

Traffic Memorandum

To: Brandon Cohen
Abrika Properties, LLC
8250 SW 27th Avenue
Ocala, FL 34476

From: Kari J. McDowell Schroeder, PE, PTOE

Date: October 16, 2020
Revised March 26, 2021

Re: **Haymeadow School Site Swap – Traffic Memo**
Eagle, Colorado

Abrika Properties, the developer of Haymeadow, is proposing to swap two land uses internal to the Haymeadow site. The development's current school site is located adjacent to the Town of Eagle's Pool and Ice Rink facility, on the northwest corner of the Haymeadow site. The applicant is proposing to swap the location of the school site with 112 multifamily units located northeast of Brush Creek Road and Ouzel Lane. The Town Park use will remain adjacent to the Pool and Ice Rink facility. **Figure 1** shows the site location of the proposed land use swap.

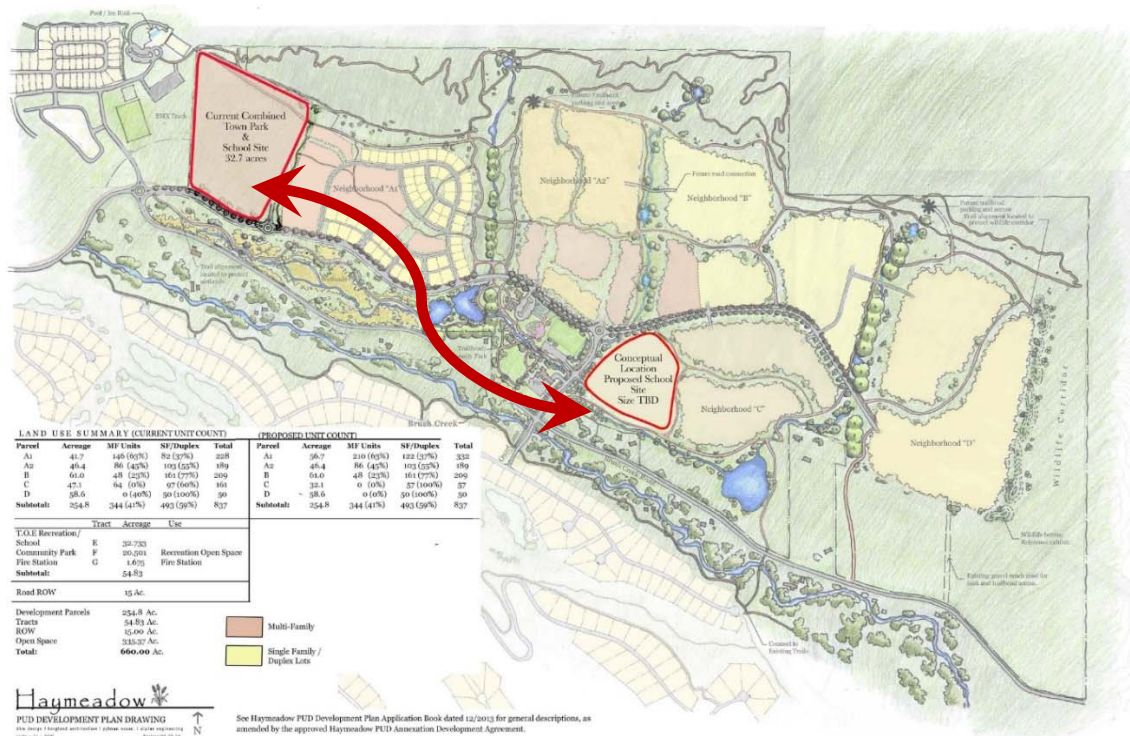


Figure 1: Proposed Land Use Swap

Project Background

The Town of Eagle previously approved a Transportation Impact Study (TIS¹) for the Haymeadow development. Data and recommendations from this TIS¹ are referenced in this analysis of traffic impacts from the proposed school site swap.

Trip Generation Impacts

The anticipated trip generation for each site was taken from the TIS¹. Refer to **Table 1**.

Table 1: Original Trip Generation Analysis from TIS¹

Haymeadow Traffic Study



Table 2. Trip Generation Estimate for the Haymeadow Development and the Recreation Facility

Parcel	ITE Code	Land Use	Size	Unit	Trip Reduction Factors			Average Daily Trips			External A.M. Peak Hour Trips				External P.M. Peak Hour Trips			
					Multi-Modal	Internal Trips and Multi-Purpose Trips	Pass-By	Rate	Total Trips with No Trip Reductions	Total External Trips With Trip Reductions	Rate	Total	In	Out	Rate	Total	In	Out
School	520/522	K - 8 School (4)	600	Students	0.10	0.375	0.00	1.36	816	459	0.47	159	87	72	0.15	51	25	26
A1	210	Single Family Detached	67	Dwelling Units	0.05	0.05	0.00	9.57	641	579	0.75	45	11	34	1.01	61	38	23
A1	230	Townhome / Condo / Apt	140	Dwelling Units	0.05	0.05	0.00	5.86	820	740	0.44	56	9	47	0.52	66	44	22
A1	(2)	Accessory Dwelling Units	10	Dwelling Units	0.05	0.05	0.00	5.86	59	53	0.44	4	1	3	0.52	5	3	2
A1		Subtotal Parcel A1:	217						1,520	1,372		105	21	84		132	85	47
A2	210	Single Family Detached	90	Dwelling Units	0.05	0.05	0.00	9.57	861	777	0.75	61	15	46	1.01	82	52	30
A2	230	Townhome / Condo / Apt	93	Dwelling Units	0.05	0.05	0.00	5.86	545	492	0.44	37	6	31	0.52	44	29	15
A2	(2)	Accessory Dwelling Units	13	Dwelling Units	0.05	0.05	0.00	5.86	76	69	0.44	5	1	4	0.52	6	4	2
A2		Subtotal Parcel A2:	196						1,482	1,338		103	22	81		132	85	47
B	210	Single Family Detached	147	Dwelling Units	0.05	0.05	0.00	9.57	1,407	1,270	0.75	100	25	75	1.01	134	84	50
B	230	Townhome / Condo / Apt	48	Dwelling Units	0.05	0.05	0.00	5.86	281	254	0.44	19	3	16	0.52	23	15	8
B	(2)	Accessory Dwelling Units	22	Dwelling Units	0.05	0.05	0.00	5.86	129	116	0.44	9	1	8	0.52	10	7	3
B		Subtotal Parcel B:	217						1,817	1,640		128	29	99		167	106	61
C	210	Single Family Detached	88	Dwelling Units	0.05	0.05	0.00	9.57	842	760	0.75	60	15	45	1.01	80	50	30
C	230	Townhome / Condo / Apt	64	Dwelling Units	0.05	0.05	0.00	5.86	375	338	0.44	25	4	21	0.52	30	20	10
C	(2)	Accessory Dwelling Units	13	Dwelling Units	0.05	0.05	0.00	5.86	76	69	0.44	5	1	4	0.52	6	4	2
C		Subtotal Parcel C:	165						1,293	1,167		90	20	70		116	74	42
D	210	Single Family Detached	50	Dwelling Units	0.05	0.05	0.00	9.57	479	432	0.75	34	9	25	1.01	46	29	17
D	230	Townhome / Condo / Apt	0	Dwelling Units	0.05	0.05	0.00	5.86	0	0	0.44	0	0	0	0.52	0	0	0
D	(2)	Accessory Dwelling Units	8	Dwelling Units	0.05	0.05	0.00	5.86	47	42	0.44	3	0	3	0.52	4	3	1
D		Subtotal Parcel D:	58						526	474		37	9	28		50	32	18
Civic	412	Community Park (3)	13	Acres	0.15	0.50	0.00	2.28	30	13	0.01	0	0	0	0.06	0	0	0
Civic	(1)	Fire Station	2	Acres	0.00	0.00	0.00	10.00	20	20	2.00	4	3	1	2.00	4	1	3
Total External Haymeadow Trip Ends:									7,504	6,483		626	191	435		652	408	244
T.O.E. Rec.	495	Recreation Community Center	68	1,000 sq. ft.	0.10	0.10	0.00	14.00	952	771	1.62	89	54	35	1.45	80	30	50
T.O.E. Rec.	488	Soccer Complex	3	Fields	0.10	0.10	0.00	71.33	214	173	1.40	3	2	1	20.67	50	35	15
Total External Recreation Facility Trip Ends:									1,166	944		92	56	36		130	65	65
Total External Trips From Both Sites:									8,670	7,427		718	247	471		782	473	309

Total Single Family DUs:	442
Total Multi-Family DUs:	345
Total Accessory DUs:	66
Total DUs:	853

Notes:

1. No ITE information available. Trip rate for Fire Station estimated for normal daily activity (not a fire event) assuming some resident fire fighters on-site..
2. To be conservative, Accessory Dwelling Units are assumed to be similar to apartment units from a trip generation perspective.
3. Community Park will not likely host a significant event during weekday peak hours
4. ITE school rates have been prorated as follows: 78% Elementary and 22% Middle School / Junior High School

A comparison of the sites to be swapped results in a net increase of daily trips for Neighborhood A. However, peak morning hourly trips are anticipated to be higher at the new school site. A comparison of the trip generation is included in **Table 2**. These trip generation calculations are based upon ITE's national

trip generation methods³. Reductions were already taken in the TIS for the school site's multimodal (pedestrian and bicycle), internal Haymeadow trips, and multi-purpose trips.

Table 2: Summary of Original and Proposed Trips

Time	Weekday Trips (vpd)	Peak AM Trips Inbound (vph)	Peak AM Trips Outbound (vph)	Peak PM Trips Inbound (vph)	Peak PM Trips Outbound (vph)
Neighborhood A					
Original – School Site	-459	-87	-72	-25	-26
Proposed – 112 Multifamily	+592	+7	+37	+35	+18
Difference	+133	-80	-35	+10	-8
Neighborhood B & C					
Original – 112 Multifamily	-592	-7	-37	-35	-18
Proposed – School Site	+459	+87	+72	+25	+26
Difference	-133	+80	+35	-10	+8

vpd = vehicles per day; vph = vehicles per hour

The proposed land use swap results in the following changed in traffic patterns.

- Neighborhood A
 - o Net increase in daily trips of 133vpd. This increase is caused because residential units are more likely to travel throughout the day than school traffic. This daily traffic increase will not be as noticeable as hourly traffic increases.
 - o Decrease of 115vph in morning traffic. This is because residential traffic is less intensive in the morning than school traffic.
 - o Comparable (+2vph) evening peak hour traffic.
- Neighborhood B & C
 - o Net decrease in daily trips of 133vpd.
 - o Increase in morning traffic due to the school drop-off peak traffic. This is typically an intensive travel time for 20 – 30 minutes before school starts.
 - Extra 80vph inbound to the school.
 - Extra 35 vph leaving after school drop off.
 - o Comparable (-2vph) evening peak hour traffic.

School Site Walkability

Most Safe Routes to School practitioners agree that a half mile is as far as most kindergarteners will walk happily and a mile is a reasonable length for older elementary school kids.⁴ The applicant produced a walkability diagram based upon the conservative half mile walking distance to both school site locations. This document is included as an attachment to this memorandum.

Table 3: School Site Walkability

School Site Location	Residential Parcels within ½ Mile
Original – School Site	462
Proposed – School Site	625

The proposed school site will serve more residential lots within the half mile walking distance. Therefore, more pedestrian and bicycle traffic is anticipated to utilize alternate modes of transportation. To be conservative, the multimodal reductions that were applied to the original school site analysis in the original TIS¹ were used in this analysis as well.

Haymeadow Internal Roadway Network Impact

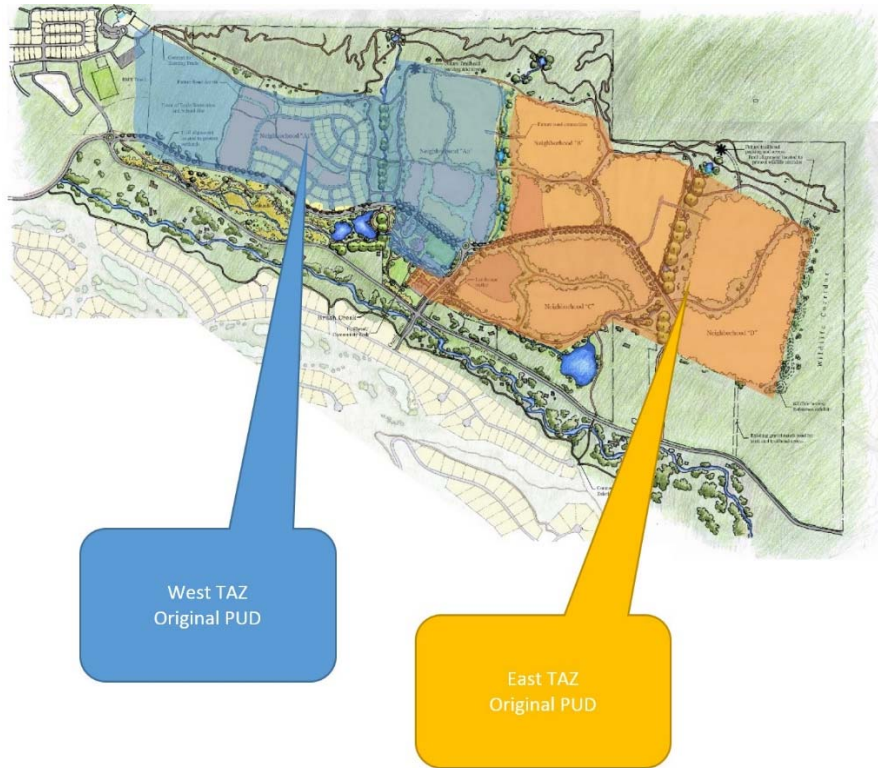
The Town of Eagle requested additional traffic analysis to augment the trip generation analysis and original TIS¹. This analysis adds internal roadway network modeling to the TIS¹, which primarily focused on external roadway network evaluation. The analysis also compares the original PUD land use locations to the proposed school site swap.

Traffic Analysis Zones (TAZs):

The proposed Haymeadow site was divided into Traffic Analysis Zones (TAZs) based upon whether the parcels' primary access was located north/east or south/west of the Sylvan Lake Road and Ouzel Lane intersection. The cabin wedding/event site was given its own TAZ.

For the school site swap alternative, separate TAZs were used to compare the impacts of the new land use locations.

Original PUD Traffic Analysis Zones



School Site Swap PUD Traffic Analysis Zones

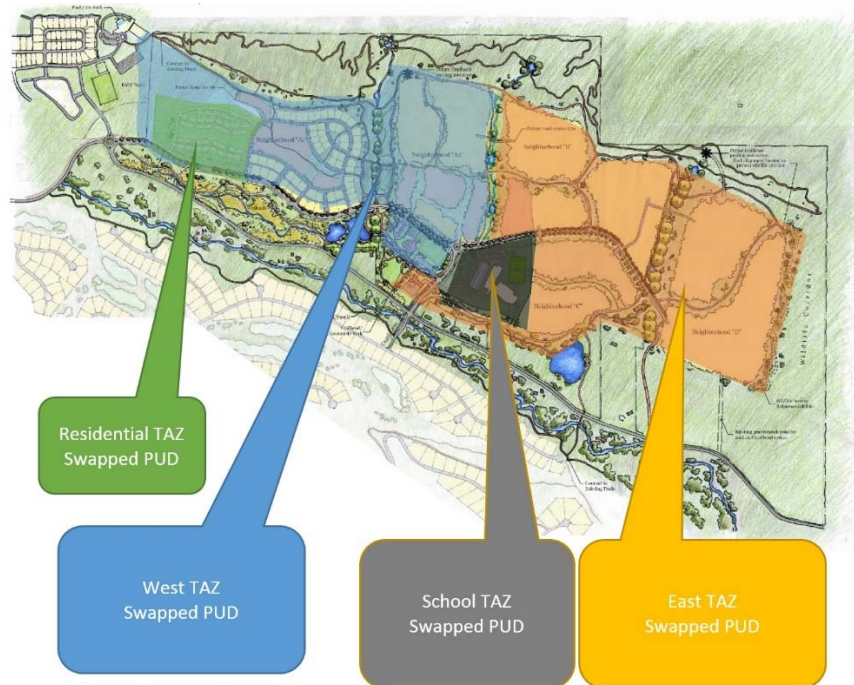


Figure 2: Proposed Land Use Swap

Project-Traffic Distribution:

Project-traffic distribution was applied to five TAZ scenarios. The distributions were based upon the overall distributions from the original TIS¹. Traffic was distributed to the site accesses relative to the anticipated total traffic percentage of each parcel to the entire TAZ. The site access to Neighborhood A1 was conservatively assumed to have a single access – meaning all of the A1 traffic was applied to a single access. With two accesses, the traffic at each access will be less and will operate better. These figures are included as an attachment to this memorandum.

1. West TAZ - Original PUD (**Figure 3**)
2. East TAZ - Original PUD (**Figure 4**)
3. West TAZ – School Swap PUD (**Figure 5**)
4. East TAZ – School Swap PUD (**Figure 6**)
5. Relocated School TAZ – School Swap PUD (**Figure 7**)
6. Cabin TAZ – Wedding/Events (**Figure 8**)

Project-Traffic Assignment:

The directional distribution for each TAZ was applied to the anticipated trip generation for both scenarios. The cabin's wedding/event traffic was added to both scenarios. This results in the project-traffic assignment at each access. These figures are included as an attachment to this memorandum.

1. Original PUD Traffic Assignment (**Figure 9**)
2. School Swap PUD Traffic Assignment (**Figure 10**)

Background Traffic:

Traffic data was collected at the intersection of Brush Creek Road and Ouzel Lane on Thursday, February 25, 2021. Turning movement counts were collected from 7-9am and 4-6pm. This information was used to forecast traffic volumes on Brush Creek Road. Year 2020 background traffic is shown in **Figure 11**.

Brush Creek Road, Ouzel Lane, and Sylvan Lake Road traffic was forecasted per the Town of Eagle's anticipated buildout projections² for the Brush Creek Road travel shed. This information was used to determine the anticipated Year 2040 Background Traffic. This information is depicted in **Figure 12**.

Total Traffic:

Total Year 2040 traffic was calculated by adding the Year 2040 Background Traffic (**Figure 12**) to the Project-Traffic Assignment (**Figure 9** for the Original PUD, and **Figure 10** for the proposed School Swap PUD.)

1. Year 2040 Total Traffic - Original PUD (**Figure 13**)
2. Year 2040 Total Traffic - School Swap PUD (**Figure 14**)

Transportation Infrastructure Impacts and Recommendations

The additional traffic from the school's morning drop-off will reduce traffic on Sylvan Lake Road, east of Ouzel Lane. The swap will increase traffic on Ouzel Lane. Detailed calculations are included in **Figure 13** and **Figure 14**.

Table 4: Traffic Analysis Scenarios

Land Use Configuration	Sylvan Lake Road and Brush Creek Road Roundabout	Sylvan Lake Road and Access #2	Sylvan Lake Road and Access #3	Sylvan Lake Road and Ouzel Lane	Brush Creek Road and Ouzel Lane
Impact					
Original PUD	+ More traffic	+ More traffic	+ More traffic	- Less traffic	- Less traffic
Proposed School Site Swap	- Less traffic	- Less traffic	- Less traffic	+ More traffic	+ More traffic

Anticipated Intersection Level of Service:

Synchro and Rodent modeling were performed on the analysis intersections using *Highway Capacity Manual*⁵ methodology. This yields an intersection Level of Service (LOS) based upon the anticipated vehicular delay in Year 2040 total traffic conditions during the morning and evening peak hours.

All intersections are anticipated to operate at acceptable Levels of Service through Year 2040 total traffic conditions. Detailed reports of these analyses and results are included as an attachment to this memorandum.

The interim configuration of the two-legged roundabout at Brush Creek Road and the future Sylvan Lake Road will operate at acceptable Levels of Service for the foreseeable future. The applicant will work with the Town of Eagle to determine the appropriate threshold for the completion of the four-legged roundabout.

Auxiliary Turn Lane Analysis:

The Town of Eagle defers to the *State Highway Access Code*⁶ for determining auxiliary turn lane requirements at intersections and accesses. Auxiliary turn lanes will be required at the following locations to accommodate the anticipated traffic volume.

1. Brush Creek Road and Ouzel Lane – Eastbound Left Turn Lane
2. Brush Creek Road and Cabin Access – Eastbound Left Turn Lane

The posted speed limit of Brush Creek Road at these accesses is 40mph. Per the *State Highway Access Code*⁶, these left turn lanes will require:

- 12' lanes
- 16' center turn lane (12' lane with 4' striped median)
- 2' gravel shoulder for the length of the improvements
- 50' of storage for the left turn bay
- 12:1 Transition taper ratio
- 30:1 Redirect taper ratio

The turn lane recommendations are the same with or without the proposed school site swap.

Sylvan Lake Road Design:

The Sylvan Lake Road extension into the Haymeadow property was adequately designed with two 11' wide travel lanes and a 5-foot-wide paved shoulder on each side to serve as on-street bike lanes. The Sylvan Lake Road corridor will also include a separated 10-foot-wide bicycle/pedestrian path. This path will connect to the existing trails and sidewalks to the new Haymeadow development.

Future School Site Development:

The future school site should be designed to accommodate the anticipated queues within the school property. The configuration of the school site circulation will directly impact operations and travel on the adjacent street network. The school's proposed circulation and operations should be reviewed by the Town's Traffic Engineer.

Conclusion

Haymeadow's proposed roadway network will accommodate the anticipated Year 2040 traffic volumes with either school site location.

Please call if you would like any additional information or have any questions regarding this matter.

Sincerely,
McDowell Engineering, LLC



Kari J. McDowell, PE, PTOE
Senior Traffic & Transportation Engineer

References:

1. *Haymeadow Transportation Impact Study*. Fox Tuttle Transportation Group, LLC. August 15, 2013.
2. *Town of Eagle's Anticipated Land Use Buildout on Brush Creek Road Travel Shed - Brush Creek Road Extension Corridor Study*. McDowell Engineering, October 14, 2020.
3. *Trip Generation, 8th Edition*. Institute of Transportation Engineers, 2008.
4. *Too Far to Walk?* Safe Routes Partnership, May 22, 2018.
5. *Highway Capacity Manual, 6th Edition*. Transportation Research Board, 2016.
6. *State Highway Access Code Volume 2, Code of Colorado Regulations 601-1*. State of Colorado, March 2002.

Enclosed:

1. Trip Generation Calculations
2. School Site Walkability Diagram
3. Project-Traffic Distribution Figures by TAZ
4. Project-Traffic Assignment Figures by Scenario
5. Year 2020 Background Traffic Figure
6. Year 2040 Background Traffic Figure
7. Year 2040 Total Traffic for the Original PUD
8. Year 2040 Total Traffic for the Proposed School Site Swap PUD

9. Intersection Level of Service Table
10. Synchro Unsignalized Intersection Reports
11. Rodel Roundabout Reports

ORIGINAL 2013 Haymeadow TIS – Trip Generation Calculations

Table 2. Trip Generation Estimate for the Haymeadow Development and the Recreation Facility

Parcel	ITE Code	Land Use	Size	Unit	Trip Reduction Factors			Average Daily Trips			External A.M. Peak Hour Trips				External P.M. Peak Hour Trips			
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D	210	Single Family Detached	50	Dwelling Units	0.05	0.05	0.00	9.57	479	432	0.75	34	9	25	1.01	46	29	17
D	230	Townhome / Condo / Apt	0	Dwelling Units	0.05	0.05	0.00	5.86	0	0	0.44	0	0	0	0.52	0	0	0
D	(2)	Accessory Dwelling Units	8	Dwelling Units	0.05	0.05	0.00	5.86	47	42	0.44	3	0	3	0.52	4	3	1
D		Subtotal Parcel D:	58						526	474		37	9	28		50	32	18
Civic	412	Community Park (3)	13	Acres	0.15	0.50	0.00	2.28	30	13	0.01	0	0	0	0.06	0	0	0
Civic	(1)	Fire Station	2	Acres	0.00	0.00	0.00	10.00	20	20	2.00	4	3	1	2.00	4	1	3
Total External Haymeadow Trip Ends:									7,504	6,483		626	191	435		652	408	244
T.O.E. Rec.	495	Recreation Community Center	68	1,000 sq. ft.	0.10	0.10	0.00	14.00	952	771	1.62	89	54	35	1.45	80	30	50
T.O.E. Rec.	488	Soccer Complex	3	Fields	0.10	0.10	0.00	71.33	214	173	1.40	3	2	1	20.67	50	35	15
Total External Recreation Facility Trip Ends:									1,166	944		92	56	36		130	65	65
Total External Trips From Both Sites:									8,670	7,427		718	247	471		782	473	309

ORIGINAL PUD - Internal Vehicle Trips					
West TAZ Original PUD					
Land Use	Avg. Daily Trips (vpd)	AM In (vph)	AM Out (vph)	PM In (vph)	PM Out (vph)
A1, A2 ¹	2710	43	165	170	94
Add Internal and Multi-Purpose Trips ²	0.05	0.05	0.05	0.05	0.05
	2846	45	173	179	99
School ¹	459	87	72	51	25
Add Internal and Multi-Purpose Trips ²	0.375	0.375	0.375	0.375	0.375
	631	120	99	70	34
Community Park ¹	13	0	0	0	0
Add Internal and Multi-Purpose Trips ²	0.5	0.5	0.5	0.5	0.5
	20	0	0	0	0
West TAZ Traffic for Original PUD	3497	165	272	249	133
East TAZ Original PUD					
Land Use	Avg. Daily Trips (vpd)	AM In (vph)	AM Out (vph)	PM In (vph)	PM Out (vph)
B, C, D ¹	3281	58	197	212	121
Add Internal and Multi-Purpose Trips ²	0.05	0.05	0.05	0.05	0.05
West TAZ Traffic for Original PUD	3445	61	207	223	127
Fire Station ¹	20	3	1	1	3
Add Internal and Multi-Purpose Trips ²	0.0	0.0	0.0	0.0	0.0
West TAZ Traffic for Original PUD	20	3	1	1	3
West TAZ Traffic for Original PUD	3465	64	208	224	130

A

B

¹ From Original 2013 Haymeadow TIS.

² Include Internal and Multi-Purpose Trips for the internal traffic analysis in this report. McDowell's 10/2020 Memo was intended to update the Fox study which was focused on external intersection analysis. This analysis is analyzing internal Haymeadow intersections. Therefore, the internal and multi-purpose trips need to be included.

PROPOSED PUD W/ SCHOOL SITE SWAP - Internal Vehicle Trips

West TAZ Original PUD					
Land Use	Avg. Daily Trips (vpd)	AM In (vph)	AM Out (vph)	PM In (vph)	PM Out (vph)
A1, A2 ¹	2710	43	165	170	94
+112du Residential Added from Swap	592	7	37	35	18
Add Internal and Multi-Purpose Trips ²	0.05	0.05	0.05	0.05	0.05
	3467	53	212	215	118
Community Park ¹	13	0	0	0	0
Add Internal and Multi-Purpose Trips ²	0.5	0.5	0.5	0.5	0.5
	20	0	0	0	0
West TAZ Traffic for School Site Swap	3487	53	212	215	118
East TAZ Original PUD					
Land Use	Avg. Daily Trips (vpd)	AM In (vph)	AM Out (vph)	PM In (vph)	PM Out (vph)
B, C, D ¹	3281	58	197	212	121
-112du Residential Added from Swap	-592	-7	-37	-35	-18
Add Internal and Multi-Purpose Trips ²	0.05	0.05	0.05	0.05	0.05
West TAZ Traffic for Original PUD	2823	54	168	186	108
Fire Station ¹	20	3	1	1	3
Add Internal and Multi-Purpose Trips ²	0.0	0.0	0.0	0.0	0.0
West TAZ Traffic for Original PUD	20	3	1	1	3
Subtotal East TAZ Traffic for School Site Swap (without School)	6788	114	410	428	242
School ¹	459	87	72	51	25
Add Internal and Multi-Purpose Trips ²	0.4	0.4	0.4	0.4	0.4
	631	120	99	70	34
East TAZ Traffic for School Site Swap	3474	177	268	257	145

¹ From Original 2013 Haymeadow TIS.

² Include Internal and Multi-Purpose Trips for the internal traffic analysis in this report. McDowell's 10/2020 Memo was intended to update the Fox study which was focused on external intersection analysis. This analysis is analyzing internal Haymeadow intersections. Therefore, the internal and multi-purpose trips need to be included.

Haymeadow Cabin - Wedding/Event Site

Project Trip Generation

Estimated Project-Generated Traffic

Guests primarily drive themselves:

Trip Generation					Event Start				Event End				
Equation ¹					Inbound		Outbound		Inbound		Outbound		
ITE Code	Units ²		Eq. Coef	Start Peak Hour	End Peak Hour	% Trips	Trips	% Trips	Trips	% Trips	Trips	% Trips	Trips
Wedding/Special Events													
Wedding/Special Events	170 Guests		Type a= b=	Rate 0.30	Rate 0.12	100%	51	0%	0	0%	0	100%	20
Proposed Vehicle Trips (in PCEs)						51		0		0		20	

Notes:

¹ Wedding and Event venues use CDOT's Wedding venue trip generation. January 30, 2018.

² Event attendance

Guests primarily arrive by mini bus:

Trip Generation					Event Start				Event End				
Equation ¹					Inbound		Outbound		Inbound		Outbound		
ITE Code	Units ²		Eq. Coef	Start Peak Hour	End Peak Hour	% Trips	Trips	% Trips	Trips	% Trips	Trips	% Trips	Trips
Wedding/Special Events													
Wedding/Special Events 170 Guests			Type	Rate	Rate	100% 21		0% 0		0% 0		100% 7	
			a=	0.13	0.04								
			b=										
			PCE ³ Factor			2		2		2		2	
Proposed Vehicle Trips (in PCEs)						42		0		0		14	

Notes:

¹ Assumes an average of 10 guests per bus. Some vendors and wedding party will drive separately. Therefore, uses 8 guests per bus average.

² Event attendance

³ PCEs = Passenger Car Equivalents per *State Highway Access Code*

Guests primarily arrive by Coach bus:

			Trip Generation				Event Start				Event End			
			Equation ¹				Inbound		Outbound		Inbound		Outbound	
ITE Code	Units ²		Eq. Coef	Start Peak Hour	End Peak Hour		% Trips	Trips	% Trips	Trips	% Trips	Trips	% Trips	Trips
Wedding/Special Events														
Wedding/Special Events	170	Guests	Type a= b=	Rate 0.07	Rate 0.02		100%	11	0%	0	0%	0	100%	4
			PCE ³ Factor					3		3		3		
Proposed Vehicle Trips (in PCEs)							33		0		0		12	

Notes:

¹ Assumes an average of 20 guests per bus. Some vendors and wedding party will drive separately. Therefore, uses 15 guests per bus average.

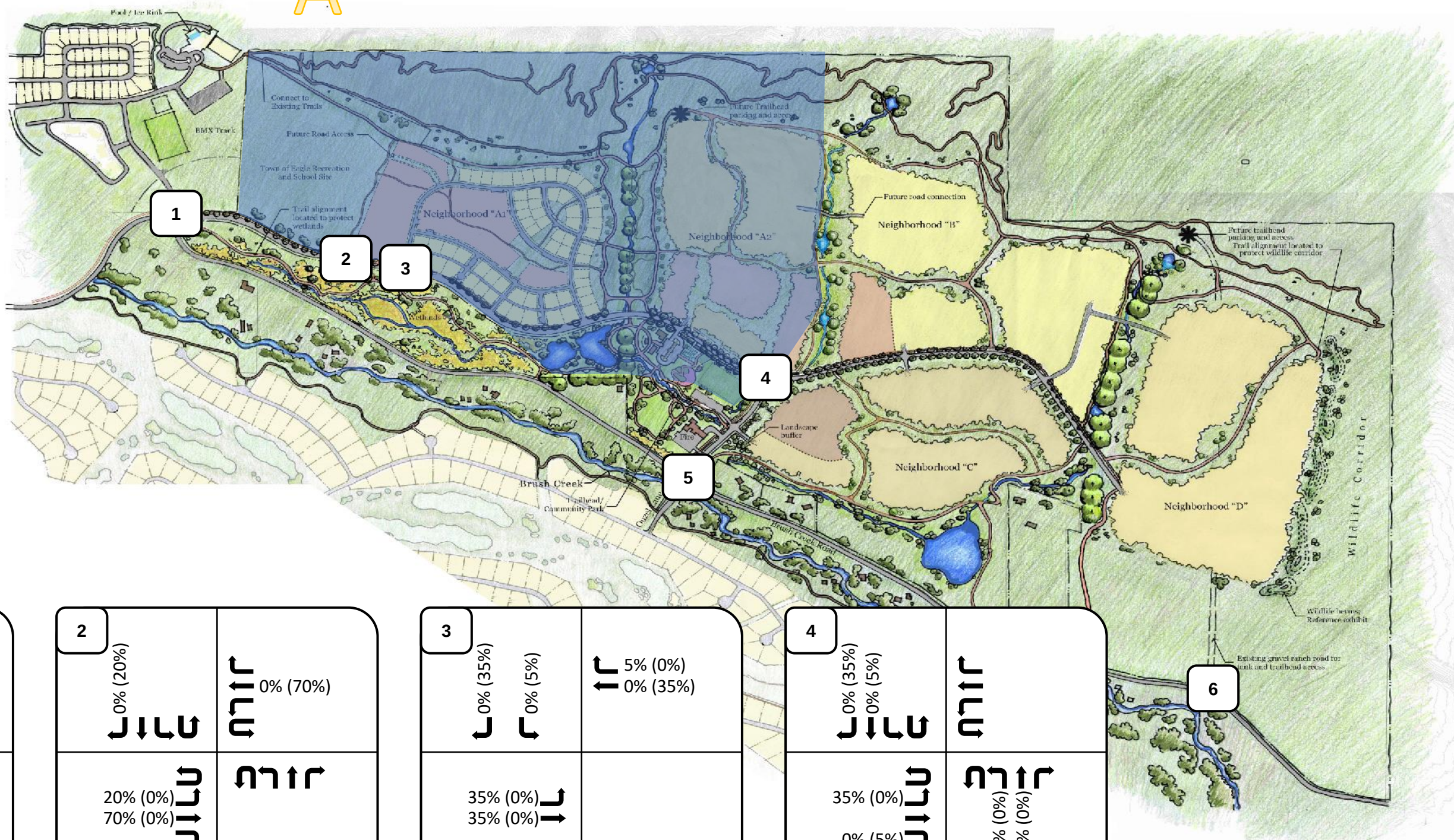
² Event attendance

³ PCEs = Passenger Car Equivalents per *State Highway Access Code*

F

Figure 3: West TAZ Original PUD Distribution

A



1	45% (0%) ↙ ↘ ↕	↕ ↙ ↘ ↕
	45% (0%) ↙ ↘ ↕	↕ ↙ ↘ ↕

2	0% (20%) ↙ ↘ ↕	↕ ↙ ↘ ↕
	20% (0%) 70% (0%) ↙ ↘ ↕	↕ ↙ ↘ ↕

3	0% (35%) ↙ ↘ ↕	↕ ↙ ↘ ↕
	35% (0%) 35% (0%) ↙ ↘ ↕	↕ ↙ ↘ ↕

4	0% (35%) ↙ ↘ ↕	↕ ↙ ↘ ↕
	35% (0%) 0% (5%) ↙ ↘ ↕	↕ ↙ ↘ ↕

5	0% (3%) ↙ ↘ ↕	↕ ↙ ↘ ↕
	3% (0%) ↙ ↘ ↕	↕ ↙ ↘ ↕

6	↙ ↘ ↕	↕ ↙ ↘ ↕
	0% (1%) ↙ ↘ ↕	↕ ↙ ↘ ↕

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements

↕

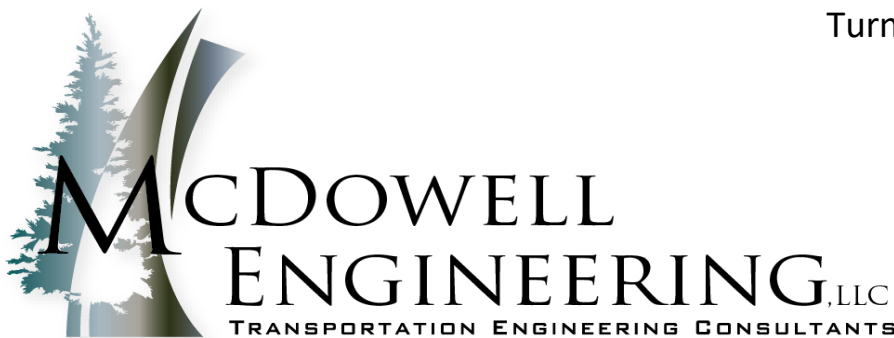


Figure 4: East TAZ Original PUD Distribution

B



1	40% (0%) ↙ ↘ ↕	↙ ↘ ↕ 0% (40%) 0% (40%)
	40% (0%) ↙ ↘ ↕	↙ ↘ ↕

2	↙ ↘ ↕	↙ ↘ ↕ 0% (80%)
	80% (0%) ↙ ↘ ↕	↙ ↘ ↕

3	↙ ↘ ↕	↙ ↘ ↕ 0% (80%)
	80% (0%) ↙ ↘ ↕	

4	↙ ↘ ↕	↙ ↘ ↕ 0% (70%) 0% (15%)
	70% (0%) 10% (0%) ↙ ↘ ↕	↙ ↘ ↕ 0% (10%) 15% (0%)

5	0% (13%) 0% (6%) 0% (1%) ↙ ↘ ↕	↙ ↘ ↕ 1% (0%)
	13% (0%) ↙ ↘ ↕	↙ ↘ ↕ 6% (0%)

6	↙ ↘ ↕	↙ ↘ ↕ 1% (0%)
	0% (1%) ↙ ↘ ↕	

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements ↙ ↘ ↕

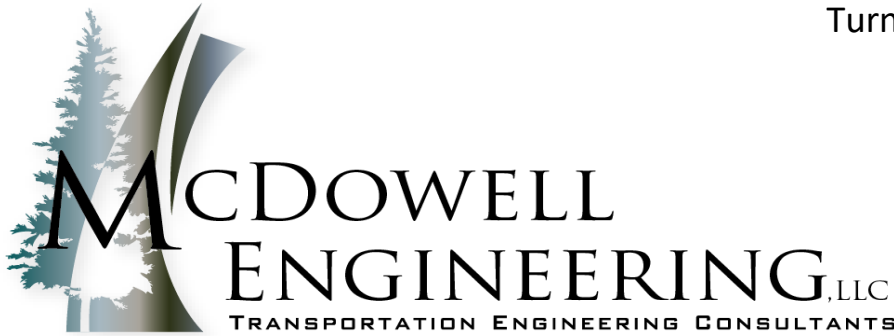
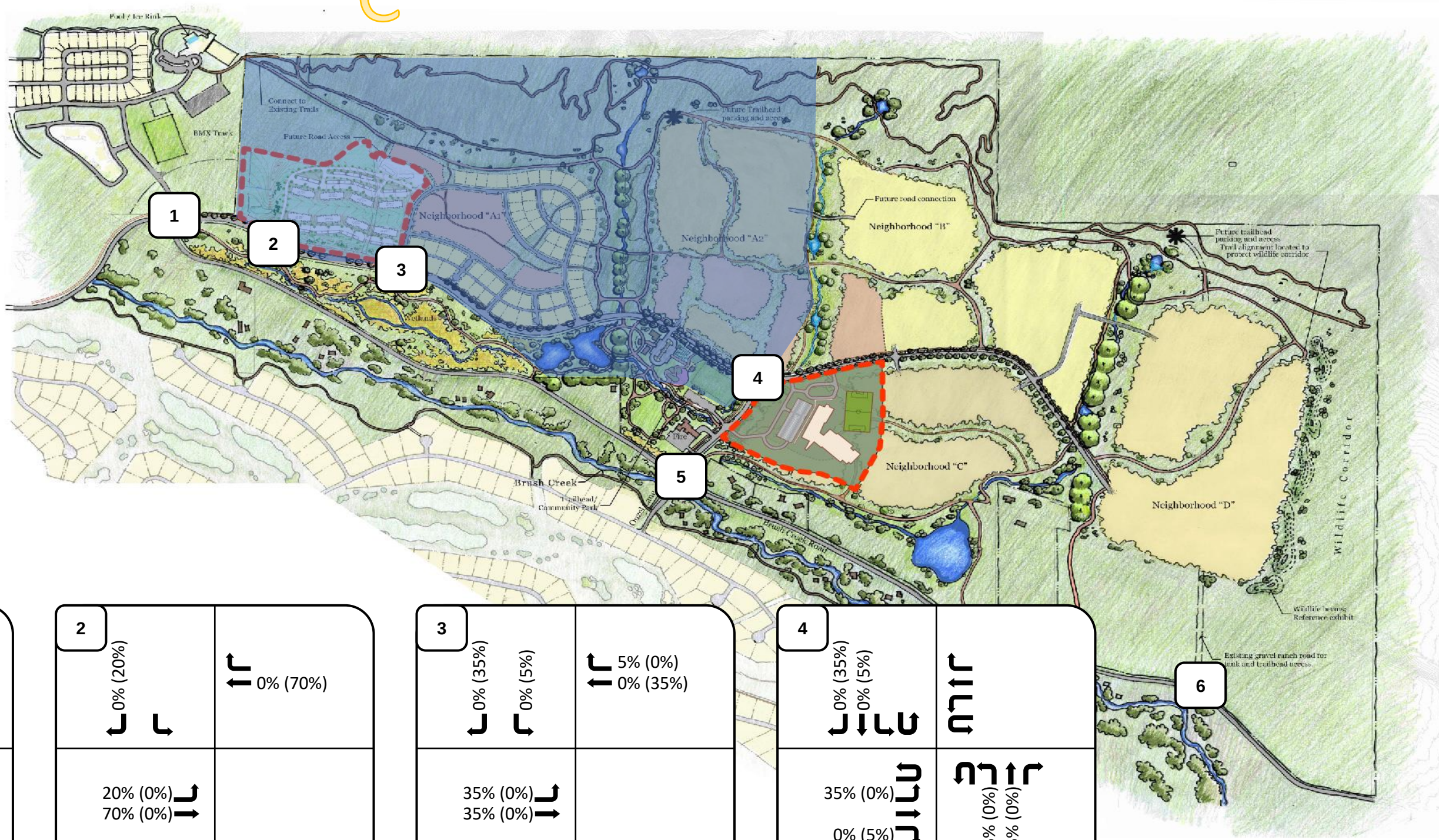


Figure 5: West TAZ School Swap PUD Distribution



1	45% (0%) ↙ ↘ ↕ ↖ ↗ ↕	↖ ↗ ↕ ↙ ↘ ↕
---	--	---

2	0% (20%) ↙ ↘	↖ ↗	0% (70%) ↖ ↗
---	--	--	--

3	0% (35%) ↙ ↘ 0% (5%) ↙ ↘	↖ ↗	5% (0%) ↖ ↗ 0% (35%) ↙ ↘
---	--	--	--

4	0% (35%) ↙ ↘ ↕ 0% (5%) ↙ ↘	↖ ↗	↖ ↗ 5% (0%) ↙ ↘ 5% (0%) ↙ ↘
---	---	--	--

5	0% (3%) ↙ ↘ ↕ 0% (6%) ↙ ↘ 0% (1%) ↙ ↘	↖ ↗	1% (0%) ↖ ↗
---	--	--	---

6	↙ ↘	↖ ↗	1% (0%) ↖ ↗
---	--	--	---

LEGEND:
 Directional Distribution = Inbound% (Outbound %)
 AM/PM Volumes = XX/XX VPH (in PCEs)
 Turning Movements

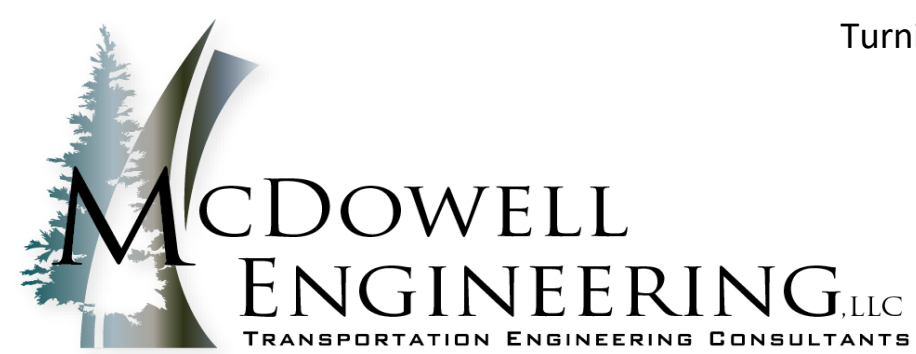
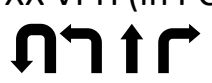
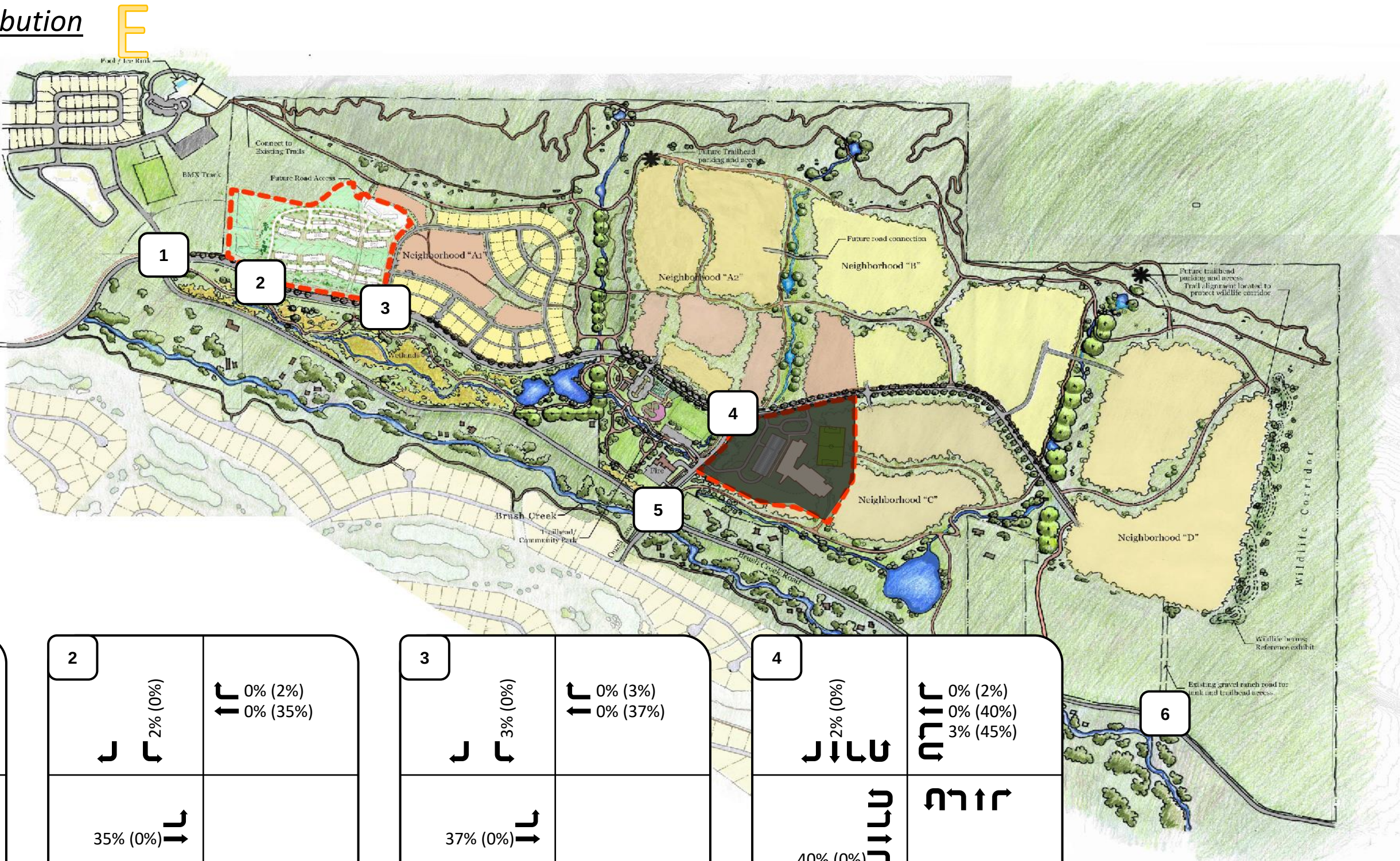


Figure 7: School TAZ Distribution



1	20% (0%) ↓ ↓ ↓	0% (20%) ↑ 0% (15%) ↑
	15% (0%) ↑ ↑ ↑	0% (15%) ↑

2	2% (0%) ↓ ↓	0% (2%) ↑ 0% (35%) ↑
	35% (0%) ↑ ↑	

3	3% (0%) ↓ ↓	0% (3%) ↑ 0% (37%) ↑
	37% (0%) ↑ ↑	

4	2% (0%) ↓ ↓ ↓	0% (2%) ↑ 0% (40%) 3% (45%) ↑
	40% (0%) ↑ ↑ ↑	0% (40%) ↑

5	0% (14%) ↓ ↓ ↓ 0% (40%) ↓ ↓ ↓ 0% (1%) ↓ ↓ ↓	1% (0%) ↑ 0% (0%) ↑
	14% (0%) ↑ ↑ ↑	40% (0%) ↑

6	1% (0%) ↑	
	0% (1%) ↑	

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements

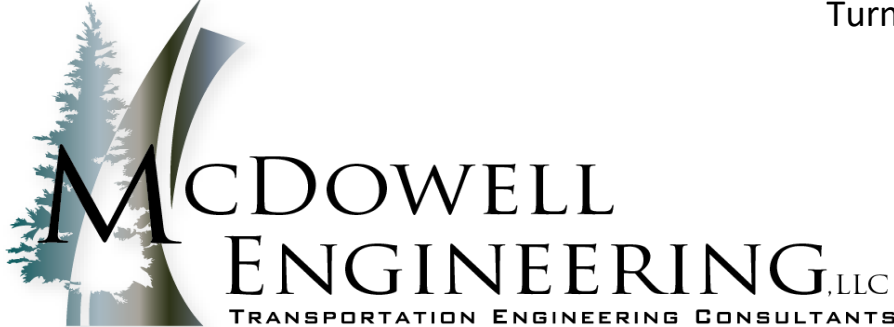


Figure 8: Cabin TAZ Wedding/Events Distribution F



1	50% (0%) → → →	→ →
	→ →	→ →

2	→ → →	→ →
	→ →	→ →

3	→ →	→ →
	→ →	→ →

4	→ → →	→ →
	→ →	→ →

6	→ →	→ →
	→ →	→ →

LEGEND:
 Directional Distribution = Inbound% (Outbound %)
 AM/PM Volumes = XX/XX VPH (in PCEs)
 Turning Movements →

5	→ →	→ →
	→ →	→ →

6	→ →	→ →
	→ →	→ →

Figure 9: Original PUD Assignment + Cabin Venue



1	26/0 100/202 100/202 26/0
205/112 205/112 0/10 0/10	

2	54/27 33/50 167/353
356/197 0/10 0/10	

3	95/47 14/7 58/87 109/266
8/12 261/151	

4	95/47 14/7 58/87 45/157 20/29
146/91 31/20 29/25 8/12 10/34	

5	35/21 28/16 5/2 13/36 51/0
3/4 0/20 14/28	

6	0/20 51/0 5/2
3/4	

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements

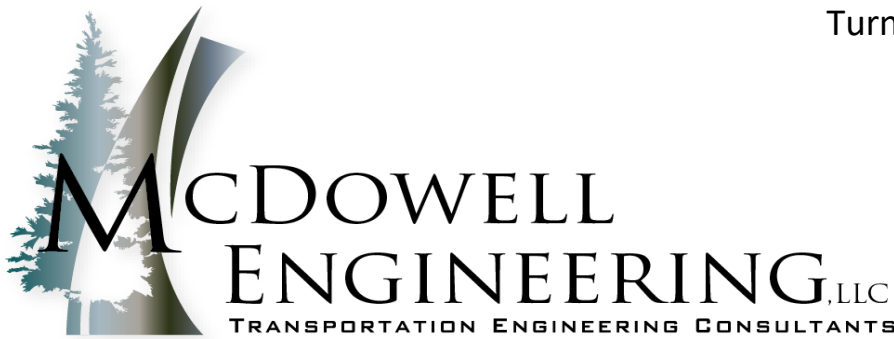


Figure 10: School Swap PUD Assignment + Cabin Venue



1	26/0 99/304 300/169 295/167
93/301 26/0	0/10 0/10

2	42/24 2/1 2/1 552/313
11/43 182/561	

3	74/41 15/8 6/12 480/272
19/75 166/486	

4	74/41 13/7 2/1 405/229 89/41
19/75 101/381 60/38	7/13 3/11 11/43

5	41/21 69/31 7/3 3/7 0/20
25/37 51/0	56/58

6	0/20 4/5
51/0 6/2	

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements

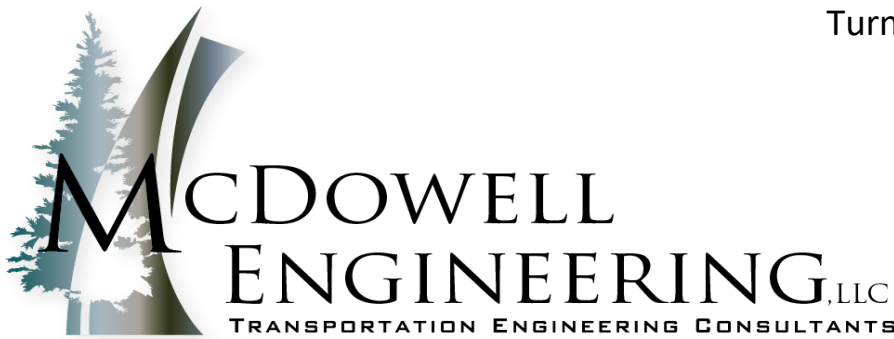


Figure 11: Year 2020 Background Traffic



1	25/55 37/19 זורה
28/22 24/26 טלון	31/21 67/40 זורה

2	טלון זורה
טלון זורה	

3	זורה
טלון	

4	טלון זורה
טלון זורה	

6	זורה

Note: Intersection #1 uses future configuration of roundabout for consistency.

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements **זורה**

5	זורה 24/52 5/2
טלון 53/32 16/32	37/17 4/3 זורה

6	זורה 29/54
טלון 57/35	

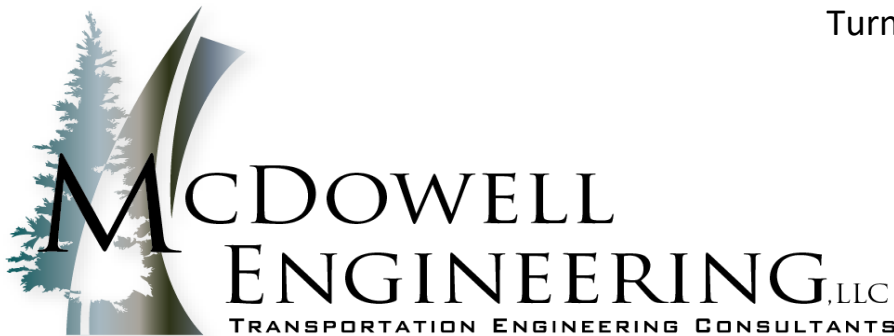


Figure 12: Year 2040 Background Traffic



1	44/113 37/19 ←→→	זורה
	28/22 33/56 ←→→	57/38 53/33 67/40 ←→→

2	←→→	זורה
	←→→	זורה

3	←→→	זורה
	←→→	

4	←→→	זורה
	←→→	זורה

5	←→→	103/102 5/2 זורה
	81/120 16/32 ←→→	37/17 4/3 ←→→

6	←→→	108/104 זורה
	85/123 ←→→	

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements **זורה**

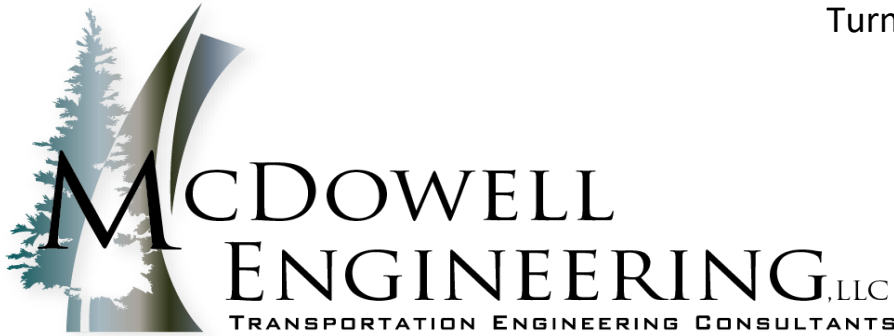


Figure 13: Year 2040 Total (Original PUD) Traffic



1	70/113 137/221 205/112 205/112
28/22 100/202 59/56 57/48 53/43 67/40	

2	54/27 356/197
33/50 167/353 307/167	

3	95/47 14/7 8/12 261/151
58/87 109/266	

4	95/47 14/7 146/91 31/20
58/87 45/157 20/29 29/25 8/12 10/34	

5	35/21 28/16 5/2 3/4 103/122 5/2
13/36 132/120 16/32 37/17 14/28 4/3	

6	0/20 111/108
51/0 90/125	

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements

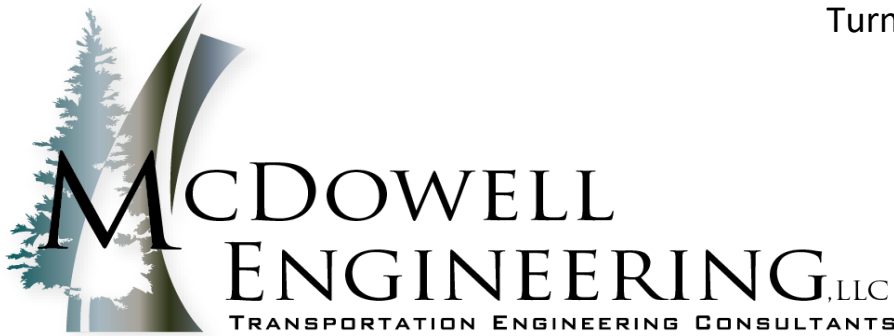


Figure 14: Year 2040 Total (Proposed PUD) Traffic



1	70/113 136/323 ↓ 300/169 295/167 ↑ 28/22 93/301 59/56 ↓ 57/48 53/43 67/40 ↑
---	---

2	42/24 2/1 ↓ 2/1 552/313 ↑ 11/43 182/561 ↓
---	---

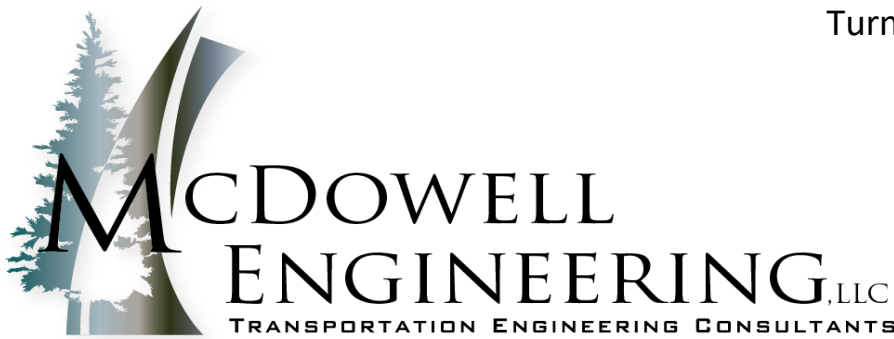
3	74/41 15/8 ↓ 6/12 480/272 ↑ 19/75 166/486 ↓
---	---

4	74/41 13/7 ↓ 2/1 405/229 89/41 ↑ 19/75 101/381 60/38 ↓ 7/13 3/11 11/43 ↑
---	--

5	41/21 69/31 7/3 ↓ 3/7 103/122 5/2 ↑ 25/37 132/120 16/32 ↓ 37/17 56/58 4/3 ↑
---	---

6	0/20 112/109 ↓ 51/0 91/125 ↓
---	--

LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM Volumes = XX/XX VPH (in PCEs)
Turning Movements



#	Int.	Traffic Control	Approach or Control Delay	Approach	Year 2040 Original PUD Level of Service (Delay in Seconds)		Year 2040 School Site Swap PUD Level of Service (Delay in Seconds)	
					AM	PM	AM	PM
1	SLR & BCR	RAB	A	EB	A (4.13)	A (5.10)	A (4.10)	A (6.59)
			A	WB	A (5.30)	A (4.07)	A (7.39)	A (4.68)
			A	NB	A (4.24)	A (4.51)	A (4.22)	A (5.24)
			A	SB	A (4.39)	A (4.83)	A (4.66)	A (5.90)
2	SLR & New Res. Access	SB Stop	A	EB	A (1.3)	A (1.0)	A (0.5)	A (0.6)
			A	WB	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			A	SB	B (11.0)	A (9.5)	B (13.2)	B (10.8)
3	SLR & A1 W. Access	SB Stop/ RAB	A	EB	-	-	A (0.9)	A (1.1)
			A	WB	-	-	A (0.0)	A (0.0)
			A	SB	-	-	B (13.7)	B (12.2)
4	SLR & Ouzel	RAB	A	EB	A (3.52)	A (4.09)	A (3.85)	A (5.60)
			A	WB	A (3.82)	A (3.62)	A (5.53)	A (4.27)
			A	NB	A (3.37)	A (3.72)	A (3.31)	A (4.20)
			A	SB	A (3.79)	A (3.45)	A (4.43)	A (3.71)
5	BCR & Ouzel	NB/SB Stop	A	EB	A (0.6)	A (1.4)	A (1.1)	A (1.5)
			A	WB	A (0.3)	A (0.1)	A (0.3)	A (0.1)
			A	NB	B (11.8)	B (12.2)	B (13.2)	B (12.9)
			A	SB	B (10.4)	B (10.6)	B (11.8)	B (11.3)
6	BCR & Cabin Access	SB Stop	A	EB	A (2.7)	A (0.0)	A (2.7)	A (0.0)
			A	WB	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			A	SB	A (0.0)	A (8.9)	A (0.0)	A (8.9)

Unsignalized Intersection Analysis

- 1. Sylvan Lake Road & School/Residential Access**
- 2. Sylvan Lake Road & Neighborhood A1**
- 3. Sylvan Lake Road & Ouzel Lane**
- 4. Brush Creek Road & Ouzel Lane**
- 5. Brush Creek Road & Cabin – Event/Wedding Venue Access**

2: Sylvan Lake Road & New Residential Access

2040 T AM Original PUD.syn

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	167	356	0	0	54
Future Vol, veh/h	33	167	356	0	0	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	182	387	0	0	59
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	387	0	-	0	641	387
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	254	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1171	-	-	-	439	661
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1171	-	-	-	424	661
Mov Cap-2 Maneuver	-	-	-	-	424	-
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	788	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		11		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1171	-	-	-	661	
HCM Lane V/C Ratio	0.031	-	-	-	0.089	
HCM Control Delay (s)	8.2	0	-	-	11	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	

2: Sylvan Lake Road & New Residential Access

2040 T PM Original PUD.syn

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	353	197	0	0	27
Future Vol, veh/h	50	353	197	0	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	384	214	0	0	29

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	214	0	0 706 214
Stage 1	-	-	- 214 -
Stage 2	-	-	- 492 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1356	-	- 402 826
Stage 1	-	-	- 822 -
Stage 2	-	-	- 615 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1356	-	- 381 826
Mov Cap-2 Maneuver	-	-	- 381 -
Stage 1	-	-	- 780 -
Stage 2	-	-	- 615 -

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1356	-	-	-	826
HCM Lane V/C Ratio	0.04	-	-	-	0.036
HCM Control Delay (s)	7.8	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

2: Sylvan Lake Road & New Residential Access

2040 T AM School Swap PUD.syn

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	182	552	2	2	42
Future Vol, veh/h	11	182	552	2	2	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	198	600	2	2	46
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	602	0	-	0	823	601
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	222	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	975	-	-	-	343	500
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	815	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	338	500
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	815	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		13.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	975	-	-	-	-	489
HCM Lane V/C Ratio	0.012	-	-	-	-	0.098
HCM Control Delay (s)	8.7	0	-	-	-	13.2
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.3

2: Sylvan Lake Road & New Residential Access

2040 T PM School Swap PUD.syn

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	561	313	1	1	24
Future Vol, veh/h	43	561	313	1	1	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	610	340	1	1	26
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	341	0	-	0	1045	341
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	704	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1218	-	-	-	253	701
Stage 1	-	-	-	-	720	-
Stage 2	-	-	-	-	490	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1218	-	-	-	238	701
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	490	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		10.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1218	-	-	-	650	
HCM Lane V/C Ratio	0.038	-	-	-	0.042	
HCM Control Delay (s)	8.1	0	-	-	10.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

3: Sylvan Lake Road & A1 W. Access

2040 T AM School Swap PUD.syn

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	166	480	6	15	74
Future Vol, veh/h	19	166	480	6	15	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	180	522	7	16	80
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	529	0	-	0	748	526
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	222	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1038	-	-	-	380	552
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	815	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1038	-	-	-	372	552
Mov Cap-2 Maneuver	-	-	-	-	372	-
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	815	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		13.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1038	-	-	-	510	
HCM Lane V/C Ratio	0.02	-	-	-	0.19	
HCM Control Delay (s)	8.5	0	-	-	13.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7	

3: Sylvan Lake Road & A1 W. Access

2040 T PM School Swap PUD.syn

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	486	272	12	8	41
Future Vol, veh/h	75	486	272	12	8	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	528	296	13	9	45
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	309	0	-	0	995	303
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	692	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1252	-	-	-	271	737
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	497	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1252	-	-	-	246	737
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	497	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.1	0		12.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1252	-	-	-	556	
HCM Lane V/C Ratio	0.065	-	-	-	0.096	
HCM Control Delay (s)	8.1	0	-	-	12.2	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	

5: Ouzel Lane & Brush Creek Road
2040 T AM Original PUD.syn

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	132	16	5	103	3	37	14	4	5	28	35
Future Vol, veh/h	13	132	16	5	103	3	37	14	4	5	28	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	143	17	5	112	3	40	15	4	5	30	38
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	115	0	0	160	0	0	338	305	152	313	312	114
Stage 1	-	-	-	-	-	-	180	180	-	124	124	-
Stage 2	-	-	-	-	-	-	158	125	-	189	188	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1474	-	-	1419	-	-	616	608	894	640	603	939
Stage 1	-	-	-	-	-	-	822	750	-	880	793	-
Stage 2	-	-	-	-	-	-	844	792	-	813	745	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1474	-	-	1419	-	-	562	600	894	618	595	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	562	600	-	618	595	-
Stage 1	-	-	-	-	-	-	815	743	-	872	790	-
Stage 2	-	-	-	-	-	-	775	789	-	785	738	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.3			11.8			10.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	587	1474	-	-	1419	-	-	736				
HCM Lane V/C Ratio	0.102	0.01	-	-	0.004	-	-	0.1				
HCM Control Delay (s)	11.8	7.5	-	-	7.5	0	-	10.4				
HCM Lane LOS	B	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

5: Ouzel Lane & Brush Creek Road
2040 T PM Original PUD.syn

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	120	32	2	122	4	17	28	3	2	16	21
Future Vol, veh/h	36	120	32	2	122	4	17	28	3	2	16	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	130	35	2	133	4	18	30	3	2	17	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	137	0	0	165	0	0	385	367	148	381	382	135
Stage 1	-	-	-	-	-	-	226	226	-	139	139	-
Stage 2	-	-	-	-	-	-	159	141	-	242	243	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1447	-	-	1413	-	-	573	562	899	577	551	914
Stage 1	-	-	-	-	-	-	777	717	-	864	782	-
Stage 2	-	-	-	-	-	-	843	780	-	762	705	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1447	-	-	1413	-	-	533	546	899	538	535	914
Mov Cap-2 Maneuver	-	-	-	-	-	-	533	546	-	538	535	-
Stage 1	-	-	-	-	-	-	756	698	-	841	780	-
Stage 2	-	-	-	-	-	-	802	778	-	707	686	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.1			12.2			10.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	555	1447	-	-	1413	-	-	689				
HCM Lane V/C Ratio	0.094	0.027	-	-	0.002	-	-	0.062				
HCM Control Delay (s)	12.2	7.6	-	-	7.6	0	-	10.6				
HCM Lane LOS	B	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.2				

5: Ouzel Lane & Brush Creek Road
2040 T AM School Swap PUD.syn

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	132	16	5	103	3	37	56	4	7	69	41
Future Vol, veh/h	25	132	16	5	103	3	37	56	4	7	69	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	143	17	5	112	3	40	61	4	8	75	45
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	115	0	0	160	0	0	390	331	152	362	338	114
Stage 1	-	-	-	-	-	-	206	206	-	124	124	-
Stage 2	-	-	-	-	-	-	184	125	-	238	214	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1474	-	-	1419	-	-	569	588	894	594	583	939
Stage 1	-	-	-	-	-	-	796	731	-	880	793	-
Stage 2	-	-	-	-	-	-	818	792	-	765	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1474	-	-	1419	-	-	479	575	894	534	570	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	479	575	-	534	570	-
Stage 1	-	-	-	-	-	-	782	718	-	864	790	-
Stage 2	-	-	-	-	-	-	702	789	-	684	712	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.3			13.2			11.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	542	1474	-	-	1419	-	-	658				
HCM Lane V/C Ratio	0.195	0.018	-	-	0.004	-	-	0.193				
HCM Control Delay (s)	13.2	7.5	-	-	7.5	0	-	11.8				
HCM Lane LOS	B	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	0.7				

5: Ouzel Lane & Brush Creek Road
2040 T PM School Swap PUD.syn

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	120	32	2	122	7	17	58	3	3	31	21
Future Vol, veh/h	37	120	32	2	122	7	17	58	3	3	31	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	130	35	2	133	8	18	63	3	3	34	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	141	0	0	165	0	0	398	373	148	402	386	137
Stage 1	-	-	-	-	-	-	228	228	-	141	141	-
Stage 2	-	-	-	-	-	-	170	145	-	261	245	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1442	-	-	1413	-	-	562	557	899	559	548	911
Stage 1	-	-	-	-	-	-	775	715	-	862	780	-
Stage 2	-	-	-	-	-	-	832	777	-	744	703	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1442	-	-	1413	-	-	510	540	899	496	532	911
Mov Cap-2 Maneuver	-	-	-	-	-	-	510	540	-	496	532	-
Stage 1	-	-	-	-	-	-	753	695	-	838	778	-
Stage 2	-	-	-	-	-	-	774	775	-	655	683	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.5			0.1			12.9			11.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	541	1442	-	-	1413	-	-	630				
HCM Lane V/C Ratio	0.157	0.028	-	-	0.002	-	-	0.095				
HCM Control Delay (s)	12.9	7.6	-	-	7.6	0	-	11.3				
HCM Lane LOS	B	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-	-	0.3				

6: Brush Creek Road & Event Access
2040 T AM Original PUD.syn

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	90	111	0	0	0
Future Vol, veh/h	51	90	111	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	98	121	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	121	0	0 329 121
Stage 1	-	-	- 121 -
Stage 2	-	-	- 208 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1467	-	- 665 930
Stage 1	-	-	- 904 -
Stage 2	-	-	- 827 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1467	-	- 640 930
Mov Cap-2 Maneuver	-	-	- 640 -
Stage 1	-	-	- 871 -
Stage 2	-	-	- 827 -

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1467	-	-	-	-
HCM Lane V/C Ratio	0.038	-	-	-	-
HCM Control Delay (s)	7.5	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

6: Brush Creek Road & Event Access
2040 T PM Original PUD.syn

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	125	108	0	0	20
Future Vol, veh/h	0	125	108	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	136	117	0	0	22
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	117	0	-	0	253	117
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1471	-	-	-	736	935
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1471	-	-	-	736	935
Mov Cap-2 Maneuver	-	-	-	-	736	-
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	890	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		8.9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1471	-	-	-	935	
HCM Lane V/C Ratio	-	-	-	-	0.023	
HCM Control Delay (s)	0	-	-	-	8.9	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

6: Brush Creek Road & Event Access
2040 T AM School Swap PUD.syn

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	91	112	0	0	0
Future Vol, veh/h	51	91	112	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	99	122	0	0	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	122	0	-	0	331	122
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	209	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1465	-	-	-	664	929
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1465	-	-	-	639	929
Mov Cap-2 Maneuver	-	-	-	-	639	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	826	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.7	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1465	-	-	-	-	
HCM Lane V/C Ratio	0.038	-	-	-	-	
HCM Control Delay (s)	7.6	-	-	-	0	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	-	

6: Brush Creek Road & Event Access
2040 T PM School Swap PUD.syn

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	125	109	0	0	20
Future Vol, veh/h	0	125	109	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	136	118	0	0	22
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	118	0	-	0	254	118
Stage 1	-	-	-	-	118	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1470	-	-	-	735	934
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1470	-	-	-	735	934
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	890	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		8.9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1470	-	-	-	934	
HCM Lane V/C Ratio	-	-	-	-	0.023	
HCM Control Delay (s)	0	-	-	-	8.9	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Roundabout Analysis

6. Sylvan Lake Road & Brush Creek Road



7. Sylvan Lake Road & Original PUD's School Site

8. Sylvan Lake Road & Ouzel Lane

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Brush Creek Rd. (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Brush Creek Rd. (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Brush Creek Rd. (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Brush Creek Rd. (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Brush Creek Rd. (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Brush Creek Rd. (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Brush Creek Rd. (N. Leg)	0	137	70	0	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	28	100	59	0	5.0	1.00
3	Brush Creek Rd. (S. Leg)	0	57	53	67	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	0	205	205	0	5.0	1.00

2040 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Brush Creek Rd. (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Brush Creek Rd. (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	207		262		286	977		0.2119	
2	Sylvan Lake Rd. (W. Leg)	None	187		207		262	1005		0.1861	
3	Brush Creek Rd. (S. Leg)	None	177		265		129	975		0.1815	
4	Sylvan Lake Rd. (E. Leg)	None	410		138		304	1040		0.3943	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	4.39		4.39	0.79		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.13		4.13	0.66		A		A
3	Brush Creek Rd. (S. Leg)	None	4.24		4.24	0.65		A		A
4	Sylvan Lake Rd. (E. Leg)	None	5.30		5.30	1.91		A		A

2040 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	233		295		322	960		0.2431	
2	Sylvan Lake Rd. (W. Leg)	None	211		233		295	991		0.2127	
3	Brush Creek Rd. (S. Leg)	None	200		299		145	958		0.2083	
4	Sylvan Lake Rd. (E. Leg)	None	462		156		343	1031		0.4485	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	4.52		4.52	0.79		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.22		4.22	0.66		A		A
3	Brush Creek Rd. (S. Leg)	None	4.34		4.34	0.65		A		A
4	Sylvan Lake Rd. (E. Leg)	None	5.58		5.58	1.91		A		A

Approach Flow Profile

2040 AM Peak - Approach Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	21.53	19.45	18.41	42.64
7.5 - 15.0	25.06	22.64	21.43	49.64
15.0 - 22.5	27.74	25.06	23.72	54.93
22.5 - 30.0	29.18	26.36	24.95	57.79
30.0 - 37.5	29.18	26.36	24.95	57.79
37.5 - 45.0	27.74	25.06	23.72	54.93
45.0 - 52.5	25.06	22.64	21.43	49.64
52.5 - 60.0	21.53	19.45	18.41	42.64
Peak 15 min	29.18	26.36	24.95	57.79
Peak 60 min	25.87	23.37	22.13	51.25

Exit Flow Profile

2040 AM Peak - Exit Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	29.72	27.23	13.41	31.60
7.5 - 15.0	34.59	31.68	15.60	36.77
15.0 - 22.5	38.29	35.07	17.27	40.71
22.5 - 30.0	40.29	36.91	18.18	42.83
30.0 - 37.5	40.31	36.93	18.18	42.85
37.5 - 45.0	38.33	35.12	17.29	40.74
45.0 - 52.5	34.66	31.75	15.63	36.83
52.5 - 60.0	29.78	27.28	13.43	31.65
0-60	286	262	129	304
%Trucks	5.00	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Brush Creek Rd. (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Brush Creek Rd. (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Brush Creek Rd. (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Brush Creek Rd. (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Brush Creek Rd. (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Brush Creek Rd. (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Brush Creek Rd. (N. Leg)	0	221	113	0	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	22	202	56	0	5.0	1.00
3	Brush Creek Rd. (S. Leg)	0	48	43	40	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	0	112	112	0	5.0	1.00

2040 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Brush Creek Rd. (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Brush Creek Rd. (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	334		160		177	1029		0.3247	
2	Sylvan Lake Rd. (W. Leg)	None	280		334		160	940		0.2978	
3	Brush Creek Rd. (S. Leg)	None	131		445		169	884		0.1482	
4	Sylvan Lake Rd. (E. Leg)	None	224		113		463	1053		0.2128	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	4.83		4.83	1.40		A		A
2	Sylvan Lake Rd. (W. Leg)	None	5.10		5.10	1.26		A		A
3	Brush Creek Rd. (S. Leg)	None	4.51		4.51	0.52		A		A
4	Sylvan Lake Rd. (E. Leg)	None	4.07		4.07	0.78		A		A

2040 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	377		180		200	1018		0.3698	
2	Sylvan Lake Rd. (W. Leg)	None	316		377		180	919		0.3436	
3	Brush Creek Rd. (S. Leg)	None	148		502		191	855		0.1727	
4	Sylvan Lake Rd. (E. Leg)	None	253		127		522	1045		0.2417	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	5.03		5.03	1.40		A		A
2	Sylvan Lake Rd. (W. Leg)	None	5.35		5.35	1.26		A		A
3	Brush Creek Rd. (S. Leg)	None	4.66		4.66	0.52		A		A
4	Sylvan Lake Rd. (E. Leg)	None	4.15		4.15	0.78		A		A

Approach Flow Profile

2040 PM Peak - Approach Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	34.73	29.12	13.62	23.29
7.5 - 15.0	40.44	33.90	15.86	27.12
15.0 - 22.5	44.75	37.52	17.55	30.01
22.5 - 30.0	47.08	39.47	18.46	31.57
30.0 - 37.5	47.08	39.47	18.46	31.57
37.5 - 45.0	44.75	37.52	17.55	30.01
45.0 - 52.5	40.44	33.90	15.86	27.12
52.5 - 60.0	34.73	29.12	13.62	23.29
Peak 15 min	47.08	39.47	18.46	31.57
Peak 60 min	41.75	35.00	16.38	28.00

Exit Flow Profile

2040 PM Peak - Exit Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	18.40	16.63	17.56	48.12
7.5 - 15.0	21.41	19.36	20.44	56.00
15.0 - 22.5	23.70	21.42	22.62	61.98
22.5 - 30.0	24.94	22.54	23.81	65.23
30.0 - 37.5	24.95	22.55	23.82	65.26
37.5 - 45.0	23.72	21.44	22.65	62.06
45.0 - 52.5	21.45	19.38	20.48	56.11
52.5 - 60.0	18.43	16.66	17.60	48.21
0-60	177	160	169	463
%Trucks	5.00	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Brush Creek Rd. (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Brush Creek Rd. (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Brush Creek Rd. (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Brush Creek Rd. (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Brush Creek Rd. (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Brush Creek Rd. (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Brush Creek Rd. (N. Leg)	0	136	70	0	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	28	93	59	0	5.0	1.00
3	Brush Creek Rd. (S. Leg)	0	57	53	67	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	0	295	300	0	5.0	1.00

2040 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Brush Creek Rd. (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Brush Creek Rd. (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	206		352		381	931		0.2212	
2	Sylvan Lake Rd. (W. Leg)	None	180		206		352	1005		0.1790	
3	Brush Creek Rd. (S. Leg)	None	177		257		129	979		0.1807	
4	Sylvan Lake Rd. (E. Leg)	None	595		138		296	1040		0.5722	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	4.66		4.66	0.84		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.10		4.10	0.63		A		A
3	Brush Creek Rd. (S. Leg)	None	4.22		4.22	0.64		A		A
4	Sylvan Lake Rd. (E. Leg)	None	7.39		7.39	4.02		A		A

2040 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	232		397		429	909		0.2557	
2	Sylvan Lake Rd. (W. Leg)	None	203		232		397	992		0.2046	
3	Brush Creek Rd. (S. Leg)	None	200		290		145	963		0.2073	
4	Sylvan Lake Rd. (E. Leg)	None	671		156		334	1031		0.6508	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	4.84		4.84	0.84		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.18		4.18	0.63		A		A
3	Brush Creek Rd. (S. Leg)	None	4.32		4.32	0.64		A		A
4	Sylvan Lake Rd. (E. Leg)	None	8.18		8.18	4.02		A		A

Approach Flow Profile

2040 AM Peak - Approach Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	21.42	18.72	18.41	61.88
7.5 - 15.0	24.94	21.79	21.43	72.04
15.0 - 22.5	27.60	24.12	23.72	79.72
22.5 - 30.0	29.04	25.37	24.95	83.87
30.0 - 37.5	29.04	25.37	24.95	83.87
37.5 - 45.0	27.60	24.12	23.72	79.72
45.0 - 52.5	24.94	21.79	21.43	72.04
52.5 - 60.0	21.42	18.72	18.41	61.88
Peak 15 min	29.04	25.37	24.95	83.87
Peak 60 min	25.75	22.50	22.13	74.38

Exit Flow Profile

2040 AM Peak - Exit Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	39.59	36.57	13.41	30.77
7.5 - 15.0	46.05	42.54	15.60	35.80
15.0 - 22.5	50.97	47.09	17.27	39.63
22.5 - 30.0	53.65	49.56	18.18	41.71
30.0 - 37.5	53.70	49.61	18.18	41.72
37.5 - 45.0	51.08	47.20	17.29	39.67
45.0 - 52.5	46.22	42.70	15.63	35.86
52.5 - 60.0	39.71	36.69	13.43	30.81
0-60	381	352	129	296
%Trucks	5.00	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Brush Creek Rd. (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Brush Creek Rd. (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Brush Creek Rd. (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Brush Creek Rd. (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Brush Creek Rd. (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Brush Creek Rd. (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Brush Creek Rd. (N. Leg)	0	323	113	0	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	22	301	56	0	5.0	1.00
3	Brush Creek Rd. (S. Leg)	0	48	43	40	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	0	167	169	0	5.0	1.00

2040 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Brush Creek Rd. (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Brush Creek Rd. (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	436		215		234	1001		0.4357	
2	Sylvan Lake Rd. (W. Leg)	None	379		436		215	889		0.4265	
3	Brush Creek Rd. (S. Leg)	None	131		646		169	782		0.1675	
4	Sylvan Lake Rd. (E. Leg)	None	336		113		664	1053		0.3192	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	5.90		5.90	2.30		A		A
2	Sylvan Lake Rd. (W. Leg)	None	6.59		6.59	2.28		A		A
3	Brush Creek Rd. (S. Leg)	None	5.24		5.24	0.61		A		A
4	Sylvan Lake Rd. (E. Leg)	None	4.68		4.68	1.36		A		A

2040 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Brush Creek Rd (N. Leg)	None	492		242		264	987		0.4982	
2	Sylvan Lake Rd. (W. Leg)	None	427		491		242	860		0.4967	
3	Brush Creek Rd. (S. Leg)	None	148		728		190	740		0.1995	
4	Sylvan Lake Rd. (E. Leg)	None	379		127		748	1045		0.3625	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Brush Creek Rd (N. Leg)	None	6.32		6.32	2.30		A		A
2	Sylvan Lake Rd. (W. Leg)	None	7.18		7.18	2.28		A		A
3	Brush Creek Rd. (S. Leg)	None	5.52		5.52	0.61		A		A
4	Sylvan Lake Rd. (E. Leg)	None	4.85		4.85	1.36		A		A

Approach Flow Profile

2040 PM Peak - Approach Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	45.34	39.41	13.62	34.94
7.5 - 15.0	52.79	45.89	15.86	40.68
15.0 - 22.5	58.42	50.78	17.55	45.02
22.5 - 30.0	61.45	53.42	18.46	47.36
30.0 - 37.5	61.45	53.42	18.46	47.36
37.5 - 45.0	58.42	50.78	17.55	45.02
45.0 - 52.5	52.79	45.89	15.86	40.68
52.5 - 60.0	45.34	39.41	13.62	34.94
Peak 15 min	61.45	53.42	18.46	47.36
Peak 60 min	54.50	47.38	16.38	42.00

Exit Flow Profile

2040 PM Peak - Exit Flows (Veh / Hour)

Time Slice	Brush Creek Rd (N. Leg)	Sylvan Lake Rd. (W. Leg)	Brush Creek Rd. (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	24.32	22.35	17.56	69.00
7.5 - 15.0	28.30	26.00	20.43	80.27
15.0 - 22.5	31.33	28.78	22.61	88.85
22.5 - 30.0	32.97	30.29	23.80	93.52
30.0 - 37.5	32.98	30.30	23.82	93.58
37.5 - 45.0	31.37	28.82	22.66	89.02
45.0 - 52.5	28.36	26.05	20.49	80.51
52.5 - 60.0	24.37	22.39	17.61	69.18
0-60	234	215	169	664
%Trucks	5.00	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Neigh. A1 West Access (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Neigh. A1 West Access (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Neigh. A1 West Access (N. Leg)	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0
3	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows				Flow Modifiers	
		U-Turn	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Neigh. A1 West Access (N. Leg)	0	14	95	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	58	109	0	5.0	1.00
3	Sylvan Lake Rd. (E. Leg)	0	261	8	0	5.0	1.00

2040 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Neigh. A1 West Access (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Neigh. A1 West Access (N. Leg)	None	109		261		66	977		0.1115	
2	Sylvan Lake Rd. (W. Leg)	None	167		14		356	1103		0.1514	
3	Sylvan Lake Rd. (E. Leg)	None	269		58		123	1080		0.2490	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Neigh. A1 West Access (N. Leg)	None	3.91		3.91	0.36		A		A
2	Sylvan Lake Rd. (W. Leg)	None	3.61		3.61	0.51		A		A
3	Sylvan Lake Rd. (E. Leg)	None	4.15		4.15	0.95		A		A

2040 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Neigh. A1 West Access (N. Leg)	None	123		294		74	961		0.1280	
2	Sylvan Lake Rd. (W. Leg)	None	188		16		401	1102		0.1709	
3	Sylvan Lake Rd. (E. Leg)	None	303		65		139	1077		0.2817	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Neigh. A1 West Access (N. Leg)	None	3.97		3.97	0.36		A		A
2	Sylvan Lake Rd. (W. Leg)	None	3.63		3.63	0.51		A		A
3	Sylvan Lake Rd. (E. Leg)	None	4.23		4.23	0.95		A		A

Approach Flow Profile

2040 AM Peak - Approach Flows (Veh / Hour)

Time Slice	Neigh. A1 West Access (N. Leg)	Sylvan Lake Rd. (W. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	11.34	17.37	27.97
7.5 - 15.0	13.20	20.22	32.57
15.0 - 22.5	14.60	22.38	36.04
22.5 - 30.0	15.36	23.54	37.92
30.0 - 37.5	15.36	23.54	37.92
37.5 - 45.0	14.60	22.38	36.04
45.0 - 52.5	13.20	20.22	32.57
52.5 - 60.0	11.34	17.37	27.97
Peak 15 min	15.36	23.54	37.92
Peak 60 min	13.62	20.88	33.63

Exit Flow Profile

2040 AM Peak - Exit Flows (Veh / Hour)

Time Slice	Neigh. A1 West Access (N. Leg)	Sylvan Lake Rd. (W. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	6.86	37.00	12.79
7.5 - 15.0	7.99	43.07	14.88
15.0 - 22.5	8.84	47.67	16.47
22.5 - 30.0	9.30	50.16	17.33
30.0 - 37.5	9.30	50.18	17.34
37.5 - 45.0	8.84	47.71	16.48
45.0 - 52.5	7.99	43.13	14.90
52.5 - 60.0	6.87	37.06	12.80
0-60	66	356	123
%Trucks	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Neigh. A1 West Access (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Neigh. A1 West Access (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Neigh. A1 West Access (N. Leg)	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0
3	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	12.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows				Flow Modifiers	
		U-Turn	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Neigh. A1 West Access (N. Leg)	0	7	47	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	87	266	0	5.0	1.00
3	Sylvan Lake Rd. (E. Leg)	0	151	12	0	5.0	1.00

2040 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Neigh. A1 West Access (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Neigh. A1 West Access (N. Leg)	None	54		151		99	1033		0.0523	
2	Sylvan Lake Rd. (W. Leg)	None	353		7		198	1106		0.3191	
3	Sylvan Lake Rd. (E. Leg)	None	163		87		273	1066		0.1530	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Neigh. A1 West Access (N. Leg)	None	3.47		3.47	0.16		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.44		4.44	1.35		A		A
3	Sylvan Lake Rd. (E. Leg)	None	3.75		3.75	0.52		A		A

2040 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Neigh. A1 West Access (N. Leg)	None	61		170		112	1023		0.0595	
2	Sylvan Lake Rd. (W. Leg)	None	398		8		223	1106		0.3599	
3	Sylvan Lake Rd. (E. Leg)	None	184		98		308	1060		0.1734	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Neigh. A1 West Access (N. Leg)	None	3.48		3.48	0.16		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.58		4.58	1.35		A		A
3	Sylvan Lake Rd. (E. Leg)	None	3.78		3.78	0.52		A		A

Approach Flow Profile

2040 PM Peak - Approach Flows (Veh / Hour)

Time Slice	Neigh. A1 West Access (N. Leg)	Sylvan Lake Rd. (W. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	5.62	36.71	16.95
7.5 - 15.0	6.54	42.74	19.73
15.0 - 22.5	7.24	47.30	21.84
22.5 - 30.0	7.61	49.76	22.98
30.0 - 37.5	7.61	49.76	22.98
37.5 - 45.0	7.24	47.30	21.84
45.0 - 52.5	6.54	42.74	19.73
52.5 - 60.0	5.62	36.71	16.95
Peak 15 min	7.61	49.76	22.98
Peak 60 min	6.75	44.13	20.38

Exit Flow Profile

2040 PM Peak - Exit Flows (Veh / Hour)

Time Slice	Neigh. A1 West Access (N. Leg)	Sylvan Lake Rd. (W. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	10.29	20.58	28.38
7.5 - 15.0	11.98	23.96	33.02
15.0 - 22.5	13.26	26.52	36.55
22.5 - 30.0	13.95	27.90	38.47
30.0 - 37.5	13.95	27.91	38.48
37.5 - 45.0	13.27	26.53	36.59
45.0 - 52.5	11.99	23.98	33.08
52.5 - 60.0	10.31	20.61	28.42
0-60	99	198	273
%Trucks	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Ouzel Ln (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Ouzel Ln (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Ouzel Ln (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Ouzel Ln (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Ouzel Ln (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Ouzel Ln (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Ouzel Ln (N. Leg)	0	0	14	95	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	58	45	20	0	5.0	1.00
3	Ouzel Ln (S. Leg)	0	29	8	10	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	31	146	0	0	5.0	1.00

2040 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Ouzel Ln (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Ouzel Ln (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	109		206		66	1005		0.1084	
2	Sylvan Lake Rd. (W. Leg)	None	123		45		270	1087		0.1132	
3	Ouzel Ln (S. Leg)	None	47		103		65	1058		0.0444	
4	Sylvan Lake Rd. (E. Leg)	None	177		95		55	1062		0.1667	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	3.79		3.79	0.35		A		A
2	Sylvan Lake Rd. (W. Leg)	None	3.52		3.52	0.36		A		A
3	Ouzel Ln (S. Leg)	None	3.37		3.37	0.13		A		A
4	Sylvan Lake Rd. (E. Leg)	None	3.82		3.82	0.58		A		A

2040 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	123		232		74	992		0.1239	
2	Sylvan Lake Rd. (W. Leg)	None	139		51		304	1084		0.1279	
3	Ouzel Ln (S. Leg)	None	53		116		73	1051		0.0504	
4	Sylvan Lake Rd. (E. Leg)	None	200		107		62	1055		0.1891	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	3.83		3.83	0.35		A		A
2	Sylvan Lake Rd. (W. Leg)	None	3.52		3.52	0.36		A		A
3	Ouzel Ln (S. Leg)	None	3.36		3.36	0.13		A		A
4	Sylvan Lake Rd. (E. Leg)	None	3.87		3.87	0.58		A		A

Approach Flow Profile

2040 AM Peak - Approach Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	11.34	12.79	4.89	18.41
7.5 - 15.0	13.20	14.89	5.69	21.43
15.0 - 22.5	14.60	16.48	6.30	23.72
22.5 - 30.0	15.36	17.34	6.62	24.95
30.0 - 37.5	15.36	17.34	6.62	24.95
37.5 - 45.0	14.60	16.48	6.30	23.72
45.0 - 52.5	13.20	14.89	5.69	21.43
52.5 - 60.0	11.34	12.79	4.89	18.41
Peak 15 min	15.36	17.34	6.62	24.95
Peak 60 min	13.62	15.38	5.87	22.13

Exit Flow Profile

2040 AM Peak - Exit Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	6.86	28.07	6.76	5.72
7.5 - 15.0	7.99	32.67	7.86	6.65
15.0 - 22.5	8.84	36.16	8.70	7.37
22.5 - 30.0	9.30	38.05	9.16	7.75
30.0 - 37.5	9.30	38.06	9.16	7.75
37.5 - 45.0	8.84	36.18	8.71	7.37
45.0 - 52.5	7.99	32.71	7.87	6.66
52.5 - 60.0	6.87	28.10	6.76	5.72
0-60	66	270	65	55
%Trucks	5.00	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Ouzel Ln (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Ouzel Ln (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Ouzel Ln (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Ouzel Ln (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Ouzel Ln (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Ouzel Ln (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Ouzel Ln (N. Leg)	0	0	7	47	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	87	157	29	0	5.0	1.00
3	Ouzel Ln (S. Leg)	0	25	12	34	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	20	91	0	0	5.0	1.00

2040 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Ouzel Ln (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Ouzel Ln (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	54		136		99	1041		0.0519	
2	Sylvan Lake Rd. (W. Leg)	None	273		27		163	1096		0.2491	
3	Ouzel Ln (S. Leg)	None	71		244		56	986		0.0720	
4	Sylvan Lake Rd. (E. Leg)	None	111		124		191	1047		0.1060	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	3.45		3.45	0.16		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.09		4.09	0.95		A		A
3	Ouzel Ln (S. Leg)	None	3.72		3.72	0.22		A		A
4	Sylvan Lake Rd. (E. Leg)	None	3.62		3.62	0.34		A		A

2040 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	61		153		112	1032		0.0590	
2	Sylvan Lake Rd. (W. Leg)	None	308		30		184	1094		0.2813	
3	Ouzel Ln (S. Leg)	None	80		275		63	970		0.0825	
4	Sylvan Lake Rd. (E. Leg)	None	125		140		215	1039		0.1205	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	3.45		3.45	0.16		A		A
2	Sylvan Lake Rd. (W. Leg)	None	4.17		4.17	0.95		A		A
3	Ouzel Ln (S. Leg)	None	3.75		3.75	0.22		A		A
4	Sylvan Lake Rd. (E. Leg)	None	3.65		3.65	0.34		A		A

Approach Flow Profile

2040 PM Peak - Approach Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	5.62	28.39	7.38	11.54
7.5 - 15.0	6.54	33.05	8.60	13.44
15.0 - 22.5	7.24	36.58	9.51	14.87
22.5 - 30.0	7.61	38.48	10.01	15.65
30.0 - 37.5	7.61	38.48	10.01	15.65
37.5 - 45.0	7.24	36.58	9.51	14.87
45.0 - 52.5	6.54	33.05	8.60	13.44
52.5 - 60.0	5.62	28.39	7.38	11.54
Peak 15 min	7.61	38.48	10.01	15.65
Peak 60 min	6.75	34.13	8.88	13.87

Exit Flow Profile

2040 PM Peak - Exit Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	10.29	16.94	5.82	19.85
7.5 - 15.0	11.98	19.72	6.78	23.11
15.0 - 22.5	13.26	21.83	7.50	25.58
22.5 - 30.0	13.95	22.97	7.89	26.91
30.0 - 37.5	13.95	22.98	7.89	26.92
37.5 - 45.0	13.27	21.84	7.50	25.60
45.0 - 52.5	11.99	19.74	6.78	23.14
52.5 - 60.0	10.30	16.96	5.83	19.88
0-60	99	163	56	191
%Trucks	5.00	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Ouzel Ln (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Ouzel Ln (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Ouzel Ln (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Ouzel Ln (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Ouzel Ln (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Ouzel Ln (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 AM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Ouzel Ln (N. Leg)	0	0	13	74	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	19	101	60	0	5.0	1.00
3	Ouzel Ln (S. Leg)	0	7	3	11	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	89	405	2	0	5.0	1.00

2040 AM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Ouzel Ln (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Ouzel Ln (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	87		501		24	856		0.1017	
2	Sylvan Lake Rd. (W. Leg)	None	180		102		486	1058		0.1701	
3	Ouzel Ln (S. Leg)	None	21		120		162	1049		0.0200	
4	Sylvan Lake Rd. (E. Leg)	None	496		29		112	1095		0.4529	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	4.43		4.43	0.34		A		A
2	Sylvan Lake Rd. (W. Leg)	None	3.85		3.85	0.59		A		A
3	Ouzel Ln (S. Leg)	None	3.31		3.31	0.06		A		A
4	Sylvan Lake Rd. (E. Leg)	None	5.53		5.53	2.42		A		A

2040 AM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	98		565		27	823		0.1192	
2	Sylvan Lake Rd. (W. Leg)	None	203		115		548	1052		0.1930	
3	Ouzel Ln (S. Leg)	None	24		135		183	1041		0.0227	
4	Sylvan Lake Rd. (E. Leg)	None	559		33		126	1093		0.5116	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	4.57		4.57	0.34		A		A
2	Sylvan Lake Rd. (W. Leg)	None	3.90		3.90	0.59		A		A
3	Ouzel Ln (S. Leg)	None	3.30		3.30	0.06		A		A
4	Sylvan Lake Rd. (E. Leg)	None	5.86		5.86	2.42		A		A

Approach Flow Profile

2040 AM Peak - Approach Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	9.05	18.72	2.18	51.58
7.5 - 15.0	10.53	21.79	2.54	60.05
15.0 - 22.5	11.66	24.12	2.81	66.46
22.5 - 30.0	12.26	25.37	2.96	69.91
30.0 - 37.5	12.26	25.37	2.96	69.91
37.5 - 45.0	11.66	24.12	2.81	66.46
45.0 - 52.5	10.53	21.79	2.54	60.05
52.5 - 60.0	9.05	18.72	2.18	51.58
Peak 15 min	12.26	25.37	2.96	69.91
Peak 60 min	10.88	22.50	2.62	62.00

Exit Flow Profile

2040 AM Peak - Exit Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	2.49	50.51	16.84	11.64
7.5 - 15.0	2.90	58.77	19.59	13.55
15.0 - 22.5	3.21	65.05	21.69	15.00
22.5 - 30.0	3.38	68.46	22.82	15.78
30.0 - 37.5	3.38	68.50	22.83	15.79
37.5 - 45.0	3.22	65.15	21.71	15.01
45.0 - 52.5	2.91	58.91	19.63	13.57
52.5 - 60.0	2.50	50.62	16.87	11.66
0-60	24	486	162	112
%Trucks	5.00	5.00	5.00	5.00

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	Ouzel Ln (N. Leg)	0	0	12.00	1	14.00	1	120.00	66.00	30.00
2	Sylvan Lake Rd. (W. Leg)	90	0	12.00	1	14.00	1	120.00	66.00	30.00
3	Ouzel Ln (S. Leg)	180	0	12.00	1	14.00	1	120.00	66.00	30.00
4	Sylvan Lake Rd. (E. Leg)	270	0	12.00	1	14.00	1	120.00	66.00	30.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	Ouzel Ln (N. Leg)	150.00	16.00	1	14.00	1	12.00	1
2	Sylvan Lake Rd. (W. Leg)	150.00	16.00	1	14.00	1	12.00	1
3	Ouzel Ln (S. Leg)	150.00	16.00	1	14.00	1	12.00	1
4	Sylvan Lake Rd. (E. Leg)	150.00	16.00	1	14.00	1	12.00	1

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	Ouzel Ln (N. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
2	Sylvan Lake Rd. (W. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
3	Ouzel Ln (S. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0
4	Sylvan Lake Rd. (E. Leg)	0	1.000	0	1.000	20.00	1792	0	12.00	1792	0

Traffic Flow Data (veh/hr)

2040 PM Peak Peak Hour Flows

Leg	Leg Names	Turning Flows					Flow Modifiers	
		U-Turn	Exit-3	Exit-2	Exit-1	Bypass	Trucks %	Flow Factor
1	Ouzel Ln (N. Leg)	0	0	7	41	0	5.0	1.00
2	Sylvan Lake Rd. (W. Leg)	0	75	381	38	0	5.0	1.00
3	Ouzel Ln (S. Leg)	0	13	11	43	0	5.0	1.00
4	Sylvan Lake Rd. (E. Leg)	0	41	229	1	0	5.0	1.00

2040 PM Peak Synthetic Flow Profile - Timeslice 7.5 mins

Leg	Leg Names	Flow Ratios			Flow Times		
		Ratio 1	Ratio 2	Ratio 3	Time 1	Time 2	Time 3
1	Ouzel Ln (N. Leg)	0.750	1.125	0.750	0	30	60
2	Sylvan Lake Rd. (W. Leg)	0.750	1.125	0.750	0	30	60
3	Ouzel Ln (S. Leg)	0.750	1.125	0.750	0	30	60
4	Sylvan Lake Rd. (E. Leg)	0.750	1.125	0.750	0	30	60

Operational Results

2040 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	48		283		87	966		0.0497	
2	Sylvan Lake Rd. (W. Leg)	None	494		48		283	1085		0.4551	
3	Ouzel Ln (S. Leg)	None	67		456		86	878		0.0763	
4	Sylvan Lake Rd. (E. Leg)	None	271		99		424	1060		0.2558	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	3.71		3.71	0.15		A		A
2	Sylvan Lake Rd. (W. Leg)	None	5.60		5.60	2.44		A		A
3	Ouzel Ln (S. Leg)	None	4.20		4.20	0.24		A		A
4	Sylvan Lake Rd. (E. Leg)	None	4.27		4.27	0.99		A		A

2040 PM Peak - 15 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	Ouzel Ln (N. Leg)	None	54		319		98	948		0.0571	
2	Sylvan Lake Rd. (W. Leg)	None	557		54		319	1082		0.5146	
3	Ouzel Ln (S. Leg)	None	76		514		97	849		0.0890	
4	Sylvan Lake Rd. (E. Leg)	None	306		112		478	1053		0.2901	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	Ouzel Ln (N. Leg)	None	3.74		3.74	0.15		A		A
2	Sylvan Lake Rd. (W. Leg)	None	5.95		5.95	2.44		A		A
3	Ouzel Ln (S. Leg)	None	4.30		4.30	0.24		A		A
4	Sylvan Lake Rd. (E. Leg)	None	4.37		4.37	0.99		A		A

Approach Flow Profile

2040 PM Peak - Approach Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	4.99	51.37	6.97	28.18
7.5 - 15.0	5.81	59.81	8.11	32.81
15.0 - 22.5	6.43	66.19	8.98	36.31
22.5 - 30.0	6.77	69.63	9.44	38.20
30.0 - 37.5	6.77	69.63	9.44	38.20
37.5 - 45.0	6.43	66.19	8.98	36.31
45.0 - 52.5	5.81	59.81	8.11	32.81
52.5 - 60.0	4.99	51.37	6.97	28.18
Peak 15 min	6.77	69.63	9.44	38.20
Peak 60 min	6.00	61.75	8.38	33.88

Exit Flow Profile

2040 PM Peak - Exit Flows (Veh / Hour)

Time Slice	Ouzel Ln (N. Leg)	Sylvan Lake Rd. (W. Leg)	Ouzel Ln (S. Leg)	Sylvan Lake Rd. (E. Leg)
0.0 - 7.5	9.04	29.42	8.94	44.06
7.5 - 15.0	10.52	34.23	10.40	51.27
15.0 - 22.5	11.64	37.89	11.51	56.75
22.5 - 30.0	12.26	39.88	12.12	59.73
30.0 - 37.5	12.26	39.89	12.12	59.76
37.5 - 45.0	11.66	37.93	11.53	56.84
45.0 - 52.5	10.55	34.29	10.42	51.40
52.5 - 60.0	9.06	29.46	8.95	44.16
0-60	87	283	86	424
%Trucks	5.00	5.00	5.00	5.00