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	38.8	38.8	44.0	38.8	11.4	11.4
Actuated g/C Ratio	0.55	0.55	0.63	0.55	0.16	0.16
v/c Ratio	0.14	0.08	0.13	0.33	0.56	0.51
Control Delay	9.0	3.2	2.1	6.3	30.9	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	3.2	2.1	6.3	30.9	8.3
LOS	A	A	A	A	C	A
Approach Delay	7.8			5.7	21.4	
Approach LOS	A			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 22 (31%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 35.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.



Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	174	4	152	6	0	2	0	281	2	2	278	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	189	4	165	7	0	2	0	305	2	2	302	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	460	615	151	465	614	154	302	0	0	308	0	0
Stage 1	307	307	-	307	307	-	-	-	-	-	-	-
Stage 2	153	308	-	158	307	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	485	405	868	481	406	864	1256	-	-	1249	-	-
Stage 1	678	660	-	678	660	-	-	-	-	-	-	-
Stage 2	834	659	-	828	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	483	404	868	386	405	864	1256	-	-	1249	-	-
Mov Cap-2 Maneuver	483	404	-	386	405	-	-	-	-	-	-	-
Stage 1	678	659	-	678	660	-	-	-	-	-	-	-
Stage 2	832	659	-	665	659	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.2	13.2	0	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1256	-	-	605	448	1249	-	-
HCM Lane V/C Ratio	-	-	-	0.593	0.019	0.002	-	-
HCM Control Delay (s)	0	-	-	19.2	13.2	7.9	0	-
HCM Lane LOS	A	-	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	3.9	0.1	0	-	-

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	53	553	450	151	137	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	601	489	164	149	92

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	653	0	-	0	987	327
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	930	-	-	-	244	669
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	930	-	-	-	221	669
Mov Cap-2 Maneuver	-	-	-	-	221	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	574	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	53.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	930	-	-	-	297
HCM Lane V/C Ratio	0.062	-	-	-	0.812
HCM Control Delay (s)	9.1	0.4	-	-	53.7
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	6.6

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	53	553	450	151	137	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	601	489	164	149	92

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	653	0	-	0	987	327
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	930	-	-	-	244	669
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	930	-	-	-	229	669
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	594	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	32.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	930	-	-	-	229	669
HCM Lane V/C Ratio	0.062	-	-	-	0.65	0.138
HCM Control Delay (s)	9.1	-	-	-	45.9	11.2
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	4	0.5

Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	207	0	21	184	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	0	23	200	0	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	138	123	0	0	223	0
Stage 1	123	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	855	928	-	-	1346	-
Stage 1	902	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	855	928	-	-	1346	-
Mov Cap-2 Maneuver	855	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	855	1346	-
HCM Lane V/C Ratio	-	-	0.263	-	-
HCM Control Delay (s)	-	-	10.7	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	SEL	SER	NEL	NET	SWT	SWR
Vol, veh/h	0	50	0	1004	852	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	0	1091	926	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1363	463	926	0	-	0
Stage 1	926	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	203	467	425	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	203	467	425	-	-	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	268	-	-	-	-	-
Stage 2	566	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	425	-	467	-	-
HCM Lane V/C Ratio	-	-	0.116	-	-
HCM Control Delay (s)	0	-	13.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

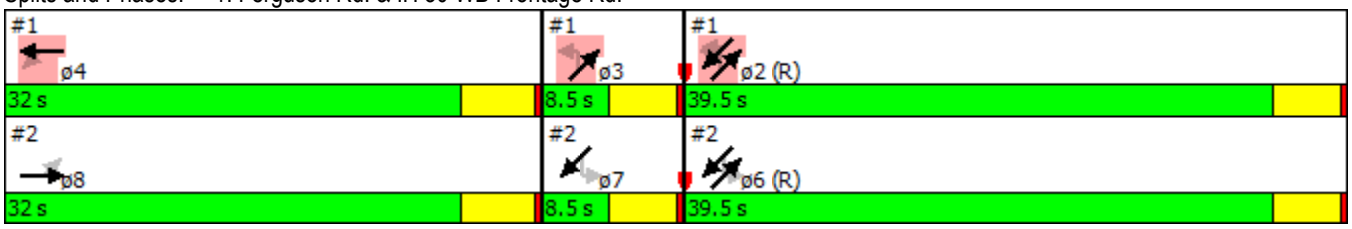
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	132	14	97	90	908	0	0	358	544
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.882							0.850
Flt Protected				0.950	0.995			0.996				
Satd. Flow (prot)	0	0	0	1681	1553	0	0	5065	0	0	3539	1583
Flt Permitted				0.950	0.995			0.816				
Satd. Flow (perm)	0	0	0	1681	1553	0	0	4150	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					98							591
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			138	
Travel Time (s)		17.8			22.7			8.7			2.4	
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
Adj. Flow (vph)	0	0	0	143	15	105	98	987	0	0	389	591
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	0	0	129	134	0	0	1085	0	0	389	591
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					4			2 3			2	
Permitted Phases				4			2 3					2
Detector Phase				4	4		2 3	2 3			2	2

Lane Group	ø3	ø6	ø7	ø8
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	3	6	7	8
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0						15.0	15.0
Minimum Split (s)				28.8	28.8						22.5	22.5
Total Split (s)				32.0	32.0						39.5	39.5
Total Split (%)				40.0%	40.0%						49.4%	49.4%
Maximum Green (s)				27.2	27.2						35.0	35.0
Yellow Time (s)				4.3	4.3						4.0	4.0
All-Red Time (s)				0.5	0.5						0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.5	2.5
Recall Mode				None	None						C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				20.3	20.3			50.4			37.9	37.9
Actuated g/C Ratio				0.25	0.25			0.63			0.47	0.47
v/c Ratio				0.30	0.29			0.42			0.23	0.56
Control Delay				24.4	9.0			10.9			13.7	3.7
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				24.4	9.0			10.9			13.7	3.7
LOS				C	A			B			B	A
Approach Delay					16.6			10.9			7.6	
Approach LOS					B			B			A	
Queue Length 50th (ft)				54	14			142			62	0
Queue Length 95th (ft)				90	51			173			92	56
Internal Link Dist (ft)		702			920			430			58	
Turn Bay Length (ft)												
Base Capacity (vph)				571	592			2613			1675	1060
Starvation Cap Reductn				0	0			0			0	0
Spillback Cap Reductn				0	0			0			0	0
Storage Cap Reductn				0	0			0			0	0
Reduced v/c Ratio				0.23	0.23			0.42			0.23	0.56

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 37 (46%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 71.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø3	ø6	ø7	ø8
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	22.5	8.5	28.8
Total Split (s)	8.5	39.5	8.5	32.0
Total Split (%)	11%	49%	11%	40%
Maximum Green (s)	4.0	35.0	4.0	27.2
Yellow Time (s)	4.0	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	0.2	2.5	0.2	2.0
Recall Mode	None	C-Max	None	None
Walk Time (s)		7.0		7.0
Flash Dont Walk (s)		10.0		17.0
Pedestrian Calls (#/hr)		0		0
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

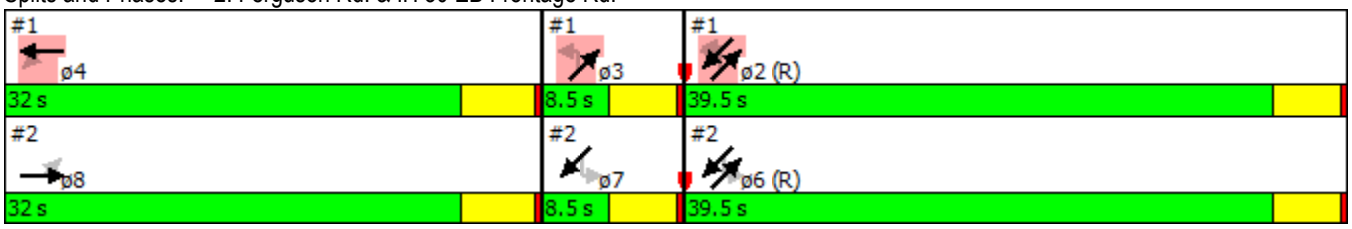
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	590	3	12	0	0	0	0	386	208	151	348	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.994						0.948				
Flt Protected	0.950	0.955									0.985	
Satd. Flow (prot)	1681	1680	0	0	0	0	0	4821	0	0	5009	0
Flt Permitted	0.950	0.955									0.664	
Satd. Flow (perm)	1681	1680	0	0	0	0	0	4821	0	0	3377	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						215				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	641	3	13	0	0	0	0	420	226	164	378	0
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	327	330	0	0	0	0	0	646	0	0	542	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		8						6			6 7	
Permitted Phases	8									6 7		
Detector Phase	8	8						6		6 7	6 7	

Lane Group	ø2	ø3	ø4	ø7
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	2	3	4	7
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0				
Minimum Split (s)	28.8	28.8						22.5				
Total Split (s)	32.0	32.0						39.5				
Total Split (%)	40.0%	40.0%						49.4%				
Maximum Green (s)	27.2	27.2						35.0				
Yellow Time (s)	4.3	4.3						4.0				
All-Red Time (s)	0.5	0.5						0.5				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	20.3	20.3						37.9			50.4	
Actuated g/C Ratio	0.25	0.25						0.47			0.63	
v/c Ratio	0.77	0.77						0.27			0.25	
Control Delay	39.2	39.1						0.9			6.6	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	39.2	39.1						0.9			6.6	
LOS	D	D						A			A	
Approach Delay		39.1						0.9			6.6	
Approach LOS		D						A			A	
Queue Length 50th (ft)	157	157						0			35	
Queue Length 95th (ft)	226	226						8			48	
Internal Link Dist (ft)		637			775			485			430	
Turn Bay Length (ft)												
Base Capacity (vph)	571	573						2394			2126	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.57	0.58						0.27			0.25	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 37 (46%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 16.2		Intersection LOS: B	
Intersection Capacity Utilization 50.2%		ICU Level of Service A	
Analysis Period (min) 15			

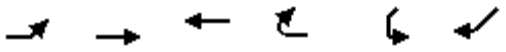
Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.



Lane Group	ø2	ø3	ø4	ø7
Switch Phase				
Minimum Initial (s)	15.0	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8	8.5
Total Split (s)	39.5	8.5	32.0	8.5
Total Split (%)	49%	11%	40%	11%
Maximum Green (s)	35.0	4.0	27.2	4.0
Yellow Time (s)	4.0	4.0	4.3	4.0
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	2.5	0.2	2.0	0.2
Recall Mode	C-Max	None	None	None
Walk Time (s)	7.0		7.0	
Flash Dont Walk (s)	10.0		17.0	
Pedestrian Calls (#/hr)	0		0	
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	450	391	304	155	73	281	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				168		305	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	489	425	330	168	79	305	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	489	425	330	168	79	305	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	Perm	
Protected Phases	1	6	2		7		8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	7	



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	9.6	11.0
Total Split (s)	21.0	55.0	34.0	34.0	14.0	14.0	11.0
Total Split (%)	26.3%	68.8%	42.5%	42.5%	17.5%	17.5%	14%
Maximum Green (s)	16.0	49.0	27.1	27.1	8.4	8.4	7.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.6	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	2.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	5.6	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	2.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			4.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	14.5	61.2	40.8	40.8	7.2	7.2	
Actuated g/C Ratio	0.18	0.76	0.51	0.51	0.09	0.09	
v/c Ratio	0.78	0.16	0.18	0.19	0.50	0.58	
Control Delay	36.6	1.5	11.6	2.7	30.2	8.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	36.6	1.5	11.6	2.7	30.2	8.3	
LOS	D	A	B	A	C	A	
Approach Delay		20.3	8.6		12.8		
Approach LOS		C	A		B		
Queue Length 50th (ft)	120	8	46	0	24	0	
Queue Length 95th (ft)	174	26	72	30	m49	2	
Internal Link Dist (ft)		471	1620		485		
Turn Bay Length (ft)	200			200			
Base Capacity (vph)	686	2708	1804	889	185	565	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.71	0.16	0.18	0.19	0.43	0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

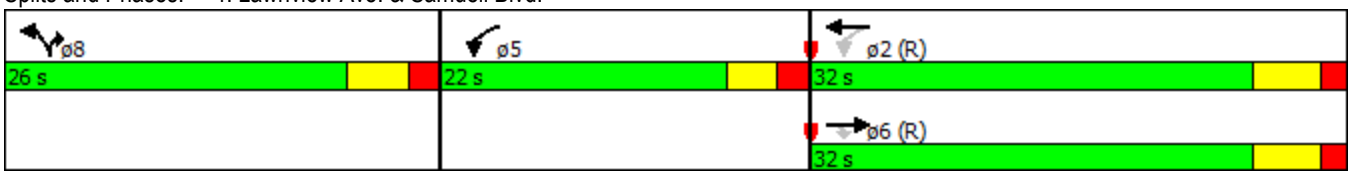
Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	533	157	147	427	175	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	150		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.424		0.950	
Satd. Flow (perm)	3539	1583	790	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		171				299
Link Speed (mph)	35			35	35	
Link Distance (ft)	453			551	234	
Travel Time (s)	8.8			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	579	171	160	464	190	299
Shared Lane Traffic (%)						
Lane Group Flow (vph)	579	171	160	464	190	299
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	10.0	10.0
Minimum Split (s)	25.7	25.7	20.0	25.7	18.6	18.6
Total Split (s)	32.0	32.0	22.0	32.0	26.0	26.0
Total Split (%)	40.0%	40.0%	27.5%	40.0%	32.5%	32.5%
Maximum Green (s)	26.3	26.3	17.0	26.3	20.4	20.4
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			6.0	6.0
Flash Dont Walk (s)	10.0	10.0			7.0	7.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	46.8	46.8	53.7	46.8	10.7	10.7
Actuated g/C Ratio	0.58	0.58	0.67	0.58	0.13	0.13
v/c Ratio	0.28	0.17	0.26	0.22	0.41	0.63
Control Delay	9.1	2.0	2.8	4.5	34.4	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	2.0	2.8	4.5	34.4	10.8
LOS	A	A	A	A	C	B
Approach Delay	7.5			4.1	20.0	
Approach LOS	A			A	B	
Queue Length 50th (ft)	66	0	6	24	46	0
Queue Length 95th (ft)	114	27	6	71	73	65
Internal Link Dist (ft)	373			471	154	
Turn Bay Length (ft)		100	150			
Base Capacity (vph)	2070	996	787	2070	875	626
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.17	0.20	0.22	0.22	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 12 (15%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 46.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.



TAB FOUR

Background Horizon 2036 Capacity Analysis

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	144	8	97	1	0	0	0	373	4	7	154	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	157	9	105	1	0	0	0	405	4	8	167	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	386	593	84	511	591	205	167	0	0	410	0	0
Stage 1	183	183	-	408	408	-	-	-	-	-	-	-
Stage 2	203	410	-	103	183	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	547	417	958	446	418	802	1408	-	-	1145	-	-
Stage 1	801	747	-	591	595	-	-	-	-	-	-	-
Stage 2	780	594	-	892	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	544	414	958	388	415	802	1408	-	-	1145	-	-
Mov Cap-2 Maneuver	544	414	-	388	415	-	-	-	-	-	-	-
Stage 1	801	741	-	591	595	-	-	-	-	-	-	-
Stage 2	780	594	-	778	741	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	14.3	0	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1408	-	-	646	388	1145	-	-
HCM Lane V/C Ratio	-	-	-	0.419	0.003	0.007	-	-
HCM Control Delay (s)	0	-	-	14.5	14.3	8.2	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	4	170	844	5	4	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	185	917	5	4	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	923	0	-	0	1021	461
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	101	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	736	-	-	-	232	547
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	912	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	736	-	-	-	231	547
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	907	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	736	-	-	-	442
HCM Lane V/C Ratio	0.006	-	-	-	0.057
HCM Control Delay (s)	9.9	0	-	-	13.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

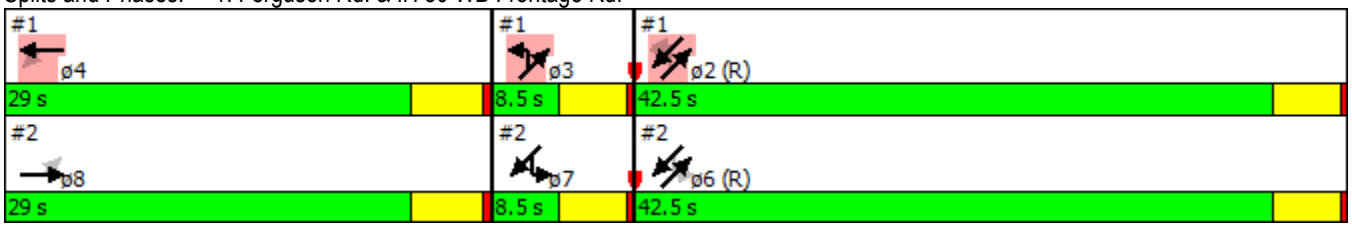
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	102	3	101	129	514	0	0	301	698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.867							0.850
Flt Protected				0.950	0.996			0.990				
Satd. Flow (prot)	0	0	0	1681	1528	0	0	5034	0	0	3539	1583
Flt Permitted				0.950	0.996			0.799				
Satd. Flow (perm)	0	0	0	1681	1528	0	0	4063	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					110							759
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			1808	
Travel Time (s)		17.8			22.7			8.7			30.8	
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
Adj. Flow (vph)	0	0	0	111	3	110	140	559	0	0	327	759
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	0	0	100	124	0	0	699	0	0	327	759
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		D.P+P	NA			NA	Perm
Protected Phases					4		3	2 3			2	
Permitted Phases				4			2					2
Detector Phase				4	4		3	2 3			2	2

Lane Group	ø6	ø7	ø8
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	6	7	8
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				15.0	15.0
Minimum Split (s)				28.8	28.8		8.5				22.5	22.5
Total Split (s)				29.0	29.0		8.5				42.5	42.5
Total Split (%)				36.3%	36.3%		10.6%				53.1%	53.1%
Maximum Green (s)				24.2	24.2		4.0				38.0	38.0
Yellow Time (s)				4.3	4.3		4.0				4.0	4.0
All-Red Time (s)				0.5	0.5		0.5				0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0		0.2				2.5	2.5
Recall Mode				None	None		None				C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				15.2	15.2			51.0			44.8	44.8
Actuated g/C Ratio				0.19	0.19			0.64			0.56	0.56
v/c Ratio				0.31	0.33			0.26			0.16	0.62
Control Delay				28.8	9.1			6.9			9.9	3.6
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				28.8	9.1			6.9			9.9	3.6
LOS				C	A			A			A	A
Approach Delay					17.9			6.9			5.5	
Approach LOS					B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 39 (49%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 73.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø6	ø7	ø8
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	42.5	8.5	29.0
Total Split (%)	53%	11%	36%
Maximum Green (s)	38.0	4.0	24.2
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

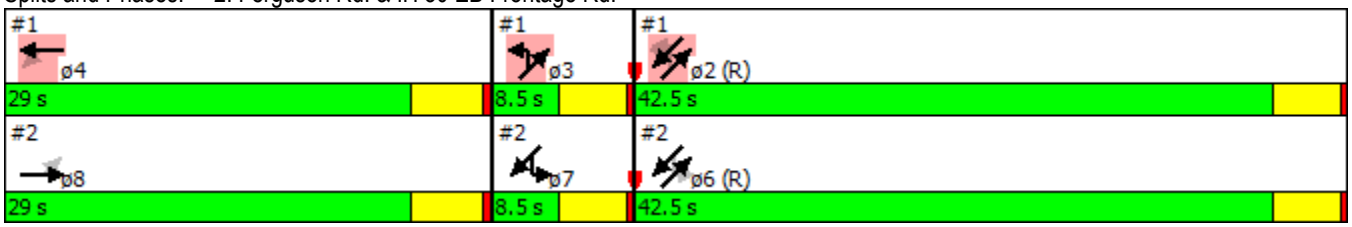
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	383	1	28	0	0	0	0	289	95	90	301	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.980						0.963				
Flt Protected	0.950	0.959									0.989	
Satd. Flow (prot)	1681	1663	0	0	0	0	0	4897	0	0	5029	0
Flt Permitted	0.950	0.959									0.786	
Satd. Flow (perm)	1681	1663	0	0	0	0	0	4897	0	0	3997	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10						103				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	416	1	30	0	0	0	0	314	103	98	327	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	225	222	0	0	0	0	0	417	0	0	425	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		D.P+P	NA	
Protected Phases		8						6		7	6 7	
Permitted Phases	8									6		
Detector Phase	8	8						6		7	6 7	

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0		4.0		
Minimum Split (s)	28.8	28.8						22.5		8.5		
Total Split (s)	29.0	29.0						42.5		8.5		
Total Split (%)	36.3%	36.3%						53.1%		10.6%		
Maximum Green (s)	24.2	24.2						38.0		4.0		
Yellow Time (s)	4.3	4.3						4.0		4.0		
All-Red Time (s)	0.5	0.5						0.5		0.5		
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5		0.2		
Recall Mode	None	None						C-Max		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	15.2	15.2						44.8			51.0	
Actuated g/C Ratio	0.19	0.19						0.56			0.64	
v/c Ratio	0.70	0.69						0.15			0.16	
Control Delay	41.6	39.0						2.6			4.5	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	41.6	39.0						2.6			4.5	
LOS	D	D						A			A	
Approach Delay		40.3						2.6			4.5	
Approach LOS		D						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 39 (49%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 16.3		Intersection LOS: B	
Intersection Capacity Utilization 38.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.



Lane Group	ø2	ø3	ø4
Switch Phase			
Minimum Initial (s)	15.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	42.5	8.5	29.0
Total Split (%)	53%	11%	36%
Maximum Green (s)	38.0	4.0	24.2
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	196	220	407	145	68	259	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				158		282	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	213	239	442	158	74	282	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	213	239	442	158	74	282	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	custom	
Protected Phases	1	6	2		7	4	8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	4	

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	8.0	13.0
Total Split (s)	14.0	52.0	38.0	38.0	15.0	13.0	13.0
Total Split (%)	17.5%	65.0%	47.5%	47.5%	18.8%	16.3%	16%
Maximum Green (s)	9.0	46.0	31.1	31.1	9.4	9.0	9.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.5	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	4.0	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			6.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	8.3	53.5	39.3	39.3	7.4	16.5	
Actuated g/C Ratio	0.10	0.67	0.49	0.49	0.09	0.21	
v/c Ratio	0.60	0.10	0.25	0.18	0.45	0.35	
Control Delay	40.4	5.3	13.6	3.1	33.9	7.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	40.4	5.3	13.6	3.1	33.9	7.6	
LOS	D	A	B	A	C	A	
Approach Delay		21.9	10.8		13.1		
Approach LOS		C	B		B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 11 (14%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 36.4%		ICU Level of Service A	
Analysis Period (min) 15			

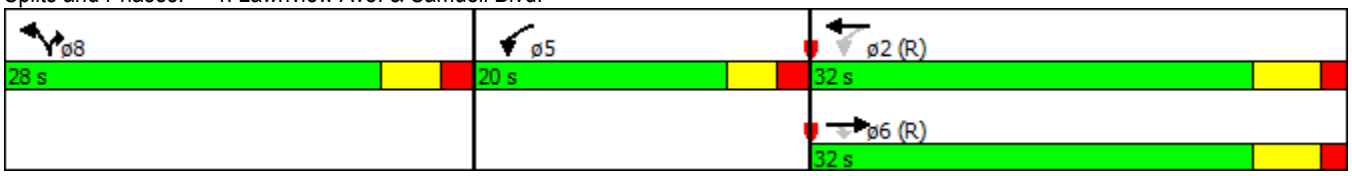
Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	136	46	110	580	256	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	180		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.658		0.950	
Satd. Flow (perm)	3539	1583	1226	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		50				280
Link Speed (mph)	35			35	35	
Link Distance (ft)	478			551	234	
Travel Time (s)	9.3			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	148	50	120	630	278	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	50	120	630	278	280
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	3.0	10.0	10.0	10.0
Minimum Split (s)	22.7	22.7	20.0	15.7	26.6	26.6
Total Split (s)	32.0	32.0	20.0	32.0	28.0	28.0
Total Split (%)	40.0%	40.0%	25.0%	40.0%	35.0%	35.0%
Maximum Green (s)	26.3	26.3	15.0	26.3	22.4	22.4
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	10.0	10.0			14.0	14.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	48.5	48.5	54.0	48.5	11.4	11.4
Actuated g/C Ratio	0.61	0.61	0.68	0.61	0.14	0.14
v/c Ratio	0.07	0.05	0.14	0.29	0.57	0.60
Control Delay	7.9	3.0	3.0	6.9	36.5	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	3.0	3.0	6.9	36.5	10.0
LOS	A	A	A	A	D	B
Approach Delay	6.6			6.3	23.2	
Approach LOS	A			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 35 (44%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 12.6		Intersection LOS: B	
Intersection Capacity Utilization 36.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.



Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	146	4	152	6	0	2	0	263	2	2	257	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	159	4	165	7	0	2	0	286	2	2	279	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	427	572	140	433	571	144	279	0	0	288	0	0
Stage 1	284	284	-	287	287	-	-	-	-	-	-	-
Stage 2	143	288	-	146	284	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	512	429	882	507	429	877	1281	-	-	1271	-	-
Stage 1	699	675	-	696	673	-	-	-	-	-	-	-
Stage 2	845	672	-	842	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	510	428	882	408	428	877	1281	-	-	1271	-	-
Mov Cap-2 Maneuver	510	428	-	408	428	-	-	-	-	-	-	-
Stage 1	699	674	-	696	673	-	-	-	-	-	-	-
Stage 2	843	672	-	679	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	12.8	0	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	645	471	1271	-	-
HCM Lane V/C Ratio	-	-	-	0.509	0.018	0.002	-	-
HCM Control Delay (s)	0	-	-	16.2	12.8	7.8	0	-
HCM Lane LOS	A	-	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.9	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	20	675	549	5	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	734	597	5	3	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	602	0	-	0	1009	301
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	410	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	971	-	-	-	237	695
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	638	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	971	-	-	-	228	695
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	614	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	971	-	-	-	518
HCM Lane V/C Ratio	0.022	-	-	-	0.038
HCM Control Delay (s)	8.8	0.2	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

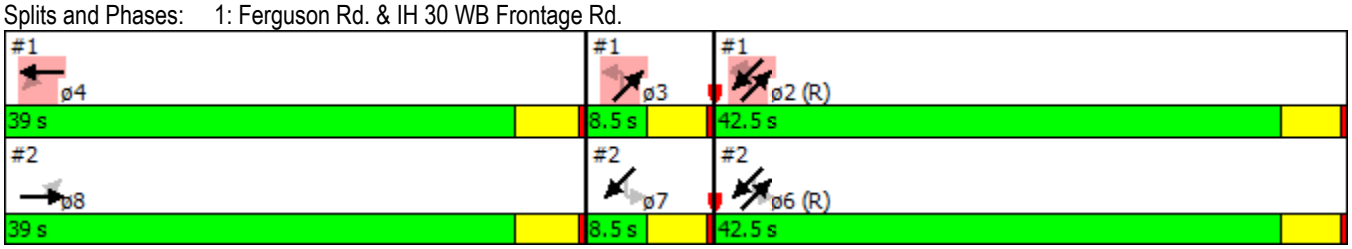
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	128	17	118	110	1058	0	0	392	603
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.880							0.850
Flt Protected				0.950	0.996			0.995				
Satd. Flow (prot)	0	0	0	1681	1551	0	0	5060	0	0	3539	1583
Flt Permitted				0.950	0.996			0.770				
Satd. Flow (perm)	0	0	0	1681	1551	0	0	3916	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					55							655
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			1808	
Travel Time (s)		17.8			22.7			8.7			30.8	
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
Adj. Flow (vph)	0	0	0	139	18	128	120	1150	0	0	426	655
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	0	0	125	160	0	0	1270	0	0	426	655
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					4			2 3			2	
Permitted Phases				4			2 3					2
Detector Phase				4	4		2 3	2 3			2	2

Lane Group	ø3	ø6	ø7	ø8
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	3	6	7	8
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0						15.0	15.0
Minimum Split (s)				28.8	28.8						22.5	22.5
Total Split (s)				39.0	39.0						42.5	42.5
Total Split (%)				43.3%	43.3%						47.2%	47.2%
Maximum Green (s)				34.2	34.2						38.0	38.0
Yellow Time (s)				4.3	4.3						4.0	4.0
All-Red Time (s)				0.5	0.5						0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.5	2.5
Recall Mode				None	None						C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				26.7	26.7			54.0			39.9	39.9
Actuated g/C Ratio				0.30	0.30			0.60			0.44	0.44
v/c Ratio				0.25	0.32			0.54			0.27	0.62
Control Delay				23.5	16.0			17.9			17.0	4.3
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				23.5	16.0			17.9			17.0	4.3
LOS				C	B			B			B	A
Approach Delay					19.3			17.9			9.3	
Approach LOS					B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 75 (83%), Referenced to phase 2:NESW and 6:, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 79.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø3	ø6	ø7	ø8
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	22.5	8.5	28.8
Total Split (s)	8.5	42.5	8.5	39.0
Total Split (%)	9%	47%	9%	43%
Maximum Green (s)	4.0	38.0	4.0	34.2
Yellow Time (s)	4.0	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	0.2	2.5	0.2	2.0
Recall Mode	None	C-Max	None	None
Walk Time (s)		7.0		7.0
Flash Dont Walk (s)		10.0		17.0
Pedestrian Calls (#/hr)		0		0
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				

Intersection Summary

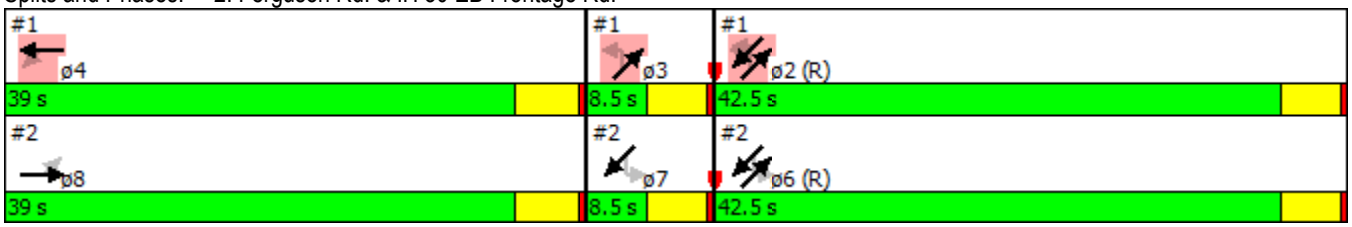
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	719	4	15	0	0	0	0	420	216	184	346	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.994						0.949				
Flt Protected	0.950	0.955									0.983	
Satd. Flow (prot)	1681	1680	0	0	0	0	0	4826	0	0	4999	0
Flt Permitted	0.950	0.955									0.651	
Satd. Flow (perm)	1681	1680	0	0	0	0	0	4826	0	0	3311	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						179				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	782	4	16	0	0	0	0	457	235	200	376	0
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	399	403	0	0	0	0	0	692	0	0	576	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		8						6			6 7	
Permitted Phases	8									6 7		
Detector Phase	8	8						6		6 7	6 7	

Lane Group	ø2	ø3	ø4	ø7
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	2	3	4	7
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0				
Minimum Split (s)	28.8	28.8						22.5				
Total Split (s)	39.0	39.0						42.5				
Total Split (%)	43.3%	43.3%						47.2%				
Maximum Green (s)	34.2	34.2						38.0				
Yellow Time (s)	4.3	4.3						4.0				
All-Red Time (s)	0.5	0.5						0.5				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	26.7	26.7						39.9			54.0	
Actuated g/C Ratio	0.30	0.30						0.44			0.60	
v/c Ratio	0.80	0.80						0.31			0.29	
Control Delay	41.0	41.1						1.1			8.1	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	41.0	41.1						1.1			8.1	
LOS	D	D						A			A	
Approach Delay		41.0						1.1			8.1	
Approach LOS		D						A			A	

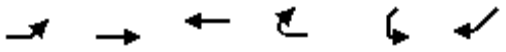
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 75 (83%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.



Lane Group	ø2	ø3	ø4	ø7
Switch Phase				
Minimum Initial (s)	15.0	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8	8.5
Total Split (s)	42.5	8.5	39.0	8.5
Total Split (%)	47%	9%	43%	9%
Maximum Green (s)	38.0	4.0	34.2	4.0
Yellow Time (s)	4.0	4.0	4.3	4.0
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	2.5	0.2	2.0	0.2
Recall Mode	C-Max	None	None	None
Walk Time (s)	7.0		7.0	
Flash Dont Walk (s)	10.0		17.0	
Pedestrian Calls (#/hr)	0		0	
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	460	427	326	189	89	264	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				205		287	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	500	464	354	205	97	287	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	500	464	354	205	97	287	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	custom	
Protected Phases	1	6	2		7	4	8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	4	

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	8.0	11.0
Total Split (s)	26.0	62.9	36.9	36.9	16.1	11.0	11.0
Total Split (%)	28.9%	69.9%	41.0%	41.0%	17.9%	12.2%	12%
Maximum Green (s)	21.0	56.9	30.0	30.0	10.5	7.0	7.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.5	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	4.0	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			4.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	17.2	62.3	39.3	39.3	8.7	17.7	
Actuated g/C Ratio	0.19	0.69	0.44	0.44	0.10	0.20	
v/c Ratio	0.76	0.19	0.23	0.25	0.57	0.37	
Control Delay	42.1	3.7	18.4	4.0	35.9	10.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.1	3.7	18.4	4.0	35.9	10.2	
LOS	D	A	B	A	D	B	
Approach Delay		23.7	13.1		16.7		
Approach LOS		C	B		B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 45 (50%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 45.1%		ICU Level of Service A	
Analysis Period (min) 15			

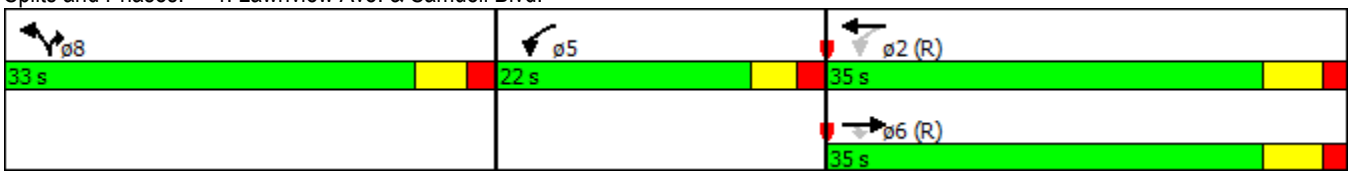
Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	511	166	180	397	157	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	150		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.437		0.950	
Satd. Flow (perm)	3539	1583	814	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		180				365
Link Speed (mph)	35			35	35	
Link Distance (ft)	453			551	234	
Travel Time (s)	8.8			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	555	180	196	432	171	365
Shared Lane Traffic (%)						
Lane Group Flow (vph)	555	180	196	432	171	365
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	10.0	10.0
Minimum Split (s)	25.7	25.7	20.0	25.7	18.6	18.6
Total Split (s)	35.0	35.0	22.0	35.0	33.0	33.0
Total Split (%)	38.9%	38.9%	24.4%	38.9%	36.7%	36.7%
Maximum Green (s)	29.3	29.3	17.0	29.3	27.4	27.4
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			6.0	6.0
Flash Dont Walk (s)	10.0	10.0			7.0	7.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	55.7	55.7	63.2	55.7	11.2	11.2
Actuated g/C Ratio	0.62	0.62	0.70	0.62	0.12	0.12
v/c Ratio	0.25	0.17	0.30	0.20	0.40	0.71
Control Delay	8.7	2.0	3.8	4.1	38.8	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	2.0	3.8	4.1	38.8	12.2
LOS	A	A	A	A	D	B
Approach Delay	7.0			4.0	20.7	
Approach LOS	A			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 50 (56%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 48.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.



TAB FIVE

Full Build Horizon 2036 Capacity Analysis

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	192	8	97	1	0	0	0	405	4	7	181	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	209	9	105	1	0	0	0	440	4	8	197	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	432	657	98	560	654	222	197	0	0	445	0	0
Stage 1	212	212	-	442	442	-	-	-	-	-	-	-
Stage 2	220	445	-	118	212	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	507	383	939	411	385	782	1373	-	-	1112	-	-
Stage 1	770	726	-	564	575	-	-	-	-	-	-	-
Stage 2	762	573	-	874	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	504	380	939	356	382	782	1373	-	-	1112	-	-
Mov Cap-2 Maneuver	504	380	-	356	382	-	-	-	-	-	-	-
Stage 1	770	720	-	564	575	-	-	-	-	-	-	-
Stage 2	762	573	-	760	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.3	15.1	0	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1373	-	-	588	356	1112	-	-
HCM Lane V/C Ratio	-	-	-	0.549	0.003	0.007	-	-
HCM Control Delay (s)	0	-	-	18.3	15.1	8.3	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	3.3	0	0	-	-

Intersection	
Int Delay, s/veh	64.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	69	170	844	199	175	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	185	917	216	190	121

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1134	0	-	0	1268	567
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	242	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	612	-	-	-	~ 160	467
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	612	-	-	-	~ 138	467
Mov Cap-2 Maneuver	-	-	-	-	~ 138	-
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	670	-

Approach	EB	WB	SB
HCM Control Delay, s	3.7	0	$ 352.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	612	-	-	-	190
HCM Lane V/C Ratio	0.123	-	-	-	1.636
HCM Control Delay (s)	11.7	0.4	-	-	$ 352.7
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	20.7

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	30.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	69	170	844	199	175	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	185	917	216	190	121

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1134	0	-	0	1268	567
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	242	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	612	-	-	-	~ 160	467
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	612	-	-	-	~ 140	467
Mov Cap-2 Maneuver	-	-	-	-	~ 140	-
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	165.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	612	-	-	-	140	467
HCM Lane V/C Ratio	0.123	-	-	-	1.359	0.258
HCM Control Delay (s)	11.7	-	-	-	260.5	15.4
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	12.1	1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	SEL	SER	NEL	NET	SWT	SWR
Vol, veh/h	0	0	0	666	999	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	724	1086	124

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1438	605	1210	0	-	0
Stage 1	1148	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	186	378	309	-	-	-
Stage 1	196	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	186	378	309	-	-	-
Mov Cap-2 Maneuver	186	-	-	-	-	-
Stage 1	196	-	-	-	-	-
Stage 2	673	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	309	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	264	0	9	258	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	0	10	280	0	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	175	150	0	0	290	0
Stage 1	150	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	815	896	-	-	1272	-
Stage 1	878	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	815	896	-	-	1272	-
Mov Cap-2 Maneuver	815	-	-	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	815	1272	-
HCM Lane V/C Ratio	-	-	0.352	-	-
HCM Control Delay (s)	-	-	11.8	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.6	0	-

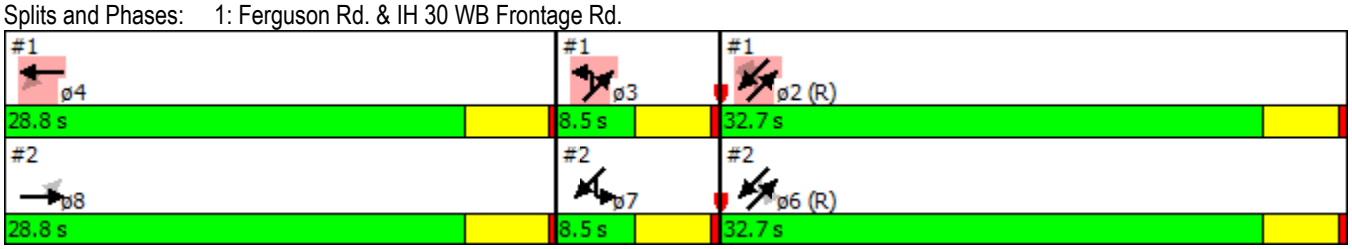
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	150	3	101	129	567	0	0	301	698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.874							0.850
Flt Protected				0.950	0.993			0.991				
Satd. Flow (prot)	0	0	0	1681	1536	0	0	5040	0	0	3539	1583
Flt Permitted				0.950	0.993			0.810				
Satd. Flow (perm)	0	0	0	1681	1536	0	0	4119	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					110							759
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			175	
Travel Time (s)		17.8			22.7			8.7			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
Adj. Flow (vph)	0	0	0	163	3	110	140	616	0	0	327	759
Shared Lane Traffic (%)				11%								
Lane Group Flow (vph)	0	0	0	145	131	0	0	756	0	0	327	759
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		D.P+P	NA			NA	Perm
Protected Phases					4		3	2 3			2	
Permitted Phases				4			2					2
Detector Phase				4	4		3	2 3			2	2

Lane Group	ø6	ø7	ø8
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	6	7	8
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				15.0	15.0
Minimum Split (s)				28.8	28.8		8.5				22.5	22.5
Total Split (s)				28.8	28.8		8.5				32.7	32.7
Total Split (%)				41.1%	41.1%		12.1%				46.7%	46.7%
Maximum Green (s)				24.0	24.0		4.0				28.2	28.2
Yellow Time (s)				4.3	4.3		4.0				4.0	4.0
All-Red Time (s)				0.5	0.5		0.5				0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0		0.2				2.5	2.5
Recall Mode				None	None		None				C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				13.9	13.9			42.3			35.7	35.7
Actuated g/C Ratio				0.20	0.20			0.60			0.51	0.51
v/c Ratio				0.43	0.33			0.29			0.18	0.64
Control Delay				27.4	8.9			5.8			10.9	4.2
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				27.4	8.9			5.8			10.9	4.2
LOS				C	A			A			B	A
Approach Delay					18.6			5.8			6.2	
Approach LOS					B			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 31 (44%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 7.7		Intersection LOS: A	
Intersection Capacity Utilization 75.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø6	ø7	ø8
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	32.7	8.5	28.8
Total Split (%)	47%	12%	41%
Maximum Green (s)	28.2	4.0	24.0
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

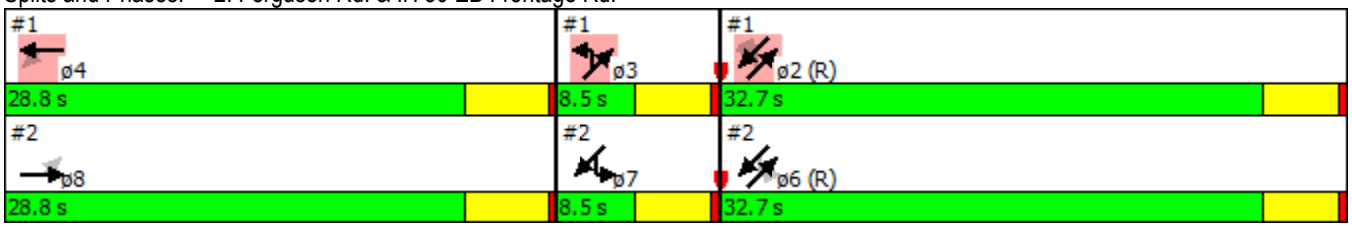
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	383	1	28	0	0	0	0	341	135	90	349	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.980						0.957				
Flt Protected	0.950	0.959									0.990	
Satd. Flow (prot)	1681	1663	0	0	0	0	0	4867	0	0	5034	0
Flt Permitted	0.950	0.959									0.785	
Satd. Flow (perm)	1681	1663	0	0	0	0	0	4867	0	0	3992	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12						147				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	416	1	30	0	0	0	0	371	147	98	379	0
Shared Lane Traffic (%)	46%											
Lane Group Flow (vph)	225	222	0	0	0	0	0	518	0	0	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		D.P+P	NA	
Protected Phases		8						6		7	6 7	
Permitted Phases	8									6		
Detector Phase	8	8						6		7	6 7	

Lane Group	ø2	ø3	ø4
Lane Configurations			
Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	2	3	4
Permitted Phases			
Detector Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0		4.0		
Minimum Split (s)	28.8	28.8						22.5		8.5		
Total Split (s)	28.8	28.8						32.7		8.5		
Total Split (%)	41.1%	41.1%						46.7%		12.1%		
Maximum Green (s)	24.0	24.0						28.2		4.0		
Yellow Time (s)	4.3	4.3						4.0		4.0		
All-Red Time (s)	0.5	0.5						0.5		0.5		
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5		0.2		
Recall Mode	None	None						C-Max		None		
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	13.9	13.9						35.7			42.3	
Actuated g/C Ratio	0.20	0.20						0.51			0.60	
v/c Ratio	0.67	0.65						0.20			0.19	
Control Delay	35.4	32.8						2.1			4.8	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	35.4	32.8						2.1			4.8	
LOS	D	C						A			A	
Approach Delay		34.1						2.1			4.8	
Approach LOS		C						A			A	

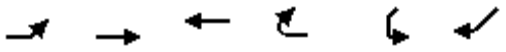
Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 31 (44%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 41.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.



Lane Group	ø2	ø3	ø4
Switch Phase			
Minimum Initial (s)	15.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8
Total Split (s)	32.7	8.5	28.8
Total Split (%)	47%	12%	41%
Maximum Green (s)	28.2	4.0	24.0
Yellow Time (s)	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.5	0.2	2.0
Recall Mode	C-Max	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	10.0		17.0
Pedestrian Calls (#/hr)	0		0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	288	273	471	145	68	307	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				158		334	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	313	297	512	158	74	334	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	313	297	512	158	74	334	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	custom	
Protected Phases	1	6	2		7	4	8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	4	

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	8.0	13.0
Total Split (s)	13.0	46.2	33.2	33.2	10.8	13.0	13.0
Total Split (%)	18.6%	66.0%	47.4%	47.4%	15.4%	18.6%	19%
Maximum Green (s)	8.0	40.2	26.3	26.3	5.2	9.0	9.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.5	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	4.0	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			6.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	8.0	45.8	31.9	31.9	5.1	14.2	
Actuated g/C Ratio	0.11	0.65	0.46	0.46	0.07	0.20	
v/c Ratio	0.80	0.13	0.32	0.20	0.58	0.40	
Control Delay	44.0	4.3	13.6	3.1	53.2	5.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	44.0	4.3	13.6	3.1	53.2	5.2	
LOS	D	A	B	A	D	A	
Approach Delay		24.7	11.1		13.9		
Approach LOS		C	B		B		

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 64 (91%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			

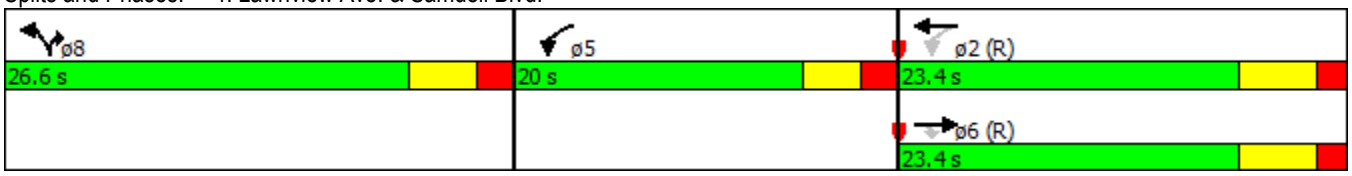
Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	281	72	110	693	337	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	180		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.566		0.950	
Satd. Flow (perm)	3539	1583	1054	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		78				280
Link Speed (mph)	35			35	35	
Link Distance (ft)	469			551	234	
Travel Time (s)	9.1			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	305	78	120	753	366	280
Shared Lane Traffic (%)						
Lane Group Flow (vph)	305	78	120	753	366	280
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	3.0	10.0	10.0	10.0
Minimum Split (s)	22.7	22.7	20.0	15.7	26.6	26.6
Total Split (s)	23.4	23.4	20.0	23.4	26.6	26.6
Total Split (%)	33.4%	33.4%	28.6%	33.4%	38.0%	38.0%
Maximum Green (s)	17.7	17.7	15.0	17.7	21.0	21.0
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			7.0	7.0
Flash Dont Walk (s)	10.0	10.0			14.0	14.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	37.6	37.6	43.2	37.6	12.2	12.2
Actuated g/C Ratio	0.54	0.54	0.62	0.54	0.17	0.17
v/c Ratio	0.16	0.09	0.17	0.40	0.61	0.55
Control Delay	9.9	3.4	2.2	6.7	31.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	3.4	2.2	6.7	31.2	8.1
LOS	A	A	A	A	C	A
Approach Delay	8.5			6.1	21.1	
Approach LOS	A			A	C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 14 (20%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.



Intersection	
Int Delay, s/veh	12.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	206	5	185	7	0	3	0	339	3	3	335	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	224	5	201	8	0	3	0	368	3	3	364	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	555	743	182	561	741	186	364	0	0	372	0	0
Stage 1	371	371	-	370	370	-	-	-	-	-	-	-
Stage 2	184	372	-	191	371	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	414	342	829	410	343	824	1191	-	-	1183	-	-
Stage 1	622	618	-	622	619	-	-	-	-	-	-	-
Stage 2	800	617	-	792	618	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	411	341	829	306	342	824	1191	-	-	1183	-	-
Mov Cap-2 Maneuver	411	341	-	306	342	-	-	-	-	-	-	-
Stage 1	622	616	-	622	619	-	-	-	-	-	-	-
Stage 2	797	617	-	593	616	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.7	14.8	0	0.1
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1191	-	-	536	377	1183	-	-
HCM Lane V/C Ratio	-	-	-	0.803	0.029	0.003	-	-
HCM Control Delay (s)	0	-	-	33.7	14.8	8.1	0	-
HCM Lane LOS	A	-	-	D	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	7.7	0.1	0	-	-

Intersection	
Int Delay, s/veh	17.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	57	675	549	152	137	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	734	597	165	149	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	762	0	-	0	1170	381
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	491	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	846	-	-	-	186	617
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	581	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	846	-	-	-	163	617
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	509	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	124.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	846	-	-	-	228
HCM Lane V/C Ratio	0.073	-	-	-	1.068
HCM Control Delay (s)	9.6	0.5	-	-	124.5
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	10.6

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	57	675	549	152	137	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	734	597	165	149	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	762	0	-	0	1170	381
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	491	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	846	-	-	-	186	617
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	581	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	846	-	-	-	172	617
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	465	-
Stage 2	-	-	-	-	538	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	60.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	846	-	-	-	172	617
HCM Lane V/C Ratio	0.073	-	-	-	0.866	0.153
HCM Control Delay (s)	9.6	-	-	-	90.9	11.9
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.2	-	-	-	6.2	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SER	NEL	NET	SWT	SWR
Vol, veh/h	0	50	0	1216	1031	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	0	1322	1121	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1650	560	1121	0	-	0
Stage 1	1121	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	144	404	342	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	507	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	144	404	342	-	-	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	507	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	15.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	342	-	404	-	-
HCM Lane V/C Ratio	-	-	0.135	-	-
HCM Control Delay (s)	0	-	15.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	5.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	207	0	26	184	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	0	28	200	0	18

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	146	128	0	0	228	0
Stage 1	128	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	846	922	-	-	1340	-
Stage 1	898	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	922	-	-	1340	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	846	1340	-
HCM Lane V/C Ratio	-	-	0.266	-	-
HCM Control Delay (s)	-	-	10.8	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-

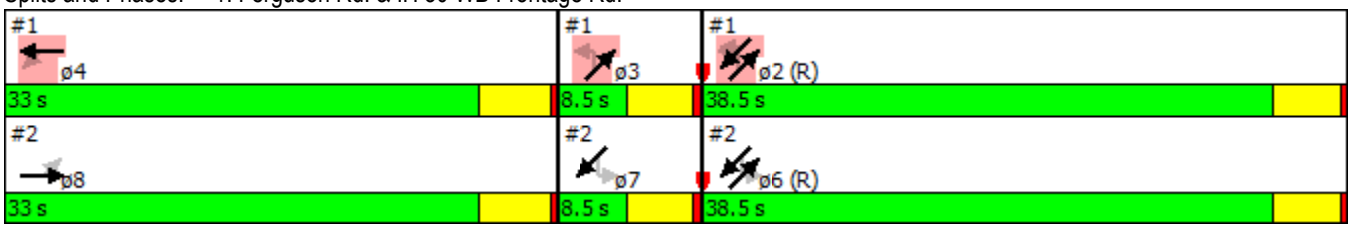
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	155	17	118	110	1099	0	0	429	714
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00
Frt					0.882							0.850
Flt Protected				0.950	0.995			0.995				
Satd. Flow (prot)	0	0	0	1681	1553	0	0	5060	0	0	3539	1583
Flt Permitted				0.950	0.995			0.773				
Satd. Flow (perm)	0	0	0	1681	1553	0	0	3931	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					53							776
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		782			1000			510			168	
Travel Time (s)		17.8			22.7			8.7			2.9	
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
Adj. Flow (vph)	0	0	0	168	18	128	120	1195	0	0	466	776
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	0	0	0	151	163	0	0	1315	0	0	466	776
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	2		1	2			2	1
Detector Template				Left	Thru		Left	Thru			Thru	Right
Leading Detector (ft)				20	100		20	100			100	20
Trailing Detector (ft)				0	0		0	0			0	0
Detector 1 Position(ft)				0	0		0	0			0	0
Detector 1 Size(ft)				20	6		20	6			6	20
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	0.0
Detector 2 Position(ft)					94			94			94	
Detector 2 Size(ft)					6			6			6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					4			2 3			2	
Permitted Phases				4			2 3					2
Detector Phase				4	4		2 3	2 3			2	2

Lane Group	ø3	ø6	ø7	ø8
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	3	6	7	8
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)				4.0	4.0						15.0	15.0
Minimum Split (s)				28.8	28.8						22.5	22.5
Total Split (s)				33.0	33.0						38.5	38.5
Total Split (%)				41.3%	41.3%						48.1%	48.1%
Maximum Green (s)				28.2	28.2						34.0	34.0
Yellow Time (s)				4.3	4.3						4.0	4.0
All-Red Time (s)				0.5	0.5						0.5	0.5
Lost Time Adjust (s)				0.0	0.0						0.0	0.0
Total Lost Time (s)				4.8	4.8						4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0						2.5	2.5
Recall Mode				None	None						C-Max	C-Max
Walk Time (s)				7.0	7.0						7.0	7.0
Flash Dont Walk (s)				17.0	17.0						10.0	10.0
Pedestrian Calls (#/hr)				0	0						0	0
Act Effct Green (s)				23.5	23.5			47.2			35.2	35.2
Actuated g/C Ratio				0.29	0.29			0.59			0.44	0.44
v/c Ratio				0.31	0.33			0.57			0.30	0.69
Control Delay				22.4	15.3			13.6			15.5	5.0
Queue Delay				0.0	0.0			0.0			0.0	0.0
Total Delay				22.4	15.3			13.6			15.5	5.0
LOS				C	B			B			B	A
Approach Delay					18.7			13.6			8.9	
Approach LOS					B			B			A	
Queue Length 50th (ft)				60	42			178			78	0
Queue Length 95th (ft)				102	87			206			113	63
Internal Link Dist (ft)		702			920			430			88	
Turn Bay Length (ft)												
Base Capacity (vph)				592	581			2321			1556	1130
Starvation Cap Reductn				0	0			0			0	0
Spillback Cap Reductn				0	0			0			0	0
Storage Cap Reductn				0	0			0			0	0
Reduced v/c Ratio				0.26	0.28			0.57			0.30	0.69

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 37 (46%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 12.1		Intersection LOS: B	
Intersection Capacity Utilization 87.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Ferguson Rd. & IH 30 WB Frontage Rd.



Lane Group	ø3	ø6	ø7	ø8
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	22.5	8.5	28.8
Total Split (s)	8.5	38.5	8.5	33.0
Total Split (%)	11%	48%	11%	41%
Maximum Green (s)	4.0	34.0	4.0	28.2
Yellow Time (s)	4.0	4.0	4.0	4.3
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	0.2	2.5	0.2	2.0
Recall Mode	None	C-Max	None	None
Walk Time (s)		7.0		7.0
Flash Dont Walk (s)		10.0		17.0
Pedestrian Calls (#/hr)		0		0
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

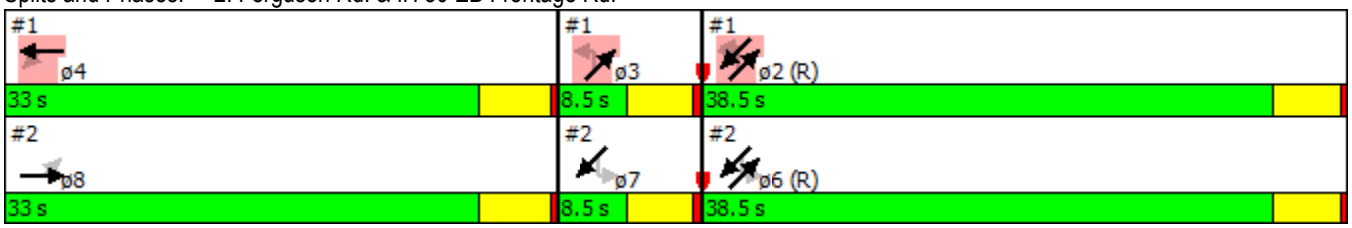
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	719	4	15	0	0	0	0	462	247	184	411	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	60		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	1.00
Frt		0.994						0.948				
Flt Protected	0.950	0.955									0.985	
Satd. Flow (prot)	1681	1680	0	0	0	0	0	4821	0	0	5009	0
Flt Permitted	0.950	0.955									0.655	
Satd. Flow (perm)	1681	1680	0	0	0	0	0	4821	0	0	3331	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						210				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		717			855			565			510	
Travel Time (s)		16.3			19.4			9.6			8.7	
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
Adj. Flow (vph)	782	4	16	0	0	0	0	502	268	200	447	0
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	399	403	0	0	0	0	0	770	0	0	647	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		8						6			6 7	
Permitted Phases	8									6 7		
Detector Phase	8	8						6		6 7	6 7	

Lane Group	ø2	ø3	ø4	ø7
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	2	3	4	7
Permitted Phases				
Detector Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	4.0	4.0						4.0				
Minimum Split (s)	28.8	28.8						22.5				
Total Split (s)	33.0	33.0						38.5				
Total Split (%)	41.3%	41.3%						48.1%				
Maximum Green (s)	28.2	28.2						34.0				
Yellow Time (s)	4.3	4.3						4.0				
All-Red Time (s)	0.5	0.5						0.5				
Lost Time Adjust (s)	0.0	0.0						0.0				
Total Lost Time (s)	4.8	4.8						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0						2.5				
Recall Mode	None	None						C-Max				
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	17.0	17.0						10.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	23.5	23.5						35.2			47.2	
Actuated g/C Ratio	0.29	0.29						0.44			0.59	
v/c Ratio	0.81	0.82						0.34			0.33	
Control Delay	39.1	39.3						1.0			7.7	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	39.1	39.3						1.0			7.7	
LOS	D	D						A			A	
Approach Delay		39.2						1.0			7.7	
Approach LOS		D						A			A	
Queue Length 50th (ft)	188	188						0			43	
Queue Length 95th (ft)	278	282						m13			57	
Internal Link Dist (ft)		637			775			485			430	
Turn Bay Length (ft)												
Base Capacity (vph)	592	594						2237			1966	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.67	0.68						0.34			0.33	

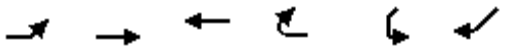
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 37 (46%), Referenced to phase 2:NESW and 6:, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 16.8		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Ferguson Rd. & IH 30 EB Frontage Rd.

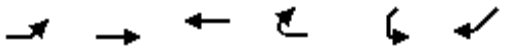


Lane Group	ø2	ø3	ø4	ø7
Switch Phase				
Minimum Initial (s)	15.0	4.0	4.0	4.0
Minimum Split (s)	22.5	8.5	28.8	8.5
Total Split (s)	38.5	8.5	33.0	8.5
Total Split (%)	48%	11%	41%	11%
Maximum Green (s)	34.0	4.0	28.2	4.0
Yellow Time (s)	4.0	4.0	4.3	4.0
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	2.5	0.2	2.0	0.2
Recall Mode	C-Max	None	None	None
Walk Time (s)	7.0		7.0	
Flash Dont Walk (s)	10.0		17.0	
Pedestrian Calls (#/hr)	0		0	
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Lane Configurations							
Volume (vph)	533	468	363	189	89	329	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	200			200	0	0	
Storage Lanes	2			1	1	2	
Taper Length (ft)	100				25		
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	3433	3539	3539	1583	1770	2787	
Flt Permitted	0.950				0.950		
Satd. Flow (perm)	3433	3539	3539	1583	1770	2787	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				205		358	
Link Speed (mph)		35	35		40		
Link Distance (ft)		551	1700		565		
Travel Time (s)		10.7	33.1		9.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	579	509	395	205	97	358	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	579	509	395	205	97	358	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		24	24		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	1	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94				
Detector 2 Size(ft)		6	6				
Detector 2 Type		Cl+Ex	Cl+Ex				
Detector 2 Channel							
Detector 2 Extend (s)		0.0	0.0				
Turn Type	Prot	NA	NA	Perm	Prot	custom	
Protected Phases	1	6	2		7	4	8
Permitted Phases				2		7	
Detector Phase	1	6	2	2	7	4	



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	ø8
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	4.0	4.0	3.0
Minimum Split (s)	9.0	21.0	32.9	32.9	9.6	8.0	11.0
Total Split (s)	21.0	56.0	35.0	35.0	13.0	11.0	11.0
Total Split (%)	26.3%	70.0%	43.8%	43.8%	16.3%	13.8%	14%
Maximum Green (s)	16.0	50.0	28.1	28.1	7.4	7.0	7.0
Yellow Time (s)	3.0	4.0	4.0	4.0	3.6	3.5	3.5
All-Red Time (s)	2.0	2.0	2.9	2.9	2.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.9	6.9	5.6	4.0	
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Vehicle Extension (s)	2.0	2.5	3.0	3.0	2.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			3.0
Flash Dont Walk (s)			19.0	19.0			4.0
Pedestrian Calls (#/hr)			0	0			0
Act Effct Green (s)	15.5	54.0	32.6	32.6	7.0	16.0	
Actuated g/C Ratio	0.19	0.68	0.41	0.41	0.09	0.20	
v/c Ratio	0.87	0.21	0.27	0.27	0.63	0.43	
Control Delay	41.7	2.7	17.6	3.8	40.6	5.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	41.7	2.7	17.6	3.8	40.6	5.2	
LOS	D	A	B	A	D	A	
Approach Delay		23.5	12.9		12.8		
Approach LOS		C	B		B		
Queue Length 50th (ft)	145	16	72	0	28	0	
Queue Length 95th (ft)	#231	38	106	41	m#95	17	
Internal Link Dist (ft)		471	1620		485		
Turn Bay Length (ft)	200			200			
Base Capacity (vph)	686	2390	1443	766	163	886	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.84	0.21	0.27	0.27	0.60	0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Samuell Blvd. & Ferguson Rd.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	625	187	180	498	203	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		100	150		0	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.369		0.950	
Satd. Flow (perm)	3539	1583	687	3539	3433	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		194				365
Link Speed (mph)	35			35	35	
Link Distance (ft)	453			551	234	
Travel Time (s)	8.8			10.7	4.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	679	203	196	541	221	365
Shared Lane Traffic (%)						
Lane Group Flow (vph)	679	203	196	541	221	365
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	8	8
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	20.0	20.0	3.0	20.0	10.0	10.0
Minimum Split (s)	25.7	25.7	20.0	25.7	18.6	18.6
Total Split (s)	33.0	33.0	20.0	33.0	27.0	27.0
Total Split (%)	41.3%	41.3%	25.0%	41.3%	33.8%	33.8%
Maximum Green (s)	27.3	27.3	15.0	27.3	21.4	21.4
Yellow Time (s)	4.0	4.0	3.0	4.0	3.6	3.6
All-Red Time (s)	1.7	1.7	2.0	1.7	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.0	5.7	5.6	5.6
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	1.5	3.0	2.0	2.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Walk Time (s)	7.0	7.0			6.0	6.0
Flash Dont Walk (s)	10.0	10.0			7.0	7.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	45.7	45.7	53.2	45.7	11.2	11.2
Actuated g/C Ratio	0.57	0.57	0.66	0.57	0.14	0.14
v/c Ratio	0.34	0.21	0.36	0.27	0.46	0.68
Control Delay	10.3	2.5	4.1	4.8	34.6	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	2.5	4.1	4.8	34.6	10.8
LOS	B	A	A	A	C	B
Approach Delay	8.5			4.6	19.8	
Approach LOS	A			A	B	
Queue Length 50th (ft)	82	2	6	36	54	0
Queue Length 95th (ft)	147	34	13	87	81	71
Internal Link Dist (ft)	373			471	154	
Turn Bay Length (ft)		100	150			
Base Capacity (vph)	2021	987	703	2021	918	690
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.21	0.28	0.27	0.24	0.53

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 12 (15%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Lawnview Ave. & Samuell Blvd.