Exhibit B

Transportation Impact Study
for
Mary Drive Mixed Use Site
Grand Lake, Colorado

October 9, 2023
Revised May 21, 2024

PREPARED FOR:
Town of Grand Lake, Community Development
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Project Number: M1616

Statement of Engineering Qualifications

Kari J. McDowell Schroeder, PE, PTOE is a Transportation and Traffic Engineer for McDowell Engineering, LLC. Ms. McDowell Schroeder has over twenty-seven years of extensive traffic and transportation engineering experience. She has completed numerous transportation studies and roadway design projects throughout the State of Colorado. Ms. McDowell Schroeder is a licensed Professional Engineer in the State of Colorado and has her certification as a Professional Traffic Operations Engineer from the Institute of Transportation Engineers.

Transportation Impact Analysis

Table of Contents

Figures and Tables

1.0 Project Description

McDowell Engineering has prepared this Level Three Transportation Impact Study for the proposed mixed-use development at 600 Mary Drive in Grand Lake, Colorado. The purpose of this transportation analysis is to forecast and analyze the impacts of the additional traffic volumes associated with the addition of the mixed-use development on the surrounding roadway network.

The development is located approximately 300 feet northeast of the Mary Drive (Grand County Road 479) and US Highway 34 (US 34) intersection. The proposed development will be constructed on a single lot that is currently vacant. The development is proposing 30 multifamily residential units and approximately 3,300 square feet (sf) of office space.

The project has two accesses located onto Mary Drive. Internal traffic circulation is proposed to be two-directional.

The project location is shown in **Figure 2**. The proposed site plan provided by the Town of Grand Lake is shown in **Figure 2.**

Figure 1: Project Location

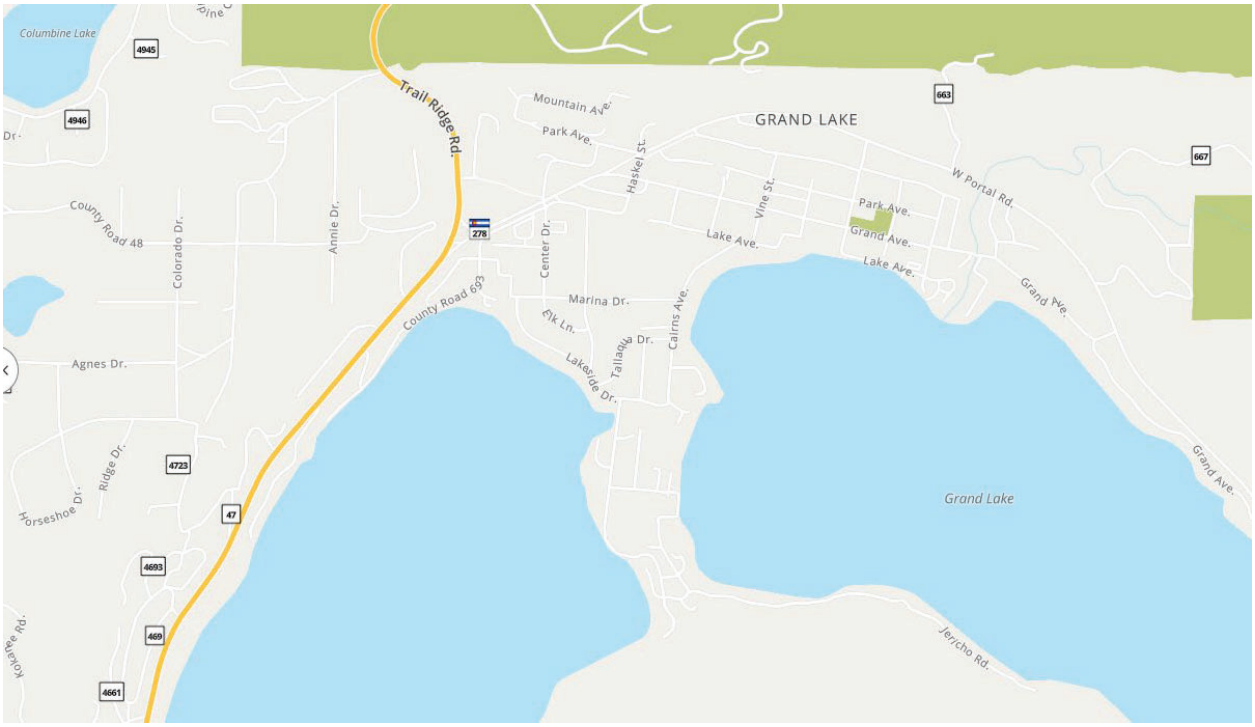
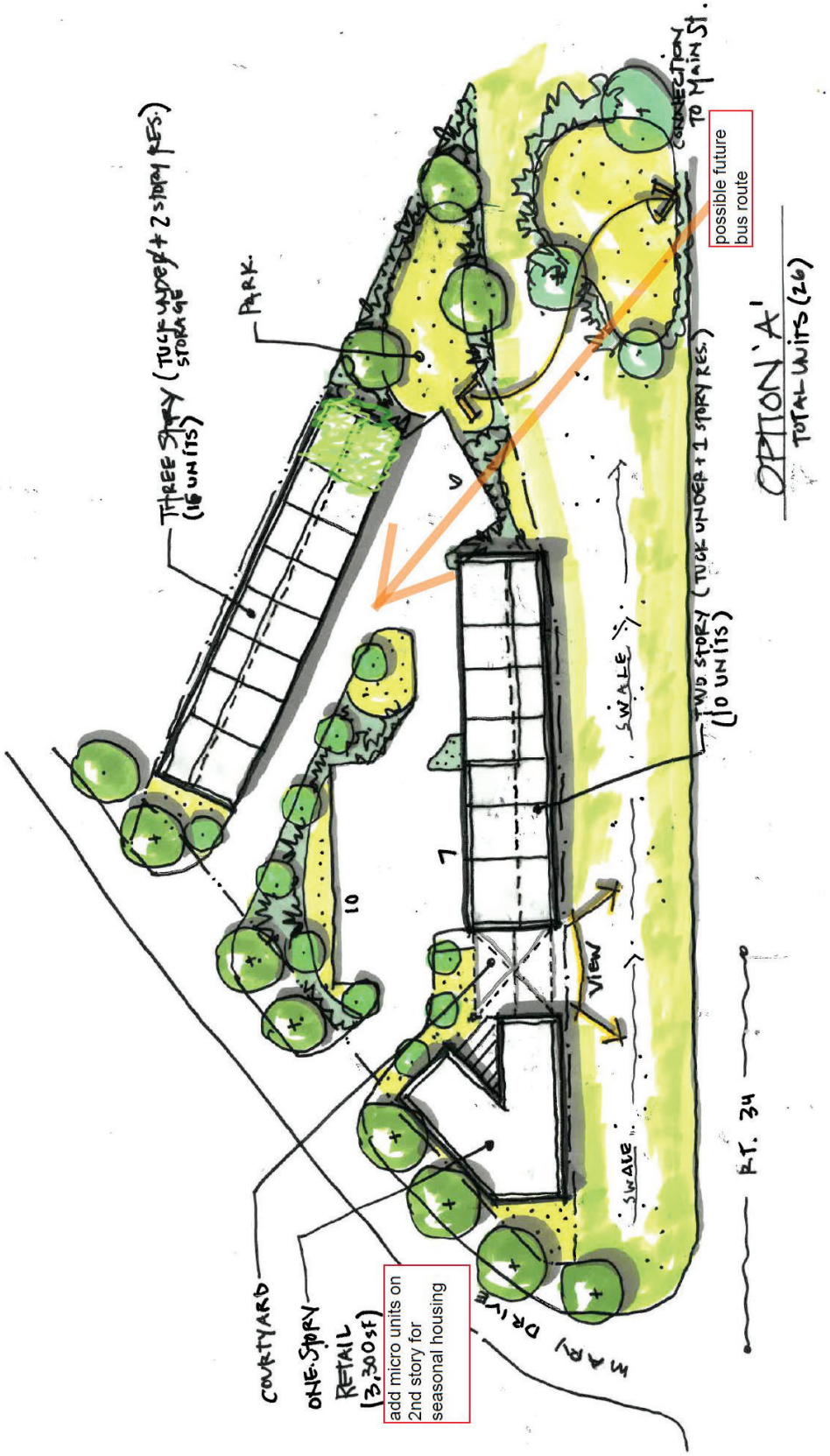


Figure 2: Site Plan



2.0 Existing Conditions

2.1 Road Network

Mary Drive (Grand County Road 479): Mary Drive is a north-south, two-lane, paved collector roadway in the vicinity of the project site. Mary Drive serves residential neighborhoods and provides access to US 34. The posted speed limit is 25mph within the vicinity of the project site.

The intersection of Mary Drive with US 34 is southbound stop controlled. Mary Drive meets US 34 on a downhill, skewed angle.

US Highway 34 (US 34): US 34 is a two-lane, east-west US highway. The posted speed limit is 50mph at Mary Drive. The speed limit reduces to 40mph eastbound approximately 50 feet east of Mary Drive.

2.2 Site Access Description

The project is proposing two site accesses to Mary Drive. Both accesses will be northbound stop controlled. The two site accesses can be seen in **Figure 2**.

2.3 Traffic Data Collection

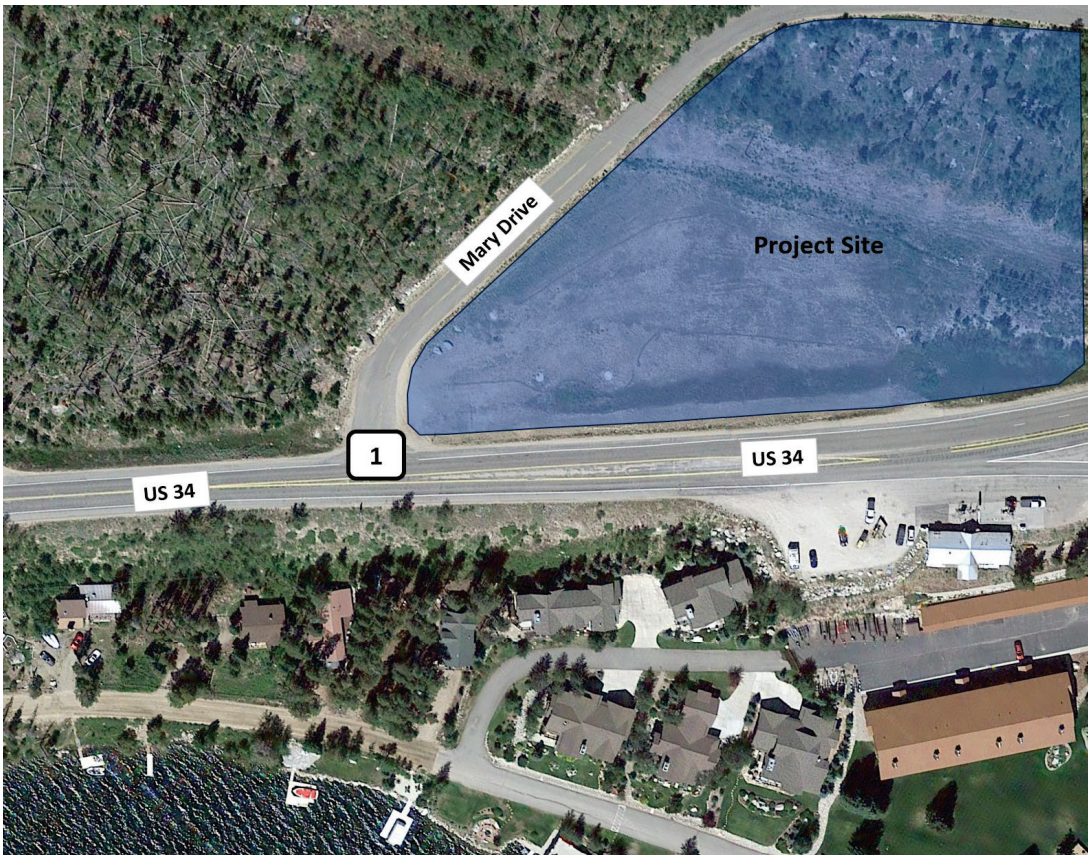
Current Year 2023 traffic data was collected at the intersection of US 34 with Mary Drive. Weekday peak hour turning movement counts were taken on Thursday, June 15, 2023, from 7:00am – 9:00am and 4:00pm – 6:00pm. Weekend peak hour turning movement counts were taken on Saturday, June 17, 2023, from 10:00am – 2:00pm.

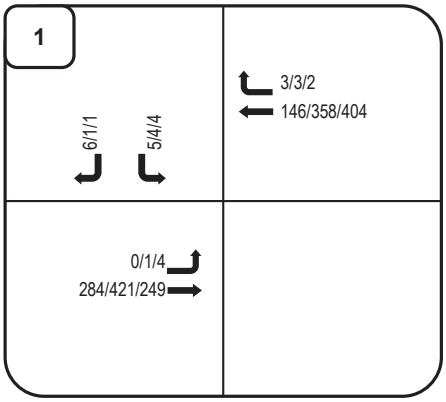
Peak hour data is used in this analysis. The data collection results showed that the weekday morning peak hour occurred between 7:45am – 8:45am. The weekday afternoon peak hour occurred between 4:15pm – 5:15pm. The weekend peak hour occurred between 12:45pm – 1:45pm.

Figure 3 below shows the Year 2023 existing June peak hour traffic volumes. The corresponding raw traffic data collected can be found in the **Appendix**.

Seasonal Adjustment Factor: CDOT's historic traffic data shows that the seasonal traffic peak on US 34 near Grand Lake occurs in July. A seasonal adjustment factor was applied to June traffic counts to equate them to peak season traffic counts. See **Section 3.4** for more details regarding the seasonal adjustment factor applied to the June traffic counts.

Figure 3: Year 2023 Existing (Seasonally Adjusted) Traffic





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

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3.0 Infrastructure Assumptions

3.1 Existing & Committed Capital Improvement Projects

The Town of Grand Lake is not currently planning any capital improvement projects in the project vicinity.

3.2 Planned or Existing Land Development Projects

There are currently no planned or existing land development projects in the project vicinity.

3.3 Background Traffic Growth

CDOT *OTIS*[1] data was used to forecast traffic on US 34. The 20-year factor of 1.30 equates to an annual growth rate of 1.32%. This growth rate was applied to the through traffic volumes on US 34. No growth rate was applied to the traffic volumes on Mary Drive or to turning volumes.

3.4 Seasonal Adjustment Factor

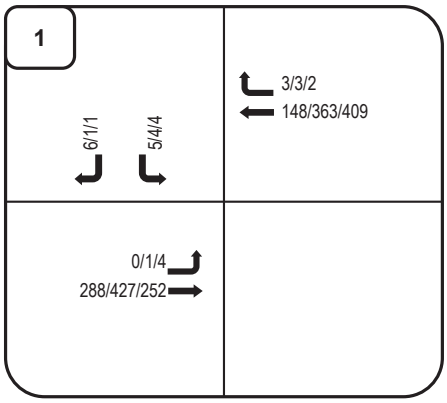
A seasonal adjustment factor was used to convert the June 2023 counts to the peak July 2023 summer traffic volumes. CDOT's *OTIS*[2] has continuous traffic count data that was used to determine a seasonal adjustment factor on US 34. The seasonal adjustment factor was found to equate to 1.18. This factor was applied to the through traffic volumes on US 34 that are impacted by the seasonality. The continuous traffic count data used to derive the seasonal adjustment factor can be found in the **Appendix**.

3.5 Forecasted Background Traffic

Projected Year 2024 and 2045 background traffic can be seen in **Figure 4** and **Figure 5**.

[1] Colorado Department of Transportation, Online Transportation Information System, 2023.

Figure 4: Year 2024 Background Traffic



LEGEND:
Directional Distribution = Inbound% (Outbound %)
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Turning Movements

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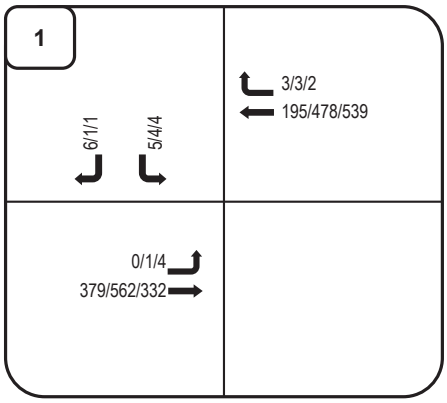
Figure 5: Year 2045 Background Traffic



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

3.6 Background Intersection Traffic Levels of Service and Recommendations

Using *Highway Capacity Manual 6th Edition 2016*[2] *(HCM)* methodology, Synchro Version 10 software was used to determine the delay (in seconds) and Level of Service (LOS.) *HCM* LOS is defined by the following criteria:

Table 1: Year HCM Level of Service Criteria

LOS	Expected Delay to Minor Street Traffic	Average Signal Delay (Seconds/Vehicle)	Average Stop-Controlled Delay (Seconds/Vehicle)
A	Little or no delay.	0-10	0-10
B	Short traffic delays.	>10-20	>10-15
C	Average traffic delays.	>20-35	>15-25
D	Long traffic delays.	>35-55	>25-35
E	Very long traffic delays.	>55-80	>35-50
F	When volume exceeds the capacity of the lane extreme delays will be encountered with queuing that may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improving the intersection.	>80	>50

Table 2 shown below shows the resulting LOS as determined by *HCM* analysis:

Table 2: Background Traffic Level of Service

#	Int.	Traffic Control	Approach or Control Delay	Approach	Year 2023 Existing Level of Service (Delay in Seconds)			Year 2024 Background Level of Service (Delay in Seconds)			Year 2045 Background Level of Service (Delay in Seconds)		
					AM	PM	SAT	AM	PM	SAT	AM	PM	SAT
1	Mary Dr & US 34	SB Stop	C	EB	A (0.0)	A (0.0)	A (0.2)	A (0.0)	A (0.0)	A (0.2)	A (0.0)	A (0.0)	A (0.1)
			C	WB	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			C	SB	B (10.2)	B (14.9)	B (13.6)	B (10.2)	C (15.1)	B (13.7)	B (11.0)	C (19.5)	C (16.7)

As can be seen in **Table 2**, the Mary Drive & US 34 intersection is anticipated to operate at an acceptable overall LOS C or better through long-term Year 2045 background traffic conditions. The Synchro reports can be found in the **Appendix**.

[2] Highway Capacity Manual, 6th Edition. Transportation Research Board, 2016.

4.0 Project Traffic

4.1 Trip Generation

Proposed Residential Development: The owner is proposing to develop 30 residential dwelling units. The owner is also proposing to develop approximately 3,300sf of office space. These uses fall under two land use codes (LUC) per the Institute of Transportation Engineers' 11th *Edition of the Trip Generation Manual*[3] *(Trip Generation Manual)*, #220 Multifamily Housing (Low-Rise) and #710 – General Office Building. As per ITE's Trip Generation Handbook[4] methodology, the trip generation regression equations or average rate for each of the land use codes were utilized for this analysis.

Multimodal Reduction: No multimodal reduction was applied when calculating the total number of vehicular trips.

Project Trip Generation: The project is anticipated to generate 262 vehicle trips per day (vpd) on the average weekday on Mary Drive, including 26 vehicles per hour (vph) during the morning peak hour, 30vph during the afternoon peak hour, and 17vph during a typical Saturday peak hour. Refer to **Table 3** for trip generation calculations and further breakdown of these trips.

Table 3: Trip Generation Table

			ITE Trip Generation Equation[3]				Average Weekday	Morning Peak Hour				Evening Peak Hour				Saturday Peak Hour			
								Inbound		Outbound		Inbound		Outbound		Inbound		Outbound	
ITE Code	Units [2]	Eq. Coef	Avg. Weekday	AM Peak Hour	PM Peak Hour	Sat. Peak Hour	Trips (vpd)	% Trips	Trips (vph)	% Trips	Trips (vph)	% Trips	Trips (vph)	% Trips	Trips (vph)	% Trips	Trips (vph)	% Trips	Trips (vph)
Residential Land Use																			
#220 - Multifamily Housing (Low-Rise) (Rates)	26 DU	Type a= b=	Rate 6.74	Rate 0.47	Rate 0.57	Rate 0.41	175	24%	3	76%	10	62%	10	38%	6	62%	7	38%	5
#220 - Multifamily Housing (Low-Rise) (Rates)	4 DU	Type a= b=	Rate 6.74	Rate 0.47	Rate 0.57	Rate 0.41	27	24%	1	76%	2	62%	2	38%	1	62%	2	38%	1
Proposed Residential Trips							**202**		**4**		**12**		**12**		**7**		**9**		**6**
Commerical Land Use																			
#710 - General Office Building	3.3 KSF	Type a= b=	B 0.87 3.05	B 0.86 1.16	B 0.83 1.29	Rate 0.53	60	88%	8	12%	2	18%	2	82%	9	54%	1	46%	1
Proposed Commercial Trips							**60**		**8**		**2**		**2**		**9**		**1**		**1**
Total Project Trips							**262**		**12**		**14**		**14**		**16**		**10**		**7**
									26				**30**				**17**		

Notes:

[1] Values obtained from *Trip Generation, 11th Edition,* Institute of Transportation Engineers, September 2021.

[2] DU = Dwelling Units, kSF = 1,000 Square Feet

[3] Fitted curve equations from ITE Land Uses - Equation Type A is T = a * X + b, Equation Type B is Ln(T) = a * Ln(X) + b, Rate is T = a * X

[3] Trip Generation Manual, 11th Edition. Institute of Transportation Engineers, 2021.

[4] Trip Generation Handbook, An ITE Recommended Practice. Institute of Transportation Engineers, 2001.

4.2 Trip Distribution

The anticipated arrival and departure routes of project-generated traffic is influenced by several factors including the following:

- The location of the site relative to other facilities and the roadway network.
- The configuration of the existing and proposed adjacent roadway network.
- Relative location of neighboring population centers.

Directional Distribution: The directional distribution for the project-generated trips was estimated based on the existing Year 2023 traffic counts. Refer to **Figure 6** for the anticipated site-generated directional distribution.

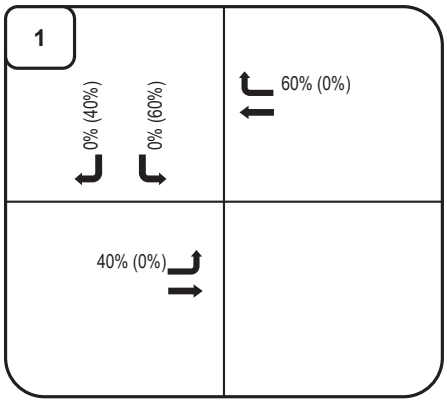
4.3 Site-Generated Traffic

When the trip generation expected for the development (**Table 1**) is applied to the estimated trip distribution (**Figure 6**), the result is the anticipated assignment of trips on the roadway system. **Figure 7** depicts the new vehicle trips that are anticipated from the residential development.

4.4 Total Traffic

The total traffic anticipated is the sum of background traffic with the site-generated traffic. For Year 2024, the background traffic (**Figure 4**) added to the site-generated traffic (**Figure 7**) yields the total Year 2024 traffic in **Figure 8**. For Year 2045, the background traffic (**Figure 5**) added to the site-generated traffic (**Figure 7**) yields the total Year 2045 traffic in **Figure 9**.

Figure 6: Project Generated Traffic Distribution



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

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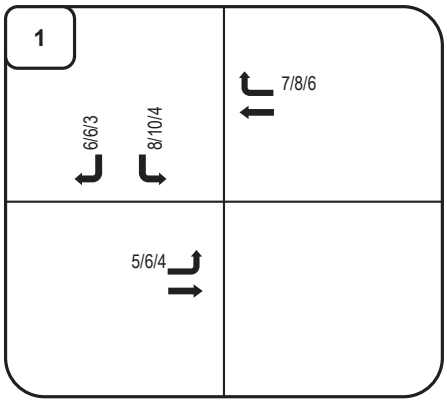
Figure 7: Project Generated Traffic Assignment



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

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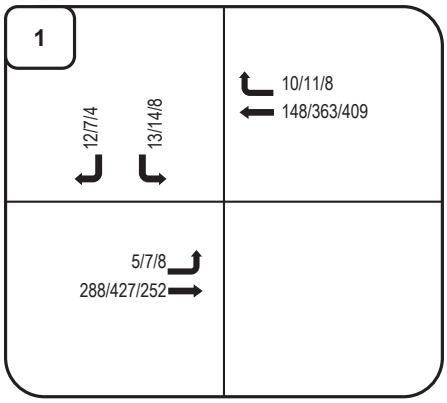
Figure 8: Year 2024 Total Traffic



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

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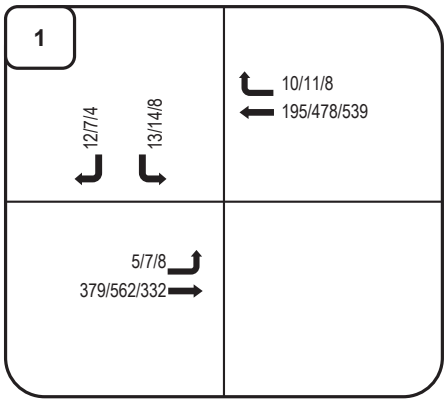
Project Number	M1616
Prepared By	KJS

Figure 9: Year 2045 Total Traffic



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

McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number	M1616
Prepared By	KJS

5.0 Traffic Analysis

5.1 Auxiliary Turn Lane Analysis

US 34: The *Access Code*[1] was used for auxiliary turn lane requirements on US 34. The *Access Code*[1] establishes the need for auxiliary turn lanes on Colorado's highway network. Several criteria apply when determining the traffic volume thresholds such as highway classification, posted speed limit, turning traffic volumes, and safety/operations.

US 34 is classified as a Regional Highway (R-A) per CDOT's *OTIS*[2] and has a posted speed limit of 50mph at the site access. Section 3.8(5) of the *Access Code*[1] requires auxiliary turn lanes for certain turning movement volumes. Auxiliary turn lanes are required on US 34 for more than 25vph making an inbound right turn movement and 10vph making an inbound left turn movement.

Mary Drive: Based upon HCM operational analyses, this intersection is anticipated to operate well through the long-range planning conditions. Therefore, no auxiliary turn lanes are recommended at the site accesses to Mary Drive.

Table 4 summarizes the auxiliary turn lane requirements for the site access according to the *Access Code*[1].

Table 4: Auxiliary Turn Lane Requirements

#	Int.	Mvmt	Accel or Decel	Posted Speed Limit (MPH)	Road Classification	SHAC Trigger Volume (VPH)	Year 2023 Existing			Year 2024 Background			Year 2045 Background			Year 2024 Total			Year 2045 Total			Existing Turn Lane	*Access Code* Required Turn Lane	Trigger Year & Condition
							AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT			
1	US 34 & Mary Drive	EBL	Decel	50	R-A	> 10	0	1	4	0	1	4	0	1	4	5	7	8	5	7	8	None	Not	N/A
		WBR	Decel	50	R-A	> 25	3	3	2	3	3	2	3	3	2	10	11	8	10	11	8	None	Not	N/A
		SBL	Accel	50	R-A	Safety & Ops	5	4	4	5	4	4	5	4	4	13	14	8	13	14	8	None	Not Warranted	N/A
		SBR	Accel	50	R-A	> 50	6	1	1	6	1	1	6	1	1	12	7	4	12	7	4	None	Not	N/A
		SBL	Decel	25		Safety & Ops	5	4	4	5	4	4	5	4	4	13	14	8	13	14	8	None	Not Warranted	N/A
		SBR	Decel	25		Safety & Ops	6	1	1	6	1	1	6	1	1	12	7	4	12	7	4	None	Not Warranted	N/A

[1]Based upon *State Highway Access Code* requirements for an R-A roadway with posted speed of 45mph.

Mary Drive & US 34: This intersection is anticipated to operate at an acceptable LOS through Year 2045 total traffic conditions with 95th percentile queue lengths less than one vehicle. The current and anticipated traffic volumes at the Mary Drive and US 34 intersection do not warrant the construction of auxiliary turn lanes on either US 34 or Mary Drive.

5.2 Total Traffic Level of Service

An *HCM* analysis under total traffic conditions was performed for the proposed site access under both short-term Year 2024 and long-term Year 2045 traffic conditions. The results can be seen in **Table 5**.

Table 5: HCM Total Traffic LOS

#	Int.	Traffic Control	Approach or Control Delay	Approach	Year 2024 Total Level of Service (Delay in Seconds)			Year 2045 Total Level of Service (Delay in Seconds)		
					AM	PM	SAT	AM	PM	SAT
1	Mary Dr & US 34	SB Stop	C	EB	A (0.2)	A (0.2)	A (0.3)	A (0.1)	A (0.2)	A (0.3)
			C	WB	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
			C	SB	B (10.7)	B (15.0)	B (13.2)	B (11.7)	C (19.3)	C (16.6)

As can be seen in **Table 5**, the Mary Drive & US 34 intersection is anticipated to operate at an acceptable overall LOS C or better through long-term Year 2045 total traffic conditions. The Synchro reports can be found in the **Appendix**.

5.3 Site Accesses Sight Distance

Sight distance requirements are determined by Table 4-1 and 4-2 of the *Access Code*[1] for the sight distance along the highway and entering sight distance, respectively. For residential and office uses, a single unit truck is the specified design vehicle per Table 4-3 of the *Access Code*[1]. Google Earth shows an average road grade of 0.7% on US 34 near the project site.

With a posted speed limit of 50mph on US 34 at Mary Drive, the access requires 475' of sight along US 34 and 650' of entering sight distance. **Table 6** shows the sight distance requirements for the Mary Drive and US 34 intersection.

Table 6: Sight Distance Requirements

	Posted Speed: 50mph		
	Required Sight Distance	**Existing Sight Distance**	**Meets Sight Distance Requirements?**
Sight Distance Along Highway Eastbound	475ft	700ft	Yes
Sight Distance Along Highway Westbound	475ft	750ft	Yes
Entering Sight Distance Looking East	650ft	750ft	Yes
Entering Sight Distance Looking West	650ft	700ft	Yes

As can be seen from **Table 6**, the existing sight distance along the highway and the entering sight distance are greater than the required sight distance. Therefore, the sight distance requirements are met.

The civil and landscape plans should be coordinated to avoid visual obstructions with this area.

5.4 Mary Drive and US 34 Design

The intersection of US 34 and Mary Drive should be constructed to current Town of Grand Lake and CDOT standards.

5.5 State Highway Access Permit

A new State Highway Access Permit is required when the proposed project will increase traffic by more than twenty percent. The Town of Grand Lake will need to apply for a new State Highway Access Permit for Mary Drive.

6.0 Summary and Recommendations

The proposed development includes 30 residential dwelling units and approximately 3,300sf of office space. The proposed development will be constructed on a single lot that is currently vacant. The site will access US 34 via two accesses onto Mary Drive.

Trip Generation: The project is anticipated to generate 262 vehicle trips per day (vpd) on the average weekday on Mary Drive, including 26 vehicles per hour (vph) during the morning peak hour, 30vph during the afternoon peak hour, and 17vph during a typical Saturday peak hour.

Site Access: The project is proposing two site accesses to Mary Drive. The site accesses are proposed as two-way, paved, and northbound stop-controlled. The two site accesses can be seen in **Figure 2**.

Background and Total Level of Service: As can be seen in **Table 2** and **Table** 5, the Mary Drive & US 34 intersection is anticipated to operate at an acceptable overall LOS C or better through long-term Year 2045 total traffic conditions. The Synchro reports can be found in the **Appendix**.

Site Access Sight Distance: The existing sight distance along the highway eastbound and the existing entering sight distance are greater than the required sight distance. The civil and landscape plans should be coordinated to avoid visual obstructions with this area.

Turn Lane Analysis: This intersection is anticipated to operate at an acceptable LOS through Year 2045 total traffic conditions with 95th percentile queue lengths less than one vehicle. The current and anticipated traffic volumes at the Mary Drive and US 34 intersection do not warrant the construction of auxiliary turn lanes on either US 34 or Mary Drive.

Mary Drive and US 34 Design: The intersection of US 34 and Mary Drive should be constructed to current Town of Grand Lake and CDOT standards.

State Highway Access Permit: A new State Highway Access Permit is required when the proposed project will increase traffic by more than twenty percent. The Town of Grand Lake will need to apply for a new State Highway Access Permit for Mary Drive.

Conclusion: The proposed development is anticipated to be successfully incorporated into the existing roadway network with the implementation of the project recommendations included in this report.

7.0 Appendix

7.1 Reference Documents

1. *State Highway Access Code*. State of Colorado, 2002.

2. Colorado Department of Transportation, Online Transportation Information System, 2023.

3. Highway Capacity Manual, 6th Edition. Transportation Research Boar, 2016.

4. Trip Generation Manual, 11th Edition. Institute of Transportation Engineers, 2021.

5. Trip Generation Handbook, An ITE Recommended Practice. Institute of Transportation Engineers, 2001.

6. American Association of State Highway and Transportation Officials: A policy on Geometric Design of Highways and Streets 7th Edition, 2018.

7.2 Included Documents

1. McDowell Engineering and CDOT Correspondence and Scoping Form
2. CDOT OTIS Straight Line Diagram
3. IDAX Traffic Counts
4. Seasonal Adjustment Factor Calculations
5. Synchro reports

COLORADO
Department of Transportation
Region 3

Transportation Impact Study Methodology Form

Prior to starting a traffic impact study, a Methodology Form must be submitted for review and signed by the Region 3 Access Engineer. It shall be included as part of the study.

CONTACT INFORMATION	
Consultant:	Name: McDowell Engineering
	Telephone: (970)623-0788
	Email: Kari@mcdowelleng.com
Developer/Owner Name:	Town of Grand Lake Community Development

PROJECT INFORMATION	
Project Name	Mary Dr Mixed Use
Project Location	600 Mary Dr, Grand Lake, CO 80447
Project Description *(Attached proposed site plan)*	The Town of Grand Lake is proposing to develop 30 multifamily residential dwelling units as well as 3.3KSF of commercial land use.
State Highway	US 34
County	Grand County
Mile Post	14.5
Posted Speed Limit	50mph

TIS ASSUMPTIONS			
Study Years	Current Year: 2023	Buildout Year: 2024	Long Term Year: 2045
Traffic Assessment Level *(Provide justification)*	Level 3 Traffic Impact Study		
Study Intersections	1. Mary Dr and US 34	6.	
	2.	7.	
	3.	8.	
	4.	9.	
	5.	10.	
Future Growth Rate	■ OTIS	☐ Regional TDM	☐ Other
Seasonal Adjustment Factor	SAF will be calculated based on CDOT OTIS continuous traffic counts on US 34 near the in		

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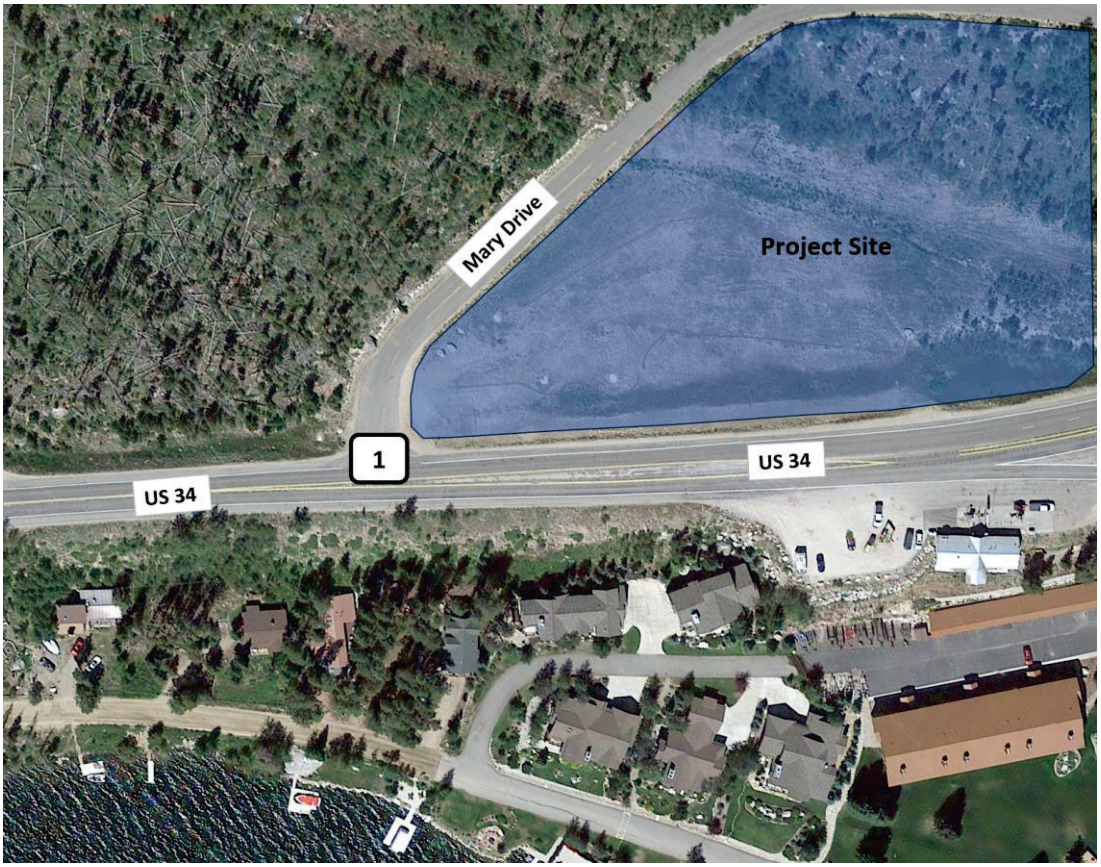
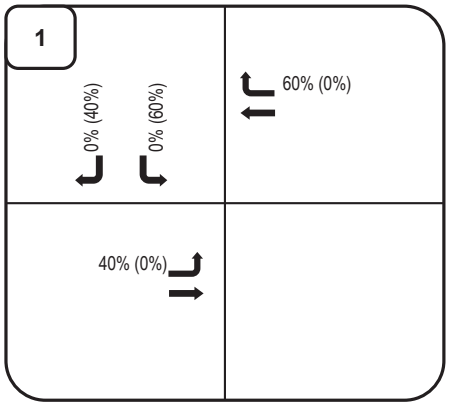
Region 3

ASSUMPTIONS CONTINUED				
Project Trip Distribution *(State assumptions and attach sketch that shows individual movements.)*	Three distributions were created. One for the residential development, one for the commercial pass-by and one for the commercial non-passby. See attached			
Trip Reduction Percentage	Internal Capture:	None	Pass By:	Passby rates provided by ITE
	Multi-Modal:	None	Other:	
Study Time Periods *(Check all that apply)*	■ AM (7-9)	■ PM (4-6)	☐ Weekday	
	■ SAT (Midday)	☐ Other		
Existing and Proposed ITE Trip Generation Land Use	#220 - Multifamily Housing (Low-Rise) , #851 - Convenience Store, #899 - Liquor Store. Commercial land uses were not specified by the developer. Therefore, exact commercial land uses are unknown at this time.			
Analysis Methods *(Check all that apply)*	■ Synchro or ☐ HCS *(isolated intersections only)*	☐ SimTraffic or ☐ Other *(closely spaced intersections or when known/expected queuing issue)*		
	☐ Signal Warrants	☐ Pedestrian/Transit/Bicycle		
	■ Safety/Sight Distance	☐ Queuing and Storage		
	☐ Other			
Notes and Other Assumptions				
Crash Data	CDOT will perform a crash data analysis for the highway in the vicinity of the proposed access and provide to the consultant. As a part of the study consultant shall recommend mitigation measures for any identified safety issues.			
Simulation Input Files	Consultant to provide computer files used for analysis with a signed and sealed copy of the study.			

CDOT INTERNAL USE ONLY	
Review Comments ☐ Revise and Resubmit	
Engineer Signature/Date	☐ Approved

Figure 6: Project Generated Traffic Distribution (Residential)



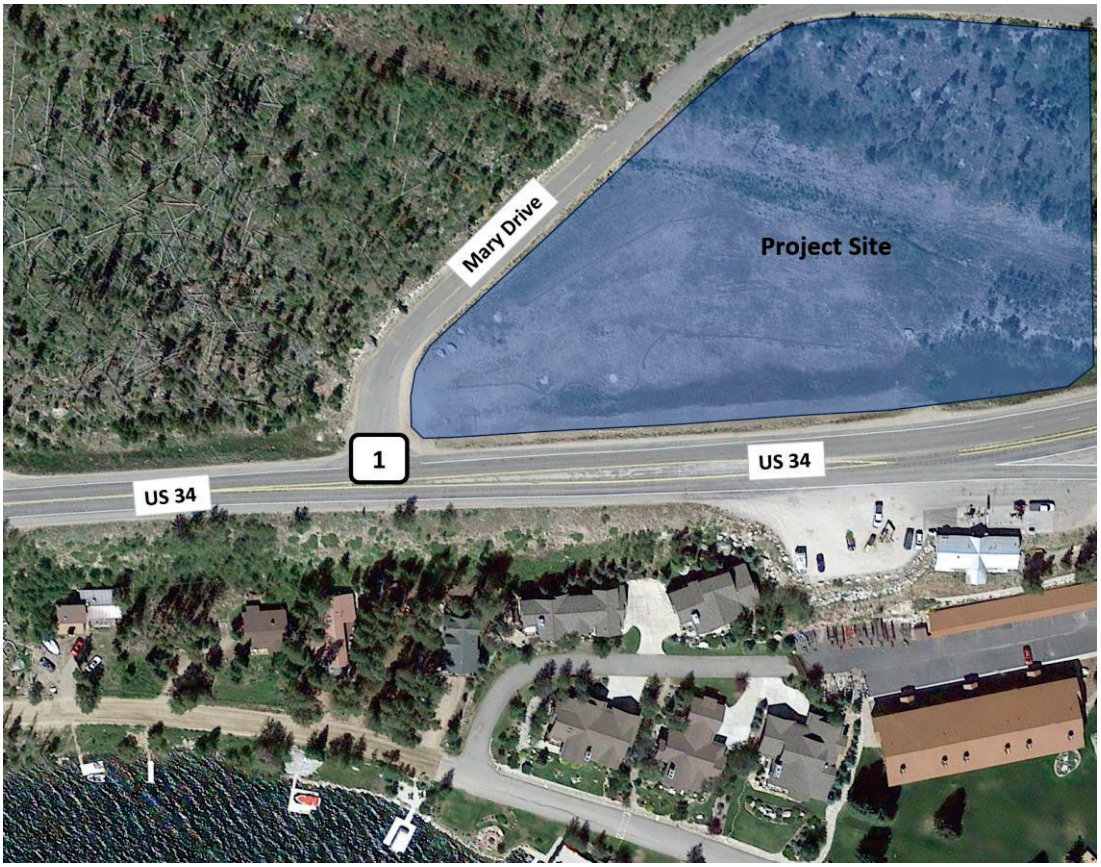


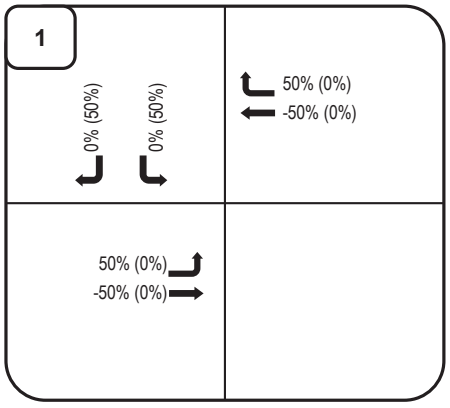
LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)
Turning Movements

McDOWELL ENGINEERING, LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number M1616
Prepared By EP

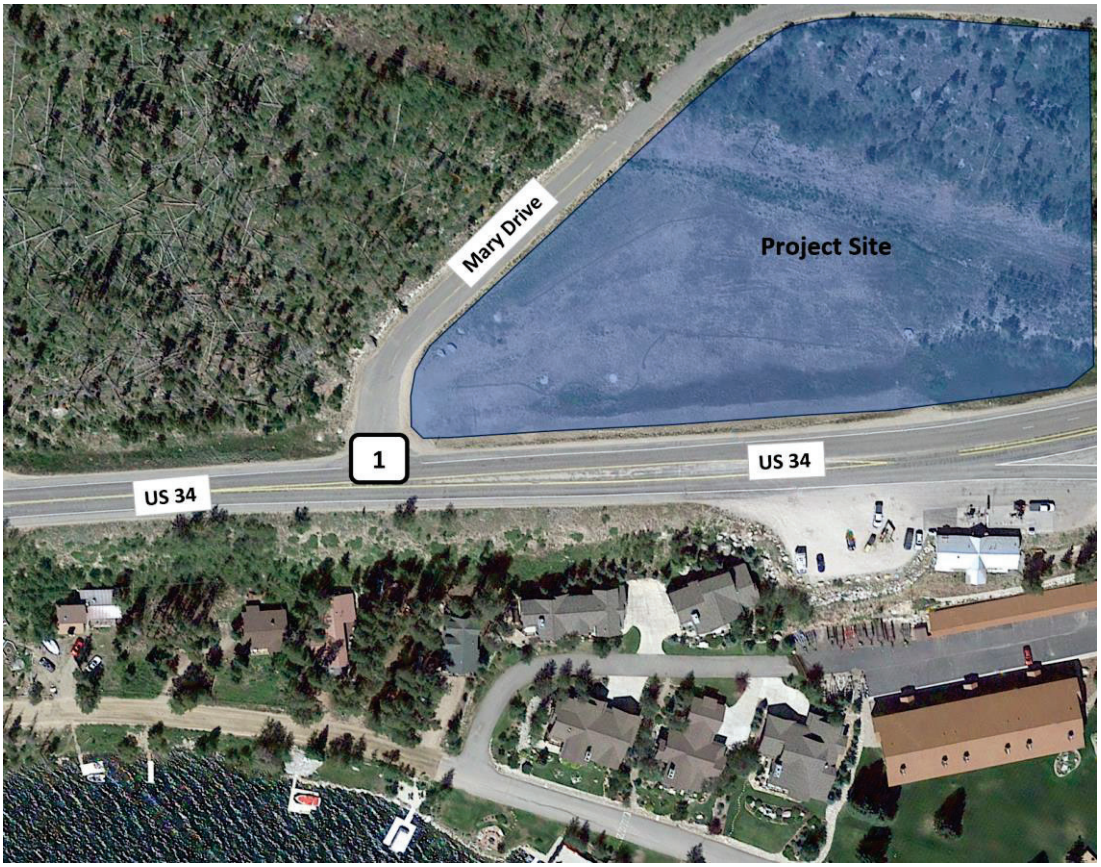
Figure 7: Project Generated Traffic Distribution (Commercial Pass-By)

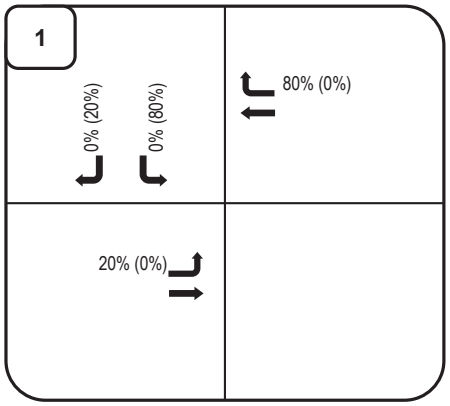




LEGEND:
Directional Distribution = Inbound% (Outbound %)
AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)
Turning Movements

Figure 8: Project Generated Traffic Distribution (Commercial Non-Passby)





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

McDOWELL ENGINEERING, LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number M1616
Prepared By EP

Table 1 - Project Name

Project Trip Generation

Estimated Project-Generated Traffic[1]

ITE Code	Units [2]		Eq. Coef	ITE Trip Generation Equation[3] Avg. Weekday	AM Peak Hour	PM Peak Hour	Sat. Peak Hour	Average Weekday Trips (VPD)	Morning Peak Hour Inbound % Trips	Morning Peak Hour Inbound Trips	Morning Peak Hour Outbound % Trips	Morning Peak Hour Outbound Trips	Evening Peak Hour Inbound % Trips	Evening Peak Hour Inbound Trips	Evening Peak Hour Outbound % Trips	Evening Peak Hour Outbound Trips	Saturday Peak Hour Inbound % Trips	Saturday Peak Hour Inbound Trips	Saturday Peak Hour Outbound % Trips	Saturday Peak Hour Outbound Trips
Residential Land Use																				
#220 - Multifamily Housing (Low-Rise) (Rates)	26	DU	Type a= b=	Rate 6.74	Rate 0.47	Rate 0.57	Rate 0.41	175	24%	3	76%	10	62%	10	38%	6	62%	7	38%	5
#220 - Multifamily Housing (Low-Rise) (Rates)	4	DU	Type a= b=	Rate 6.74	Rate 0.47	Rate 0.57	Rate 0.41	27	24%	1	76%	2	62%	2	38%	1	62%	2	38%	1
Multi-Modal Reduction		*0%*						*0*		*0*		*0*		*0*		*0*		*0*		*0*
Proposed Residential Trips								**202**		**4**		**12**		**12**		**7**		**9**		**6**
Commerical Land Use																				
#851 - Convenience Store	1.8	KSF	Type a= b=	Rate 762.28	Rate 68.83	Rate 53.51	Rate 79.12	1,372	50%	62	50%	62	51%	49	49%	47	50%	71	50%	71
Passby Reduction		*51%*						*700*		*32*		*32*		*25*		*24*		*36*		*36*
Non-Passby		*49%*						*672*		*30*		*30*		*24*		*23*		*35*		*35*
#899 - Liquor Store	1.5	KSF	Type a= b=	Rate 107.21	Rate 5.08	Rate 17.00	Rate 9.31	161	51%	4	49%	4	50%	13	50%	13	52%	8	48%	7
Passby Reduction		*36%*						*58*		*1*		*1*		*5*		*5*		*3*		*3*
Non-Passby		*64%*						*103*		*3*		*3*		*8*		*8*		*5*		*4*
Proposed Passby Trips								**758**		**33**		**33**		**30**		**29**		**39**		**39**
Proposed Non-Passby Trips								**775**		**33**		**33**		**32**		**31**		**40**		**39**
Total Trips (Passby + Non-Passby)								**1,533**		**66**		**66**		**62**		**60**		**79**		**78**

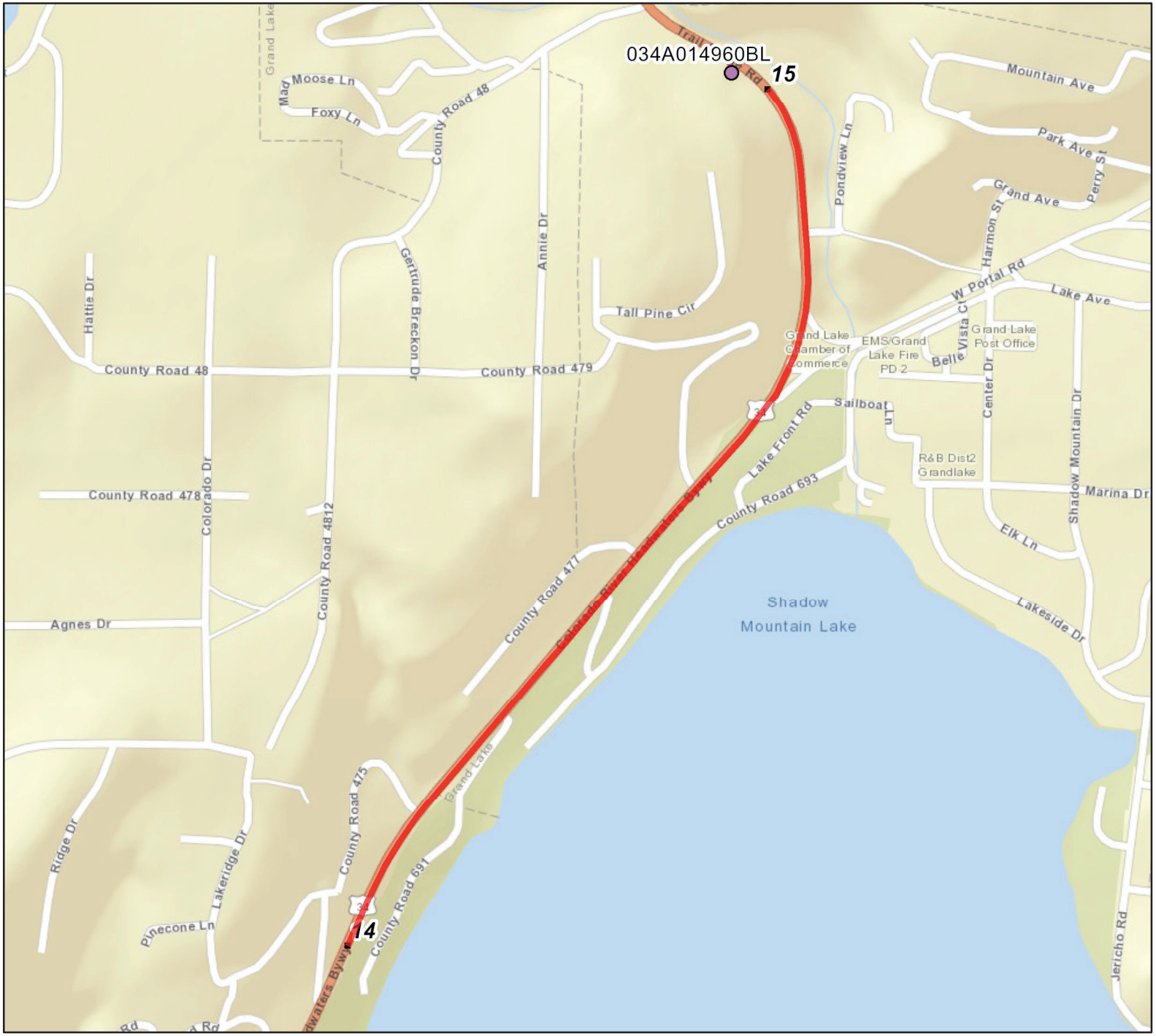
Notes:

[1] Values obtained from *Trip Generation, 11th Edition,* Institute of Transportation Engineers, September 2021.

[2] DU = Dwelling Units, kSF = 1,000 Square Feet

[3] Fitted curve equations from ITE Land Uses - Equation Type A is T = a * X + b, Equation Type B is Ln(T) = a * Ln(X) + b, Rate is T = a * X

Route 034A From 14 to 15



Legend

- Route
- Milepoint

Structures

- Major Structure
- Minor Structure

Created:

Date: 9/20/2023

Time: 9:51:45 AM

0 0.07 0.14 0.21 0.28

Miles

N

W E

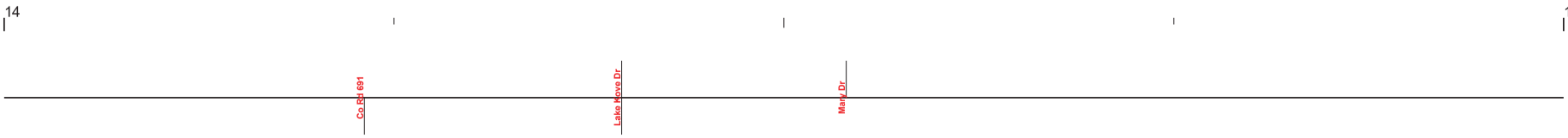
S

CDOT

The information contained in this map is based on the most currently available data and has been checked for accuracy. CDOT does not guarantee the accuracy of any information presented, is not liable in any respect for any errors or omissions, and is not responsible for determining "fitness for use".

Route 034A
From 14 To 15

Ramps
Overpass
Underpass
Structures



CLASSIFICATION

Access Control	R-A: Regional Highway	
Administrative Class	CDOT Highway	
Forest Route	0	
Functional Class	3 Principal Arterial - Other	
Highway Designation	U.S.	
Toll Road		

SAFETY

Primary Speed Limit	50	40
Secondary Speed Limit	50	

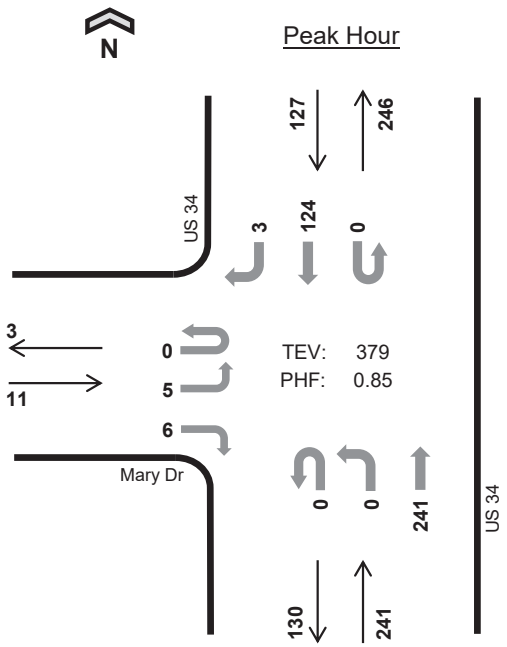
TRAFFIC

AADT	6800	5300
Design Hour Truck Percentage	1.20	0.10
DHV	15.5	
Off Peak Truck Percentage	3.80	1.30
Route Capacity	3050	2750
V/C Ratio	0.40	0.35
V/C Ratio 20	0.46	
VMT	26615	193980
Year 20 Factor	1.16	1.30

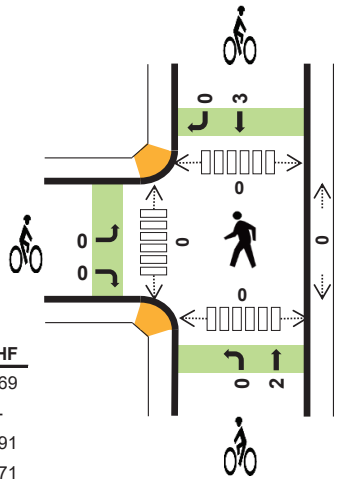
It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

US 34
Mary Dr

Peak Hour



Date: 06/15/2023
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	0.0%	0.69
WB	-	-
NB	4.6%	0.91
SB	5.5%	0.71
TOTAL	4.7%	0.85

Two-Hour Count Summaries

Interval Start		Mary Dr Eastbound				N/A Westbound				US 34 Northbound				US 34 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	0	0	0	0	0	19	0	0	0	13	0	32	0
7:15 AM		0	2	0	1	0	0	0	0	0	0	29	0	0	0	22	0	54	0
7:30 AM		0	0	0	2	0	0	0	0	0	0	35	0	0	0	29	1	67	0
7:45 AM		**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**65**	**0**	**0**	**0**	**23**	**1**	**91**	244
8:00 AM		**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**46**	**0**	**0**	**0**	**35**	**0**	**85**	297
8:15 AM		**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**64**	**0**	**0**	**0**	**44**	**1**	**112**	355
8:30 AM		**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**66**	**0**	**0**	**0**	**22**	**1**	**91**	**379**
8:45 AM		0	0	0	0	0	0	0	0	0	0	59	0	0	0	26	0	85	373
Count Total		0	7	0	9	0	0	0	0	0	0	383	0	0	0	214	4	617	0
Peak Hour	**All**	**0**	**5**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**241**	**0**	**0**	**0**	**124**	**3**	**379**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**7**	**0**	**18**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**5%**	**-**	**-**	**-**	**6%**	**0%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**2**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**0**	**0**	**3**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***
8:45 AM	0	0	2	0	*2*	0	0	3	0	*3*	0	0	0	0	*0*
Count Total	0	0	18	10	*28*	0	0	5	3	*8*	0	0	0	0	*0*
Peak Hr	**0**	**0**	**11**	**7**	***18***	**0**	**0**	**2**	**3**	***5***	**0**	**0**	**0**	**0**	***0***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Mary Dr				N/A				US 34				US 34				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	14
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**5**	17
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**5**	20
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**18**
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	14
Count Total	0	0	0	0	0	0	0	0	0	0	18	0	0	0	10	0	28	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**7**	**0**	**18**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Mary Dr			N/A			US 34			US 34			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**3**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**5**
8:45 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	5
Count Total	0	0	0	0	0	0	0	5	0	0	3	0	8	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**3**	**0**	**5**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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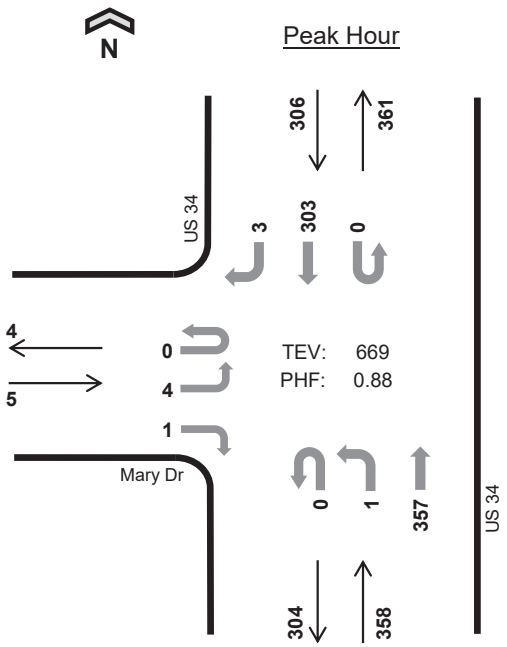
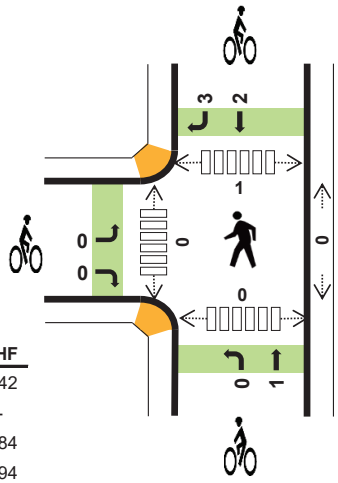
US 34
Mary Dr

Peak Hour



Date: 06/17/2023
Count Period: 10:00 AM to 2:00 PM
Peak Hour: 12:45 PM to 1:45 PM



	HV %:	PHF
EB	0.0%	0.42
WB	-	-
NB	0.8%	0.84
SB	0.7%	0.94
TOTAL	0.7%	0.88

Four-Hour Count Summaries

Interval Start		Mary Dr Eastbound				N/A Westbound				US 34 Northbound				US 34 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
12:45 PM		0	3	0	0	0	0	0	0	0	0	106	0	0	0	79	1	189	0
1:00 PM		0	0	0	1	0	0	0	0	0	0	68	0	0	0	76	1	146	0
1:15 PM		0	1	0	0	0	0	0	0	0	1	81	0	0	0	67	1	151	0
1:30 PM		0	0	0	0	0	0	0	0	0	0	102	0	0	0	81	0	183	669
Peak Hour	All	0	4	0	1	0	0	0	0	0	1	357	0	0	0	303	3	669	0
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	0
	HV%	-	0%	-	0%	-	-	-	-	-	0%	1%	-	-	-	1%	0%	1%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:45 PM	0	0	0	1	*1*	0	0	0	3	*3*	0	0	1	0	*1*
1:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
1:15 PM	0	0	1	1	*2*	0	0	1	2	*3*	0	0	0	0	*0*
1:30 PM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	0	0	3	2	*5*	0	0	1	5	*6*	0	0	1	0	*1*

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Four-Hour Count Summaries

Interval Start	Mary Dr (Eastbound)				N/A (Westbound)				US 34 (Northbound)				US 34 (Southbound)				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
10:00 AM	0	1	0	0	0	0	0	0	0	0	79	0	0	0	43	0	123	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	73	0	0	0	72	1	146	0
10:30 AM	0	3	0	0	0	0	0	0	0	0	89	0	0	0	64	3	159	0
10:45 AM	0	1	0	4	0	0	0	0	0	1	72	0	0	0	50	2	130	558
11:00 AM	0	0	0	1	0	0	0	0	0	0	61	0	0	0	60	2	124	559
11:15 AM	0	1	0	0	0	0	0	0	0	0	90	0	0	0	62	2	155	568
11:30 AM	0	0	0	0	0	0	0	0	0	2	89	0	0	0	70	0	161	570
11:45 AM	0	1	0	1	0	0	0	0	0	0	84	0	0	0	71	1	158	598
12:00 PM	0	0	0	0	0	0	0	0	0	1	70	0	0	0	62	0	133	607
12:15 PM	0	2	0	3	0	0	0	0	0	2	94	0	0	0	58	0	159	611
12:30 PM	0	0	0	0	0	0	0	0	0	0	96	0	0	0	63	0	159	609
12:45 PM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**106**	**0**	**0**	**0**	**79**	**1**	**189**	640
1:00 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**68**	**0**	**0**	**0**	**76**	**1**	**146**	653
1:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**81**	**0**	**0**	**0**	**67**	**1**	**151**	645
1:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**102**	**0**	**0**	**0**	**81**	**0**	**183**	**669**
1:45 PM	0	0	0	0	0	0	0	0	0	0	87	0	0	0	78	0	165	645
Count Total	0	13	0	10	0	0	0	0	0	7	1,341	0	0	0	1,056	14	2,441	0
Peak Hour All	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**357**	**0**	**0**	**0**	**303**	**3**	**669**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**5**	**0**
Peak Hour HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**1%**	**-**	**-**	**-**	**1%**	**0%**	**1%**	**0**

Note: Four-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
10:00 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	1	0	*2*
10:15 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
10:30 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
10:45 AM	0	0	0	2	*2*	0	0	0	0	*0*	0	0	0	0	*0*
11:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
11:15 AM	0	0	0	2	*2*	0	0	0	0	*0*	0	0	0	0	*0*
11:30 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
12:00 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	0	0	0	1	*1*	0	0	1	0	*1*	0	0	0	0	*0*
12:45 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**3**	***3***	**0**	**0**	**1**	**0**	*1*
1:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
1:15 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	*0*
1:30 PM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:45 PM	0	0	2	1	*3*	0	0	1	0	*1*	0	0	0	0	*0*
Count Total	0	0	12	15	*27*	0	0	3	5	*8*	0	1	2	0	*3*
Peak Hr	**0**	**0**	**3**	**2**	***5***	**0**	**0**	**1**	**5**	***6***	**0**	**0**	**1**	**0**	***1***

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Four-Hour Count Summaries - Heavy Vehicles

Interval Start	Mary Dr				N/A				US 34				US 34				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
11:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	7
11:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	8
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	10
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
12:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	5
1:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
1:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	4
1:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**5**
1:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	7
Count Total	0	0	0	0	0	0	0	0	0	0	12	0	0	0	15	0	27	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**5**	**0**

Four-Hour Count Summaries - Bikes

Interval Start	Mary Dr			N/A			US 34			US 34			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
12:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	4
1:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
1:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**	7
1:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**
1:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	4
Count Total	0	0	0	0	0	0	0	3	0	0	2	3	8	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**3**	**6**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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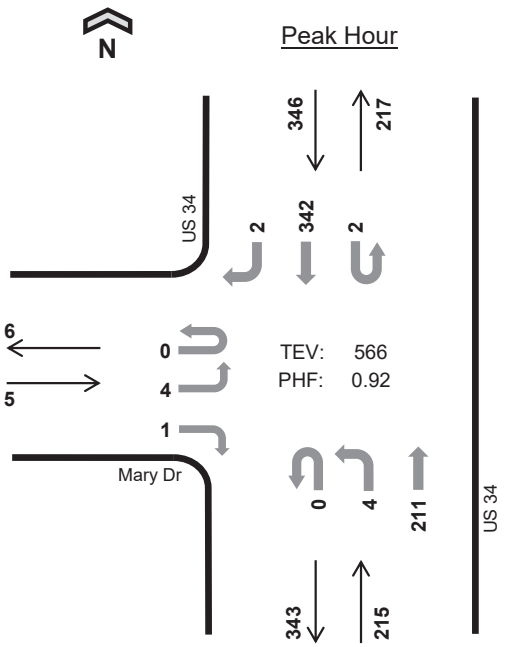
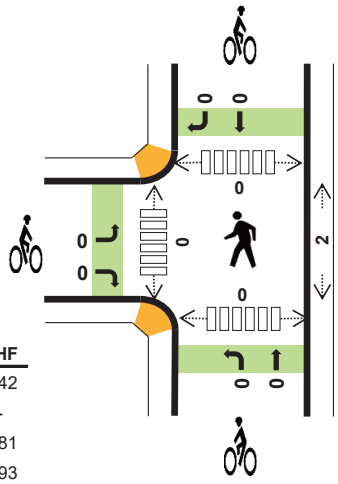
US 34
Mary Dr

Peak Hour



Date: 06/15/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	0.0%	0.42
WB	-	-
NB	2.8%	0.81
SB	2.3%	0.93
TOTAL	2.5%	0.92

Two-Hour Count Summaries

Interval Start		Mary Dr Eastbound				N/A Westbound				US 34 Northbound				US 34 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	1	0	1	0	0	0	0	0	0	50	0	0	0	71	0	123	0
4:15 PM		**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**66**	**0**	**0**	**0**	**84**	**2**	**153**	0
4:30 PM		**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**45**	**0**	**0**	**0**	**93**	**0**	**140**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**49**	**0**	**0**	**0**	**88**	**0**	**139**	555
5:00 PM		**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**51**	**0**	**2**	**0**	**77**	**0**	**134**	**566**
5:15 PM		0	2	0	1	0	0	0	0	0	1	52	0	1	0	78	1	136	549
5:30 PM		0	2	0	1	0	0	0	0	0	0	65	0	0	0	54	0	122	531
5:45 PM		0	0	0	0	0	0	0	0	0	0	64	0	0	0	76	1	141	533
Count Total		0	9	0	4	0	0	0	0	0	5	442	0	3	0	621	4	1,088	0
Peak Hour	**All**	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**211**	**0**	**2**	**0**	**342**	**2**	**566**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**8**	**0**	**14**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**3%**	**-**	**0%**	**-**	**2%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
4:45 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
5:00 PM	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	0	0	2	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	3	1	*4*	0	0	1	0	*1*	0	0	0	0	*0*
5:45 PM	0	0	1	0	*1*	0	0	1	0	*1*	0	0	0	0	*0*
Count Total	0	0	13	11	*24*	0	0	2	0	*2*	2	0	0	0	*2*
Peak Hr	**0**	**0**	**6**	**8**	***14***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Mary Dr				N/A				US 34				US 34				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**7**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	14
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**14**
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	10
5:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	11
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	10
Count Total	0	0	0	0	0	0	0	0	0	0	13	0	0	0	11	0	24	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**8**	**0**	**14**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Mary Dr			N/A			US 34			US 34			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	2
Count Total	0	0	0	0	0	0	0	2	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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Monthly Summary Data

CDOT OTIS Station ID 000205, ON US 34 East of Estes Park

CALYR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2023	3891	4358	4538	4864	6409	8516	9537	8239				
2022	3981	4145	4744	5135	6345	8322	9276	8463	8682	7301	4604	4161
2021	4230	4037	4902	5123	6542	8934	9814	8675	8864	7336	5212	4590
2020	4375	4029	4159	2813	4963	7771	9062	8545	8159	6053	4271	4183
2019	3994	4141	4618	4741	6002	8206	9824	9052	9028	6951	4536	4254
2018	2369	2313	2641	2806	4465	8539	9836	8582	8865	5996	4472	4332
2017	2210	2448	2723	3032	4474	8966	10161	8729	8460	3265	2598	2350
2016	4150	4346	4646	4511	6098	9113	10360	8572	8756	5302	3063	2775
2015	3830	3636	4692	4442	5930	8762	10386	9189	9047	6921	4432	4007
2014	3391	3450	4149	4293	5838	8155	9563	8958	8161	6156	4054	3634
2013	3651	3610	4067	4095	5981	8113	9650	8490	4059	2008	3192	3606
2012	3179	3011	3923				9204	8224	8435	5370	4313	3650
2011	3069	2893	3458	3675	4641	6921	8631	7529	7171	5293	3580	3218
2010	3075	2884	3323	3704	4718	6860	8567	7676	7233	5276	3581	3306
2009	3246	3379	3603	3478	5266	7004	8457	7726	7232	4521	3701	2952
2008	3070	3233	3375	3673	4787	6459	7771	7327	6982	5154	3878	3196
2007	2848	3230	3708	3862	5114	7071	8379	7520	7242	4877	3778	2937
2006	3367	3354	3470	4113	5333	7164	8227	7177	7137	4821	3860	3162
2005	3184	3590	3647	3768	5129	7009	8703	7522	6851	5032	3872	3536
2004	3376	3528	3910	3870	5414	6796	8381	7731	7528	4455	3544	3560
2003	3528	3315	3359	3972	5321	6214	8799	8205	7128	5484	3752	3633
2002	3280	3507	3546	4002	5257	7299	8334	7624	7082	4770	3741	3681
Average	**3,422**	**3,474**	**3,873**	**3,999**	**5,430**	**7,724**	**9,133**	**8,171**	**7,719**	**5,350**	**3,906**	**3,558**

Seasonal Adjustment Factors

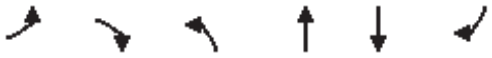
CDOT OTIS Station ID 000205, ON US 34 East of Estes Park

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		3,422	3,474	3,873	3,999	5,430	7,724	9,133	8,171	7,719	5,350	3,906	3,558
Jan	3,422	1.00	1.02	1.13	1.17	1.59	2.26	2.67	2.39	2.26	1.56	1.14	1.04
Feb	3,474	0.99	1.00	1.11	1.15	1.56	2.22	2.63	2.35	2.22	1.54	1.12	1.02
Mar	3,873	0.88	0.90	1.00	1.03	1.40	1.99	2.36	2.11	1.99	1.38	1.01	0.92
Apr	3,999	0.86	0.87	0.97	1.00	1.36	1.93	2.28	2.04	1.93	1.34	0.98	0.89
May	5,430	0.63	0.64	0.71	0.74	1.00	1.42	1.68	1.50	1.42	0.99	0.72	0.66
Jun	7,724	0.44	0.45	0.50	0.52	0.70	1.00	1.18	1.06	1.00	0.69	0.51	0.46
Jul	9,133	0.37	0.38	0.42	0.44	0.59	0.85	1.00	0.89	0.85	0.59	0.43	0.39
Aug	8,171	0.42	0.43	0.47	0.49	0.66	0.95	1.12	1.00	0.94	0.65	0.48	0.44
Sep	7,719	0.44	0.45	0.50	0.52	0.70	1.00	1.18	1.06	1.00	0.69	0.51	0.46
Oct	5,350	0.64	0.65	0.72	0.75	1.01	1.44	1.71	1.53	1.44	1.00	0.73	0.67
Nov	3,906	0.88	0.89	0.99	1.02	1.39	1.98	2.34	2.09	1.98	1.37	1.00	0.91
Dec	3,558	0.96	0.98	1.09	1.12	1.53	2.17	2.57	2.30	2.17	1.50	1.10	1.00

Monthly Summary Data from CDOT OTIS:

https://dtdapps.coloradodot.info/otis/TrafficData#ui/0/0/1/station/000126/criteria//19/false/true/

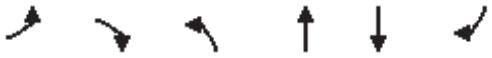
Data Retrieved on September 20, 2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	6	0	284	146	3
Future Volume (Veh/h)	5	6	0	284	146	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	7	0	309	159	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	470	160	162			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	470	160	162			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	100			
cM capacity (veh/h)	552	885	1417			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	12	309	162
Volume Left	5	0	0
Volume Right	7	0	3
cSH	707	1417	1700
Volume to Capacity	0.02	0.00	0.10
Queue Length 95th (ft)	1	0	0
Control Delay (s)	10.2	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.2	0.0	0.0
Approach LOS	B		

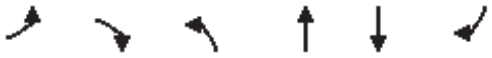
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	1	1	421	358	3
Future Volume (Veh/h)	4	1	1	421	358	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	1	458	389	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	850	390	392			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	850	390	392			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	330	658	1167			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	459	392
Volume Left	4	1	0
Volume Right	1	0	3
cSH	367	1167	1700
Volume to Capacity	0.01	0.00	0.23
Queue Length 95th (ft)	1	0	0
Control Delay (s)	14.9	0.0	0.0
Lane LOS	B	A	
Approach Delay (s)	14.9	0.0	0.0
Approach LOS	B		

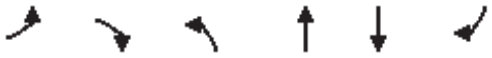
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	1	4	249	404	2
Future Volume (Veh/h)	4	1	4	249	404	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	4	271	439	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	719	440	441			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	719	440	441			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	394	617	1119			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	275	441
Volume Left	4	4	0
Volume Right	1	0	2
cSH	425	1119	1700
Volume to Capacity	0.01	0.00	0.26
Queue Length 95th (ft)	1	0	0
Control Delay (s)	13.6	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	13.6	0.2	0.0
Approach LOS	B		

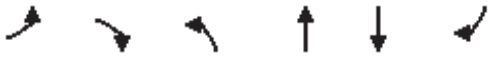
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	6	0	288	148	3
Future Volume (Veh/h)	5	6	0	288	148	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	7	0	313	161	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	476	162	164			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	476	162	164			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	100			
cM capacity (veh/h)	548	882	1414			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	12	313	164
Volume Left	5	0	0
Volume Right	7	0	3
cSH	703	1414	1700
Volume to Capacity	0.02	0.00	0.10
Queue Length 95th (ft)	1	0	0
Control Delay (s)	10.2	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.2	0.0	0.0
Approach LOS	B		

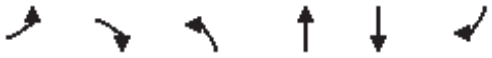
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	1	1	427	363	3
Future Volume (Veh/h)	4	1	1	427	363	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	1	464	395	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	862	396	398			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	862	396	398			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	325	653	1161			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	465	398
Volume Left	4	1	0
Volume Right	1	0	3
cSH	361	1161	1700
Volume to Capacity	0.01	0.00	0.23
Queue Length 95th (ft)	1	0	0
Control Delay (s)	15.1	0.0	0.0
Lane LOS	C	A	
Approach Delay (s)	15.1	0.0	0.0
Approach LOS	C		

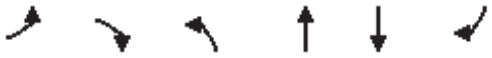
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	1	4	252	409	2
Future Volume (Veh/h)	4	1	4	252	409	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	4	274	445	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	728	446	447			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	728	446	447			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	389	612	1113			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	278	447
Volume Left	4	4	0
Volume Right	1	0	2
cSH	420	1113	1700
Volume to Capacity	0.01	0.00	0.26
Queue Length 95th (ft)	1	0	0
Control Delay (s)	13.7	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	13.7	0.2	0.0
Approach LOS	B		

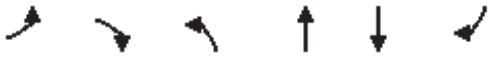
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	6	0	379	195	3
Future Volume (Veh/h)	5	6	0	379	195	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	7	0	412	212	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	626	214	215			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	626	214	215			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	100			
cM capacity (veh/h)	448	827	1355			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	12	412	215
Volume Left	5	0	0
Volume Right	7	0	3
cSH	612	1355	1700
Volume to Capacity	0.02	0.00	0.13
Queue Length 95th (ft)	1	0	0
Control Delay (s)	11.0	0.0	0.0
Lane LOS	B		
Approach Delay (s)	11.0	0.0	0.0
Approach LOS	B		

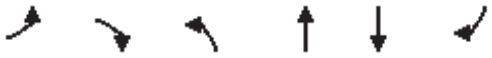
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	1	1	562	478	3
Future Volume (Veh/h)	4	1	1	562	478	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	1	611	520	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1134	522	523			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1134	522	523			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	224	555	1043			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	612	523
Volume Left	4	1	0
Volume Right	1	0	3
cSH	254	1043	1700
Volume to Capacity	0.02	0.00	0.31
Queue Length 95th (ft)	2	0	0
Control Delay (s)	19.5	0.0	0.0
Lane LOS	C	A	
Approach Delay (s)	19.5	0.0	0.0
Approach LOS	C		

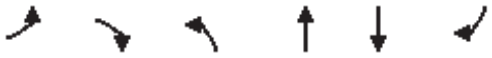
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	1	4	332	539	2
Future Volume (Veh/h)	4	1	4	332	539	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	4	361	586	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	956	587	588			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	956	587	588			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	285	510	987			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	365	588
Volume Left	4	4	0
Volume Right	1	0	2
cSH	313	987	1700
Volume to Capacity	0.02	0.00	0.35
Queue Length 95th (ft)	1	0	0
Control Delay (s)	16.7	0.1	0.0
Lane LOS	C	A	
Approach Delay (s)	16.7	0.1	0.0
Approach LOS	C		

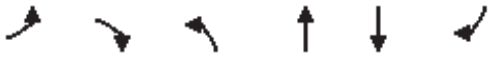
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	12	5	288	148	10
Future Volume (Veh/h)	13	12	5	288	148	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	13	5	313	161	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	490	166	172			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	490	166	172			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	536	878	1405			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	318	172
Volume Left	14	5	0
Volume Right	13	0	11
cSH	660	1405	1700
Volume to Capacity	0.04	0.00	0.10
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.7	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	0.2	0.0
Approach LOS	B		

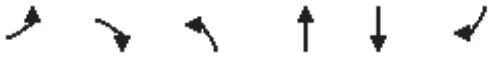
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	7	7	427	363	11
Future Volume (Veh/h)	14	7	7	427	363	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	8	8	464	395	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	881	401	407			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	881	401	407			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	315	649	1152			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	23	472	407
Volume Left	15	8	0
Volume Right	8	0	12
cSH	384	1152	1700
Volume to Capacity	0.06	0.01	0.24
Queue Length 95th (ft)	5	1	0
Control Delay (s)	15.0	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	15.0	0.2	0.0
Approach LOS	B		

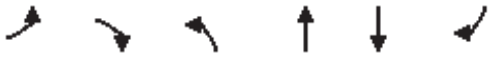
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	12	8	252	409	8
Future Volume (Veh/h)	13	12	8	252	409	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	13	9	274	445	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	742	450	454			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	742	450	454			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	98	99			
cM capacity (veh/h)	380	610	1107			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	283	454
Volume Left	14	9	0
Volume Right	13	0	9
cSH	464	1107	1700
Volume to Capacity	0.06	0.01	0.27
Queue Length 95th (ft)	5	1	0
Control Delay (s)	13.2	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	13.2	0.3	0.0
Approach LOS	B		

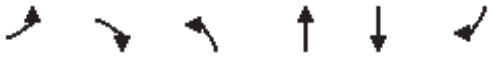
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	12	5	379	195	10
Future Volume (Veh/h)	13	12	5	379	195	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	13	5	412	212	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	640	218	223			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	640	218	223			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	98	100			
cM capacity (veh/h)	438	822	1346			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	417	223
Volume Left	14	5	0
Volume Right	13	0	11
cSH	565	1346	1700
Volume to Capacity	0.05	0.00	0.13
Queue Length 95th (ft)	4	0	0
Control Delay (s)	11.7	0.1	0.0
Lane LOS	B	A	
Approach Delay (s)	11.7	0.1	0.0
Approach LOS	B		

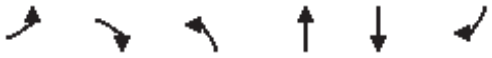
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	7	7	562	478	11
Future Volume (Veh/h)	14	7	7	562	478	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	8	8	611	520	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1153	526	532			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1153	526	532			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	99	99			
cM capacity (veh/h)	217	552	1036			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	23	619	532
Volume Left	15	8	0
Volume Right	8	0	12
cSH	275	1036	1700
Volume to Capacity	0.08	0.01	0.31
Queue Length 95th (ft)	7	1	0
Control Delay (s)	19.3	0.2	0.0
Lane LOS	C	A	
Approach Delay (s)	19.3	0.2	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	4	8	332	539	8
Future Volume (Veh/h)	8	4	8	332	539	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	4	9	361	586	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	970	590	595			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	970	590	595			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	278	507	981			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	13	370	595
Volume Left	9	9	0
Volume Right	4	0	9
cSH	323	981	1700
Volume to Capacity	0.04	0.01	0.35
Queue Length 95th (ft)	3	1	0
Control Delay (s)	16.6	0.3	0.0
Lane LOS	C	A	
Approach Delay (s)	16.6	0.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		