



Memorandum

Date: July 10, 2024
To: Ms. Jessica Viramontes, ICF
From: Trisha Dudala, Katie Riutta
Subject: Traffic Operations Analysis for the Proposed Parkline Project in Menlo Park, CA

Hexagon Transportation Consultants, Inc. has completed a traffic operations analysis for the proposed Parkline project in Menlo Park, CA. The project site, located at 333 Ravenswood Avenue, is currently occupied by the existing SRI International campus. The proposed project would include a new office/research and development (R&D) campus with no increase in office/R&D square footage; up to 550 new dwelling units at a range of affordability levels (comprised of 450 multi-family units and townhomes, and a proposed land dedication to an affordable housing developer that could accommodate up to 100 affordable units); and new bicycle and pedestrian connections. In total, the proposed project would result in approximately 1,768,802 square feet (s.f.) of mixed-use development, with approximately 1,093,602 s.f. of office/R&D uses and approximately 675,200 s.f. of residential uses. The proposed project would demolish all buildings on SRI International's Campus, excluding Buildings P, S, and T, which would remain onsite and be operated by SRI International.

The residential area would have three access points that would serve the residential uses using existing and/or relocated driveways at the following locations:

- Ravenswood Avenue, toward the west side of the Project Site;
- Laurel Street, toward the middle of the residential area, for the multi-family residential buildings; and
- Laurel Street, toward the south end of the residential area, for the townhouses.

The office/R&D area would have four access points that would serve the commercial portion of the site by using existing and/or relocated driveways at the following locations:

- Ravenswood Avenue, toward the west end of the office/R&D area;
- Ravenswood Avenue, toward the east end of the office/R&D area;
- Middlefield Road at Ringwood Avenue; and
- Middlefield Road at Seminary Drive.

The proposed project is expected to generate 1,368 AM peak hour trips and 1,316 PM peak hour trips after applying a 25% TDM¹ reduction.

The project also proposes a variant, called the "Increased Development Variant", which is a variation of the proposed project at the same Project Site (although the Project Site would be slightly expanded to include 201 Ravenswood Avenue), generally with the same objectives, background, and development controls but with the following differences:

¹ After initiation of this simulation analysis, the Proposed Project's TDM reduction was revised to a 28% trip reduction for the office/R&D land use and a 25% trip reduction for the residential land use. This study is therefore considered slightly conservative because it did not assume the extra 3% trip reduction for the office/R&D land use.

1. The Project Site has been expanded to include the parcel at 201 Ravenswood Avenue to create a continuous Project frontage area along Ravenswood Avenue and increase the size of the overall Project Site by approximately 43,762 s.f. (approximately 1.0 acre), for a total of approximately 64.2 acres;
2. The Project Variant would include up to 250 additional residential rental dwelling units compared to the Proposed Project (an increase from 550 to 800 units, inclusive of up to 154 units to be developed by an affordable housing developer);
3. The Project Variant would reduce the underground parking footprint within the site, both by removing underground parking from the multifamily residential buildings in the residential area and removing the underground parking connection between office/research-and-development (R&D) Building O1 and Building O5. As a result, Parking Garage (PG) 1 and PG2 increase in square footage and height compared to the Proposed Project and the number of structured spaces increases by 400 (with no change in the total number of parking spaces proposed for the office/R&D buildings); and
4. The Project Variant would include an approximately 2- to 3-million-gallon emergency water reservoir that would be buried below grade in the northeast area of the Project Site, in addition to a small pump station, an emergency well, and related improvements that would be built at and below grade (i.e., emergency generator, disinfection system, surge tank) (referred to as “reservoir” throughout this document). It would be built and operated by the city of Menlo Park.

As part of this variant, the project would relocate some housing units to the Middlefield Road/Ravenswood Avenue corner of the project site, and reconfigure the site circulation so that the majority of residential vehicles would need to use the office/R&D driveways. In addition to the proposed driveways on Middlefield Road listed above, access to the project site would be provided on Ravenswood Avenue at W 1st Street and four new driveways between Laurel Street and W 1st Street. Two of these driveways are the same office driveways as the main project. The other two driveways would be located just north and south of Pine Street for the residential land use. The proposed variant is expected to generate 1,441 AM peak hour trips and 1,393 PM peak hour trips after applying a 25% TDM² reduction.

This report presents the results of the simulation analysis conducted along Middlefield Road between Oak Grove Avenue and Seminary Drive and along Ravenswood Avenue between Middlefield Road and Laurel Street. Existing traffic congestion and long queues were observed during peak traffic periods along the project frontages on Middlefield Road and Ravenswood Avenue. The project would add a considerable amount of traffic to Ravenswood Avenue and Middlefield Road. As such, a Synchro/SimTraffic traffic operations model was used to identify and test improvements that would reduce project congestion. Presented in this report are the results of a detailed analysis of the traffic operations issues along Middlefield Road and Ravenswood Avenue and identification and evaluation of potential feasible improvements to improve traffic congestion and flow along these corridors. The analysis considers traffic operations under existing conditions, background conditions, background plus project conditions, and background plus variant conditions. The results and recommendations of this analysis is referenced in the Transportation Impact Analysis report prepared for this project. A map of the study area is shown on Figure 1.

² After initiation of this simulation analysis, the Project Variant’s TDM reduction was revised to a 28% trip reduction for the office/R&D land use and a 25% trip reduction for the residential land use. This study is therefore considered slightly conservative because it did not assume the extra 3% trip reduction for the office/R&D land use.

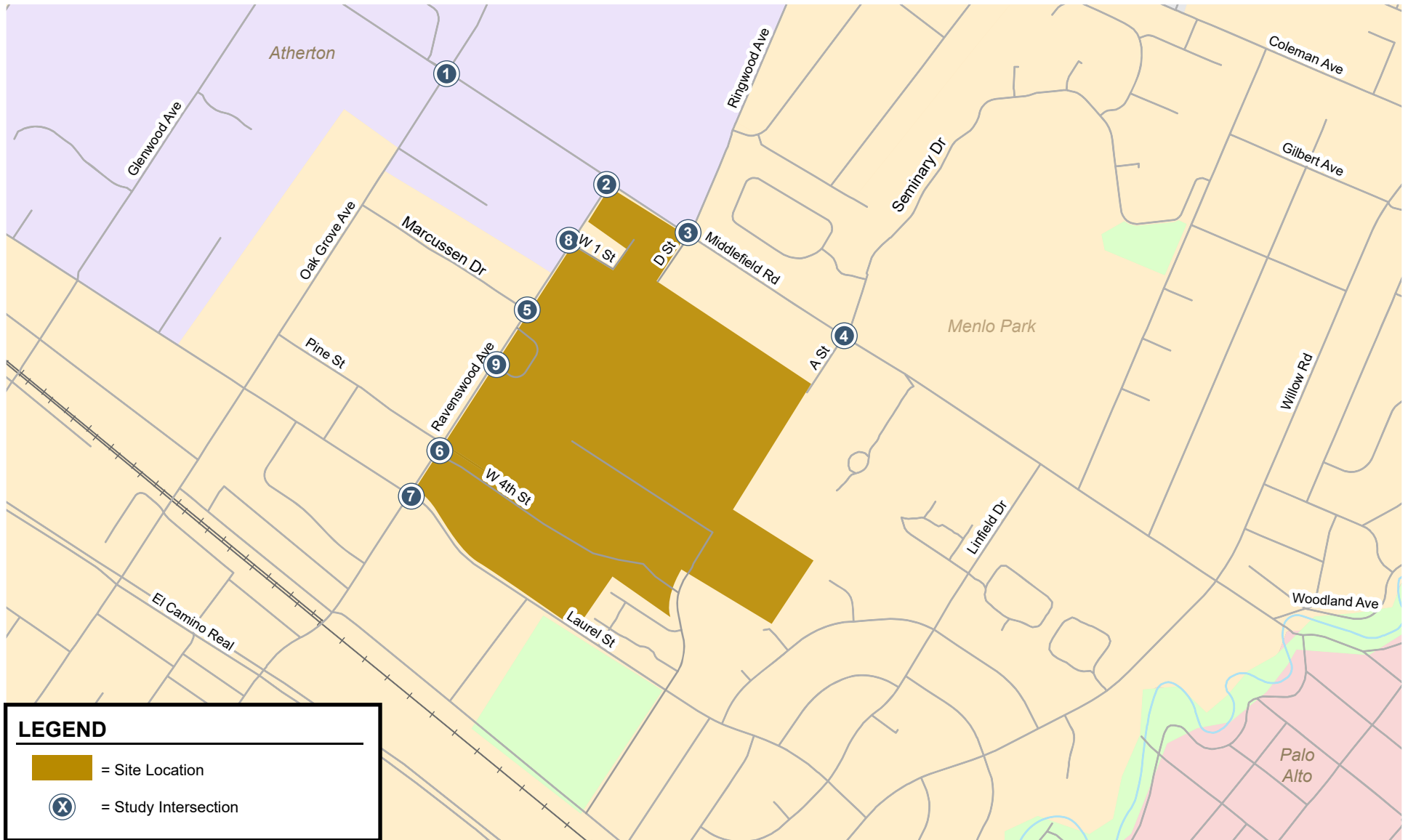


Figure 1
Site Location and Study Intersections

Scope of Study

This study was conducted for the purpose of documenting existing, background, background plus project, and background plus variant conditions and identifying potential feasible improvements to improve traffic congestion and flow along Middlefield Road and Ravenswood Avenue. This corridor study includes an analysis of weekday AM (7-9 AM) and PM (4-6 PM) peak hour traffic conditions for the following nine study intersections. These intersections are shown on Figure 1.

Study Intersections

1. Middlefield Road & Oak Grove Avenue [Atherton, signal]
2. Middlefield Road & Ravenswood Avenue [signal]
3. Middlefield Road & Ringwood Avenue/D Street [Project Driveway, signal]
4. Middlefield Road & Seminary Drive/A Street [Project Driveway, unsignalized]
5. Marcussen Drive & Ravenswood Avenue [unsignalized]
6. Pine Street/4th St & Ravenswood Avenue [Project Driveway, unsignalized]
7. Laurel Street & Ravenswood Avenue [signal]
8. W 1st Street & Ravenswood Avenue [Project Driveway, unsignalized]
9. Loop Road & Ravenswood Avenue [Project Driveway, unsignalized]

Traffic conditions were evaluated for the following scenarios:

Scenario 1: Existing Conditions. Existing AM and PM peak-hour traffic volumes were obtained from manual turning-movement counts conducted in May 2023. The simulation model requires that the volumes between intersections in the network be balanced to ensure that vehicles do not appear or disappear between intersections. Therefore, the counts were balanced between adjacent intersections.

Scenario 2: Year 2027 Background Conditions. The background scenario assumed a year 2027 horizon³ and was analyzed using the model. Traffic volumes were obtained from the Menlo Park Travel Demand Model and adjusted based on existing counts and model results. In addition, traffic and roadway improvements associated with the approved developments were assumed as directed by City Staff.

Scenario 3: Year 2027 Background Plus Project Conditions. Background plus project conditions reflect the projected traffic volumes with the completion of the project and future developments. Project-generated traffic was added to the background condition traffic volumes. The background plus project scenario was evaluated relative to the background scenario.

Scenario 4: Year 2027 Background Plus Variant Conditions. Background plus variant conditions reflect the projected traffic volumes with the completion of the variant and future developments. Variant-generated traffic was added to the background conditions traffic volumes. The background plus variant scenario was evaluated relative to the background plus project scenario.

³ 2027 is the earliest year for expected occupancy when this analysis started. The expected occupancy has since been revised to year 2031. However, as discussed in detail in the *Parkline Transportation Impact Analysis* report, there would be no substantive changes to any conclusions whether the near-term scenario is studied with a horizon year of 2027 or 2031.

Analysis Methodology

This section describes the methods and performance criteria used to evaluate traffic operations along the Middlefield Road and Ravenswood Avenue corridors between Oak Grove Avenue and Seminary Drive and between Middlefield Road and Laurel Street, respectively.

Analysis Method

Due to the close proximity of the study intersections, a simulation analysis was conducted using Synchro/SimTraffic (version 12). Unlike macroscopic models of isolated intersection operations, such as the *Highway Capacity Manual* intersection level of service methodology, SimTraffic is a microscopic model that measures the full impact of queuing and blocking attributed to closely spaced intersections.

The existing conditions SimTraffic model was calibrated and validated to existing conditions based on existing lane geometry, existing AM and PM peak hour traffic counts, observed peak-hour vehicular queues, and the observed signal timing.

Level of Service Criteria

The average delay time (measured in seconds per vehicle) calculated by the simulation model was correlated to Level of Service (LOS) based on the thresholds contained in the *Highway Capacity Manual*. Level of Service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The correlation between delay and level of service is shown on Table 1 for signalized intersections and Table 2 for unsignalized intersections.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though some vehicles may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *Highway Capacity Manual*.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Delay Per Vehicle (Sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *Highway Capacity Manual*.

Existing Conditions

Hexagon collected existing roadway geometry, peak hour intersection turning movement volumes, and intersection queuing characteristics within the study area. Most traffic congestion in the study area was observed to occur during the morning (7:00 – 9:00 AM) and evening (4:00 – 6:00 PM) peak commute hours. The existing lane geometry at the study intersections are shown on Figure 2. At the time field observations were conducted, Middlefield Road had two northbound lanes at the intersection of Seminary Drive, which is reflected in the existing conditions analysis. However, the city recently restriped Middlefield Road to consist of one northbound lane at the intersection of Middlefield Road and Seminary Drive, which is reflected in the background conditions analysis.

Intersection Turning Movements Volumes

Existing AM and PM peak-hour traffic volumes were obtained from the May 2023 manual turning-movement counts. The existing traffic volumes are shown on Figure 3.

Parkline Project Traffic Operations Analysis

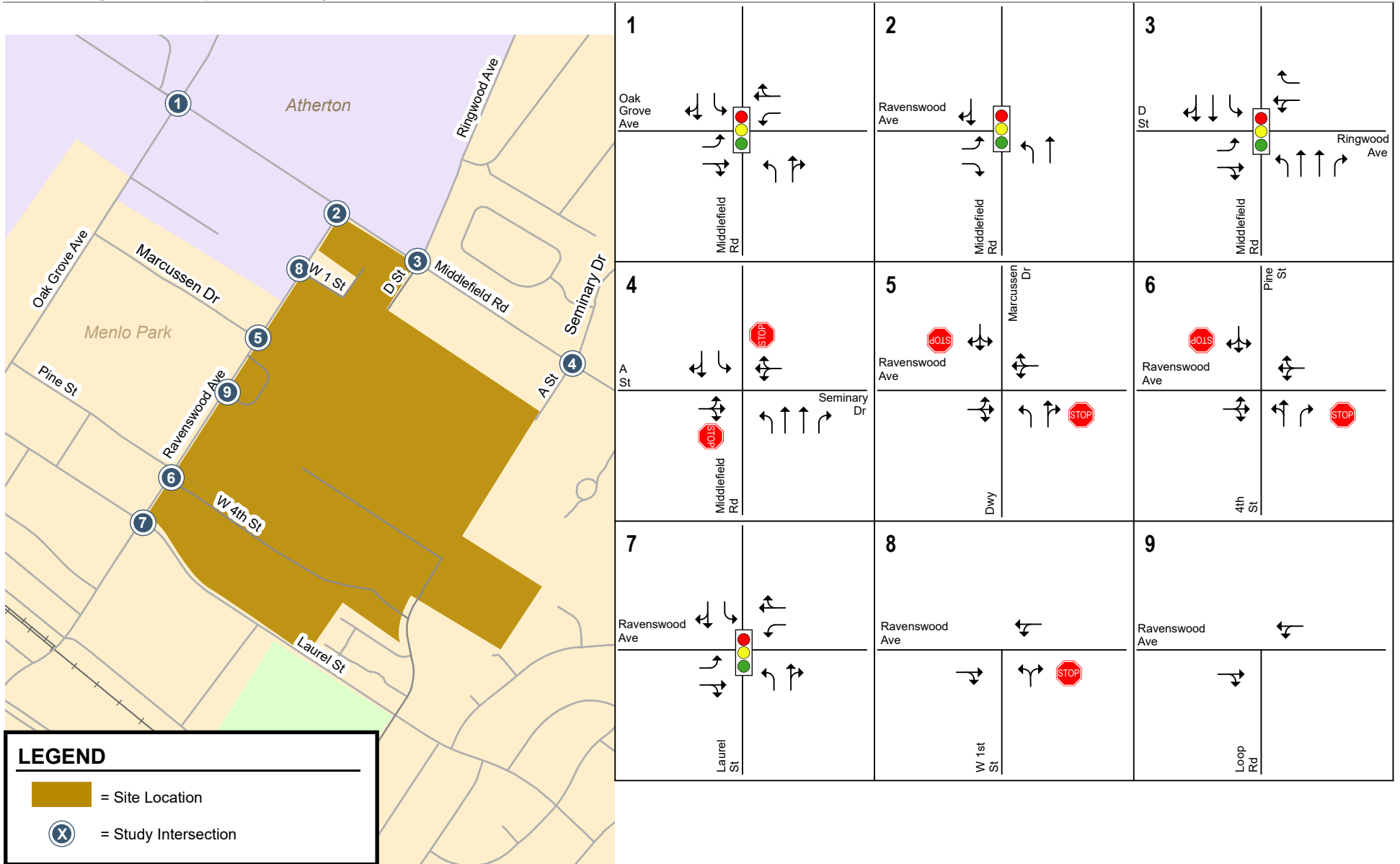


Figure 2
Existing Lane Configurations

Parkline Project Traffic Operations Analysis

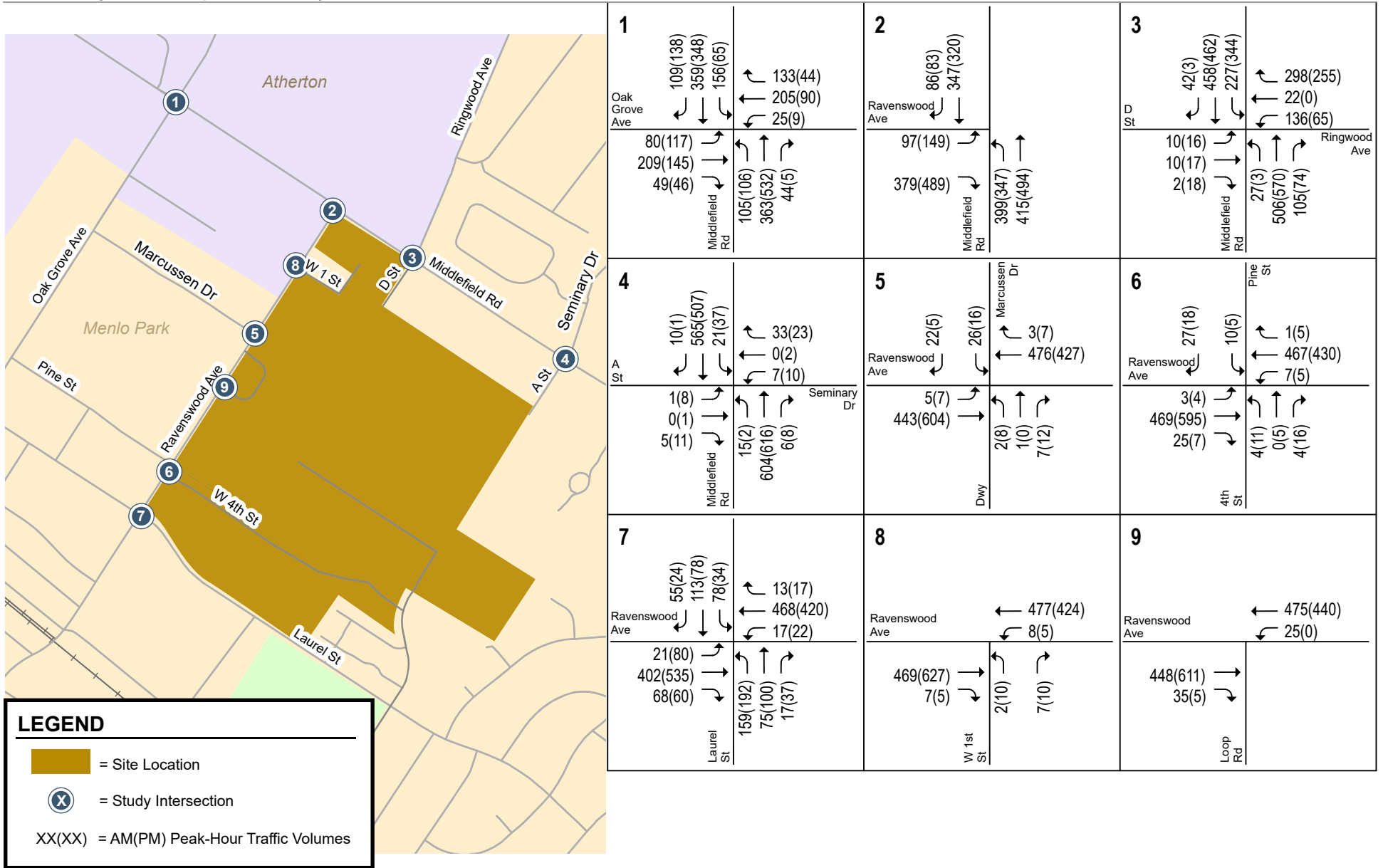


Figure 3
Existing Traffic Volumes

Field Observations

Hexagon conducted field observations of traffic congestion and vehicle queuing at the study intersections during the AM and PM peak periods in May of 2023. Field observations showed that some operational problems currently occur during the peak commute hours. These issues are described below.

Middlefield Road & Ravenswood Avenue

During the AM peak hour, the northbound left turn queue from Middlefield Road to westbound Ravenswood Avenue often reached the Ringwood Avenue intersection. During the peak time, the northbound left turn green time increased to allow more vehicles through the intersection. The first cycle with a long northbound left turn queue resulted in 10 vehicles waiting for a second cycle. However, the cycles after that had increased green time and allowed the entire queue to clear in one cycle.

During the PM peak hour, the southbound left turn queue at the downstream intersection of Ringwood Avenue/Middlefield Road often reached close to the Ravenswood Avenue intersection. Vehicles expecting to continue southbound on Middlefield Road were able to go around the queue into the second lane. Therefore, all southbound vehicles were able to clear the intersection in one cycle.

Middlefield Road & Ringwood Avenue

During the AM peak hour, the downstream northbound left turn queue at Ravenswood Avenue often reached the Ringwood Avenue intersection. This created a long westbound right turn queue at Ringwood Avenue. However, because the northbound left turn signal at Ravenswood Avenue turned green when the westbound movement turned green at Ringwood Avenue, the queues were able to clear in one cycle.

During the PM peak hour, the southbound left turn queue often reached close to the upstream intersection at Ravenswood Avenue/Middlefield Road. Vehicles expecting to continue southbound on Middlefield Road were able to go around the queue into the second lane. Therefore, all southbound vehicles were able to clear the intersection in one cycle.

Middlefield Road & Seminary Drive

There were no traffic operational deficiencies observed during the AM and PM peak hours. The upstream and downstream signals provided gaps for traffic on Seminary Drive to turn onto Middlefield Road.

Ravenswood Avenue & Laurel Street

During the AM peak hour, the downstream westbound queue at the Alma Street/Ravenswood Avenue intersection occasionally reached the Laurel Street intersection. This caused the northbound left-turn queue to wait for the queue to begin clearing the receiving lane. However, the green time allowed all vehicles to clear the intersection.

During the PM peak hour, Hexagon observed the Caltrain running during one of the cycles. The Caltrain came during the eastbound/westbound through green time, which caused the queue to back up into the Laurel Street intersection. However, the green time allowed all vehicles to clear the intersection.

Model Development and Calibration

The Synchro model was developed by drawing the roadway network using an aerial photo of the study area as a background image. Geometric information such as number of lanes, curvature, turn restrictions, and location of lane drops and lane additions were based on aerial photographs and field observations. Intersection signal operations were based on measuring the cycle lengths and splits at each of the study intersections in the field. The existing AM and PM peak hour counts were used as input volumes to develop the existing conditions model.

Model Validation

During the validation process, the model estimates were compared to the field data to measure the model's accuracy. The following criteria were used:

- Turning movement volumes for more than 85% of the cases should have a GEH (Geoffrey E. Havers) statistic of less than 5. GEH statistic is a measure of goodness of fit named after the statistician who developed it. The model served volume at each of the nine study intersections were compared to the raw turning movement counts. The GEH statistic for the individual turning movements was calculated to be less than 5 and the GEH statistic for the total volume through the intersection calculated to be less than 3.
- The visual queuing shown in the model should match queues observed in the field. Queues shown in the model matched field observations. During the AM peak hour, the model showed long queues on northbound Middlefield Road at Ravenswood Avenue and on westbound Ravenswood Avenue near Laurel Street. During the PM peak hour, the model showed long queues on southbound Middlefield Road at Ringwood Avenue. The model queues matched the queues observed in the field.

Existing Conditions Level of Service Analysis

The calibrated and validated SimTraffic model was used to analyze traffic operations at the nine study intersections along the corridors. Table 3 shows the average delay and the corresponding LOS during the AM and PM peak hour periods under existing conditions. The average delay (measured in seconds per vehicle) calculated by the microscopic simulation model was correlated to LOS based on the thresholds contained in the *Highway Capacity Manual*.

The results of the level of service analysis show that all study intersections currently operate at acceptable conditions during both peak hours.

Table 3
Existing Conditions Level of Service Analysis

#	Intersection	Control	Peak Hour	Count Date	Existing Conditions	
					Avg. Delay ¹	LOS
1	Middlefield Rd & Oak Grove Ave	Signal	AM	05/24/23	40.1	D
			PM	05/24/23	31.2	C
2	Middlefield Rd & Ravenswood Ave	Signal	AM	05/24/23	39.0	D
			PM	05/24/23	30.0	C
3	Middlefield Rd & Ringwood Ave	Signal	AM	05/24/23	34.5	C
			PM	05/24/23	28.0	C
4	Middlefield Rd & Seminary Dr	TWSC	AM	05/24/23	9.9	A
			PM	05/24/23	12.1	B
5	Marcussen Dr & Ravenswood Ave	TWSC	AM	05/24/23	22.7	C
			PM	05/24/23	13.9	B
6	Pine St & Ravenswood Ave	TWSC	AM	05/24/23	17.3	C
			PM	05/24/23	23.5	C
7	Laurel St & Ravenswood Ave	Signal	AM	05/24/23	30.2	C
			PM	05/24/23	47.9	D
8	W 1st St & Ravenswood Ave	OWSC	AM	05/24/23	15.6	C
			PM	05/24/23	14.7	B
9	Loop Rd & Ravenswood Ave	OWSC	AM	05/24/23	5.1	A
			PM	05/24/23	0.0	A

Notes:
 Avg Delay = Average Delay in seconds; LOS = Level of Service; TWSC = Two Way Stop Control; OWSC = One Way Stop Control

¹ At signalized intersections, delay shown is the weighted average delay for all vehicles entering the intersection calculated using the calibrated SimTraffic model. At unsignalized intersections, the delay is shown for the worst stop controlled approach or uncontrolled left-turn movement, whichever is greater.

Existing Conditions Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis. The queues (measured in feet per lane) were calculated by the microscopic simulation model. Table 4 shows the existing storage lengths, 95th percentile and average queues for all intersection movements during the AM and PM peak hour periods under existing conditions. Where there are no turn pockets, the storage length was assumed to be the distance to the adjacent upstream intersection.

**Table 4
Existing Conditions Queuing Analysis**

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Existing Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
1	Middlefield Rd & Oak Grove Ave	EBL	AM	245	176	78
			PM		124	64
		EBTR	AM	425	304	160
			PM		181	100
		WBL	AM	45	65	24
			PM		39	0
		WBTR	AM	130	356	209
			PM		150	77
		NBL	AM	130	179	93
			PM		163	85
NBTR	AM	985	426	260		
	PM		386	228		
SBL	AM	150	190	103		
	PM		157	63		
SBTR	AM	1000	635	318		
	PM		499	293		
2	Middlefield Rd & Ravenswood Ave	EBL	AM	355	370	149
			PM		365	171
		EBR	AM	125	220	90
			PM		226	91
		NBL	AM	435	455	301
			PM		356	238
		NBT	AM	435	245	53
			PM		155	68
		SBTR	AM	985	805	344
			PM		450	295

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the existing queue length exceeds the existing storage capacity.

Table 4 (continued)
Existing Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Existing Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
3	Middlefield Rd & Ringwood Ave/Project Driveway	EBL	AM	145	36	0
			PM		41	0
		EBTR	AM	145	39	0
			PM		52	21
		WBLT	AM	250	192	116
			PM		97	48
		WBR	AM	250	179	96
			PM		148	82
		NBL	AM	200	86	29
			PM		33	0
		NBT1	AM	885	284	120
			PM		260	118
		NBT2	AM	885	392	204
			PM		390	225
NBR	AM	150	174	73		
	PM		159	58		
SBL	AM	160	203	156		
	PM		194	166		
SBT	AM	450	443	250		
	PM		424	245		
SBTR	AM	320	512	177		
	PM		410	139		
4	Middlefield Rd & Seminary Dr/Project Driveway	EBLTR	AM	250	27	0
			PM		43	16
		WBLTR	AM	250	48	20
			PM		41	18
		NBL	AM	65	26	0
			PM		0	0
		NBT	AM	360	0	0
			PM		0	0
		NBR	AM	105	0	0
			PM		0	0
		SBL	AM	100	28	0
			PM		38	0
		SBTR	AM	885	38	0
			PM		19	0

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the existing queue length exceeds the existing storage capacity.

Table 4 (continued)
Existing Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Existing Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
5	Marcussen Dr & Ravenswood Ave	EBLTR	AM	730	74	0
			PM		43	0
		WBLTR	AM	760	23	0
			PM		0	0
		NBL	AM	135	0	0
			PM		28	0
		NBTR	AM	135	28	0
PM	36		0			
SBLTR	AM	985	83	32		
	PM		45	17		
6	Pine St/Project Driveway & Ravenswood Ave	EBLTR	AM	210	34	0
			PM		51	0
		WBLTR	AM	730	168	56
			PM		253	97
		NBLT	AM	230	21	0
			PM		40	0
		NBR	AM	230	19	0
PM	37		0			
SBLTR	AM	1000	60	25		
	PM		49	19		
7	Laurel St & Ravenswood Ave	EBL	AM	125	72	21
			PM		117	58
		EBTR	AM	365	588	274
			PM		986	544
		WBL	AM	100	56	17
			PM		71	25
		WBTR	AM	220	302	184
			PM		306	211
		NBL	AM	115	137	88
			PM		142	102
		NBTR	AM	1250	196	82
			PM		375	199
		SBL	AM	130	130	64
			PM		96	36
SBTR	AM	480	191	109		
	PM		182	104		

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the existing queue length exceeds the existing storage capacity.

Table 4 (continued)
Existing Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Existing Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
8	W 1st St/Project Driveway & Ravenswood Ave	EBTR	AM	365	161	27
			PM		76	0
		WBLT	AM	365	65	0
			PM		47	0
		NBLR	AM	255	31	0
			PM		45	17
9	Loop Rd/Project Driveway & Ravenswood Ave	EBTR	AM	525	52	0
			PM		0	0
		WBLT	AM	175	98	22
			PM		0	0

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.

The results of the queuing analysis show that the following lanes at the study intersections experience 95th percentile queues that extend beyond the existing storage capacity during at least one of the peak hours as described below.

AM Peak Hour

- Middlefield Road & Oak Grove Avenue
 - Westbound Left-Turn
 - Westbound Shared Through-Right
 - Northbound Left-Turn
 - Southbound Left-Turn
- Middlefield Road & Ravenswood Avenue
 - Eastbound Left-Turn
 - Eastbound Right-Turn
 - Northbound Left-Turn
- Middlefield Road & Ringwood Avenue
 - Northbound Right-Turn
 - Southbound Left-Turn
 - Southbound Shared Through-Right
- Laurel Street & Ravenswood Avenue
 - Eastbound Shared Through-Right
 - Westbound Shared Through-Right
 - Northbound Left-Turn

PM Peak Hour

- Middlefield Road & Oak Grove Avenue
 - Westbound Shared Through-Right
 - Northbound Left-Turn
 - Southbound Left-Turn
- Middlefield Road & Ravenswood Avenue
 - Eastbound Left-Turn
 - Eastbound Right-Turn
- Middlefield Road & Ringwood Avenue
 - Northbound Right-Turn
 - Southbound Left-Turn
 - Southbound Shared Through-Right
- Laurel Street & Ravenswood Avenue
 - Eastbound Shared Through-Right
 - Westbound Shared Through-Right
 - Northbound Left-Turn

Background Conditions

The background scenario assumed a year 2027 horizon⁴ and was analyzed using the model. Traffic volumes were obtained from the Menlo Park Travel Demand Model and adjusted based on existing counts and model results. The traffic volumes under background conditions are shown on Figure 4. Under background conditions, the existing lane striping, which reflects one lane in each direction on Middlefield Road south of Seminary Drive was assumed.

Background Conditions Level of Service Analysis

Table 5 shows the average delay and the corresponding LOS during the AM and PM peak hour periods under background conditions. The results of the level of service analysis show that all study intersections would operate at similar acceptable conditions as the existing scenario during both peak hours.

⁴ 2027 is the earliest year for expected occupancy when this analysis started. The expected occupancy has since been revised to year 2031. However, as discussed in detail in the *Parkline Transportation Impact Analysis* report, there would be no substantive changes to any conclusions whether the near-term scenario is studied with a horizon year of 2027 or 2031.

Parkline Project Traffic Operations Analysis

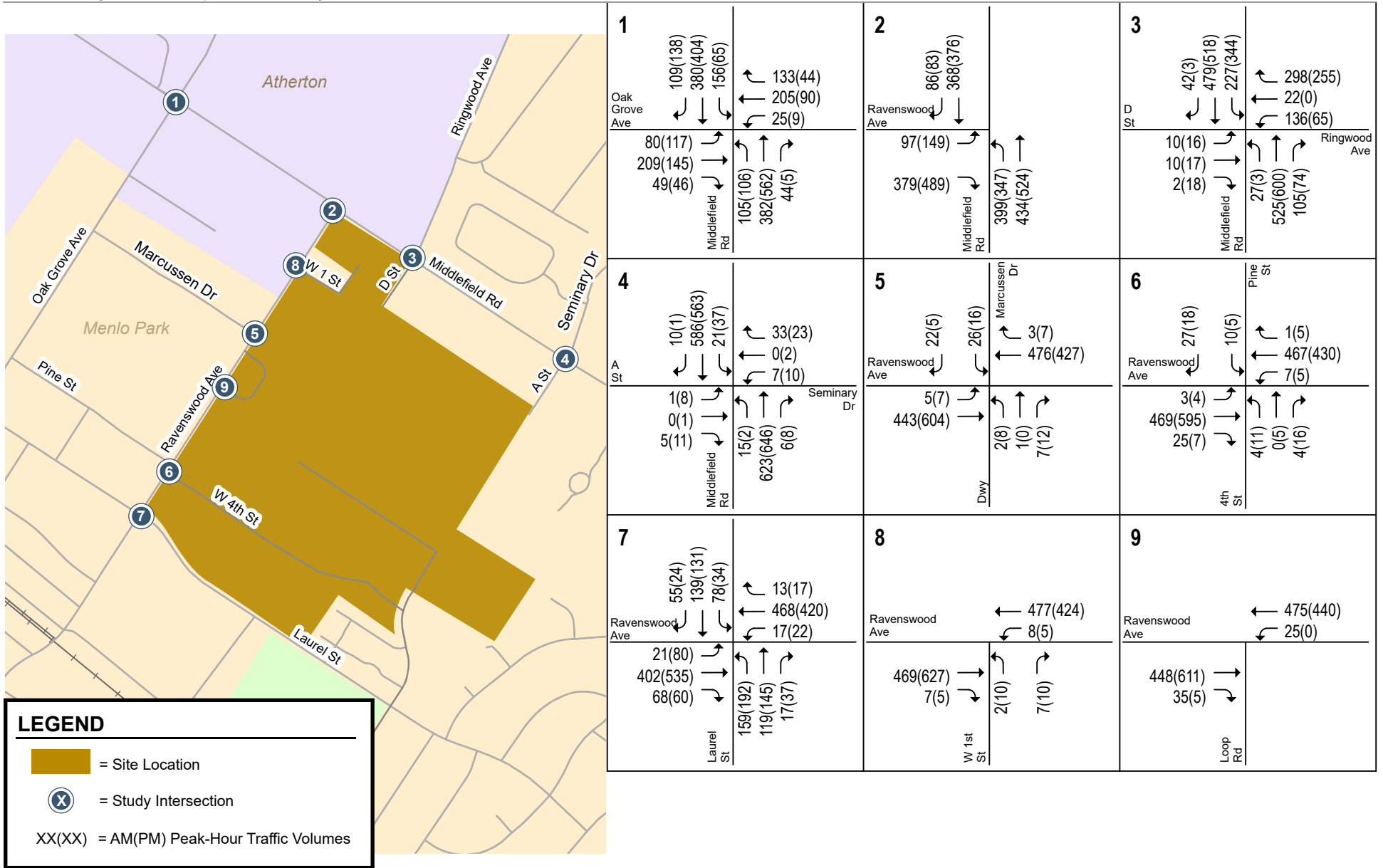


Figure 4
Background Traffic Volumes

Table 5
Background Conditions Level of Service Analysis

#	Intersection	Control	Peak Hour	Existing Conditions		Background Conditions	
				Avg. Delay ¹	LOS	Avg. Delay ¹	LOS
1	Middlefield Rd & Oak Grove Ave	Signal	AM	40.1	D	40.0	D
			PM	31.2	C	37.0	D
2	Middlefield Rd & Ravenswood Ave	Signal	AM	39.0	D	34.9	C
			PM	30.0	C	31.5	C
3	Middlefield Rd & Ringwood Ave	Signal	AM	34.5	C	32.4	C
			PM	28.0	C	27.1	C
4	Middlefield Rd & Seminary Dr	TWSC	AM	9.9	A	9.8	A
			PM	12.1	B	11.8	B
5	Marcussen Dr & Ravenswood Ave	TWSC	AM	22.7	C	11.6	B
			PM	13.9	B	13.6	B
6	Pine St & Ravenswood Ave	TWSC	AM	17.3	C	18.9	C
			PM	23.5	C	30.4	D
7	Laurel St & Ravenswood Ave	Signal	AM	30.2	C	33.8	C
			PM	47.9	D	49.4	D
8	W 1st St & Ravenswood Ave	OWSC	AM	15.6	C	5.4	A
			PM	14.7	B	14.1	B
9	Loop Rd & Ravenswood Ave	OWSC	AM	5.1	A	5.0	A
			PM	0.0	A	0.0	A

Notes:

Avg Delay = Average Delay in seconds; LOS = Level of Service; TWSC = Two Way Stop Control; OWSC = One Way Stop Control

¹ At signalized intersections, delay shown is the weighted average delay for all vehicles entering the intersection calculated using the calibrated SimTraffic model. At unsignalized intersections, the delay is shown for the worst stop controlled approach or uncontrolled left-turn movement, whichever is greater.

Background Conditions Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis. The queues (measured in feet per lane) were calculated by the microscopic simulation model. Table 6 shows the 95th percentile and average queues at all intersection movements during the AM and PM peak hour periods under background conditions.

Table 6
Background Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Background Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
1	Middlefield Rd & Oak Grove Ave	EBL	AM	245	157	75
			PM		138	70
		EBTR	AM	425	253	144
			PM		181	100
		WBL	AM	45	62	21
			PM		34	0
		WBTR	AM	130	328	195
			PM		151	73
		NBL	AM	130	173	88
			PM		167	88
NBTR	AM	985	473	287		
	PM		471	260		
SBL	AM	150	192	106		
	PM		145	60		
SBTR	AM	1000	652	330		
	PM		677	385		
2	Middlefield Rd & Ravenswood Ave	EBL	AM	355	309	127
			PM		383	182
		EBR	AM	125	209	79
			PM		228	95
		NBL	AM	435	460	313
			PM		366	246
		NBT	AM	435	223	50
			PM		179	79
		SBTR	AM	985	697	276
			PM		498	341

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Table 6 (continued)
Background Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Background Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
3	Middlefield Rd & Ringwood Ave/Project Driveway	EBL	AM	145	42	0
			PM		42	0
		EBTR	AM	145	35	0
			PM		61	24
		WBLT	AM	250	186	108
			PM		94	46
		WBR	AM	250	192	107
			PM		156	87
		NBL	AM	200	95	31
			PM		26	0
		NBT1	AM	885	292	139
			PM		273	124
		NBT2	AM	885	389	223
			PM		409	240
NBR	AM	150	180	76		
	PM		156	55		
SBL	AM	160	206	149		
	PM		194	166		
SBT	AM	450	389	209		
	PM		419	241		
SBTR	AM	320	411	128		
	PM		379	126		
4	Middlefield Rd & Seminary Dr/Project Driveway	EBLTR	AM	250	27	0
			PM		41	0
		WBLTR	AM	250	49	22
			PM		42	19
		NBL	AM	65	26	0
			PM		0	0
		NBT	AM	360	0	0
			PM		0	0
		NBR	AM	105	0	0
			PM		0	0
		SBL	AM	100	34	0
			PM		38	0
		SBTR	AM	885	0	0
			PM		63	0

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Table 6 (continued)
Background Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Background Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
5	Marcussen Dr & Ravenswood Ave	EBLTR	AM	730	79	0
			PM		62	0
		WBLTR	AM	760	0	0
			PM		15	0
		NBL	AM	135	0	0
			PM		27	0
NBTR	AM	135	31	0		
	PM		37	0		
SBLTR	AM	985	57	28		
	PM		42	17		
6	Pine St/Project Driveway & Ravenswood Ave	EBLTR	AM	210	39	0
			PM		56	0
		WBLTR	AM	730	186	64
			PM		290	105
		NBLT	AM	230	17	0
			PM		44	0
NBR	AM	230	20	0		
	PM		35	0		
SBLTR	AM	1000	70	28		
	PM		47	18		
7	Laurel St & Ravenswood Ave	EBL	AM	125	57	17
			PM		115	56
		EBTR	AM	365	669	297
			PM		1071	575
		WBL	AM	100	54	16
			PM		67	23
		WBTR	AM	220	306	190
			PM		304	211
		NBL	AM	115	139	94
			PM		145	101
		NBTR	AM	1250	292	126
			PM		434	243
SBL	AM	130	139	68		
	PM		119	43		
SBTR	AM	480	221	130		
	PM		257	158		

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Table 6 (continued)
Background Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Existing Storage Length (ft/ln)	Background Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
8	W 1st St/Project Driveway & Ravenswood Ave	EBTR	AM	365	97	0
			PM		91	15
		WBLT	AM	365	64	0
			PM		31	0
		NBLR	AM	255	28	0
			PM		46	18
9	Loop Rd/Project Driveway & Ravenswood Ave	EBTR	AM	525	50	0
			PM		0	0
		WBLT	AM	175	93	21
			PM		19	0

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.

The results of the queuing analysis show that all lanes that currently have 95th percentile queues extend beyond the storage capacity under existing conditions would continue to have queues exceed the storage capacity under background conditions.

Background Plus Project Conditions

Under background plus project conditions, access to the proposed project site would be provided via two driveways along Middlefield Road and three driveways along Ravenswood Avenue. The project driveways were analyzed with the following characteristics. The project lane configurations are shown on Figure 5.

- Middlefield Road & Ringwood Avenue – The project driveway is proposed to be the west leg of the signalized intersection. The project driveway approach would have one shared left-through lane and one right-turn lane. The lane configurations for the other approaches would remain the same. The signal was analyzed with the existing timing and phasing (permitted left turns for eastbound and westbound approaches on Ringwood Avenue).
- Middlefield Road & Seminary Drive – The project driveway is proposed to be the west leg of the unsignalized intersection as a stop-controlled approach. The project driveway approach would have one shared left-through lane and one right-turn lane. The lane configurations for the other approaches would remain the same.
- Pine Street & Ravenswood Avenue – The project driveway is proposed to be the south leg of the unsignalized intersection as a stop-controlled approach. The project driveway

approach would have one shared left-through-right lane. The lane configurations for the other approaches would remain the same.

- W 1st Street & Ravenswood Avenue – The project driveway is proposed to be the south leg of the unsignalized intersection as a stop-controlled approach. The project driveway approach would have one right-turn lane and would be restricted to right-in-right-out only movements.
- Loop Road & Ravenswood Avenue – The project driveway is proposed to be the south leg of the unsignalized intersection as a stop-controlled approach. The project driveway approach would have one left-turn lane and one right-turn lane. The lane configurations for the other approaches would remain the same.

Intersection Turning Movements Volumes

Background plus project conditions reflect the projected traffic volumes with the completion of the project and future developments. Project-generated traffic was added to the background condition traffic volumes. The background plus project traffic volumes are shown on Figure 6.

Parkline Project Traffic Operations Analysis

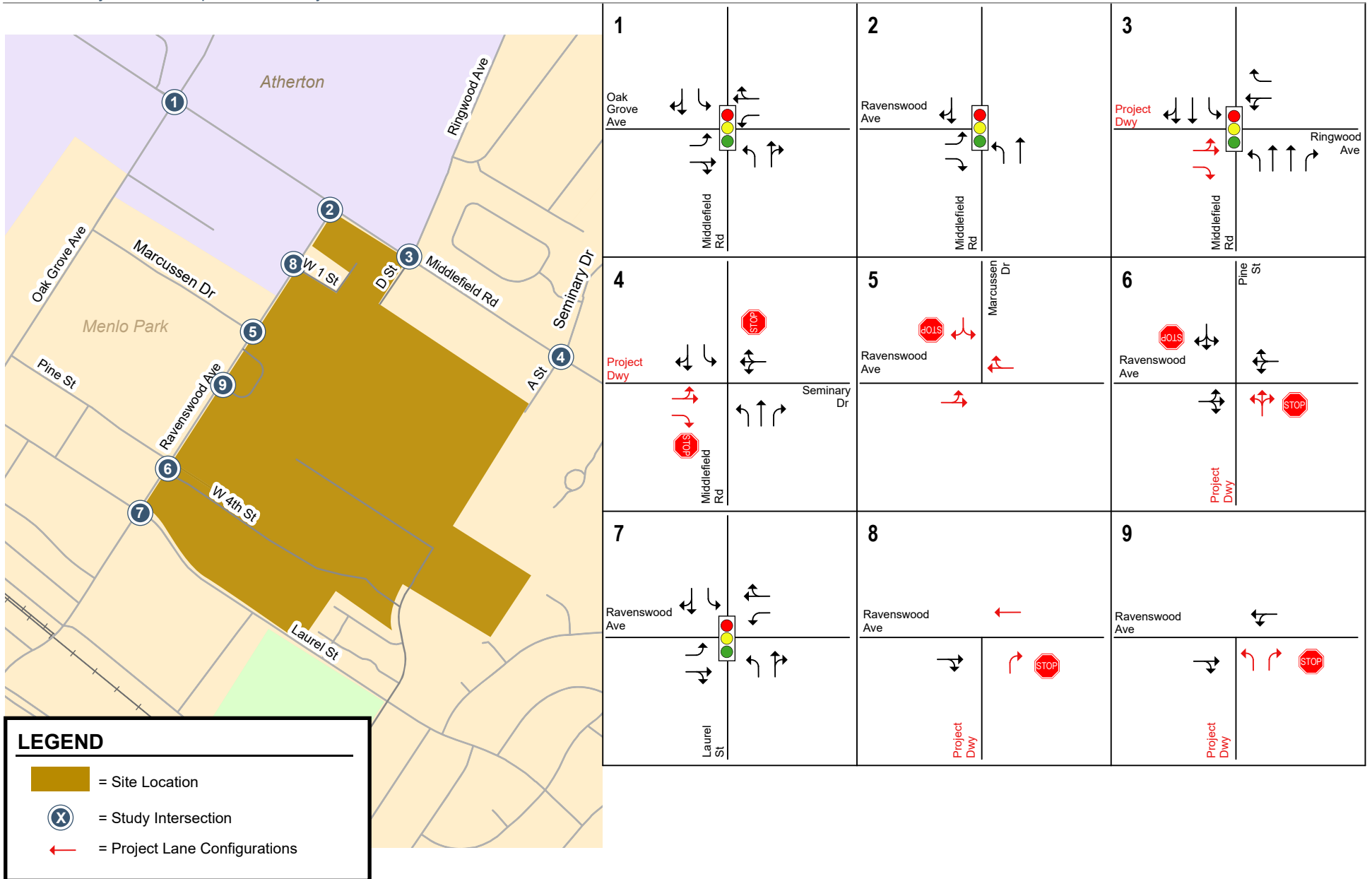


Figure 5
Project Lane Configurations

Parkline Project Traffic Operations Analysis

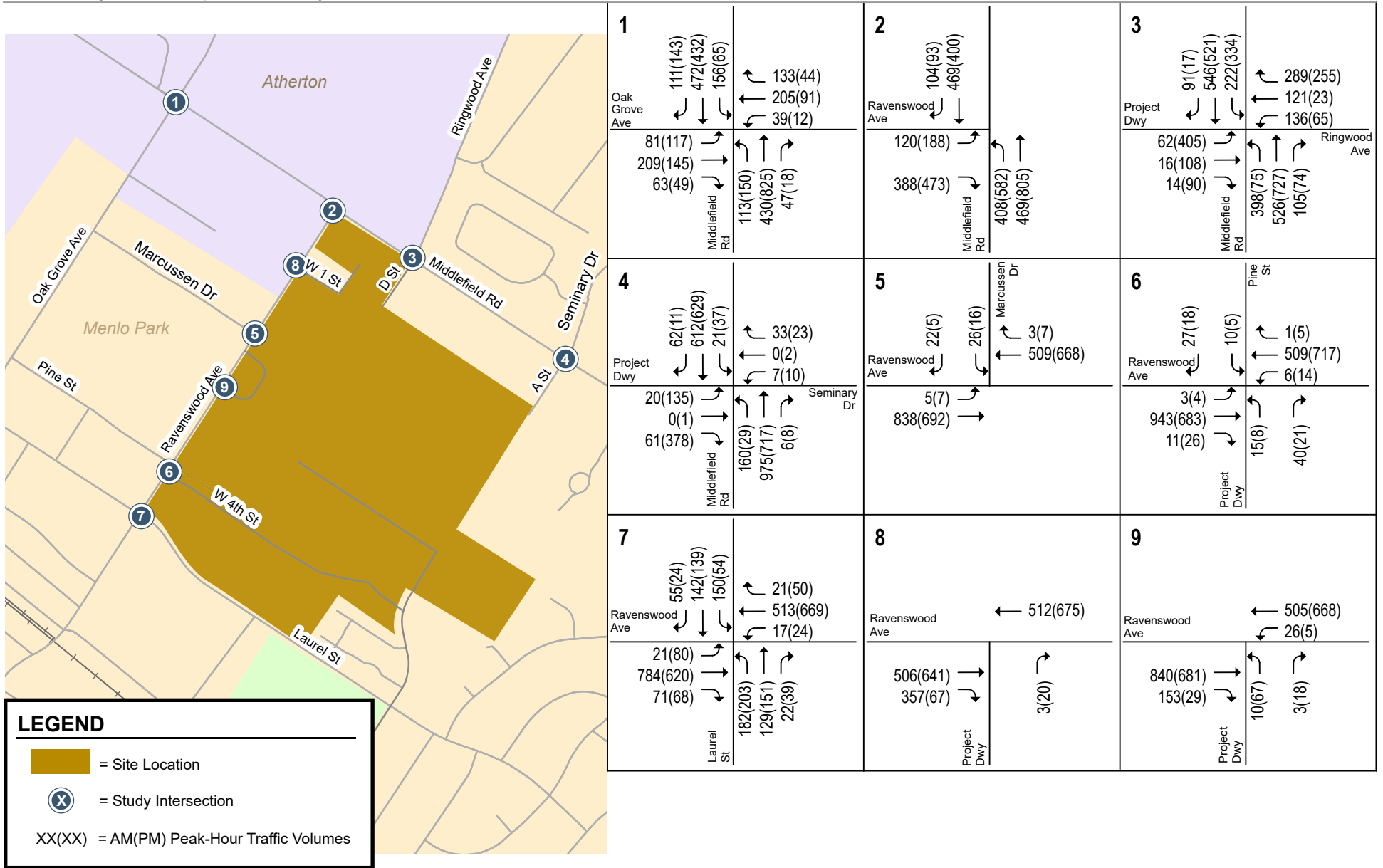


Figure 6
Background Plus Project Traffic Volumes

Background Plus Project Conditions Level of Service Analysis

Table 7 shows the average delay and the corresponding LOS during the AM and PM peak hour periods under background plus project conditions. The results show that six study intersections would operate at unacceptable conditions during at least one of the peak hours under background plus project conditions.

Table 7
Background Plus Project Conditions Level of Service Analysis

#	Intersection	Control	Peak Hour	Background Conditions		Background + Project Conditions	
				Avg. Delay ¹	LOS	Avg. Delay ¹	LOS
1	Middlefield Rd & Oak Grove Ave	Signal	AM	40.0	D	103.5	F
			PM	37.0	D	79.6	E
2	Middlefield Rd & Ravenswood Ave	Signal	AM	34.9	C	80.4	F
			PM	31.5	C	59.2	E
3	Middlefield Rd & Ringwood Ave/Project Dwy	Signal	AM	32.4	C	60.5	E
			PM	27.1	C	OVR	F
4	Middlefield Rd & Seminary Dr/Project Dwy	TWSC	AM	9.8	A	OVR	F
			PM	11.8	B	OVR	F
5	Marcussen Dr & Ravenswood Ave	TWSC	AM	11.6	B	14.4	B
			PM	13.6	B	27.2	D
6	Pine St/Project Dwy & Ravenswood Ave	TWSC	AM	18.9	C	24.2	C
			PM	30.4	D	OVR	F
7	Laurel St & Ravenswood Ave	Signal	AM	33.8	C	44.6	D
			PM	49.4	D	52.4	D
8	W 1st St/Project Dwy & Ravenswood Ave	OWSC	AM	5.4	A	7.2	A
			PM	14.1	B	11.4	B
9	Loop Rd/Project Dwy & Ravenswood Ave	OWSC	AM	5.0	A	26.3	D
			PM	0.0	A	58.9	F

Notes:

Avg Delay = Average Delay in seconds; LOS = Level of Service; TWSC = Two Way Stop Control; OWSC = One Way Stop Control; OVR = Delay exceeds 120 seconds

¹ At signalized intersections, delay shown is the weighted average delay for all vehicles entering the intersection calculated using the calibrated SimTraffic model. At unsignalized intersections, the delay is shown for the worst stop controlled approach or uncontrolled left-turn movement, whichever is greater.

Bold indicates LOS "E" or "F".

Background Plus Project Conditions Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis. The queues (measured in feet per lane) were calculated by the microscopic simulation model. Table 8 shows the 95th percentile and average queues at all intersection movements during the AM and PM peak hour periods under background plus project conditions.

Table 8
Background Plus Project Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
1	Middlefield Rd & Oak Grove Ave	EBL	AM	245	189	80
			PM		134	69
		EBTR	AM	425	332	174
			PM		185	108
		WBL	AM	45	72	31
			PM		44	0
		WBTR	AM	130	431	230
			PM		145	74
		NBL	AM	130	95	40
			PM		179	109
NBTR	AM	985	204	100		
	PM		1273	871		
SBL	AM	150	213	112		
	PM		162	72		
SBTR	AM	1000	2416	1255		
	PM		1088	576		
2	Middlefield Rd & Ravenswood Ave	EBL	AM	355	236	104
			PM		367	193
		EBR	AM	125	200	75
			PM		238	114
		NBL	AM	435	308	192
			PM		501	409
		NBT	AM	435	105	42
			PM		532	307
		SBTR	AM	985	1262	901
			PM		894	555

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Table 8 (continued)
Background Plus Project Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
3	Middlefield Rd & Ringwood Ave/Project Driveway	EBLT	AM	145	303	111
			PM		1627	1614
		EBR	AM	145	33	0
			PM		1635	1612
		WBLT	AM	250	262	170
			PM		116	60
		WBR	AM	250	128	71
			PM		273	147
		NBL	AM	200	202	199
			PM		250	145
		NBT1	AM	885	1048	972
			PM		1079	532
		NBT2	AM	885	578	222
			PM		933	529
NBR	AM	150	0	0		
	PM		176	62		
SBL	AM	160	204	142		
	PM		198	162		
SBT	AM	450	348	204		
	PM		406	223		
SBTR	AM	320	321	103		
	PM		355	124		
4	Middlefield Rd & Seminary Dr/Project Driveway	EBLT	AM	250	1835	1031
			PM		1931	956
		EBR	AM	90	48	0
			PM		163	96
		WBLTR	AM	250	1158	731
			PM		141	44
		NBL	AM	65	90	33
			PM		44	0
		NBT	AM	360	2410	2394
			PM		606	131
		NBR	AM	105	24	0
			PM		32	0
		SBL	AM	100	50	17
			PM		62	22
SBTR	AM	885	26	0		
	PM		257	25		

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Table 8 (continued)
Background Plus Project Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
5	Marcussen Dr & Ravenswood Ave	EBLT	AM	730	47	0
			PM		73	0
		WBTR	AM	760	28	0
PM	103		0			
		SBLR	AM	985	62	30
			PM		45	18
6	Pine St/Project Driveway & Ravenswood Ave	EBLTR	AM	210	27	0
			PM		104	15
		WBLTR	AM	730	146	44
			PM		573	334
NBLTR	AM	230	77	34		
	PM		146	47		
		SBLTR	AM	1000	59	24
			PM		85	29
7	Laurel St & Ravenswood Ave	EBL	AM	125	64	16
			PM		120	67
		EBTR	AM	365	1031	739
			PM		1261	765
		WBL	AM	100	61	19
			PM		58	19
		WBTR	AM	220	296	173
			PM		297	229
		NBL	AM	115	143	98
PM	145		101			
NBTR	AM	1250	339	161		
	PM		491	290		
SBL	AM	130	159	101		
	PM		137	61		
SBTR	AM	480	285	152		
	PM		280	159		

Notes:

NB = northbound, SB = southbound, EB = eastbound, WB = westbound

L = left-turn movement, T = through movement, R = right-turn movement

¹ Based on 95th percentile queues reported by SimTraffic software.

² Based on average queues reported by SimTraffic software.

Bold indicates that the queue length exceeds the storage capacity.

Table 8 (continued)
Background Plus Project Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
8	W 1st St/Project Driveway & Ravenswood Ave	EBTR	AM	365	48	0
			PM		69	0
		WBT	AM	365	0	0
			PM		33	0
		NBR	AM	255	18	0
			PM		41	15
9	Loop Rd/Project Driveway & Ravenswood Ave	EBTR	AM	525	15	0
			PM		18	0
		WBLT	AM	175	157	45
			PM		156	38
		NBL	AM	70	34	0
			PM		186	65
		NBR	AM	70	18	0
			PM		39	0

Notes:

NB = northbound, SB = southbound, EB = eastbound, WB = westbound

L = left-turn movement, T = through movement, R = right-turn movement

¹ Based on 95th percentile queues reported by SimTraffic software.

² Based on average queues reported by SimTraffic software.

Bold indicates that the queue length exceeds the storage capacity.

Project Effects

The results of the level of service and queuing analyses show that the following intersections would operate at unacceptable conditions during at least one of the peak hours under background plus project conditions as described below.

Middlefield Road & Oak Grove Avenue

During the AM peak hour, the analysis shows that this intersection would operate at an unacceptable LOS F under background plus project conditions. The simulation shows that the 95th percentile queues would be longer for most lanes compared to background conditions. Queues would be particularly long for the westbound through/right and southbound through/right movements. The analysis shows shorter queue lengths for the northbound lanes under project conditions due to traffic being metered at upstream intersections. For example, at the Middlefield Road and Ringwood Avenue intersection, the analysis shows that the northbound left-turning traffic would spill out of the turn pocket and extend into the adjacent through lane, thus affecting the throughput on northbound Middlefield Road.

During the PM peak hour, the analysis shows that this intersection would operate at an unacceptable LOS E under background plus project conditions and queues would be particularly

long for the northbound and southbound approaches on Middlefield Road compared to background no project conditions.

Middlefield Road & Ravenswood Avenue

During the AM peak hour, the analysis shows that this intersection would operate at LOS F under background plus project conditions. Queues would be significantly long for the southbound approach on Middlefield Road.

During the PM peak hour, the analysis shows that this intersection would operate at an LOS E under background plus project conditions. The simulation shows that the 95th percentile queues would be longer for northbound and southbound approaches on Middlefield Road compared to background conditions.

Middlefield Road & Ringwood Avenue

During the AM peak hour, the analysis shows that this intersection would operate at LOS E under background plus project conditions and the 95th percentile queues for the northbound left-turn, westbound left-turn and southbound left-turn movements would exceed their storage capacities. The project would add approximately 400 vehicles during the AM peak hour to the northbound left-turn movement and the analysis shows that only 27% of the left-turning traffic could be served during the AM peak hour with the current signal timing and phasing.

During the PM peak hour, the analysis shows that this intersection would operate at LOS F and the 95th percentile queue for the northbound left-turn, northbound through, southbound left-turn and westbound right-turn would exceed their storage capacities. The project would add approximately 550 vehicles to the eastbound approach and the analysis shows that only 40% of the eastbound traffic could be served during the PM peak hour with the current signal timing and phasing.

Middlefield Road & Seminary Drive

During the AM and PM peak hours, this intersection would operate at LOS F under background plus project conditions. The simulation analysis shows that the northbound vehicular queue at the downstream intersection of Middlefield and Ringwood Avenue would extend beyond Seminary Drive resulting in long delays for traffic on the minor street approaches.

Pine Street/Project Driveway and Ravenswood

During the PM peak hour, this intersection would operate at LOS F under background plus project conditions based on the delay experienced by traffic on the minor street approaches. Due to increased traffic levels on Ravenswood Avenue, traffic on Pine Street and the project driveway would experience long delays in finding gaps to turn onto Ravenswood Avenue.

Loop Road/Project Driveway and Ravenswood

During the PM peak hour, this intersection would operate at LOS F under background plus project conditions based on the delay experienced by traffic exiting the project site. Due to increased traffic levels on Ravenswood Avenue, traffic on the project driveway would experience long delays in finding gaps to turn onto Ravenswood Avenue.

Background Plus Project (With Improvements) Conditions

The following improvements were identified to improve traffic operations along Middlefield Road and Ravenswood Avenue:

- A new traffic signal at Middlefield Road & Seminary Drive with protected north/south phasing and split east/west phasing and optimized cycle length. Split phasing was used in favor of permitted phasing due to the lack of space for opposing left-turning vehicles to travel simultaneously and to reduce delays to the left-turning traffic.
- Extension of the northbound left-turn storage length at Middlefield Road & Seminary Drive from 50 feet to 325 feet.
- Adding forced-turn islands on the east and west approaches of the Middlefield Road & Seminary Drive intersection to eliminate through movements and prevent future cut-through traffic on Seminary Drive.
- Changing the east/west phasing at Middlefield Road & Ringwood Avenue from permitted to split phasing and modifying the signal timings at Middlefield & Ravenswood Avenue. The analysis assumed half cycle length at the Middlefield/Ravenswood intersection during the PM peak hour.
- Adding a center median with left-turn pockets or two-way left-turn lane along Ravenswood Avenue between the proposed project driveway at W 1st Street and Laurel Street.

Background Plus Project (With Improvements) Conditions Level of Service Analysis

Table 9 shows the average delay and the corresponding LOS during the AM and PM peak hour periods under background plus project conditions with the identified improvements listed above. The results show that implementation of these improvements would result in acceptable levels of service during one of the peak hours at four of the six intersections that would operate at unacceptable levels with the project traffic. However, the following intersections would continue to operate at LOS E or LOS F during at least one of the peak hours.

- Middlefield Road & Oak Grove Avenue (AM)
- Middlefield Road & Ravenswood Avenue (AM)
- Middlefield Road & Ringwood Avenue (AM & PM)
- Middlefield Road & Seminary Drive (AM)
- Pine Street & Ravenswood Avenue (AM & PM)

Background Plus Project (With Improvements) Conditions Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis. The queues (measured in feet per lane) were calculated by the microscopic simulation model. Table 10 shows the 95th percentile and average queues at all intersection movements during the AM and PM peak hour periods under background plus project (with improvements) conditions.

Table 9
Background Plus Project (With Improvements) Conditions Level of Service Analysis

#	Intersection	Control	Peak Hour	Background + Project Conditions		Background + Project With Improvements	
				Avg. Delay ¹	LOS	Avg. Delay ¹	LOS
1	Middlefield Rd & Oak Grove Ave	Signal	AM	103.5	F	101.3	F
			PM	79.6	E	29.2	C
2	Middlefield Rd & Ravenswood Ave	Signal	AM	80.4	F	57.5	E
			PM	59.2	E	31.8	C
3	Middlefield Rd & Ringwood Ave	Signal	AM	60.5	E	71.6	E
			PM	OVR	F	OVR	F
4	Middlefield Rd & Seminary Dr	TWSC	AM	OVR	F	-	-
			PM	OVR	F	-	-
	<i>Mitigation</i>	<i>Signal</i>	<i>AM</i>	-	-	63.2	E
			<i>PM</i>	-	-	49.2	<i>D</i>
5	Marcussen Dr & Ravenswood Ave	TWSC	AM	14.4	B	14.9	B
			PM	27.2	D	24.0	C
6	Pine St & Ravenswood Ave	TWSC	AM	24.2	C	39.8	E
			PM	OVR	F	58.1	F
7	Laurel St & Ravenswood Ave	Signal	AM	44.6	D	38.7	D
			PM	52.4	D	46.6	D
8	W 1st St & Ravenswood Ave	OWSC	AM	7.2	A	8.1	A
			PM	11.4	B	21.5	C
9	Loop Rd & Ravenswood Ave	OWSC	AM	26.3	D	16.9	C
			PM	58.9	F	30.5	D

Notes:

Avg Delay = Average Delay in seconds; LOS = Level of Service; TWSC = Two Way Stop Control; OWSC = One Way Stop Control; OVR = Delay exceeds 120 seconds

¹ At signalized intersections, delay shown is the weighted average delay for all vehicles entering the intersection calculated using the calibrated SimTraffic model. At unsignalized intersections, the delay is shown for the worst stop controlled approach or uncontrolled left-turn movement, whichever is greater.

Bold indicates LOS "E" or "F".

Table 10
Background Plus Project (With Improvements) Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project (With Improvements) Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
1	Middlefield Rd & Oak Grove Ave	EBL	AM	245	223	96
			PM		182	99
		EBTR	AM	425	666	252
			PM		255	148
		WBL	AM	45	77	35
			PM		52	17
		WBTR	AM	130	836	341
			PM		171	94
		NBL	AM	130	176	97
			PM		163	83
NBTR	AM	985	462	259		
	PM		674	334		
SBL	AM	150	201	113		
	PM		135	53		
SBTR	AM	1000	2304	1128		
	PM		371	214		
2	Middlefield Rd & Ravenswood Ave	EBL	AM	355	345	160
			PM		449	242
		EBR	AM	125	223	97
			PM		243	129
		NBL	AM	435	434	297
			PM		455	288
		NBT	AM	435	111	22
			PM		421	191
		SBTR	AM	985	1194	670
			PM		693	362

Notes:

NB = northbound, SB = southbound, EB = eastbound, WB = westbound

L = left-turn movement, T = through movement, R = right-turn movement

¹ Based on 95th percentile queues reported by SimTraffic software.

² Based on average queues reported by SimTraffic software.

Bold indicates that the queue length exceeds the storage capacity.

Table 10 (continued)
Background Plus Project (With Improvements) Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project (With Improvements) Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
3	Middlefield Rd & Ringwood Ave/Project Driveway	EBLT	AM	145	203	77
			PM		1649	1632
		EBR	AM	145	33	0
			PM		1643	1629
		WBLT	AM	250	284	197
			PM		172	88
		WBR	AM	250	186	102
			PM		244	136
		NBL	AM	200	239	185
			PM		187	75
		NBT1	AM	885	1194	716
			PM		730	363
		NBT2	AM	885	930	678
			PM		733	449
NBR	AM	150	198	91		
	PM		191	72		
SBL	AM	160	222	157		
	PM		189	168		
SBT	AM	450	507	386		
	PM		450	319		
SBTR	AM	320	621	394		
	PM		597	315		
4	Middlefield Rd & Seminary Dr/Project Driveway	EBLT	AM	250	285	69
			PM		811	309
		EBR	AM	90	89	36
			PM		133	109
		WBLTR	AM	250	83	33
			PM		50	19
		NBL	AM	65	413	271
			PM		292	95
		NBT	AM	360	2274	900
			PM		985	531
		NBR	AM	105	32	0
			PM		44	0
		SBL	AM	100	68	24
			PM		91	41
SBTR	AM	885	727	327		
	PM		982	496		

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Table 10 (continued)
Background Plus Project (With Improvements) Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project (With Improvements) Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
5	Marcussen Dr & Ravenswood Ave	EBL	AM	730	0	0
			PM		18	0
		EBT	AM	730	81	0
			PM		138	24
		WBTR	AM	760	18	0
			PM		40	0
		SBLR	AM	985	62	29
			PM		48	18
6	Pine St/Project Driveway & Ravenswood Ave	EBL	AM	210	0	0
			PM		16	0
		EBTR	AM	210	40	0
			PM		0	0
		WBL	AM	730	27	0
			PM		35	0
		WBTR	AM	730	297	109
			PM		535	262
		NBLTR	AM	230	72	36
			PM		54	23
		SBLTR	AM	1000	82	30
			PM		64	23
7	Laurel St & Ravenswood Ave	EBL	AM	125	66	18
			PM		126	67
		EBTR	AM	365	777	445
			PM		1006	503
		WBL	AM	100	65	20
			PM		63	21
		WBTR	AM	220	312	213
			PM		294	231
		NBL	AM	115	142	96
			PM		149	103
		NBTR	AM	1250	365	168
			PM		594	333
		SBL	AM	130	159	100
			PM		145	68
		SBTR	AM	480	278	149
			PM		334	187

Notes:

NB = northbound, SB = southbound, EB = eastbound, WB = westbound

L = left-turn movement, T = through movement, R = right-turn movement

¹ Based on 95th percentile queues reported by SimTraffic software.

² Based on average queues reported by SimTraffic software.

Bold indicates that the queue length exceeds the storage capacity.

Table 10 (continued)
Background Plus Project (With Improvements) Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Project (With Improvements) Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
8	W 1st St/Project Driveway & Ravenswood Ave	EBTR	AM	365	138	21
			PM		233	55
		NBR	AM	255	16	0
			PM		42	16
9	Loop Rd/Project Driveway & Ravenswood Ave	EBTR	AM	525	100	0
			PM		116	0
		WBL	AM	175	45	16
			PM		18	0
		WBT	AM	1175	38	0
			PM		88	0
		NBL	AM	70	33	0
			PM		92	46
NBR	AM	70	15	0		
	PM		38	0		

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Effects of Identified Improvements

A comparison of the percentage of traffic served at each intersection under existing, background, background plus project and background plus project (with improvements) for AM and PM peak hour scenarios based on the simulation analysis is shown in Table 11. The effects of the identified improvements on the traffic operations at each of the study intersections are also discussed below.

Table 11
Percentage of Traffic Served – Project Conditions

#	Intersection	Percentage of Traffic Served				
		Existing	Background	Background Plus Project	Background Plus Project (with Improvements)	Increased Difference (With Improvements)
1	Middlefield Rd & Oak Grove Ave	100%	100%	83%	97%	14%
		99%	100%	92%	95%	3%
2	Middlefield Rd & Ravenswood Ave	100%	100%	74%	94%	20%
		100%	100%	90%	93%	3%
3	Middlefield Rd & Ringwood Ave	100%	100%	65%	96%	31%
		100%	100%	86%	91%	5%
4	Middlefield Rd & Seminary Dr	100%	100%	45%	97%	52%
		100%	99%	92%	99%	7%
5	Marcussen Dr & Ravenswood Ave	100%	100%	85%	88%	3%
		99%	100%	93%	95%	2%
6	Pine St & Ravenswood Ave	100%	100%	85%	87%	2%
		99%	100%	94%	96%	2%
7	Laurel St & Ravenswood Ave	100%	100%	89%	89%	0%
		100%	100%	95%	97%	2%
8	W 1st St & Ravenswood Ave	100%	100%	85%	90%	5%
		99%	100%	93%	95%	2%
9	Loop Rd & Ravenswood Ave	100%	100%	85%	87%	2%
		99%	100%	94%	96%	2%

Middlefield Road & Oak Grove Avenue

During the AM peak hour, the analysis shows that with the identified improvements, the Middlefield Road & Oak Grove Avenue intersection would continue to operate at LOS F but with a lower delay. The queuing analysis shows longer vehicular queues for the eastbound and westbound approaches on Oak Grove Avenue and a shorter queue for the southbound approach on Middlefield Road. The percentage of traffic served under background plus project conditions would improve from 83% to 97% with improvements.

During the PM peak hour, the analysis shows that the identified improvements would reduce the intersection delay and improve the LOS from E to a C. The queuing analysis shows shorter northbound and southbound queues on Middlefield Road with the proposed improvements. The percentage of traffic served under background plus project conditions would improve from 92% to 95% with improvements.

Middlefield Road & Ravenswood Avenue

During the AM peak hour, the analysis shows that the identified improvements would reduce the delay at the Middlefield Road & Ravenswood Avenue intersection and improve the LOS from F to

an E. The percentage of traffic served under background plus project conditions would improve from 74% to 94% with improvements.

During the PM peak hour, the analysis shows that the identified improvements would reduce the intersection delay and improve the LOS from E to a C. The percentage of traffic served under background plus project conditions would improve from 90% to 93% with improvements.

Middlefield Road & Ringwood Avenue

At the Middlefield Road & Ringwood Avenue intersection, the project would add approximately 400 vehicles to the northbound left-turn during the AM peak hour and approximately 550 vehicles to the eastbound approach during the PM peak hour. With a new traffic signal identified as a potential improvement at the intersection of Middlefield Road & Seminary Drive, which also provides access to the project, it was assumed that 50% of the project traffic would use the Ringwood Avenue traffic signal and 50% would use the Seminary Drive traffic signal. The improvements also assume that split phasing would be implemented for the eastbound and westbound approaches on Ringwood Avenue.

During the AM peak hour, the analysis shows that with the identified improvements, the intersection would continue to operate at LOS E. The percentage of traffic served under background plus project conditions would improve from 65% to 96% with improvements.

During the PM peak hour, the analysis shows that with the identified improvements, the intersection would continue to operate at LOS F. The queuing analysis shows shorter queues on northbound Middlefield Road and longer queues on southbound Middlefield Road. Overall, the percentage of traffic served under background plus project conditions would improve from 86% to 91% with improvements.

Middlefield Road & Seminary Drive

During the AM peak hour, the analysis shows that with a traffic signal at Middlefield Road & Seminary Drive, the average intersection delay would decrease, and the LOS would improve from F to an E. The queuing analysis shows a significant reduction in vehicular queues for the eastbound and westbound approaches and a longer queue for the southbound approach. The percentage of traffic served under background plus project conditions would improve from 45% to 97% with improvements.

During the PM peak hour, the analysis shows that the identified improvements would reduce the intersection delay, and the LOS would improve from F to a D. The queuing analysis shows a significantly shorter queue for the eastbound approach (project driveway) as vehicles can exit onto Middlefield Road with a traffic signal and longer queues for the northbound and southbound approaches on Middlefield Road as traffic would have to stop due to the traffic signal. Overall, the percentage of traffic served under background plus project conditions would improve from 92% to 99% with improvements.

Marcussen Drive & Ravenswood Avenue

The intersection of Marcussen Drive and Ravenswood Avenue would continue to operate at acceptable LOS C or better during both the AM and PM peak hours. The percentage of traffic served under background plus project conditions with improvements would increase from 85% to 88% and from 93% to 95% during the AM and PM peak hours, respectively.

Pine Street/Project Driveway & Ravenswood Avenue

During the AM peak hour, the analysis shows that with the identified improvements, including exclusive eastbound and westbound left-turn lanes on Ravenswood Avenue, vehicles on southbound Pine Street would experience longer delays (LOS E) due to the improved traffic throughput on Ravenswood Avenue. The percentage of traffic served under background plus project conditions would improve from 85% to 87% with improvements.

During the PM peak hour, the analysis shows that with the identified improvements, the intersection would continue to operate at LOS F. The percentage of traffic served under background plus project conditions would improve from 94% to 96% with improvements.

Laurel Street & Ravenswood Avenue

The analysis shows that with the identified improvements, the intersection of Laurel Street and Ravenswood Avenue would continue to operate at LOS D during the AM and PM peak hours. During the PM peak hour, the percentage of traffic served under background plus project conditions would improve from 95% to 97% with improvements.

W 1st Street/Project Driveway & Ravenswood Avenue

The intersection of W 1st Street/Project Driveway and Ravenswood Avenue would continue to operate at acceptable LOS C or better during both the AM and PM peak hours with the identified improvements. The percentage of traffic served under background plus project conditions with improvements would increase from 85% to 90% and from 93% to 95% during the AM and PM peak hours, respectively.

Loop Road/Project Driveway & Ravenswood Avenue

During the AM peak hour, the analysis shows that with the identified improvements, including an exclusive westbound left-turn lane on Ravenswood Avenue, the LOS would improve from D to a C. The percentage of traffic served under background plus project conditions would improve from 85% to 87% with improvements.

During the PM peak hour, the analysis shows that the identified improvements would reduce the intersection delay and the LOS would improve from F to a D. Overall, the percentage of traffic served under background plus project conditions would improve from 94% to 96% with improvements.

Background Plus Variant Conditions

Under background plus variant conditions, access to the proposed project site would be provided via two signalized driveways along Middlefield Road and five unsignalized driveways along Ravenswood Avenue. The variant was analyzed with all improvements that were analyzed for the project conditions discussed in the previous section. The project driveways were analyzed with the following characteristics. The variant lane configurations are shown on Figure 7.

- **Middlefield Road & Ringwood Avenue** – The project driveway is proposed to be the west leg of the signalized intersection. The lane configurations of the intersection would remain the same as existing conditions. The signal was analyzed with the same timing and phasing as background plus project (with improvements).
- **Middlefield Road & Seminary Drive** – The project driveway is proposed to be the west leg of the signalized intersection. The lane configurations and signal timing would be the same as background plus project (with improvements).

- W 1st Street & Ravenswood Avenue – The project driveway is proposed to be the south leg of the unsignalized intersection as a stop-controlled approach. The project driveway approach would have one right-turn lane and would be restricted to right-in-right-out only movements.
- Loop Road & Ravenswood Avenue – Two project driveways would be connected via Loop Road and would intersect Ravenswood Avenue east and west of Marcussen Drive. The driveway approaches are proposed to be the south legs of the unsignalized intersections as stop-controlled approaches. The project driveway approaches would each have one shared left-right lane and the driveways would allow all turning movements.
- R1 Driveways & Ravenswood Avenue – Two project driveways would be connected in a similar fashion as Loop Road and would intersect Ravenswood Avenue east and west of Pine Street. The driveway approaches are proposed to be the south legs of the unsignalized intersections. The western driveway would have one inbound lane and be restricted to right-in only. The eastern driveway would have one stop-controlled approach with one right-turn lane and be restricted to right-out only.

Intersection Turning Movements Volumes

Background plus variant conditions reflect the projected traffic volumes with the completion of the variant and future developments. Variant-generated traffic was added to the background condition traffic volumes. The background plus variant traffic volumes are shown on Figure 8.

Parkline Project Traffic Operations Analysis

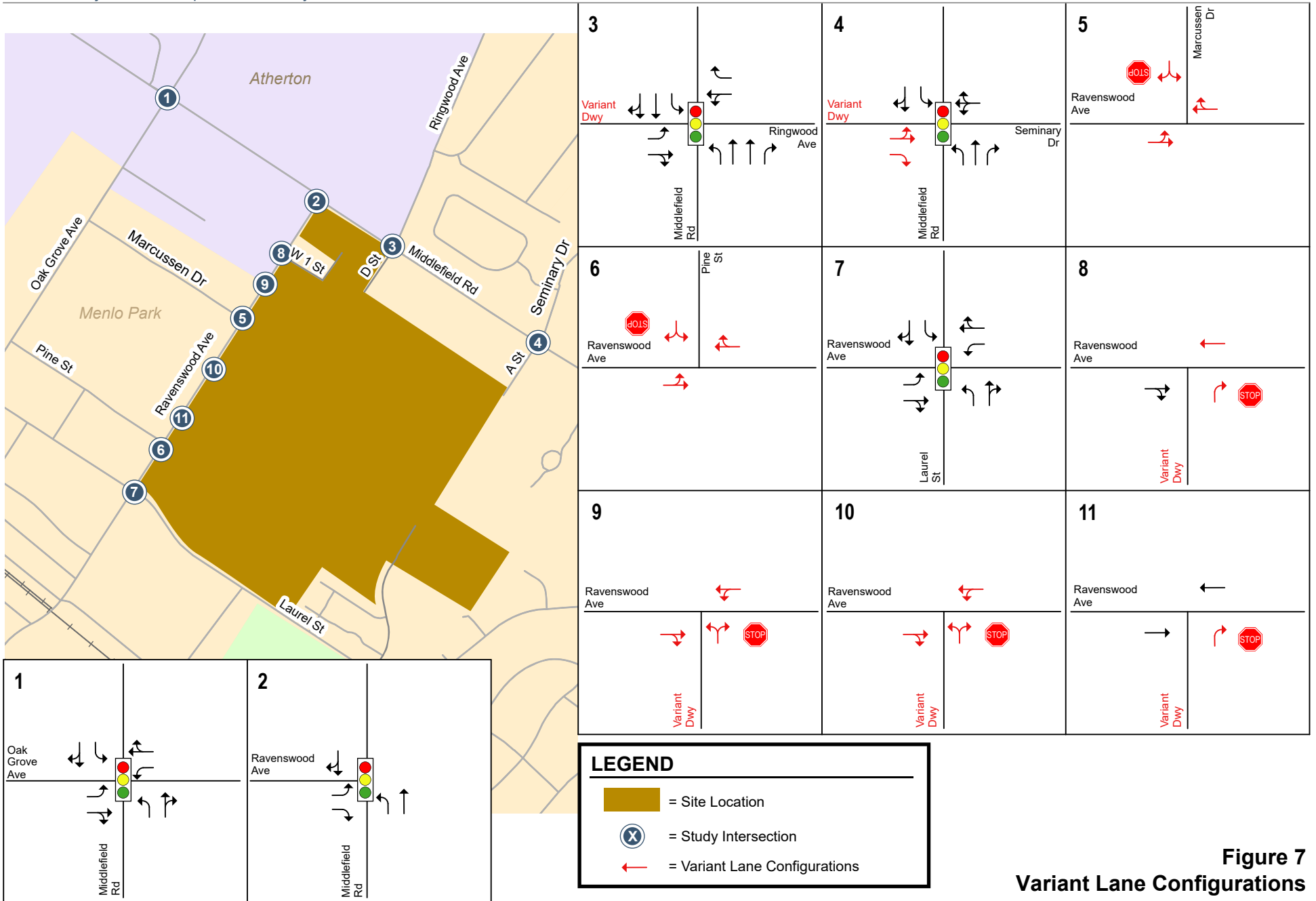


Figure 7
Variant Lane Configurations

Parkline Project Traffic Operations Analysis

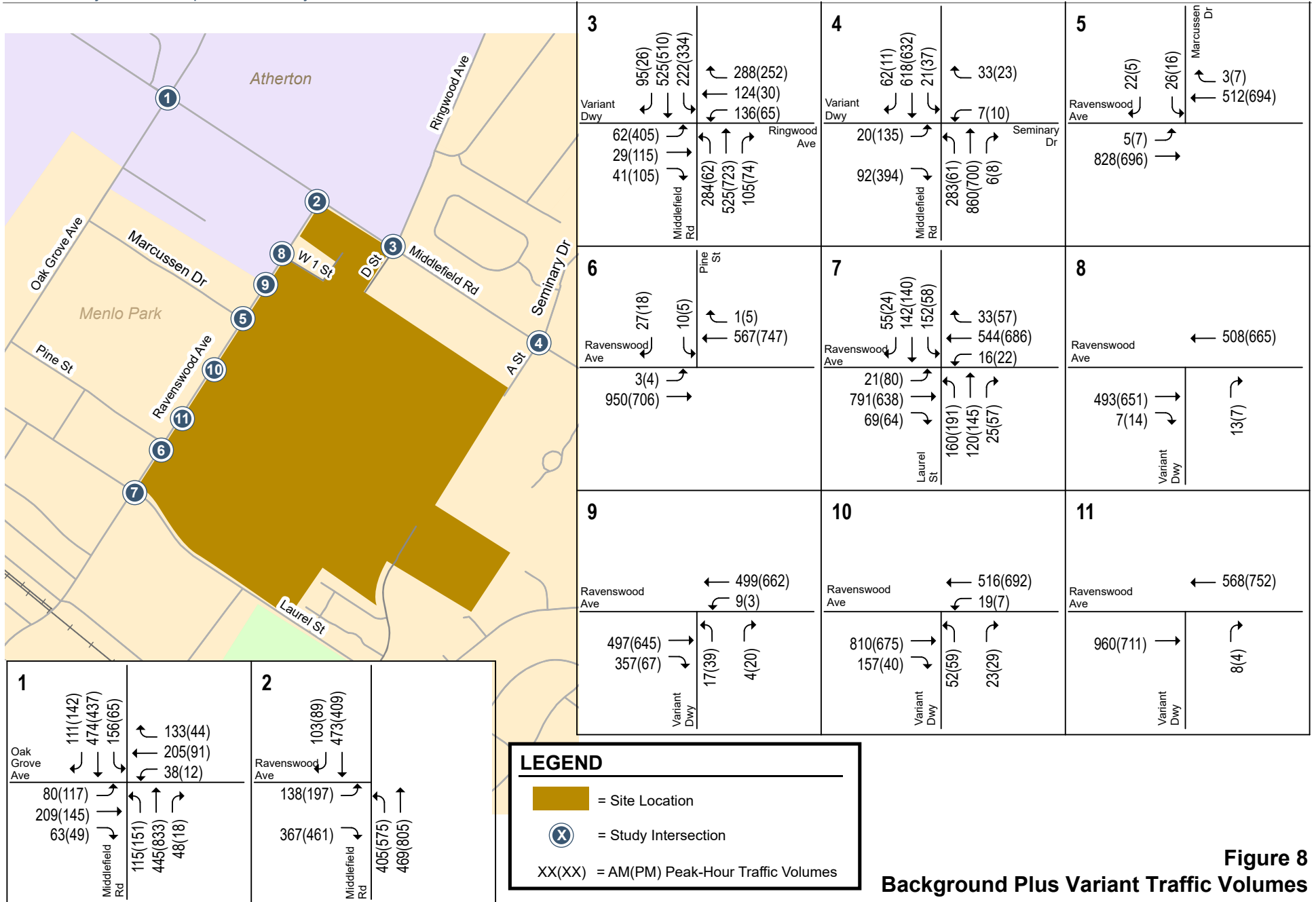


Figure 8
Background Plus Variant Traffic Volumes

Background Plus Variant Conditions Level of Service Analysis

Table 12 shows the average delay and the corresponding LOS during the AM and PM peak hour periods under background plus variant conditions.

Table 12
Background Plus Variant Conditions Level of Service Analysis

#	Intersection	Control	Peak Hour	Background + Project With Improvements		Background + Variant Conditions	
				Avg. Delay ¹	LOS	Avg. Delay ¹	LOS
1	Middlefield Rd & Oak Grove Ave	Signal	AM	101.3	F	91.0	F
			PM	29.2	C	29.8	C
2	Middlefield Rd & Ravenswood Ave	Signal	AM	57.5	E	52.0	D
			PM	31.8	C	31.7	C
3	Middlefield Rd & Ringwood Ave/Project Dwy	Signal	AM	71.6	E	68.2	E
			PM	OVR	F	OVR	F
4	Middlefield Rd & Seminary Dr/Project Dwy	Signal	AM	63.2	E	60.1	E
			PM	49.2	D	46.9	D
5	Marcussen Dr & Ravenswood Ave	OWSC	AM	14.9	B	24.7	C
			PM	24.0	C	32.1	D
6	Pine St & Ravenswood Ave	OWSC	AM	39.8	E	67.5	F
			PM	58.1	F	OVR	F
7	Laurel St & Ravenswood Ave	Signal	AM	38.7	D	37.0	D
			PM	46.6	D	45.6	D
8	W 1st St/Projecty Dwy & Ravenswood Ave	OWSC	AM	8.1	A	11.0	B
			PM	21.5	C	24.0	C
9	East Loop Rd & Ravenswood Ave	OWSC	AM	-	-	20.9	C
			PM	-	-	31.8	D
10	West Loop Rd & Ravenswood Ave	OWSC	AM	-	-	40.0	E
			PM	-	-	OVR	F
11	East R1 Dwy & Ravenswood Ave	OWSC	AM	-	-	12.4	B
			PM	-	-	5.7	A

Notes:

Avg Delay = Average Delay in seconds; LOS = Level of Service; OWSC = One Way Stop Control; OVR = Delay exceeds 120 seconds

¹ At signalized intersections, delay shown is the weighted average delay for all vehicles entering the intersection calculated using the calibrated SimTraffic model. At unsignalized intersections, the delay is shown for the worst stop controlled approach or uncontrolled left-turn movement, whichever is greater.

Bold indicates LOS "E" or "F".

The results show that the following four study intersections would operate at LOS E or F during at least one of the peak hours under background plus variant conditions.

- Middlefield Road & Oak Grove Avenue (AM)
- Middlefield Road & Ringwood Avenue (AM & PM)
- Middlefield Road & Seminary Drive (AM)
- Pine Street & Ravenswood Avenue (AM & PM)
- West Loop Road & Ravenswood Avenue (AM & PM)

At the Pine Street and Ravenswood Avenue intersection, the analysis shows that the intersection delay would increase, and the LOS would decline from E to an F during the AM peak hour under background plus variant conditions compared to project conditions. During the PM peak hour, the analysis shows that the intersection delay would increase, and the LOS would continue to operate at LOS F. The increase in delay at the Ravenswood/Pine intersection under the variant could be attributed to the additional driveways provided in close proximity along Ravenswood Avenue.

Under background plus variant conditions, there would be additional driveways on Ravenswood Avenue. The intersection at the East Loop Road driveway and Ravenswood Avenue would operate at LOS C during the AM peak hour and LOS D during the PM peak hour. The intersection at the West Loop Road driveway and Ravenswood Avenue would operate at LOS E during the AM peak hour and LOS F during the PM peak hour. The intersection at the East R1 driveway and Ravenswood Avenue would operate at LOS B during the AM peak hour and LOS A during the PM peak hour.

Background Plus Variant Conditions Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis. The queues (measured in feet per lane) were calculated by the microscopic simulation model. Table 13 shows the 95th percentile and average queues at all intersection movements during the AM and PM peak hour periods under background plus variant conditions. A comparison of the 95th percentile and average queues for existing, background, background plus project, background plus project (with improvements), and background plus variant is illustrated on Figures 9 – 16.

Table 13
Background Plus Variant Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Variant Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
1	Middlefield Rd & Oak Grove Ave	EBL	AM	245	203	89
			PM		181	99
		EBTR	AM	425	572	231
			PM		234	143
		WBL	AM	45	81	36
			PM		42	0
		WBTR	AM	130	837	341
			PM		170	96
		NBL	AM	130	175	97
			PM		164	84
NBTR	AM	985	475	265		
	PM		719	362		
SBL	AM	150	200	110		
	PM		143	58		
SBTR	AM	1000	2117	987		
	PM		407	227		
2	Middlefield Rd & Ravenswood Ave	EBL	AM	355	319	156
			PM		378	206
		EBR	AM	125	222	94
			PM		242	117
		NBL	AM	435	440	306
			PM		457	292
		NBT	AM	435	98	16
			PM		443	212
		SBTR	AM	985	1138	575
			PM		720	389

Notes:

NB = northbound, SB = southbound, EB = eastbound, WB = westbound

L = left-turn movement, T = through movement, R = right-turn movement

¹ Based on 95th percentile queues reported by SimTraffic software.

² Based on average queues reported by SimTraffic software.

Bold indicates that the queue length exceeds the storage capacity.

Table 13 (continued)
Background Plus Variant Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Variant Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
3	Middlefield Rd & Ringwood Ave/Project Driveway	EBL	AM	145	134	56
			PM		1725	1612
		EBTR	AM	145	200	63
			PM		1879	1580
		WBLT	AM	250	287	195
			PM		159	89
		WBR	AM	250	194	107
			PM		259	151
		NBL	AM	200	236	186
			PM		210	94
		NBT1	AM	885	1208	706
			PM		810	406
		NBT2	AM	885	935	670
			PM		786	491
NBR	AM	150	203	104		
	PM		188	73		
SBL	AM	160	218	156		
	PM		187	169		
SBT	AM	450	509	360		
	PM		461	328		
SBTR	AM	320	610	350		
	PM		598	320		
4	Middlefield Rd & Seminary Dr/Project Driveway	EBLT	AM	250	277	67
			PM		651	288
		EBR	AM	90	103	48
			PM		131	110
		WBLTR	AM	250	88	34
			PM		44	17
		NBL	AM	325	416	279
			PM		311	114
		NBT	AM	360	2156	861
			PM		929	511
		NBR	AM	105	43	0
			PM		42	0
		SBL	AM	100	66	24
			PM		91	38
SBTR	AM	885	758	341		
	PM		1028	545		

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.

Table 13 (continued)
Background Plus Variant Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Variant Conditions	
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²
5	Marcussen Dr & Ravenswood Ave	EBL	AM	-	11	-
			PM	-	21	-
		EBT	AM	730	116	15
			PM	730	136	21
		WBTR	AM	760	8	-
			PM	760	87	-
		SBLR	AM	985	69	33
			PM	985	52	20
6	Pine St/Project Driveway & Ravenswood Ave	EBL	AM	-	0	0
			PM	-	16	0
		EBT	AM	210	33	0
			PM	210	27	0
		WBTR	AM	730	105	64
			PM	730	89	60
		SBLR	AM	1000	102	39
			PM	1000	110	41
7	Laurel St & Ravenswood Ave	EBL	AM	125	66	19
			PM	125	119	65
		EBTR	AM	365	789	466
			PM	365	983	475
		WBL	AM	100	57	16
			PM	100	58	19
		WBTR	AM	220	164	135
			PM	220	155	136
		NBL	AM	115	141	96
			PM	115	151	100
		NBTR	AM	1250	353	154
			PM	1250	705	396
		SBL	AM	130	160	103
			PM	130	156	76
SBTR	AM	480	289	155		
	PM	480	350	200		

Notes:

NB = northbound, SB = southbound, EB = eastbound, WB = westbound

L = left-turn movement, T = through movement, R = right-turn movement

¹ Based on 95th percentile queues reported by SimTraffic software.

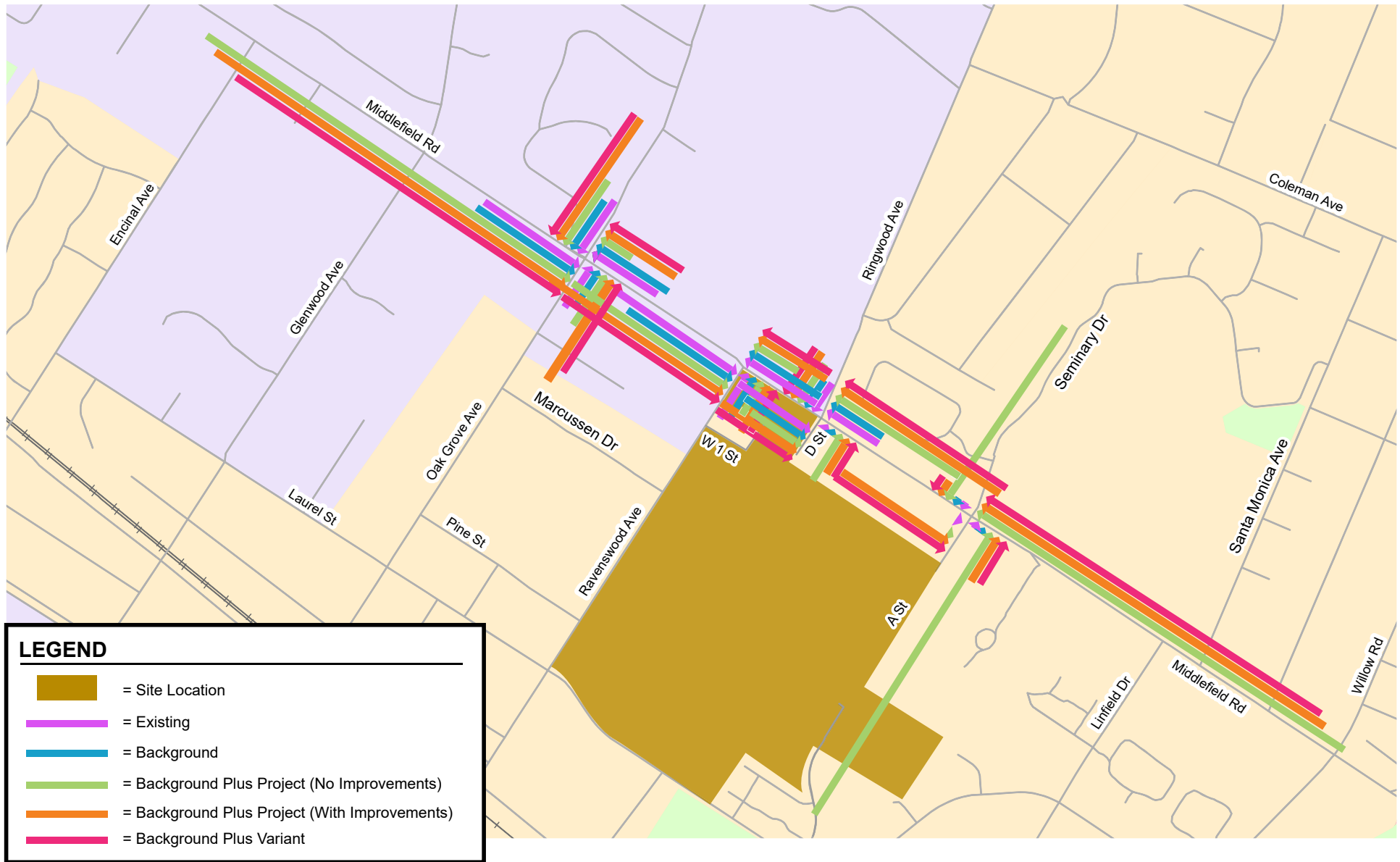
² Based on average queues reported by SimTraffic software.

Bold indicates that the queue length exceeds the storage capacity.

Table 13 (continued)
Background Plus Variant Conditions Queuing Analysis

#	Intersection	Movement	Peak Period	Storage Length (ft/ln)	Background Plus Variant Conditions			
					95th Percentile Queue (ft/ln) ¹	Average Queue (ft/ln) ²		
8	W 1st St/Project Driveway & Ravenswood Ave	EBTR	AM	365	103	17		
			PM		170	43		
		WBT	AM	365	-	-		
			PM		39	0		
		NBR	AM	255	39	0		
			PM		26	0		
9	East Loop Rd & Ravenswood Ave	EBTR	AM	-	58	0		
			PM		84	16		
		WBL	AM	-	26	0		
			PM		0	0		
		WBT	AM	-	-	-		
			PM		81	0		
		NBLR	AM	-	45	16		
			PM		87	40		
		10	West Loop Rd & Ravenswood Ave	EBTR	AM	-	68	0
					PM		67	0
				WBL	AM	-	40	0
					PM		21	0
WBT	AM			-	112	22		
	PM				373	148		
NBLR	AM			-	113	52		
	PM				435	180		
11	East R1 Dwy & Ravenswood Ave	EBT	AM	-	19	0		
			PM		0	0		
		WBT	AM	-	329	146		
			PM		366	259		
		NBR	AM	-	27	0		
			PM		20	0		

Notes:
 NB = northbound, SB = southbound, EB = eastbound, WB = westbound
 L = left-turn movement, T = through movement, R = right-turn movement
¹ Based on 95th percentile queues reported by SimTraffic software.
² Based on average queues reported by SimTraffic software.
Bold indicates that the queue length exceeds the storage capacity.



Note: Queue lengths are approximate.

Figure 9
Middlefield Road Corridor AM Peak Hour – 95th Percentile Queues

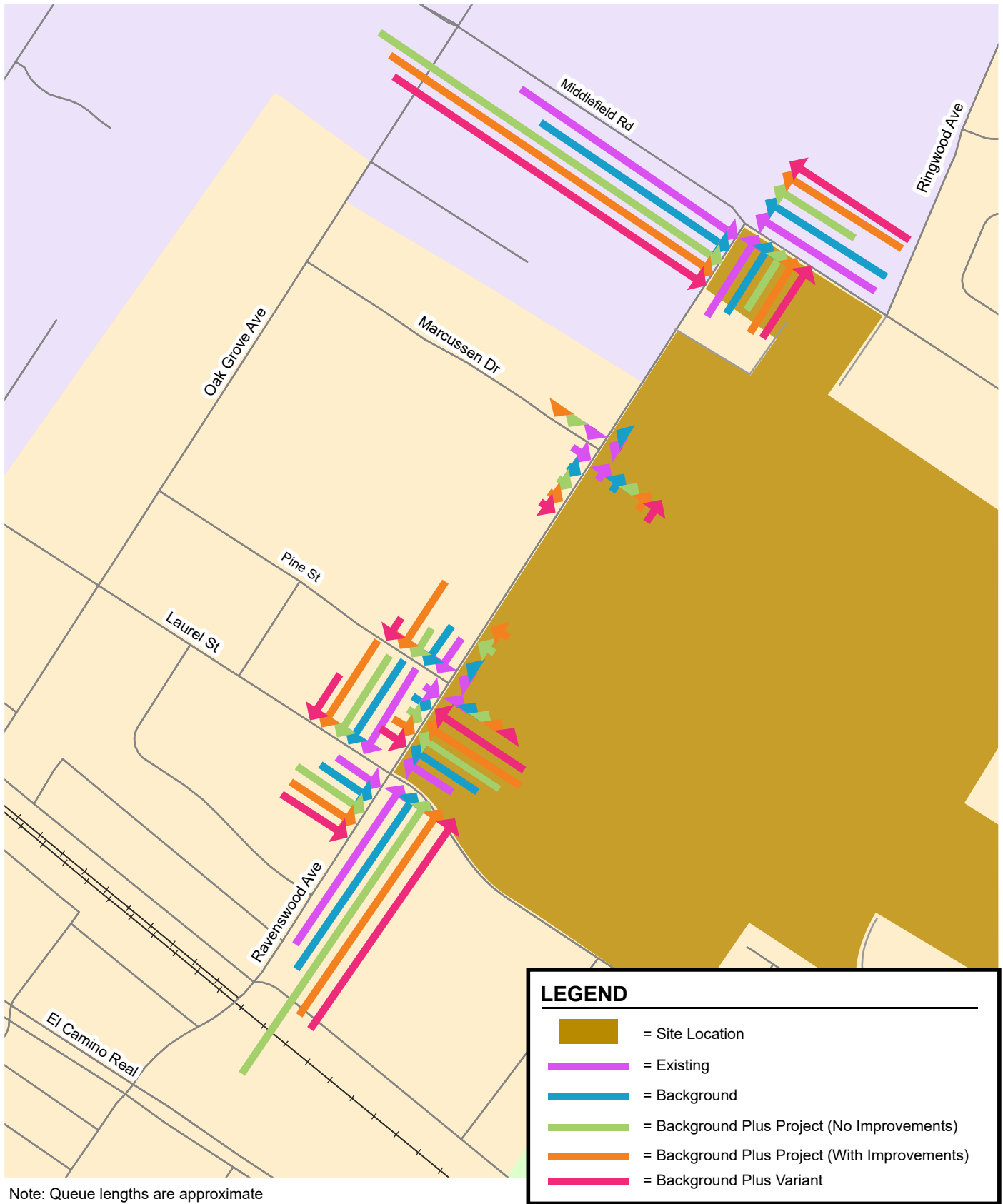
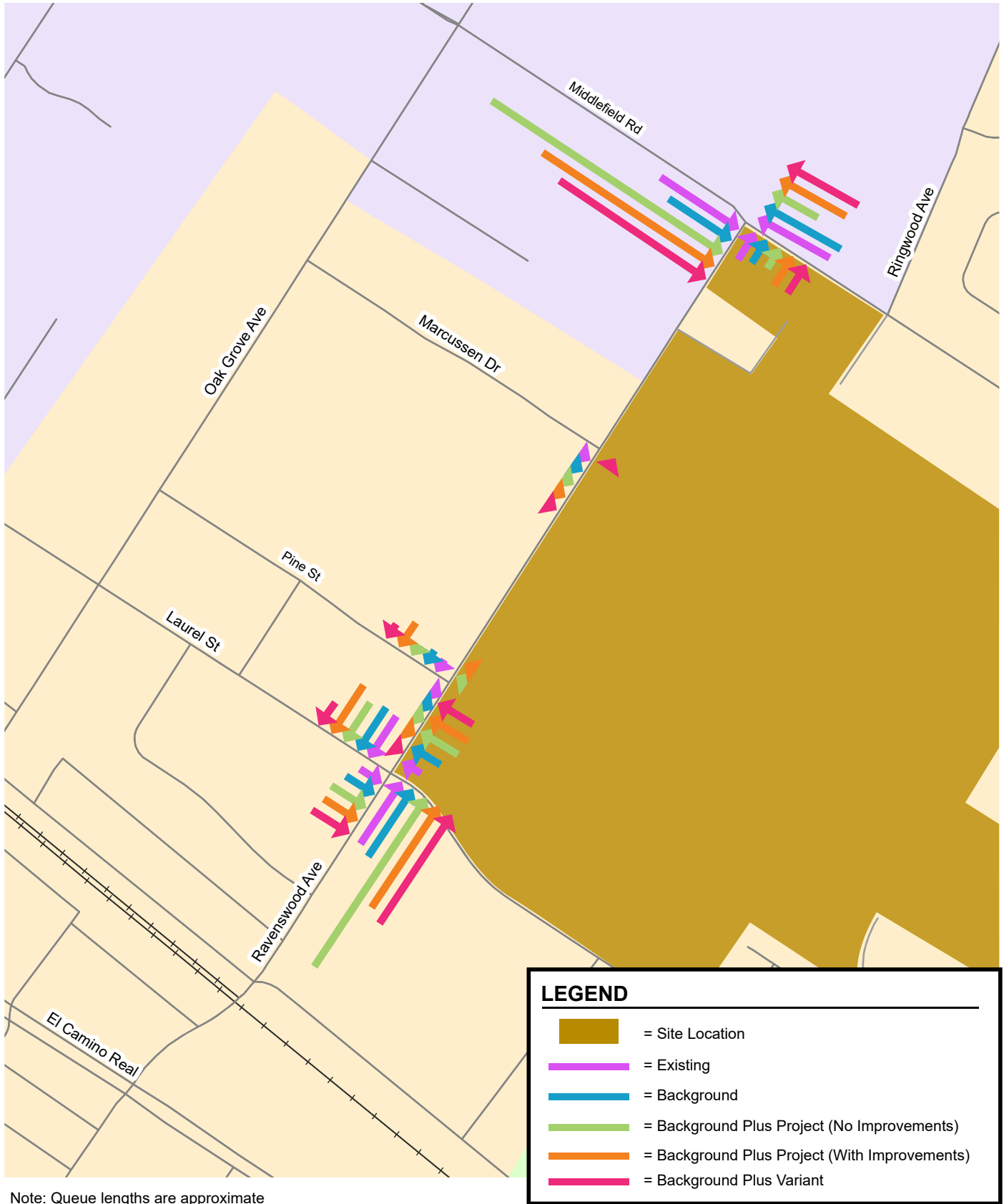


Figure 10
Ravenswood Avenue Corridor AM Peak Hour – 95th Percentile Queues



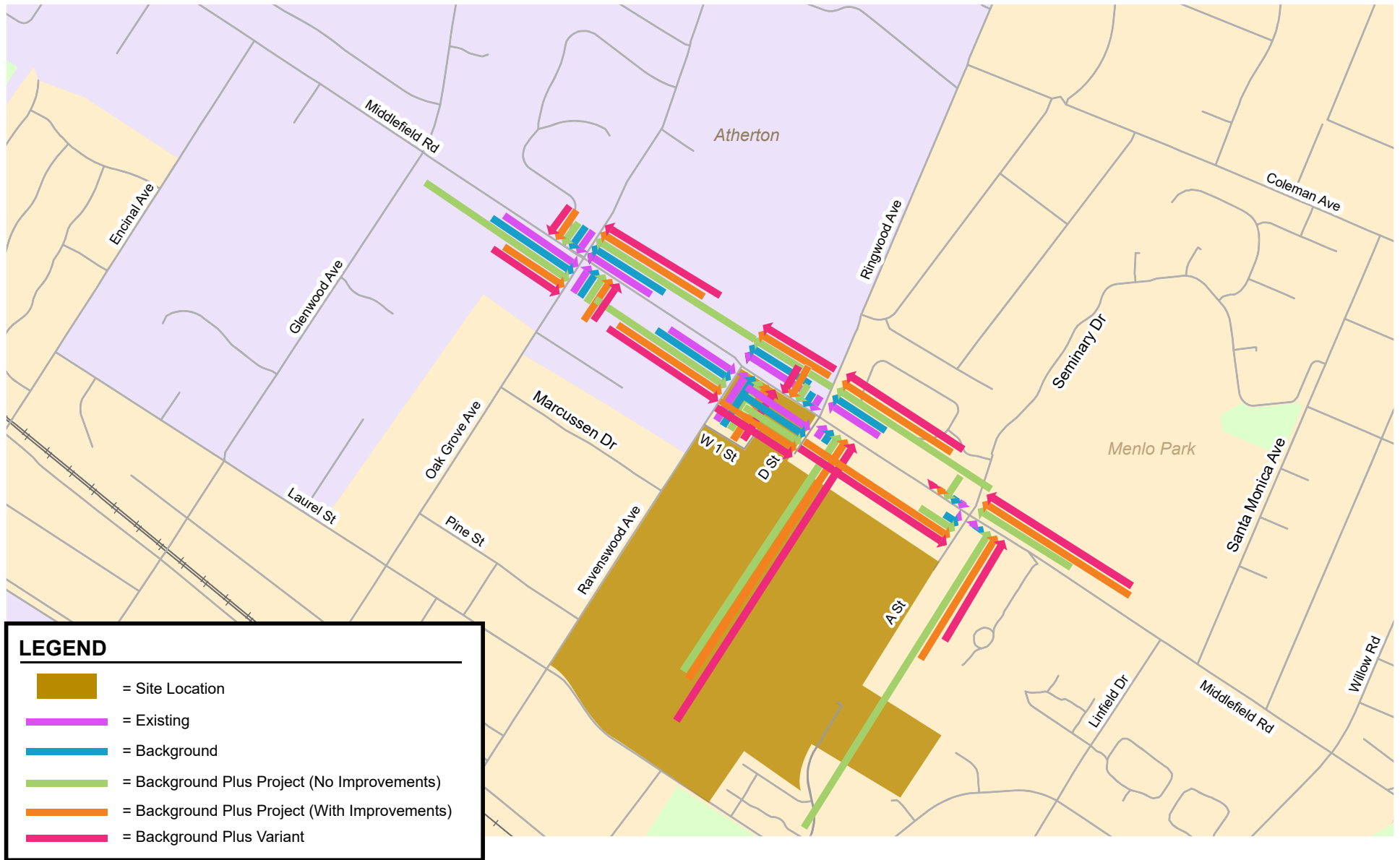
Note: Queue lengths are approximate.

Figure 11
Middlefield Road Corridor AM Peak Hour – Average Queues



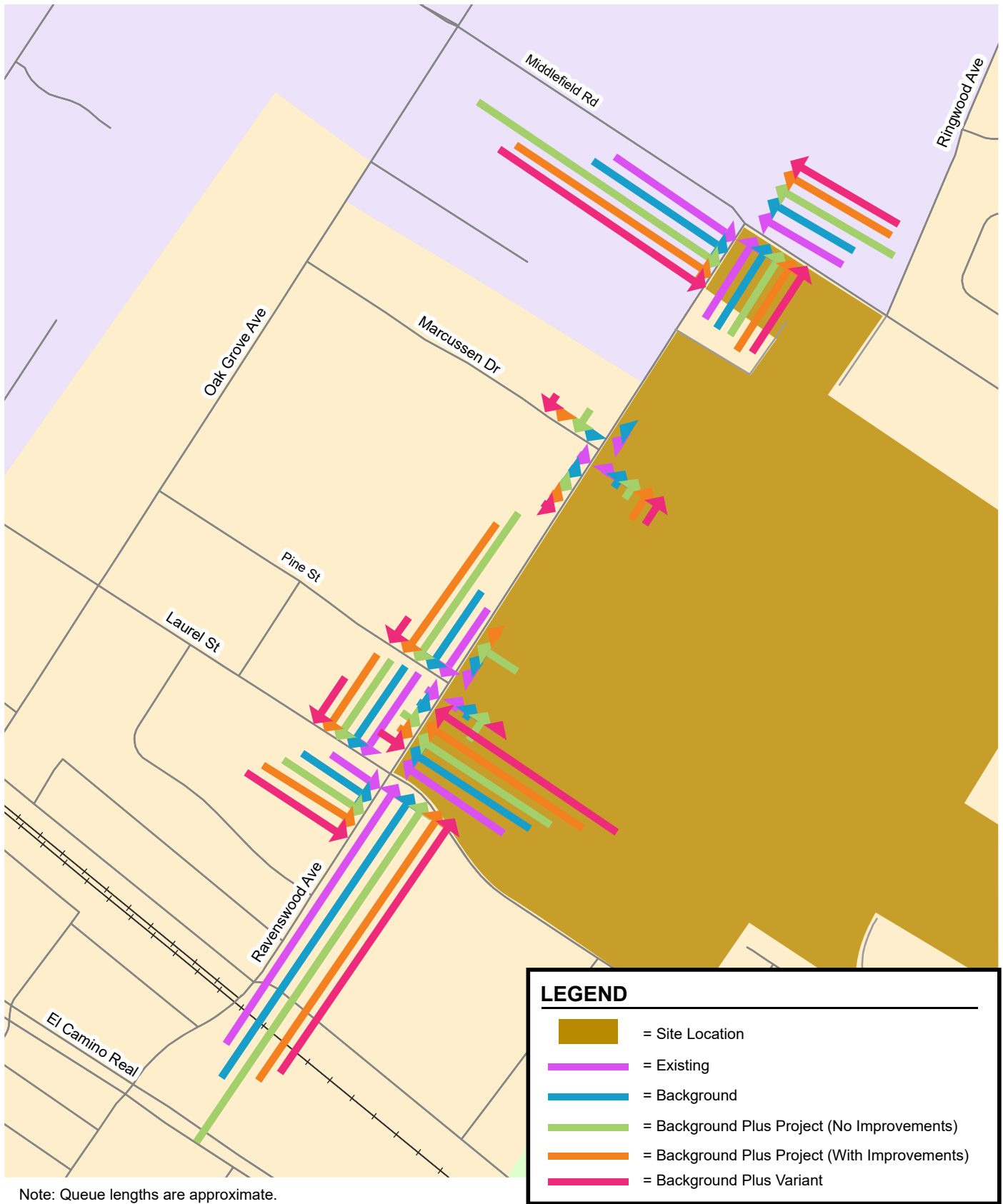
Note: Queue lengths are approximate

Figure 12
Ravenswood Avenue Corridor AM Peak Hour – Average Queues



Note: Queue lengths are approximate.

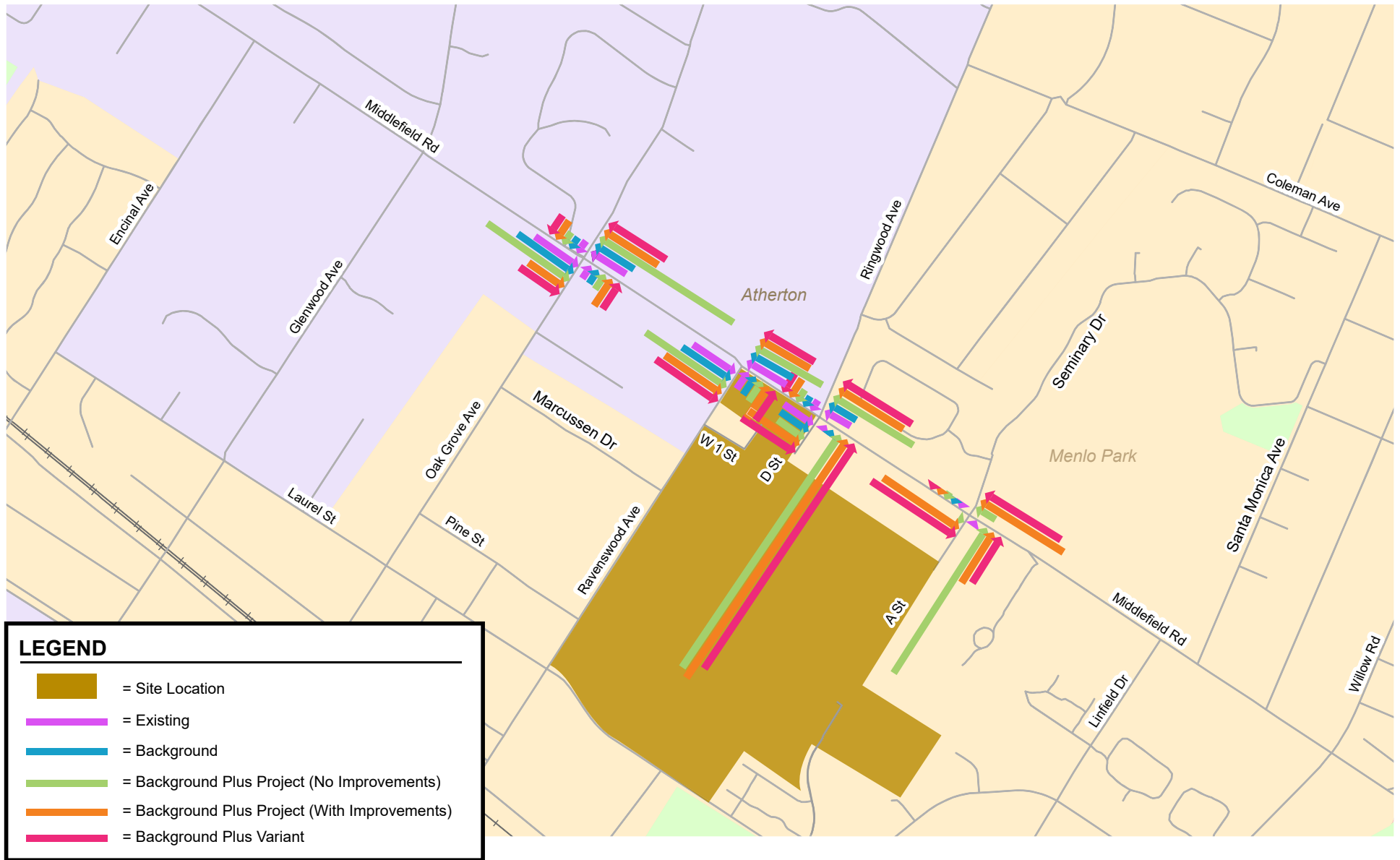
Figure 13
Middlefield Road Corridor PM Peak Hour – 95th Percentile Queues



Note: Queue lengths are approximate.

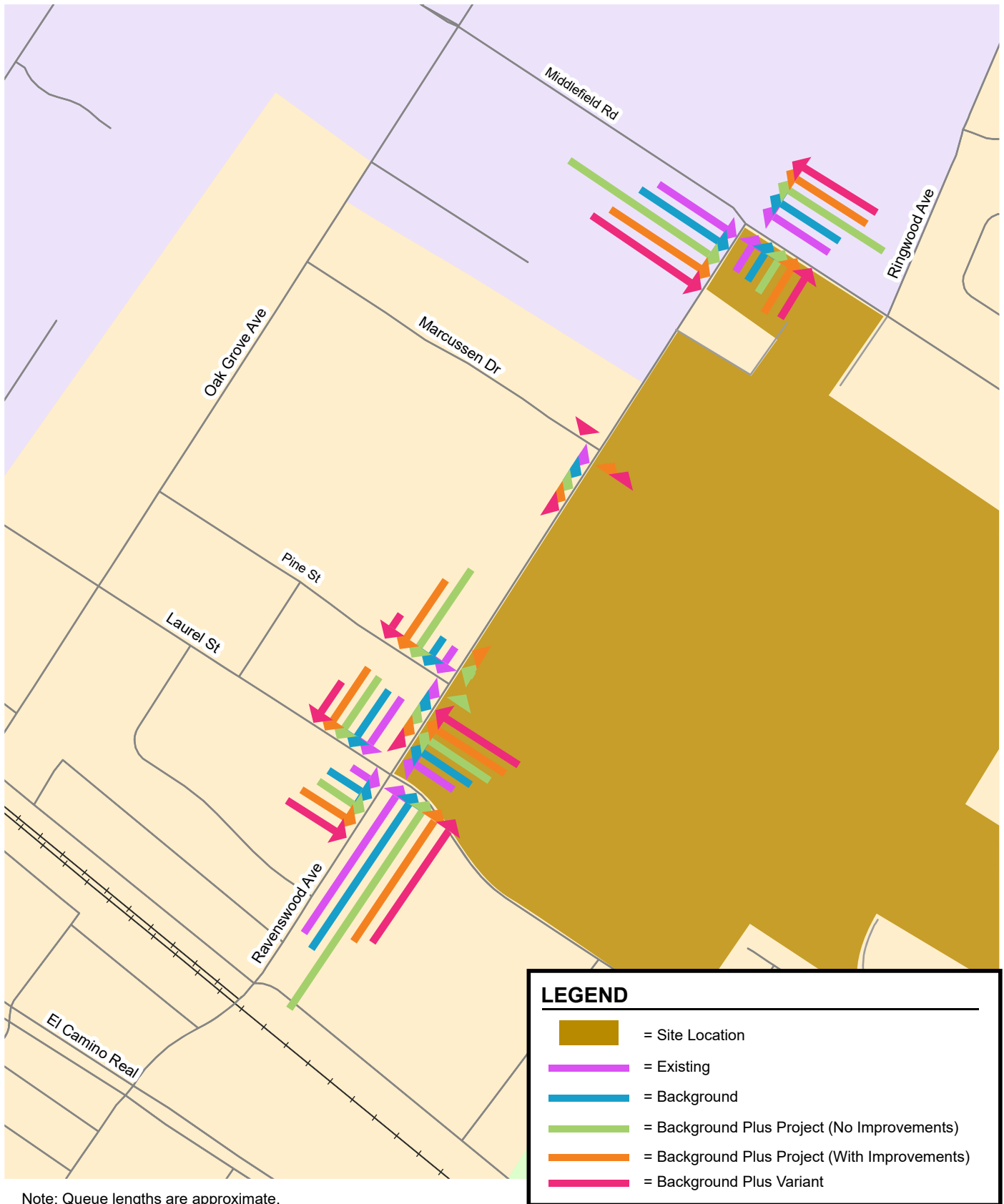
Figure 14

Ravenswood Avenue Corridor PM Peak Hour – 95th Percentile Queues



Note: Queue lengths are approximate.

Figure 15
Middlefield Road Corridor PM Peak Hour – Average Queues



Note: Queue lengths are approximate.

LEGEND

- = Site Location
- = Existing
- = Background
- = Background Plus Project (No Improvements)
- = Background Plus Project (With Improvements)
- = Background Plus Variant

Figure 16
Ravenswood Avenue Corridor PM Peak Hour – Average Queues

Variant Effects

A comparison of the percentage of traffic served at each intersection under background plus project (with improvements) and background plus variant for the AM and PM peak hour scenarios based on the simulation analysis is shown in Table 14. As shown in this table, the peak hour traffic operations under background plus variant conditions would be similar or marginally better compared to background plus project (with improvements) conditions.

Table 14
Percentage of Traffic Served – Variant Conditions

#	Intersection	Control	Peak Hour	Percentage of Traffic Served		
				Background + Project With Improvements	Background + Variant	Difference
1	Middlefield Rd & Oak Grove Ave	Signal	AM	97%	97%	0%
			PM	95%	99%	4%
2	Middlefield Rd & Ravenswood Ave	Signal	AM	94%	94%	0%
			PM	93%	97%	4%
3	Middlefield Rd & Ringwood Ave/Project Dwy	Signal	AM	96%	96%	0%
			PM	91%	95%	4%
4	Middlefield Rd & Seminary Dr/Project Dwy	Signal	AM	97%	97%	0%
			PM	99%	100%	1%
5	Marcussen Dr & Ravenswood Ave	OWSC	AM	88%	89%	1%
			PM	95%	98%	3%
6	Pine St & Ravenswood Ave	OWSC	AM	87%	88%	1%
			PM	96%	98%	2%
7	Laurel St & Ravenswood Ave	Signal	AM	89%	89%	0%
			PM	97%	99%	2%
8	W 1st St/Projecy Dwy & Ravenswood Ave	OWSC	AM	90%	92%	2%
			PM	95%	97%	2%
9	East Loop Rd & Ravenswood Ave	OWSC	AM	-	89%	-
			PM	-	97%	-
10	West Loop Rd & Ravenswood Ave	OWSC	AM	-	88%	-
			PM	-	98%	-
11	East R1 Dwy & Ravenswood Ave	OWSC	AM	-	89%	-
			PM	-	98%	-

Conclusions

A simulation analysis of traffic operations was conducted for the proposed Parkline project in Menlo Park. The project proposes to redevelop the approximately 63-acre site to include 550 new housing units (including affordable housing), 1.1 million s.f. of replacement office and R&D uses, and new community-oriented retail space. Access to the project site would be provided via driveways on Middlefield Road at Seminary Drive and Ringwood Avenue and on Ravenswood Avenue at W 1st Street, Pine Street/4th Street, and Loop Road.

The proposed project is expected to generate 1,368 AM peak hour trips and 1,316 PM peak hour trips after applying a 25% TDM reduction. An evaluation of traffic operations on Middlefield Road and Ravenswood Avenue near the project site showed that the project would contribute to significant traffic congestion along Middlefield Road. The following improvements were identified to improve traffic operations along Middlefield Road and Ravenswood Avenue:

- A new traffic signal at Middlefield Road & Seminary Drive with protected north/south phasing and split east/west phasing and optimized cycle length.
- Extension of the northbound left-turn storage length at Middlefield Road & Seminary Drive from 50 feet to 325 feet.
- Adding forced-turn islands on the east and west approaches of the Middlefield Road & Seminary Drive intersection to eliminate through movements and prevent future cut-through traffic on Seminary Drive.
- Changing the east/west phasing at Middlefield Road & Ringwood Avenue from permitted to split phasing and modifying the signal timings at Middlefield Road & Ravenswood Avenue. The analysis assumed half cycle length at the Middlefield/Ravenswood intersection during the PM peak hour.
- Adding a center median with left-turn pockets or two-way left-turn lane along Ravenswood Avenue between the proposed project driveway at W 1st Street and Laurel Street.

With these improvements, the analysis showed that traffic operations would improve significantly along Middlefield Road near the project site.

A simulation analysis was also conducted for the proposed variant which would incorporate the existing church site into the project, relocate some housing units to the Middlefield Road corner of the project site, and reconfigure the site circulation so that the majority of residential vehicles would need to use the office/R&D driveways. In addition to the proposed driveways on Middlefield Road listed above, access to the project site would be provided on Ravenswood Avenue at W 1st Street and four new driveways between Laurel Street and W 1st Street. The variant was analyzed with all the improvements discussed above.

The proposed variant is expected to generate 1,441 AM peak hour trips and 1,393 PM peak hour trips after applying a 25% TDM reduction. Based on the analysis, the peak hour traffic operations under background plus variant conditions would be similar to background plus project (with improvements) conditions.

Attachment A
Intersection Traffic Counts



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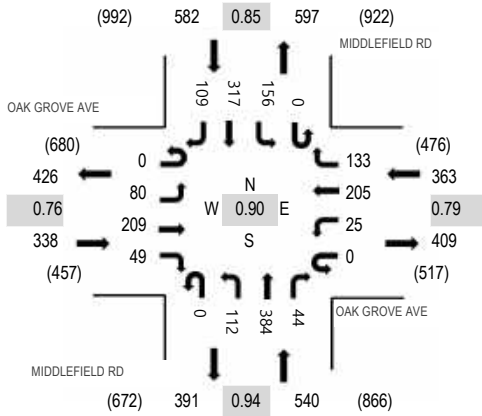
Location: 1 MIDDLEFIELD RD & OAK GROVE AVE AM

Date: Wednesday, May 24, 2023

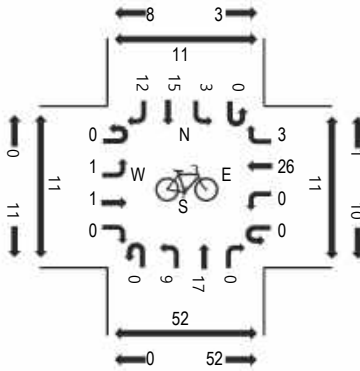
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

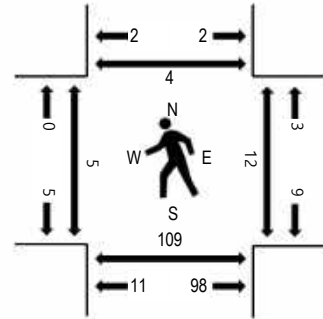
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	OAK GROVE AVE Eastbound				OAK GROVE AVE Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
	7:00 AM	0	11	6	5	0	1	13	3	0	17	34	1	0	4	35			21	151	1,047	0
7:15 AM	0	8	12	4	0	0	8	9	0	20	42	0	0	7	53	23	186	1,402	0	0	1	0
7:30 AM	0	9	14	6	0	0	19	11	0	19	93	4	0	17	73	31	296	1,704	0	0	2	0
7:45 AM	0	32	29	8	0	2	45	35	0	27	102	3	0	22	71	38	414	1,823	4	1	9	0
8:00 AM	0	17	77	17	0	7	71	37	0	26	106	11	0	49	63	25	506	1,744	1	2	42	2
8:15 AM	0	18	83	10	0	11	42	42	0	32	90	21	0	59	70	10	488		0	7	39	2
8:30 AM	0	13	20	14	0	5	47	19	0	27	86	9	0	26	113	36	415		0	2	19	0
8:45 AM	0	19	19	6	0	2	34	13	0	20	73	3	0	21	96	29	335		0	1	4	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	1	0	0	0	0	0	0	1	1	0	0	4	0	8
Lights	0	75	208	47	0	25	204	132	0	111	375	43	0	154	308	105	1,787
Mediums	0	4	1	1	0	0	1	1	0	1	8	0	0	2	5	4	28
Total	0	80	209	49	0	25	205	133	0	112	384	44	0	156	317	109	1,823



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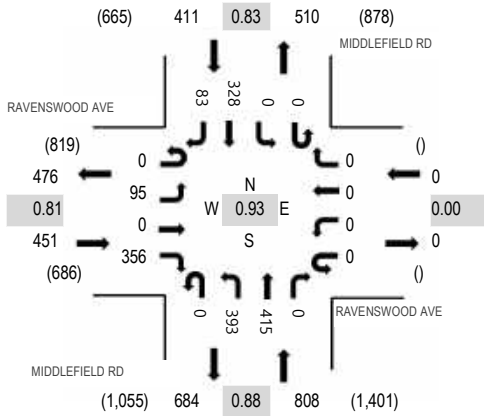
Location: 2 MIDDLEFIELD RD & RAVENSWOOD AVE AM

Date: Wednesday, May 24, 2023

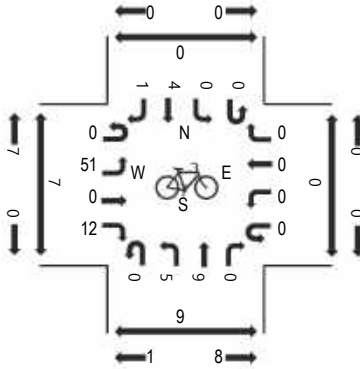
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

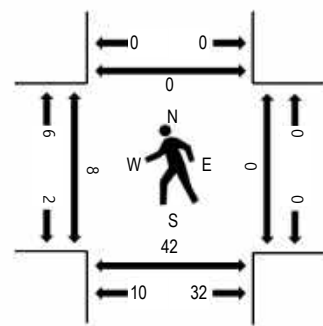
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD AVE Eastbound				RAVENSWOOD AVE Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	9	0	40	0	0	0	0	0	50	43	0	0	0	23	17	182	1,082	0	0	0	0
7:15 AM	0	6	0	38	0	0	0	0	0	66	55	0	0	0	41	16	222	1,348	0	0	0	0
7:30 AM	0	22	0	49	0	0	0	0	0	66	94	0	0	0	51	19	301	1,567	0	0	3	0
7:45 AM	0	15	0	56	0	0	0	0	0	95	124	0	0	0	73	14	377	1,655	3	0	4	0
8:00 AM	0	20	0	106	0	0	0	0	0	103	134	0	0	0	71	14	448	1,670	6	0	8	0
8:15 AM	0	30	0	110	0	0	0	0	0	102	109	0	0	0	72	18	441		1	0	23	0
8:30 AM	0	28	0	66	0	0	0	0	0	87	84	0	0	0	97	27	389		1	0	8	0
8:45 AM	0	17	0	74	0	0	0	0	0	101	88	0	0	0	88	24	392		0	0	3	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	4	10
Lights	0	86	0	347	0	0	0	0	0	373	409	0	0	0	322	74	1,611
Mediums	0	7	0	7	0	0	0	0	0	19	5	0	0	0	6	5	49
Total	0	95	0	356	0	0	0	0	0	393	415	0	0	0	328	83	1,670



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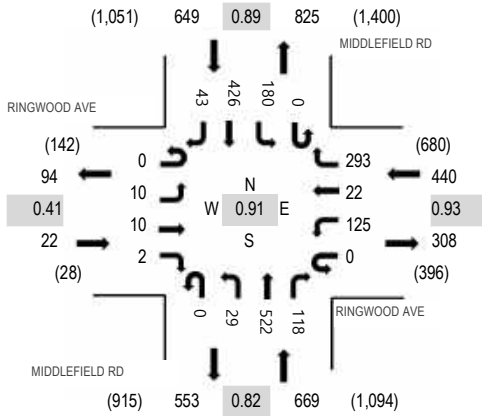
Location: 3 MIDDLEFIELD RD & RINGWOOD AVE AM

Date: Wednesday, May 24, 2023

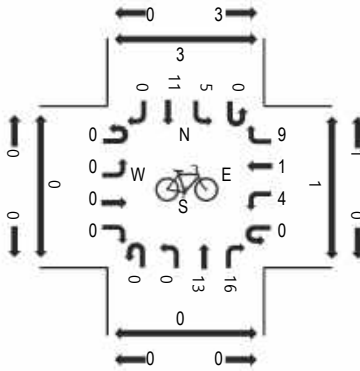
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

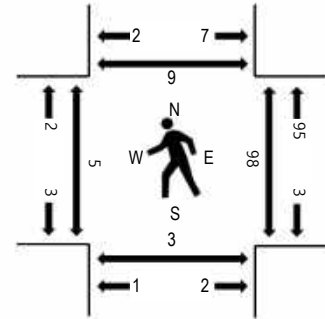
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RINGWOOD AVE Eastbound				RINGWOOD AVE Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	1	0	1	0	1	1	27	0	12	64	2	0	12	47	5	173	1,074	0	1	0	0
7:15 AM	0	0	0	1	0	10	2	40	0	1	88	4	0	6	63	7	222	1,384	2	0	0	3
7:30 AM	0	1	0	1	0	6	2	57	0	2	106	6	0	18	83	2	284	1,651	0	12	0	1
7:45 AM	0	0	0	0	0	16	3	72	0	5	143	27	0	20	100	9	395	1,780	1	3	1	1
8:00 AM	0	3	0	1	0	31	4	76	0	5	155	45	0	57	98	8	483	1,779	2	39	1	4
8:15 AM	0	3	10	1	0	41	4	74	0	10	124	32	0	76	94	20	489		0	43	1	4
8:30 AM	0	4	0	0	0	37	11	71	0	9	100	14	0	27	134	6	413		2	13	0	0
8:45 AM	0	0	0	1	0	23	3	68	0	3	123	14	0	26	125	8	394		0	1	1	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	1	2	0	6
Lights	0	10	10	2	0	125	22	288	0	28	501	115	0	177	416	42	1,736
Mediums	0	0	0	0	0	0	0	5	0	1	18	3	0	2	8	1	38
Total	0	10	10	2	0	125	22	293	0	29	522	118	0	180	426	43	1,780



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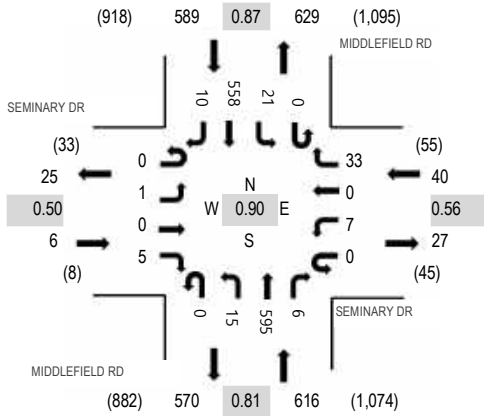
Location: 4 MIDDLEFIELD RD & SEMINARY DR AM

Date: Wednesday, May 24, 2023

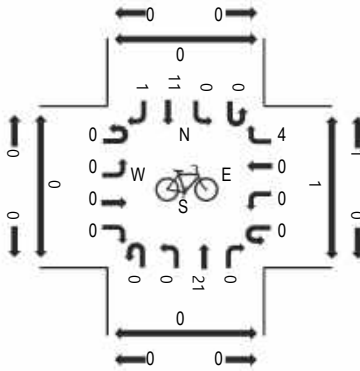
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

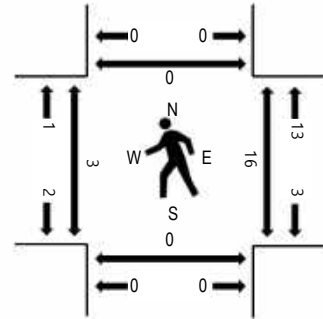
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SEMINARY DR Eastbound				SEMINARY DR Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	1	0	1	0	0	81	0	0	0	39	2	124	804	0	0	0	0
7:15 AM	0	0	0	1	0	0	0	5	0	3	89	0	0	6	69	1	174	1,028	0	1	0	0
7:30 AM	0	0	0	1	0	0	0	0	0	0	117	0	0	5	92	0	215	1,160	1	1	0	0
7:45 AM	0	0	0	0	0	1	0	7	0	1	166	1	0	6	108	1	291	1,238	0	4	0	0
8:00 AM	0	1	0	1	0	5	0	13	0	0	199	0	0	4	124	1	348	1,251	1	5	0	0
8:15 AM	0	0	0	3	0	0	0	6	0	5	153	3	0	8	127	1	306		1	6	0	0
8:30 AM	0	0	0	1	0	1	0	7	0	4	109	2	0	4	160	5	293		1	5	0	0
8:45 AM	0	0	0	0	0	1	0	7	0	6	134	1	0	5	147	3	304		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4
Lights	0	1	0	5	0	7	0	33	0	15	573	5	0	21	548	10	1,218
Mediums	0	0	0	0	0	0	0	0	0	0	20	1	0	0	8	0	29
Total	0	1	0	5	0	7	0	33	0	15	595	6	0	21	558	10	1,251



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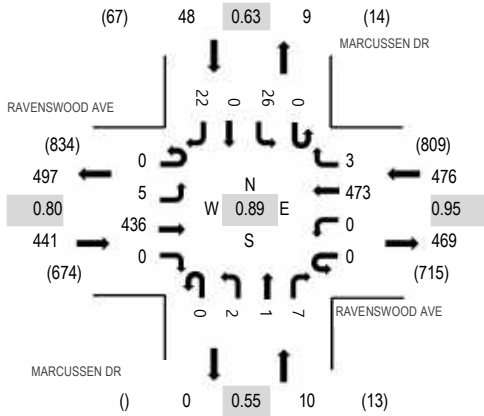
Location: 5 MARCUSSEN DR & RAVENSWOOD AVE AM

Date: Wednesday, May 24, 2023

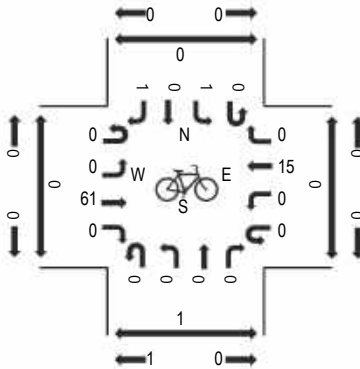
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

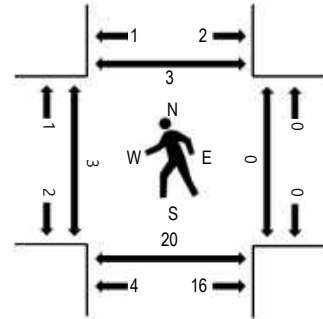
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD AVE Eastbound				RAVENSWOOD AVE Westbound				MARCUSSEN DR Northbound				MARCUSSEN DR Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	46	0	0	0	64	0	0	1	0	1	0	2	0	2	116	588	0	0	0	0
7:15 AM	0	1	47	0	0	0	78	0	0	0	0	0	0	3	0	0	129	741	0	0	1	0
7:30 AM	0	1	67	0	0	0	85	1	0	0	0	0	0	5	0	1	160	886	0	1	3	0
7:45 AM	0	0	71	0	0	0	103	2	0	0	0	1	0	3	0	3	183	934	0	0	3	0
8:00 AM	0	1	130	0	0	0	117	1	0	0	0	1	0	8	0	11	269	975	1	0	5	0
8:15 AM	0	1	136	0	0	0	122	1	0	1	1	2	0	6	0	4	274		1	0	9	2
8:30 AM	0	1	81	0	0	0	110	0	0	1	0	4	0	6	0	5	208		1	0	2	0
8:45 AM	0	2	89	0	0	0	124	1	0	0	0	0	0	6	0	2	224		0	0	4	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	9
Lights	0	4	415	0	0	0	439	3	0	2	1	7	0	26	0	22	919
Mediums	0	1	17	0	0	0	29	0	0	0	0	0	0	0	0	0	47
Total	0	5	436	0	0	0	473	3	0	2	1	7	0	26	0	22	975



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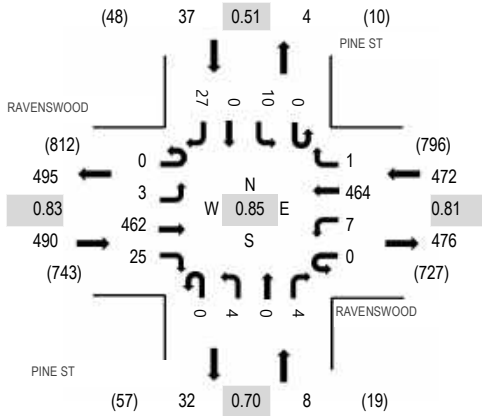
Location: 6 PINE ST & RAVENSWOOD AM

Date: Wednesday, May 24, 2023

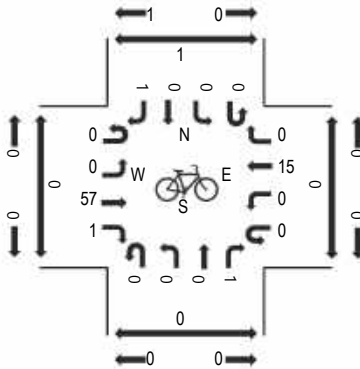
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

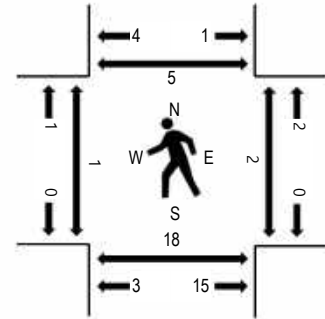
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD Eastbound				RAVENSWOOD Westbound				PINE ST Northbound				PINE ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	46	2	1	2	58	2	0	0	0	2	0	0	0	2	115	599	0	0	0	1
7:15 AM	0	0	46	4	0	4	70	1	0	0	1	2	0	2	0	1	131	736	0	0	0	1
7:30 AM	0	0	70	3	0	2	80	1	0	1	0	2	0	0	0	2	161	902	0	0	2	1
7:45 AM	0	0	76	6	0	2	100	1	0	0	0	3	0	1	0	3	192	953	1	1	4	0
8:00 AM	0	3	129	5	0	1	101	0	0	2	0	3	0	0	0	8	252	1,007	0	0	7	0
8:15 AM	0	0	143	5	0	1	144	0	0	0	0	0	0	1	0	3	297		1	1	8	1
8:30 AM	0	0	90	9	0	3	101	0	0	2	0	0	0	4	0	3	212		0	1	0	1
8:45 AM	0	0	100	6	0	2	118	1	0	0	0	1	0	5	0	13	246		0	0	3	3

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	0	0	0	5	0	0	1	0	0	0	0	0	0	11
Lights	0	3	440	25	0	7	431	1	0	2	0	3	0	10	0	27	949
Mediums	0	0	17	0	0	0	28	0	0	1	0	1	0	0	0	0	47
Total	0	3	462	25	0	7	464	1	0	4	0	4	0	10	0	27	1,007



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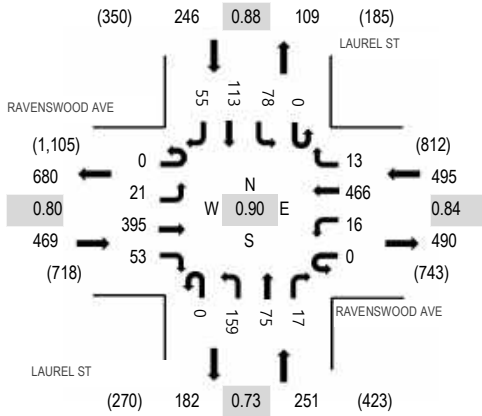
Location: 7 LAUREL ST & RAVENSWOOD AVE AM

Date: Wednesday, May 24, 2023

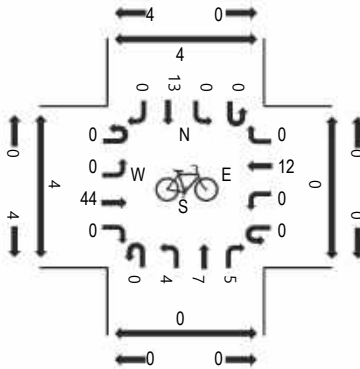
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

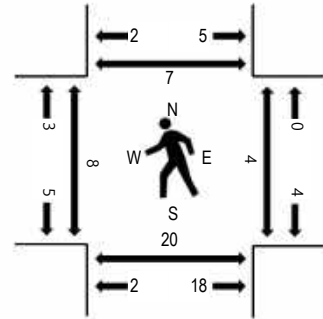
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD AVE Eastbound				RAVENSWOOD AVE Westbound				LAUREL ST Northbound				LAUREL ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	2	32	4	0	2	56	2	0	19	4	6	0	10	7	2	146	842	4	3	0	1
7:15 AM	0	4	42	6	0	2	68	1	0	21	12	2	0	6	6	4	174	1,079	2	1	2	0
7:30 AM	0	2	58	6	0	5	78	0	0	27	14	3	0	12	13	3	221	1,311	2	6	0	2
7:45 AM	0	10	69	14	0	1	100	2	0	41	23	0	0	13	22	6	301	1,410	1	0	1	1
8:00 AM	0	1	116	7	0	5	104	2	0	51	36	2	0	19	30	10	383	1,461	0	1	11	1
8:15 AM	0	5	127	15	0	2	138	7	0	31	18	3	0	18	32	10	406		2	1	3	2
8:30 AM	0	7	71	10	0	3	101	2	0	39	12	5	0	23	28	19	320		5	1	2	2
8:45 AM	0	8	81	21	0	6	123	2	0	38	9	7	0	18	23	16	352		1	1	4	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	6	0	0	0	0	1	0	2	0	0	11
Lights	0	18	380	53	0	16	431	13	0	156	74	15	0	73	110	53	1,392
Mediums	0	3	13	0	0	0	29	0	0	3	1	1	0	3	3	2	58
Total	0	21	395	53	0	16	466	13	0	159	75	17	0	78	113	55	1,461



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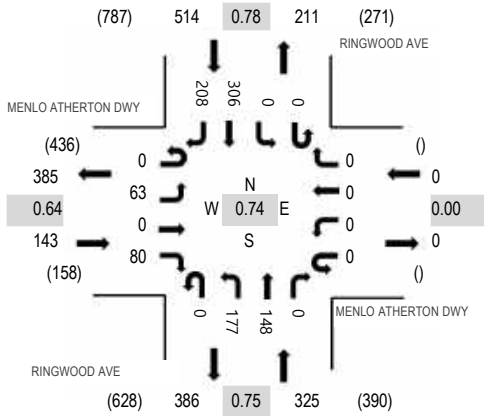
Location: 1 RINGWOOD AVE & MENLO ATHERTON DWY AM

Date: Thursday, May 25, 2023

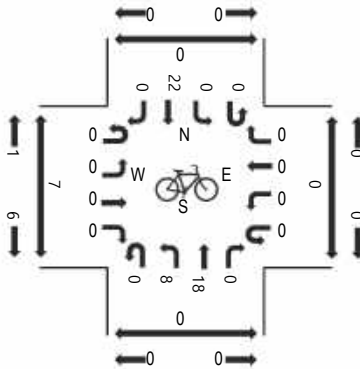
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

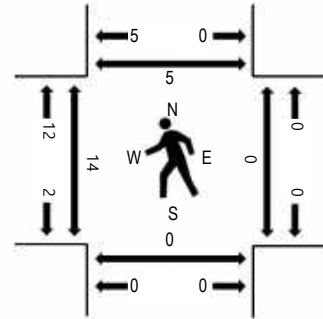
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MENLO ATHERTON DWY Eastbound				MENLO ATHERTON DWY Westbound				RINGWOOD AVE Northbound				RINGWOOD AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
	7:00 AM	0	0	0	1	0	0	0	0	0	1	6	0	0	0	24			3	35	377	0
7:15 AM	0	1	0	1	0	0	0	0	0	0	5	0	0	0	42	6	55	577	0	0	0	0
7:30 AM	0	1	0	2	0	0	0	0	0	3	12	0	0	0	70	15	103	853	1	0	0	0
7:45 AM	0	10	0	9	0	0	0	0	0	22	36	0	0	0	81	26	184	982	0	0	0	2
8:00 AM	0	13	0	20	0	0	0	0	0	52	47	0	0	0	73	30	235	958	5	0	0	0
8:15 AM	0	22	0	34	0	0	0	0	0	77	32	0	0	0	62	104	331	8	0	0	3	
8:30 AM	0	18	0	17	0	0	0	0	0	26	33	0	0	0	90	48	232	1	0	0	0	
8:45 AM	0	6	0	3	0	0	0	0	0	9	29	0	0	0	99	14	160	0	0	0	1	

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	62	0	80	0	0	0	0	0	176	146	0	0	0	302	208	974
Mediums	0	1	0	0	0	0	0	0	0	1	1	0	0	0	4	0	7
Total	0	63	0	80	0	0	0	0	0	177	148	0	0	0	306	208	982



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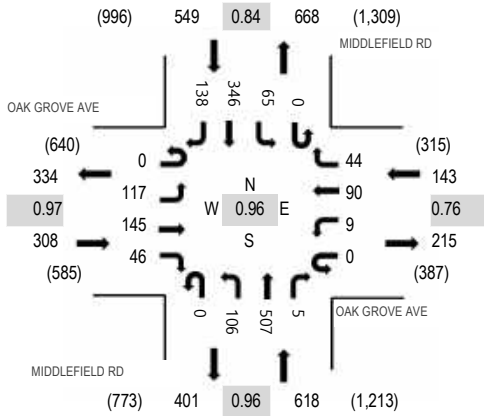
Location: 1 MIDDLEFIELD RD & OAK GROVE AVE PM

Date: Wednesday, May 24, 2023

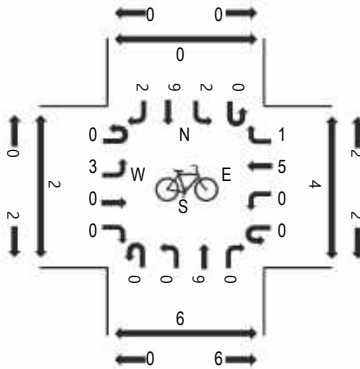
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

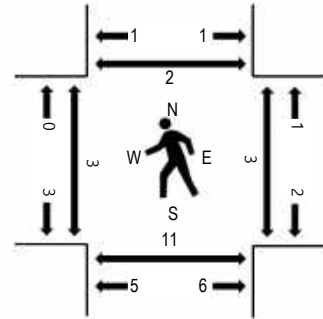
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	OAK GROVE AVE Eastbound				OAK GROVE AVE Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	23	29	19	0	3	50	12	0	16	132	7	0	14	76	28	409	1,530	0	2	7	0
4:15 PM	0	32	32	13	0	6	25	12	0	27	99	1	0	9	70	26	352	1,544	0	0	5	1
4:30 PM	0	28	25	14	0	0	15	20	0	17	122	6	0	11	75	21	354	1,568	1	2	3	1
4:45 PM	0	29	42	8	0	2	33	19	0	25	113	2	0	23	87	32	415	1,618	2	0	8	1
5:00 PM	0	28	38	12	0	3	16	11	0	19	131	2	0	17	100	46	423	1,579	0	1	1	1
5:15 PM	0	30	27	15	0	4	16	6	0	29	128	1	0	10	84	26	376		1	2	1	0
5:30 PM	0	30	38	11	0	0	25	8	0	33	135	0	0	15	75	34	404		0	0	1	0
5:45 PM	0	21	22	19	0	0	21	8	0	35	132	1	0	15	77	25	376		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	110	143	42	0	9	90	44	0	106	504	5	0	65	338	136	1,592
Mediums	0	6	2	4	0	0	0	0	0	0	3	0	0	0	8	2	25
Total	0	117	145	46	0	9	90	44	0	106	507	5	0	65	346	138	1,618



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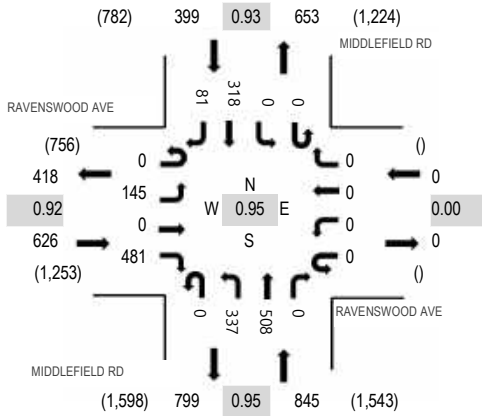
Location: 2 MIDDLEFIELD RD & RAVENSWOOD AVE PM

Date: Wednesday, May 24, 2023

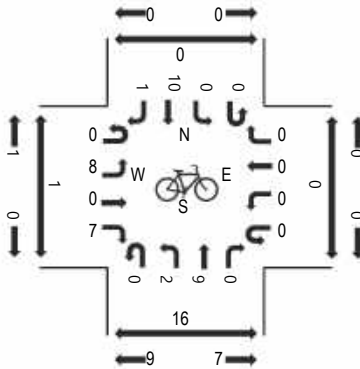
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

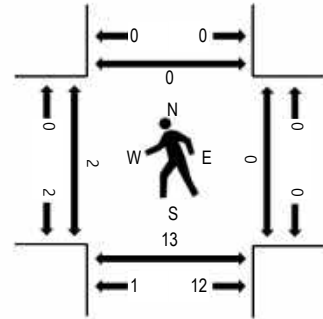
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD AVE Eastbound				RAVENSWOOD AVE Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
	4:00 PM	0	39	0	128	0	0	0	0	0	92	116	0	0	0	0			90	14	479	1,708	1
4:15 PM	0	36	0	115	0	0	0	0	0	63	95	0	0	0	0	82	12	403	1,682	0	0	2	0
4:30 PM	0	32	0	108	0	0	0	0	0	62	109	0	0	0	0	75	11	397	1,769	0	0	0	0
4:45 PM	0	40	0	129	0	0	0	0	0	57	104	0	0	0	0	72	27	429	1,838	0	0	5	0
5:00 PM	0	31	0	109	0	0	0	0	0	79	126	0	0	0	0	82	26	453	1,870	1	0	9	0
5:15 PM	0	42	0	133	0	0	0	0	0	84	123	0	0	0	0	89	19	490		1	0	2	0
5:30 PM	0	37	0	124	0	0	0	0	0	85	137	0	0	0	0	68	15	466		0	0	1	0
5:45 PM	0	35	0	115	0	0	0	0	0	89	122	0	0	0	0	79	21	461		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3
Lights	0	144	0	477	0	0	0	0	0	332	503	0	0	0	312	75	1,843
Mediums	0	1	0	4	0	0	0	0	0	3	5	0	0	0	5	6	24
Total	0	145	0	481	0	0	0	0	0	337	508	0	0	0	318	81	1,870



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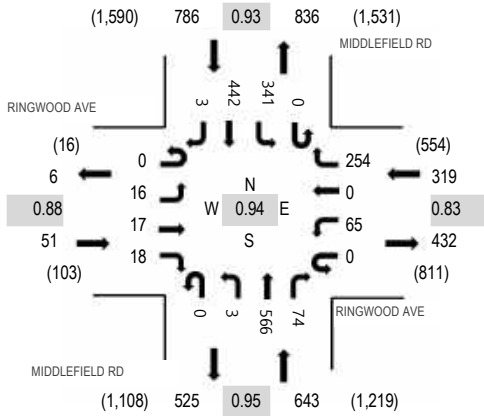
Location: 3 MIDDLEFIELD RD & RINGWOOD AVE PM

Date: Wednesday, May 24, 2023

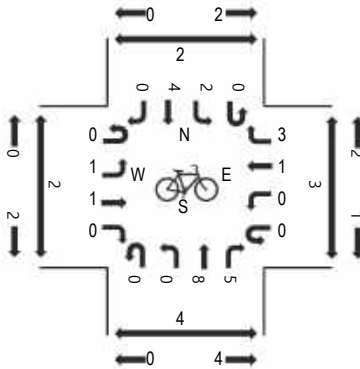
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

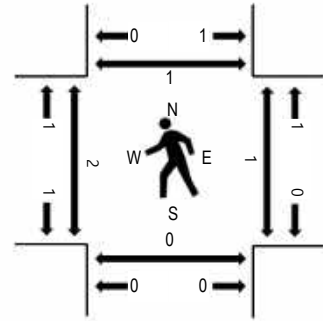
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RINGWOOD AVE Eastbound				RINGWOOD AVE Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	2	8	8	0	27	1	58	0	1	130	18	0	76	129	0	458	1,667	1	1	0	1
4:15 PM	0	3	3	3	0	9	0	42	0	1	119	16	0	68	148	1	413	1,636	1	2	1	3
4:30 PM	0	1	8	6	0	10	0	42	0	2	127	15	0	74	107	2	394	1,704	0	0	0	0
4:45 PM	0	2	2	6	0	10	0	36	0	2	133	12	0	79	120	0	402	1,753	0	3	0	1
5:00 PM	0	5	6	4	0	10	0	56	0	0	145	12	0	73	116	0	427	1,799	1	0	0	1
5:15 PM	0	4	6	3	0	16	0	58	0	1	145	24	0	101	121	2	481		1	0	0	0
5:30 PM	0	3	2	6	0	14	0	69	0	2	151	12	0	85	99	0	443		0	1	0	0
5:45 PM	0	4	3	5	0	25	0	71	0	0	125	26	0	82	106	1	448		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3
Lights	0	16	17	18	0	65	0	253	0	3	558	73	0	337	437	3	1,780
Mediums	0	0	0	0	0	0	0	1	0	0	6	1	0	4	4	0	16
Total	0	16	17	18	0	65	0	254	0	3	566	74	0	341	442	3	1,799



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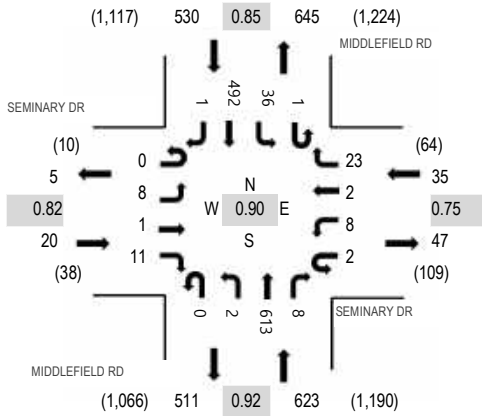
Location: 4 MIDDLEFIELD RD & SEMINARY DR PM

Date: Wednesday, May 24, 2023

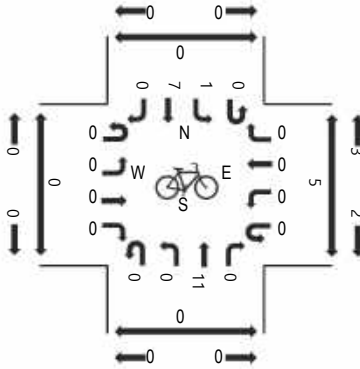
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

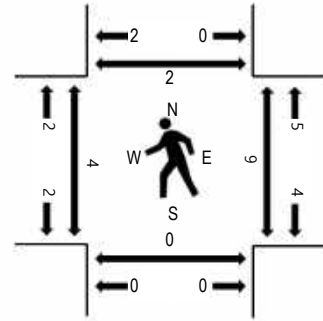
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SEMINARY DR Eastbound				SEMINARY DR Westbound				MIDDLEFIELD RD Northbound				MIDDLEFIELD RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	2	0	0	0	10	0	1	141	5	0	17	154	1	331	1,201	2	2	0	0
4:15 PM	0	2	0	4	0	2	0	4	0	0	134	4	0	14	139	0	303	1,160	0	1	0	0
4:30 PM	0	2	0	1	0	2	0	4	0	2	131	4	2	8	115	0	271	1,191	1	1	0	0
4:45 PM	0	1	0	3	0	2	0	4	0	1	149	4	0	12	120	0	296	1,208	1	1	0	0
5:00 PM	0	2	0	3	0	2	0	7	0	1	143	1	0	8	122	1	290	1,208	0	2	0	0
5:15 PM	0	3	0	3	2	1	2	7	0	0	167	2	1	7	139	0	334		3	1	0	2
5:30 PM	0	2	1	2	0	3	0	5	0	0	154	1	0	9	111	0	288		0	5	0	0
5:45 PM	0	4	0	3	1	2	0	4	0	1	141	3	0	6	131	0	296		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	2	0	2	0	0	0	0	0	0	0	1	0	5
Lights	0	8	1	11	0	8	0	23	0	2	608	8	1	36	486	1	1,193
Mediums	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	10
Total	0	8	1	11	2	8	2	23	0	2	613	8	1	36	492	1	1,208



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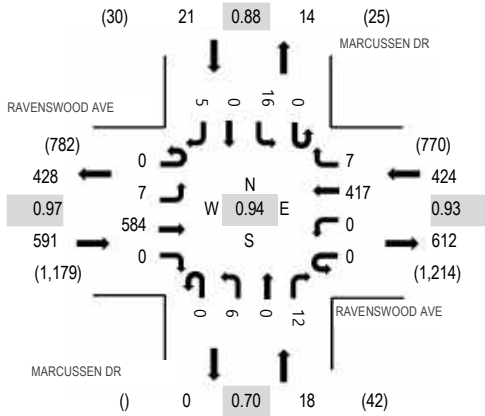
Location: 5 MARCUSSEN DR & RAVENSWOOD AVE PM

Date: Wednesday, May 24, 2023

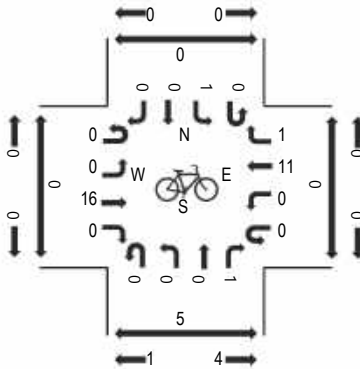
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

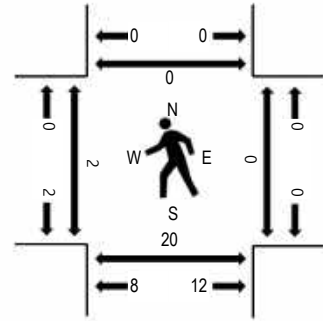
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD AVE Eastbound				RAVENSWOOD AVE Westbound				MARCUSSEN DR Northbound				MARCUSSEN DR Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
	4:00 PM	0	0	158	0	0	0	109	2	0	0	0	1	0	1	0			2	273	967	0
4:15 PM	0	0	134	0	0	0	79	0	0	2	0	8	0	2	0	2	227	955	0	0	4	0
4:30 PM	0	3	135	0	0	0	75	1	0	2	0	5	0	0	0	0	221	1,008	0	1	1	2
4:45 PM	0	4	154	0	0	0	79	1	0	2	0	4	0	0	0	2	246	1,053	1	0	5	0
5:00 PM	0	1	144	0	0	0	103	2	0	1	0	4	0	3	0	3	261	1,054	0	0	11	0
5:15 PM	0	3	157	0	0	0	106	2	0	2	0	4	0	4	0	2	280		2	0	4	0
5:30 PM	0	1	158	0	0	0	96	1	0	3	0	2	0	5	0	0	266		0	0	3	0
5:45 PM	0	2	125	0	0	0	112	2	0	0	0	2	0	4	0	0	247		0	0	2	0

Peak Rolling Hour Flow Rates

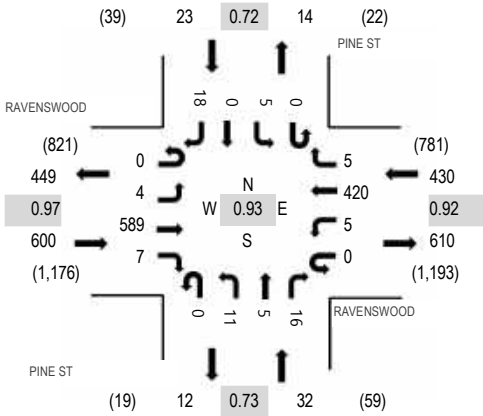
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total					
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
Articulated Trucks	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2					
Lights	0	7	577	0	0	0	398	7	0	6	0	12	0	16	0	5	1,028					
Mediums	0	0	7	0	0	0	17	0	0	0	0	0	0	0	0	0	24					
Total	0	7	584	0	0	0	417	7	0	6	0	12	0	16	0	5	1,054					



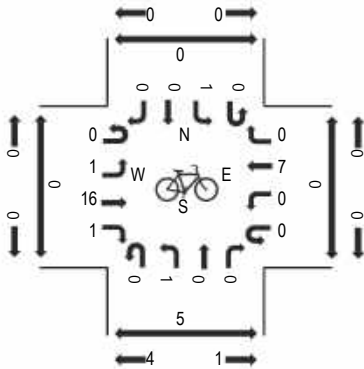
(303) 216-2439
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Location: 6 PINE ST & RAVENSWOOD PM
Date: Wednesday, May 24, 2023
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

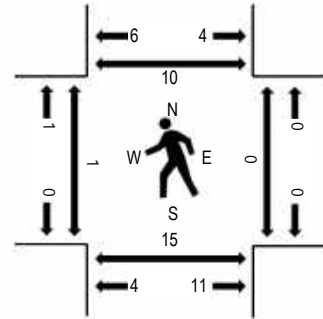
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD Eastbound				RAVENSWOOD Westbound				PINE ST Northbound				PINE ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	3	145	2	0	0	111	0	0	4	1	5	0	1	0	1	273	970	0	0	11	3
4:15 PM	0	1	134	0	0	0	80	0	0	2	0	3	0	2	0	3	225	973	0	0	1	0
4:30 PM	0	0	139	2	0	0	78	1	0	4	0	2	0	1	0	4	231	1,041	0	0	0	3
4:45 PM	0	1	149	0	0	3	78	0	0	3	1	2	0	0	0	4	241	1,074	0	0	2	2
5:00 PM	0	1	153	2	0	1	102	1	0	3	2	6	0	1	0	4	276	1,085	0	0	9	3
5:15 PM	0	2	158	1	0	3	108	1	0	4	2	6	0	2	0	6	293		0	0	2	4
5:30 PM	0	0	158	2	0	1	94	2	0	2	0	2	0	0	0	3	264		1	0	3	3
5:45 PM	0	1	120	2	0	0	116	1	0	2	1	2	0	2	0	5	252		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	4	576	7	0	5	403	4	0	11	5	16	0	5	0	18	1,054
Mediums	0	0	13	0	0	0	16	1	0	0	0	0	0	0	0	0	30
Total	0	4	589	7	0	5	420	5	0	11	5	16	0	5	0	18	1,085



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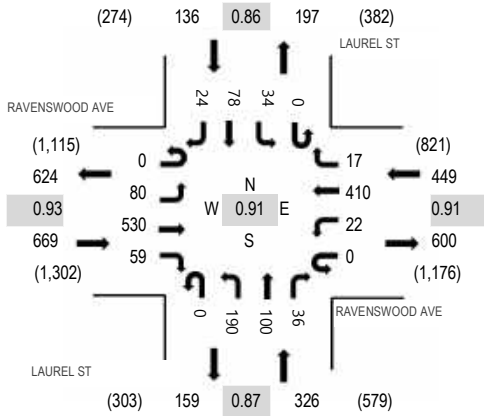
Location: 7 LAUREL ST & RAVENSWOOD AVE PM

Date: Wednesday, May 24, 2023

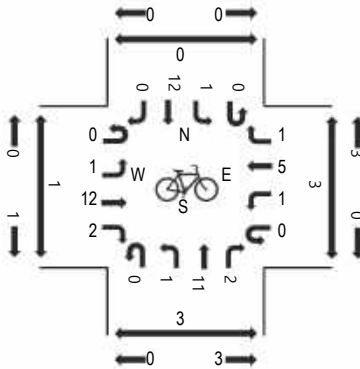
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

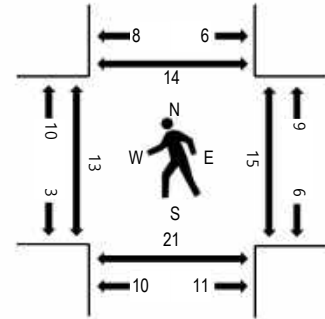
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	RAVENSWOOD AVE Eastbound				RAVENSWOOD AVE Westbound				LAUREL ST Northbound				LAUREL ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	20	132	12	0	7	105	4	0	37	40	6	0	12	20	10	405	1,396	5	3	9	3
4:15 PM	0	17	124	7	0	3	81	1	0	25	16	5	0	6	13	5	303	1,384	3	3	3	2
4:30 PM	0	16	124	17	0	4	77	5	0	28	24	5	0	12	15	2	329	1,515	2	2	1	6
4:45 PM	0	20	131	13	0	7	75	3	0	38	19	10	0	9	26	8	359	1,579	4	1	8	3
5:00 PM	0	18	138	11	0	7	99	3	0	48	26	10	0	8	18	7	393	1,580	3	6	5	4
5:15 PM	0	23	138	18	0	5	108	5	0	54	30	10	0	13	20	10	434		3	3	10	5
5:30 PM	0	25	143	19	0	5	89	5	0	48	22	8	0	9	16	4	393		4	2	2	3
5:45 PM	0	14	111	11	0	5	114	4	0	40	22	8	0	4	24	3	360		3	4	4	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	80	522	59	0	21	394	17	0	189	100	35	0	30	77	24	1,548
Mediums	0	0	8	0	0	1	15	0	0	1	0	1	0	4	1	0	31
Total	0	80	530	59	0	22	410	17	0	190	100	36	0	34	78	24	1,580



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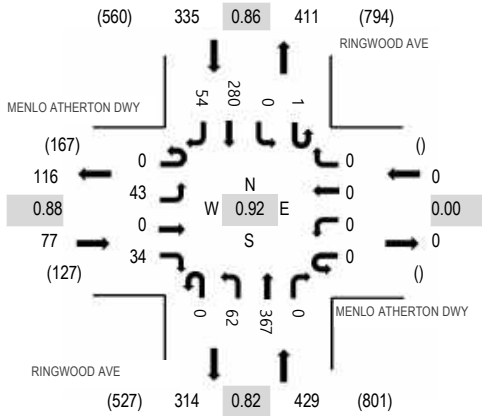
Location: 1 RINGWOOD AVE & MENLO ATHERTON DWY PM

Date: Thursday, May 25, 2023

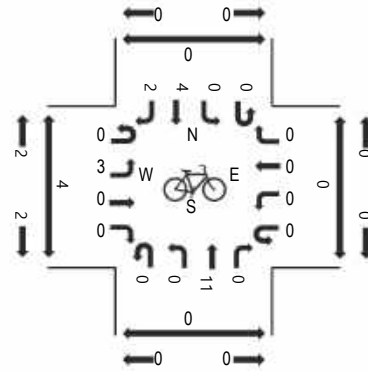
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

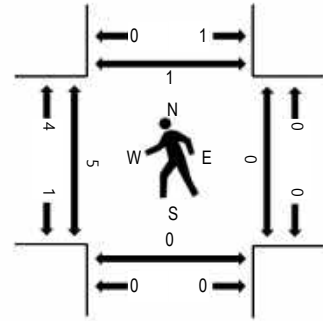
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MENLO ATHERTON DWY Eastbound				MENLO ATHERTON DWY Westbound				RINGWOOD AVE Northbound				RINGWOOD AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
	4:00 PM	0	13	0	9	0	0	0	0	0	6	94	0	0	0	61			8	191	647	2
4:15 PM	0	10	0	3	0	0	0	0	0	3	84	0	1	0	46	7	154	639	1	0	0	0
4:30 PM	0	3	0	1	0	0	0	0	0	5	86	0	0	0	50	3	148	713	0	0	1	0
4:45 PM	0	8	0	3	0	0	0	0	0	10	84	0	0	0	40	9	154	772	1	0	0	0
5:00 PM	0	14	0	4	0	0	0	0	0	18	73	0	0	0	62	12	183	841	3	0	0	0
5:15 PM	0	9	0	10	0	0	0	0	0	18	113	0	0	0	62	16	228		0	0	0	0
5:30 PM	0	10	0	12	0	0	0	0	0	13	86	0	1	0	72	13	207		2	0	0	0
5:45 PM	0	10	0	8	0	0	0	0	0	13	95	0	0	0	84	13	223		0	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	43	0	34	0	0	0	0	0	62	364	0	1	0	280	54	838
Mediums	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Total	0	43	0	34	0	0	0	0	0	62	367	0	1	0	280	54	841

Attachment B

Intersection Level of Service Calculations

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:30	7:30	7:30	7:30	7:30	7:30	7:30
End Time	9:00	9:00	9:00	9:00	9:00	9:00	9:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6762	6817	6807	6745	6777	6819	6769
Vehs Exited	6794	6882	6827	6781	6790	6990	6810
Starting Vehs	241	289	280	278	254	411	255
Ending Vehs	209	224	260	242	241	240	214
Denied Entry Before	1	0	1	2	2	1	1
Denied Entry After	0	3	2	0	1	6	2
Travel Distance (mi)	3574	3624	3642	3565	3615	3682	3541
Travel Time (hr)	266.2	272.5	269.1	278.2	274.0	307.0	258.9
Total Delay (hr)	136.7	141.3	137.5	148.8	142.9	173.3	130.7
Total Stops	9791	9933	9786	10009	9992	11214	9494
Fuel Used (gal)	155.0	157.4	157.2	157.2	157.5	167.3	151.8

Summary of All Intervals

Run Number	8	10	11	Avg
Start Time	7:30	7:30	7:30	7:30
End Time	9:00	9:00	9:00	9:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6786	6788	6795	6782
Vehs Exited	6814	6804	6798	6827
Starting Vehs	254	254	273	271
Ending Vehs	226	238	270	228
Denied Entry Before	1	1	1	0
Denied Entry After	1	5	3	0
Travel Distance (mi)	3552	3612	3617	3602
Travel Time (hr)	273.2	260.1	282.5	274.2
Total Delay (hr)	144.3	129.0	151.0	143.5
Total Stops	9734	9624	10334	9990
Fuel Used (gal)	156.5	154.3	159.3	157.4

Interval #0 Information Seeding

Start Time	7:30
End Time	8:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1623	1582	1573	1560	1593	1596	1625
Vehs Exited	1597	1625	1626	1598	1577	1736	1608
Starting Vehs	241	289	280	278	254	411	255
Ending Vehs	267	246	227	240	270	271	272
Denied Entry Before	1	0	1	2	2	1	1
Denied Entry After	1	1	3	1	1	3	2
Travel Distance (mi)	853	885	869	845	853	928	854
Travel Time (hr)	59.0	66.7	66.4	61.5	60.6	83.5	59.8
Total Delay (hr)	28.0	34.7	34.9	30.9	29.6	49.8	28.9
Total Stops	2193	2400	2394	2320	2227	3177	2208
Fuel Used (gal)	35.7	38.7	38.1	36.3	36.4	43.6	35.8

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	10	11	Avg
Vehs Entered	1565	1541	1626	1585
Vehs Exited	1577	1553	1618	1610
Starting Vehs	254	254	273	271
Ending Vehs	242	242	281	244
Denied Entry Before	1	1	1	0
Denied Entry After	2	1	2	0
Travel Distance (mi)	855	810	879	863
Travel Time (hr)	60.5	55.3	67.7	64.1
Total Delay (hr)	29.5	25.9	35.8	32.8
Total Stops	2257	2052	2516	2370
Fuel Used (gal)	37.0	34.0	38.5	37.4

Interval #2 Information

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	2037	1999	1976	2034	2036	1964	1999
Vehs Exited	1946	1882	1886	1907	1944	1871	1913
Starting Vehs	267	246	227	240	270	271	272
Ending Vehs	358	363	317	367	362	364	358
Denied Entry Before	1	1	3	1	1	3	2
Denied Entry After	4	7	3	8	9	15	12
Travel Distance (mi)	1012	993	974	992	1016	963	978
Travel Time (hr)	81.1	75.2	74.9	80.9	80.0	88.7	78.9
Total Delay (hr)	44.5	39.2	39.6	45.0	43.1	53.8	43.4
Total Stops	2957	2791	2764	2896	3013	3087	2841
Fuel Used (gal)	45.2	43.0	42.6	44.1	44.8	45.8	43.6

Interval #2 Information

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	10	11	Avg
Vehs Entered	2038	1972	1970	2004
Vehs Exited	1896	1879	1906	1905
Starting Vehs	242	242	281	244
Ending Vehs	384	335	345	354
Denied Entry Before	2	1	2	0
Denied Entry After	10	5	5	4
Travel Distance (mi)	963	981	988	986
Travel Time (hr)	77.2	74.9	80.3	79.2
Total Delay (hr)	42.3	39.2	44.2	43.4
Total Stops	2742	2798	2966	2887
Fuel Used (gal)	42.8	42.9	44.3	43.9

Interval #3 Information

Start Time	8:30
End Time	8:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1551	1596	1615	1549	1587	1691	1588
Vehs Exited	1665	1691	1678	1658	1683	1757	1717
Starting Vehs	358	363	317	367	362	364	358
Ending Vehs	244	268	254	258	266	298	229
Denied Entry Before	4	7	3	8	9	15	12
Denied Entry After	2	2	0	1	1	0	0
Travel Distance (mi)	866	860	897	866	894	929	896
Travel Time (hr)	68.6	69.3	65.9	75.2	74.4	77.2	66.4
Total Delay (hr)	37.3	38.1	33.6	43.7	42.1	43.5	34.0
Total Stops	2516	2524	2375	2603	2623	2803	2440
Fuel Used (gal)	39.0	38.6	38.9	40.2	40.7	42.1	38.6

Interval #3 Information

Start Time	8:30
End Time	8:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	10	11	Avg
Vehs Entered	1571	1655	1609	1595
Vehs Exited	1695	1722	1683	1696
Starting Vehs	384	335	345	354
Ending Vehs	260	268	271	256
Denied Entry Before	10	5	5	4
Denied Entry After	3	2	1	0
Travel Distance (mi)	862	927	891	889
Travel Time (hr)	74.5	68.9	74.7	71.5
Total Delay (hr)	43.1	35.2	42.2	39.3
Total Stops	2529	2552	2644	2559
Fuel Used (gal)	39.9	40.1	40.3	39.8

Interval #4 Information

Start Time	8:45
End Time	9:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1551	1640	1643	1602	1561	1568	1557
Vehs Exited	1586	1684	1637	1618	1586	1626	1572
Starting Vehs	244	268	254	258	266	298	229
Ending Vehs	209	224	260	242	241	240	214
Denied Entry Before	2	2	0	1	1	0	0
Denied Entry After	0	3	2	0	1	6	2
Travel Distance (mi)	842	886	902	863	854	862	813
Travel Time (hr)	57.4	61.4	61.9	60.6	59.0	57.5	53.8
Total Delay (hr)	26.9	29.3	29.3	29.2	28.1	26.3	24.4
Total Stops	2125	2218	2253	2190	2129	2147	2005
Fuel Used (gal)	35.1	37.2	37.7	36.6	35.7	35.9	33.8

Interval #4 Information

Start Time	8:45
End Time	9:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	10	11	Avg
Vehs Entered	1612	1620	1590	1589
Vehs Exited	1646	1650	1591	1620
Starting Vehs	260	268	271	256
Ending Vehs	226	238	270	228
Denied Entry Before	3	2	1	0
Denied Entry After	1	5	3	0
Travel Distance (mi)	871	894	858	865
Travel Time (hr)	61.1	61.0	59.8	59.4
Total Delay (hr)	29.3	28.6	28.7	28.0
Total Stops	2206	2222	2208	2168
Fuel Used (gal)	36.9	37.3	36.2	36.2

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	2.9	0.4	0.4	3.5	0.4	0.4	0.2	0.0	0.0	2.0	0.7	0.7
Total Delay (hr)	1.6	2.0	0.6	0.4	2.1	1.3	1.4	4.3	0.5	1.8	4.2	1.2
Total Del/Veh (s)	72.7	34.0	36.8	44.7	35.1	33.8	47.4	40.3	41.9	41.4	39.5	38.2
Stop Delay (hr)	1.5	1.7	0.5	0.3	1.7	1.1	1.2	3.6	0.4	1.4	3.1	0.9
Stop Del/Veh (s)	69.1	28.6	33.6	39.5	28.3	29.4	41.0	33.5	37.2	32.5	29.5	30.0
Travel Dist (mi)	20.7	56.4	14.7	5.2	39.0	24.2	20.7	74.3	8.3	57.6	141.1	40.5
Travel Time (hr)	2.4	4.0	1.1	0.6	3.4	2.2	2.1	6.8	0.8	3.9	9.0	2.6
Vehicles Entered	77	211	54	28	214	133	104	375	42	152	374	108
Vehicles Exited	78	209	54	28	212	132	104	378	41	154	378	109
Hourly Exit Rate	78	209	54	28	212	132	104	378	41	154	378	109
Input Volume	80	209	49	25	205	133	105	374	44	156	359	109
% of Volume	97	100	110	111	103	99	99	101	93	99	105	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.7
Total Delay (hr)	21.3
Total Del/Veh (s)	40.1
Stop Delay (hr)	17.5
Stop Del/Veh (s)	33.1
Travel Dist (mi)	502.7
Travel Time (hr)	39.0
Vehicles Entered	1872
Vehicles Exited	1877
Hourly Exit Rate	1877
Input Volume	1850
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.2
Denied Del/Veh (s)	1.2	0.0	1.4	0.1	0.0	0.5	0.0	0.5
Total Delay (hr)	1.1	0.0	2.0	6.1	0.4	7.9	1.8	19.4
Total Del/Veh (s)	42.9	4.4	18.6	56.8	3.6	75.8	67.5	39.0
Stop Delay (hr)	1.0	0.0	1.6	5.6	0.2	6.6	1.5	16.5
Stop Del/Veh (s)	39.0	2.5	14.2	51.6	1.7	63.3	57.3	33.1
Travel Dist (mi)	7.7	0.8	28.4	34.6	39.2	75.5	18.9	205.1
Travel Time (hr)	1.5	0.1	3.3	7.8	1.8	10.5	2.5	27.4
Vehicles Entered	92	18	390	382	427	369	92	1770
Vehicles Exited	94	18	392	381	424	368	92	1769
Hourly Exit Rate	94	18	392	381	424	368	92	1769
Input Volume	97	18	379	399	425	348	86	1752
% of Volume	97	100	103	95	100	106	107	101
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.5	0.1	0.0
Total Delay (hr)	0.1	0.1	0.0	1.6	0.3	1.2	0.6	4.7	0.6	5.5	3.9	0.2
Total Del/Veh (s)	56.9	55.1	10.4	40.5	18.7	15.3	73.3	32.3	19.7	79.4	27.7	13.3
Stop Delay (hr)	0.1	0.1	0.0	1.5	0.2	1.2	0.5	4.1	0.5	5.0	3.0	0.1
Stop Del/Veh (s)	55.0	51.9	9.8	37.8	16.5	15.2	70.7	28.3	17.5	72.5	21.5	10.4
Travel Dist (mi)	0.4	0.4	0.1	8.1	2.3	15.8	1.6	31.0	6.6	21.5	44.3	4.0
Travel Time (hr)	0.1	0.1	0.0	2.0	0.4	2.1	0.6	5.7	0.9	6.4	5.6	0.4
Vehicles Entered	8	8	2	144	54	282	26	514	108	239	498	44
Vehicles Exited	8	8	2	142	54	280	26	517	109	242	501	44
Hourly Exit Rate	8	8	2	142	54	280	26	517	109	242	501	44
Input Volume	10	10	2	136	54	298	27	513	105	227	475	42
% of Volume	82	82	100	104	100	94	96	101	104	106	105	105
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	18.7
Total Del/Veh (s)	34.5
Stop Delay (hr)	16.5
Stop Del/Veh (s)	30.4
Travel Dist (mi)	136.1
Travel Time (hr)	24.4
Vehicles Entered	1927
Vehicles Exited	1933
Hourly Exit Rate	1933
Input Volume	1899
% of Volume	102
Denied Entry Before	0
Denied Entry After	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	2.9	0.2	2.6	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.5
Total Del/Veh (s)	9.9	5.4	25.6	6.6	4.9	0.6	1.0	4.7	1.1	0.6	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	8.8	5.3	24.0	6.5	3.0	0.0	0.0	2.4	0.0	0.0	0.4
Travel Dist (mi)	0.0	0.3	0.3	1.3	3.0	116.9	1.4	2.5	70.7	1.4	197.8
Travel Time (hr)	0.0	0.0	0.1	0.1	0.1	4.1	0.1	0.1	2.6	0.1	7.2
Vehicles Entered	1	7	7	33	15	606	7	21	600	12	1309
Vehicles Exited	1	7	7	33	16	608	7	21	600	12	1312
Hourly Exit Rate	1	7	7	33	16	608	7	21	600	12	1312
Input Volume	1	5	7	33	15	604	6	21	569	10	1272
% of Volume	80	147	100	101	105	101	112	100	105	117	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1		0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.7
Total Del/Veh (s)	6.3	1.6	1.1	0.5	10.5		11.1	30.0	14.8	2.6
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.5
Stop Del/Veh (s)	4.0	0.9	0.0	0.0	9.2		11.1	27.9	14.1	1.6
Travel Dist (mi)	0.2	22.2	33.0	0.2	0.0	0.0	0.2	4.2	4.0	64.1
Travel Time (hr)	0.0	1.0	1.3	0.0	0.0	0.0	0.0	0.4	0.3	2.9
Vehicles Entered	4	460	472	4	1	0	7	27	25	1000
Vehicles Exited	4	461	473	4	1	0	8	27	25	1003
Hourly Exit Rate	4	461	473	4	1	0	8	27	25	1003
Input Volume	5	461	480	3	2	1	7	26	22	1008
% of Volume	76	100	98	133	50	0	110	104	112	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.0	0.1	4.5	0.1	0.1	0.0
Total Delay (hr)	0.0	0.3	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.1	1.3
Total Del/Veh (s)	6.6	2.4	1.7	9.6	5.3	4.4	26.3	5.9	16.8	17.4	4.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.6
Stop Del/Veh (s)	2.9	0.1	0.1	6.8	2.8	3.1	24.7	5.8	14.7	17.0	2.1
Travel Dist (mi)	0.2	26.6	1.5	0.7	50.0	0.1	0.4	0.4	0.9	3.1	83.9
Travel Time (hr)	0.0	1.3	0.1	0.0	2.4	0.0	0.0	0.0	0.1	0.3	4.2
Vehicles Entered	3	474	27	6	481	1	4	4	8	28	1036
Vehicles Exited	3	473	27	7	482	1	4	4	8	28	1037
Hourly Exit Rate	3	473	27	7	482	1	4	4	8	28	1037
Input Volume	3	473	25	7	485	1	4	4	10	27	1038
% of Volume	92	100	109	104	99	100	107	107	78	105	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	0.4	1.4	1.2	0.3	0.2	0.0	0.3	0.1	0.0	3.8	0.4	0.4
Total Delay (hr)	0.2	3.7	0.6	0.2	3.0	0.1	1.7	0.7	0.2	0.9	1.3	0.6
Total Del/Veh (s)	36.0	31.6	30.0	36.4	22.6	18.6	37.0	29.5	34.0	36.6	38.7	34.5
Stop Delay (hr)	0.2	2.9	0.5	0.2	2.4	0.1	1.6	0.6	0.2	0.8	1.1	0.5
Stop Del/Veh (s)	29.5	24.3	24.4	32.4	18.0	16.1	34.2	26.4	32.5	33.1	33.6	32.0
Travel Dist (mi)	1.6	32.8	5.4	0.9	25.9	0.7	22.5	11.1	2.3	15.4	21.7	11.1
Travel Time (hr)	0.3	5.0	0.8	0.2	3.9	0.1	2.6	1.1	0.3	1.5	2.0	1.0
Vehicles Entered	20	420	67	17	479	13	158	87	16	81	115	58
Vehicles Exited	20	421	68	17	477	13	161	86	16	82	114	59
Hourly Exit Rate	20	421	68	17	477	13	161	86	16	82	114	59
Input Volume	21	423	68	17	479	13	159	93	17	78	113	55
% of Volume	96	100	100	100	100	102	101	92	94	105	101	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.8
Total Delay (hr)	13.0
Total Del/Veh (s)	30.2
Stop Delay (hr)	10.9
Stop Del/Veh (s)	25.2
Travel Dist (mi)	151.5
Travel Time (hr)	18.7
Vehicles Entered	1531
Vehicles Exited	1534
Hourly Exit Rate	1534
Input Volume	1534
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.2	0.2	0.1	0.4	0.1	0.0	0.3	1.3
Denied Del/Veh (s)	3.5	4.0	1.4	3.3	5.3	0.0	7.5	3.5
Total Delay (hr)	2.1	1.4	0.2	0.3	0.3	0.0	0.4	4.8
Total Del/Veh (s)	38.4	28.9	2.2	3.1	21.6	1.7	9.1	13.1
Stop Delay (hr)	2.0	1.2	0.0	0.1	0.3	0.0	0.4	4.1
Stop Del/Veh (s)	36.2	25.7	0.2	1.2	21.0	0.8	9.6	11.3
Travel Dist (mi)	12.0	10.2	26.5	34.4	1.1	0.3	2.6	87.1
Travel Time (hr)	2.9	2.1	1.2	2.2	0.5	0.0	0.8	9.7
Vehicles Entered	198	173	307	399	58	25	143	1303
Vehicles Exited	198	172	307	399	58	25	143	1302
Hourly Exit Rate	198	172	307	399	58	25	143	1302
Input Volume	192	162	308	400	63	26	148	1298
% of Volume	103	106	100	100	92	98	97	100
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	5.4	1.7	7.1
Total Del/Veh (s)	24.4	8.5	16.9
Stop Delay (hr)	4.7	1.5	6.2
Stop Del/Veh (s)	21.2	7.4	14.7
Travel Dist (mi)	61.3	17.1	78.4
Travel Time (hr)	8.2	2.4	10.6
Vehicles Entered	790	706	1496
Vehicles Exited	792	706	1498
Hourly Exit Rate	792	706	1498
Input Volume	786	704	1490
% of Volume	101	100	101
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.8	1.9	3.6	0.0	0.0	0.0	2.3	0.2	0.3	2.6	0.3	2.5
Total Delay (hr)	1.5	6.0	1.0	8.0	3.6	0.3	2.0	6.9	1.6	2.5	8.4	0.1
Total Del/Veh (s)	82.3	76.5	54.0	63.1	61.8	17.2	69.8	29.1	13.8	82.6	31.1	15.3
Stop Delay (hr)	1.4	5.4	0.9	7.3	3.3	0.2	1.9	5.6	1.3	2.3	6.8	0.1
Stop Del/Veh (s)	76.5	69.2	49.7	58.1	56.0	14.7	65.5	23.8	11.3	76.8	25.1	12.0
Travel Dist (mi)	6.3	27.6	6.7	33.4	15.4	4.0	15.6	125.2	60.5	12.8	113.0	2.2
Travel Time (hr)	1.7	7.0	1.4	9.3	4.1	0.4	2.7	11.2	3.9	3.0	12.3	0.2
Vehicles Entered	63	277	67	447	206	53	104	830	403	108	949	18
Vehicles Exited	64	278	68	450	208	54	104	835	404	108	946	18
Hourly Exit Rate	64	278	68	450	208	54	104	835	404	108	946	18
Input Volume	64	271	68	448	205	51	104	844	407	108	936	18
% of Volume	100	103	100	100	101	105	100	99	99	100	101	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.6
Total Delay (hr)	41.7
Total Del/Veh (s)	41.8
Stop Delay (hr)	36.5
Stop Del/Veh (s)	36.5
Travel Dist (mi)	422.5
Travel Time (hr)	57.3
Vehicles Entered	3525
Vehicles Exited	3537
Hourly Exit Rate	3537
Input Volume	3524
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.2
Total Delay (hr)	0.7	0.5	1.2
Total Del/Veh (s)	4.2	8.6	5.3
Stop Delay (hr)	0.6	0.4	0.9
Stop Del/Veh (s)	3.2	6.8	4.0
Travel Dist (mi)	12.4	34.3	46.7
Travel Time (hr)	1.6	1.7	3.3
Vehicles Entered	629	204	833
Vehicles Exited	629	203	832
Hourly Exit Rate	629	203	832
Input Volume	624	211	834
% of Volume	101	96	100
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.0	0.2	0.5
Total Del/Veh (s)	1.9	1.6	5.1	1.6	1.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.3	0.6	2.9	0.3	0.4
Travel Dist (mi)	49.5	4.0	1.3	25.5	80.3
Travel Time (hr)	1.9	0.2	0.1	1.1	3.3
Vehicles Entered	463	37	24	473	997
Vehicles Exited	464	37	24	473	998
Hourly Exit Rate	464	37	24	473	998
Input Volume	464	35	25	477	1001
% of Volume	100	106	97	99	100
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.4	0.8	0.0	0.0	0.1	0.1	0.2
Total Delay (hr)	0.7	0.0	0.0	0.2	0.0	0.0	1.0
Total Del/Veh (s)	5.3	3.5	5.1	1.8	9.1	17.2	3.7
Stop Delay (hr)	0.5	0.0	0.0	0.0	0.0	0.0	0.6
Stop Del/Veh (s)	4.0	2.6	2.3	0.2	8.1	17.1	2.3
Travel Dist (mi)	34.3	0.6	0.7	40.7	0.0	0.2	76.6
Travel Time (hr)	2.0	0.0	0.0	1.9	0.0	0.1	4.0
Vehicles Entered	492	9	8	473	2	8	992
Vehicles Exited	495	9	8	478	2	8	1000
Hourly Exit Rate	495	9	8	478	2	8	1000
Input Volume	490	7	8	485	2	7	1000
% of Volume	101	124	97	99	100	110	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.2	0.0	0.1	0.1	0.1
Total Delay (hr)	0.4	0.1	3.2	0.1	0.0	0.4	4.2
Total Del/Veh (s)	2.8	1.6	16.7	11.5	7.8	31.0	9.7
Stop Delay (hr)	0.2	0.0	2.7	0.1	0.0	0.4	3.4
Stop Del/Veh (s)	1.4	0.3	14.3	10.3	7.5	30.5	7.9
Travel Dist (mi)	11.8	7.9	37.3	1.2	0.6	2.2	61.0
Travel Time (hr)	0.8	0.6	4.8	0.1	0.1	0.5	6.9
Vehicles Entered	473	319	686	22	14	44	1558
Vehicles Exited	474	319	685	22	14	44	1558
Hourly Exit Rate	474	319	685	22	14	44	1558
Input Volume	477	309	683	23	14	45	1551
% of Volume	99	103	100	97	98	97	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	6.0	0.1	0.1	3.7	1.6	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.3	0.0	0.0	1.1	0.2	0.1
Travel Dist (mi)	0.0	16.5	0.1	0.1	29.2	45.9
Travel Time (hr)	0.0	0.6	0.0	0.0	1.1	1.7
Vehicles Entered	1	244	1	1	203	450
Vehicles Exited	1	245	1	1	203	451
Hourly Exit Rate	1	245	1	1	203	451
Input Volume	1	251	1	1	201	456
% of Volume	100	98	100	100	101	99
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0

44: Laurel St Performance by movement

Movement	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.0	2.3	0.2	0.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.4	0.0	0.0
Travel Dist (mi)	7.2	0.0	0.1	13.2	20.5
Travel Time (hr)	0.3	0.0	0.0	0.5	0.7
Vehicles Entered	246	1	1	199	447
Vehicles Exited	246	1	1	199	447
Hourly Exit Rate	246	1	1	199	447
Input Volume	252	1	1	197	451
% of Volume	98	100	100	101	99
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	3.0
Denied Del/Veh (s)	1.6
Total Delay (hr)	140.5
Total Del/Veh (s)	71.7
Stop Delay (hr)	115.0
Stop Del/Veh (s)	58.7
Travel Dist (mi)	3602.4
Travel Time (hr)	274.2
Vehicles Entered	6782
Vehicles Exited	6827
Hourly Exit Rate	6827
Input Volume	30792
% of Volume	22
Denied Entry Before	0
Denied Entry After	0

Arterial Level of Service: NB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seminary Dr	4	0.6	24.0	0.2	30
	20	1.4	15.7	0.1	27
Ringwood Ave	3	32.3	39.6	0.1	6
Ravenswood Ave	2	2.8	14.1	0.1	24
	1	45.2	68.4	0.2	11
Total		82.3	161.7	0.7	15

Arterial Level of Service: SB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ravenswood Ave	2	74.2	99.3	0.2	8
	3	20.3	30.9	0.1	11
	20	1.4	9.2	0.1	24
	4	1.1	15.3	0.1	28
Total		97.0	154.7	0.5	11

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	226	397	73	432	149	466	160	704
Average Queue (ft)	78	160	24	209	93	260	103	318
95th Queue (ft)	176	304	65	356	179	426	190	635
Link Distance (ft)		1416		961		1022		1985
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	1	3	4	45	2	39	1	30
Queuing Penalty (veh)	3	3	12	12	6	41	6	47

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	398	170	439	377	788
Average Queue (ft)	149	90	301	53	344
95th Queue (ft)	370	220	455	245	805
Link Distance (ft)	391		420	420	1022
Upstream Blk Time (%)	5		4	1	1
Queuing Penalty (veh)	22		18	4	6
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	12	8			
Queuing Penalty (veh)	47	8			

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	T	T	L	T
Maximum Queue (ft)	50	54	219	226	123	271	332	150	58	103	175	434
Average Queue (ft)	10	10	116	96	29	117	196	73	3	8	156	250
95th Queue (ft)	36	39	192	179	86	242	322	174	42	70	203	443
Link Distance (ft)	255	255	257	257		260	260		565	565		420
Upstream Blk Time (%)			0	0		1	5					5
Queuing Penalty (veh)			0	0		4	16					20
Storage Bay Dist (ft)					175			100			125	
Storage Blk Time (%)					0	3	29	2			39	7
Queuing Penalty (veh)					0	1	30	6			91	17

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	507
Average Queue (ft)	177
95th Queue (ft)	512
Link Distance (ft)	420
Upstream Blk Time (%)	11
Queuing Penalty (veh)	45
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	WB	NB	NB	SB	SB	B20
Directions Served	LTR	LTR	L	R	L	TR	T
Maximum Queue (ft)	32	64	32	3	29	3	36
Average Queue (ft)	7	20	6	0	8	0	1
95th Queue (ft)	27	48	26	2	28	2	36
Link Distance (ft)	274	195				565	260
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			50	85	80		
Storage Blk Time (%)			0				
Queuing Penalty (veh)			0				

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	117	52	16	32	95
Average Queue (ft)	10	2	1	7	32
95th Queue (ft)	74	23	9	28	83
Link Distance (ft)	218	313	150	150	834
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	2				
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	57	227	34	28	72
Average Queue (ft)	3	56	4	4	25
95th Queue (ft)	34	168	21	19	60
Link Distance (ft)	232	517	525		577
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				75	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T	L	TR	L	TR	L	TR
Maximum Queue (ft)	107	458	146	72	251	119	264	134	234
Average Queue (ft)	21	258	16	17	184	88	82	64	109
95th Queue (ft)	72	502	86	56	302	137	196	130	191
Link Distance (ft)		344	209		232		719		997
Upstream Blk Time (%)		8	0		10				
Queuing Penalty (veh)		41	0		51				
Storage Bay Dist (ft)	85			70		95		110	
Storage Blk Time (%)	0	31		0	33	17	3	2	11
Queuing Penalty (veh)	0	7		0	6	17	5	2	8

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	274	135	128	99
Average Queue (ft)	186	8	31	58
95th Queue (ft)	311	85	95	93
Link Distance (ft)	257	454		66
Upstream Blk Time (%)	8	0		14
Queuing Penalty (veh)	32	0		31
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		0	1	
Queuing Penalty (veh)		0	3	

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	337	352	79	77
Average Queue (ft)	162	140	43	40
95th Queue (ft)	369	367	100	96
Link Distance (ft)	318	318	67	67
Upstream Blk Time (%)	3	5	24	19
Queuing Penalty (veh)	12	20	83	67
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	422	250	300	342	325	160	282	409	383	316	264	476
Average Queue (ft)	221	170	181	201	171	53	102	256	223	114	134	300
95th Queue (ft)	392	270	325	348	326	161	210	370	331	245	264	429
Link Distance (ft)	515			318	318			792	792	792		621
Upstream Blk Time (%)	1		0	3	3					0		
Queuing Penalty (veh)	0		0	10	11					0		
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	12	3	1	6	22	0	0	2			0	16
Queuing Penalty (veh)	25	6	3	14	11	0	0	2			1	17

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	441	94
Average Queue (ft)	258	9
95th Queue (ft)	384	50
Link Distance (ft)	621	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		75
Storage Blk Time (%)	33	0
Queuing Penalty (veh)	6	0

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	99	151
Average Queue (ft)	69	25
95th Queue (ft)	87	108
Link Distance (ft)	66	887
Upstream Blk Time (%)	7	
Queuing Penalty (veh)	43	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB
Directions Served	TR	LT
Maximum Queue (ft)	53	168
Average Queue (ft)	3	22
95th Queue (ft)	52	98
Link Distance (ft)	517	218
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 36: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	230	141	37
Average Queue (ft)	27	8	8
95th Queue (ft)	161	65	31
Link Distance (ft)	313	391	141
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	5		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	WB	B27	NB	SB
Directions Served	T	TR	T	TR	T	R	R
Maximum Queue (ft)	106	91	308	289	236	34	88
Average Queue (ft)	43	10	148	85	23	12	32
95th Queue (ft)	101	50	311	221	126	35	71
Link Distance (ft)	67	67	209	209	344	222	259
Upstream Blk Time (%)	5	1	9	2	0		
Queuing Penalty (veh)	20	2	32	8	0		
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 42: Laurel St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	21	8
Average Queue (ft)	1	0
95th Queue (ft)	9	7
Link Distance (ft)	69	719
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 44: Laurel St

Movement	SB
Directions Served	LT
Maximum Queue (ft)	6
Average Queue (ft)	0
95th Queue (ft)	4
Link Distance (ft)	297
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1069

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	12.1	52.7	48.4	7.2	57.6	48.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	None	Max	None
Avg. Green (s)	9.3	6.8	-1.0	6.8	9.6	-1.0	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	8	0	0	15	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	23	100	100	56	100	100	0
Cycles with Peds (%)	0	31	96	0	12	12	0

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	2	3	5	6	7	8
Movement(s) Served	NBT	EBR	NBL	SBT	EBL	NBTL
Maximum Green (s)	50.5	70.5	5.1	40.9	33.0	33.0
Minimum Green (s)	10.0	8.0	5.0	7.0	7.0	7.0
Recall	C-Max	Min	None	C-Max	Max	None
Avg. Green (s)	0.1	-5.1	5.2	-6.0	10.1	7.2
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	32	0	0	0
Cycles @ Minimum (%)	0	0	40	0	0	0
Cycles Maxed Out (%)	100	100	28	100	100	88
Cycles with Peds (%)	96	0	0	19	93	42

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	4.9	39.5	23.8	4.9	39.5	23.2
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Max	C-Max	None	Max	Max
Avg. Green (s)	4.9	5.5	3.3	6.0	5.8	2.7
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	82	0	0	86	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	18	100	100	14	100	100
Cycles with Peds (%)	0	39	9	0	19	19

Controller Summary

Average Cycle Length (s): -7.0
Number of Complete Cycles : 28

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	Max	Max	None	C-Max
Avg. Green (s)	-12.4	0.4	-4.3	0.7	13.6	5.7
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	8	0
Cycles @ Minimum (%)	0	0	0	0	12	0
Cycles Maxed Out (%)	100	100	100	100	8	100
Cycles with Peds (%)	0	50	0	75	0	29

Controller Summary

Average Cycle Length (s): -13.8
Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:30	4:30	4:30	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6444	6533	6456	6517	6481	6430	6606
Vehs Exited	6488	6534	6473	6551	6501	6485	6628
Starting Vehs	294	252	308	282	266	288	283
Ending Vehs	250	251	291	248	246	233	261
Denied Entry Before	1	1	2	2	2	1	0
Denied Entry After	1	1	2	2	0	2	2
Travel Distance (mi)	3540	3562	3547	3587	3559	3611	3657
Travel Time (hr)	250.7	260.1	255.4	261.0	256.3	268.9	267.6
Total Delay (hr)	123.4	131.9	127.8	131.9	128.2	138.8	136.1
Total Stops	8519	8824	8552	8799	8775	9245	9159
Fuel Used (gal)	150.2	152.8	152.1	153.6	152.0	156.6	156.9

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6417	6392	6625	6483
Vehs Exited	6447	6412	6667	6520
Starting Vehs	296	266	270	271
Ending Vehs	266	246	228	247
Denied Entry Before	1	1	1	0
Denied Entry After	0	1	1	0
Travel Distance (mi)	3521	3509	3659	3575
Travel Time (hr)	258.9	253.0	298.5	263.0
Total Delay (hr)	132.2	126.7	166.8	134.4
Total Stops	8796	8719	9985	8932
Fuel Used (gal)	151.5	149.5	165.1	154.0

Interval #0 Information Seeding

Start Time	4:30
End Time	5:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1522	1553	1535	1541	1561	1527	1573
Vehs Exited	1596	1553	1597	1555	1572	1539	1584
Starting Vehs	294	252	308	282	266	288	283
Ending Vehs	220	252	246	268	255	276	272
Denied Entry Before	1	1	2	2	2	1	0
Denied Entry After	3	1	0	2	1	0	0
Travel Distance (mi)	892	849	875	866	870	870	887
Travel Time (hr)	64.3	60.9	63.7	63.2	64.3	65.7	64.0
Total Delay (hr)	32.2	30.2	32.2	32.1	32.8	34.2	32.2
Total Stops	2171	2049	2138	2164	2285	2249	2222
Fuel Used (gal)	38.3	35.7	37.8	37.2	37.6	38.1	38.0

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1523	1523	1644	1548
Vehs Exited	1563	1542	1619	1571
Starting Vehs	296	266	270	271
Ending Vehs	256	247	295	252
Denied Entry Before	1	1	1	0
Denied Entry After	1	2	2	0
Travel Distance (mi)	860	852	911	873
Travel Time (hr)	59.5	59.6	68.1	63.3
Total Delay (hr)	28.6	28.8	35.4	31.9
Total Stops	2030	2019	2382	2169
Fuel Used (gal)	36.2	35.7	39.5	37.4

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1876	1824	1781	1817	1863	1815	1821
Vehs Exited	1836	1741	1717	1761	1799	1780	1790
Starting Vehs	220	252	246	268	255	276	272
Ending Vehs	260	335	310	324	319	311	303
Denied Entry Before	3	1	0	2	1	0	0
Denied Entry After	2	2	1	0	1	4	0
Travel Distance (mi)	980	945	936	954	969	981	970
Travel Time (hr)	70.7	70.6	67.5	71.1	69.5	77.2	75.0
Total Delay (hr)	35.4	36.8	33.9	36.8	34.6	42.0	40.0
Total Stops	2407	2433	2274	2380	2364	2782	2599
Fuel Used (gal)	42.0	41.2	40.1	41.0	41.5	43.6	42.6

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1845	1774	1854	1822
Vehs Exited	1745	1705	1765	1764
Starting Vehs	256	247	295	252
Ending Vehs	356	316	384	312
Denied Entry Before	1	2	2	0
Denied Entry After	1	2	3	0
Travel Distance (mi)	973	928	982	962
Travel Time (hr)	77.1	67.5	94.9	74.1
Total Delay (hr)	42.1	34.2	59.5	39.5
Total Stops	2672	2400	2931	2521
Fuel Used (gal)	42.8	39.7	47.7	42.2

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1514	1560	1530	1570	1549	1553	1614
Vehs Exited	1551	1647	1586	1625	1603	1600	1651
Starting Vehs	260	335	310	324	319	311	303
Ending Vehs	223	248	254	269	265	264	266
Denied Entry Before	2	2	1	0	1	4	0
Denied Entry After	1	1	2	3	1	3	0
Travel Distance (mi)	841	881	860	891	856	891	893
Travel Time (hr)	59.1	65.4	60.9	65.3	60.2	66.1	64.4
Total Delay (hr)	28.9	33.7	29.9	33.2	29.4	33.9	32.2
Total Stops	2000	2193	1982	2220	2034	2213	2189
Fuel Used (gal)	35.7	38.3	36.7	38.4	36.0	38.5	38.0

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1544	1526	1550	1546
Vehs Exited	1642	1599	1700	1618
Starting Vehs	356	316	384	312
Ending Vehs	258	243	234	245
Denied Entry Before	1	2	3	0
Denied Entry After	1	2	2	0
Travel Distance (mi)	876	859	906	875
Travel Time (hr)	66.3	64.1	73.0	64.5
Total Delay (hr)	34.7	33.2	40.5	33.0
Total Stops	2260	2189	2532	2176
Fuel Used (gal)	38.3	37.3	41.2	37.8

Interval #4 Information

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1532	1596	1610	1589	1508	1535	1598
Vehs Exited	1505	1593	1573	1610	1527	1566	1603
Starting Vehs	223	248	254	269	265	264	266
Ending Vehs	250	251	291	248	246	233	261
Denied Entry Before	1	1	2	3	1	3	0
Denied Entry After	1	1	2	2	0	2	2
Travel Distance (mi)	827	887	877	876	863	869	907
Travel Time (hr)	56.6	63.2	63.4	61.4	62.4	60.0	64.1
Total Delay (hr)	26.9	31.3	31.8	29.9	31.3	28.7	31.6
Total Stops	1941	2149	2158	2035	2092	2001	2149
Fuel Used (gal)	34.2	37.6	37.4	37.0	36.8	36.4	38.3

Interval #4 Information

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1505	1569	1577	1561
Vehs Exited	1497	1566	1583	1562
Starting Vehs	258	243	234	245
Ending Vehs	266	246	228	247
Denied Entry Before	1	2	2	0
Denied Entry After	0	1	1	0
Travel Distance (mi)	812	870	861	865
Travel Time (hr)	55.9	61.8	62.4	61.1
Total Delay (hr)	26.8	30.5	31.4	30.0
Total Stops	1834	2111	2140	2056
Fuel Used (gal)	34.1	36.8	36.7	36.5

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.0	0.4	0.4	4.1	0.2	0.2	0.0	0.0	0.0	1.9	0.5	0.5
Total Delay (hr)	0.9	1.0	0.4	0.1	0.6	0.3	1.2	4.0	0.0	0.7	3.8	1.4
Total Del/Veh (s)	30.8	25.4	26.3	35.8	24.0	25.8	39.1	26.4	34.4	38.6	38.4	37.1
Stop Delay (hr)	0.8	0.9	0.3	0.1	0.5	0.3	1.0	3.0	0.0	0.5	2.8	1.1
Stop Del/Veh (s)	27.8	21.3	24.5	32.6	20.3	24.1	33.1	20.3	29.3	30.7	28.9	29.7
Travel Dist (mi)	28.6	38.9	13.1	1.5	16.5	8.3	22.6	108.7	1.1	23.4	131.3	50.8
Travel Time (hr)	2.0	2.4	0.8	0.1	1.2	0.6	2.1	7.7	0.1	1.5	8.2	3.2
Vehicles Entered	106	145	49	8	90	45	111	533	5	62	349	135
Vehicles Exited	108	146	49	8	92	46	111	531	5	62	347	133
Hourly Exit Rate	108	146	49	8	92	46	111	531	5	62	347	133
Input Volume	117	145	46	9	90	44	106	536	5	65	348	138
% of Volume	92	101	106	89	102	105	104	99	100	95	100	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.5
Total Delay (hr)	14.5
Total Del/Veh (s)	31.2
Stop Delay (hr)	11.6
Stop Del/Veh (s)	25.0
Travel Dist (mi)	444.8
Travel Time (hr)	30.0
Vehicles Entered	1638
Vehicles Exited	1638
Hourly Exit Rate	1638
Input Volume	1649
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	2.0	1.5	5.0	0.9	5.3	1.3	16.0
Total Del/Veh (s)	48.1	10.8	51.7	6.5	57.1	52.4	30.0
Stop Delay (hr)	1.8	0.7	4.5	0.6	4.5	1.1	13.1
Stop Del/Veh (s)	42.9	5.2	46.5	4.0	47.7	45.0	24.5
Travel Dist (mi)	12.7	35.9	30.6	47.1	65.8	17.3	209.5
Travel Time (hr)	2.5	2.8	6.4	2.6	7.6	1.9	23.8
Vehicles Entered	150	485	338	512	330	86	1901
Vehicles Exited	146	488	341	509	333	86	1903
Hourly Exit Rate	146	488	341	509	333	86	1903
Input Volume	149	489	347	504	330	83	1902
% of Volume	98	100	98	101	101	104	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.2	0.1	0.0	0.7	0.0	0.9	0.0	4.6	0.3	5.6	1.9	0.0
Total Del/Veh (s)	38.2	30.7	7.2	37.4	0.4	12.9	68.7	28.5	14.1	57.7	14.6	13.9
Stop Delay (hr)	0.2	0.1	0.0	0.7	0.0	0.9	0.0	3.9	0.2	4.8	1.2	0.0
Stop Del/Veh (s)	36.4	28.3	6.7	35.3	0.0	12.3	65.6	24.3	11.7	49.2	9.2	9.6
Travel Dist (mi)	0.7	0.8	0.8	3.9	0.2	14.7	0.1	34.8	4.5	31.2	42.7	0.3
Travel Time (hr)	0.2	0.2	0.1	0.9	0.0	1.6	0.0	5.8	0.5	7.0	3.6	0.0
Vehicles Entered	15	16	17	67	5	252	2	578	73	341	467	3
Vehicles Exited	15	16	18	67	5	251	2	580	74	340	466	3
Hourly Exit Rate	15	16	18	67	5	251	2	580	74	340	466	3
Input Volume	16	17	18	65	3	255	3	578	74	344	463	3
% of Volume	95	96	101	103	167	98	67	100	100	99	101	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	14.4
Total Del/Veh (s)	28.0
Stop Delay (hr)	12.1
Stop Del/Veh (s)	23.4
Travel Dist (mi)	134.8
Travel Time (hr)	20.0
Vehicles Entered	1836
Vehicles Exited	1837
Hourly Exit Rate	1837
Input Volume	1838
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	3.2	0.2	2.7	0.1	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	19.2	19.3	6.7	17.4	12.7	5.6	6.6	0.5	0.7	5.1	1.0	0.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	17.4	15.0	6.5	15.9	9.6	5.5	3.9	0.0	0.0	2.8	0.0	0.0
Travel Dist (mi)	0.4	0.1	0.6	0.3	0.1	0.9	0.3	118.5	1.7	4.0	60.8	0.2
Travel Time (hr)	0.1	0.0	0.1	0.1	0.0	0.1	0.0	4.1	0.1	0.2	2.2	0.0
Vehicles Entered	8	1	12	9	2	22	1	614	9	34	524	2
Vehicles Exited	8	1	12	9	2	22	1	616	9	34	522	2
Hourly Exit Rate	8	1	12	9	2	22	1	616	9	34	522	2
Input Volume	8	1	11	10	2	23	2	616	8	37	519	1
% of Volume	103	100	112	90	89	97	50	100	109	91	101	200
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.5
Total Del/Veh (s)	1.3
Stop Delay (hr)	0.2
Stop Del/Veh (s)	0.5
Travel Dist (mi)	187.7
Travel Time (hr)	6.9
Vehicles Entered	1238
Vehicles Exited	1238
Hourly Exit Rate	1238
Input Volume	1238
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	4.2	0.2	0.1	0.1	0.0
Total Delay (hr)	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.4
Total Del/Veh (s)	4.3	0.9	0.9	0.5	18.3	7.4	16.6	7.0	1.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Stop Del/Veh (s)	2.3	0.1	0.0	0.0	16.6	7.1	14.7	6.5	0.5
Travel Dist (mi)	0.4	29.7	29.9	0.5	0.3	0.6	2.3	1.0	64.7
Travel Time (hr)	0.0	1.2	1.1	0.0	0.1	0.1	0.2	0.0	2.6
Vehicles Entered	8	607	426	8	7	13	15	6	1090
Vehicles Exited	8	607	425	8	7	13	15	6	1089
Hourly Exit Rate	8	607	425	8	7	13	15	6	1089
Input Volume	7	613	430	7	8	12	16	5	1098
% of Volume	114	99	99	110	85	106	95	114	99
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	4.1	0.1	0.1	0.1
Total Delay (hr)	0.0	0.4	0.0	0.0	1.3	0.0	0.1	0.0	0.0	0.0	0.1	2.1
Total Del/Veh (s)	5.6	2.2	1.3	10.0	11.0	11.0	46.7	25.0	9.1	20.8	24.3	6.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.9	0.0	0.1	0.0	0.0	0.0	0.1	1.3
Stop Del/Veh (s)	2.8	0.1	0.0	7.6	7.6	9.4	44.8	21.9	8.4	18.8	24.0	4.2
Travel Dist (mi)	0.2	33.5	0.4	0.5	45.5	0.6	1.0	0.5	1.7	0.6	2.0	86.5
Travel Time (hr)	0.0	1.5	0.0	0.0	2.8	0.0	0.2	0.1	0.1	0.1	0.2	5.1
Vehicles Entered	4	597	8	5	424	6	10	5	17	5	18	1099
Vehicles Exited	4	597	8	4	422	6	10	5	17	5	18	1096
Hourly Exit Rate	4	597	8	4	422	6	10	5	17	5	18	1096
Input Volume	4	604	7	5	431	5	11	5	16	5	18	1111
% of Volume	100	99	114	80	98	120	89	105	106	105	99	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.3	0.2	0.0	0.0	0.0	0.1	0.0	0.0	3.9	0.3	0.3
Total Delay (hr)	1.5	7.6	0.8	0.4	4.0	0.1	2.9	1.5	0.6	0.5	1.5	0.4
Total Del/Veh (s)	65.0	50.3	44.8	59.6	34.1	29.6	54.3	48.9	53.5	55.4	61.1	57.9
Stop Delay (hr)	1.3	6.2	0.6	0.4	3.4	0.1	2.7	1.3	0.6	0.5	1.4	0.4
Stop Del/Veh (s)	57.2	41.4	37.9	55.4	29.1	26.7	49.9	44.0	50.4	51.9	56.6	55.4
Travel Dist (mi)	6.6	43.3	4.9	1.2	22.7	0.9	28.4	15.5	5.8	6.1	16.0	4.5
Travel Time (hr)	1.8	9.1	1.0	0.4	4.8	0.2	4.0	2.0	0.8	0.8	2.1	0.6
Vehicles Entered	81	529	60	22	411	17	193	110	39	32	85	24
Vehicles Exited	82	533	61	22	410	16	193	109	40	31	85	24
Hourly Exit Rate	82	533	61	22	410	16	193	109	40	31	85	24
Input Volume	80	537	60	22	421	17	192	107	37	34	78	24
% of Volume	102	99	102	101	97	96	101	102	108	91	109	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	21.8
Total Del/Veh (s)	47.9
Stop Delay (hr)	18.9
Stop Del/Veh (s)	41.6
Travel Dist (mi)	155.9
Travel Time (hr)	27.3
Vehicles Entered	1603
Vehicles Exited	1606
Hourly Exit Rate	1606
Input Volume	1609
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.4	3.6	0.0	0.0	0.0	0.4
Total Delay (hr)	0.1	0.3	0.0	0.0	0.1	0.0	0.0	0.7
Total Del/Veh (s)	4.8	3.1	0.4	0.2	12.6	0.8	4.5	2.7
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.3
Stop Del/Veh (s)	2.0	0.6	0.0	0.0	11.6	0.0	4.6	1.2
Travel Dist (mi)	4.0	23.4	24.1	4.8	0.8	0.0	0.8	57.9
Travel Time (hr)	0.3	1.4	0.9	0.3	0.2	0.0	0.1	3.1
Vehicles Entered	65	382	279	56	42	2	40	866
Vehicles Exited	65	387	279	56	42	2	40	871
Hourly Exit Rate	65	387	279	56	42	2	40	871
Input Volume	62	389	281	54	43	2	39	869
% of Volume	105	99	99	104	98	133	103	100
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	2.8	0.5	3.4
Total Del/Veh (s)	10.6	3.3	7.8
Stop Delay (hr)	2.1	0.5	2.6
Stop Del/Veh (s)	8.0	2.7	6.0
Travel Dist (mi)	73.6	14.5	88.1
Travel Time (hr)	6.3	1.1	7.4
Vehicles Entered	955	600	1555
Vehicles Exited	956	599	1555
Hourly Exit Rate	956	599	1555
Input Volume	956	608	1564
% of Volume	100	99	99
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.3	0.0
Denied Del/Veh (s)	0.9	1.9	3.6	0.0	0.0	0.0	2.8	0.9	1.2	3.1	1.0	2.9
Total Delay (hr)	0.9	5.6	1.2	5.4	3.0	0.4	2.9	15.4	2.3	3.0	8.8	0.2
Total Del/Veh (s)	71.8	73.1	55.6	55.6	55.4	21.1	83.5	41.1	15.3	77.4	33.0	15.8
Stop Delay (hr)	0.8	5.1	1.1	5.1	2.7	0.4	2.6	11.8	1.7	2.8	7.1	0.1
Stop Del/Veh (s)	66.6	65.9	51.1	52.0	50.3	19.3	75.3	31.5	11.4	71.2	26.8	12.1
Travel Dist (mi)	4.3	27.2	7.4	25.7	14.1	4.9	18.4	199.2	81.2	16.6	111.3	5.1
Travel Time (hr)	1.1	6.7	1.6	6.5	3.5	0.6	3.6	22.5	5.7	3.8	12.8	0.4
Vehicles Entered	44	273	75	344	189	65	122	1322	540	140	933	42
Vehicles Exited	43	273	74	346	188	65	122	1322	543	140	934	42
Hourly Exit Rate	43	273	74	346	188	65	122	1322	543	140	934	42
Input Volume	48	276	75	347	196	64	124	1328	543	137	920	44
% of Volume	89	99	98	100	96	102	99	100	100	102	102	95
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	1.3
Denied Del/Veh (s)	1.1
Total Delay (hr)	49.0
Total Del/Veh (s)	42.3
Stop Delay (hr)	41.3
Stop Del/Veh (s)	35.6
Travel Dist (mi)	515.3
Travel Time (hr)	68.6
Vehicles Entered	4089
Vehicles Exited	4092
Hourly Exit Rate	4092
Input Volume	4102
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.1
Total Delay (hr)	0.1	0.0	0.1
Total Del/Veh (s)	3.5	1.1	2.5
Stop Delay (hr)	0.1	0.0	0.1
Stop Del/Veh (s)	2.4	0.1	1.5
Travel Dist (mi)	2.6	14.0	16.6
Travel Time (hr)	0.3	0.5	0.8
Vehicles Entered	124	83	207
Vehicles Exited	125	84	209
Hourly Exit Rate	125	84	209
Input Volume	120	82	202
% of Volume	105	102	104
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.1	0.3
Total Del/Veh (s)	1.3	0.7	0.6	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	0.0	0.0	0.0
Travel Dist (mi)	67.1	0.5	23.4	91.0
Travel Time (hr)	2.5	0.0	0.9	3.4
Vehicles Entered	612	4	436	1052
Vehicles Exited	612	4	436	1052
Hourly Exit Rate	612	4	436	1052
Input Volume	618	5	443	1065
% of Volume	99	80	98	99
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.3	0.0	0.0	0.2	0.0	0.0	0.6
Total Del/Veh (s)	1.9	2.7	7.6	1.6	17.3	12.5	2.1
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	0.5	1.8	4.5	0.3	15.7	12.3	0.7
Travel Dist (mi)	45.2	0.4	0.4	36.7	0.4	0.5	83.5
Travel Time (hr)	1.9	0.0	0.0	1.7	0.1	0.1	3.8
Vehicles Entered	629	5	4	426	10	12	1086
Vehicles Exited	630	5	4	426	10	12	1087
Hourly Exit Rate	630	5	4	426	10	12	1087
Input Volume	636	5	5	428	10	10	1094
% of Volume	99	100	80	100	98	117	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Total Delay (hr)	0.6	0.2	0.5	0.0	0.4	0.1	1.7
Total Del/Veh (s)	3.7	2.1	2.8	2.5	12.1	9.7	3.6
Stop Delay (hr)	0.3	0.1	0.3	0.0	0.4	0.1	1.1
Stop Del/Veh (s)	2.0	0.7	1.6	1.7	11.5	9.5	2.3
Travel Dist (mi)	13.8	10.0	32.5	2.8	4.8	1.2	65.1
Travel Time (hr)	1.1	0.8	1.8	0.2	0.6	0.1	4.6
Vehicles Entered	555	402	579	51	112	25	1724
Vehicles Exited	554	402	579	51	112	25	1723
Hourly Exit Rate	554	402	579	51	112	25	1723
Input Volume	568	389	587	54	108	25	1730
% of Volume	98	103	99	95	104	101	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	WBR	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	4.4	3.4	0.2	1.5	0.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.6	3.4	0.0	0.2	0.1
Travel Dist (mi)	0.0	0.0	22.5	24.8	47.3
Travel Time (hr)	0.0	0.0	0.8	1.0	1.8
Vehicles Entered	2	2	336	169	509
Vehicles Exited	2	2	335	169	508
Hourly Exit Rate	2	2	335	169	508
Input Volume	2	2	327	161	492
% of Volume	100	100	102	105	103
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.3	0.4		0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		3.0	0.4	0.0		0.2	0.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		3.1	0.0	0.0		0.0	0.0
Travel Dist (mi)	0.0	0.0	9.0	0.0	0.0	11.4	20.5
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.4	0.8
Vehicles Entered	0	2	334	1	0	169	506
Vehicles Exited	0	2	334	1	0	169	506
Hourly Exit Rate	0	2	334	1	0	169	506
Input Volume	1	1	326	1	1	161	491
% of Volume	0	200	102	100	0	105	103
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	1.8
Denied Del/Veh (s)	1.0
Total Delay (hr)	132.5
Total Del/Veh (s)	70.5
Stop Delay (hr)	104.7
Stop Del/Veh (s)	55.7
Travel Dist (mi)	3575.3
Travel Time (hr)	263.0
Vehicles Entered	6483
Vehicles Exited	6520
Hourly Exit Rate	6520
Input Volume	30923
% of Volume	21
Denied Entry Before	0
Denied Entry After	0

Arterial Level of Service: NB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seminary Dr	4	0.5	23.8	0.2	30
	20	1.1	15.3	0.1	28
Ringwood Ave	3	28.5	35.9	0.1	6
Ravenswood Ave	2	6.2	17.4	0.1	19
	1	15.8	40.0	0.2	19
Total		52.2	132.4	0.7	18

Arterial Level of Service: SB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ravenswood Ave	2	61.4	85.1	0.2	9
	3	5.2	16.1	0.1	21
	20	1.8	9.6	0.1	23
	4	1.0	15.0	0.1	28
Total		69.4	125.8	0.5	14

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	162	208	58	184	149	424	160	584
Average Queue (ft)	64	100	9	77	85	228	63	293
95th Queue (ft)	124	181	39	150	163	386	157	499
Link Distance (ft)		1416		961		1023		1985
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)		0	0	23	1	27	0	33
Queuing Penalty (veh)		0	0	2	5	29	1	22

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	398	170	382	220	487
Average Queue (ft)	171	91	238	68	295
95th Queue (ft)	365	226	356	155	450
Link Distance (ft)	390		420	420	1023
Upstream Blk Time (%)	1		0	0	
Queuing Penalty (veh)	8		2	0	
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	30	2			
Queuing Penalty (veh)	149	3			

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	T	T	L	T
Maximum Queue (ft)	56	61	114	193	58	279	336	150	24	99	175	394
Average Queue (ft)	13	21	48	82	4	117	217	58	1	8	166	245
95th Queue (ft)	41	52	97	148	33	244	341	159	16	49	194	424
Link Distance (ft)	255	255	257	257		260	260		565	565		420
Upstream Blk Time (%)				0		1	6					1
Queuing Penalty (veh)				0		2	20					2
Storage Bay Dist (ft)					175			100			125	
Storage Blk Time (%)						2	32	0			37	0
Queuing Penalty (veh)						0	24	0			84	1

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	489
Average Queue (ft)	139
95th Queue (ft)	410
Link Distance (ft)	420
Upstream Blk Time (%)	1
Queuing Penalty (veh)	6
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	WB	NB	NB	NB	NB	SB	SB	B20	B20
Directions Served	LTR	LTR	L	T	T	R	L	TR	T	
Maximum Queue (ft)	44	52	17	8	20	3	50	17	12	4
Average Queue (ft)	16	18	1	0	1	0	13	1	1	0
95th Queue (ft)	43	41	8	6	9	2	38	10	9	0
Link Distance (ft)	274	195		1010	1010			565	260	260
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			50			85	80			
Storage Blk Time (%)				0			0			
Queuing Penalty (veh)				0			0			

Queuing and Blocking Report
Existing PM

10/03/2023

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	101	16	32	39	59
Average Queue (ft)	7	1	7	11	17
95th Queue (ft)	43	8	28	36	45
Link Distance (ft)	217	317		249	834
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)			100		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	101	322	45	35	62
Average Queue (ft)	5	97	14	13	19
95th Queue (ft)	51	253	40	37	49
Link Distance (ft)	232	517	525		577
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)				75	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	109	468	285	242	94	250	120	419	128	217
Average Queue (ft)	58	393	99	52	25	211	102	199	36	104
95th Queue (ft)	117	531	272	183	71	306	142	375	96	182
Link Distance (ft)		343	209	209		232		723		997
Upstream Blk Time (%)		30	8	3		21				
Queuing Penalty (veh)		204	28	9		96				
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	2	51			1	41	30	17	0	13
Queuing Penalty (veh)	15	40			5	9	41	33	0	4

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	SB
Directions Served	LT	R	LR
Maximum Queue (ft)	197	11	71
Average Queue (ft)	37	0	35
95th Queue (ft)	120	8	60
Link Distance (ft)	257		66
Upstream Blk Time (%)	0		1
Queuing Penalty (veh)	0		1
Storage Bay Dist (ft)		135	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	311	334	78	74
Average Queue (ft)	95	117	20	18
95th Queue (ft)	265	318	68	62
Link Distance (ft)	318	318	67	67
Upstream Blk Time (%)	0	1	5	3
Queuing Penalty (veh)	0	5	16	10
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	431	250	270	289	307	160	345	764	704	478	265	503
Average Queue (ft)	203	161	127	146	149	49	186	458	411	172	167	312
95th Queue (ft)	364	265	223	245	278	144	377	708	659	403	290	461
Link Distance (ft)	515			318	318			792	792	792		621
Upstream Blk Time (%)	0		0	0	1			2	1	0		1
Queuing Penalty (veh)	0		0	1	3			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	6	4	0	1	16	0	0	22			1	17
Queuing Penalty (veh)	14	8	0	2	10	0	0	28			4	23

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	456	100
Average Queue (ft)	265	23
95th Queue (ft)	411	83
Link Distance (ft)	621	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		75
Storage Blk Time (%)	34	0
Queuing Penalty (veh)	15	0

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	67	16
Average Queue (ft)	36	1
95th Queue (ft)	55	11
Link Distance (ft)	66	887
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB
Directions Served	TR
Maximum Queue (ft)	43
Average Queue (ft)	0
95th Queue (ft)	0
Link Distance (ft)	517
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 36: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	155	124	54
Average Queue (ft)	12	5	17
95th Queue (ft)	76	47	45
Link Distance (ft)	317	390	207
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	WB	NB	SB
Directions Served	T	TR	T	TR	R	R
Maximum Queue (ft)	102	87	140	125	114	56
Average Queue (ft)	41	33	40	34	45	18
95th Queue (ft)	99	87	104	96	86	46
Link Distance (ft)	67	67	209	209	222	259
Upstream Blk Time (%)	6	4	0			
Queuing Penalty (veh)	31	18	0			
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 42: Laurel St

Movement	WB
Directions Served	LR
Maximum Queue (ft)	26
Average Queue (ft)	3
95th Queue (ft)	19
Link Distance (ft)	95
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 44: Laurel St

Movement	WB
Directions Served	LR
Maximum Queue (ft)	26
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	85
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1034

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	6.5	54.3	52.4	7.5	53.3	52.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	None	Max	None
Avg. Green (s)	6.1	4.8	8.6	6.8	1.4	8.6	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	42	0	0	15	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	27	100	100	52	100	100	0
Cycles with Peds (%)	0	33	96	0	13	11	0

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	2	3	5	6	7	8
Movement(s) Served	NBT	EBR	NBL	SBT	EBL	NBTL
Maximum Green (s)	48.3	72.7	5.0	38.8	34.5	33.7
Minimum Green (s)	10.0	8.0	5.0	7.0	7.0	7.0
Recall	C-Max	Min	None	C-Max	Ped	None
Avg. Green (s)	3.1	-8.3	5.8	2.3	5.2	9.1
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	92	0	0	0
Cycles @ Minimum (%)	0	0	8	0	0	0
Cycles Maxed Out (%)	100	42	4	100	46	43
Cycles with Peds (%)	96	0	0	12	100	25

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	5.3	79.3	41.4	8.5	76.1	35.4
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Min	C-Max	None	Min	Max
Avg. Green (s)	5.5	9.9	-12.9	6.7	6.2	2.6
g/C Ratio	0.11	0.62	-0.80	0.27	0.39	0.16
Cycles Skipped (%)	69	0	0	35	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	31	50	100	6	50	100
Cycles with Peds (%)	0	60	45	0	50	45

Controller Summary

Average Cycle Length (s): 16.2

Number of Complete Cycles : 16

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	None	None	None	C-Max
Avg. Green (s)	-8.6	0.4	-6.1	-1.3	-13.1	7.4
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	4	0
Cycles @ Minimum (%)	0	0	0	0	4	0
Cycles Maxed Out (%)	100	100	46	75	4	100
Cycles with Peds (%)	0	55	0	71	0	24

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:30	7:30	7:30	7:30	7:30	7:30	7:30
End Time	9:00	9:00	9:00	9:00	9:00	9:00	9:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6923	7065	6994	6943	6968	6912	7040
Vehs Exited	6983	7047	7013	6960	7024	6998	7050
Starting Vehs	294	245	270	266	286	306	273
Ending Vehs	234	263	251	249	230	220	263
Denied Entry Before	4	3	1	0	1	2	4
Denied Entry After	2	3	2	3	1	0	2
Travel Distance (mi)	3697	3694	3716	3667	3659	3703	3722
Travel Time (hr)	269.0	268.0	303.6	280.2	272.8	274.6	386.3
Total Delay (hr)	135.4	134.2	169.3	147.5	140.5	140.6	251.5
Total Stops	9589	9590	10527	9969	9591	9872	11592
Fuel Used (gal)	157.6	157.5	166.7	160.2	158.7	159.8	185.5

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:30	7:30	7:30	7:30
End Time	9:00	9:00	9:00	9:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6861	7014	6992	6965
Vehs Exited	6893	7019	7024	7002
Starting Vehs	280	265	255	274
Ending Vehs	248	260	223	239
Denied Entry Before	0	1	0	0
Denied Entry After	2	1	2	0
Travel Distance (mi)	3673	3691	3659	3688
Travel Time (hr)	272.1	294.2	284.5	290.5
Total Delay (hr)	138.7	160.5	152.0	157.0
Total Stops	9796	10159	9951	10060
Fuel Used (gal)	158.1	163.8	161.4	162.9

Interval #0 Information Seeding

Start Time	7:30
End Time	8:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1591	1615	1644	1611	1593	1685	1665
Vehs Exited	1651	1611	1647	1594	1620	1696	1648
Starting Vehs	294	245	270	266	286	306	273
Ending Vehs	234	249	267	283	259	295	290
Denied Entry Before	4	3	1	0	1	2	4
Denied Entry After	1	0	1	1	1	2	4
Travel Distance (mi)	870	865	882	843	862	938	903
Travel Time (hr)	61.6	60.6	61.1	58.5	60.3	68.2	65.9
Total Delay (hr)	30.1	29.3	29.3	28.1	29.2	34.3	33.1
Total Stops	2228	2171	2243	2097	2114	2429	2409
Fuel Used (gal)	36.7	36.6	37.2	35.5	36.2	39.9	38.4

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1595	1575	1656	1618
Vehs Exited	1614	1563	1661	1632
Starting Vehs	280	265	255	274
Ending Vehs	261	277	250	263
Denied Entry Before	0	1	0	0
Denied Entry After	4	2	4	0
Travel Distance (mi)	862	849	877	875
Travel Time (hr)	61.3	59.0	61.8	61.8
Total Delay (hr)	30.0	28.3	30.1	30.2
Total Stops	2223	2090	2244	2227
Fuel Used (gal)	36.6	35.6	36.8	37.0

Interval #2 Information

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	2063	2075	1988	2074	2094	2047	2050
Vehs Exited	1965	1974	1865	1967	2039	1973	1753
Starting Vehs	234	249	267	283	259	295	290
Ending Vehs	332	350	390	390	314	369	587
Denied Entry Before	1	0	1	1	1	2	4
Denied Entry After	3	10	12	9	13	9	61
Travel Distance (mi)	1030	1031	955	1015	1030	1026	878
Travel Time (hr)	78.6	79.8	88.3	86.7	80.0	82.9	108.2
Total Delay (hr)	41.3	42.5	53.7	49.8	42.9	45.7	76.4
Total Stops	2808	2829	2921	3025	2759	2977	2851
Fuel Used (gal)	44.7	44.9	45.0	46.2	45.4	45.6	47.4

Interval #2 Information

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	2063	2147	2067	2064
Vehs Exited	1966	2021	1941	1945
Starting Vehs	261	277	250	263
Ending Vehs	358	403	376	389
Denied Entry Before	4	2	4	0
Denied Entry After	5	28	24	14
Travel Distance (mi)	1041	1032	994	1003
Travel Time (hr)	79.6	90.1	83.5	85.8
Total Delay (hr)	41.6	52.5	47.5	49.4
Total Stops	2910	3056	2904	2902
Fuel Used (gal)	45.3	47.2	45.2	45.7

Interval #3 Information

Start Time	8:30
End Time	8:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1628	1677	1655	1639	1670	1592	1664
Vehs Exited	1706	1760	1733	1764	1676	1708	1847
Starting Vehs	332	350	390	390	314	369	587
Ending Vehs	254	267	312	265	308	253	404
Denied Entry Before	3	10	12	9	13	9	61
Denied Entry After	1	1	1	3	1	1	15
Travel Distance (mi)	905	907	928	924	880	883	982
Travel Time (hr)	66.9	65.5	87.4	73.7	69.0	66.1	130.9
Total Delay (hr)	34.2	32.6	53.9	40.3	37.1	34.2	95.3
Total Stops	2413	2396	3015	2615	2469	2388	3455
Fuel Used (gal)	38.8	38.6	44.4	41.2	39.0	38.5	55.5

Interval #3 Information

Start Time	8:30
End Time	8:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1608	1627	1644	1637
Vehs Exited	1685	1766	1753	1737
Starting Vehs	358	403	376	389
Ending Vehs	281	264	267	286
Denied Entry Before	5	28	24	14
Denied Entry After	3	2	3	1
Travel Distance (mi)	906	917	912	914
Travel Time (hr)	71.6	80.8	79.1	79.1
Total Delay (hr)	38.8	47.6	46.0	46.0
Total Stops	2585	2748	2661	2674
Fuel Used (gal)	40.0	42.7	42.3	42.1

Interval #4 Information

Start Time	8:45
End Time	9:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1641	1698	1707	1619	1611	1588	1661
Vehs Exited	1661	1702	1768	1635	1689	1621	1802
Starting Vehs	254	267	312	265	308	253	404
Ending Vehs	234	263	251	249	230	220	263
Denied Entry Before	1	1	1	3	1	1	15
Denied Entry After	2	3	2	3	1	0	2
Travel Distance (mi)	892	890	951	885	888	856	959
Travel Time (hr)	61.9	62.0	66.8	61.3	63.4	57.3	81.3
Total Delay (hr)	29.8	29.8	32.5	29.3	31.3	26.4	46.7
Total Stops	2140	2194	2348	2232	2249	2078	2877
Fuel Used (gal)	37.3	37.4	40.1	37.4	38.0	35.7	44.2

Interval #4 Information

Start Time	8:45
End Time	9:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1595	1665	1625	1638
Vehs Exited	1628	1669	1669	1685
Starting Vehs	281	264	267	286
Ending Vehs	248	260	223	239
Denied Entry Before	3	2	3	1
Denied Entry After	2	1	2	0
Travel Distance (mi)	864	892	876	895
Travel Time (hr)	59.6	64.4	60.0	63.8
Total Delay (hr)	28.3	32.2	28.3	31.4
Total Stops	2078	2265	2142	2257
Fuel Used (gal)	36.3	38.3	37.1	38.2

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.1
Denied Del/Veh (s)	2.9	0.4	0.4	3.5	0.3	0.4	0.1	0.0	0.0	4.6	3.4	4.4
Total Delay (hr)	1.5	2.1	0.5	0.3	1.9	1.2	1.5	4.9	0.6	2.4	6.1	1.8
Total Del/Veh (s)	62.1	36.7	39.3	51.5	33.0	32.8	49.9	42.6	44.5	55.5	56.6	61.2
Stop Delay (hr)	1.4	1.8	0.5	0.3	1.5	1.0	1.3	4.0	0.5	2.0	4.9	1.5
Stop Del/Veh (s)	58.4	31.4	36.2	46.7	26.8	28.7	43.1	35.2	38.7	45.4	44.9	51.4
Travel Dist (mi)	22.4	54.4	13.2	4.0	36.6	23.7	21.7	80.7	8.9	58.1	144.0	38.5
Travel Time (hr)	2.3	4.0	1.0	0.5	3.1	2.1	2.3	7.7	0.9	4.7	11.3	3.3
Vehicles Entered	83	202	49	22	200	130	108	406	44	154	382	103
Vehicles Exited	85	201	49	22	199	129	107	407	44	155	383	102
Hourly Exit Rate	85	201	49	22	199	129	107	407	44	155	383	102
Input Volume	80	209	49	25	205	133	105	394	44	156	380	109
% of Volume	106	96	100	87	97	97	102	103	100	99	101	93
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	0.8
Denied Del/Veh (s)	1.6
Total Delay (hr)	24.8
Total Del/Veh (s)	46.6
Stop Delay (hr)	20.7
Stop Del/Veh (s)	38.9
Travel Dist (mi)	506.1
Travel Time (hr)	43.2
Vehicles Entered	1883
Vehicles Exited	1883
Hourly Exit Rate	1883
Input Volume	1890
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.8
Denied Del/Veh (s)	4.8	0.0	5.8	0.1	0.0	0.0	0.0	1.5
Total Delay (hr)	1.3	0.0	1.9	6.8	0.5	7.3	1.5	19.3
Total Del/Veh (s)	44.3	2.8	17.7	60.3	3.7	69.5	64.0	37.7
Stop Delay (hr)	1.2	0.0	1.4	6.2	0.2	6.1	1.3	16.4
Stop Del/Veh (s)	40.3	0.9	13.4	54.7	1.7	58.3	54.7	32.1
Travel Dist (mi)	8.5	0.8	27.6	36.1	42.2	75.6	17.5	208.3
Travel Time (hr)	1.8	0.0	3.6	8.5	2.0	9.9	2.2	27.9
Vehicles Entered	102	18	383	398	459	371	85	1816
Vehicles Exited	103	18	384	397	456	369	85	1812
Hourly Exit Rate	103	18	384	397	456	369	85	1812
Input Volume	97	18	379	399	444	370	86	1793
% of Volume	106	100	101	99	103	100	99	101
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.0
Total Delay (hr)	0.2	0.1	0.0	1.6	0.2	1.3	0.6	5.3	0.5	4.9	3.5	0.1
Total Del/Veh (s)	67.8	39.3	8.4	41.7	15.7	16.3	74.0	34.5	15.7	75.5	24.5	13.1
Stop Delay (hr)	0.2	0.1	0.0	1.5	0.2	1.3	0.6	4.7	0.4	4.5	2.6	0.1
Stop Del/Veh (s)	65.7	36.4	7.7	39.0	13.7	16.2	71.2	30.2	13.2	68.8	18.7	10.1
Travel Dist (mi)	0.4	0.4	0.1	7.7	2.4	16.5	1.6	33.3	6.8	20.5	44.7	3.6
Travel Time (hr)	0.2	0.1	0.0	1.9	0.3	2.3	0.6	6.5	0.8	5.8	5.2	0.3
Vehicles Entered	9	8	3	135	56	294	27	552	111	227	502	40
Vehicles Exited	9	8	3	134	56	292	28	554	111	230	505	40
Hourly Exit Rate	9	8	3	134	56	292	28	554	111	230	505	40
Input Volume	10	10	2	136	54	298	27	533	105	227	496	42
% of Volume	92	82	150	99	103	98	104	104	106	101	102	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	18.4
Total Del/Veh (s)	33.3
Stop Delay (hr)	16.1
Stop Del/Veh (s)	29.2
Travel Dist (mi)	137.9
Travel Time (hr)	24.2
Vehicles Entered	1964
Vehicles Exited	1970
Hourly Exit Rate	1970
Input Volume	1940
% of Volume	102
Denied Entry Before	0
Denied Entry After	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	2.9	0.6	2.7	0.0	0.0	0.0	0.3
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.1	0.0	0.5
Total Del/Veh (s)	24.8	4.5	20.2	7.7	4.4	1.3	0.7	4.8	0.4	0.1	1.3
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	23.0	4.4	18.5	7.5	2.4	0.0	0.0	3.1	0.0	0.0	0.4
Travel Dist (mi)	0.1	0.3	0.3	1.5	2.8	124.2	1.2	0.7	21.1	0.4	152.5
Travel Time (hr)	0.0	0.0	0.1	0.2	0.1	4.5	0.1	0.1	0.8	0.0	5.8
Vehicles Entered	1	6	7	36	15	645	6	20	596	11	1343
Vehicles Exited	1	6	7	36	15	646	6	20	596	11	1344
Hourly Exit Rate	1	6	7	36	15	646	6	20	596	11	1344
Input Volume	1	5	7	33	15	623	6	21	590	10	1312
% of Volume	80	126	100	110	98	104	96	95	101	107	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Denied Del/Veh (s)	4.7	2.3	0.0	0.0	0.1	0.2	0.1	0.1	0.1	1.1
Total Delay (hr)	0.0	0.5	0.1	0.0	0.0	0.0	0.1	0.5	0.3	1.5
Total Del/Veh (s)	8.2	3.8	1.0	0.3	16.1	13.2	21.5	66.6	51.9	5.4
Stop Delay (hr)	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.5	0.3	1.2
Stop Del/Veh (s)	6.6	2.8	0.0	0.0	14.7	10.6	21.4	64.9	51.6	4.4
Travel Dist (mi)	0.2	22.2	34.1	0.2	0.1	0.0	0.3	4.2	3.5	64.8
Travel Time (hr)	0.0	1.5	1.3	0.0	0.0	0.0	0.1	0.7	0.5	4.0
Vehicles Entered	5	462	483	3	2	1	9	26	22	1013
Vehicles Exited	5	463	484	4	2	1	9	27	22	1017
Hourly Exit Rate	5	463	484	4	2	1	9	27	22	1017
Input Volume	5	461	480	3	2	1	7	26	22	1008
% of Volume	95	100	101	133	100	100	124	104	99	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.0	0.1	0.2	0.0
Total Delay (hr)	0.0	0.4	0.0	0.0	0.8	0.0	0.0	0.0	0.1	0.2	1.5
Total Del/Veh (s)	5.5	3.3	2.8	9.2	5.8	1.0	26.5	6.6	27.4	20.4	5.3
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.2	0.8
Stop Del/Veh (s)	3.1	1.0	1.2	6.5	3.1	0.0	24.6	6.6	25.4	19.8	2.9
Travel Dist (mi)	0.2	26.5	1.4	0.9	50.8	0.1	0.3	0.4	1.1	3.4	85.1
Travel Time (hr)	0.0	1.4	0.1	0.1	2.5	0.0	0.0	0.0	0.1	0.3	4.5
Vehicles Entered	4	472	25	8	490	1	3	4	10	31	1048
Vehicles Exited	4	471	25	8	490	1	3	4	10	31	1047
Hourly Exit Rate	4	471	25	8	490	1	3	4	10	31	1047
Input Volume	3	473	25	7	485	1	4	4	10	27	1038
% of Volume	123	100	101	119	101	100	80	107	98	116	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	2.8	2.2	3.6	0.6	0.2	0.1	0.9	0.4	1.9	3.7	0.4	0.5
Total Delay (hr)	0.3	4.3	0.6	0.2	3.2	0.1	2.2	1.4	0.2	0.9	1.7	0.7
Total Del/Veh (s)	43.4	36.8	31.2	35.6	23.7	20.0	46.3	37.1	41.3	39.9	41.5	41.6
Stop Delay (hr)	0.2	3.4	0.5	0.2	2.6	0.1	2.0	1.2	0.2	0.8	1.4	0.6
Stop Del/Veh (s)	36.7	29.2	25.7	31.4	19.1	17.5	43.0	32.8	38.9	36.0	36.2	38.7
Travel Dist (mi)	1.7	32.7	5.6	1.0	26.2	0.7	23.4	17.4	2.6	14.5	26.5	11.1
Travel Time (hr)	0.3	5.7	0.9	0.2	4.1	0.1	3.1	2.0	0.3	1.5	2.6	1.1
Vehicles Entered	21	416	70	18	485	13	165	132	18	77	140	59
Vehicles Exited	21	419	71	17	482	13	165	131	18	78	141	59
Hourly Exit Rate	21	419	71	17	482	13	165	131	18	78	141	59
Input Volume	21	423	68	17	479	13	159	140	17	78	139	55
% of Volume	101	99	105	100	101	102	104	94	106	100	101	108
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	1.2
Total Delay (hr)	15.6
Total Del/Veh (s)	34.4
Stop Delay (hr)	13.2
Stop Del/Veh (s)	29.2
Travel Dist (mi)	163.4
Travel Time (hr)	22.0
Vehicles Entered	1614
Vehicles Exited	1615
Hourly Exit Rate	1615
Input Volume	1607
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.1	0.1	0.4	0.3	0.0	0.8	1.8
Denied Del/Veh (s)	2.6	1.8	1.3	3.3	17.1	0.0	18.7	5.0
Total Delay (hr)	1.9	1.2	0.2	0.3	0.4	0.0	0.5	4.4
Total Del/Veh (s)	34.1	25.9	1.8	3.0	22.6	1.5	11.3	12.3
Stop Delay (hr)	1.7	1.0	0.0	0.1	0.4	0.0	0.5	3.8
Stop Del/Veh (s)	31.8	22.6	0.0	1.3	22.2	0.5	12.0	10.6
Travel Dist (mi)	11.7	9.7	26.1	34.0	1.2	0.3	2.8	85.9
Travel Time (hr)	2.6	1.7	1.1	2.1	0.8	0.0	1.5	9.9
Vehicles Entered	195	166	302	395	64	25	154	1301
Vehicles Exited	195	165	302	395	64	25	154	1300
Hourly Exit Rate	195	165	302	395	64	25	154	1300
Input Volume	192	162	308	400	63	26	148	1298
% of Volume	101	102	98	99	102	98	104	100
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	5.0	0.6	5.6
Total Del/Veh (s)	22.5	3.1	13.3
Stop Delay (hr)	4.3	0.5	4.8
Stop Del/Veh (s)	19.5	2.6	11.5
Travel Dist (mi)	61.0	12.6	73.6
Travel Time (hr)	7.8	1.1	8.9
Vehicles Entered	788	714	1502
Vehicles Exited	790	715	1505
Hourly Exit Rate	790	715	1505
Input Volume	786	704	1490
% of Volume	101	102	101
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.3	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	3.1	4.5	5.0	0.0	0.0	0.0	2.3	0.2	0.4	2.6	0.3	0.3
Total Delay (hr)	1.5	6.7	1.3	8.1	3.7	0.3	2.3	7.4	1.6	2.4	8.9	0.1
Total Del/Veh (s)	84.7	86.2	63.6	62.9	63.0	18.8	74.9	29.3	14.3	79.2	32.2	25.9
Stop Delay (hr)	1.4	6.1	1.2	7.5	3.4	0.2	2.2	6.0	1.3	2.2	7.1	0.1
Stop Del/Veh (s)	78.5	78.5	58.4	58.2	57.7	16.7	70.2	23.8	11.8	73.4	25.8	22.4
Travel Dist (mi)	6.3	27.7	7.1	34.0	15.4	3.8	16.6	132.9	60.9	12.6	115.8	2.1
Travel Time (hr)	1.8	8.0	1.7	9.5	4.2	0.5	3.0	11.9	4.0	2.9	12.9	0.2
Vehicles Entered	63	277	71	457	207	51	110	881	405	106	969	18
Vehicles Exited	63	277	71	461	208	52	110	884	406	106	970	18
Hourly Exit Rate	63	277	71	461	208	52	110	884	406	106	970	18
Input Volume	64	271	70	448	205	51	108	877	407	108	953	18
% of Volume	98	102	101	103	101	101	102	101	100	98	102	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.8
Denied Del/Veh (s)	0.8
Total Delay (hr)	44.3
Total Del/Veh (s)	43.2
Stop Delay (hr)	38.8
Stop Del/Veh (s)	37.8
Travel Dist (mi)	435.3
Travel Time (hr)	60.6
Vehicles Entered	3615
Vehicles Exited	3626
Hourly Exit Rate	3626
Input Volume	3580
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.1
Denied Del/Veh (s)	0.2	0.2	0.2
Total Delay (hr)	0.7	1.5	2.2
Total Del/Veh (s)	4.2	25.5	9.7
Stop Delay (hr)	0.5	1.4	2.0
Stop Del/Veh (s)	3.1	23.8	8.4
Travel Dist (mi)	12.3	36.0	48.3
Travel Time (hr)	1.6	2.8	4.3
Vehicles Entered	620	214	834
Vehicles Exited	620	215	835
Hourly Exit Rate	620	215	835
Input Volume	624	211	834
% of Volume	99	102	100
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.7	0.1	0.0	0.2	1.0
Total Del/Veh (s)	5.1	7.5	5.4	1.5	3.5
Stop Delay (hr)	0.4	0.1	0.0	0.0	0.5
Stop Del/Veh (s)	3.3	6.1	3.0	0.3	2.0
Travel Dist (mi)	49.6	3.9	1.3	26.0	80.8
Travel Time (hr)	2.3	0.2	0.1	1.1	3.8
Vehicles Entered	464	36	24	482	1006
Vehicles Exited	465	36	24	482	1007
Hourly Exit Rate	465	36	24	482	1007
Input Volume	464	35	25	477	1001
% of Volume	100	103	97	101	101
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.8	0.0	0.0	0.2	0.0	0.0	1.1
Total Del/Veh (s)	5.9	9.8	4.6	1.8	18.1	10.6	4.0
Stop Delay (hr)	0.6	0.0	0.0	0.0	0.0	0.0	0.7
Stop Del/Veh (s)	4.6	9.2	2.1	0.2	17.0	10.6	2.5
Travel Dist (mi)	34.7	0.6	0.6	41.3	0.0	0.2	77.4
Travel Time (hr)	2.0	0.0	0.0	2.0	0.0	0.0	4.1
Vehicles Entered	497	8	7	483	1	7	1003
Vehicles Exited	499	8	8	488	1	7	1011
Hourly Exit Rate	499	8	8	488	1	7	1011
Input Volume	490	7	8	485	2	7	1000
% of Volume	102	110	97	101	50	97	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.0	0.0	1.0	0.1	0.1	0.1	0.4
Total Delay (hr)	0.1	0.1	3.7	0.2	0.0	0.5	4.6
Total Del/Veh (s)	0.8	0.9	19.3	22.8	2.8	41.6	10.6
Stop Delay (hr)	0.0	0.0	3.0	0.1	0.0	0.5	3.7
Stop Del/Veh (s)	0.2	0.0	15.7	20.0	2.7	41.3	8.5
Travel Dist (mi)	8.4	5.6	42.2	1.5	0.6	1.9	60.2
Travel Time (hr)	0.4	0.5	5.6	0.2	0.0	0.6	7.4
Vehicles Entered	473	316	691	24	14	45	1563
Vehicles Exited	473	316	691	24	14	46	1564
Hourly Exit Rate	473	316	691	24	14	46	1564
Input Volume	477	309	683	23	14	45	1551
% of Volume	99	102	101	105	98	102	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)		0.1	0.0	3.6	1.7	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		0.0	0.0	0.9	0.1	0.1
Travel Dist (mi)	0.0	19.9	0.1	0.1	33.7	53.9
Travel Time (hr)	0.0	0.7	0.0	0.0	1.3	2.0
Vehicles Entered	0	296	2	1	235	534
Vehicles Exited	0	296	2	1	235	534
Hourly Exit Rate	0	296	2	1	235	534
Input Volume	1	295	1	1	228	526
% of Volume	0	100	200	100	103	102
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0

44: Laurel St Performance by movement

Movement	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.2	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.0	1.2	0.3	0.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Travel Dist (mi)	8.8	0.0	0.0	15.2	24.1
Travel Time (hr)	0.3	0.0	0.0	0.5	0.9
Vehicles Entered	298	1	1	229	529
Vehicles Exited	298	1	1	230	530
Hourly Exit Rate	298	1	1	230	530
Input Volume	296	1	1	223	521
% of Volume	101	100	100	103	102
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	5.5
Denied Del/Veh (s)	2.9
Total Delay (hr)	151.5
Total Del/Veh (s)	75.3
Stop Delay (hr)	124.6
Stop Del/Veh (s)	61.9
Travel Dist (mi)	3688.0
Travel Time (hr)	290.5
Vehicles Entered	6965
Vehicles Exited	7002
Hourly Exit Rate	7002
Input Volume	32703
% of Volume	21
Denied Entry Before	0
Denied Entry After	0

Arterial Level of Service: NB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seminary Dr	4	1.3	25.0	0.2	29
	46	0.3	4.6	0.0	28
	20	1.0	11.0	0.1	27
Ringwood Ave	3	34.5	41.8	0.1	5
Ravenswood Ave	2	2.8	14.0	0.1	24
	1	47.6	71.0	0.2	10
Total		87.5	167.4	0.7	15

Arterial Level of Service: SB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ravenswood Ave	2	66.5	90.8	0.2	8
	3	16.6	27.1	0.1	12
	20	1.3	9.1	0.1	24
	46	0.6	10.6	0.1	28
	4	0.4	4.7	0.0	27
Total		85.5	142.5	0.5	12

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	207	404	74	370	150	512	160	814
Average Queue (ft)	75	157	21	195	89	287	107	413
95th Queue (ft)	160	358	62	327	174	473	194	1050
Link Distance (ft)		1416		961		1022		1985
Upstream Blk Time (%)								2
Queuing Penalty (veh)								0
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	0	3	4	45	2	42	2	32
Queuing Penalty (veh)	1	3	15	12	7	44	10	51

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	366	170	437	340	675
Average Queue (ft)	144	86	311	50	306
95th Queue (ft)	347	218	457	223	760
Link Distance (ft)	387		420	420	1022
Upstream Blk Time (%)	4		6	1	2
Queuing Penalty (veh)	22		23	3	10
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	16	7			
Queuing Penalty (veh)	62	7			

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	T	T	L	T
Maximum Queue (ft)	57	48	218	223	149	291	335	150	24	86	175	402
Average Queue (ft)	11	9	110	106	31	137	215	77	1	7	150	219
95th Queue (ft)	42	34	189	190	95	274	340	181	17	45	207	405
Link Distance (ft)	255	255	257	257		260	260		382	382		420
Upstream Blk Time (%)			0	0		2	5					4
Queuing Penalty (veh)			0	0		7	19					16
Storage Bay Dist (ft)					175			100			125	
Storage Blk Time (%)					0	6	31	0			33	7
Queuing Penalty (veh)					0	2	34	1			82	16

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	451
Average Queue (ft)	141
95th Queue (ft)	439
Link Distance (ft)	420
Upstream Blk Time (%)	8
Queuing Penalty (veh)	35
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	30	60	33	42
Average Queue (ft)	7	22	6	10
95th Queue (ft)	27	49	26	34
Link Distance (ft)	274	207		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			50	80
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Queuing and Blocking Report
Background AM

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Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	135	18	24	38	121
Average Queue (ft)	19	1	2	9	43
95th Queue (ft)	112	9	14	34	176
Link Distance (ft)	218	315	150	150	834
Upstream Blk Time (%)	2				
Queuing Penalty (veh)	11				
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	74	239	32	26	102
Average Queue (ft)	9	65	4	4	29
95th Queue (ft)	71	190	20	19	72
Link Distance (ft)	232	517	525		577
Upstream Blk Time (%)	1				
Queuing Penalty (veh)	4				
Storage Bay Dist (ft)				75	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	102	457	280	26	94	251	120	383	134	259
Average Queue (ft)	18	270	40	1	16	189	93	125	68	130
95th Queue (ft)	59	521	174	27	54	306	138	290	138	223
Link Distance (ft)		344	246	246		232		719		997
Upstream Blk Time (%)		12	2	0		11				
Queuing Penalty (veh)		62	4	0		54				
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	0	33			0	35	20	12	1	18
Queuing Penalty (veh)	0	7			1	6	30	20	2	14

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	274	159	143	100
Average Queue (ft)	174	7	35	63
95th Queue (ft)	303	71	103	100
Link Distance (ft)	257	454		66
Upstream Blk Time (%)	6			21
Queuing Penalty (veh)	21			47
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		0	1	
Queuing Penalty (veh)		0	4	

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	335	346	53	42
Average Queue (ft)	144	135	21	14
95th Queue (ft)	366	365	52	41
Link Distance (ft)	318	318	34	34
Upstream Blk Time (%)	3	5	25	19
Queuing Penalty (veh)	13	19	89	66
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Background AM

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Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	489	250	299	342	325	160	314	421	415	336	265	490
Average Queue (ft)	250	183	185	204	171	50	116	273	239	116	139	310
95th Queue (ft)	452	279	326	356	327	157	238	384	360	256	272	440
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	4		0	3	3							0
Queuing Penalty (veh)	0		0	11	9							0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	14	8	2	7	23	0	0	3			0	18
Queuing Penalty (veh)	30	15	4	15	12	0	2	3			1	19

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	450
Average Queue (ft)	268
95th Queue (ft)	394
Link Distance (ft)	621
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	97	282
Average Queue (ft)	69	57
95th Queue (ft)	87	244
Link Distance (ft)	66	887
Upstream Blk Time (%)	7	
Queuing Penalty (veh)	42	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB
Directions Served	TR	LT
Maximum Queue (ft)	90	168
Average Queue (ft)	17	21
95th Queue (ft)	156	94
Link Distance (ft)	517	218
Upstream Blk Time (%)	1	0
Queuing Penalty (veh)	6	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 36: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	115	106	32
Average Queue (ft)	25	8	8
95th Queue (ft)	160	63	30
Link Distance (ft)	315	387	148
Upstream Blk Time (%)	3		
Queuing Penalty (veh)	16		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	B27	NB	SB
Directions Served	T	TR	TR	T	R	R
Maximum Queue (ft)	40	7	359	348	36	99
Average Queue (ft)	3	0	217	92	11	35
95th Queue (ft)	21	0	469	293	34	76
Link Distance (ft)	34	34	246	344	222	220
Upstream Blk Time (%)	1		18	1		
Queuing Penalty (veh)	5		120	4		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report

Background AM

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Intersection: 42: Laurel St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	12	6
Average Queue (ft)	0	0
95th Queue (ft)	4	5
Link Distance (ft)	69	719
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 44: Laurel St

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 1270

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	12.1	52.7	48.4	7.2	57.6	48.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	None	Max	None
Avg. Green (s)	9.3	8.0	-1.0	7.0	9.3	-1.0	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	15	0	0	12	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	19	100	100	62	100	100	0
Cycles with Peds (%)	0	38	96	0	12	8	0

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	2	3	5	6	7	8
Movement(s) Served	NBT	EBR	NBL	SBT	EBL	NBTL
Maximum Green (s)	50.5	70.5	5.1	40.9	33.0	33.0
Minimum Green (s)	10.0	8.0	5.0	7.0	7.0	7.0
Recall	C-Max	Min	None	C-Max	Max	None
Avg. Green (s)	0.1	-5.1	5.2	-5.8	10.0	7.4
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	35	0	0	0
Cycles @ Minimum (%)	0	0	35	0	0	0
Cycles Maxed Out (%)	100	100	27	100	100	92
Cycles with Peds (%)	96	0	0	23	96	38

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Actuated Signals, Observed Splits
Background AM

10/03/2023

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	4.9	39.5	23.8	4.9	39.5	23.2
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Max	C-Max	None	Max	Max
Avg. Green (s)	5.8	5.8	3.3	5.3	5.3	2.7
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	86	0	0	79	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	14	100	100	21	100	100
Cycles with Peds (%)	0	45	9	0	19	22

Controller Summary

Average Cycle Length (s): -7.0

Number of Complete Cycles : 28

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	Max	Max	None	C-Max
Avg. Green (s)	-12.4	0.4	-4.3	0.7	13.6	5.2
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	4	0
Cycles @ Minimum (%)	0	0	0	0	8	0
Cycles Maxed Out (%)	100	100	100	100	4	100
Cycles with Peds (%)	0	50	0	71	0	19

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:30	4:30	4:30	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6950	6754	6979	6774	6982	6879	7026
Vehs Exited	6943	6775	6961	6793	6969	6926	7032
Starting Vehs	291	275	273	296	264	304	289
Ending Vehs	298	254	291	277	277	257	283
Denied Entry Before	0	1	4	3	3	3	2
Denied Entry After	2	3	2	0	0	2	1
Travel Distance (mi)	3827	3678	3824	3703	3813	3811	3858
Travel Time (hr)	287.4	262.4	284.1	271.8	279.5	279.3	301.6
Total Delay (hr)	150.2	130.3	146.7	138.7	142.7	142.6	163.3
Total Stops	9475	8613	9529	8980	9259	9233	10120
Fuel Used (gal)	165.6	155.7	165.1	159.0	163.8	163.4	170.3

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6890	6950	6816	6896
Vehs Exited	6901	6939	6829	6907
Starting Vehs	288	289	301	287
Ending Vehs	277	300	288	272
Denied Entry Before	3	2	1	0
Denied Entry After	0	1	1	0
Travel Distance (mi)	3739	3763	3801	3782
Travel Time (hr)	288.8	289.9	278.4	282.3
Total Delay (hr)	154.3	154.3	141.9	146.5
Total Stops	9851	9682	9199	9391
Fuel Used (gal)	164.0	165.7	162.3	163.5

Interval #0 Information Seeding

Start Time	4:30
End Time	5:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1649	1638	1640	1618	1653	1637	1640
Vehs Exited	1678	1628	1609	1686	1645	1644	1607
Starting Vehs	291	275	273	296	264	304	289
Ending Vehs	262	285	304	228	272	297	322
Denied Entry Before	0	1	4	3	3	3	2
Denied Entry After	0	1	2	0	0	2	0
Travel Distance (mi)	903	899	895	924	896	927	890
Travel Time (hr)	63.3	63.4	66.5	67.6	63.2	65.9	66.7
Total Delay (hr)	31.0	31.1	34.5	34.4	31.2	32.8	34.7
Total Stops	2010	2020	2286	2239	1997	2121	2284
Fuel Used (gal)	38.3	38.2	38.8	39.6	37.6	39.1	38.2

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1610	1627	1617	1630
Vehs Exited	1610	1624	1647	1635
Starting Vehs	288	289	301	287
Ending Vehs	288	292	271	272
Denied Entry Before	3	2	1	0
Denied Entry After	2	1	1	0
Travel Distance (mi)	882	893	906	902
Travel Time (hr)	62.0	63.6	67.1	64.9
Total Delay (hr)	30.3	31.4	34.7	32.6
Total Stops	2031	2110	2187	2126
Fuel Used (gal)	36.9	38.0	38.9	38.4

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1962	1912	1901	1832	1940	1909	2011
Vehs Exited	1902	1896	1881	1757	1848	1887	1972
Starting Vehs	262	285	304	228	272	297	322
Ending Vehs	322	301	324	303	364	319	361
Denied Entry Before	0	1	2	0	0	2	0
Denied Entry After	2	1	2	3	2	1	1
Travel Distance (mi)	1016	1002	995	954	1022	1014	1061
Travel Time (hr)	78.0	72.6	72.0	70.5	75.1	76.9	88.3
Total Delay (hr)	41.7	36.8	36.2	36.2	38.5	40.7	50.3
Total Stops	2634	2428	2381	2322	2526	2557	2953
Fuel Used (gal)	44.4	42.7	42.5	41.0	44.0	44.0	48.5

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1993	1936	1957	1932
Vehs Exited	1888	1883	1889	1878
Starting Vehs	288	292	271	272
Ending Vehs	393	345	339	330
Denied Entry Before	2	1	1	0
Denied Entry After	2	2	1	0
Travel Distance (mi)	1017	995	1032	1011
Travel Time (hr)	84.5	79.8	78.1	77.6
Total Delay (hr)	48.0	44.0	41.0	41.3
Total Stops	3033	2657	2659	2613
Fuel Used (gal)	46.0	44.5	44.7	44.2

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1666	1609	1730	1656	1687	1697	1727
Vehs Exited	1697	1642	1760	1707	1732	1726	1792
Starting Vehs	322	301	324	303	364	319	361
Ending Vehs	291	268	294	252	319	290	296
Denied Entry Before	2	1	2	3	2	1	1
Denied Entry After	3	0	3	2	1	0	0
Travel Distance (mi)	961	921	979	917	949	951	990
Travel Time (hr)	76.1	65.6	71.9	67.8	69.5	69.0	77.5
Total Delay (hr)	41.5	32.5	36.8	34.8	35.4	34.8	42.0
Total Stops	2572	2164	2390	2236	2343	2261	2581
Fuel Used (gal)	42.5	38.8	41.8	39.6	41.1	40.9	43.9

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1660	1637	1585	1663
Vehs Exited	1768	1713	1638	1717
Starting Vehs	393	345	339	330
Ending Vehs	285	269	286	278
Denied Entry Before	2	2	1	0
Denied Entry After	0	2	0	0
Travel Distance (mi)	945	909	918	944
Travel Time (hr)	78.1	73.0	65.5	71.4
Total Delay (hr)	44.0	40.2	32.5	37.4
Total Stops	2660	2381	2179	2372
Fuel Used (gal)	42.9	40.9	38.8	41.1

Interval #4 Information

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1673	1595	1708	1668	1702	1636	1648
Vehs Exited	1666	1609	1711	1643	1744	1669	1661
Starting Vehs	291	268	294	252	319	290	296
Ending Vehs	298	254	291	277	277	257	283
Denied Entry Before	3	0	3	2	1	0	0
Denied Entry After	2	3	2	0	0	2	1
Travel Distance (mi)	947	856	955	908	946	919	918
Travel Time (hr)	70.0	60.8	73.7	65.9	71.6	67.5	69.2
Total Delay (hr)	36.0	30.0	39.3	33.3	37.5	34.3	36.3
Total Stops	2259	2001	2472	2183	2393	2294	2302
Fuel Used (gal)	40.4	36.0	41.9	38.9	41.1	39.4	39.7

Interval #4 Information

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1627	1750	1657	1662
Vehs Exited	1635	1719	1655	1671
Starting Vehs	285	269	286	278
Ending Vehs	277	300	288	272
Denied Entry Before	0	2	0	0
Denied Entry After	0	1	1	0
Travel Distance (mi)	895	967	945	926
Travel Time (hr)	64.3	73.6	67.7	68.4
Total Delay (hr)	32.1	38.7	33.8	35.1
Total Stops	2127	2534	2174	2267
Fuel Used (gal)	38.1	42.3	39.8	39.8

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Denied Del/Veh (s)	2.9	0.4	0.4	4.1	0.2	0.2	0.0	0.0	0.0	1.9	0.6	0.6
Total Delay (hr)	1.1	1.1	0.4	0.1	0.6	0.3	1.5	4.7	0.0	1.0	5.6	2.0
Total Del/Veh (s)	32.8	25.8	27.5	38.3	24.0	22.8	51.5	29.1	35.3	51.6	49.6	47.1
Stop Delay (hr)	1.0	0.9	0.4	0.1	0.6	0.3	1.3	3.5	0.0	0.8	4.2	1.5
Stop Del/Veh (s)	29.7	21.7	25.3	35.2	20.6	21.0	44.6	22.1	30.3	41.3	37.3	36.9
Travel Dist (mi)	31.9	39.1	13.3	1.5	17.1	8.0	21.1	116.1	1.0	24.6	151.3	55.6
Travel Time (hr)	2.3	2.4	0.9	0.1	1.2	0.6	2.3	8.7	0.1	1.8	10.8	4.0
Vehicles Entered	119	146	50	8	94	44	103	571	5	66	404	147
Vehicles Exited	120	147	50	8	95	44	104	567	5	66	397	147
Hourly Exit Rate	120	147	50	8	95	44	104	567	5	66	397	147
Input Volume	117	145	46	9	90	44	106	565	5	65	404	138
% of Volume	102	101	108	89	105	101	98	100	100	102	98	107
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.5
Total Delay (hr)	18.4
Total Del/Veh (s)	37.0
Stop Delay (hr)	14.6
Stop Del/Veh (s)	29.4
Travel Dist (mi)	480.7
Travel Time (hr)	35.2
Vehicles Entered	1757
Vehicles Exited	1750
Hourly Exit Rate	1750
Input Volume	1735
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	2.1	1.6	5.2	1.1	6.5	1.3	17.7
Total Del/Veh (s)	48.6	11.5	52.0	7.2	59.6	53.2	31.5
Stop Delay (hr)	1.9	0.8	4.7	0.7	5.4	1.1	14.4
Stop Del/Veh (s)	43.3	5.7	46.7	4.5	49.3	45.1	25.7
Travel Dist (mi)	13.1	35.7	31.9	49.5	76.6	17.0	223.7
Travel Time (hr)	2.6	2.9	6.7	2.8	9.1	1.9	26.0
Vehicles Entered	155	483	351	538	382	83	1992
Vehicles Exited	151	482	355	536	386	83	1993
Hourly Exit Rate	151	482	355	536	386	83	1993
Input Volume	149	489	347	534	388	83	1991
% of Volume	101	99	102	100	99	100	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.0
Total Delay (hr)	0.2	0.2	0.1	0.7	0.0	1.0	0.0	4.9	0.3	5.2	2.1	0.0
Total Del/Veh (s)	45.9	36.1	9.0	37.3	0.4	13.6	81.2	28.7	14.5	54.4	14.6	7.9
Stop Delay (hr)	0.2	0.2	0.0	0.6	0.0	1.0	0.0	4.1	0.3	4.4	1.3	0.0
Stop Del/Veh (s)	43.9	33.3	8.3	35.2	0.0	13.0	78.6	24.3	12.0	46.2	9.2	4.3
Travel Dist (mi)	0.7	0.8	1.0	3.8	0.1	15.5	0.1	36.5	4.6	30.8	47.0	0.3
Travel Time (hr)	0.2	0.2	0.1	0.8	0.0	1.8	0.1	6.1	0.5	6.6	4.0	0.0
Vehicles Entered	14	16	20	65	4	264	2	606	76	340	514	3
Vehicles Exited	14	17	20	66	4	265	2	607	76	334	513	3
Hourly Exit Rate	14	17	20	66	4	265	2	607	76	334	513	3
Input Volume	16	17	18	65	3	255	3	607	74	344	520	3
% of Volume	89	101	113	101	133	104	67	100	102	97	99	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	14.6
Total Del/Veh (s)	27.1
Stop Delay (hr)	12.2
Stop Del/Veh (s)	22.5
Travel Dist (mi)	141.2
Travel Time (hr)	20.4
Vehicles Entered	1924
Vehicles Exited	1921
Hourly Exit Rate	1921
Input Volume	1924
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	2.2	0.6	3.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0
Total Del/Veh (s)	16.9	21.9	7.3	14.7	19.2	6.5	7.4	1.2	0.7	4.3	0.4	0.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	15.3	18.6	7.0	13.1	16.3	6.4	4.6	0.0	0.0	2.7	0.0	0.0
Travel Dist (mi)	0.4	0.1	0.5	0.4	0.1	0.9	0.2	123.7	1.6	1.2	20.2	0.0
Travel Time (hr)	0.0	0.0	0.0	0.1	0.0	0.1	0.0	4.5	0.1	0.1	0.7	0.0
Vehicles Entered	7	1	10	10	2	23	1	643	8	35	574	1
Vehicles Exited	7	1	10	10	2	23	1	644	8	35	574	1
Hourly Exit Rate	7	1	10	10	2	23	1	644	8	35	574	1
Input Volume	8	1	11	10	2	23	2	646	8	37	576	1
% of Volume	90	100	93	100	89	101	50	100	97	94	100	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.3
Total Delay (hr)	0.5
Total Del/Veh (s)	1.3
Stop Delay (hr)	0.2
Stop Del/Veh (s)	0.5
Travel Dist (mi)	149.4
Travel Time (hr)	5.7
Vehicles Entered	1315
Vehicles Exited	1316
Hourly Exit Rate	1316
Input Volume	1325
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	4.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.4
Total Del/Veh (s)	5.2	1.0	1.0	0.6	16.9	8.6	16.5	6.3	1.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Stop Del/Veh (s)	3.3	0.2	0.0	0.0	15.3	8.4	14.6	6.0	0.5
Travel Dist (mi)	0.3	29.8	30.7	0.6	0.3	0.6	2.4	1.0	65.7
Travel Time (hr)	0.0	1.2	1.2	0.0	0.1	0.1	0.2	0.0	2.7
Vehicles Entered	6	610	437	8	7	14	15	6	1103
Vehicles Exited	6	609	437	8	7	14	15	6	1102
Hourly Exit Rate	6	609	437	8	7	14	15	6	1102
Input Volume	7	613	430	7	8	12	16	5	1098
% of Volume	86	99	102	110	85	114	95	114	100
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	4.2	0.1	0.1	0.1
Total Delay (hr)	0.0	0.4	0.0	0.0	1.5	0.0	0.1	0.0	0.0	0.0	0.1	2.3
Total Del/Veh (s)	9.9	2.2	1.7	15.6	12.5	10.6	51.2	25.4	9.0	26.0	31.4	7.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	1.1	0.0	0.1	0.0	0.0	0.0	0.1	1.5
Stop Del/Veh (s)	6.5	0.2	0.0	12.2	9.0	8.2	49.4	21.9	8.5	24.0	31.0	5.0
Travel Dist (mi)	0.2	34.0	0.5	0.7	46.8	0.6	0.9	0.5	1.5	0.4	1.9	88.0
Travel Time (hr)	0.0	1.6	0.0	0.1	3.1	0.0	0.2	0.1	0.1	0.0	0.2	5.4
Vehicles Entered	3	607	8	6	437	6	9	5	15	4	17	1117
Vehicles Exited	3	606	8	6	434	6	9	5	15	4	17	1113
Hourly Exit Rate	3	606	8	6	434	6	9	5	15	4	17	1113
Input Volume	4	604	7	5	431	5	11	5	16	5	18	1111
% of Volume	75	100	114	120	101	120	80	105	94	84	93	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	3.8	0.3	0.4
Total Delay (hr)	1.5	7.6	0.8	0.3	4.1	0.1	3.2	2.4	0.7	0.5	2.4	0.4
Total Del/Veh (s)	60.4	49.5	45.6	55.3	34.2	29.3	59.7	56.8	58.4	59.2	61.9	60.1
Stop Delay (hr)	1.3	6.2	0.7	0.3	3.5	0.1	2.9	2.1	0.6	0.5	2.2	0.4
Stop Del/Veh (s)	52.1	40.4	38.6	51.1	29.2	26.2	54.6	51.1	54.3	55.3	56.5	56.9
Travel Dist (mi)	7.0	44.2	4.9	1.2	23.3	0.9	28.2	21.5	6.1	5.5	25.7	4.7
Travel Time (hr)	1.7	9.1	1.0	0.4	4.9	0.2	4.2	3.1	0.9	0.7	3.3	0.6
Vehicles Entered	86	541	61	22	421	16	192	150	41	29	136	25
Vehicles Exited	85	542	60	22	421	16	192	150	42	29	136	24
Hourly Exit Rate	85	542	60	22	421	16	192	150	42	29	136	24
Input Volume	80	537	60	22	421	17	192	152	37	34	131	24
% of Volume	106	101	100	101	100	96	100	99	114	85	104	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	24.0
Total Del/Veh (s)	49.4
Stop Delay (hr)	20.8
Stop Del/Veh (s)	42.9
Travel Dist (mi)	173.1
Travel Time (hr)	30.2
Vehicles Entered	1720
Vehicles Exited	1719
Hourly Exit Rate	1719
Input Volume	1707
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.1	0.4	3.5	0.1	0.0	0.0	0.4
Total Delay (hr)	0.1	0.3	0.0	0.0	0.2	0.0	0.1	0.7
Total Del/Veh (s)	4.8	3.0	0.4	0.2	13.1	0.7	5.7	2.8
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.3
Stop Del/Veh (s)	2.0	0.5	0.0	0.0	12.1	0.0	5.8	1.3
Travel Dist (mi)	3.8	23.3	25.1	4.9	0.9	0.0	0.8	58.7
Travel Time (hr)	0.3	1.4	0.9	0.3	0.2	0.0	0.1	3.2
Vehicles Entered	62	381	290	57	45	1	39	875
Vehicles Exited	63	385	290	57	45	1	39	880
Hourly Exit Rate	63	385	290	57	45	1	39	880
Input Volume	62	389	281	54	43	2	39	869
% of Volume	102	99	103	106	105	67	101	101
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	2.6	0.3	2.9
Total Del/Veh (s)	9.7	1.7	6.6
Stop Delay (hr)	2.0	0.2	2.2
Stop Del/Veh (s)	7.2	1.3	4.9
Travel Dist (mi)	74.5	10.2	84.7
Travel Time (hr)	6.2	0.7	6.9
Vehicles Entered	972	604	1576
Vehicles Exited	972	604	1576
Hourly Exit Rate	972	604	1576
Input Volume	956	608	1564
% of Volume	102	99	101
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0
Denied Del/Veh (s)	0.8	2.0	3.5	0.0	0.0	0.0	2.1	0.6	0.7	2.6	0.3	0.4
Total Delay (hr)	0.9	5.3	1.4	5.4	3.1	0.4	3.2	17.3	2.5	2.9	9.8	0.3
Total Del/Veh (s)	65.8	70.5	57.5	56.3	56.2	21.0	86.8	43.5	15.5	74.9	34.1	26.9
Stop Delay (hr)	0.8	4.8	1.3	5.1	2.8	0.4	2.9	13.1	1.8	2.7	7.8	0.3
Stop Del/Veh (s)	60.1	63.4	52.4	52.8	51.2	19.3	77.9	33.0	11.4	68.3	26.9	22.1
Travel Dist (mi)	4.8	27.0	8.8	25.4	14.7	4.9	19.6	210.1	84.5	16.5	121.0	5.2
Travel Time (hr)	1.1	6.4	1.9	6.5	3.6	0.6	4.0	24.6	5.8	3.6	14.0	0.6
Vehicles Entered	48	270	88	341	197	65	130	1396	562	138	1013	44
Vehicles Exited	48	270	87	342	198	65	130	1395	563	139	1012	44
Hourly Exit Rate	48	270	87	342	198	65	130	1395	563	139	1012	44
Input Volume	48	276	86	347	196	64	132	1394	543	137	1021	44
% of Volume	99	98	101	99	101	102	99	100	104	101	99	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.8
Denied Del/Veh (s)	0.7
Total Delay (hr)	52.6
Total Del/Veh (s)	43.2
Stop Delay (hr)	43.7
Stop Del/Veh (s)	35.9
Travel Dist (mi)	542.5
Travel Time (hr)	72.6
Vehicles Entered	4292
Vehicles Exited	4293
Hourly Exit Rate	4293
Input Volume	4288
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.1
Total Delay (hr)	0.1	0.0	0.2
Total Del/Veh (s)	3.5	1.5	2.7
Stop Delay (hr)	0.1	0.0	0.1
Stop Del/Veh (s)	2.4	0.3	1.6
Travel Dist (mi)	2.6	14.1	16.7
Travel Time (hr)	0.3	0.5	0.8
Vehicles Entered	123	83	206
Vehicles Exited	123	84	207
Hourly Exit Rate	123	84	207
Input Volume	120	82	202
% of Volume	103	102	103
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.1	0.3
Total Del/Veh (s)	1.3	1.1	0.7	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.1	0.0	0.0
Travel Dist (mi)	67.4	0.6	24.1	92.1
Travel Time (hr)	2.5	0.0	0.9	3.4
Vehicles Entered	615	5	451	1071
Vehicles Exited	614	5	450	1069
Hourly Exit Rate	614	5	450	1069
Input Volume	618	5	443	1065
% of Volume	99	100	102	100
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Total Delay (hr)	0.4	0.0	0.0	0.2	0.1	0.0	0.6
Total Del/Veh (s)	2.1	3.1	6.7	1.4	17.2	11.3	2.1
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	0.5	2.0	4.0	0.1	15.6	10.9	0.6
Travel Dist (mi)	45.4	0.4	0.3	37.7	0.4	0.5	84.7
Travel Time (hr)	1.9	0.0	0.0	1.8	0.1	0.1	3.8
Vehicles Entered	632	5	3	438	11	12	1101
Vehicles Exited	633	5	3	437	11	12	1101
Hourly Exit Rate	633	5	3	437	11	12	1101
Input Volume	636	5	5	428	10	10	1094
% of Volume	100	100	60	102	107	117	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Total Delay (hr)	0.2	0.1	0.7	0.1	0.2	0.1	1.4
Total Del/Veh (s)	1.3	0.8	4.3	3.5	7.8	12.0	2.8
Stop Delay (hr)	0.1	0.0	0.4	0.0	0.2	0.1	0.8
Stop Del/Veh (s)	0.4	0.1	2.5	2.4	7.4	11.9	1.7
Travel Dist (mi)	9.7	6.5	37.2	3.5	4.1	1.0	61.9
Travel Time (hr)	0.6	0.5	2.2	0.2	0.5	0.1	4.2
Vehicles Entered	579	394	586	54	108	23	1744
Vehicles Exited	579	394	585	54	108	23	1743
Hourly Exit Rate	579	394	585	54	108	23	1743
Input Volume	568	389	587	54	108	25	1730
% of Volume	102	101	100	100	100	93	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	WBR	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	12.1	2.9	0.2	1.9	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	10.6	2.8	0.0	0.1	0.1
Travel Dist (mi)	0.0	0.1	25.1	32.4	57.6
Travel Time (hr)	0.0	0.0	0.9	1.3	2.1
Vehicles Entered	1	3	375	222	601
Vehicles Exited	1	3	375	221	600
Hourly Exit Rate	1	3	375	221	600
Input Volume	2	2	372	216	592
% of Volume	50	150	101	102	101
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.3	0.5		0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	7.8	3.7	0.4	0.0		0.4	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	7.1	3.9	0.0	0.0		0.0	0.0
Travel Dist (mi)	0.0	0.0	10.1	0.0	0.0	14.8	25.0
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.5	0.9
Vehicles Entered	1	1	373	1	0	220	596
Vehicles Exited	1	1	373	1	0	220	596
Hourly Exit Rate	1	1	373	1	0	220	596
Input Volume	1	1	371	1	1	214	589
% of Volume	100	100	101	100	0	103	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	1.5
Denied Del/Veh (s)	0.8
Total Delay (hr)	145.0
Total Del/Veh (s)	72.7
Stop Delay (hr)	113.5
Stop Del/Veh (s)	56.9
Travel Dist (mi)	3781.9
Travel Time (hr)	282.3
Vehicles Entered	6896
Vehicles Exited	6907
Hourly Exit Rate	6907
Input Volume	33485
% of Volume	21
Denied Entry Before	0
Denied Entry After	0

Arterial Level of Service: NB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seminary Dr	4	1.2	24.9	0.2	29
	46	0.3	4.6	0.0	28
	20	1.2	11.2	0.1	26
Ringwood Ave	3	28.7	36.0	0.1	6
Ravenswood Ave	2	7.0	18.2	0.1	19
	1	19.5	43.7	0.2	17
Total		57.9	138.7	0.7	18

Arterial Level of Service: SB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ravenswood Ave	2	62.4	86.0	0.2	9
	3	4.6	15.5	0.1	22
	20	2.1	9.8	0.1	23
	46	0.8	10.7	0.1	28
	4	0.4	4.7	0.0	28
Total		70.3	126.7	0.5	14

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	170	213	60	185	149	551	160	752
Average Queue (ft)	70	100	8	73	88	260	60	385
95th Queue (ft)	138	181	34	151	167	471	145	677
Link Distance (ft)		1416		961		1023		1985
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	0	0	0	22	3	31	0	40
Queuing Penalty (veh)	0	0	0	2	14	33	0	26

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	396	170	386	253	524
Average Queue (ft)	182	95	246	79	341
95th Queue (ft)	383	228	366	179	498
Link Distance (ft)	390		420	420	1023
Upstream Blk Time (%)	1		0	0	
Queuing Penalty (veh)	9		1	0	
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	31	2			
Queuing Penalty (veh)	151	3			

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Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	SB	SB
Directions Served	L	TR	LT	R	L	T	T	R	T	T	L	T
Maximum Queue (ft)	50	82	115	180	47	288	340	150	20	105	175	394
Average Queue (ft)	14	24	46	87	3	123	230	55	1	10	166	241
95th Queue (ft)	42	61	94	156	26	254	354	156	19	55	194	419
Link Distance (ft)	255	255	257	257		260	260		379	379		420
Upstream Blk Time (%)				0		1	7					1
Queuing Penalty (veh)				0		3	25					3
Storage Bay Dist (ft)					175			100			125	
Storage Blk Time (%)						1	33	0			34	1
Queuing Penalty (veh)						0	25	0			87	4

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	448
Average Queue (ft)	126
95th Queue (ft)	379
Link Distance (ft)	420
Upstream Blk Time (%)	1
Queuing Penalty (veh)	5
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	WB	NB	NB	NB	SB	SB	B20	B20
Directions Served	LTR	LTR	L	T	R	L	TR	T	
Maximum Queue (ft)	44	48	11	10	2	45	33	58	21
Average Queue (ft)	14	19	1	0	0	14	2	3	1
95th Queue (ft)	41	42	7	8	2	38	15	35	13
Link Distance (ft)	274	208		1010			131	260	260
Upstream Blk Time (%)								0	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)			50		85	80			
Storage Blk Time (%)				0		0	0		
Queuing Penalty (veh)				0		0	0		

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	149	35	33	40	38
Average Queue (ft)	8	1	7	12	17
95th Queue (ft)	62	15	27	37	42
Link Distance (ft)	217	317		249	834
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)			100		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LTR
Maximum Queue (ft)	92	397	55	38	63
Average Queue (ft)	6	105	14	12	18
95th Queue (ft)	56	290	44	35	47
Link Distance (ft)	232	517	525		577
Upstream Blk Time (%)	0	0			
Queuing Penalty (veh)	1	0			
Storage Bay Dist (ft)				75	
Storage Blk Time (%)			1		
Queuing Penalty (veh)			0		

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	109	464	320	269	92	252	120	479	134	286
Average Queue (ft)	56	391	115	69	23	211	101	243	43	158
95th Queue (ft)	115	535	302	234	67	304	145	434	119	257
Link Distance (ft)		343	249	249		232		723		997
Upstream Blk Time (%)		29	8	3		22		0		
Queuing Penalty (veh)		198	26	9		101		0		
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	3	50			0	42	30	30	0	26
Queuing Penalty (veh)	17	40			2	9	54	58	0	9

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	SB
Directions Served	LT	R	LR
Maximum Queue (ft)	169	13	74
Average Queue (ft)	39	0	37
95th Queue (ft)	119	8	66
Link Distance (ft)	257		66
Upstream Blk Time (%)			2
Queuing Penalty (veh)			1
Storage Bay Dist (ft)		135	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	309	333	46	43
Average Queue (ft)	87	114	10	9
95th Queue (ft)	261	320	36	34
Link Distance (ft)	318	318	25	25
Upstream Blk Time (%)	0	1	11	9
Queuing Penalty (veh)	0	3	33	29
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	428	250	254	260	307	160	345	771	734	596	265	528
Average Queue (ft)	220	177	126	143	154	53	214	493	453	192	176	345
95th Queue (ft)	387	271	222	234	280	153	409	735	687	453	304	486
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	0				1			2	1	0		0
Queuing Penalty (veh)	0				3			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	9	5	0	0	16	0	0	26			0	21
Queuing Penalty (veh)	19	10	0	0	10	0	3	34			2	29

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	478
Average Queue (ft)	297
95th Queue (ft)	431
Link Distance (ft)	621
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	64	42
Average Queue (ft)	36	2
95th Queue (ft)	55	18
Link Distance (ft)	66	887
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB
Directions Served	TR	LT
Maximum Queue (ft)	15	23
Average Queue (ft)	0	1
95th Queue (ft)	8	19
Link Distance (ft)	517	217
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 36: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	182	63	49
Average Queue (ft)	15	4	18
95th Queue (ft)	91	31	46
Link Distance (ft)	317	390	207
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	NB	SB
Directions Served	T	TR	TR	R	R
Maximum Queue (ft)	52	21	222	88	52
Average Queue (ft)	6	2	43	37	17
95th Queue (ft)	30	17	153	74	44
Link Distance (ft)	25	25	249	193	234
Upstream Blk Time (%)	4	1	0		
Queuing Penalty (veh)	21	5	2		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 42: Laurel St

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	4
95th Queue (ft)	21
Link Distance (ft)	95
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 44: Laurel St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	29	3
Average Queue (ft)	2	0
95th Queue (ft)	15	3
Link Distance (ft)	85	297
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1123

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	6.5	54.3	52.4	7.5	53.3	52.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	None	Max	None
Avg. Green (s)	6.2	4.6	8.6	6.9	1.6	8.6	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	42	0	0	19	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	27	100	100	48	100	100	0
Cycles with Peds (%)	0	33	96	0	17	11	0

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	2	3	5	6	7	8
Movement(s) Served	NBT	EBR	NBL	SBT	EBL	NBTL
Maximum Green (s)	48.3	72.7	5.0	38.8	34.5	33.7
Minimum Green (s)	10.0	8.0	5.0	7.0	7.0	7.0
Recall	C-Max	Min	None	C-Max	Ped	None
Avg. Green (s)	2.5	-7.4	9.2	1.9	5.2	9.8
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	96	0	0	0
Cycles @ Minimum (%)	0	0	4	0	0	0
Cycles Maxed Out (%)	100	42	0	100	46	46
Cycles with Peds (%)	96	0	0	12	100	29

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	5.3	79.3	41.4	8.5	76.1	35.4
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Min	C-Max	None	Min	Max
Avg. Green (s)	5.5	11.8	-14.8	7.4	8.2	2.6
g/C Ratio	0.10	0.73	-0.91	0.29	0.51	0.16
Cycles Skipped (%)	71	0	0	38	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	29	60	100	6	60	100
Cycles with Peds (%)	0	60	55	0	45	50

Controller Summary

Average Cycle Length (s): 16.2

Number of Complete Cycles : 16

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	None	None	None	C-Max
Avg. Green (s)	-9.7	0.4	-5.3	-1.0	-13.0	6.5
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	8	0
Cycles @ Minimum (%)	0	0	0	0	8	0
Cycles Maxed Out (%)	100	100	50	79	4	100
Cycles with Peds (%)	0	50	0	75	0	24

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	7:30	7:30	7:30	7:30	7:30	7:30	7:30
End Time	9:00	9:00	9:00	9:00	9:00	9:00	9:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6968	6855	6952	6827	7343	7047	6782
Vehs Exited	6843	6706	6768	6710	7140	6871	6638
Starting Vehs	577	580	541	570	498	515	570
Ending Vehs	702	729	725	687	701	691	714
Denied Entry Before	463	376	374	276	322	353	465
Denied Entry After	1963	1960	1878	1877	1531	1772	2280
Travel Distance (mi)	3929	3883	3923	3928	4116	3938	3870
Travel Time (hr)	1899.4	1843.7	1744.8	1723.2	1600.7	1681.4	2062.0
Total Delay (hr)	1756.8	1703.1	1602.8	1580.9	1451.6	1538.2	1921.1
Total Stops	12320	12104	11907	11847	12483	12010	11573
Fuel Used (gal)	534.4	521.5	500.0	494.6	472.8	485.9	570.5

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	7:30	7:30	7:30	7:30
End Time	9:00	9:00	9:00	9:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6849	6935	6987	6948
Vehs Exited	6730	6761	6814	6795
Starting Vehs	565	507	522	535
Ending Vehs	684	681	695	691
Denied Entry Before	286	311	316	353
Denied Entry After	1999	1747	1868	1886
Travel Distance (mi)	3862	3850	3924	3922
Travel Time (hr)	1787.4	1669.3	1725.1	1773.7
Total Delay (hr)	1647.2	1529.6	1582.8	1631.4
Total Stops	11767	11651	11974	11964
Fuel Used (gal)	507.1	481.3	495.7	506.4

Interval #0 Information Seeding

Start Time	7:30
End Time	8:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1652	1621	1672	1575	1703	1734	1599
Vehs Exited	1697	1661	1695	1638	1686	1679	1666
Starting Vehs	577	580	541	570	498	515	570
Ending Vehs	532	540	518	507	515	570	503
Denied Entry Before	463	376	374	276	322	353	465
Denied Entry After	781	644	655	681	609	570	850
Travel Distance (mi)	986	966	982	975	984	984	970
Travel Time (hr)	287.4	270.1	258.7	243.3	235.7	247.2	299.2
Total Delay (hr)	251.7	235.1	223.1	208.0	200.0	211.3	264.0
Total Stops	2867	2737	2745	2605	2638	2901	2675
Fuel Used (gal)	91.0	86.8	84.4	80.7	79.2	82.0	93.7

Interval #1 Information Recording

Start Time	8:00
End Time	8:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1695	1685	1697	1660
Vehs Exited	1666	1699	1679	1677
Starting Vehs	565	507	522	535
Ending Vehs	594	493	540	526
Denied Entry Before	286	311	316	353
Denied Entry After	562	593	608	655
Travel Distance (mi)	959	943	973	972
Travel Time (hr)	249.4	230.3	240.8	256.2
Total Delay (hr)	214.7	196.0	205.6	221.0
Total Stops	2923	2610	2746	2742
Fuel Used (gal)	81.8	77.5	80.4	83.8

Interval #2 Information

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	2050	1917	2051	2002	2119	2019	1983
Vehs Exited	1801	1729	1851	1764	1852	1866	1731
Starting Vehs	532	540	518	507	515	570	503
Ending Vehs	781	728	718	745	782	723	755
Denied Entry Before	781	644	655	681	609	570	850
Denied Entry After	1325	1267	1152	1190	1046	1117	1499
Travel Distance (mi)	1016	1023	1081	1040	1072	1051	1026
Travel Time (hr)	431.9	397.6	381.6	390.9	361.1	371.9	453.4
Total Delay (hr)	394.9	360.4	342.3	353.1	322.1	333.6	416.0
Total Stops	3444	3195	3203	3330	3466	3335	3203
Fuel Used (gal)	124.3	117.0	114.8	115.8	110.1	112.3	129.6

Interval #2 Information

Start Time	8:15
End Time	8:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	2028	2074	2025	2026
Vehs Exited	1837	1830	1826	1806
Starting Vehs	594	493	540	526
Ending Vehs	785	737	739	742
Denied Entry Before	562	593	608	655
Denied Entry After	1159	1102	1159	1199
Travel Distance (mi)	1039	1047	1047	1044
Travel Time (hr)	383.9	369.4	379.6	392.1
Total Delay (hr)	346.1	331.4	341.5	354.1
Total Stops	3226	3396	3398	3318
Fuel Used (gal)	114.2	111.2	114.0	116.3

Interval #3 Information

Start Time	8:30
End Time	8:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1590	1555	1598	1584	1745	1639	1550
Vehs Exited	1719	1621	1636	1665	1852	1676	1612
Starting Vehs	781	728	718	745	782	723	755
Ending Vehs	652	662	680	664	675	686	693
Denied Entry Before	1325	1267	1152	1190	1046	1117	1499
Denied Entry After	1729	1717	1552	1530	1315	1453	1964
Travel Distance (mi)	994	924	919	938	1045	947	936
Travel Time (hr)	548.5	541.8	503.3	499.5	468.7	484.2	604.7
Total Delay (hr)	512.4	508.3	470.1	465.6	431.0	449.9	570.5
Total Stops	2931	2906	2903	2865	3194	2963	2883
Fuel Used (gal)	150.7	147.6	139.0	138.5	134.7	135.1	162.2

Interval #3 Information

Start Time	8:30
End Time	8:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1568	1490	1581	1587
Vehs Exited	1660	1619	1709	1675
Starting Vehs	785	737	739	742
Ending Vehs	693	608	611	652
Denied Entry Before	1159	1102	1159	1199
Denied Entry After	1611	1500	1567	1591
Travel Distance (mi)	929	906	957	950
Travel Time (hr)	525.2	493.6	505.4	517.5
Total Delay (hr)	491.5	460.9	470.7	483.1
Total Stops	2851	2586	2868	2890
Fuel Used (gal)	143.6	136.5	140.2	142.8

Interval #4 Information

Start Time	8:45
End Time	9:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1676	1762	1631	1666	1776	1655	1650
Vehs Exited	1626	1695	1586	1643	1750	1650	1629
Starting Vehs	652	662	680	664	675	686	693
Ending Vehs	702	729	725	687	701	691	714
Denied Entry Before	1729	1717	1552	1530	1315	1453	1964
Denied Entry After	1963	1960	1878	1877	1531	1772	2280
Travel Distance (mi)	933	970	941	975	1015	956	937
Travel Time (hr)	631.7	634.3	601.2	589.6	535.2	578.1	704.7
Total Delay (hr)	597.8	599.3	567.2	554.2	498.5	543.3	670.6
Total Stops	3078	3266	3056	3047	3185	2811	2812
Fuel Used (gal)	168.3	170.1	161.8	159.6	148.8	156.5	185.0

Interval #4 Information

Start Time	8:45
End Time	9:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1558	1686	1684	1674
Vehs Exited	1567	1613	1600	1636
Starting Vehs	693	608	611	652
Ending Vehs	684	681	695	691
Denied Entry Before	1611	1500	1567	1591
Denied Entry After	1999	1747	1868	1886
Travel Distance (mi)	935	954	947	956
Travel Time (hr)	628.8	575.9	599.4	607.9
Total Delay (hr)	594.9	541.3	565.0	573.2
Total Stops	2767	3059	2962	3007
Fuel Used (gal)	167.4	156.1	161.1	163.5

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.4	1.1
Denied Del/Veh (s)	2.8	0.4	0.4	3.1	0.4	0.4	0.2	0.0	0.0	34.4	33.6	33.8
Total Delay (hr)	1.7	2.1	0.6	0.6	2.4	1.5	0.4	1.2	0.2	8.3	26.9	6.1
Total Del/Veh (s)	74.8	34.6	34.9	55.7	40.8	38.9	27.0	18.7	20.5	192.3	202.6	193.7
Stop Delay (hr)	1.6	1.8	0.6	0.5	2.0	1.3	0.4	0.9	0.1	7.4	24.2	5.5
Stop Del/Veh (s)	70.9	28.9	31.5	50.0	33.3	33.8	23.1	14.3	17.8	172.9	182.2	175.9
Travel Dist (mi)	20.6	58.3	17.3	8.2	47.3	30.2	11.0	43.6	5.6	54.9	168.1	40.3
Travel Time (hr)	2.4	4.1	1.3	0.9	4.0	2.6	0.8	2.7	0.4	11.7	37.0	8.6
Vehicles Entered	77	217	64	36	211	135	55	220	28	151	464	110
Vehicles Exited	78	216	65	37	210	134	55	221	28	143	433	104
Hourly Exit Rate	78	216	65	37	210	134	55	221	28	143	433	104
Input Volume	81	209	63	39	205	133	113	444	47	156	472	111
% of Volume	97	103	104	94	102	101	49	50	60	92	92	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	4	9	3

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	7.1
Denied Del/Veh (s)	14.4
Total Delay (hr)	51.9
Total Del/Veh (s)	103.5
Stop Delay (hr)	46.2
Stop Del/Veh (s)	92.2
Travel Dist (mi)	505.3
Travel Time (hr)	76.5
Vehicles Entered	1768
Vehicles Exited	1724
Hourly Exit Rate	1724
Input Volume	2072
% of Volume	83
Denied Entry Before	0
Denied Entry After	16

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.6
Denied Del/Veh (s)	0.3	0.0	0.5	0.1	0.0	3.8	1.1	1.3
Total Delay (hr)	1.2	0.0	0.9	3.6	0.4	22.9	5.0	34.0
Total Del/Veh (s)	39.0	1.7	9.0	43.4	7.3	181.8	175.2	80.4
Stop Delay (hr)	1.1	0.0	0.5	3.4	0.3	20.1	4.5	29.9
Stop Del/Veh (s)	35.3	0.1	5.0	40.9	6.4	159.6	155.5	70.6
Travel Dist (mi)	8.9	0.6	25.2	26.2	15.9	87.5	19.8	184.2
Travel Time (hr)	1.6	0.0	1.9	4.9	1.0	26.4	5.8	41.7
Vehicles Entered	110	13	356	295	184	437	99	1494
Vehicles Exited	110	13	356	292	183	425	96	1475
Hourly Exit Rate	110	13	356	292	183	425	96	1475
Input Volume	120	19	388	408	496	470	104	2006
% of Volume	91	69	92	72	37	90	92	74
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	1	0	1

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.3	0.3	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.1	0.6	0.7	0.2	97.0	77.3	55.5	0.2	0.0	0.0
Total Delay (hr)	2.4	0.7	0.0	1.6	1.6	0.7	13.5	1.1	0.0	3.5	3.4	0.3
Total Del/Veh (s)	141.0	138.9	3.6	44.8	35.0	8.2	495.3	39.5	1.8	61.5	23.4	12.5
Stop Delay (hr)	2.4	0.6	0.0	1.5	1.4	0.6	13.6	1.1	0.0	3.1	2.5	0.2
Stop Del/Veh (s)	138.3	134.7	3.1	41.5	31.4	7.9	498.7	38.5	1.6	55.0	17.4	9.5
Travel Dist (mi)	18.0	4.9	4.3	7.3	8.3	16.3	5.1	6.2	1.3	18.0	46.2	8.1
Travel Time (hr)	3.1	0.8	0.2	2.0	1.9	1.6	16.1	3.6	0.4	4.3	5.2	0.7
Vehicles Entered	60	16	14	129	161	290	85	101	21	198	514	88
Vehicles Exited	61	16	14	127	159	289	84	101	21	200	517	89
Hourly Exit Rate	61	16	14	127	159	289	84	101	21	200	517	89
Input Volume	62	16	14	136	158	289	398	538	105	222	566	91
% of Volume	99	102	102	93	101	100	21	19	20	90	91	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	5	5	1	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	5.1
Denied Del/Veh (s)	10.9
Total Delay (hr)	28.8
Total Del/Veh (s)	60.5
Stop Delay (hr)	27.1
Stop Del/Veh (s)	57.1
Travel Dist (mi)	143.9
Travel Time (hr)	39.8
Vehicles Entered	1677
Vehicles Exited	1678
Hourly Exit Rate	1678
Input Volume	2594
% of Volume	65
Denied Entry Before	0
Denied Entry After	11

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	1.1	3.6	0.5	1.3	99.3	630.8	3.7	0.0	0.0	0.0	740.2
Denied Del/Veh (s)	216.9	203.0	257.4	147.6	1833.7	1873.5	1654.2	0.0	0.0	0.0	1224.6
Total Delay (hr)	14.5	31.9	4.9	28.6	14.2	86.4	0.2	0.3	0.1	0.0	181.2
Total Del/Veh (s)	2485.2	2088.3	2221.7	2639.6	1063.3	1076.1	858.9	54.2	0.9	0.3	590.8
Stop Delay (hr)	14.5	31.9	4.9	28.6	14.5	87.9	0.2	0.3	0.0	0.0	182.8
Stop Del/Veh (s)	2483.5	2086.0	2219.8	2637.5	1084.0	1095.5	879.8	52.8	0.0	0.0	596.1
Travel Dist (mi)	2.3	6.9	0.4	2.0	15.3	90.3	0.3	0.7	19.9	1.9	139.9
Travel Time (hr)	15.7	35.7	5.5	30.0	114.0	720.2	3.9	0.3	0.8	0.1	926.2
Vehicles Entered	14	49	5	26	36	200	1	20	567	54	972
Vehicles Exited	2	6	1	2	33	200	0	20	567	54	885
Hourly Exit Rate	2	6	1	2	33	200	0	20	567	54	885
Input Volume	20	61	7	33	160	975	6	21	614	62	1959
% of Volume	10	10	14	6	21	21	0	95	92	87	45
Denied Entry Before	0	0	0	0	40	229	1	0	0	0	270
Denied Entry After	4	14	2	6	159	1012	7	0	0	0	1204

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.3	0.1	0.0	0.1	0.1	0.6
Total Del/Veh (s)	6.0	1.3	1.0	0.2	19.3	9.2	1.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.1	0.2
Stop Del/Veh (s)	3.4	0.1	0.2	0.0	17.2	8.7	0.6
Travel Dist (mi)	0.2	39.5	28.2	0.2	4.0	3.7	75.9
Travel Time (hr)	0.0	1.6	1.1	0.0	0.3	0.2	3.2
Vehicles Entered	3	772	395	3	25	24	1222
Vehicles Exited	3	773	397	3	25	24	1225
Hourly Exit Rate	3	773	397	3	25	24	1225
Input Volume	5	872	514	3	26	22	1442
% of Volume	57	89	77	100	96	108	85
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.6	0.0	0.0	0.5	0.0	0.1	0.2	0.1	0.1	1.6
Total Del/Veh (s)	6.5	2.5	1.8	10.2	4.4	1.2	34.6	20.2	24.5	15.3	4.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.1	0.1	0.8
Stop Del/Veh (s)	3.0	0.1	0.1	7.8	2.0	0.5	32.4	19.7	22.6	14.8	2.1
Travel Dist (mi)	0.1	46.5	0.5	0.5	44.8	0.1	2.9	7.5	1.6	5.2	109.8
Travel Time (hr)	0.0	2.2	0.0	0.0	2.0	0.0	0.2	0.5	0.1	0.3	5.5
Vehicles Entered	2	826	9	5	418	1	14	36	9	29	1349
Vehicles Exited	2	825	9	5	419	1	14	37	9	29	1350
Hourly Exit Rate	2	825	9	5	419	1	14	37	9	29	1350
Input Volume	3	950	11	6	527	1	15	40	10	27	1590
% of Volume	62	87	84	80	80	100	93	93	88	108	85
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	4.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	24.3	23.8	16.2	0.4	0.2	0.0	0.5	0.2	0.2	2.6	0.5	0.4
Total Delay (hr)	0.3	11.3	0.9	0.2	2.7	0.1	2.6	1.7	0.3	1.7	1.7	0.7
Total Del/Veh (s)	62.0	58.7	55.0	49.5	22.3	17.9	49.4	38.3	41.8	41.1	43.4	43.8
Stop Delay (hr)	0.2	9.1	0.8	0.2	2.1	0.1	2.4	1.5	0.2	1.5	1.5	0.6
Stop Del/Veh (s)	51.8	47.4	45.9	45.6	17.9	15.6	45.3	33.8	38.7	36.5	37.2	40.0
Travel Dist (mi)	1.3	53.3	4.8	0.8	23.0	0.9	26.2	20.3	3.0	40.7	38.7	15.3
Travel Time (hr)	0.5	17.6	1.4	0.2	3.5	0.1	3.7	2.4	0.4	3.3	3.1	1.3
Vehicles Entered	17	682	59	15	430	16	185	156	21	148	140	55
Vehicles Exited	16	682	60	14	430	16	186	155	21	149	142	56
Hourly Exit Rate	16	682	60	14	430	16	186	155	21	149	142	56
Input Volume	21	820	71	17	524	21	182	152	22	150	142	55
% of Volume	77	83	85	82	82	75	102	102	97	99	100	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	5.1
Denied Del/Veh (s)	9.5
Total Delay (hr)	24.2
Total Del/Veh (s)	44.6
Stop Delay (hr)	20.3
Stop Del/Veh (s)	37.5
Travel Dist (mi)	228.2
Travel Time (hr)	37.4
Vehicles Entered	1924
Vehicles Exited	1927
Hourly Exit Rate	1927
Input Volume	2177
% of Volume	89
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.2	0.4	0.1	0.0	0.3	1.0
Denied Del/Veh (s)	2.0	1.5	1.4	3.3	6.2	0.0	6.6	2.9
Total Delay (hr)	1.4	0.8	0.3	0.3	0.3	0.0	0.4	3.5
Total Del/Veh (s)	35.3	25.7	2.6	2.9	20.4	2.1	9.8	9.9
Stop Delay (hr)	1.3	0.7	0.0	0.1	0.3	0.0	0.4	2.9
Stop Del/Veh (s)	32.9	22.4	0.4	0.9	20.0	1.1	10.3	8.1
Travel Dist (mi)	8.5	6.5	39.4	40.4	1.1	0.3	2.7	98.8
Travel Time (hr)	1.9	1.1	1.8	2.3	0.5	0.0	0.9	8.5
Vehicles Entered	139	107	390	401	60	24	150	1271
Vehicles Exited	139	107	392	402	60	24	150	1274
Hourly Exit Rate	139	107	392	402	60	24	150	1274
Input Volume	192	160	398	400	63	26	148	1387
% of Volume	72	67	98	101	96	94	102	92
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	11.6	0.6	12.2
Total Del/Veh (s)	41.8	3.1	26.1
Stop Delay (hr)	10.3	0.5	10.8
Stop Del/Veh (s)	37.2	2.6	23.1
Travel Dist (mi)	74.8	12.0	86.9
Travel Time (hr)	15.1	1.1	16.2
Vehicles Entered	978	683	1661
Vehicles Exited	975	683	1658
Hourly Exit Rate	975	683	1658
Input Volume	1171	772	1943
% of Volume	83	88	85
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	6.7	32.7	7.7	0.0	0.0	0.0	5.0	38.6	26.4	52.4	200.3	3.7
Denied Del/Veh (s)	378.5	354.6	367.3	0.0	0.0	0.0	168.3	156.8	159.2	716.9	717.4	706.6
Total Delay (hr)	3.8	20.1	4.0	7.4	3.6	0.3	2.2	12.6	26.7	25.7	7.5	0.1
Total Del/Veh (s)	246.6	250.8	222.6	61.2	62.6	17.5	78.2	52.8	166.3	498.0	40.5	33.1
Stop Delay (hr)	3.7	19.2	3.8	6.9	3.3	0.2	2.0	10.5	25.6	25.5	6.1	0.1
Stop Del/Veh (s)	236.5	238.9	212.7	56.8	57.3	15.3	71.1	44.0	159.6	494.1	32.9	27.0
Travel Dist (mi)	5.2	27.2	6.2	31.7	15.0	4.1	15.1	124.5	82.4	19.3	77.1	1.4
Travel Time (hr)	10.8	53.7	11.9	8.7	4.1	0.5	7.8	55.5	56.2	78.8	210.4	3.9
Vehicles Entered	53	274	62	426	202	55	100	831	557	163	643	12
Vehicles Exited	52	273	61	429	202	56	100	821	544	162	647	12
Hourly Exit Rate	52	273	61	429	202	56	100	821	544	162	647	12
Input Volume	64	326	70	489	221	62	108	877	594	250	953	18
% of Volume	81	84	87	88	91	91	93	94	92	65	68	68
Denied Entry Before	1	5	1	0	0	0	0	1	1	16	57	1
Denied Entry After	11	58	13	0	0	0	8	56	39	100	362	7

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	373.5
Denied Del/Veh (s)	333.5
Total Delay (hr)	114.1
Total Del/Veh (s)	116.9
Stop Delay (hr)	106.9
Stop Del/Veh (s)	109.5
Travel Dist (mi)	409.1
Travel Time (hr)	502.3
Vehicles Entered	3378
Vehicles Exited	3359
Hourly Exit Rate	3359
Input Volume	4033
% of Volume	83
Denied Entry Before	83
Denied Entry After	654

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.2
Total Delay (hr)	0.6	0.4	1.1
Total Del/Veh (s)	4.0	7.5	4.9
Stop Delay (hr)	0.5	0.3	0.8
Stop Del/Veh (s)	3.0	5.5	3.7
Travel Dist (mi)	11.0	34.8	45.8
Travel Time (hr)	1.4	1.6	3.0
Vehicles Entered	573	207	780
Vehicles Exited	572	207	779
Hourly Exit Rate	572	207	779
Input Volume	624	211	834
% of Volume	92	98	93
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.7	0.1	0.1	0.3	0.1	0.0	1.3
Total Del/Veh (s)	3.2	2.2	13.9	3.1	30.8	11.5	3.5
Stop Delay (hr)	0.0	0.0	0.1	0.2	0.1	0.0	0.4
Stop Del/Veh (s)	0.1	0.1	11.7	1.7	29.1	11.4	1.0
Travel Dist (mi)	80.9	13.8	1.0	20.1	0.8	0.2	116.8
Travel Time (hr)	3.5	0.6	0.1	1.0	0.1	0.0	5.4
Vehicles Entered	772	130	21	398	10	3	1334
Vehicles Exited	774	130	21	398	10	3	1336
Hourly Exit Rate	774	130	21	398	10	3	1336
Input Volume	874	153	26	508	10	3	1574
% of Volume	89	85	82	78	98	100	85
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.1	0.0
Total Delay (hr)	0.5	0.2	0.1	0.0	0.8
Total Del/Veh (s)	3.7	2.2	1.1	7.2	2.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.2	0.1	0.1	7.2	0.1
Travel Dist (mi)	33.2	22.4	33.4	0.3	89.2
Travel Time (hr)	1.6	1.2	1.5	0.0	4.4
Vehicles Entered	491	320	395	3	1209
Vehicles Exited	492	321	399	3	1215
Hourly Exit Rate	492	321	399	3	1215
Input Volume	544	357	520	3	1424
% of Volume	91	90	77	100	85
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.0	0.0	0.9	0.4	0.1	0.1	0.4
Total Delay (hr)	0.7	0.0	3.4	0.1	0.0	0.4	4.7
Total Del/Veh (s)	3.6	0.6	18.5	19.2	3.9	34.0	9.8
Stop Delay (hr)	0.4	0.0	2.8	0.1	0.0	0.4	3.7
Stop Del/Veh (s)	2.0	0.0	15.0	16.8	3.7	33.6	7.7
Travel Dist (mi)	12.6	4.6	40.6	1.1	0.6	1.8	61.3
Travel Time (hr)	1.2	0.3	5.3	0.2	0.0	0.5	7.5
Vehicles Entered	714	261	669	18	14	43	1719
Vehicles Exited	713	262	666	18	14	43	1716
Hourly Exit Rate	713	262	666	18	14	43	1716
Input Volume	861	309	754	23	14	45	2006
% of Volume	83	85	88	79	98	95	86
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Total Del/Veh (s)	6.0	3.5	0.3	0.1	4.9	2.0	1.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	5.4	3.8	0.0	0.0	1.7	0.2	0.5
Travel Dist (mi)	0.3	0.5	20.4	1.0	0.8	31.0	54.0
Travel Time (hr)	0.1	0.1	0.7	0.0	0.0	1.2	2.2
Vehicles Entered	23	36	303	15	6	215	598
Vehicles Exited	23	36	303	15	6	215	598
Hourly Exit Rate	23	36	303	15	6	215	598
Input Volume	24	35	298	14	7	228	606
% of Volume	97	103	102	105	83	94	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.3	0.4		0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	6.2	3.9	0.3	0.0		0.4	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	4.9	4.1	0.0	0.0		0.1	0.1
Travel Dist (mi)	0.0	0.1	9.3	0.1	0.0	15.4	24.9
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.6	0.9
Vehicles Entered	1	3	315	2	0	234	555
Vehicles Exited	1	3	315	2	0	233	554
Hourly Exit Rate	1	3	315	2	0	233	554
Input Volume	2	3	309	1	1	247	563
% of Volume	50	100	102	200	0	94	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	1132.9
Denied Del/Veh (s)	461.7
Total Delay (hr)	498.5
Total Del/Veh (s)	239.7
Stop Delay (hr)	465.5
Stop Del/Veh (s)	223.9
Travel Dist (mi)	3922.3
Travel Time (hr)	1773.7
Vehicles Entered	6948
Vehicles Exited	6795
Hourly Exit Rate	6795
Input Volume	41314
% of Volume	16
Denied Entry Before	353
Denied Entry After	1886

Arterial Level of Service: NB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seminary Dr	4	1076.1	8971.1	0.5	1
	46	116.0	120.4	0.0	1
	20	319.7	328.9	0.1	1
Ringwood Ave	3	39.5	127.1	0.1	5
Ravenswood Ave	2	2.4	12.6	0.1	27
	1	25.4	48.6	0.2	15
Total		1579.1	9608.7	0.9	2

Arterial Level of Service: SB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ravenswood Ave	2	180.0	207.4	0.2	4
	3	16.3	27.0	0.1	13
	20	1.6	9.2	0.1	24
	46	0.8	10.9	0.1	28
	4	0.9	5.1	0.0	25
Total		199.5	259.7	0.5	7

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	245	411	72	475	137	265	160	1973
Average Queue (ft)	80	174	31	230	40	100	112	1255
95th Queue (ft)	189	332	72	431	95	204	213	2416
Link Distance (ft)		1416		1181		1022		1985
Upstream Blk Time (%)								24
Queuing Penalty (veh)								0
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	1	4	7	47		5	1	57
Queuing Penalty (veh)	4	3	26	19		6	3	89

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	280	170	337	145	1037
Average Queue (ft)	104	75	192	42	901
95th Queue (ft)	236	200	308	105	1262
Link Distance (ft)	384		425	425	1022
Upstream Blk Time (%)	0		0		5
Queuing Penalty (veh)	1		1		30
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	18	2			
Queuing Penalty (veh)	70	2			

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	B46	SB
Directions Served	LT	R	LT	R	L	T	T	R	T	T	T	L
Maximum Queue (ft)	364	41	267	175	200	351	69	16	468	453	222	175
Average Queue (ft)	111	9	170	71	199	326	9	2	451	213	195	142
95th Queue (ft)	303	33	262	128	202	336	42	10	467	536	245	204
Link Distance (ft)	1597	1597	256	256		253	253		385	385	128	
Upstream Blk Time (%)			2	0		99			98	1	89	
Queuing Penalty (veh)			5	0		509			501	4	910	
Storage Bay Dist (ft)					175			100				125
Storage Blk Time (%)					100	1	0					22
Queuing Penalty (veh)					263	6	0					61

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	396	432
Average Queue (ft)	204	103
95th Queue (ft)	348	321
Link Distance (ft)	425	425
Upstream Blk Time (%)	1	3
Queuing Penalty (veh)	6	14
Storage Bay Dist (ft)		
Storage Blk Time (%)	12	
Queuing Penalty (veh)	28	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	B20
Directions Served	LT	R	LTR	L	T	R	L	TR	T
Maximum Queue (ft)	1503	69	969	75	2429	40	64	32	2
Average Queue (ft)	1031	6	731	33	2394	1	17	2	0
95th Queue (ft)	1835	48	1158	90	2410	24	50	24	2
Link Distance (ft)	1511		1004		2375			128	253
Upstream Blk Time (%)	32		28		100			0	
Queuing Penalty (veh)	0		0		0			0	
Storage Bay Dist (ft)		90		50		85	80		
Storage Blk Time (%)	98	1		1	90		0		
Queuing Penalty (veh)	60	0		6	150		2		

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	94	70	81
Average Queue (ft)	5	3	30
95th Queue (ft)	47	28	62
Link Distance (ft)	213	324	834
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	1		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	41	192	93	84
Average Queue (ft)	2	44	34	24
95th Queue (ft)	27	146	77	59
Link Distance (ft)	233	520	1096	943
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	93	471	338	192	94	251	120	395	134	334
Average Queue (ft)	16	445	279	15	19	173	98	161	101	152
95th Queue (ft)	64	488	429	114	61	296	143	339	159	285
Link Distance (ft)		344	246	246		233		719		1459
Upstream Blk Time (%)		49	33	1		8				
Queuing Penalty (veh)		428	144	5		42				
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	0	57			0	31	26	15	8	17
Queuing Penalty (veh)	0	12			1	5	43	28	15	27

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	264	141	138	102
Average Queue (ft)	136	12	30	61
95th Queue (ft)	264	104	94	94
Link Distance (ft)	256	530		65
Upstream Blk Time (%)	3	0		15
Queuing Penalty (veh)	12	0		33
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		0	1	
Queuing Penalty (veh)		1	3	

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	359	372	53	47
Average Queue (ft)	302	297	20	16
95th Queue (ft)	397	453	51	45
Link Distance (ft)	318	318	34	34
Upstream Blk Time (%)	24	28	24	19
Queuing Penalty (veh)	140	166	91	74
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	575	250	299	338	326	160	344	810	826	841	265	664
Average Queue (ft)	536	243	172	189	168	47	152	477	691	753	261	637
95th Queue (ft)	614	272	309	335	331	151	343	864	1037	992	271	653
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	81		0	2	3			2	32	63		97
Queuing Penalty (veh)	0		0	7	13			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	76	38	1	4	22	0	0	16			94	3
Queuing Penalty (veh)	177	87	2	10	14	0	0	17			448	7

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	656
Average Queue (ft)	476
95th Queue (ft)	852
Link Distance (ft)	621
Upstream Blk Time (%)	4
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	97	159
Average Queue (ft)	68	26
95th Queue (ft)	87	100
Link Distance (ft)	65	887
Upstream Blk Time (%)	7	
Queuing Penalty (veh)	39	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB	NB	NB
Directions Served	TR	LT	L	R
Maximum Queue (ft)	38	217	37	34
Average Queue (ft)	2	45	10	3
95th Queue (ft)	15	157	34	18
Link Distance (ft)	520	213	447	447
Upstream Blk Time (%)		1		
Queuing Penalty (veh)		4		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 36: Ravenswood Ave

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	40	31
Average Queue (ft)	3	3
95th Queue (ft)	48	18
Link Distance (ft)	324	448
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	B27	NB	SB
Directions Served	T	TR	TR	T	R	R
Maximum Queue (ft)	104	11	358	344	33	106
Average Queue (ft)	46	1	206	82	10	33
95th Queue (ft)	98	7	458	285	33	75
Link Distance (ft)	34	34	246	344	222	220
Upstream Blk Time (%)	25	0	16	1		
Queuing Penalty (veh)	148	1	118	4		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 42: Laurel St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	64	42
Average Queue (ft)	30	3
95th Queue (ft)	55	22
Link Distance (ft)	69	719
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 44: Laurel St

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	4
95th Queue (ft)	20
Link Distance (ft)	90
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 5146

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	12.1	52.7	48.4	7.2	57.6	48.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	None	Max	None
Avg. Green (s)	8.4	10.8	-1.0	6.4	-12.4	-1.0	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	35	0	0	42	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	8	100	100	23	100	100	0
Cycles with Peds (%)	0	35	96	0	15	12	0

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	2	3	5	6	7	8
Movement(s) Served	NBT	EBR	NBL	SBT	EBL	NBTL
Maximum Green (s)	50.5	70.5	5.1	40.9	33.0	33.0
Minimum Green (s)	10.0	8.0	5.0	7.0	7.0	7.0
Recall	C-Max	Min	None	C-Max	Max	None
Avg. Green (s)	0.1	-5.1	5.1	-9.5	10.2	7.4
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	100	100	100	88
Cycles with Peds (%)	96	0	0	27	93	38

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	4.9	39.5	23.8	4.9	39.5	23.2
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Max	C-Max	None	Max	Max
Avg. Green (s)	5.1	5.5	3.3	6.4	5.9	2.7
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	82	0	0	89	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	18	100	100	11	100	100
Cycles with Peds (%)	0	42	13	0	19	22

Controller Summary

Average Cycle Length (s): -7.0
Number of Complete Cycles : 28

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	Max	Max	None	C-Max
Avg. Green (s)	-12.4	0.4	-4.3	0.7	-10.9	4.3
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	100	100	100	100
Cycles with Peds (%)	0	55	0	75	0	29

Controller Summary

Average Cycle Length (s): -13.8
Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:30	4:30	4:30	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7862	8086	7915	7995	7866	7689	7960
Vehs Exited	7777	8113	7835	8067	7756	7738	7998
Starting Vehs	488	557	521	589	540	600	554
Ending Vehs	573	530	601	517	650	551	516
Denied Entry Before	78	40	60	41	31	120	88
Denied Entry After	644	410	524	430	710	802	430
Travel Distance (mi)	4920	5146	4993	5127	4907	4868	5117
Travel Time (hr)	876.8	776.7	803.0	875.5	940.6	1030.0	777.9
Total Delay (hr)	701.0	592.7	624.6	691.9	765.6	855.6	595.4
Total Stops	14396	14540	14258	16227	15825	14524	12885
Fuel Used (gal)	325.4	309.1	310.4	331.7	340.5	361.1	307.7

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7861	8077	7942	7924
Vehs Exited	7911	8023	7924	7914
Starting Vehs	501	479	496	528
Ending Vehs	451	533	514	531
Denied Entry Before	25	40	46	56
Denied Entry After	332	399	423	508
Travel Distance (mi)	5022	5104	5096	5030
Travel Time (hr)	700.6	784.2	735.9	830.1
Total Delay (hr)	521.0	601.6	553.8	650.3
Total Stops	14280	14302	14117	14535
Fuel Used (gal)	288.6	310.2	297.9	318.3

Interval #0 Information Seeding

Start Time	4:30
End Time	5:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1999	1958	1955	1876	1946	1924	1847
Vehs Exited	1959	2004	1944	1940	1937	1950	1980
Starting Vehs	488	557	521	589	540	600	554
Ending Vehs	528	511	532	525	549	574	421
Denied Entry Before	78	40	60	41	31	120	88
Denied Entry After	108	110	120	171	115	226	155
Travel Distance (mi)	1257	1283	1250	1245	1235	1256	1234
Travel Time (hr)	149.3	148.5	141.7	162.2	146.3	186.0	151.2
Total Delay (hr)	104.4	102.8	97.1	117.5	102.2	141.1	107.1
Total Stops	3441	3460	3138	3613	3628	3826	3226
Fuel Used (gal)	65.8	66.9	63.9	69.0	65.0	75.0	66.2

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1866	1907	1975	1924
Vehs Exited	1862	1917	1987	1944
Starting Vehs	501	479	496	528
Ending Vehs	505	469	484	503
Denied Entry Before	25	40	46	56
Denied Entry After	69	116	76	124
Travel Distance (mi)	1218	1222	1271	1247
Travel Time (hr)	136.8	136.2	134.2	149.2
Total Delay (hr)	93.0	92.4	88.8	104.6
Total Stops	3482	3141	3152	3411
Fuel Used (gal)	62.5	62.7	63.0	66.0

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	2202	2254	2178	2289	2175	2179	2259
Vehs Exited	2071	2131	2077	2104	2067	2068	2075
Starting Vehs	528	511	532	525	549	574	421
Ending Vehs	659	634	633	710	657	685	605
Denied Entry Before	108	110	120	171	115	226	155
Denied Entry After	289	227	223	331	361	436	294
Travel Distance (mi)	1295	1348	1349	1345	1282	1265	1352
Travel Time (hr)	196.5	185.1	187.4	216.8	211.2	240.0	190.9
Total Delay (hr)	150.3	137.0	139.2	168.8	165.5	194.7	142.7
Total Stops	4026	3987	3937	4423	3950	4122	3566
Fuel Used (gal)	77.8	76.4	77.1	83.8	80.9	87.5	77.8

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	8	9	10	Avg
Vehs Entered	2279	2337	2232	2229
Vehs Exited	2131	2100	2087	2090
Starting Vehs	505	469	484	503
Ending Vehs	653	706	629	650
Denied Entry Before	69	116	76	124
Denied Entry After	190	217	202	275
Travel Distance (mi)	1338	1346	1355	1327
Travel Time (hr)	174.6	189.6	173.8	196.6
Total Delay (hr)	126.9	141.4	125.3	149.2
Total Stops	4018	3963	3933	3988
Fuel Used (gal)	74.1	77.5	74.0	78.7

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1855	1944	1945	1968	1924	1792	1966
Vehs Exited	1908	1995	1959	2047	1953	1914	2044
Starting Vehs	659	634	633	710	657	685	605
Ending Vehs	606	583	619	631	628	563	527
Denied Entry Before	289	227	223	331	361	436	294
Denied Entry After	472	297	326	377	507	640	339
Travel Distance (mi)	1211	1244	1213	1288	1229	1188	1311
Travel Time (hr)	246.0	211.4	221.2	256.8	270.7	281.6	214.8
Total Delay (hr)	202.8	166.8	177.8	210.7	226.8	239.0	168.1
Total Stops	3720	3396	3692	4249	4175	3356	3172
Fuel Used (gal)	87.1	80.3	81.7	91.9	93.6	95.0	82.3

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1809	1919	1870	1896
Vehs Exited	1964	2004	1966	1976
Starting Vehs	653	706	629	650
Ending Vehs	498	621	533	572
Denied Entry Before	190	217	202	275
Denied Entry After	269	286	329	381
Travel Distance (mi)	1231	1255	1249	1242
Travel Time (hr)	198.1	227.7	202.8	233.1
Total Delay (hr)	154.2	182.9	158.2	188.7
Total Stops	3630	3857	3421	3667
Fuel Used (gal)	76.7	84.7	78.4	85.2

Interval #4 Information

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1806	1930	1837	1862	1821	1794	1888
Vehs Exited	1839	1983	1855	1976	1799	1806	1899
Starting Vehs	606	583	619	631	628	563	527
Ending Vehs	573	530	601	517	650	551	516
Denied Entry Before	472	297	326	377	507	640	339
Denied Entry After	644	410	524	430	710	802	430
Travel Distance (mi)	1158	1270	1182	1250	1160	1160	1219
Travel Time (hr)	284.9	231.7	252.6	239.6	312.4	322.4	220.9
Total Delay (hr)	243.5	186.2	210.5	194.9	271.1	280.8	177.6
Total Stops	3209	3697	3491	3942	4072	3220	2921
Fuel Used (gal)	94.6	85.5	87.7	87.0	101.1	103.6	81.4

Interval #4 Information

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1907	1914	1865	1860
Vehs Exited	1954	2002	1884	1898
Starting Vehs	498	621	533	572
Ending Vehs	451	533	514	531
Denied Entry Before	269	286	329	381
Denied Entry After	332	399	423	508
Travel Distance (mi)	1235	1281	1221	1214
Travel Time (hr)	191.1	230.7	225.2	251.2
Total Delay (hr)	147.0	184.9	181.4	207.8
Total Stops	3150	3341	3611	3461
Fuel Used (gal)	75.3	85.2	82.5	88.4

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0
Denied Del/Veh (s)	2.9	0.5	0.5	3.6	0.2	0.2	1.4	1.5	0.2	1.9	0.6	0.6
Total Delay (hr)	1.0	1.2	0.4	0.1	0.6	0.3	4.9	19.7	0.4	1.8	10.2	3.4
Total Del/Veh (s)	31.0	29.1	27.5	36.8	24.7	22.3	131.6	99.1	99.0	95.3	83.5	82.0
Stop Delay (hr)	0.9	1.0	0.4	0.1	0.6	0.3	4.1	15.3	0.3	1.5	8.1	2.8
Stop Del/Veh (s)	27.6	24.7	25.3	33.6	21.2	20.7	111.2	77.2	77.9	81.0	66.1	66.6
Travel Dist (mi)	31.3	39.7	13.6	2.5	20.0	9.9	25.9	141.6	3.1	24.8	161.9	55.9
Travel Time (hr)	2.2	2.6	0.9	0.2	1.3	0.7	5.9	24.9	0.5	2.7	15.7	5.5
Vehicles Entered	116	148	51	11	91	45	127	698	15	66	431	149
Vehicles Exited	118	151	51	11	92	46	130	688	15	66	424	147
Hourly Exit Rate	118	151	51	11	92	46	130	688	15	66	424	147
Input Volume	117	145	49	12	91	44	150	830	18	65	432	143
% of Volume	101	104	105	90	101	105	87	83	82	102	98	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	1.1
Total Delay (hr)	44.1
Total Del/Veh (s)	79.6
Stop Delay (hr)	35.4
Stop Del/Veh (s)	63.9
Travel Dist (mi)	530.4
Travel Time (hr)	63.0
Vehicles Entered	1948
Vehicles Exited	1939
Hourly Exit Rate	1939
Input Volume	2097
% of Volume	92
Denied Entry Before	0
Denied Entry After	0

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.4	0.1	0.7
Denied Del/Veh (s)	0.0		0.0	0.6	0.4	3.2	5.6	1.0
Total Delay (hr)	2.5	0.0	1.4	11.1	6.3	14.4	3.2	38.8
Total Del/Veh (s)	48.3		10.6	79.9	33.4	122.1	120.7	59.2
Stop Delay (hr)	2.2	0.0	0.7	9.9	5.2	12.4	2.8	33.2
Stop Del/Veh (s)	43.2		4.9	71.7	27.5	105.7	106.0	50.7
Travel Dist (mi)	15.1	0.0	34.7	44.5	62.1	81.0	18.5	256.0
Travel Time (hr)	3.0	0.0	2.7	13.1	8.6	17.5	4.1	49.0
Vehicles Entered	179	0	475	481	668	406	92	2301
Vehicles Exited	177	0	477	486	670	405	92	2307
Hourly Exit Rate	177	0	477	486	670	405	92	2307
Input Volume	188	0	473	582	823	413	93	2572
% of Volume	94	0	101	83	81	98	99	90
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	1	0	1

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	156.5	41.2	32.6	0.0	0.0	0.0	0.1	0.4	0.1	0.0	0.0	0.0
Denied Del/Veh (s)	1271.4	1236.4	1235.4	0.0	0.1	0.6	7.5	1.9	3.6	0.0	0.0	0.0
Total Delay (hr)	62.0	15.9	2.8	0.8	0.2	3.4	6.5	11.6	0.7	4.8	2.6	0.1
Total Del/Veh (s)	949.0	954.9	252.4	39.5	29.8	47.9	311.7	56.9	35.6	51.0	18.0	11.1
Stop Delay (hr)	62.2	16.0	2.6	0.7	0.2	3.3	6.5	10.3	0.6	4.1	1.8	0.0
Stop Del/Veh (s)	952.7	957.6	237.6	37.2	27.1	46.9	310.3	50.9	32.0	42.9	12.4	7.3
Travel Dist (mi)	52.6	13.3	11.0	4.0	1.4	14.8	4.1	43.5	4.4	30.7	48.0	1.6
Travel Time (hr)	220.2	57.6	35.8	0.9	0.3	4.1	6.8	13.4	1.0	6.2	4.5	0.1
Vehicles Entered	170	44	36	68	26	250	70	725	71	334	518	18
Vehicles Exited	175	44	37	68	26	250	68	722	71	330	519	18
Hourly Exit Rate	175	44	37	68	26	250	68	722	71	330	519	18
Input Volume	405	108	90	65	26	255	75	741	74	334	523	17
% of Volume	43	41	41	104	98	98	90	97	96	99	99	104
Denied Entry Before	39	9	8	0	0	0	0	0	0	0	0	0
Denied Entry After	273	76	59	0	0	0	0	1	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	230.9
Denied Del/Veh (s)	303.5
Total Delay (hr)	111.3
Total Del/Veh (s)	164.1
Stop Delay (hr)	108.3
Stop Del/Veh (s)	159.7
Travel Dist (mi)	229.5
Travel Time (hr)	351.0
Vehicles Entered	2330
Vehicles Exited	2328
Hourly Exit Rate	2328
Input Volume	2715
% of Volume	86
Denied Entry Before	56
Denied Entry After	409

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	9.1	0.0	24.9	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	236.6	15.0	234.8	0.1	0.1	0.1	1.1	0.7	1.0	0.0	0.0	0.0
Total Delay (hr)	12.1	0.1	25.1	0.4	0.1	0.8	0.2	3.7	0.0	0.3	0.2	0.0
Total Del/Veh (s)	364.1	339.0	278.4	126.2	121.5	121.4	23.4	17.8	23.2	34.1	1.4	0.3
Stop Delay (hr)	12.3	0.1	25.8	0.4	0.1	0.8	0.1	2.3	0.0	0.3	0.1	0.0
Stop Del/Veh (s)	369.7	345.0	285.8	124.4	117.2	121.6	15.3	10.9	15.1	32.5	0.4	0.0
Travel Dist (mi)	32.9	0.2	89.8	2.0	0.4	4.7	12.6	330.0	2.8	1.2	20.7	0.3
Travel Time (hr)	22.4	0.1	53.2	0.5	0.1	1.0	0.6	14.9	0.1	0.4	0.9	0.0
Vehicles Entered	114	1	310	11	2	25	28	734	6	35	584	9
Vehicles Exited	107	1	296	11	2	25	28	732	6	35	584	9
Hourly Exit Rate	107	1	296	11	2	25	28	732	6	35	584	9
Input Volume	135	1	378	10	2	23	29	717	8	37	642	11
% of Volume	79	100	78	110	89	110	97	102	73	94	91	84
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	25	0	71	0	0	0	0	0	0	0	0	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	All
Denied Delay (hr)	34.2
Denied Del/Veh (s)	62.9
Total Delay (hr)	43.1
Total Del/Veh (s)	82.0
Stop Delay (hr)	42.3
Stop Del/Veh (s)	80.5
Travel Dist (mi)	497.7
Travel Time (hr)	94.4
Vehicles Entered	1859
Vehicles Exited	1836
Hourly Exit Rate	1836
Input Volume	1993
% of Volume	92
Denied Entry Before	0
Denied Entry After	96

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.2	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.2	0.4	0.0	0.1	0.0	0.8
Total Del/Veh (s)	6.4	1.2	2.4	1.4	27.2	12.4	2.1
Stop Delay (hr)	0.0	0.0	0.2	0.0	0.1	0.0	0.3
Stop Del/Veh (s)	4.4	0.2	1.1	0.7	25.3	12.2	0.9
Travel Dist (mi)	0.4	36.5	41.1	0.4	2.3	1.0	81.6
Travel Time (hr)	0.0	1.5	1.8	0.0	0.2	0.1	3.6
Vehicles Entered	7	696	577	6	15	6	1307
Vehicles Exited	7	696	577	6	15	6	1307
Hourly Exit Rate	7	696	577	6	15	6	1307
Input Volume	7	702	672	7	16	5	1409
% of Volume	100	99	86	83	95	114	93
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0
Total Delay (hr)	0.0	0.6	0.0	0.1	6.1	0.0	0.5	0.7	0.1	0.6	8.9
Total Del/Veh (s)	23.2	3.2	2.5	38.5	34.6	29.0	240.4	127.5	72.5	117.6	22.5
Stop Delay (hr)	0.0	0.1	0.0	0.1	4.6	0.0	0.5	0.7	0.1	0.6	6.8
Stop Del/Veh (s)	19.4	0.6	0.7	31.1	26.1	23.4	238.6	127.3	70.6	117.3	17.3
Travel Dist (mi)	0.2	38.7	1.5	1.2	69.7	0.5	1.6	4.4	0.8	3.0	121.6
Travel Time (hr)	0.0	2.0	0.1	0.2	8.5	0.1	0.6	0.9	0.1	0.7	13.2
Vehicles Entered	3	689	27	11	631	4	8	20	4	17	1414
Vehicles Exited	3	689	27	11	627	5	8	21	4	18	1413
Hourly Exit Rate	3	689	27	11	627	5	8	21	4	18	1413
Input Volume	4	693	26	14	717	5	8	21	5	18	1511
% of Volume	75	99	103	77	87	100	100	101	84	99	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.4	0.0	0.0	0.0	0.2	0.1	0.0	3.2	0.3	0.4
Total Delay (hr)	1.9	9.3	1.0	0.3	5.3	0.3	3.9	3.3	0.8	0.9	2.5	0.4
Total Del/Veh (s)	90.1	53.0	47.9	66.0	31.6	27.2	71.6	72.7	74.9	61.0	63.8	59.7
Stop Delay (hr)	1.7	7.5	0.8	0.3	4.2	0.3	3.6	3.0	0.8	0.9	2.3	0.4
Stop Del/Veh (s)	80.8	42.5	39.3	60.7	25.3	23.0	65.2	65.7	69.8	57.1	58.3	56.6
Travel Dist (mi)	6.1	50.4	5.9	0.9	32.7	2.3	28.8	23.5	5.8	15.2	38.5	6.8
Travel Time (hr)	2.2	11.0	1.2	0.4	6.4	0.4	5.0	4.1	1.1	1.5	3.8	0.7
Vehicles Entered	75	619	72	17	595	41	197	162	40	53	135	24
Vehicles Exited	75	618	72	17	596	41	196	163	40	53	134	24
Hourly Exit Rate	75	618	72	17	596	41	196	163	40	53	134	24
Input Volume	80	622	68	24	670	50	203	157	39	54	139	24
% of Volume	94	99	106	72	89	82	97	104	103	98	97	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	30.1
Total Del/Veh (s)	52.4
Stop Delay (hr)	25.7
Stop Del/Veh (s)	44.7
Travel Dist (mi)	216.8
Travel Time (hr)	37.8
Vehicles Entered	2030
Vehicles Exited	2029
Hourly Exit Rate	2029
Input Volume	2128
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.1	0.4	3.5	0.0	0.0	0.0	0.4
Total Delay (hr)	0.1	0.3	0.3	0.0	0.2	0.0	0.1	1.1
Total Del/Veh (s)	4.9	3.0	3.7	0.7	15.8	1.0	13.2	4.2
Stop Delay (hr)	0.0	0.1	0.2	0.0	0.2	0.0	0.1	0.6
Stop Del/Veh (s)	2.2	0.6	2.7	0.1	14.8	0.1	13.4	2.6
Travel Dist (mi)	3.2	24.7	32.0	5.9	0.8	0.0	0.8	67.4
Travel Time (hr)	0.2	1.4	1.4	0.3	0.2	0.0	0.2	3.8
Vehicles Entered	53	409	300	56	41	1	39	899
Vehicles Exited	54	413	301	56	41	1	40	906
Hourly Exit Rate	54	413	301	56	41	1	40	906
Input Volume	62	472	304	54	43	2	39	976
% of Volume	87	87	99	104	95	67	103	93
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	4.6	0.3	4.9
Total Del/Veh (s)	15.6	1.6	9.6
Stop Delay (hr)	3.7	0.2	3.9
Stop Del/Veh (s)	12.4	1.1	7.6
Travel Dist (mi)	81.2	13.3	94.5
Travel Time (hr)	8.4	0.9	9.3
Vehicles Entered	1056	789	1845
Vehicles Exited	1054	788	1842
Hourly Exit Rate	1054	788	1842
Input Volume	1049	868	1917
% of Volume	100	91	96
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.2	0.1	0.0	0.0	0.0	0.2	1.2	0.6	0.1	0.1	0.0
Denied Del/Veh (s)	1.4	2.5	4.2	0.0	0.0	0.0	5.1	3.0	3.6	2.5	0.3	0.5
Total Delay (hr)	1.0	7.2	1.7	8.1	4.1	0.6	3.9	21.1	4.6	4.0	10.4	0.4
Total Del/Veh (s)	78.1	84.5	74.0	61.1	60.5	26.4	106.6	53.3	27.5	88.1	35.0	30.4
Stop Delay (hr)	1.0	6.5	1.6	7.6	3.8	0.5	3.5	16.3	3.7	3.7	8.2	0.3
Stop Del/Veh (s)	71.7	76.6	68.2	56.7	54.9	24.0	95.8	41.3	22.3	80.9	27.4	25.7
Travel Dist (mi)	4.7	30.1	8.4	35.0	17.9	5.8	19.4	208.6	88.7	19.3	124.8	5.3
Travel Time (hr)	1.2	8.4	2.2	9.6	4.8	0.8	4.8	29.3	8.6	4.9	14.7	0.6
Vehicles Entered	48	302	84	471	241	78	128	1381	590	163	1042	44
Vehicles Exited	48	302	84	470	240	78	129	1387	591	163	1046	44
Hourly Exit Rate	48	302	84	470	240	78	129	1387	591	163	1046	44
Input Volume	48	290	86	522	260	86	132	1394	590	169	1021	44
% of Volume	99	104	97	90	92	90	98	99	100	96	102	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	2	0	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	2.5
Denied Del/Veh (s)	1.9
Total Delay (hr)	67.3
Total Del/Veh (s)	51.7
Stop Delay (hr)	56.7
Stop Del/Veh (s)	43.6
Travel Dist (mi)	568.1
Travel Time (hr)	89.9
Vehicles Entered	4572
Vehicles Exited	4582
Hourly Exit Rate	4582
Input Volume	4643
% of Volume	99
Denied Entry Before	0
Denied Entry After	2

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.1
Total Delay (hr)	0.1	0.3	0.4
Total Del/Veh (s)	3.4	13.6	7.7
Stop Delay (hr)	0.1	0.3	0.4
Stop Del/Veh (s)	2.4	12.6	6.7
Travel Dist (mi)	2.4	13.5	15.9
Travel Time (hr)	0.3	0.8	1.0
Vehicles Entered	113	81	194
Vehicles Exited	114	81	195
Hourly Exit Rate	114	81	195
Input Volume	120	82	202
% of Volume	95	98	97
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Total Delay (hr)	0.4	0.0	0.0	0.6	1.4	0.0	2.5
Total Del/Veh (s)	2.1	1.4	12.8	3.8	71.8	9.6	6.5
Stop Delay (hr)	0.0	0.0	0.0	0.4	1.4	0.0	1.8
Stop Del/Veh (s)	0.0	0.0	10.4	2.3	69.9	9.4	4.7
Travel Dist (mi)	73.8	3.4	0.3	29.3	6.0	1.5	114.1
Travel Time (hr)	2.9	0.1	0.0	1.6	1.6	0.1	6.4
Vehicles Entered	683	31	5	580	69	18	1386
Vehicles Exited	683	31	5	580	70	18	1387
Hourly Exit Rate	683	31	5	580	70	18	1387
Input Volume	688	29	5	672	67	18	1479
% of Volume	99	107	100	86	104	101	94
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.5	0.0	0.3	0.1	0.9
Total Del/Veh (s)	2.7	1.4	1.7	11.4	2.3
Stop Delay (hr)	0.1	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	0.3	0.1	0.2	11.1	0.4
Travel Dist (mi)	45.3	4.9	49.8	1.5	101.4
Travel Time (hr)	2.0	0.2	2.4	0.1	4.7
Vehicles Entered	640	68	584	19	1311
Vehicles Exited	642	69	582	19	1312
Hourly Exit Rate	642	69	582	19	1312
Input Volume	650	67	681	20	1418
% of Volume	99	103	85	96	93
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.3	0.1	0.0
Total Delay (hr)	0.5	0.1	1.3	0.1	0.5	0.1	2.7
Total Del/Veh (s)	2.7	1.1	6.3	4.3	16.7	20.0	4.8
Stop Delay (hr)	0.2	0.0	0.9	0.0	0.5	0.1	1.8
Stop Del/Veh (s)	1.3	0.2	4.0	2.9	16.5	19.7	3.2
Travel Dist (mi)	11.1	6.5	48.8	3.4	4.0	1.2	74.9
Travel Time (hr)	0.9	0.6	3.3	0.2	0.7	0.2	6.0
Vehicles Entered	661	393	767	54	106	26	2007
Vehicles Exited	661	393	767	54	106	26	2007
Hourly Exit Rate	661	393	767	54	106	26	2007
Input Volume	661	389	848	54	108	25	2084
% of Volume	100	101	90	100	98	105	96
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.1	0.3
Total Del/Veh (s)	8.1	3.6	0.5	0.2	5.4	2.3	1.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	7.0	3.6	0.0	0.0	1.9	0.2	0.3
Travel Dist (mi)	0.2	0.4	24.9	2.1	2.4	30.7	60.7
Travel Time (hr)	0.0	0.0	0.9	0.1	0.1	1.2	2.4
Vehicles Entered	11	20	371	32	16	210	660
Vehicles Exited	11	20	372	32	16	210	661
Hourly Exit Rate	11	20	372	32	16	210	661
Input Volume	13	19	373	36	16	217	674
% of Volume	83	107	100	89	98	97	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.3	0.2	0.0	0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	5.9	3.5	0.4	0.0	2.8	0.4	0.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	5.2	3.6	0.0	0.0	0.6	0.0	0.0
Travel Dist (mi)	0.0	0.0	10.8	0.1	0.1	14.6	25.7
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.5	1.0
Vehicles Entered	2	3	400	4	1	218	628
Vehicles Exited	2	3	400	4	1	218	628
Hourly Exit Rate	2	3	400	4	1	218	628
Input Volume	2	2	407	2	2	226	640
% of Volume	100	150	98	200	50	97	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	269.1
Denied Del/Veh (s)	114.9
Total Delay (hr)	381.2
Total Del/Veh (s)	162.5
Stop Delay (hr)	332.5
Stop Del/Veh (s)	141.7
Travel Dist (mi)	5030.0
Travel Time (hr)	830.1
Vehicles Entered	7924
Vehicles Exited	7914
Hourly Exit Rate	7914
Input Volume	41421
% of Volume	19
Denied Entry Before	56
Denied Entry After	508

Arterial Level of Service: NB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seminary Dr	4	17.8	72.0	0.5	23
	46	6.1	10.6	0.0	12
	20	38.8	48.7	0.1	6
Ringwood Ave	3	56.9	66.0	0.1	3
Ravenswood Ave	2	38.1	49.5	0.1	7
	1	100.7	126.1	0.2	6
Total		258.3	372.9	0.9	9

Arterial Level of Service: SB Middlefield Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Ravenswood Ave	2	120.7	147.2	0.2	5
	3	5.0	16.0	0.1	21
	20	2.8	10.4	0.1	21
	46	2.1	12.0	0.1	25
	4	1.4	5.8	0.0	23
Total		132.0	191.4	0.5	9

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	172	216	61	184	150	1027	160	1019
Average Queue (ft)	69	108	11	74	109	871	72	576
95th Queue (ft)	134	185	44	145	179	1273	162	1088
Link Distance (ft)		1416		1162		1023		1985
Upstream Blk Time (%)						8		
Queuing Penalty (veh)						79		
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	0	0	1	23	10	49	1	49
Queuing Penalty (veh)	0	0	1	3	86	74	5	32

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	390	170	449	448	793
Average Queue (ft)	193	114	409	307	555
95th Queue (ft)	367	238	501	532	894
Link Distance (ft)	385		424	424	1023
Upstream Blk Time (%)	1		22	7	0
Queuing Penalty (veh)	5		155	48	1
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	39	1			
Queuing Penalty (veh)	184	2			

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	B46	SB
Directions Served	LT	R	LT	R	L	T	T	R	T	T	T	L
Maximum Queue (ft)	1635	1635	135	265	200	340	352	150	416	451	174	175
Average Queue (ft)	1614	1612	60	147	145	278	296	62	192	233	62	162
95th Queue (ft)	1627	1635	116	273	250	389	397	176	477	536	213	198
Link Distance (ft)	1600	1600	256	256		253	253		379	379	134	
Upstream Blk Time (%)	100	84		6		40	43		6	16	12	
Queuing Penalty (veh)	0	0		11		176	189		27	71	106	
Storage Bay Dist (ft)					175			100				125
Storage Blk Time (%)					44	10	57	0				28
Queuing Penalty (veh)					158	7	42	0				73

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	401	482
Average Queue (ft)	223	124
95th Queue (ft)	406	355
Link Distance (ft)	424	424
Upstream Blk Time (%)	0	1
Queuing Penalty (veh)	1	3
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	7	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	B46	B20	B20
Directions Served	LT	R	LTR	L	T	R	L	TR	T	T	
Maximum Queue (ft)	1576	115	132	57	500	56	65	100	133	86	46
Average Queue (ft)	956	96	44	14	131	3	22	11	9	3	2
95th Queue (ft)	1931	163	141	44	606	32	62	78	113	40	26
Link Distance (ft)	1581		990		2362			134	379	253	253
Upstream Blk Time (%)	29							2	1	0	
Queuing Penalty (veh)	0							10	4	1	
Storage Bay Dist (ft)		90		50		85	80				
Storage Blk Time (%)	55	39		0	10		4	0			
Queuing Penalty (veh)	212	53		1	4		29	0			

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	112	119	46
Average Queue (ft)	11	14	18
95th Queue (ft)	73	103	45
Link Distance (ft)	213	323	834
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	1	2	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	171	524	164	92
Average Queue (ft)	15	334	47	29
95th Queue (ft)	104	573	146	85
Link Distance (ft)	232	520	1123	917
Upstream Blk Time (%)	1	4		
Queuing Penalty (veh)	6	33		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	109	474	332	317	83	251	120	567	134	344
Average Queue (ft)	67	424	196	145	19	229	101	290	61	159
95th Queue (ft)	120	527	386	348	58	297	145	491	137	280
Link Distance (ft)		343	249	249		232		723		1507
Upstream Blk Time (%)		41	23	11		35				
Queuing Penalty (veh)		316	88	41		258				
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	9	50			1	49	32	40	1	25
Queuing Penalty (veh)	64	40			5	12	61	82	2	14

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	211	136	67	70
Average Queue (ft)	36	18	4	36
95th Queue (ft)	126	98	41	63
Link Distance (ft)	256	561		65
Upstream Blk Time (%)	0			5
Queuing Penalty (veh)	0			4
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		2		
Queuing Penalty (veh)		1		

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	318	338	42	45
Average Queue (ft)	125	148	12	11
95th Queue (ft)	318	367	37	36
Link Distance (ft)	318	318	25	25
Upstream Blk Time (%)	0	3	13	10
Queuing Penalty (veh)	2	14	55	45
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	470	250	300	335	326	160	345	802	777	675	265	598
Average Queue (ft)	264	195	187	210	202	67	224	565	518	267	195	375
95th Queue (ft)	460	285	302	325	338	178	416	835	792	602	314	555
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	2		0	1	3			4	2	2		0
Queuing Penalty (veh)	0		0	6	13			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	17	8	1	4	27	0	1	32			4	21
Queuing Penalty (veh)	40	15	2	10	23	0	4	43			22	36

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	495
Average Queue (ft)	321
95th Queue (ft)	470
Link Distance (ft)	621
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	62	76
Average Queue (ft)	35	10
95th Queue (ft)	52	81
Link Distance (ft)	65	887
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB	NB	NB
Directions Served	TR	LT	L	R
Maximum Queue (ft)	21	195	180	43
Average Queue (ft)	1	38	65	13
95th Queue (ft)	18	156	186	39
Link Distance (ft)	520	213	455	455
Upstream Blk Time (%)		2	0	
Queuing Penalty (veh)		12	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 36: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	T	R
Maximum Queue (ft)	134	18	42
Average Queue (ft)	9	2	15
95th Queue (ft)	69	33	41
Link Distance (ft)	323	385	427
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	B27	NB	SB
Directions Served	T	TR	TR	T	R	R
Maximum Queue (ft)	80	66	297	56	110	66
Average Queue (ft)	17	11	84	3	44	19
95th Queue (ft)	55	46	246	37	99	49
Link Distance (ft)	25	25	249	343	193	234
Upstream Blk Time (%)	16	6	2		1	
Queuing Penalty (veh)	85	29	19		0	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 42: Laurel St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	46	2	77
Average Queue (ft)	20	0	9
95th Queue (ft)	45	2	43
Link Distance (ft)	95	297	723
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 44: Laurel St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	29	6
Average Queue (ft)	4	0
95th Queue (ft)	21	3
Link Distance (ft)	85	297
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 3366

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	6.5	54.3	52.4	7.5	53.3	52.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	None	Max	None
Avg. Green (s)	6.2	4.7	8.6	7.2	0.0	8.6	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	38	0	0	7	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	31	100	100	70	100	100	0
Cycles with Peds (%)	0	38	96	0	17	14	0

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	2	3	5	6	7	8
Movement(s) Served	NBT	EBR	NBL	SBT	EBL	NBTL
Maximum Green (s)	48.3	72.7	5.0	38.8	34.5	33.7
Minimum Green (s)	10.0	8.0	5.0	7.0	7.0	7.0
Recall	C-Max	Min	None	C-Max	Ped	None
Avg. Green (s)	-2.1	-2.9	5.0	-11.6	6.2	-10.1
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	100	0	0	0
Cycles Maxed Out (%)	100	100	100	100	54	100
Cycles with Peds (%)	92	0	0	8	100	29

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	5.3	79.3	41.4	8.5	76.1	35.4
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Min	C-Max	None	Min	Max
Avg. Green (s)	5.6	-12.7	10.7	7.2	13.9	2.6
g/C Ratio	0.07	-0.79	0.66	0.32	0.86	0.16
Cycles Skipped (%)	81	0	0	28	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	19	85	100	17	85	100
Cycles with Peds (%)	0	60	55	0	45	45

Controller Summary

Average Cycle Length (s): 16.2

Number of Complete Cycles : 16

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	None	None	None	C-Max
Avg. Green (s)	-10.8	0.4	-5.1	-0.1	-11.4	6.1
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	12	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	67	83	19	100
Cycles with Peds (%)	0	50	0	71	0	27

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:30	6:30	6:30	6:30	6:30	6:30	6:30
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7439	7585	7121	7576	7514	7489	7632
Vehs Exited	7421	7451	7005	7367	7383	7319	7532
Starting Vehs	500	443	493	420	399	429	459
Ending Vehs	518	577	609	629	530	599	559
Denied Entry Before	113	112	317	287	162	193	219
Denied Entry After	1156	1037	1738	1167	1138	1173	1172
Travel Distance (mi)	4786	4846	4571	4687	4786	4778	4854
Travel Time (hr)	1153.2	1203.1	1633.4	1306.6	1254.1	1286.8	1329.9
Total Delay (hr)	981.1	1028.5	1468.7	1138.2	1082.3	1114.5	1155.2
Total Stops	14293	16420	15262	14975	15352	16149	15498
Fuel Used (gal)	386.1	398.1	490.3	418.0	408.5	415.7	428.3

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:30	6:30	6:30	6:30
End Time	8:00	8:00	8:00	8:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7366	7430	7541	7463
Vehs Exited	7412	7333	7569	7378
Starting Vehs	443	501	499	460
Ending Vehs	397	598	471	540
Denied Entry Before	128	192	101	180
Denied Entry After	1212	1260	936	1198
Travel Distance (mi)	4812	4750	4898	4777
Travel Time (hr)	1153.2	1390.1	999.0	1270.9
Total Delay (hr)	979.8	1219.2	822.5	1099.0
Total Stops	14091	16914	14672	15362
Fuel Used (gal)	386.8	439.8	354.4	412.6

Interval #0 Information Seeding

Start Time	6:30
End Time	7:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1740	1827	1616	1701	1773	1764	1762
Vehs Exited	1803	1772	1699	1735	1693	1731	1770
Starting Vehs	500	443	493	420	399	429	459
Ending Vehs	437	498	410	386	479	462	451
Denied Entry Before	113	112	317	287	162	193	219
Denied Entry After	298	312	644	507	361	395	499
Travel Distance (mi)	1151	1189	1129	1085	1128	1160	1159
Travel Time (hr)	166.3	175.3	226.3	194.4	170.8	178.0	195.1
Total Delay (hr)	125.0	132.4	185.7	155.4	130.2	136.3	153.6
Total Stops	3189	3556	3059	2837	3092	3138	3089
Fuel Used (gal)	67.7	70.1	80.7	72.3	67.5	70.1	74.5

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1742	1785	1808	1747
Vehs Exited	1738	1756	1846	1754
Starting Vehs	443	501	499	460
Ending Vehs	447	530	461	452
Denied Entry Before	128	192	101	180
Denied Entry After	291	419	214	393
Travel Distance (mi)	1153	1179	1181	1151
Travel Time (hr)	170.4	191.7	151.6	182.0
Total Delay (hr)	128.8	149.5	109.1	140.6
Total Stops	3021	3699	3482	3215
Fuel Used (gal)	68.6	73.9	64.9	71.0

Interval #2 Information Recording

Start Time	7:15
End Time	7:30
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	2246	2219	2074	2194	2166	2212	2264
Vehs Exited	2050	1937	1728	1919	1942	1925	2055
Starting Vehs	437	498	410	386	479	462	451
Ending Vehs	633	780	756	661	703	749	660
Denied Entry Before	298	312	644	507	361	395	499
Denied Entry After	644	695	1123	826	813	766	869
Travel Distance (mi)	1327	1261	1109	1274	1277	1259	1306
Travel Time (hr)	255.2	278.8	362.3	300.6	298.1	297.6	314.8
Total Delay (hr)	207.4	233.2	322.1	254.7	252.1	252.2	267.6
Total Stops	4020	4483	3839	4053	4287	4207	4351
Fuel Used (gal)	91.9	95.6	110.5	100.4	100.3	99.7	105.2

Interval #2 Information Recording

Start Time	7:15
End Time	7:30
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	8	9	10	Avg
Vehs Entered	2155	2142	2230	2184
Vehs Exited	2022	1886	2048	1948
Starting Vehs	447	530	461	452
Ending Vehs	580	786	643	688
Denied Entry Before	291	419	214	393
Denied Entry After	737	785	511	776
Travel Distance (mi)	1325	1228	1351	1272
Travel Time (hr)	263.0	311.8	231.7	291.4
Total Delay (hr)	215.2	267.4	183.0	245.5
Total Stops	4051	4728	4182	4221
Fuel Used (gal)	93.4	102.7	87.4	98.7

Interval #3 Information Recording

Start Time	7:30
End Time	7:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1610	1715	1636	1828	1726	1746	1700
Vehs Exited	1729	1924	1793	1921	1846	1903	1775
Starting Vehs	633	780	756	661	703	749	660
Ending Vehs	514	571	599	568	583	592	585
Denied Entry Before	644	695	1123	826	813	766	869
Denied Entry After	1009	895	1505	1016	1016	1000	1093
Travel Distance (mi)	1101	1204	1178	1165	1174	1188	1148
Travel Time (hr)	339.8	367.6	491.8	370.5	379.9	388.3	398.9
Total Delay (hr)	300.2	324.3	449.4	328.8	338.0	345.2	357.5
Total Stops	3411	4302	4334	3982	4187	4428	4052
Fuel Used (gal)	106.1	115.1	143.1	114.8	117.0	119.3	120.6

Interval #3 Information Recording

Start Time	7:30
End Time	7:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1742	1688	1702	1707
Vehs Exited	1852	1813	1891	1844
Starting Vehs	580	786	643	688
Ending Vehs	470	661	454	556
Denied Entry Before	737	785	511	776
Denied Entry After	979	1123	756	1034
Travel Distance (mi)	1195	1137	1179	1167
Travel Time (hr)	341.9	428.6	290.3	379.8
Total Delay (hr)	299.0	387.6	247.9	337.8
Total Stops	3983	4254	3699	4058
Fuel Used (gal)	109.1	127.5	97.1	117.0

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1843	1824	1795	1853	1849	1767	1906
Vehs Exited	1839	1818	1785	1792	1902	1760	1932
Starting Vehs	514	571	599	568	583	592	585
Ending Vehs	518	577	609	629	530	599	559
Denied Entry Before	1009	895	1505	1016	1016	1000	1093
Denied Entry After	1156	1037	1738	1167	1138	1173	1172
Travel Distance (mi)	1208	1191	1155	1163	1207	1171	1240
Travel Time (hr)	392.0	381.4	553.1	441.1	405.3	422.9	421.1
Total Delay (hr)	348.5	338.6	511.5	399.4	362.0	380.7	376.6
Total Stops	3673	4079	4030	4103	3786	4376	4006
Fuel Used (gal)	120.4	117.4	156.1	130.5	123.7	126.6	128.0

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1727	1815	1801	1817
Vehs Exited	1800	1878	1784	1828
Starting Vehs	470	661	454	556
Ending Vehs	397	598	471	540
Denied Entry Before	979	1123	756	1034
Denied Entry After	1212	1260	936	1198
Travel Distance (mi)	1139	1206	1187	1187
Travel Time (hr)	377.9	458.0	325.3	417.8
Total Delay (hr)	336.8	414.7	282.4	375.1
Total Stops	3036	4233	3309	3860
Fuel Used (gal)	115.7	135.8	105.0	125.9

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.1	0.6	0.3	0.0	0.0	0.0	1.6	4.8	1.1
Denied Del/Veh (s)	2.9	0.5	0.7	9.1	10.0	7.3	0.1	0.0	0.0	38.0	35.9	34.9
Total Delay (hr)	2.3	4.0	1.3	1.5	4.6	3.0	1.6	3.7	0.4	7.8	23.5	5.4
Total Del/Veh (s)	103.7	68.1	67.9	138.1	79.7	78.7	49.3	31.1	29.3	178.8	172.9	165.2
Stop Delay (hr)	2.2	3.5	1.2	1.4	4.1	2.7	1.4	2.8	0.3	6.9	20.5	4.8
Stop Del/Veh (s)	98.4	60.8	63.0	130.4	70.2	71.8	42.0	23.3	22.9	157.9	150.9	146.7
Travel Dist (mi)	21.2	55.3	18.7	8.7	47.9	30.8	23.3	84.4	8.7	56.7	174.3	41.0
Travel Time (hr)	3.1	5.8	2.0	1.9	6.8	4.4	2.4	6.6	0.7	11.4	34.1	7.9
Vehicles Entered	80	207	70	38	209	135	116	425	43	153	474	112
Vehicles Exited	76	204	70	36	206	132	114	426	44	147	456	108
Hourly Exit Rate	76	204	70	36	206	132	114	426	44	147	456	108
Input Volume	81	209	63	39	205	133	113	444	47	156	472	111
% of Volume	94	98	112	92	100	99	101	96	94	94	97	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	3	6	2

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	8.6
Denied Del/Veh (s)	14.9
Total Delay (hr)	59.0
Total Del/Veh (s)	101.3
Stop Delay (hr)	51.7
Stop Del/Veh (s)	88.8
Travel Dist (mi)	571.1
Travel Time (hr)	87.3
Vehicles Entered	2062
Vehicles Exited	2019
Hourly Exit Rate	2019
Input Volume	2072
% of Volume	97
Denied Entry Before	0
Denied Entry After	11

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.3
Denied Del/Veh (s)	2.7	0.0	1.8	0.4	0.1	0.2	0.0	0.6
Total Delay (hr)	2.3	0.0	1.8	6.7	0.5	16.0	3.5	30.8
Total Del/Veh (s)	79.3	2.9	19.8	58.7	3.4	123.5	120.5	57.5
Stop Delay (hr)	2.2	0.0	1.4	6.2	0.2	13.7	3.1	26.7
Stop Del/Veh (s)	74.6	0.9	15.4	54.2	1.3	105.9	105.4	49.9
Travel Dist (mi)	8.3	0.9	22.8	36.6	44.6	93.4	21.2	227.7
Travel Time (hr)	2.7	0.0	2.8	8.5	2.1	19.3	4.4	39.7
Vehicles Entered	102	18	322	403	496	458	104	1903
Vehicles Exited	102	18	322	404	496	449	101	1892
Hourly Exit Rate	102	18	322	404	496	449	101	1892
Input Volume	120	19	388	408	496	470	104	2006
% of Volume	85	96	83	99	100	95	97	94
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0
Denied Del/Veh (s)	0.2	0.2	0.1	0.8	0.8	0.2	0.5	0.7	0.6	1.2	0.4	0.6
Total Delay (hr)	1.2	0.3	0.0	2.2	1.9	1.3	6.9	14.8	1.8	5.9	10.8	1.0
Total Del/Veh (s)	67.5	73.5	4.2	54.9	43.9	15.2	89.4	98.7	61.3	102.6	75.3	47.9
Stop Delay (hr)	1.2	0.3	0.0	2.0	1.8	1.2	6.5	13.7	1.7	5.5	9.6	0.9
Stop Del/Veh (s)	63.7	68.6	3.7	51.4	40.0	14.8	84.1	91.8	56.9	95.3	66.7	42.6
Travel Dist (mi)	19.1	4.6	4.6	7.8	7.9	16.7	16.2	31.7	6.5	18.4	46.0	7.1
Travel Time (hr)	1.9	0.5	0.2	2.5	2.3	2.2	7.6	15.9	2.2	6.7	12.7	1.4
Vehicles Entered	64	15	15	136	154	296	270	526	104	203	512	77
Vehicles Exited	65	15	16	138	154	296	272	526	105	204	515	78
Hourly Exit Rate	65	15	16	138	154	296	272	526	105	204	515	78
Input Volume	62	16	14	136	158	289	279	538	105	222	566	91
% of Volume	105	95	116	101	98	102	97	98	100	92	91	86
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	0.6
Total Delay (hr)	48.1
Total Del/Veh (s)	71.6
Stop Delay (hr)	44.3
Stop Del/Veh (s)	66.0
Travel Dist (mi)	186.5
Travel Time (hr)	56.0
Vehicles Entered	2372
Vehicles Exited	2384
Hourly Exit Rate	2384
Input Volume	2475
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	1.2	4.0	0.0	0.0	0.0	0.0	5.3
Denied Del/Veh (s)	0.2	2.9	0.1	0.1	15.2	16.6	16.3	0.0	0.0	0.3	9.9
Total Delay (hr)	1.2	1.3	0.1	0.5	8.9	18.6	0.1	0.4	2.8	0.2	34.1
Total Del/Veh (s)	237.6	74.2	71.1	49.9	111.6	76.5	64.0	81.2	17.2	14.4	63.2
Stop Delay (hr)	1.2	1.2	0.1	0.5	6.9	12.0	0.1	0.4	2.1	0.2	24.8
Stop Del/Veh (s)	234.6	72.1	68.8	49.2	86.0	49.6	42.0	78.2	13.3	12.4	45.9
Travel Dist (mi)	5.1	17.7	1.3	7.0	124.0	383.4	2.6	0.6	20.2	2.0	563.9
Travel Time (hr)	1.4	2.0	0.2	0.8	14.4	35.5	0.2	0.5	3.4	0.3	58.6
Vehicles Entered	17	61	7	37	278	858	6	18	574	57	1913
Vehicles Exited	18	61	7	37	275	841	6	18	573	57	1893
Hourly Exit Rate	18	61	7	37	275	841	6	18	573	57	1893
Input Volume	20	61	7	33	279	857	6	21	614	62	1960
% of Volume	91	100	100	113	99	98	96	86	93	92	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	2	8	0	0	0	0	10

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.5	0.0	0.0	0.1	0.1	0.3
Total Delay (hr)	0.0	0.2	0.1	0.0	0.1	0.1	0.5
Total Del/Veh (s)	3.3	0.9	0.9	0.4	17.3	12.4	1.4
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.1	0.1	0.3
Stop Del/Veh (s)	1.9	0.4	0.0	0.0	15.3	12.0	0.7
Travel Dist (mi)	0.1	17.5	36.2	0.2	3.5	3.3	60.8
Travel Time (hr)	0.0	0.9	1.4	0.0	0.2	0.2	2.7
Vehicles Entered	4	716	508	3	22	21	1274
Vehicles Exited	4	715	507	3	22	21	1272
Hourly Exit Rate	4	715	507	3	22	21	1272
Input Volume	5	872	514	3	26	22	1442
% of Volume	76	82	99	100	85	94	88
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.4	0.1	0.0	0.1	0.2	0.1	0.2	0.0
Total Delay (hr)	0.0	0.5	0.0	0.0	1.5	0.0	0.1	0.2	0.1	0.3	2.8
Total Del/Veh (s)	9.5	2.4	1.5	14.2	10.4	11.9	26.2	15.5	39.6	39.9	7.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	1.0	0.0	0.1	0.2	0.1	0.3	1.7
Stop Del/Veh (s)	5.4	0.2	0.1	10.2	6.8	8.5	24.2	14.8	37.5	39.5	4.5
Travel Dist (mi)	0.1	42.9	0.5	0.7	55.7	0.1	3.2	9.9	1.4	5.3	119.7
Travel Time (hr)	0.0	2.1	0.0	0.0	3.4	0.0	0.2	0.6	0.1	0.5	7.0
Vehicles Entered	2	760	8	6	518	1	14	44	8	29	1390
Vehicles Exited	2	760	8	6	519	1	14	44	8	29	1391
Hourly Exit Rate	2	760	8	6	519	1	14	44	8	29	1391
Input Volume	3	950	11	6	527	1	15	40	10	27	1590
% of Volume	62	80	74	96	99	100	93	111	78	108	87
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	1.6	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	5.1	9.4	8.3	0.7	0.5	1.1	0.7	0.3	0.3	2.7	0.5	0.5
Total Delay (hr)	0.2	7.3	0.6	0.2	3.9	0.1	2.6	1.7	0.3	1.8	1.7	0.7
Total Del/Veh (s)	55.5	42.2	37.8	42.9	26.5	23.7	53.4	39.5	50.1	40.7	43.7	43.5
Stop Delay (hr)	0.2	5.7	0.5	0.2	3.1	0.1	2.4	1.5	0.3	1.6	1.4	0.6
Stop Del/Veh (s)	47.2	33.3	31.4	38.3	21.2	20.5	49.3	34.7	46.4	36.1	37.8	39.9
Travel Dist (mi)	1.2	47.4	4.3	0.8	27.9	1.2	24.6	20.0	3.0	42.5	37.8	15.2
Travel Time (hr)	0.3	10.4	0.9	0.2	4.9	0.2	3.6	2.4	0.4	3.4	3.0	1.2
Vehicles Entered	16	605	54	16	521	22	175	152	22	151	134	54
Vehicles Exited	16	612	54	16	522	22	173	152	22	150	135	54
Hourly Exit Rate	16	612	54	16	522	22	173	152	22	150	135	54
Input Volume	21	820	71	17	524	21	182	152	22	150	142	55
% of Volume	77	75	76	94	100	104	95	100	101	100	95	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	2.0
Denied Del/Veh (s)	3.7
Total Delay (hr)	21.0
Total Del/Veh (s)	38.7
Stop Delay (hr)	17.6
Stop Del/Veh (s)	32.4
Travel Dist (mi)	225.9
Travel Time (hr)	31.0
Vehicles Entered	1922
Vehicles Exited	1928
Hourly Exit Rate	1928
Input Volume	2177
% of Volume	89
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.3	0.2	0.2	0.4	0.5	0.0	1.5	3.1
Denied Del/Veh (s)	6.3	5.6	1.4	3.3	30.4	0.0	35.5	8.1
Total Delay (hr)	2.3	1.4	0.4	0.4	0.6	0.0	0.7	5.8
Total Del/Veh (s)	43.8	34.2	4.0	3.3	31.6	3.6	15.6	15.1
Stop Delay (hr)	2.2	1.3	0.1	0.1	0.6	0.0	0.7	5.1
Stop Del/Veh (s)	42.0	31.4	1.3	1.2	31.3	2.5	16.5	13.2
Travel Dist (mi)	11.0	8.8	45.2	44.6	1.2	0.4	2.7	113.9
Travel Time (hr)	3.2	2.1	2.1	2.5	1.2	0.0	2.3	13.4
Vehicles Entered	185	150	399	393	64	31	150	1372
Vehicles Exited	185	150	399	394	64	30	151	1373
Hourly Exit Rate	185	150	399	394	64	30	151	1373
Input Volume	192	160	398	400	63	26	148	1387
% of Volume	96	93	100	99	102	118	102	99
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	17.1	1.0	18.1
Total Del/Veh (s)	70.7	4.7	39.9
Stop Delay (hr)	16.9	0.9	17.8
Stop Del/Veh (s)	70.0	4.1	39.2
Travel Dist (mi)	64.7	14.6	79.3
Travel Time (hr)	20.1	1.6	21.7
Vehicles Entered	850	760	1610
Vehicles Exited	850	759	1609
Hourly Exit Rate	850	759	1609
Input Volume	1171	772	1943
% of Volume	73	98	83
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	12.1	66.0	14.0	0.0	0.0	0.0	9.1	72.6	50.0	92.1	370.6	6.2
Denied Del/Veh (s)	671.9	685.1	691.4	0.0	0.0	0.0	300.0	301.7	305.6	1228.1	1236.3	1246.3
Total Delay (hr)	3.7	21.2	3.9	9.2	4.0	0.3	2.2	16.2	33.0	26.8	4.0	0.0
Total Del/Veh (s)	284.8	294.4	267.9	67.3	65.4	18.6	86.8	77.0	224.7	688.2	30.2	18.0
Stop Delay (hr)	3.6	20.4	3.7	8.6	3.7	0.3	2.0	14.0	33.5	26.8	3.2	0.0
Stop Del/Veh (s)	276.2	284.0	259.2	62.4	60.1	16.3	76.9	66.3	227.8	690.4	24.3	13.8
Travel Dist (mi)	4.3	24.2	4.9	35.7	16.0	4.6	13.7	109.2	74.0	13.9	55.0	1.0
Travel Time (hr)	16.0	88.0	18.1	10.7	4.6	0.5	11.8	92.5	85.9	119.4	376.4	6.3
Vehicles Entered	43	243	48	481	215	62	91	730	499	117	460	8
Vehicles Exited	43	242	49	482	216	62	90	724	490	118	460	8
Hourly Exit Rate	43	242	49	482	216	62	90	724	490	118	460	8
Input Volume	64	326	70	489	221	62	108	877	594	250	953	18
% of Volume	67	74	70	99	98	100	83	83	82	47	48	45
Denied Entry Before	2	14	3	0	0	0	0	9	4	31	116	1
Denied Entry After	22	104	25	0	0	0	18	136	90	153	619	10

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	692.7
Denied Del/Veh (s)	597.5
Total Delay (hr)	124.6
Total Del/Veh (s)	143.0
Stop Delay (hr)	119.8
Stop Del/Veh (s)	137.5
Travel Dist (mi)	356.4
Travel Time (hr)	830.2
Vehicles Entered	2997
Vehicles Exited	2984
Hourly Exit Rate	2984
Input Volume	4033
% of Volume	74
Denied Entry Before	180
Denied Entry After	1177

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.2
Total Delay (hr)	0.7	2.7	3.4
Total Del/Veh (s)	4.1	45.1	14.9
Stop Delay (hr)	0.5	2.6	3.2
Stop Del/Veh (s)	3.2	43.2	13.7
Travel Dist (mi)	11.9	36.5	48.5
Travel Time (hr)	1.6	4.0	5.5
Vehicles Entered	612	217	829
Vehicles Exited	611	218	829
Hourly Exit Rate	611	218	829
Input Volume	624	211	834
% of Volume	98	103	99
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.7	0.1	0.1	0.1	0.1	0.0	1.0
Total Del/Veh (s)	3.6	2.6	11.1	0.4	19.2	9.1	2.6
Stop Delay (hr)	0.1	0.0	0.1	0.0	0.0	0.0	0.3
Stop Del/Veh (s)	0.6	0.6	9.7	0.0	17.5	9.0	0.7
Travel Dist (mi)	74.6	13.1	0.7	12.7	0.8	0.3	102.1
Travel Time (hr)	3.3	0.6	0.1	0.5	0.1	0.0	4.6
Vehicles Entered	718	124	27	500	10	3	1382
Vehicles Exited	713	123	26	500	10	3	1375
Hourly Exit Rate	713	123	26	500	10	3	1375
Input Volume	874	153	26	508	10	3	1574
% of Volume	82	80	101	98	98	100	87
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.1	0.1
Total Delay (hr)	0.7	0.3	0.2	0.0	1.2
Total Del/Veh (s)	5.3	3.8	1.3	8.1	3.3
Stop Delay (hr)	0.2	0.1	0.0	0.0	0.3
Stop Del/Veh (s)	1.5	1.4	0.0	8.0	0.9
Travel Dist (mi)	30.5	21.3	43.2	0.3	95.3
Travel Time (hr)	1.7	1.3	2.0	0.0	5.0
Vehicles Entered	450	307	512	3	1272
Vehicles Exited	451	307	514	3	1275
Hourly Exit Rate	451	307	514	3	1275
Input Volume	544	357	520	3	1424
% of Volume	83	86	99	100	90
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.0	0.0	1.0	1.7	0.1	0.1	0.5
Total Delay (hr)	0.3	0.0	4.1	0.1	0.0	0.6	5.2
Total Del/Veh (s)	2.0	0.7	19.7	17.0	3.0	45.2	11.1
Stop Delay (hr)	0.1	0.0	3.3	0.1	0.0	0.6	4.0
Stop Del/Veh (s)	0.5	0.1	15.7	14.1	2.7	44.7	8.6
Travel Dist (mi)	12.1	4.3	44.5	1.3	0.6	1.9	64.7
Travel Time (hr)	0.8	0.3	6.1	0.2	0.0	0.7	8.1
Vehicles Entered	623	226	744	22	13	46	1674
Vehicles Exited	624	226	742	22	13	46	1673
Hourly Exit Rate	624	226	742	22	13	46	1673
Input Volume	861	309	754	23	14	45	2006
% of Volume	72	73	98	97	91	102	83
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Total Del/Veh (s)	6.4	3.5	0.3	0.1	4.7	1.9	1.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	5.7	3.7	0.0	0.0	1.3	0.2	0.5
Travel Dist (mi)	0.3	0.4	19.7	0.8	0.9	29.6	51.7
Travel Time (hr)	0.1	0.1	0.7	0.0	0.0	1.2	2.1
Vehicles Entered	23	33	294	12	6	204	572
Vehicles Exited	23	33	294	12	6	205	573
Hourly Exit Rate	23	33	294	12	6	205	573
Input Volume	24	35	298	14	7	228	606
% of Volume	97	94	99	84	83	90	94
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.3	0.2		0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.5	2.6	0.3	0.0		0.4	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.6	2.7	0.0	0.0		0.1	0.1
Travel Dist (mi)	0.0	0.1	8.9	0.0	0.0	14.9	23.9
Travel Time (hr)	0.0	0.0	0.3	0.0	0.0	0.5	0.9
Vehicles Entered	2	3	302	1	0	225	533
Vehicles Exited	2	3	302	1	0	224	532
Hourly Exit Rate	2	3	302	1	0	224	532
Input Volume	2	3	309	1	1	247	563
% of Volume	100	100	98	100	0	91	94
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	712.8
Denied Del/Veh (s)	296.3
Total Delay (hr)	386.2
Total Del/Veh (s)	175.6
Stop Delay (hr)	338.3
Stop Del/Veh (s)	153.8
Travel Dist (mi)	4776.7
Travel Time (hr)	1270.9
Vehicles Entered	7463
Vehicles Exited	7378
Hourly Exit Rate	7378
Input Volume	42334
% of Volume	17
Denied Entry Before	180
Denied Entry After	1198

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	242	796	74	814	150	508	160	1818
Average Queue (ft)	96	252	35	341	97	259	113	1128
95th Queue (ft)	223	666	77	836	176	462	201	2304
Link Distance (ft)		1416		1216		1022		1984
Upstream Blk Time (%)		0		4				27
Queuing Penalty (veh)		0		0				0
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	2	14	18	46	2	25	2	53
Queuing Penalty (veh)	6	11	61	18	10	29	12	83

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	382	170	440	188	1031
Average Queue (ft)	160	97	297	22	670
95th Queue (ft)	345	223	434	111	1194
Link Distance (ft)	383		425	425	1022
Upstream Blk Time (%)	3		2	0	10
Queuing Penalty (veh)	16		10	1	60
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	34	6			
Queuing Penalty (veh)	134	8			

Queuing and Blocking Report
 Background + Project (With Improvements) AM

05/08/2024

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	B46	SB
Directions Served	LT	R	LT	R	L	T	T	R	T	T	T	L
Maximum Queue (ft)	295	38	269	230	200	341	354	150	462	461	203	175
Average Queue (ft)	77	9	197	102	185	288	323	91	331	355	97	157
95th Queue (ft)	203	33	284	186	239	408	365	198	557	565	229	222
Link Distance (ft)	1572	1572	256	256		253	253		383	383	130	
Upstream Blk Time (%)			5	0		44	72		17	25	17	
Queuing Penalty (veh)			13	1		204	328		76	111	156	
Storage Bay Dist (ft)					175			100				125
Storage Blk Time (%)					39	30	74	3				24
Queuing Penalty (veh)					102	85	77	8				66

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	450	516
Average Queue (ft)	386	394
95th Queue (ft)	507	621
Link Distance (ft)	425	425
Upstream Blk Time (%)	17	18
Queuing Penalty (veh)	77	83
Storage Bay Dist (ft)		
Storage Blk Time (%)	50	
Queuing Penalty (veh)	113	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	B46	B20
Directions Served	LT	R	LTR	L	T	R	L	TR	T	T
Maximum Queue (ft)	317	110	107	350	1849	69	91	213	443	74
Average Queue (ft)	69	36	33	271	900	3	24	163	160	4
95th Queue (ft)	285	89	83	413	2274	32	68	264	421	42
Link Distance (ft)	1538		998		2363			130	383	253
Upstream Blk Time (%)					7			26	3	0
Queuing Penalty (veh)					0			182	22	0
Storage Bay Dist (ft)		90		325		85	80			
Storage Blk Time (%)	13	2		4	31		0	29		
Queuing Penalty (veh)	10	0		33	88		1	6		

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	EB	B48	WB	SB
Directions Served	L	T	T	TR	LR
Maximum Queue (ft)	21	94	18	35	83
Average Queue (ft)	1	9	2	1	29
95th Queue (ft)	12	56	25	18	62
Link Distance (ft)		80	78	324	828
Upstream Blk Time (%)		1	1		
Queuing Penalty (veh)		11	5		
Storage Bay Dist (ft)	50				
Storage Blk Time (%)	0	1			
Queuing Penalty (veh)	0	0			

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	27	23	48	374	94	112
Average Queue (ft)	2	2	5	109	36	30
95th Queue (ft)	12	40	27	297	72	82
Link Distance (ft)		233		519	1169	947
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		1				
Storage Bay Dist (ft)	50		50			
Storage Blk Time (%)		0	0	15		
Queuing Penalty (veh)		0	0	1		

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	107	462	255	6	94	267	120	445	134	323
Average Queue (ft)	18	373	72	0	20	213	96	168	100	149
95th Queue (ft)	66	550	221	6	65	312	142	365	159	278
Link Distance (ft)		344	239	239		233		719		1488
Upstream Blk Time (%)		23	1			16				
Queuing Penalty (veh)		208	6			92				
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	0	46			0	40	25	14	8	17
Queuing Penalty (veh)	0	10			2	7	41	28	16	26

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	273	300	150	105
Average Queue (ft)	174	30	37	66
95th Queue (ft)	316	158	106	105
Link Distance (ft)	256	597		64
Upstream Blk Time (%)	10			33
Queuing Penalty (veh)	37			72
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		1	1	
Queuing Penalty (veh)		4	3	

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	352	366	58	58
Average Queue (ft)	319	325	31	21
95th Queue (ft)	380	402	70	58
Link Distance (ft)	318	318	41	41
Upstream Blk Time (%)	25	33	24	14
Queuing Penalty (veh)	145	190	94	55
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	571	250	300	340	330	160	344	811	832	839	265	665
Average Queue (ft)	543	242	198	220	181	48	141	714	764	792	261	637
95th Queue (ft)	556	278	336	369	329	153	339	990	999	912	272	652
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	88		0	4	3			14	59	75		99
Queuing Penalty (veh)	0		0	17	13			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	83	37	1	9	28	0	0	17			97	3
Queuing Penalty (veh)	194	84	3	21	17	0	0	18			461	8

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	652
Average Queue (ft)	415
95th Queue (ft)	850
Link Distance (ft)	621
Upstream Blk Time (%)	1
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	100	398
Average Queue (ft)	70	96
95th Queue (ft)	93	323
Link Distance (ft)	64	887
Upstream Blk Time (%)	8	
Queuing Penalty (veh)	47	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB	WB	B48	NB	NB
Directions Served	TR	L	T	T	L	R
Maximum Queue (ft)	100	57	54	13	38	29
Average Queue (ft)	9	16	2	0	9	2
95th Queue (ft)	100	45	27	11	33	15
Link Distance (ft)	519		78	80	440	440
Upstream Blk Time (%)	0	0	0	0		
Queuing Penalty (veh)	3	0	1	0		
Storage Bay Dist (ft)		50				
Storage Blk Time (%)		1	0			
Queuing Penalty (veh)		6	0			

Intersection: 36: Ravenswood Ave

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	231	31
Average Queue (ft)	21	2
95th Queue (ft)	138	16
Link Distance (ft)	324	422
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	10	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 38: Ravenswood Ave

Movement	EB	WB	B27	NB	SB
Directions Served	T	TR	T	R	R
Maximum Queue (ft)	46	363	355	34	102
Average Queue (ft)	4	232	125	11	39
95th Queue (ft)	26	472	360	35	83
Link Distance (ft)	41	239	344	223	220
Upstream Blk Time (%)	1	20	2		
Queuing Penalty (veh)	5	150	13		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 42: Laurel St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	70	46
Average Queue (ft)	30	2
95th Queue (ft)	56	20
Link Distance (ft)	69	719
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 44: Laurel St

Movement	WB
Directions Served	LR
Maximum Queue (ft)	32
Average Queue (ft)	4
95th Queue (ft)	21
Link Distance (ft)	90
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 4426

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	12.1	52.7	48.4	7.2	57.6	48.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	C-Max	Max	None
Avg. Green (s)	8.9	-11.6	-3.2	7.0	-11.2	-3.2	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	29	0	0	16	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	18	100	100	64	100	100	0
Cycles with Peds (%)	0	30	96	0	15	13	0

Controller Summary

Average Cycle Length (s): -6.5

Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	1	2	3	6
Movement(s) Served	NBL	SBT	EBL	NBT
Maximum Green (s)	44.5	63.5	28.5	112.5
Minimum Green (s)	7.0	7.0	8.0	7.0
Recall	None	C-Max	Min	C-Max
Avg. Green (s)	8.8	-1.2	12.9	-2.9
g/C Ratio	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	25	0
Cycles Maxed Out (%)	15	100	0	100
Cycles with Peds (%)	0	30	0	0

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20

Intersection: 3: Middlefield Road & Ringwood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBT	EBTL	SBL	NBT	WBTL
Maximum Green (s)	31.5	34.5	33.0	33.0	33.0	33.0
Minimum Green (s)	5.0	10.0	7.0	7.0	7.0	7.0
Recall	None	C-Max	None	Max	C-Max	None
Avg. Green (s)	-1.7	-4.1	-8.5	-5.9	0.2	3.4
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	9	0	0	0
Cycles @ Minimum (%)	0	0	9	0	0	0
Cycles Maxed Out (%)	100	100	30	100	100	67
Cycles with Peds (%)	0	96	35	0	100	29

Controller Summary

Average Cycle Length (s): -13.8
Number of Complete Cycles : 20

Intersection: 4: Middlefield Road & Seminary Dr

Phase	2	3	4	6	7	8
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT
Maximum Green (s)	22.0	26.9	56.1	22.0	5.0	78.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	Min	None	C-Max	Min	None	C-Max
Avg. Green (s)	10.6	0.5	-4.9	9.1	7.1	-8.4
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	11	0	0	45	0
Cycles @ Minimum (%)	32	0	0	58	5	0
Cycles Maxed Out (%)	24	7	100	13	5	100
Cycles with Peds (%)	0	0	9	0	0	52

Controller Summary

Average Cycle Length (s): -11.0
Number of Complete Cycles : 21

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	4.9	39.5	23.8	4.9	39.5	23.2
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Max	C-Max	None	Max	Max
Avg. Green (s)	5.0	5.6	3.3	5.1	5.5	2.7
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	86	0	0	86	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	14	100	100	14	100	100
Cycles with Peds (%)	0	48	13	0	19	19

Controller Summary

Average Cycle Length (s): -3.0
Number of Complete Cycles : 29

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	Max	Max	None	C-Max
Avg. Green (s)	-12.4	0.4	-4.3	0.7	-10.9	4.3
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	100	100	100	100
Cycles with Peds (%)	0	45	0	67	0	29

Controller Summary

Average Cycle Length (s): -13.8
Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:30	4:30	4:30	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	8133	8176	8089	8096	8077	8198	8182
Vehs Exited	8112	8165	8152	8182	8062	8263	8218
Starting Vehs	514	466	530	542	486	501	508
Ending Vehs	535	477	467	456	501	436	472
Denied Entry Before	31	24	81	98	15	31	62
Denied Entry After	308	303	411	302	243	313	291
Travel Distance (mi)	5217	5190	5171	5360	5114	5284	5325
Travel Time (hr)	701.6	668.8	787.4	738.1	670.3	729.6	721.5
Total Delay (hr)	515.2	483.2	602.1	546.4	487.6	540.4	531.1
Total Stops	15012	14135	14604	15130	14867	15710	15310
Fuel Used (gal)	294.6	287.1	313.1	306.0	286.3	302.7	302.0

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	8118	8097	8092	8123
Vehs Exited	8064	8091	8039	8134
Starting Vehs	447	473	507	492
Ending Vehs	501	479	560	480
Denied Entry Before	53	1	23	40
Denied Entry After	256	268	329	301
Travel Distance (mi)	5187	5223	5141	5221
Travel Time (hr)	649.2	648.1	682.2	699.7
Total Delay (hr)	463.7	461.0	497.7	512.8
Total Stops	13332	14060	14542	14675
Fuel Used (gal)	281.2	282.3	288.6	294.4

Interval #0 Information Seeding

Start Time	4:30
End Time	5:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1986	1975	1901	1992	1940	2002	2019
Vehs Exited	2015	1995	1929	2032	1935	1924	1976
Starting Vehs	514	466	530	542	486	501	508
Ending Vehs	485	446	502	502	491	579	551
Denied Entry Before	31	24	81	98	15	31	62
Denied Entry After	78	64	189	122	61	100	93
Travel Distance (mi)	1287	1263	1199	1338	1247	1267	1312
Travel Time (hr)	142.9	125.7	159.6	160.7	121.7	149.2	150.2
Total Delay (hr)	96.9	80.7	116.6	112.8	77.1	103.9	103.2
Total Stops	3660	3310	3413	3959	3227	3870	3801
Fuel Used (gal)	65.8	61.5	67.1	71.1	60.1	66.0	67.8

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1942	1963	1927	1961
Vehs Exited	1914	1967	1950	1964
Starting Vehs	447	473	507	492
Ending Vehs	475	469	484	493
Denied Entry Before	53	1	23	40
Denied Entry After	113	59	80	93
Travel Distance (mi)	1258	1276	1252	1270
Travel Time (hr)	134.2	124.7	128.4	139.7
Total Delay (hr)	89.3	79.1	83.6	94.3
Total Stops	3169	3322	3235	3497
Fuel Used (gal)	62.8	61.4	61.7	64.5

Interval #2 Information Recording

Start Time	5:15
End Time	5:30
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	2262	2273	2252	2209	2276	2334	2217
Vehs Exited	2146	2138	2147	2112	2152	2218	2089
Starting Vehs	485	446	502	502	491	579	551
Ending Vehs	601	581	607	599	615	695	679
Denied Entry Before	78	64	189	122	61	100	93
Denied Entry After	181	197	282	232	192	193	195
Travel Distance (mi)	1381	1365	1383	1379	1349	1429	1374
Travel Time (hr)	171.9	166.0	203.8	186.7	175.8	195.0	183.3
Total Delay (hr)	122.7	116.9	154.0	137.5	127.6	143.9	134.3
Total Stops	4092	3808	4153	4010	4274	4721	4120
Fuel Used (gal)	74.2	73.1	82.0	77.6	75.1	81.3	77.3

Interval #2 Information Recording

Start Time	5:15
End Time	5:30
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	8	9	10	Avg
Vehs Entered	2233	2212	2179	2240
Vehs Exited	2150	2092	2105	2134
Starting Vehs	475	469	484	493
Ending Vehs	558	589	558	598
Denied Entry Before	113	59	80	93
Denied Entry After	165	153	203	198
Travel Distance (mi)	1367	1356	1336	1372
Travel Time (hr)	164.1	160.8	164.2	177.2
Total Delay (hr)	115.3	112.3	116.4	128.1
Total Stops	3506	3710	3765	4015
Fuel Used (gal)	72.5	71.2	71.9	75.6

Interval #3 Information Recording

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1960	1974	2017	1955	1925	1889	2008
Vehs Exited	2038	2035	2103	2019	2010	2091	2167
Starting Vehs	601	581	607	599	615	695	679
Ending Vehs	523	520	521	535	530	493	520
Denied Entry Before	181	197	282	232	192	193	195
Denied Entry After	263	251	344	276	212	264	250
Travel Distance (mi)	1295	1276	1322	1325	1256	1321	1377
Travel Time (hr)	186.9	186.4	210.3	197.2	188.7	197.8	199.7
Total Delay (hr)	140.4	140.7	163.1	149.8	143.9	150.4	150.5
Total Stops	3722	3658	3825	3637	3740	4019	4155
Fuel Used (gal)	76.3	75.9	82.2	79.4	76.1	79.9	81.6

Interval #3 Information Recording

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1897	1913	2032	1954
Vehs Exited	1969	2011	2030	2049
Starting Vehs	558	589	558	598
Ending Vehs	486	491	560	506
Denied Entry Before	165	153	203	198
Denied Entry After	228	227	228	252
Travel Distance (mi)	1279	1292	1318	1306
Travel Time (hr)	168.8	176.9	190.7	190.3
Total Delay (hr)	123.0	130.4	143.4	143.5
Total Stops	3337	3543	3791	3741
Fuel Used (gal)	71.4	73.8	77.7	77.4

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1925	1954	1919	1940	1936	1973	1938
Vehs Exited	1913	1997	1973	2019	1965	2030	1986
Starting Vehs	523	520	521	535	530	493	520
Ending Vehs	535	477	467	456	501	436	472
Denied Entry Before	263	251	344	276	212	264	250
Denied Entry After	308	303	411	302	243	313	291
Travel Distance (mi)	1254	1285	1268	1319	1262	1268	1261
Travel Time (hr)	199.8	190.8	213.8	193.5	184.0	187.6	188.4
Total Delay (hr)	155.2	144.9	168.4	146.3	139.1	142.2	143.0
Total Stops	3538	3359	3213	3524	3626	3100	3234
Fuel Used (gal)	78.3	76.6	81.7	77.9	75.0	75.6	75.3

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	2046	2009	1954	1953
Vehs Exited	2031	2021	1954	1988
Starting Vehs	486	491	560	506
Ending Vehs	501	479	560	480
Denied Entry Before	228	227	228	252
Denied Entry After	256	268	329	301
Travel Distance (mi)	1284	1299	1235	1273
Travel Time (hr)	182.0	185.7	198.8	192.5
Total Delay (hr)	136.1	139.3	154.4	146.9
Total Stops	3320	3485	3751	3412
Fuel Used (gal)	74.5	76.0	77.4	76.8

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Denied Del/Veh (s)	3.0	0.4	0.5	3.6	0.2	0.2	0.1	0.0	0.0	1.9	0.6	0.6
Total Delay (hr)	1.9	2.1	0.7	0.2	1.0	0.5	1.3	5.0	0.1	0.5	2.4	0.7
Total Del/Veh (s)	57.9	48.9	49.9	66.8	42.0	40.0	33.6	23.8	23.4	28.3	19.8	18.1
Stop Delay (hr)	1.7	1.9	0.7	0.2	0.9	0.5	0.9	2.8	0.1	0.4	1.5	0.5
Stop Del/Veh (s)	53.9	43.3	46.7	63.2	37.4	37.6	23.1	13.4	13.9	21.8	12.0	12.3
Travel Dist (mi)	30.5	40.9	13.6	3.0	18.7	10.4	27.5	151.6	3.3	23.1	161.5	53.9
Travel Time (hr)	3.0	3.5	1.2	0.4	1.6	0.9	2.3	10.2	0.2	1.3	7.9	2.7
Vehicles Entered	114	153	51	13	82	46	134	741	16	61	428	143
Vehicles Exited	112	150	50	13	84	46	134	746	16	62	433	144
Hourly Exit Rate	112	150	50	13	84	46	134	746	16	62	433	144
Input Volume	117	145	49	12	91	44	150	830	18	65	432	143
% of Volume	96	103	103	106	93	105	89	90	88	95	100	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.5
Total Delay (hr)	16.4
Total Del/Veh (s)	29.2
Stop Delay (hr)	11.9
Stop Del/Veh (s)	21.2
Travel Dist (mi)	537.9
Travel Time (hr)	35.3
Vehicles Entered	1982
Vehicles Exited	1990
Hourly Exit Rate	1990
Input Volume	2097
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0		0.0	0.1	0.1	0.2	0.7	0.1
Total Delay (hr)	2.7	0.0	2.6	5.2	2.1	7.3	1.5	21.5
Total Del/Veh (s)	51.8		20.2	35.3	10.3	62.2	56.8	31.8
Stop Delay (hr)	2.4	0.0	1.8	4.3	0.8	5.9	1.2	16.5
Stop Del/Veh (s)	45.7		14.0	28.9	4.1	50.5	47.5	24.5
Travel Dist (mi)	15.5	0.0	33.7	48.8	66.9	83.3	18.7	266.9
Travel Time (hr)	3.3	0.0	3.9	7.4	4.5	10.2	2.2	31.5
Vehicles Entered	185	0	462	531	719	414	93	2404
Vehicles Exited	186	0	464	530	717	411	92	2400
Hourly Exit Rate	186	0	464	530	717	411	92	2400
Input Volume	188	0	473	582	823	413	93	2572
% of Volume	99	0	98	91	87	100	99	93
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	116.5	30.3	26.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	953.3	949.8	955.1	0.2	0.4	0.1	0.2	0.5	0.9	0.0	0.0	0.0
Total Delay (hr)	64.5	17.5	12.9	1.4	0.5	2.3	1.3	12.9	0.8	8.6	5.5	0.2
Total Del/Veh (s)	751.7	761.2	746.9	71.5	57.2	32.5	91.6	60.7	36.1	89.3	38.2	31.9
Stop Delay (hr)	64.2	17.4	12.8	1.3	0.4	2.2	1.3	11.6	0.7	7.8	4.6	0.1
Stop Del/Veh (s)	747.8	756.1	742.9	68.9	54.0	31.0	87.4	54.6	32.4	81.0	31.8	27.7
Travel Dist (mi)	72.2	19.6	15.4	4.0	1.6	15.0	3.1	45.8	4.6	31.0	47.6	1.7
Travel Time (hr)	183.6	48.6	39.4	1.5	0.5	3.1	1.5	14.5	1.0	9.9	7.4	0.2
Vehicles Entered	241	64	52	68	28	255	52	760	75	334	512	18
Vehicles Exited	234	64	48	67	29	254	51	758	74	339	516	18
Hourly Exit Rate	234	64	48	67	29	254	51	758	74	339	516	18
Input Volume	405	108	90	65	26	255	52	741	74	334	523	17
% of Volume	58	59	53	103	109	100	98	102	100	101	99	104
Denied Entry Before	26	6	7	0	0	0	0	0	0	0	0	0
Denied Entry After	199	51	46	0	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	173.0
Denied Del/Veh (s)	226.1
Total Delay (hr)	128.3
Total Del/Veh (s)	178.8
Stop Delay (hr)	124.4
Stop Del/Veh (s)	173.4
Travel Dist (mi)	261.5
Travel Time (hr)	311.2
Vehicles Entered	2459
Vehicles Exited	2452
Hourly Exit Rate	2452
Input Volume	2692
% of Volume	91
Denied Entry Before	39
Denied Entry After	296

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.6
Denied Del/Veh (s)	0.9	2.6	0.1	0.1	1.3	0.7	1.3	0.2	0.8	1.3	1.1
Total Delay (hr)	3.0	5.9	0.1	0.1	1.2	12.1	0.1	0.8	4.0	0.1	27.4
Total Del/Veh (s)	80.4	53.9	33.7	19.2	86.2	59.7	52.0	81.0	23.6	19.9	49.2
Stop Delay (hr)	2.7	5.2	0.1	0.1	1.0	8.9	0.1	0.8	3.3	0.0	22.3
Stop Del/Veh (s)	72.5	47.6	32.1	18.8	75.0	44.0	38.6	77.8	19.5	17.7	40.1
Travel Dist (mi)	38.3	112.8	2.0	5.0	21.6	316.9	4.1	1.3	21.3	0.4	523.6
Travel Time (hr)	4.4	10.2	0.2	0.3	2.0	22.9	0.3	0.9	4.8	0.1	46.1
Vehicles Entered	131	384	10	26	48	706	9	36	602	10	1962
Vehicles Exited	132	385	10	26	49	714	9	35	603	10	1973
Hourly Exit Rate	132	385	10	26	49	714	9	35	603	10	1973
Input Volume	135	378	10	23	52	695	8	37	642	11	1991
% of Volume	98	102	100	114	95	103	109	94	94	93	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.3	0.2	0.0	0.1	0.0	0.6
Total Del/Veh (s)	5.9	1.5	1.1	0.8	29.4	10.6	1.7
Stop Delay (hr)	0.0	0.2	0.0	0.0	0.1	0.0	0.3
Stop Del/Veh (s)	4.5	0.9	0.1	0.2	27.6	10.3	0.9
Travel Dist (mi)	0.2	17.3	44.1	0.5	2.3	0.9	65.2
Travel Time (hr)	0.0	0.9	1.7	0.0	0.2	0.1	2.9
Vehicles Entered	6	691	617	6	15	6	1341
Vehicles Exited	6	691	617	6	14	6	1340
Hourly Exit Rate	6	691	617	6	14	6	1340
Input Volume	7	702	672	7	16	5	1409
% of Volume	86	98	92	83	89	114	95
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: 4th St/Pine St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.5	0.0	0.1	4.0	0.0	0.1	0.1	0.0	0.3	5.1
Total Del/Veh (s)	13.7	2.4	1.6	26.8	21.4	20.3	33.1	12.9	47.3	59.8	12.6
Stop Delay (hr)	0.0	0.0	0.0	0.1	2.8	0.0	0.1	0.1	0.0	0.3	3.4
Stop Del/Veh (s)	10.7	0.0	0.1	21.0	14.9	15.3	31.3	12.4	45.3	59.5	8.4
Travel Dist (mi)	0.2	38.5	1.5	1.5	73.7	0.6	1.4	5.1	0.5	3.6	126.6
Travel Time (hr)	0.0	1.8	0.1	0.2	6.5	0.1	0.1	0.3	0.1	0.5	9.6
Vehicles Entered	4	687	26	14	664	6	7	24	3	19	1454
Vehicles Exited	4	686	26	14	665	6	6	24	3	19	1453
Hourly Exit Rate	4	686	26	14	665	6	6	24	3	19	1453
Input Volume	4	693	26	14	717	5	8	21	5	18	1511
% of Volume	100	99	99	98	93	120	75	116	63	104	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.3	2.9	0.3	0.3
Total Delay (hr)	1.6	5.6	0.5	0.3	4.7	0.3	4.8	3.5	0.9	1.2	3.2	0.5
Total Del/Veh (s)	71.8	32.2	28.4	51.9	27.2	23.3	83.1	76.6	77.2	75.2	80.5	76.3
Stop Delay (hr)	1.5	4.0	0.4	0.3	3.7	0.3	4.4	3.2	0.8	1.1	3.0	0.5
Stop Del/Veh (s)	64.4	23.4	21.5	47.2	21.2	19.6	76.2	69.1	72.1	70.5	74.1	72.5
Travel Dist (mi)	6.5	50.2	5.6	1.2	34.1	2.7	29.6	23.1	5.5	15.9	41.1	6.6
Travel Time (hr)	1.9	7.3	0.8	0.4	5.9	0.5	5.9	4.3	1.1	1.8	4.6	0.7
Vehicles Entered	80	616	68	21	620	50	202	160	38	55	140	23
Vehicles Exited	80	616	68	21	621	50	203	161	38	54	140	22
Hourly Exit Rate	80	616	68	21	621	50	203	161	38	54	140	22
Input Volume	80	622	68	24	670	50	203	157	39	54	139	24
% of Volume	100	99	100	88	93	101	100	103	97	100	101	91
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.2
Total Delay (hr)	27.2
Total Del/Veh (s)	46.6
Stop Delay (hr)	23.1
Stop Del/Veh (s)	39.6
Travel Dist (mi)	222.0
Travel Time (hr)	35.1
Vehicles Entered	2073
Vehicles Exited	2074
Hourly Exit Rate	2074
Input Volume	2128
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.4	3.5	0.0	0.0	0.1	0.4
Total Delay (hr)	0.1	0.4	0.1	0.0	0.2	0.0	0.1	0.8
Total Del/Veh (s)	4.9	3.0	1.1	0.3	14.6	1.1	5.8	3.0
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.3
Stop Del/Veh (s)	1.9	0.5	0.4	0.0	13.6	0.3	6.0	1.3
Travel Dist (mi)	3.4	26.4	34.9	6.3	0.8	0.0	0.8	72.6
Travel Time (hr)	0.2	1.5	1.3	0.3	0.2	0.0	0.1	3.7
Vehicles Entered	56	438	304	55	41	2	43	939
Vehicles Exited	56	438	304	55	41	2	43	939
Hourly Exit Rate	56	438	304	55	41	2	43	939
Input Volume	62	472	304	54	43	2	39	976
% of Volume	91	93	100	102	95	133	111	96
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	3.7	0.7	4.4
Total Del/Veh (s)	12.7	2.9	8.4
Stop Delay (hr)	3.2	0.5	3.7
Stop Del/Veh (s)	10.9	2.3	7.1
Travel Dist (mi)	80.8	15.8	96.6
Travel Time (hr)	7.5	1.3	8.8
Vehicles Entered	1051	821	1872
Vehicles Exited	1052	821	1873
Hourly Exit Rate	1052	821	1873
Input Volume	1049	868	1917
% of Volume	100	95	98
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.5	0.2	0.0	0.0	0.0	0.3	2.1	0.9	0.1	0.1	0.0
Denied Del/Veh (s)	6.8	6.6	8.8	0.0	0.0	0.1	6.9	5.3	5.4	2.5	0.3	0.4
Total Delay (hr)	1.3	8.8	2.2	9.0	4.6	0.6	4.1	24.1	7.0	3.8	9.7	0.4
Total Del/Veh (s)	100.9	104.9	90.4	64.5	65.4	26.4	106.4	60.4	41.9	82.3	33.6	27.2
Stop Delay (hr)	1.2	8.0	2.1	8.4	4.2	0.6	3.6	18.9	5.8	3.5	7.6	0.3
Stop Del/Veh (s)	93.8	96.1	83.8	59.8	59.6	23.9	95.0	47.4	34.7	75.3	26.4	23.0
Travel Dist (mi)	4.5	29.6	8.7	36.6	18.3	6.1	20.5	210.1	88.7	19.8	120.9	5.7
Travel Time (hr)	1.5	10.3	2.8	10.5	5.2	0.9	5.1	33.2	11.3	4.7	13.9	0.6
Vehicles Entered	45	296	87	493	246	82	136	1398	592	166	1011	48
Vehicles Exited	46	296	88	494	247	82	137	1396	588	167	1014	48
Hourly Exit Rate	46	296	88	494	247	82	137	1396	588	167	1014	48
Input Volume	48	290	86	522	260	86	132	1394	590	169	1021	44
% of Volume	95	102	102	95	95	95	104	100	100	99	99	108
Denied Entry Before	0	1	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	4	1	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	4.3
Denied Del/Veh (s)	3.3
Total Delay (hr)	75.6
Total Del/Veh (s)	57.8
Stop Delay (hr)	64.2
Stop Del/Veh (s)	49.1
Travel Dist (mi)	569.5
Travel Time (hr)	100.1
Vehicles Entered	4600
Vehicles Exited	4603
Hourly Exit Rate	4603
Input Volume	4643
% of Volume	99
Denied Entry Before	1
Denied Entry After	5

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.2	0.1
Total Delay (hr)	0.1	0.0	0.2
Total Del/Veh (s)	3.5	1.8	2.8
Stop Delay (hr)	0.1	0.0	0.1
Stop Del/Veh (s)	2.5	0.6	1.7
Travel Dist (mi)	2.4	14.3	16.7
Travel Time (hr)	0.3	0.5	0.8
Vehicles Entered	115	85	200
Vehicles Exited	115	85	200
Hourly Exit Rate	115	85	200
Input Volume	120	82	202
% of Volume	96	103	99
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.6	0.0	0.0	0.2	0.7	0.0	1.5
Total Del/Veh (s)	3.1	2.4	8.6	1.0	34.8	10.8	3.8
Stop Delay (hr)	0.2	0.0	0.0	0.1	0.6	0.0	0.9
Stop Del/Veh (s)	1.0	1.2	7.1	0.4	32.6	10.6	2.4
Travel Dist (mi)	73.5	3.3	0.1	15.6	5.6	1.3	99.4
Travel Time (hr)	3.1	0.2	0.0	0.7	0.9	0.1	4.9
Vehicles Entered	680	31	4	619	68	15	1417
Vehicles Exited	679	31	4	619	68	15	1416
Hourly Exit Rate	679	31	4	619	68	15	1416
Input Volume	688	29	5	672	67	18	1479
% of Volume	99	107	80	92	101	85	96
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.7	1.4	0.0	0.1	0.4
Total Delay (hr)	1.3	0.1	0.2	0.1	1.8
Total Del/Veh (s)	7.3	5.4	1.3	21.5	4.6
Stop Delay (hr)	0.7	0.1	0.0	0.1	0.9
Stop Del/Veh (s)	4.1	3.6	0.1	21.2	2.4
Travel Dist (mi)	45.2	4.8	53.4	1.4	104.8
Travel Time (hr)	3.0	0.3	2.5	0.2	5.9
Vehicles Entered	639	67	627	18	1351
Vehicles Exited	640	67	624	18	1349
Hourly Exit Rate	640	67	624	18	1349
Input Volume	650	67	681	20	1418
% of Volume	98	100	92	91	95
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.1	0.1	0.0
Total Delay (hr)	0.3	0.1	2.7	0.1	0.2	0.2	3.5
Total Del/Veh (s)	1.4	0.9	11.9	10.2	5.5	24.7	6.2
Stop Delay (hr)	0.1	0.0	1.9	0.1	0.2	0.2	2.4
Stop Del/Veh (s)	0.4	0.1	8.4	7.6	5.0	24.4	4.2
Travel Dist (mi)	12.4	7.5	49.1	3.3	4.1	1.1	77.5
Travel Time (hr)	0.7	0.6	4.7	0.3	0.4	0.2	6.9
Vehicles Entered	654	399	800	53	109	25	2040
Vehicles Exited	654	399	798	53	109	26	2039
Hourly Exit Rate	654	399	798	53	109	26	2039
Input Volume	661	389	848	54	108	25	2084
% of Volume	99	103	94	99	101	105	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.2	0.5
Total Del/Veh (s)	7.2	4.6	2.1	2.6	6.7	2.6	2.5
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	6.2	4.6	1.3	2.3	2.9	0.3	1.3
Travel Dist (mi)	0.2	0.4	25.0	2.5	2.3	31.8	62.3
Travel Time (hr)	0.0	0.1	1.1	0.1	0.1	1.3	2.7
Vehicles Entered	12	20	373	38	16	218	677
Vehicles Exited	12	20	373	38	16	218	677
Hourly Exit Rate	12	20	373	38	16	218	677
Input Volume	13	19	373	36	16	217	674
% of Volume	91	107	100	106	98	100	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.4	0.3	0.0	0.0	0.3
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.6	4.3	0.8	0.1	2.1	0.5	0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.8	4.4	0.3	0.0	0.3	0.0	0.2
Travel Dist (mi)	0.0	0.0	11.1	0.1	0.1	15.1	26.5
Travel Time (hr)	0.0	0.0	0.5	0.0	0.0	0.6	1.1
Vehicles Entered	2	2	409	4	2	225	644
Vehicles Exited	2	2	409	4	2	225	644
Hourly Exit Rate	2	2	409	4	2	225	644
Input Volume	2	2	407	2	2	226	640
% of Volume	100	100	101	200	100	100	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	178.7
Denied Del/Veh (s)	76.4
Total Delay (hr)	334.2
Total Del/Veh (s)	139.7
Stop Delay (hr)	283.5
Stop Del/Veh (s)	118.5
Travel Dist (mi)	5221.3
Travel Time (hr)	699.7
Vehicles Entered	8123
Vehicles Exited	8134
Hourly Exit Rate	8134
Input Volume	42720
% of Volume	19
Denied Entry Before	40
Denied Entry After	301

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	216	304	65	207	149	791	159	430
Average Queue (ft)	99	148	17	94	83	334	53	214
95th Queue (ft)	182	255	52	171	163	674	135	371
Link Distance (ft)		1416		1195		1023		1984
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	0	2	2	36	1	20	0	17
Queuing Penalty (veh)	1	2	3	5	7	30	1	11

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	398	170	453	467	670
Average Queue (ft)	242	129	288	191	362
95th Queue (ft)	449	243	455	421	693
Link Distance (ft)	384		424	424	1023
Upstream Blk Time (%)	6		2	1	0
Queuing Penalty (veh)	42		14	9	1
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	36	6			
Queuing Penalty (veh)	169	11			

Queuing and Blocking Report
 Background + Project (With Improvements) PM

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Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	B46	SB
Directions Served	LT	R	LT	R	L	T	T	R	T	T	T	L
Maximum Queue (ft)	1659	1652	208	263	200	333	345	150	368	416	113	175
Average Queue (ft)	1632	1629	88	136	75	263	310	72	93	139	7	168
95th Queue (ft)	1649	1643	172	244	187	375	372	191	294	361	61	189
Link Distance (ft)	1615	1615	256	256		253	253		380	380	132	
Upstream Blk Time (%)	97	95	0	1		22	46		1	2	1	
Queuing Penalty (veh)	0	0	0	3		95	195		3	10	7	
Storage Bay Dist (ft)					175			100				125
Storage Blk Time (%)					0	36	57					53
Queuing Penalty (veh)					0	19	43					139

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	438	505
Average Queue (ft)	319	315
95th Queue (ft)	450	597
Link Distance (ft)	424	424
Upstream Blk Time (%)	3	10
Queuing Penalty (veh)	13	45
Storage Bay Dist (ft)		
Storage Blk Time (%)	15	
Queuing Penalty (veh)	52	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	B46	B20	B20
Directions Served	LT	R	LTR	L	T	R	L	TR	T	T	
Maximum Queue (ft)	712	115	71	349	932	97	104	221	456	269	196
Average Queue (ft)	309	109	19	95	531	5	41	192	238	66	24
95th Queue (ft)	811	133	50	292	985	44	91	258	505	219	124
Link Distance (ft)	1549		992		2349			132	380	253	253
Upstream Blk Time (%)	0							37	7	1	0
Queuing Penalty (veh)	0							253	45	2	0
Storage Bay Dist (ft)		90		325		85	80				
Storage Blk Time (%)	18	31			49		2	42			
Queuing Penalty (veh)	69	42			29		12	16			

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	EB	B48	WB	SB
Directions Served	L	T	T	TR	LR
Maximum Queue (ft)	32	114	60	68	56
Average Queue (ft)	3	17	7	4	18
95th Queue (ft)	18	86	52	40	48
Link Distance (ft)		79	78	324	828
Upstream Blk Time (%)		3	1		
Queuing Penalty (veh)		22	9		
Storage Bay Dist (ft)	50				
Storage Blk Time (%)	0	3			
Queuing Penalty (veh)	0	0			

Intersection: 6: 4th St/Pine St & Ravenswood Ave

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	29	16	48	530	72	88
Average Queue (ft)	2	1	8	262	23	23
95th Queue (ft)	16	7	35	535	54	64
Link Distance (ft)		233		520	1132	991
Upstream Blk Time (%)				1		
Queuing Penalty (veh)				10		
Storage Bay Dist (ft)	50		50			
Storage Blk Time (%)	0		0	27		
Queuing Penalty (veh)	0		2	4		

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	109	465	272	253	89	264	120	578	134	373
Average Queue (ft)	67	357	94	52	21	231	103	333	68	187
95th Queue (ft)	126	556	257	193	63	294	149	594	145	334
Link Distance (ft)		343	238	238		233		723		1541
Upstream Blk Time (%)		18	4	2		27		1		
Queuing Penalty (veh)		140	14	7		204		5		
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	10	33			1	44	37	35	1	34
Queuing Penalty (veh)	67	27			7	10	71	71	2	19

Queuing and Blocking Report
 Background + Project (With Improvements) PM

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Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	191	87	9	73
Average Queue (ft)	35	5	0	36
95th Queue (ft)	116	38	6	63
Link Distance (ft)	256	605		65
Upstream Blk Time (%)	0			2
Queuing Penalty (veh)	0			1
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	310	335	63	58
Average Queue (ft)	102	127	22	20
95th Queue (ft)	278	336	63	61
Link Distance (ft)	318	318	41	41
Upstream Blk Time (%)	0	1	12	11
Queuing Penalty (veh)	0	7	54	46
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
 Background + Project (With Improvements) PM

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Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	505	250	299	338	328	160	345	812	787	780	265	569
Average Queue (ft)	305	200	200	220	209	73	231	595	554	376	197	346
95th Queue (ft)	558	288	312	336	354	184	414	889	854	817	314	504
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	9		0	2	5			8	7	7		0
Queuing Penalty (veh)	0		0	9	21			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	23	18	1	5	29	0	0	35			3	20
Queuing Penalty (veh)	53	35	4	13	25	0	2	46			17	33

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	486
Average Queue (ft)	299
95th Queue (ft)	434
Link Distance (ft)	621
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	64	41
Average Queue (ft)	36	2
95th Queue (ft)	56	22
Link Distance (ft)	65	887
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
 Background + Project (With Improvements) PM

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Intersection: 35: Ravenswood Ave

Movement	EB	WB	WB	B48	NB	NB
Directions Served	TR	L	T	T	L	R
Maximum Queue (ft)	160	33	118	35	121	44
Average Queue (ft)	14	3	10	2	46	13
95th Queue (ft)	116	18	65	23	92	38
Link Distance (ft)	520		78	79	437	437
Upstream Blk Time (%)	0		1	0		
Queuing Penalty (veh)	0		8	2		
Storage Bay Dist (ft)		50				
Storage Blk Time (%)		0	1			
Queuing Penalty (veh)		0	0			

Intersection: 36: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	T	R
Maximum Queue (ft)	263	3	37
Average Queue (ft)	55	0	16
95th Queue (ft)	233	3	42
Link Distance (ft)	324	384	425
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	15		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	B27	NB	SB
Directions Served	T	TR	TR	T	R	R
Maximum Queue (ft)	42	35	348	334	85	56
Average Queue (ft)	5	3	184	78	37	19
95th Queue (ft)	30	22	436	266	62	48
Link Distance (ft)	41	41	238	343	195	232
Upstream Blk Time (%)	2	1	12	0		
Queuing Penalty (veh)	10	6	105	3		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 42: Laurel St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	49	36	114
Average Queue (ft)	20	7	13
95th Queue (ft)	47	77	61
Link Distance (ft)	95	297	723
Upstream Blk Time (%)		1	
Queuing Penalty (veh)		3	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 44: Laurel St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	29	18	9
Average Queue (ft)	4	3	0
95th Queue (ft)	20	38	6
Link Distance (ft)	85	141	297
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 2611

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	5.5	78.3	29.4	9.8	74.0	29.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	C-Max	Max	None
Avg. Green (s)	5.7	9.2	7.2	7.4	5.8	7.2	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	46	0	0	24	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	50	100	100	16	100	100	0
Cycles with Peds (%)	0	35	96	0	15	8	0

Controller Summary

Average Cycle Length (s): -12.5
Number of Complete Cycles : 23

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	1	2	3	6
Movement(s) Served	NBL	SBT	EBL	NBT
Maximum Green (s)	33.1	26.4	22.0	64.0
Minimum Green (s)	7.0	7.0	8.0	7.0
Recall	None	C-Max	Min	C-Max
Avg. Green (s)	-3.1	-1.5	-3.5	-4.1
g/C Ratio	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	22	0
Cycles Maxed Out (%)	44	100	11	100
Cycles with Peds (%)	0	11	0	0

Controller Summary

Average Cycle Length (s): -1.4
Number of Complete Cycles : 34

Actuated Signals, Observed Splits
Background + Project (With Improvements) PM

05/08/2024

Intersection: 3: Middlefield Road & Ringwood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBT	WBTL	SBL	NBT	EBTL
Maximum Green (s)	12.5	66.8	59.7	37.6	41.7	33.0
Minimum Green (s)	5.0	10.0	7.0	7.0	7.0	7.0
Recall	None	C-Max	None	Ped	None	None
Avg. Green (s)	11.4	-15.2	-8.2	6.6	-9.9	-1.5
g/C Ratio	0.71	-1.00	-0.54	0.37	-0.65	-0.10
Cycles Skipped (%)	6	0	0	14	0	0
Cycles @ Minimum (%)	6	0	0	0	0	0
Cycles Maxed Out (%)	65	100	0	10	71	100
Cycles with Peds (%)	0	100	24	86	41	44

Controller Summary

Average Cycle Length (s): 15.2

Number of Complete Cycles : 15

Intersection: 4: Middlefield Road & Seminary Dr

Phase	2	3	4	6	7	8
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT
Maximum Green (s)	22.0	5.3	47.7	22.0	5.0	48.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	Max	None	C-Max	Max	None	C-Max
Avg. Green (s)	0.9	5.4	5.6	0.2	5.1	7.3
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	14	0	0	28	0
Cycles @ Minimum (%)	0	0	0	0	72	0
Cycles Maxed Out (%)	100	86	100	100	72	100
Cycles with Peds (%)	0	0	13	3	0	23

Controller Summary

Average Cycle Length (s): -6.4

Number of Complete Cycles : 27

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	5.1	93.5	36.4	9.3	89.3	26.4
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Min	C-Max	None	Min	Max
Avg. Green (s)	7.1	14.6	10.2	8.1	8.1	-6.4
g/C Ratio	0.06	0.90	0.63	0.32	0.50	-0.39
Cycles Skipped (%)	87	0	0	35	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	13	50	100	24	50	100
Cycles with Peds (%)	0	56	53	0	50	50

Controller Summary

Average Cycle Length (s): 16.2

Number of Complete Cycles : 16

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	None	None	None	C-Max
Avg. Green (s)	-10.8	0.4	-5.4	0.2	-11.6	5.2
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	15	0
Cycles @ Minimum (%)	0	0	0	0	4	0
Cycles Maxed Out (%)	100	100	67	92	15	100
Cycles with Peds (%)	0	60	0	79	0	23

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:30	6:30	6:30	6:30	6:30	6:30	6:30
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7498	7482	7827	7755	7536	7700	7727
Vehs Exited	7466	7342	7696	7688	7474	7724	7701
Starting Vehs	464	460	484	458	478	496	504
Ending Vehs	496	600	615	525	540	472	530
Denied Entry Before	289	196	129	105	134	166	176
Denied Entry After	1363	1447	910	902	1280	1108	1193
Travel Distance (mi)	4772	4736	4843	4890	4762	4925	4926
Travel Time (hr)	1369.1	1435.3	1067.9	1027.6	1347.6	1165.1	1280.8
Total Delay (hr)	1197.7	1264.9	893.3	851.6	1176.3	987.8	1103.3
Total Stops	14462	15929	16184	15209	15456	15793	15779
Fuel Used (gal)	435.5	449.1	368.8	361.4	430.3	393.1	418.1

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:30	6:30	6:30	6:30
End Time	8:00	8:00	8:00	8:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7708	7630	7464	7632
Vehs Exited	7694	7455	7422	7567
Starting Vehs	452	515	474	469
Ending Vehs	466	690	516	544
Denied Entry Before	58	181	80	149
Denied Entry After	1032	1225	1342	1178
Travel Distance (mi)	4863	4753	4784	4825
Travel Time (hr)	1091.1	1335.3	1319.3	1243.9
Total Delay (hr)	916.2	1164.1	1147.1	1070.2
Total Stops	15364	16900	15508	15663
Fuel Used (gal)	374.5	428.4	424.8	408.4

Interval #0 Information Seeding

Start Time	6:30
End Time	7:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1666	1727	1780	1749	1654	1762	1686
Vehs Exited	1704	1705	1830	1793	1716	1880	1733
Starting Vehs	464	460	484	458	478	496	504
Ending Vehs	426	482	434	414	416	378	457
Denied Entry Before	289	196	129	105	134	166	176
Denied Entry After	547	464	313	291	444	371	471
Travel Distance (mi)	1117	1143	1134	1153	1137	1187	1153
Travel Time (hr)	208.0	200.3	172.1	157.3	181.8	174.1	187.3
Total Delay (hr)	168.0	159.1	131.3	115.8	141.0	131.4	145.9
Total Stops	2957	3487	3105	3039	3189	3160	3186
Fuel Used (gal)	76.6	75.2	68.6	65.7	70.7	70.8	72.5

Interval #1 Information Recording

Start Time	7:00
End Time	7:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1836	1823	1682	1733
Vehs Exited	1844	1833	1721	1775
Starting Vehs	452	515	474	469
Ending Vehs	444	505	435	428
Denied Entry Before	58	181	80	149
Denied Entry After	260	330	481	395
Travel Distance (mi)	1182	1165	1150	1152
Travel Time (hr)	143.6	183.7	182.1	179.0
Total Delay (hr)	101.1	141.9	140.7	137.6
Total Stops	3184	3768	3137	3210
Fuel Used (gal)	63.3	72.6	71.0	70.7

Interval #2 Information Recording

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	2283	2280	2392	2347	2412	2411	2339
Vehs Exited	2107	2010	2161	2128	2072	2093	2109
Starting Vehs	426	482	434	414	416	378	457
Ending Vehs	602	752	665	633	756	696	687
Denied Entry Before	547	464	313	291	444	371	471
Denied Entry After	949	844	530	526	754	618	769
Travel Distance (mi)	1361	1269	1375	1331	1322	1349	1323
Travel Time (hr)	315.2	312.9	249.2	234.7	307.6	261.8	294.2
Total Delay (hr)	266.5	267.3	199.7	186.8	259.9	213.2	246.4
Total Stops	3909	4115	4367	4366	4672	4313	4106
Fuel Used (gal)	106.7	103.3	92.0	87.9	104.0	94.0	100.7

Interval #2 Information Recording

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	2314	2181	2266	2319
Vehs Exited	2060	1944	2019	2070
Starting Vehs	444	505	435	428
Ending Vehs	698	742	682	686
Denied Entry Before	260	330	481	395
Denied Entry After	619	812	891	727
Travel Distance (mi)	1322	1216	1312	1318
Travel Time (hr)	257.5	293.8	311.7	283.9
Total Delay (hr)	210.0	249.9	264.5	236.4
Total Stops	4367	4486	4218	4291
Fuel Used (gal)	92.3	98.0	104.5	98.3

Interval #3 Information Recording

Start Time	7:30
End Time	7:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1743	1687	1821	1745	1613	1701	1786
Vehs Exited	1843	1800	1896	1904	1763	1794	1874
Starting Vehs	602	752	665	633	756	696	687
Ending Vehs	502	639	590	474	606	603	599
Denied Entry Before	949	844	530	526	754	618	769
Denied Entry After	1212	1218	674	772	1154	916	1051
Travel Distance (mi)	1133	1113	1156	1191	1060	1142	1204
Travel Time (hr)	407.6	441.0	301.2	297.2	400.9	349.5	384.7
Total Delay (hr)	366.7	400.8	259.5	254.3	362.7	308.3	341.2
Total Stops	3923	4159	4311	4008	3583	4214	4386
Fuel Used (gal)	122.1	129.5	98.8	98.8	119.0	109.4	118.2

Interval #3 Information Recording

Start Time	7:30
End Time	7:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1702	1750	1791	1737
Vehs Exited	1828	1820	1911	1843
Starting Vehs	698	742	682	686
Ending Vehs	572	672	562	572
Denied Entry Before	619	812	891	727
Denied Entry After	866	1053	1059	995
Travel Distance (mi)	1157	1134	1196	1149
Travel Time (hr)	329.7	400.2	400.2	371.2
Total Delay (hr)	288.1	359.2	357.1	329.8
Total Stops	4037	4343	4567	4151
Fuel Used (gal)	105.2	121.0	122.5	114.4

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1806	1788	1834	1914	1857	1826	1916
Vehs Exited	1812	1827	1809	1863	1923	1957	1985
Starting Vehs	502	639	590	474	606	603	599
Ending Vehs	496	600	615	525	540	472	530
Denied Entry Before	1212	1218	674	772	1154	916	1051
Denied Entry After	1363	1447	910	902	1280	1108	1193
Travel Distance (mi)	1162	1211	1178	1215	1243	1247	1246
Travel Time (hr)	438.2	481.1	345.3	338.4	457.3	379.8	414.6
Total Delay (hr)	396.4	437.6	302.8	294.6	412.7	334.9	369.8
Total Stops	3673	4168	4401	3796	4012	4106	4101
Fuel Used (gal)	130.1	141.0	109.3	109.0	136.6	119.0	126.8

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1856	1876	1725	1842
Vehs Exited	1962	1858	1771	1876
Starting Vehs	572	672	562	572
Ending Vehs	466	690	516	544
Denied Entry Before	866	1053	1059	995
Denied Entry After	1032	1225	1342	1178
Travel Distance (mi)	1202	1237	1126	1207
Travel Time (hr)	360.4	457.6	425.3	409.8
Total Delay (hr)	317.2	413.1	384.9	366.4
Total Stops	3776	4303	3586	3992
Fuel Used (gal)	113.7	136.8	126.7	124.9

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.1	0.4	0.3	0.0	0.0	0.0	1.6	4.5	1.0
Denied Del/Veh (s)	3.0	0.4	0.5	6.6	6.9	7.4	0.2	0.0	0.1	35.4	34.9	33.5
Total Delay (hr)	2.2	3.3	1.1	1.3	4.7	3.0	1.7	3.9	0.4	6.7	19.7	4.7
Total Del/Veh (s)	98.6	56.5	65.5	127.0	80.2	76.7	53.6	31.9	31.5	149.7	149.2	152.8
Stop Delay (hr)	2.1	3.0	1.0	1.3	4.2	2.8	1.5	2.9	0.3	5.8	16.9	4.0
Stop Del/Veh (s)	93.9	49.9	61.0	119.7	71.3	70.2	46.1	23.8	25.2	129.9	127.8	132.4
Travel Dist (mi)	20.8	56.3	16.0	8.6	47.8	32.3	23.0	85.4	9.6	58.0	170.7	39.9
Travel Time (hr)	3.0	5.3	1.7	1.7	6.7	4.5	2.5	6.8	0.8	10.2	30.0	7.1
Vehicles Entered	78	211	60	37	207	140	114	429	47	156	461	107
Vehicles Exited	74	208	59	37	207	140	113	432	48	150	449	104
Hourly Exit Rate	74	208	59	37	207	140	113	432	48	150	449	104
Input Volume	80	209	63	38	205	133	115	460	48	156	474	111
% of Volume	92	100	94	97	101	105	98	94	100	96	95	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	2	6	1

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	7.9
Denied Del/Veh (s)	13.9
Total Delay (hr)	52.7
Total Del/Veh (s)	91.0
Stop Delay (hr)	45.6
Stop Del/Veh (s)	78.8
Travel Dist (mi)	568.5
Travel Time (hr)	80.3
Vehicles Entered	2047
Vehicles Exited	2021
Hourly Exit Rate	2021
Input Volume	2092
% of Volume	97
Denied Entry Before	0
Denied Entry After	9

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.3	0.1	0.0	0.1	0.0	0.5
Denied Del/Veh (s)	1.4	0.0	3.1	0.6	0.1	1.0	0.0	1.0
Total Delay (hr)	2.4	0.0	1.4	6.9	0.4	13.6	2.9	27.6
Total Del/Veh (s)	77.1	2.5	16.2	59.0	3.1	107.1	103.6	52.0
Stop Delay (hr)	2.3	0.0	1.1	6.3	0.1	11.6	2.5	24.0
Stop Del/Veh (s)	73.0	1.1	12.4	54.4	1.0	91.8	90.9	45.3
Travel Dist (mi)	8.2	0.7	19.0	37.2	44.2	91.3	20.2	220.7
Travel Time (hr)	2.8	0.0	2.4	8.7	2.0	16.8	3.6	36.4
Vehicles Entered	112	16	311	414	490	448	99	1890
Vehicles Exited	112	16	311	414	490	438	97	1878
Hourly Exit Rate	112	16	311	414	490	438	97	1878
Input Volume	138	20	367	405	497	474	103	2004
% of Volume	81	79	85	102	99	93	94	94
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0
Denied Del/Veh (s)	0.2	0.1	0.1	0.9	0.7	0.3	0.5	1.1	2.1	1.3	0.5	0.1
Total Delay (hr)	1.0	0.7	0.5	2.0	1.9	1.3	6.7	14.3	1.9	5.1	9.9	1.0
Total Del/Veh (s)	56.8	86.2	48.0	53.5	42.6	15.9	85.6	93.9	62.9	91.6	72.0	43.6
Stop Delay (hr)	0.9	0.7	0.5	1.9	1.7	1.3	6.2	13.2	1.7	4.7	8.7	0.9
Stop Del/Veh (s)	53.9	80.9	45.5	49.9	38.7	15.5	80.2	87.1	58.1	84.7	63.5	38.7
Travel Dist (mi)	18.1	8.8	11.6	7.6	8.1	16.7	16.3	32.1	6.4	17.8	43.3	7.8
Travel Time (hr)	1.6	1.0	1.0	2.4	2.2	2.2	7.4	15.5	2.2	5.9	11.6	1.4
Vehicles Entered	60	30	39	135	157	297	274	534	104	198	488	85
Vehicles Exited	62	30	39	134	157	297	273	533	104	199	489	85
Hourly Exit Rate	62	30	39	134	157	297	273	533	104	199	489	85
Input Volume	62	29	41	136	161	288	284	537	105	222	544	95
% of Volume	100	103	96	99	98	103	96	99	99	90	90	89
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	1	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.5
Denied Del/Veh (s)	0.8
Total Delay (hr)	46.3
Total Del/Veh (s)	68.2
Stop Delay (hr)	42.6
Stop Del/Veh (s)	62.7
Travel Dist (mi)	194.5
Travel Time (hr)	54.5
Vehicles Entered	2401
Vehicles Exited	2402
Hourly Exit Rate	2402
Input Volume	2503
% of Volume	96
Denied Entry Before	0
Denied Entry After	1

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.9	2.6	0.0	0.0	0.0	0.0	3.7
Denied Del/Veh (s)	0.3	2.9	0.1	0.2	12.0	10.8	7.3	0.0	0.3	0.4	6.8
Total Delay (hr)	1.2	1.2	0.1	0.6	8.7	17.8	0.1	0.4	2.8	0.3	33.2
Total Del/Veh (s)	219.6	47.5	73.8	65.0	110.6	71.6	63.1	75.0	17.8	15.6	60.1
Stop Delay (hr)	1.1	1.1	0.1	0.6	6.7	11.4	0.1	0.4	2.2	0.2	24.1
Stop Del/Veh (s)	216.0	45.3	71.5	64.3	85.5	45.9	39.6	71.9	13.9	13.6	43.5
Travel Dist (mi)	5.5	25.9	1.1	6.6	122.3	391.2	3.2	0.7	20.0	2.0	578.3
Travel Time (hr)	1.4	2.2	0.2	0.9	13.9	33.6	0.3	0.4	3.6	0.4	56.6
Vehicles Entered	19	89	6	34	273	875	7	19	573	57	1952
Vehicles Exited	19	89	6	35	275	864	7	19	572	57	1943
Hourly Exit Rate	19	89	6	35	275	864	7	19	572	57	1943
Input Volume	20	92	7	33	283	860	6	21	626	62	2010
% of Volume	96	97	86	107	97	100	112	90	91	92	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	3	0	0	0	0	3

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.2	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.6	0.1	0.0	0.2	0.1	1.0
Total Del/Veh (s)	5.2	3.3	0.5	0.0	33.8	13.9	2.9
Stop Delay (hr)	0.0	0.2	0.0	0.0	0.2	0.1	0.5
Stop Del/Veh (s)	2.8	1.2	0.0	0.0	31.7	13.3	1.5
Travel Dist (mi)	0.3	51.2	17.7	0.1	3.9	3.3	76.5
Travel Time (hr)	0.0	2.4	0.7	0.0	0.4	0.2	3.7
Vehicles Entered	4	701	518	3	25	21	1272
Vehicles Exited	4	700	518	3	25	21	1271
Hourly Exit Rate	4	700	518	3	25	21	1271
Input Volume	5	862	516	3	26	22	1435
% of Volume	76	81	100	100	96	94	89
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: Ravenswood Ave & Pine St Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.5	0.0	0.1	0.1	0.2
Total Delay (hr)	0.0	0.1	1.1	0.0	0.2	0.6	2.0
Total Del/Veh (s)	5.8	0.7	6.7	1.9	56.1	71.7	5.0
Stop Delay (hr)	0.0	0.0	0.8	0.0	0.2	0.6	1.5
Stop Del/Veh (s)	4.4	0.1	4.9	1.4	54.1	71.2	3.9
Travel Dist (mi)	0.0	15.4	11.8	0.0	1.8	4.8	33.9
Travel Time (hr)	0.0	0.7	1.6	0.0	0.2	0.7	3.2
Vehicles Entered	2	792	586	1	10	27	1418
Vehicles Exited	2	791	586	1	10	27	1417
Hourly Exit Rate	2	791	586	1	10	27	1417
Input Volume	3	978	588	1	10	27	1607
% of Volume	62	81	100	100	98	101	88
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	1.8	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	9.0	10.6	8.2	0.8	0.6	0.2	0.9	0.4	1.5	2.6	0.5	0.5
Total Delay (hr)	0.3	7.7	0.6	0.2	2.9	0.1	2.3	1.7	0.3	1.8	1.8	0.7
Total Del/Veh (s)	53.1	44.1	42.0	36.8	18.6	12.6	52.5	42.4	50.3	42.5	46.0	45.8
Stop Delay (hr)	0.2	6.1	0.5	0.1	2.4	0.1	2.2	1.5	0.3	1.6	1.6	0.6
Stop Del/Veh (s)	45.0	34.8	34.5	34.2	15.5	11.3	48.8	37.8	47.2	37.8	39.8	42.1
Travel Dist (mi)	1.3	48.1	4.2	0.5	18.5	1.1	22.4	18.9	3.4	42.3	39.1	14.9
Travel Time (hr)	0.3	11.1	0.9	0.2	3.6	0.2	3.3	2.4	0.5	3.4	3.1	1.2
Vehicles Entered	17	615	52	14	560	32	160	144	25	150	139	53
Vehicles Exited	16	622	52	15	562	33	157	143	24	150	139	54
Hourly Exit Rate	16	622	52	15	562	33	157	143	24	150	139	54
Input Volume	21	828	69	16	560	33	160	142	25	152	142	55
% of Volume	77	75	76	94	100	100	98	101	96	99	98	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	2.3
Denied Del/Veh (s)	4.2
Total Delay (hr)	20.5
Total Del/Veh (s)	37.0
Stop Delay (hr)	17.4
Stop Del/Veh (s)	31.3
Travel Dist (mi)	214.7
Travel Time (hr)	30.3
Vehicles Entered	1961
Vehicles Exited	1967
Hourly Exit Rate	1967
Input Volume	2202
% of Volume	89
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.1	0.2	0.4	0.3	0.0	0.9	2.0
Denied Del/Veh (s)	2.1	2.9	1.6	3.4	19.2	0.0	21.3	5.2
Total Delay (hr)	2.0	1.3	0.4	0.4	0.5	0.0	0.6	5.3
Total Del/Veh (s)	39.8	29.4	3.7	4.0	28.1	2.7	14.6	13.8
Stop Delay (hr)	1.9	1.2	0.1	0.2	0.5	0.0	0.6	4.5
Stop Del/Veh (s)	37.8	26.3	1.0	1.6	27.8	1.5	15.3	11.7
Travel Dist (mi)	11.0	9.8	45.4	45.7	1.1	0.4	2.7	116.1
Travel Time (hr)	2.7	1.9	2.1	2.7	0.9	0.0	1.7	12.0
Vehicles Entered	180	162	400	404	61	28	150	1385
Vehicles Exited	181	162	401	404	61	28	151	1388
Hourly Exit Rate	181	162	401	404	61	28	151	1388
Input Volume	192	170	400	400	63	26	148	1398
% of Volume	94	95	100	101	97	110	102	99
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	16.8	1.0	17.8
Total Del/Veh (s)	68.2	4.7	38.5
Stop Delay (hr)	16.6	0.9	17.4
Stop Del/Veh (s)	67.2	4.0	37.6
Travel Dist (mi)	66.1	14.8	80.9
Travel Time (hr)	19.9	1.6	21.5
Vehicles Entered	868	780	1648
Vehicles Exited	867	779	1646
Hourly Exit Rate	867	779	1646
Input Volume	1177	782	1960
% of Volume	74	100	84
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	12.6	63.3	14.6	0.0	0.0	0.0	10.2	76.7	51.1	92.4	344.1	6.6
Denied Del/Veh (s)	668.3	654.4	672.3	0.0	0.0	0.0	319.2	312.2	312.7	1192.7	1169.6	1182.6
Total Delay (hr)	4.0	20.9	4.0	9.6	4.2	0.4	2.6	17.7	33.8	26.9	4.0	0.1
Total Del/Veh (s)	275.4	283.0	256.6	68.4	65.0	19.4	92.5	81.0	226.6	671.4	30.9	26.1
Stop Delay (hr)	3.8	20.1	3.8	8.9	3.8	0.3	2.3	15.1	33.9	26.9	3.2	0.0
Stop Del/Veh (s)	266.1	272.0	247.3	63.4	59.6	17.1	81.3	69.1	227.1	673.5	25.1	20.8
Travel Dist (mi)	4.8	24.7	5.4	36.3	16.8	4.8	14.9	112.3	75.0	14.3	53.7	0.9
Travel Time (hr)	16.8	85.0	18.8	11.0	4.8	0.6	13.3	98.2	87.8	119.8	349.9	6.7
Vehicles Entered	47	248	54	489	227	64	99	748	502	121	448	8
Vehicles Exited	47	248	53	490	228	64	98	747	498	121	455	8
Hourly Exit Rate	47	248	53	490	228	64	98	747	498	121	455	8
Input Volume	64	327	70	500	222	61	108	877	597	252	953	18
% of Volume	73	76	76	98	103	105	91	85	83	48	48	45
Denied Entry Before	3	19	4	0	0	0	0	4	4	23	90	2
Denied Entry After	21	100	24	0	0	0	16	137	86	158	611	12

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	671.5
Denied Del/Veh (s)	572.9
Total Delay (hr)	127.9
Total Del/Veh (s)	143.4
Stop Delay (hr)	122.2
Stop Del/Veh (s)	137.0
Travel Dist (mi)	363.9
Travel Time (hr)	812.6
Vehicles Entered	3055
Vehicles Exited	3057
Hourly Exit Rate	3057
Input Volume	4049
% of Volume	76
Denied Entry Before	149
Denied Entry After	1165

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.1
Denied Del/Veh (s)	0.2	0.6	0.3
Total Delay (hr)	0.7	2.1	2.8
Total Del/Veh (s)	4.1	35.3	12.2
Stop Delay (hr)	0.5	2.0	2.5
Stop Del/Veh (s)	3.1	33.6	11.0
Travel Dist (mi)	12.0	36.1	48.1
Travel Time (hr)	1.6	3.4	4.9
Vehicles Entered	616	214	830
Vehicles Exited	616	216	832
Hourly Exit Rate	616	216	832
Input Volume	624	211	834
% of Volume	99	102	100
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Total Delay (hr)	0.5	0.1	0.1	0.4	0.7	0.2	1.9
Total Del/Veh (s)	2.9	2.0	12.7	3.0	44.9	28.0	5.0
Stop Delay (hr)	0.1	0.0	0.1	0.2	0.6	0.2	1.1
Stop Del/Veh (s)	0.5	0.6	10.3	1.2	42.6	27.3	2.9
Travel Dist (mi)	40.3	8.5	1.4	39.3	4.4	1.8	95.7
Travel Time (hr)	1.9	0.5	0.1	1.8	0.8	0.2	5.3
Vehicles Entered	654	138	18	518	51	21	1400
Vehicles Exited	650	138	18	517	52	21	1396
Hourly Exit Rate	650	138	18	517	52	21	1396
Input Volume	811	157	19	518	52	23	1579
% of Volume	80	88	96	100	100	92	88
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.4	0.1	0.0	0.1	0.1	0.0	0.7
Total Del/Veh (s)	3.0	1.7	11.4	0.6	22.8	13.4	2.1
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.0	0.3
Stop Del/Veh (s)	0.6	0.6	9.7	0.0	20.8	13.2	0.7
Travel Dist (mi)	14.2	9.7	0.4	23.5	1.3	0.3	49.5
Travel Time (hr)	0.9	0.7	0.0	0.9	0.2	0.0	2.7
Vehicles Entered	441	296	8	502	16	4	1267
Vehicles Exited	441	296	9	502	16	4	1268
Hourly Exit Rate	441	296	9	502	16	4	1268
Input Volume	534	357	9	499	17	4	1421
% of Volume	83	83	97	101	93	100	89
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Denied Del/Veh (s)	0.0	0.0	1.2	3.1	0.1	0.1	0.6
Total Delay (hr)	0.4	0.0	4.6	0.1	0.0	0.5	5.7
Total Del/Veh (s)	2.0	0.8	21.9	18.1	2.9	39.2	11.9
Stop Delay (hr)	0.1	0.0	3.7	0.1	0.0	0.5	4.4
Stop Del/Veh (s)	0.5	0.0	17.6	14.7	2.7	38.9	9.3
Travel Dist (mi)	12.2	4.4	45.5	1.3	0.6	2.0	65.9
Travel Time (hr)	0.8	0.3	6.7	0.2	0.0	0.6	8.7
Vehicles Entered	634	232	758	21	14	48	1707
Vehicles Exited	634	233	757	21	14	47	1706
Hourly Exit Rate	634	233	757	21	14	47	1706
Input Volume	867	309	763	23	14	45	2022
% of Volume	73	75	99	92	98	104	84
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	0.2	0.1	3.9	1.9	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	1.2	0.1	0.1
Travel Dist (mi)	20.6	0.6	0.5	30.0	51.7
Travel Time (hr)	0.7	0.0	0.0	1.2	1.9
Vehicles Entered	306	9	4	208	527
Vehicles Exited	306	9	4	208	527
Hourly Exit Rate	306	9	4	208	527
Input Volume	305	7	4	228	544
% of Volume	100	124	100	91	97
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.3	0.3		0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	3.2	2.9	0.3	0.0		0.3	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.6	3.1	0.0	0.0		0.0	0.0
Travel Dist (mi)	0.0	0.1	9.2	0.0	0.0	13.5	22.8
Travel Time (hr)	0.0	0.0	0.4	0.0	0.0	0.5	0.8
Vehicles Entered	2	4	311	1	0	204	522
Vehicles Exited	2	4	311	1	0	204	522
Hourly Exit Rate	2	4	311	1	0	204	522
Input Volume	2	3	309	1	1	222	538
% of Volume	100	133	101	100	0	92	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

50: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	All
Denied Delay (hr)	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.1	0.0	0.5	0.3
Total Delay (hr)	0.5	0.0	1.2	1.8
Total Del/Veh (s)	2.4	1.7	7.1	4.4
Stop Delay (hr)	0.1	0.0	0.9	1.0
Stop Del/Veh (s)	0.2	0.6	5.5	2.5
Travel Dist (mi)	29.0	0.5	13.0	42.5
Travel Time (hr)	1.6	0.0	1.8	3.5
Vehicles Entered	795	14	618	1427
Vehicles Exited	796	14	619	1429
Hourly Exit Rate	796	14	619	1429
Input Volume	989	15	621	1625
% of Volume	81	92	100	88
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

51: Ravenswood Ave Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Delay (hr)	0.1	2.5	0.0	2.6
Total Del/Veh (s)	0.6	15.7	12.4	6.8
Stop Delay (hr)	0.0	1.8	0.0	1.9
Stop Del/Veh (s)	0.1	11.6	12.3	4.9
Travel Dist (mi)	18.1	36.4	0.6	55.1
Travel Time (hr)	0.8	3.7	0.1	4.6
Vehicles Entered	814	568	8	1390
Vehicles Exited	812	568	7	1387
Hourly Exit Rate	812	568	7	1387
Input Volume	990	568	8	1567
% of Volume	82	100	85	89
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

438: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.4	0.0	0.2	0.0	0.7
Total Del/Veh (s)	3.9	1.7	1.3	11.0	2.6
Stop Delay (hr)	0.3	0.0	0.0	0.0	0.3
Stop Del/Veh (s)	2.5	0.9	0.0	10.8	1.3
Travel Dist (mi)	19.0	0.3	39.1	1.2	59.6
Travel Time (hr)	1.1	0.0	1.9	0.1	3.1
Vehicles Entered	405	6	519	15	945
Vehicles Exited	406	6	519	15	946
Hourly Exit Rate	406	6	519	15	946
Input Volume	494	7	516	13	1030
% of Volume	82	83	101	113	92
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	689.1
Denied Del/Veh (s)	281.6
Total Delay (hr)	381.1
Total Del/Veh (s)	169.1
Stop Delay (hr)	332.2
Stop Del/Veh (s)	147.4
Travel Dist (mi)	4825.5
Travel Time (hr)	1243.9
Vehicles Entered	7632
Vehicles Exited	7567
Hourly Exit Rate	7567
Input Volume	45392
% of Volume	17
Denied Entry Before	149
Denied Entry After	1178

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	245	664	74	700	150	515	160	1763
Average Queue (ft)	89	231	36	341	97	265	110	987
95th Queue (ft)	203	572	81	837	175	475	200	2117
Link Distance (ft)		1416		1216		1022		1984
Upstream Blk Time (%)				5				15
Queuing Penalty (veh)				0				0
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	2	11	17	47	3	25	3	49
Queuing Penalty (veh)	5	9	56	18	17	29	18	77

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	335	170	432	199	1017
Average Queue (ft)	156	94	306	16	575
95th Queue (ft)	319	222	440	98	1138
Link Distance (ft)	334		419	419	1022
Upstream Blk Time (%)	4		3	0	9
Queuing Penalty (veh)	22		13	0	52
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	37	4			
Queuing Penalty (veh)	138	6			

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	B46	SB
Directions Served	L	TR	LT	R	L	T	T	R	T	T	T	L
Maximum Queue (ft)	175	259	270	238	200	344	357	150	455	467	202	175
Average Queue (ft)	56	63	195	107	186	293	329	104	316	341	97	156
95th Queue (ft)	134	200	287	194	236	407	362	203	566	573	235	218
Link Distance (ft)	1572	1572	257	257		260	260		383	383	130	
Upstream Blk Time (%)			4	0		41	69		16	25	18	
Queuing Penalty (veh)			11	1		188	316		72	110	157	
Storage Bay Dist (ft)					175			100				125
Storage Blk Time (%)					37	31	73	2				19
Queuing Penalty (veh)					97	88	76	7				52

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	442	504
Average Queue (ft)	360	350
95th Queue (ft)	509	610
Link Distance (ft)	419	419
Upstream Blk Time (%)	14	16
Queuing Penalty (veh)	59	71
Storage Bay Dist (ft)		
Storage Blk Time (%)	47	
Queuing Penalty (veh)	104	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	B46	B20
Directions Served	LT	R	LTR	L	T	R	L	TR	T	T
Maximum Queue (ft)	336	115	109	350	1858	96	100	215	443	106
Average Queue (ft)	67	48	34	279	861	5	24	167	166	8
95th Queue (ft)	277	103	88	416	2156	43	66	266	432	60
Link Distance (ft)	1538		998		2363			130	383	260
Upstream Blk Time (%)					6			27	4	0
Queuing Penalty (veh)					0			193	26	0
Storage Bay Dist (ft)		90		325		85	80			
Storage Blk Time (%)	11	2		4	33		0	30		
Queuing Penalty (veh)	13	0		35	93		1	6		

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	30	143	16	89
Average Queue (ft)	1	15	1	33
95th Queue (ft)	11	116	8	69
Link Distance (ft)		348	125	828
Upstream Blk Time (%)		1		
Queuing Penalty (veh)		8		
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0	2		
Queuing Penalty (veh)	0	0		

Intersection: 6: Ravenswood Ave & Pine St

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	20	62	94	123
Average Queue (ft)	1	6	64	39
95th Queue (ft)	11	33	105	102
Link Distance (ft)		61	65	948
Upstream Blk Time (%)		1	25	
Queuing Penalty (veh)		6	140	
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0	1		
Queuing Penalty (veh)	0	0		

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	95	470	270	6	90	148	120	428	134	353
Average Queue (ft)	19	386	80	0	16	135	96	154	103	155
95th Queue (ft)	66	550	233	6	57	164	141	353	160	289
Link Distance (ft)		344	239	239		133		719		1487
Upstream Blk Time (%)		26	2			35				
Queuing Penalty (veh)		235	9			209				
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	0	47			0	47	21	15	8	19
Queuing Penalty (veh)	0	10			0	8	33	27	17	29

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	272	174	131	101
Average Queue (ft)	159	25	31	64
95th Queue (ft)	299	175	94	102
Link Distance (ft)	257	597		64
Upstream Blk Time (%)	9	0		27
Queuing Penalty (veh)	35	0		59
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		0	1	
Queuing Penalty (veh)		2	4	

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	353	366	58	58
Average Queue (ft)	317	323	32	22
95th Queue (ft)	377	399	71	59
Link Distance (ft)	318	318	41	41
Upstream Blk Time (%)	25	31	25	14
Queuing Penalty (veh)	148	184	97	55
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Background + Variant AM

05/31/2024

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	570	250	300	343	329	160	344	822	837	837	265	657
Average Queue (ft)	544	244	205	225	190	58	162	736	798	810	261	637
95th Queue (ft)	557	274	347	377	350	170	366	969	887	825	272	652
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	87		0	5	4			16	61	79		98
Queuing Penalty (veh)	0		0	21	17			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	83	36	2	10	29	0	0	20			98	2
Queuing Penalty (veh)	193	83	5	26	18	0	0	21			465	4

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	644
Average Queue (ft)	387
95th Queue (ft)	835
Link Distance (ft)	621
Upstream Blk Time (%)	1
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	95	324
Average Queue (ft)	69	75
95th Queue (ft)	87	312
Link Distance (ft)	64	887
Upstream Blk Time (%)	8	1
Queuing Penalty (veh)	45	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	68	53	203	146
Average Queue (ft)	6	12	22	52
95th Queue (ft)	68	40	112	113
Link Distance (ft)	282		348	448
Upstream Blk Time (%)	1		0	
Queuing Penalty (veh)	5		0	
Storage Bay Dist (ft)		50		
Storage Blk Time (%)		0	3	
Queuing Penalty (veh)		2	1	

Intersection: 36: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	L	LR
Maximum Queue (ft)	64	32	50
Average Queue (ft)	8	6	16
95th Queue (ft)	58	26	45
Link Distance (ft)	125		428
Upstream Blk Time (%)	2		
Queuing Penalty (veh)	17		
Storage Bay Dist (ft)		50	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 38: Ravenswood Ave

Movement	EB	WB	B27	NB	SB
Directions Served	T	TR	T	R	R
Maximum Queue (ft)	54	350	356	32	104
Average Queue (ft)	5	244	137	9	37
95th Queue (ft)	28	466	379	31	81
Link Distance (ft)	41	239	344	222	220
Upstream Blk Time (%)	1	23	2		
Queuing Penalty (veh)	7	171	17		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Background + Variant AM

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Intersection: 42: Laurel St

Movement	SB
Directions Served	LT
Maximum Queue (ft)	26
Average Queue (ft)	1
95th Queue (ft)	13
Link Distance (ft)	719
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 44: Laurel St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	29	3
Average Queue (ft)	5	0
95th Queue (ft)	23	3
Link Distance (ft)	90	297
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 50: Ravenswood Ave

Movement	EB	WB
Directions Served	TR	T
Maximum Queue (ft)	96	97
Average Queue (ft)	12	67
95th Queue (ft)	59	102
Link Distance (ft)	133	61
Upstream Blk Time (%)	1	30
Queuing Penalty (veh)	5	179
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 51: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	33	293	31
Average Queue (ft)	2	146	7
95th Queue (ft)	19	329	27
Link Distance (ft)	65	282	455
Upstream Blk Time (%)	1	4	
Queuing Penalty (veh)	5	23	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 438: Ravenswood Ave

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	127	42
Average Queue (ft)	17	13
95th Queue (ft)	103	39
Link Distance (ft)	191	416
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	12	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 4894

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	12.1	52.7	48.4	7.2	57.6	48.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	C-Max	Max	None
Avg. Green (s)	9.0	-11.9	-3.2	7.0	-11.6	-3.2	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	29	0	0	12	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	14	100	100	64	100	100	0
Cycles with Peds (%)	0	30	96	0	15	13	0

Controller Summary

Average Cycle Length (s): -6.5
Number of Complete Cycles : 24

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	1	2	3	6
Movement(s) Served	NBL	SBT	EBL	NBT
Maximum Green (s)	44.5	63.5	28.5	112.5
Minimum Green (s)	7.0	7.0	8.0	7.0
Recall	None	C-Max	Min	C-Max
Avg. Green (s)	9.9	-2.3	-13.6	-4.0
g/C Ratio	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	17	0
Cycles Maxed Out (%)	25	100	0	100
Cycles with Peds (%)	0	26	0	0

Controller Summary

Average Cycle Length (s): -13.8
Number of Complete Cycles : 20

Intersection: 3: Middlefield Road & Ringwood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBT	EBTL	SBL	NBT	WBTL
Maximum Green (s)	31.5	34.5	33.0	33.0	33.0	33.0
Minimum Green (s)	5.0	10.0	7.0	7.0	7.0	7.0
Recall	None	C-Max	None	Max	C-Max	None
Avg. Green (s)	-1.3	-3.9	-8.4	-5.4	0.2	3.2
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	4	0	0	0
Cycles @ Minimum (%)	0	0	13	0	0	0
Cycles Maxed Out (%)	100	100	30	100	100	67
Cycles with Peds (%)	0	96	35	0	95	29

Controller Summary

Average Cycle Length (s): -13.8
Number of Complete Cycles : 20

Intersection: 4: Middlefield Road & Seminary Dr

Phase	2	3	4	6	7	8
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT
Maximum Green (s)	22.0	26.9	56.1	22.0	5.0	78.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	Min	None	C-Max	Min	None	C-Max
Avg. Green (s)	11.3	-0.1	-4.2	9.9	6.5	-9.5
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	11	0	0	39	0
Cycles @ Minimum (%)	24	0	0	54	4	0
Cycles Maxed Out (%)	24	7	100	17	9	100
Cycles with Peds (%)	0	0	13	0	0	39

Controller Summary

Average Cycle Length (s): -11.0
Number of Complete Cycles : 21

Actuated Signals, Observed Splits
Background + Variant AM

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Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	4.9	39.5	23.8	4.9	39.5	23.2
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Max	C-Max	None	Max	Max
Avg. Green (s)	6.0	5.8	3.3	4.9	5.7	2.7
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	89	0	0	86	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	11	100	100	14	100	100
Cycles with Peds (%)	0	42	9	0	19	22

Controller Summary

Average Cycle Length (s): -3.0

Number of Complete Cycles : 29

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	Max	Max	None	C-Max
Avg. Green (s)	-12.4	0.4	-4.3	0.7	-10.9	4.3
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	100	100	100	100
Cycles with Peds (%)	0	60	0	71	0	25

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:30	4:30	4:30	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	8258	8374	8211	8233	8325	8264	8341
Vehs Exited	8204	8401	8135	8243	8391	8230	8322
Starting Vehs	457	514	513	543	553	471	511
Ending Vehs	511	487	589	533	487	505	530
Denied Entry Before	4	1	4	2	6	2	4
Denied Entry After	130	162	183	146	175	132	186
Travel Distance (mi)	5315	5436	5262	5340	5416	5392	5384
Travel Time (hr)	567.1	620.1	715.1	615.8	658.9	630.1	660.9
Total Delay (hr)	377.5	425.8	526.4	425.0	465.2	437.6	468.1
Total Stops	15115	15574	15977	15618	16758	16572	16027
Fuel Used (gal)	266.6	281.6	300.5	277.9	290.8	282.9	290.1

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	8360	8412	8376	8314
Vehs Exited	8285	8352	8338	8292
Starting Vehs	477	482	547	498
Ending Vehs	552	542	585	526
Denied Entry Before	3	1	6	1
Denied Entry After	200	106	184	158
Travel Distance (mi)	5358	5429	5451	5378
Travel Time (hr)	678.3	658.9	658.0	646.3
Total Delay (hr)	487.1	464.7	462.9	454.0
Total Stops	16650	17828	17006	16316
Fuel Used (gal)	295.4	291.9	290.3	286.8

Interval #0 Information Seeding

Start Time	4:30
End Time	5:00
Total Time (min)	30
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1950	2006	2014	1990	2002	1935	1978
Vehs Exited	2020	2032	1980	2023	2022	1919	1956
Starting Vehs	457	514	513	543	553	471	511
Ending Vehs	387	488	547	510	533	487	533
Denied Entry Before	4	1	4	2	6	2	4
Denied Entry After	0	8	34	4	39	1	10
Travel Distance (mi)	1274	1330	1268	1328	1329	1271	1291
Travel Time (hr)	109.0	129.0	132.5	126.8	142.5	113.8	129.3
Total Delay (hr)	63.6	81.6	87.1	79.5	95.0	68.5	82.9
Total Stops	3322	3999	3622	3840	4073	3287	3713
Fuel Used (gal)	57.6	64.3	63.1	63.0	67.0	58.8	62.8

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	2149	2041	2016	2003
Vehs Exited	2076	1991	2014	2002
Starting Vehs	477	482	547	498
Ending Vehs	550	532	549	503
Denied Entry Before	3	1	6	1
Denied Entry After	2	0	5	8
Travel Distance (mi)	1351	1305	1335	1308
Travel Time (hr)	130.7	127.9	133.9	127.5
Total Delay (hr)	82.7	81.3	86.1	80.8
Total Stops	3996	3983	3963	3781
Fuel Used (gal)	65.1	62.8	64.6	62.9

Interval #2 Information Recording

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	2340	2353	2223	2268	2378	2426	2282
Vehs Exited	2064	2176	2115	2120	2222	2197	2186
Starting Vehs	387	488	547	510	533	487	533
Ending Vehs	663	665	655	658	689	716	629
Denied Entry Before	0	8	34	4	39	1	10
Denied Entry After	53	102	186	82	79	53	136
Travel Distance (mi)	1377	1426	1381	1418	1444	1445	1403
Travel Time (hr)	147.9	157.2	185.6	158.5	171.8	162.3	163.7
Total Delay (hr)	98.7	106.3	135.9	107.8	120.2	110.8	113.3
Total Stops	4235	4072	4301	4370	4701	4552	4221
Fuel Used (gal)	69.0	72.3	78.2	72.1	76.8	73.9	73.1

Interval #2 Information Recording

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	2275	2351	2362	2326
Vehs Exited	2148	2110	2227	2156
Starting Vehs	550	532	549	503
Ending Vehs	677	773	684	673
Denied Entry Before	2	0	5	8
Denied Entry After	135	102	83	98
Travel Distance (mi)	1397	1399	1446	1413
Travel Time (hr)	163.7	175.2	161.1	164.7
Total Delay (hr)	113.8	125.0	109.4	114.1
Total Stops	4337	4941	4437	4413
Fuel Used (gal)	74.0	76.3	73.9	74.0

Interval #3 Information Recording

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	1957	1990	1907	1934	1984	1996	2078
Vehs Exited	2105	2144	2006	2072	2109	2113	2112
Starting Vehs	663	665	655	658	689	716	629
Ending Vehs	515	511	556	520	564	599	595
Denied Entry Before	53	102	186	82	79	53	136
Denied Entry After	89	143	257	133	128	91	156
Travel Distance (mi)	1353	1374	1278	1295	1333	1377	1364
Travel Time (hr)	157.6	173.7	195.6	167.1	174.5	187.3	183.9
Total Delay (hr)	109.4	124.5	149.8	120.7	126.9	138.1	135.1
Total Stops	3976	4099	3848	3931	4222	4760	4329
Fuel Used (gal)	71.3	75.2	78.2	71.7	74.4	78.7	77.4

Interval #3 Information Recording

Start Time	5:30
End Time	5:45
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1962	1997	1964	1974
Vehs Exited	2076	2143	2038	2090
Starting Vehs	677	773	684	673
Ending Vehs	563	627	610	561
Denied Entry Before	135	102	83	98
Denied Entry After	189	82	133	139
Travel Distance (mi)	1325	1367	1335	1340
Travel Time (hr)	196.0	189.3	181.2	180.6
Total Delay (hr)	148.6	140.4	133.5	132.7
Total Stops	4366	4889	4486	4293
Fuel Used (gal)	79.6	79.4	75.9	76.2

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	6	7
Vehs Entered	2011	2025	2067	2041	1961	1907	2003
Vehs Exited	2015	2049	2034	2028	2038	2001	2068
Starting Vehs	515	511	556	520	564	599	595
Ending Vehs	511	487	589	533	487	505	530
Denied Entry Before	89	143	257	133	128	91	156
Denied Entry After	130	162	183	146	175	132	186
Travel Distance (mi)	1311	1306	1335	1298	1311	1300	1327
Travel Time (hr)	152.6	160.2	201.4	163.4	170.1	166.6	184.0
Total Delay (hr)	105.8	113.5	153.6	117.1	123.3	120.2	136.8
Total Stops	3582	3404	4206	3477	3762	3973	3764
Fuel Used (gal)	68.7	69.8	80.9	71.0	72.6	71.5	76.8

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	8	9	10	Avg
Vehs Entered	1974	2023	2034	2003
Vehs Exited	1985	2108	2059	2038
Starting Vehs	563	627	610	561
Ending Vehs	552	542	585	526
Denied Entry Before	189	82	133	139
Denied Entry After	200	106	184	158
Travel Distance (mi)	1286	1357	1335	1317
Travel Time (hr)	187.8	166.7	181.8	173.5
Total Delay (hr)	141.9	118.1	133.9	126.4
Total Stops	3951	4015	4120	3824
Fuel Used (gal)	76.7	73.4	75.9	73.8

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Denied Del/Veh (s)	3.0	0.5	0.5	3.5	0.2	0.2	0.0	0.1	0.0	1.8	0.6	0.7
Total Delay (hr)	1.9	2.0	0.7	0.2	1.1	0.5	1.4	5.6	0.1	0.6	2.6	0.7
Total Del/Veh (s)	57.1	49.3	48.2	69.6	41.7	39.6	35.6	24.7	22.8	33.4	20.4	18.6
Stop Delay (hr)	1.8	1.8	0.7	0.2	1.0	0.5	1.0	3.1	0.1	0.5	1.6	0.5
Stop Del/Veh (s)	53.2	43.9	45.0	66.1	37.0	37.1	25.0	13.6	13.5	26.5	12.2	12.3
Travel Dist (mi)	32.0	38.4	14.9	2.4	20.7	10.4	27.1	159.5	3.4	24.5	170.5	52.3
Travel Time (hr)	3.2	3.3	1.3	0.3	1.8	0.9	2.4	11.1	0.2	1.5	8.4	2.6
Vehicles Entered	119	143	56	11	91	46	137	798	17	65	452	139
Vehicles Exited	118	142	55	11	92	46	136	803	16	65	455	140
Hourly Exit Rate	118	142	55	11	92	46	136	803	16	65	455	140
Input Volume	117	145	49	12	91	44	151	838	18	65	437	142
% of Volume	101	98	113	90	101	105	90	96	88	100	104	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

1: Middlefield Road & Oak Grove Avenue Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.5
Total Delay (hr)	17.5
Total Del/Veh (s)	29.8
Stop Delay (hr)	12.5
Stop Del/Veh (s)	21.3
Travel Dist (mi)	556.1
Travel Time (hr)	37.0
Vehicles Entered	2074
Vehicles Exited	2079
Hourly Exit Rate	2079
Input Volume	2109
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

2: Middlefield Road & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.0		0.0	0.1	0.1	0.6	1.2	0.2
Total Delay (hr)	2.7	0.0	2.0	5.3	2.7	8.1	1.5	22.2
Total Del/Veh (s)	48.6		15.5	35.1	12.3	64.3	58.7	31.7
Stop Delay (hr)	2.4	0.0	1.3	4.3	1.1	6.5	1.3	16.8
Stop Del/Veh (s)	43.4		10.1	28.3	5.0	51.9	48.8	24.0
Travel Dist (mi)	14.0	0.0	27.2	52.2	75.6	86.6	17.9	273.5
Travel Time (hr)	3.3	0.0	3.0	7.6	5.4	11.1	2.2	32.6
Vehicles Entered	196	0	457	541	773	443	91	2501
Vehicles Exited	195	0	456	543	770	440	90	2494
Hourly Exit Rate	195	0	456	543	770	440	90	2494
Input Volume	197	0	461	575	823	422	89	2568
% of Volume	99	0	99	94	94	104	101	97
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	42.9	12.5	10.9	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	377.7	384.9	360.6	0.0	0.1	0.2	0.2	1.0	0.9	0.0	0.0	0.0
Total Delay (hr)	71.2	18.1	15.7	1.2	0.6	2.7	1.7	13.5	0.8	8.7	5.9	0.2
Total Del/Veh (s)	671.2	659.5	635.1	64.0	59.6	36.2	93.6	64.3	39.2	90.7	40.1	31.7
Stop Delay (hr)	70.2	17.8	15.4	1.1	0.5	2.5	1.6	12.2	0.7	7.9	4.9	0.2
Stop Del/Veh (s)	661.4	647.1	624.3	61.6	56.2	34.1	88.7	58.0	34.9	81.9	33.3	27.0
Travel Dist (mi)	92.8	25.2	22.9	3.7	1.9	15.5	3.8	45.0	4.6	32.2	50.4	2.4
Travel Time (hr)	117.4	31.5	27.4	1.3	0.6	3.5	1.8	15.2	1.1	10.1	7.9	0.3
Vehicles Entered	314	90	81	64	32	263	64	752	74	336	522	25
Vehicles Exited	300	74	71	64	32	264	62	751	75	336	522	25
Hourly Exit Rate	300	74	71	64	32	264	62	751	75	336	522	25
Input Volume	405	115	105	65	33	252	62	737	74	334	511	26
% of Volume	74	64	68	98	97	105	100	102	101	101	102	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	95	27	28	0	0	0	0	0	0	0	0	0

3: Middlefield Road & Ringwood Ave Performance by movement

Movement	All
Denied Delay (hr)	66.6
Denied Del/Veh (s)	86.6
Total Delay (hr)	140.3
Total Del/Veh (s)	185.0
Stop Delay (hr)	135.0
Stop Del/Veh (s)	178.1
Travel Dist (mi)	300.4
Travel Time (hr)	218.2
Vehicles Entered	2617
Vehicles Exited	2576
Hourly Exit Rate	2576
Input Volume	2720
% of Volume	95
Denied Entry Before	0
Denied Entry After	150

4: Middlefield Road & Seminary Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.7
Denied Del/Veh (s)	0.9	2.6	0.1	0.1	1.3	0.7	1.5	0.1	1.4	0.9	1.3
Total Delay (hr)	2.9	5.1	0.1	0.1	1.8	11.5	0.1	0.8	4.4	0.1	26.8
Total Del/Veh (s)	72.8	46.4	35.5	20.7	96.3	56.9	43.2	83.7	24.6	22.0	46.9
Stop Delay (hr)	2.5	4.4	0.1	0.1	1.6	8.4	0.1	0.7	3.6	0.1	21.6
Stop Del/Veh (s)	64.6	39.9	33.9	20.4	85.1	41.6	30.8	80.3	20.3	19.7	37.8
Travel Dist (mi)	40.5	113.9	1.6	4.2	28.3	315.0	3.5	1.1	22.5	0.4	530.9
Travel Time (hr)	4.3	9.5	0.1	0.3	2.8	22.3	0.2	0.8	5.4	0.1	45.8
Vehicles Entered	138	388	9	22	64	702	8	32	636	11	2010
Vehicles Exited	138	387	9	22	62	714	8	32	638	11	2021
Hourly Exit Rate	138	387	9	22	62	714	8	32	638	11	2021
Input Volume	135	394	10	23	61	700	8	37	646	11	2024
% of Volume	102	98	90	97	102	102	97	86	99	102	100
Denied Entry Before	0	1	0	0	0	0	0	0	0	0	1
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

5: Ravenswood Ave & Marcussen Dr Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.1	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.6	0.3	0.0	0.1	0.0	1.2
Total Del/Veh (s)	9.6	3.1	1.9	0.8	33.4	28.7	3.0
Stop Delay (hr)	0.0	0.3	0.2	0.0	0.1	0.0	0.6
Stop Del/Veh (s)	7.0	1.4	0.8	0.4	31.5	28.2	1.6
Travel Dist (mi)	0.4	53.1	22.7	0.3	2.5	0.9	79.8
Travel Time (hr)	0.0	2.4	1.1	0.0	0.2	0.1	3.9
Vehicles Entered	6	706	666	8	16	6	1408
Vehicles Exited	6	705	665	8	16	6	1406
Hourly Exit Rate	6	705	665	8	16	6	1406
Input Volume	7	706	698	7	16	5	1440
% of Volume	86	100	95	110	102	114	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

6: Ravenswood Ave & Pine St Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Total Delay (hr)	0.0	0.1	1.2	0.0	0.2	0.9	2.4
Total Del/Veh (s)	16.7	0.7	6.1	3.3	108.1	153.6	5.9
Stop Delay (hr)	0.0	0.0	0.9	0.0	0.1	0.8	1.9
Stop Del/Veh (s)	15.7	0.0	4.5	2.9	106.3	152.9	4.7
Travel Dist (mi)	0.1	14.4	14.0	0.1	0.9	3.7	33.1
Travel Time (hr)	0.0	0.6	1.7	0.0	0.2	1.0	3.5
Vehicles Entered	4	713	716	5	5	20	1463
Vehicles Exited	4	712	716	5	5	20	1462
Hourly Exit Rate	4	712	716	5	5	20	1462
Input Volume	4	716	747	5	5	18	1495
% of Volume	100	99	96	100	105	110	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.1	0.2	1.1	2.9	1.9	3.1	0.3	0.4
Total Delay (hr)	1.6	5.3	0.5	0.2	2.8	0.2	5.8	4.4	1.6	1.4	3.2	0.6
Total Del/Veh (s)	69.1	29.6	25.1	34.0	15.2	14.6	105.1	97.6	103.7	78.6	82.3	82.7
Stop Delay (hr)	1.4	3.8	0.3	0.2	2.3	0.2	5.3	4.0	1.5	1.3	3.0	0.6
Stop Del/Veh (s)	62.2	21.4	18.7	31.8	12.5	13.7	96.4	88.5	96.6	74.0	75.9	78.7
Travel Dist (mi)	6.4	51.7	5.2	0.7	22.2	1.7	27.7	22.1	8.1	18.3	39.5	7.9
Travel Time (hr)	1.8	7.0	0.7	0.2	3.6	0.3	6.8	5.2	2.0	2.1	4.6	0.9
Vehicles Entered	79	636	64	20	665	52	188	154	55	63	135	27
Vehicles Exited	78	636	64	21	665	52	191	155	55	63	137	28
Hourly Exit Rate	78	636	64	21	665	52	191	155	55	63	137	28
Input Volume	80	640	64	22	689	57	191	152	57	58	140	24
% of Volume	98	99	100	97	97	91	100	102	96	109	98	115
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: Laurel St & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	0.3
Denied Del/Veh (s)	0.5
Total Delay (hr)	27.6
Total Del/Veh (s)	45.6
Stop Delay (hr)	23.9
Stop Del/Veh (s)	39.6
Travel Dist (mi)	211.6
Travel Time (hr)	35.3
Vehicles Entered	2138
Vehicles Exited	2145
Hourly Exit Rate	2145
Input Volume	2174
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

8: Ringwood Ave & High school Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	0.4	3.5	0.0	0.0	0.0	0.4
Total Delay (hr)	0.1	0.4	0.1	0.0	0.2	0.0	0.1	0.9
Total Del/Veh (s)	5.0	3.2	1.5	0.5	14.7	5.9	6.3	3.2
Stop Delay (hr)	0.0	0.1	0.1	0.0	0.2	0.0	0.1	0.4
Stop Del/Veh (s)	2.1	0.6	0.6	0.1	13.7	5.0	6.5	1.5
Travel Dist (mi)	3.6	27.4	36.1	6.6	0.9	0.0	0.8	75.3
Travel Time (hr)	0.3	1.6	1.4	0.3	0.2	0.0	0.1	3.9
Vehicles Entered	58	445	314	58	44	1	41	961
Vehicles Exited	58	445	314	58	44	1	41	961
Hourly Exit Rate	58	445	314	58	44	1	41	961
Input Volume	62	480	308	54	43	2	39	986
% of Volume	94	93	102	107	102	67	106	97
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0

19: Caltrain & Ravenswood Ave Performance by movement

Movement	EBT	WBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0
Total Delay (hr)	6.9	0.7	7.6
Total Del/Veh (s)	23.3	3.1	14.3
Stop Delay (hr)	6.5	0.6	7.0
Stop Del/Veh (s)	21.9	2.3	13.2
Travel Dist (mi)	81.0	16.1	97.0
Travel Time (hr)	10.7	1.4	12.1
Vehicles Entered	1054	852	1906
Vehicles Exited	1056	852	1908
Hourly Exit Rate	1056	852	1908
Input Volume	1062	872	1935
% of Volume	99	98	99
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.2	0.1	0.0	0.0	0.0	0.9	8.5	3.7	0.1	0.1	0.0
Denied Del/Veh (s)	2.2	2.9	4.4	0.0	0.0	0.0	23.9	22.1	22.7	2.5	0.3	0.4
Total Delay (hr)	1.3	7.5	1.9	9.7	4.7	0.6	4.0	25.9	8.4	4.2	9.8	0.4
Total Del/Veh (s)	87.5	91.2	76.9	65.9	66.2	27.1	110.2	65.7	50.3	85.6	33.6	29.9
Stop Delay (hr)	1.2	6.8	1.7	9.0	4.3	0.6	3.6	20.6	7.1	3.8	7.7	0.3
Stop Del/Veh (s)	80.7	83.1	70.9	60.9	60.5	24.6	98.5	52.2	42.7	78.3	26.4	25.4
Travel Dist (mi)	5.1	29.2	8.6	38.6	18.5	6.3	19.4	206.8	88.3	20.5	122.5	5.1
Travel Time (hr)	1.5	8.7	2.3	11.3	5.3	0.9	5.6	41.3	15.5	5.0	14.0	0.6
Vehicles Entered	51	292	86	520	248	84	129	1377	590	173	1026	43
Vehicles Exited	52	293	87	521	249	85	128	1374	588	173	1025	43
Hourly Exit Rate	52	293	87	521	249	85	128	1374	588	173	1025	43
Input Volume	48	292	86	528	260	85	132	1394	597	173	1021	44
% of Volume	108	100	101	99	96	100	97	99	98	100	100	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	1	4	2	0	0	0

23: El Camino Real & Ravenswood Ave Performance by movement

Movement	All
Denied Delay (hr)	13.7
Denied Del/Veh (s)	10.6
Total Delay (hr)	78.2
Total Del/Veh (s)	59.6
Stop Delay (hr)	66.6
Stop Del/Veh (s)	50.8
Travel Dist (mi)	568.9
Travel Time (hr)	112.2
Vehicles Entered	4619
Vehicles Exited	4618
Hourly Exit Rate	4618
Input Volume	4661
% of Volume	99
Denied Entry Before	0
Denied Entry After	7

33: High school Performance by movement

Movement	NBT	SBT	All
Denied Delay (hr)	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.1
Total Delay (hr)	0.1	0.0	0.1
Total Del/Veh (s)	3.4	1.3	2.5
Stop Delay (hr)	0.1	0.0	0.1
Stop Del/Veh (s)	2.4	0.2	1.5
Travel Dist (mi)	2.5	14.4	16.9
Travel Time (hr)	0.3	0.5	0.8
Vehicles Entered	120	86	206
Vehicles Exited	120	85	205
Hourly Exit Rate	120	85	205
Input Volume	120	82	202
% of Volume	100	103	102
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

35: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.4	0.2	0.7
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	25.0	28.1	1.7
Total Delay (hr)	0.3	0.0	0.0	2.5	4.3	1.9	9.1
Total Del/Veh (s)	1.7	0.9	14.6	13.6	241.9	216.8	21.9
Stop Delay (hr)	0.1	0.0	0.0	1.7	4.3	1.9	8.0
Stop Del/Veh (s)	0.4	0.3	10.4	9.0	242.7	219.4	19.3
Travel Dist (mi)	42.4	2.7	0.5	50.5	5.1	2.6	103.8
Travel Time (hr)	1.8	0.1	0.0	4.3	4.9	2.2	13.3
Vehicles Entered	672	43	6	665	60	31	1477
Vehicles Exited	673	43	6	666	59	29	1476
Hourly Exit Rate	673	43	6	666	59	29	1476
Input Volume	675	40	7	696	59	29	1506
% of Volume	100	108	83	96	100	100	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	1	0	1

36: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.4	0.0	0.0	0.2	0.4	0.2	1.2
Total Del/Veh (s)	2.5	1.2	6.9	1.4	33.8	28.1	3.1
Stop Delay (hr)	0.2	0.0	0.0	0.1	0.3	0.2	0.8
Stop Del/Veh (s)	1.0	0.7	5.0	0.5	31.7	27.4	2.0
Travel Dist (mi)	22.1	2.3	0.1	30.8	3.1	1.7	60.1
Travel Time (hr)	1.2	0.1	0.0	1.3	0.5	0.2	3.4
Vehicles Entered	652	67	3	630	37	20	1409
Vehicles Exited	651	67	3	630	37	20	1408
Hourly Exit Rate	651	67	3	630	37	20	1408
Input Volume	654	67	3	662	39	20	1446
% of Volume	99	100	100	95	95	101	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

38: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	WBR	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.2	0.1	0.1
Total Delay (hr)	0.3	0.1	4.1	0.2	0.1	0.2	5.2
Total Del/Veh (s)	1.8	1.1	17.8	15.7	4.6	32.3	9.0
Stop Delay (hr)	0.1	0.0	3.2	0.2	0.1	0.2	3.9
Stop Del/Veh (s)	0.6	0.4	14.0	13.0	4.1	32.0	6.8
Travel Dist (mi)	12.6	7.3	51.3	3.3	4.2	1.1	79.7
Travel Time (hr)	0.8	0.6	6.2	0.4	0.4	0.3	8.7
Vehicles Entered	667	388	830	54	111	26	2076
Vehicles Exited	667	387	831	53	111	25	2074
Hourly Exit Rate	667	387	831	53	111	25	2074
Input Volume	673	389	852	54	108	25	2101
% of Volume	99	99	98	99	103	101	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

42: Laurel St Performance by movement

Movement	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.2	0.0	0.0	0.1	0.4
Total Del/Veh (s)	2.1	1.1	5.7	2.3	2.2
Stop Delay (hr)	0.2	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	1.5	1.0	2.2	0.2	1.1
Travel Dist (mi)	26.2	1.4	1.7	31.1	60.4
Travel Time (hr)	1.1	0.1	0.1	1.3	2.5
Vehicles Entered	391	21	11	214	637
Vehicles Exited	391	21	11	214	637
Hourly Exit Rate	391	21	11	214	637
Input Volume	393	20	12	217	642
% of Volume	99	106	90	99	99
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

44: Laurel St Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.3	0.2	0.0	0.0	0.2
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Total Del/Veh (s)		3.7	0.5	0.0	7.0	0.4	0.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		3.8	0.1	0.0	4.1	0.0	0.1
Travel Dist (mi)	0.0	0.0	11.1	0.0	0.1	14.1	25.3
Travel Time (hr)	0.0	0.0	0.5	0.0	0.0	0.5	1.0
Vehicles Entered	0	2	410	2	1	210	625
Vehicles Exited	0	2	410	2	1	210	625
Hourly Exit Rate	0	2	410	2	1	210	625
Input Volume	1	2	411	2	2	212	630
% of Volume	0	100	100	100	50	99	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

50: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Delay (hr)	0.5	0.0	1.4	1.9
Total Del/Veh (s)	2.3	1.2	6.8	4.5
Stop Delay (hr)	0.0	0.0	1.1	1.1
Stop Del/Veh (s)	0.1	0.0	5.4	2.7
Travel Dist (mi)	26.7	1.7	16.5	44.9
Travel Time (hr)	1.4	0.1	2.0	3.5
Vehicles Entered	706	45	737	1488
Vehicles Exited	708	45	736	1489
Hourly Exit Rate	708	45	736	1489
Input Volume	710	43	766	1520
% of Volume	100	104	96	98
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

51: Ravenswood Ave Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Delay (hr)	0.1	5.6	0.0	5.7
Total Del/Veh (s)	0.4	27.7	5.7	14.1
Stop Delay (hr)	0.0	4.0	0.0	4.0
Stop Del/Veh (s)	0.0	20.0	5.7	10.0
Travel Dist (mi)	15.3	47.1	0.4	62.7
Travel Time (hr)	0.6	7.2	0.0	7.8
Vehicles Entered	718	722	4	1444
Vehicles Exited	718	721	4	1443
Hourly Exit Rate	718	721	4	1443
Input Volume	720	752	4	1476
% of Volume	100	96	100	98
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

438: Ravenswood Ave Performance by movement

Movement	EBT	EBR	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.9	0.0	0.3	0.0	1.3
Total Del/Veh (s)	5.3	2.1	1.5	24.0	3.4
Stop Delay (hr)	0.6	0.0	0.0	0.0	0.6
Stop Del/Veh (s)	3.1	1.2	0.2	23.8	1.7
Travel Dist (mi)	31.6	0.7	46.9	0.5	79.8
Travel Time (hr)	2.0	0.0	2.3	0.1	4.4
Vehicles Entered	646	15	638	6	1305
Vehicles Exited	647	15	636	6	1304
Hourly Exit Rate	647	15	636	6	1304
Input Volume	651	14	670	7	1342
% of Volume	99	105	95	83	97
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

Total Network Performance

Denied Delay (hr)	82.7
Denied Del/Veh (s)	35.1
Total Delay (hr)	371.4
Total Del/Veh (s)	151.6
Stop Delay (hr)	316.0
Stop Del/Veh (s)	129.0
Travel Dist (mi)	5378.2
Travel Time (hr)	646.3
Vehicles Entered	8314
Vehicles Exited	8292
Hourly Exit Rate	8292
Input Volume	46002
% of Volume	18
Denied Entry Before	1
Denied Entry After	158

Intersection: 1: Middlefield Road & Oak Grove Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	226	270	58	198	149	790	151	473
Average Queue (ft)	99	143	12	96	84	362	58	227
95th Queue (ft)	181	234	42	170	164	719	143	407
Link Distance (ft)		1415		1195		997		1984
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	230		50		125		135	
Storage Blk Time (%)	0	1	2	38	1	21	0	17
Queuing Penalty (veh)	0	1	3	5	11	31	1	12

Intersection: 2: Middlefield Road & Ravenswood Ave

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	332	170	465	462	764
Average Queue (ft)	206	117	292	212	389
95th Queue (ft)	378	242	457	443	720
Link Distance (ft)	320		444	444	997
Upstream Blk Time (%)	7		2	1	0
Queuing Penalty (veh)	46		12	6	0
Storage Bay Dist (ft)		70			
Storage Blk Time (%)	37	3			
Queuing Penalty (veh)	171	6			

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B20	B20	B46	SB
Directions Served	L	TR	LT	R	L	T	T	R	T	T	T	L
Maximum Queue (ft)	1658	1658	184	268	200	342	354	150	382	397	98	175
Average Queue (ft)	1612	1580	89	151	94	277	318	73	119	173	10	169
95th Queue (ft)	1725	1879	159	259	210	391	386	188	349	400	70	187
Link Distance (ft)	1615	1615	257	257		260	260		380	380	132	
Upstream Blk Time (%)	78	75		2		29	50		0	3	1	
Queuing Penalty (veh)	0	0		4		122	212		2	11	8	
Storage Bay Dist (ft)					175			100				125
Storage Blk Time (%)					1	43	60					54
Queuing Penalty (veh)					2	26	44					138

Intersection: 3: Middlefield Road & Ringwood Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	452	524
Average Queue (ft)	328	320
95th Queue (ft)	461	598
Link Distance (ft)	444	444
Upstream Blk Time (%)	2	8
Queuing Penalty (veh)	9	36
Storage Bay Dist (ft)		
Storage Blk Time (%)	15	
Queuing Penalty (veh)	50	

Intersection: 4: Middlefield Road & Seminary Dr

Movement	EB	EB	WB	NB	NB	NB	SB	SB	B46	B20	B20
Directions Served	LT	R	LTR	L	T	R	L	TR	T	T	
Maximum Queue (ft)	657	115	56	350	929	86	104	226	474	300	267
Average Queue (ft)	288	110	17	114	511	5	38	197	265	83	39
95th Queue (ft)	651	131	44	311	929	42	91	245	533	250	173
Link Distance (ft)	1549		992		2349			132	380	260	260
Upstream Blk Time (%)								41	11	1	1
Queuing Penalty (veh)								282	78	5	2
Storage Bay Dist (ft)		90		325		85	80				
Storage Blk Time (%)	20	32			47		2	46			
Queuing Penalty (veh)	82	45			33		11	17			

Intersection: 5: Ravenswood Ave & Marcussen Dr

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	34	179	119	61
Average Queue (ft)	3	21	18	20
95th Queue (ft)	21	136	87	52
Link Distance (ft)		348	126	828
Upstream Blk Time (%)		1	2	
Queuing Penalty (veh)		5	11	
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0	3		
Queuing Penalty (veh)	0	0		

Intersection: 6: Ravenswood Ave & Pine St

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	33	46	75	121
Average Queue (ft)	2	4	60	41
95th Queue (ft)	16	27	89	110
Link Distance (ft)		64	58	992
Upstream Blk Time (%)		0	35	
Queuing Penalty (veh)		2	264	
Storage Bay Dist (ft)	50			
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	1	0		

Intersection: 7: Laurel St & Ravenswood Ave

Movement	EB	EB	B27	B27	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T		L	TR	L	TR	L	TR
Maximum Queue (ft)	109	457	280	250	80	144	120	704	134	375
Average Queue (ft)	65	343	87	45	19	136	100	396	76	200
95th Queue (ft)	119	551	251	181	58	155	151	705	156	350
Link Distance (ft)		343	239	239		133		723		1541
Upstream Blk Time (%)		16	3	1		39		3		
Queuing Penalty (veh)		130	12	6		300		11		
Storage Bay Dist (ft)	85				70		95		110	
Storage Blk Time (%)	8	31			0	46	36	44	3	36
Queuing Penalty (veh)	57	25			3	10	73	84	5	21

Intersection: 8: Ringwood Ave & High school

Movement	EB	WB	WB	SB
Directions Served	LT	T	R	LR
Maximum Queue (ft)	218	119	20	73
Average Queue (ft)	41	8	1	36
95th Queue (ft)	139	71	17	63
Link Distance (ft)	257	605		65
Upstream Blk Time (%)	0			1
Queuing Penalty (veh)	0			1
Storage Bay Dist (ft)			135	
Storage Blk Time (%)		0	0	
Queuing Penalty (veh)		0	0	

Intersection: 19: Caltrain & Ravenswood Ave

Movement	EB	EB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	321	341	58	54
Average Queue (ft)	149	183	23	21
95th Queue (ft)	333	375	64	60
Link Distance (ft)	318	318	38	38
Upstream Blk Time (%)	0	2	13	11
Queuing Penalty (veh)	2	13	59	46
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Background + Variant PM

05/31/2024

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	493	249	300	339	330	160	345	819	794	775	265	553
Average Queue (ft)	273	195	214	236	220	73	225	619	585	412	202	349
95th Queue (ft)	483	283	321	350	354	184	419	895	882	880	318	504
Link Distance (ft)	527			318	318			792	792	792		621
Upstream Blk Time (%)	3		0	3	5			10	12	12		0
Queuing Penalty (veh)	0		0	12	21			0	0	0		0
Storage Bay Dist (ft)		225	275			135	320				240	
Storage Blk Time (%)	18	12	1	7	29	0	1	37			6	19
Queuing Penalty (veh)	42	24	4	17	25	0	6	48			30	33

Intersection: 23: El Camino Real & Ravenswood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	486
Average Queue (ft)	302
95th Queue (ft)	439
Link Distance (ft)	621
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 33: High school

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	67	19
Average Queue (ft)	35	1
95th Queue (ft)	54	13
Link Distance (ft)	65	887
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 35: Ravenswood Ave

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	68	38	350	388
Average Queue (ft)	6	4	148	180
95th Queue (ft)	67	21	373	435
Link Distance (ft)	288		348	455
Upstream Blk Time (%)	0		3	10
Queuing Penalty (veh)	1		22	0
Storage Bay Dist (ft)		50		
Storage Blk Time (%)		0	19	
Queuing Penalty (veh)		0	1	

Intersection: 36: Ravenswood Ave

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	111	32	131	108
Average Queue (ft)	16	2	12	40
95th Queue (ft)	84	14	81	87
Link Distance (ft)	126		204	440
Upstream Blk Time (%)	3		0	
Queuing Penalty (veh)	18		2	
Storage Bay Dist (ft)		50		
Storage Blk Time (%)		0	2	
Queuing Penalty (veh)		0	0	

Intersection: 38: Ravenswood Ave

Movement	EB	EB	WB	B27	NB	SB
Directions Served	T	TR	TR	T	R	R
Maximum Queue (ft)	52	44	375	330	81	67
Average Queue (ft)	5	3	238	110	34	22
95th Queue (ft)	29	23	476	303	59	53
Link Distance (ft)	38	38	239	343	194	233
Upstream Blk Time (%)	2	1	23	1		
Queuing Penalty (veh)	9	4	206	6		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 42: Laurel St

Movement	NB	SB
Directions Served	TR	LT
Maximum Queue (ft)	100	74
Average Queue (ft)	11	6
95th Queue (ft)	84	41
Link Distance (ft)	297	723
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 44: Laurel St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	29	19	24
Average Queue (ft)	2	1	1
95th Queue (ft)	15	21	14
Link Distance (ft)	85	141	297
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 50: Ravenswood Ave

Movement	EB	WB
Directions Served	TR	T
Maximum Queue (ft)	54	77
Average Queue (ft)	4	68
95th Queue (ft)	37	95
Link Distance (ft)	133	64
Upstream Blk Time (%)	0	37
Queuing Penalty (veh)	1	283
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 51: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	14	299	30
Average Queue (ft)	1	259	4
95th Queue (ft)	12	366	20
Link Distance (ft)	58	288	463
Upstream Blk Time (%)	0	17	
Queuing Penalty (veh)	1	126	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 438: Ravenswood Ave

Movement	EB	WB	NB
Directions Served	TR	T	R
Maximum Queue (ft)	194	67	35
Average Queue (ft)	43	3	6
95th Queue (ft)	170	39	26
Link Distance (ft)	204	320	438
Upstream Blk Time (%)	3		
Queuing Penalty (veh)	22		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 3630

Intersection: 1: Middlefield Road & Oak Grove Avenue

Phase	1	2	4	5	6	8	9
Movement(s) Served	SBL	NBTL	EBTL	NBL	SBTL	WBTL	Ped
Maximum Green (s)	5.5	78.3	29.4	9.8	74.0	29.4	1.0
Minimum Green (s)	5.0	33.0	29.0	5.0	33.0	29.0	1.0
Recall	None	C-Max	Max	None	C-Max	Max	None
Avg. Green (s)	5.5	9.0	7.2	7.7	5.9	7.2	0.0
g/C Ratio	NA	NA	NA	NA	NA	NA	0.00
Cycles Skipped (%)	46	0	0	29	0	0	100
Cycles @ Minimum (%)	0	0	0	0	0	0	0
Cycles Maxed Out (%)	46	100	100	17	100	100	0
Cycles with Peds (%)	0	38	96	0	12	8	0

Controller Summary

Average Cycle Length (s): -12.5
Number of Complete Cycles : 23

Intersection: 2: Middlefield Road & Ravenswood Ave

Phase	1	2	3	6
Movement(s) Served	NBL	SBT	EBL	NBT
Maximum Green (s)	33.1	26.4	22.0	64.0
Minimum Green (s)	7.0	7.0	8.0	7.0
Recall	None	C-Max	Min	C-Max
Avg. Green (s)	-2.6	-2.4	-3.0	-3.5
g/C Ratio	NA	NA	NA	NA
Cycles Skipped (%)	3	0	0	0
Cycles @ Minimum (%)	0	0	19	0
Cycles Maxed Out (%)	49	100	16	100
Cycles with Peds (%)	0	11	0	0

Controller Summary

Average Cycle Length (s): -1.4
Number of Complete Cycles : 34

Intersection: 3: Middlefield Road & Ringwood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBT	WBTL	SBL	NBT	EBTL
Maximum Green (s)	12.5	66.8	59.7	37.6	41.7	33.0
Minimum Green (s)	5.0	10.0	7.0	7.0	7.0	7.0
Recall	None	C-Max	None	Ped	None	None
Avg. Green (s)	12.6	-16.8	-7.3	6.0	-11.5	-1.6
g/C Ratio	0.77	-1.10	-0.48	0.34	-0.75	-0.10
Cycles Skipped (%)	6	0	0	14	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	75	100	0	10	82	100
Cycles with Peds (%)	0	100	18	86	35	39

Controller Summary

Average Cycle Length (s): 15.2

Number of Complete Cycles : 15

Intersection: 4: Middlefield Road & Seminary Dr

Phase	2	3	4	6	7	8
Movement(s) Served	EBTL	NBL	SBT	WBTL	SBL	NBT
Maximum Green (s)	22.0	5.3	47.7	22.0	5.0	48.0
Minimum Green (s)	5.0	5.0	5.0	5.0	5.0	5.0
Recall	Max	None	C-Max	Max	None	C-Max
Avg. Green (s)	0.9	5.3	5.3	0.2	5.0	7.3
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	10	0	0	28	0
Cycles @ Minimum (%)	0	0	0	0	72	0
Cycles Maxed Out (%)	100	87	100	100	72	100
Cycles with Peds (%)	0	0	10	7	0	23

Controller Summary

Average Cycle Length (s): -6.4

Number of Complete Cycles : 27

Intersection: 7: Laurel St & Ravenswood Ave

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBTL	NBTL	EBL	WBTL	SBTL
Maximum Green (s)	5.1	93.5	36.4	9.3	89.3	26.4
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Recall	None	Min	C-Max	None	Min	Max
Avg. Green (s)	5.9	18.8	7.3	7.5	12.0	-6.4
g/C Ratio	0.05	1.16	0.45	0.31	0.74	-0.39
Cycles Skipped (%)	88	0	0	33	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	13	69	100	22	69	100
Cycles with Peds (%)	0	63	53	0	56	50

Controller Summary

Average Cycle Length (s): 16.2

Number of Complete Cycles : 16

Intersection: 23: El Camino Real & Ravenswood Ave

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBT	EBTL	WBTL	SBL	NBT
Maximum Green (s)	14.9	65.9	23.0	28.0	21.9	58.9
Minimum Green (s)	8.0	10.0	7.0	4.0	8.0	10.0
Recall	Max	C-Max	None	None	None	C-Max
Avg. Green (s)	-11.2	0.4	-5.2	0.4	-13.1	5.8
g/C Ratio	NA	NA	NA	NA	NA	NA
Cycles Skipped (%)	0	0	0	0	16	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	71	92	24	100
Cycles with Peds (%)	0	55	0	71	0	23

Controller Summary

Average Cycle Length (s): -13.8

Number of Complete Cycles : 20