Traffic

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BY CHET SKWARCAN

Traffic Engineering Analysis

Daum Property

Residential Development
Plainfield, Indiana

Submitted by:
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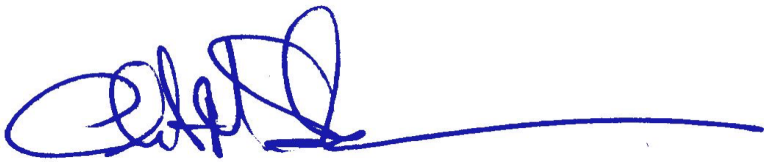
January 29, 2026

Certification

I certify this Traffic Engineering Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering.



Chet M. Skwarcan, P.E., President
Traffic Engineering, Inc.
01/29/2026

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Executive Summary

The proposed residential development is located on the east side of CR 825E between Black Oak Drive and Black Rock Road in Plainfield, Indiana. The development consists of 24 single-family homes and 312 apartment units.

The proposed site access along CR 825E includes the following:

- CR 825E at Dogwood Court / Proposed North Driveway: Converts the existing T-intersection into a four-legged intersection operating under minor-street stop control.
- CR 825E at Proposed South Driveway: Creates a new T-intersection along CR 825E operating under minor-street stop control.

Study scenarios for the AM and PM peak hours include:

1. Existing Traffic (2025)
2. Existing Traffic plus Background Growth[1] (2035)
3. Existing Traffic plus Background Growth plus Projected Site Traffic (2035)

Findings for adjacent intersections:

An evaluation of traffic operations at the adjacent study locations indicates that all intersections and site access points are anticipated to operate at acceptable levels of service with acceptable 95th-percentile vehicle queuing under existing and full build-out conditions. The single operational deficiency identified within the study area is the westbound left-turn movement from Black Rock Road onto County Road 750 East during the PM peak hour, which is failing under existing conditions. This deficiency represents an existing condition and is not attributable to traffic generated by the proposed development.

Findings for proposed driveways at CR 825E:

An operational analysis of the proposed driveways along County Road 825 East indicates that site access is projected to operate at acceptable levels of service with acceptable 95th-percentile vehicle queuing under the 2035 full build-out scenario. Based on the projected turning volumes and the results of the Level of Service analysis, no auxiliary turn lanes or additional exiting lanes are warranted at the proposed driveways in accordance with INDOT criteria.

Recommendations:

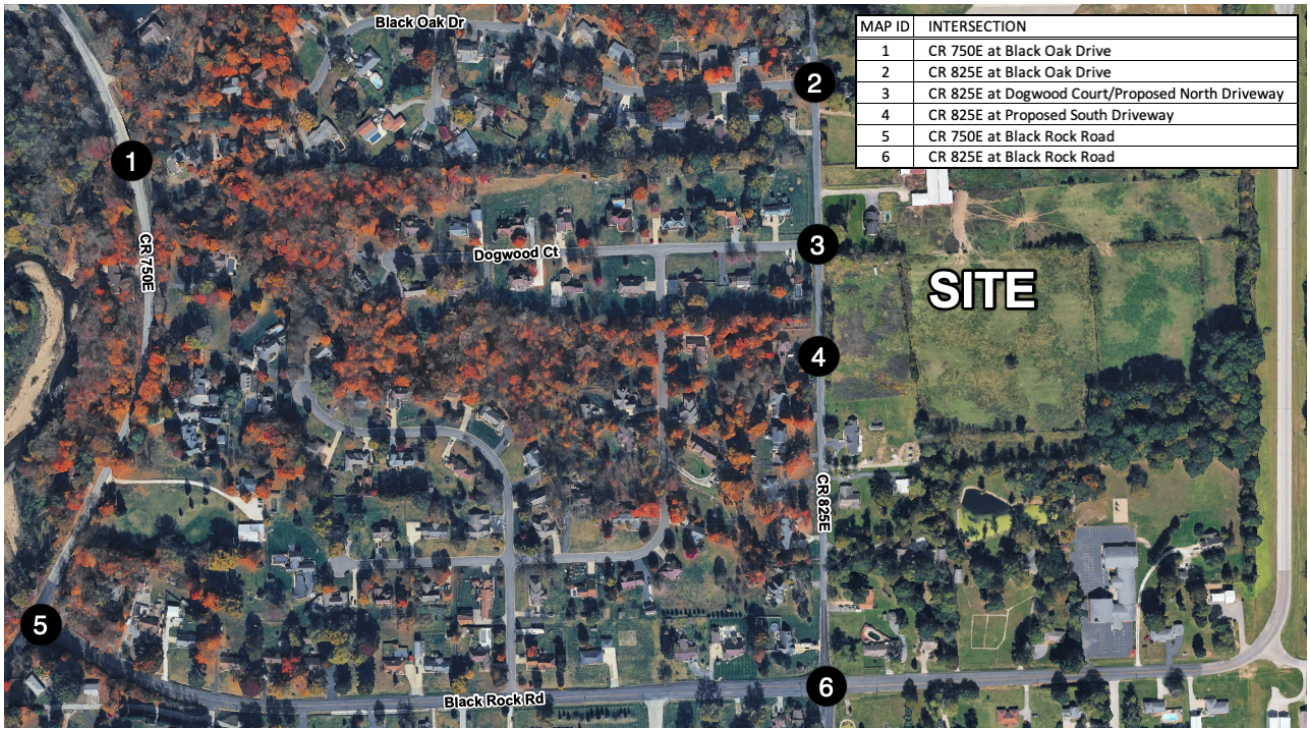
Based on the findings of this study, the single recommended improvement within the study area is to consider a single-lane roundabout at the intersection of County Road 750 East and Black Rock Road. This recommendation is intended to address the existing operational deficiency associated with the westbound left-turn movement at this intersection. No additional improvements are recommended at the remaining study locations, as acceptable levels of service and vehicle queuing are anticipated.

[1] 10 years of background traffic growth at an annual rate of 1%

Existing Traffic Information

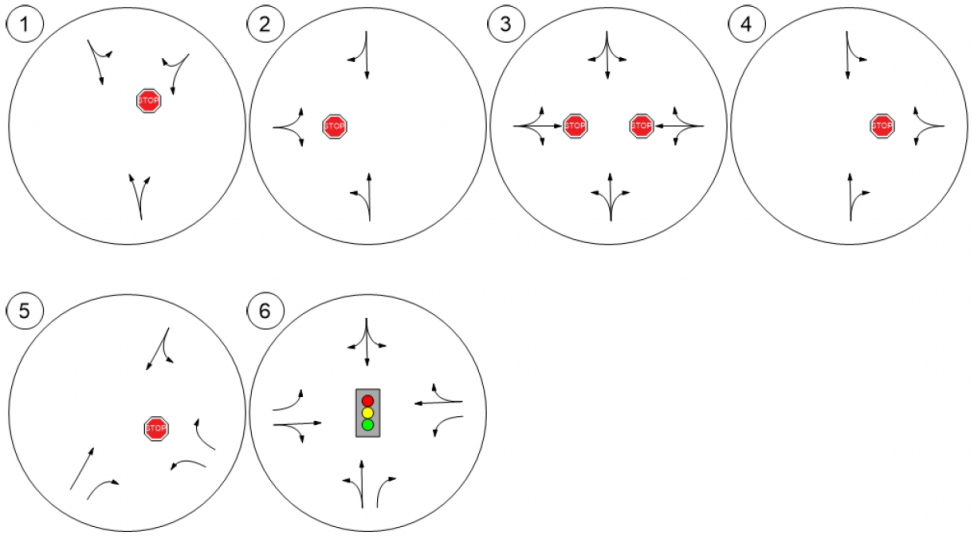
Study Locations

As part of this analysis, existing AM and PM peak hour traffic data was collected on December 17, 2025, at the following study intersections:



MAP ID	INTERSECTION
1	CR 750E at Black Oak Drive
2	CR 825E at Black Oak Drive
3	CR 825E at Dogwood Court/Proposed North Driveway
4	CR 825E at Proposed South Driveway
5	CR 750E at Black Rock Road
6	CR 825E at Black Rock Road

The lane configurations and stop control types for the study intersections are as follows:



The posted speed limits within the study area are as follows:

- CR 750E and Black Rock Road: 45 mph
- CR 825E: 35 mph
- Black Oak Drive and Dogwood Court: 20 mph

Proposed Development

Trip Generation

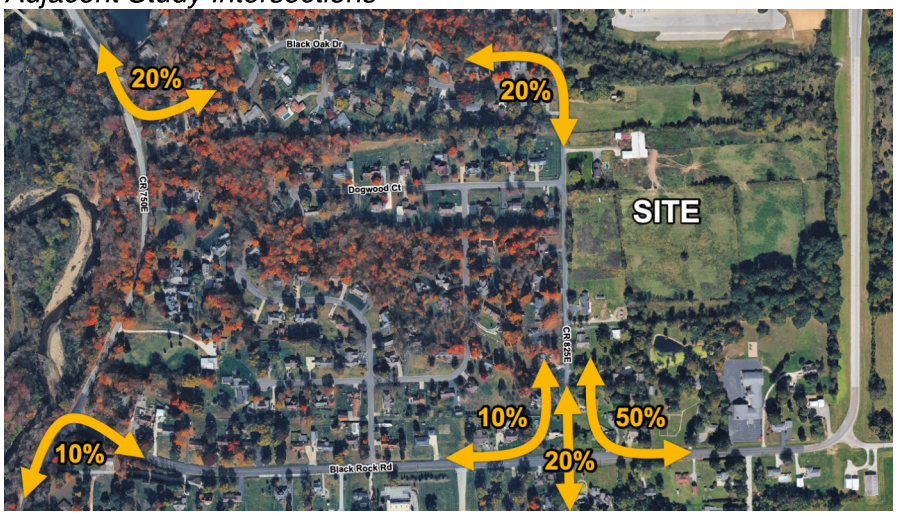
Based on traffic data from the Institute of Transportation Engineers' Trip Generation Manual (12th Edition), the expected traffic generated by the proposed development is detailed below:

Daum Property - Residential Development - Plainfield, IN Land Use Information			Trip Generation			
Land Use	Land Use Code	Size	AM Peak Hour		PM Peak Hour	
			Entry	Exit	Entry	Exit
Single-Family Detached Housing	210	24 Dwelling Units	6	16	16	10
Multifamily Housing (Low-Rise)	220	312 Dwelling Units	29	93	97	60
		TOTAL SITE TRAFFIC	**35**	**109**	**113**	**70**

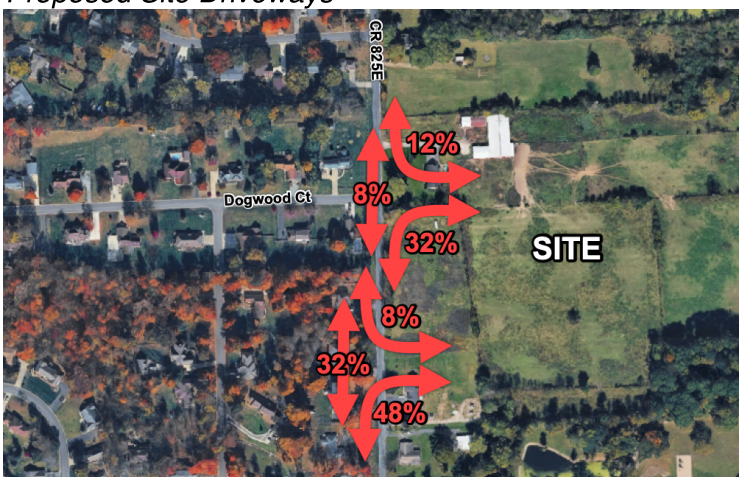
Distribution of Site Traffic

The distribution of new site traffic is based on the nature of the proposed development, existing traffic patterns in this area, and proximity to population centers. The following graphic depicts the distribution of site traffic entering and exiting the proposed development:

Adjacent Study Intersections



Proposed Site Driveways



Turning Movement Volumes

AM Peak Hour – Existing[2] plus Background[3] plus Site Traffic

MAP ID	INTERSECTION
1	CR 750E at Black Oak Drive
2	CR 825E at Black Oak Drive
3	CR 825E at Dogwood Court/Proposed North Driveway
4	CR 825E at Proposed South Driveway
5	CR 750E at Black Rock Road
6	CR 825E at Black Rock Road

ID	Volume Type	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
1	Final Base	328	2	6	257	2	16	611
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	0	7	0	0	22	29
	Future Total	**362**	**2**	**14**	**284**	**2**	**40**	**704**

ID	Volume Type	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
2	Final Base	9	8	22	4	0	10	53
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	22	0	0	0	0	7	29
	Future Total	**32**	**9**	**24**	**4**	**0**	**18**	**87**

ID	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Final Base	1	9	0	0	32	1	5	0	5	0	0	0	53
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	9	12	4	3	0	0	0	0	35	0	13	76
	Future Total	**1**	**19**	**12**	**4**	**38**	**1**	**6**	**0**	**6**	**35**	**0**	**13**	**135**

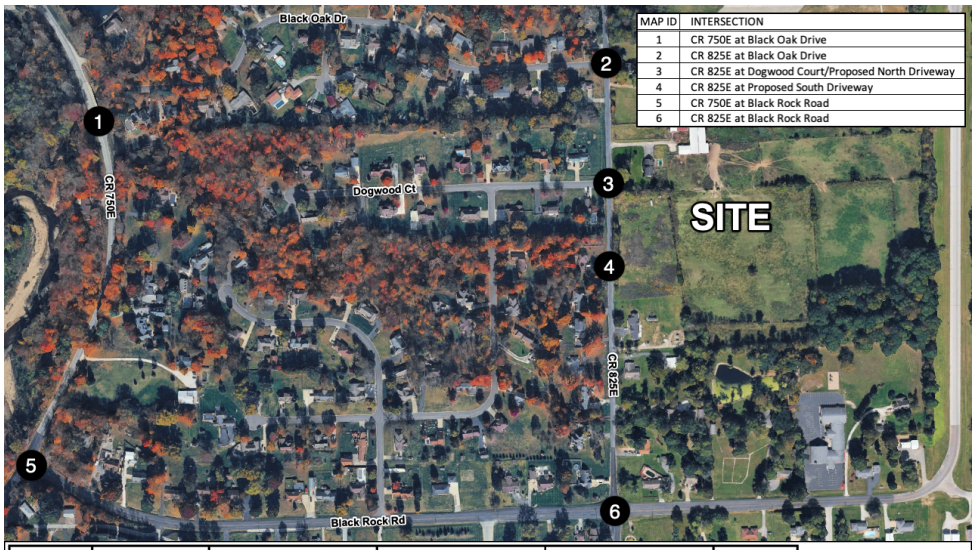
ID	Volume Type	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Final Base	10	0	0	37	0	0	47
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	12	17	3	35	52	9	128
	Future Total	**23**	**17**	**3**	**76**	**52**	**9**	**180**

ID	Volume Type	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
5	Final Base	260	322	46	195	57	65	945
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	4	0	0	11	0	15
	Future Total	**287**	**360**	**51**	**215**	**74**	**72**	**1059**

ID	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	Final Base	16	2	298	33	5	1	3	375	10	159	112	7	1021
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	7	0	54	22	11	4	0	0	0	0	18	116
	Future Total	**18**	**9**	**329**	**90**	**28**	**12**	**7**	**414**	**11**	**176**	**124**	**26**	**1244**

[2] "Final Base" is the equivalent to existing traffic volumes
[3] 10 years of background traffic growth at an annual rate of 1%

PM Peak Hour – Existing[4] plus Background[5] plus Site Traffic



MAP ID	INTERSECTION
1	CR 750E at Black Oak Drive
2	CR 825E at Black Oak Drive
3	CR 825E at Dogwood Court/Proposed North Driveway
4	CR 825E at Proposed South Driveway
5	CR 750E at Black Rock Road
6	CR 825E at Black Rock Road

ID	Volume Type	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
1	Final Base	359	7	15	554	2	17	954
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	0	23	0	0	14	37
	Future Total	**397**	**8**	**40**	**612**	**2**	**33**	**1092**

ID	Volume Type	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
2	Final Base	18	19	13	12	7	12	81
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	14	0	0	0	0	23	37
	Future Total	**34**	**21**	**14**	**13**	**8**	**36**	**126**

ID	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Final Base	7	33	0	0	21	4	3	0	3	0	0	0	71
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	6	36	14	9	0	0	0	0	22	0	8	95
	Future Total	**8**	**42**	**36**	**14**	**32**	**4**	**3**	**0**	**3**	**22**	**0**	**8**	**172**

ID	Volume Type	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
4	Final Base	40	0	0	24	0	0	64
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	36	55	9	22	34	6	162
	Future Total	**80**	**55**	**9**	**49**	**34**	**6**	**233**

ID	Volume Type	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
5	Final Base	294	115	90	450	250	71	1270
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	11	0	0	7	0	18
	Future Total	**325**	**138**	**99**	**497**	**283**	**78**	**1420**

ID	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	Final Base	13	1	236	24	1	0	3	198	43	586	295	40	1440
	Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
	Net New Trips	0	23	0	35	14	7	11	0	0	0	0	57	147
	Future Total	**14**	**24**	**261**	**62**	**15**	**7**	**14**	**219**	**47**	**647**	**326**	**101**	**1737**

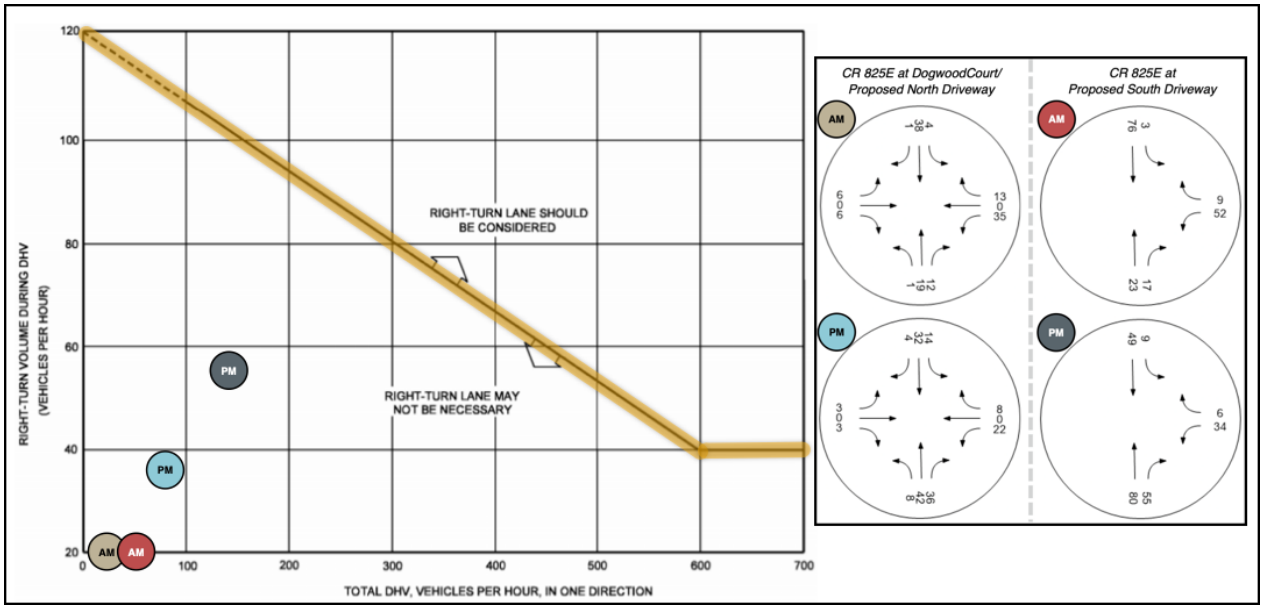
[4] "Final Base" is the equivalent to existing traffic volumes
[5] 10 years of background traffic growth at an annual rate of 1%

Turn Lane Analysis – CR 825E at Proposed Site Driveways

As stated in the INDOT Driveway Permit Manual: "Where the turning maneuver for a left- or right-turning vehicle occurs in a through travel lane, it disrupts the flow of through traffic. To minimize potential conflicts, the use of a turn lane may be warranted to improve the level of service and safety at the intersection."

Right-Turn Lane Warrant

Based on INDOT criteria[6] below, northbound right-turn lanes[7] are not necessary:



Left-Turn Lane Warrant

Based on INDOT criteria[6] below, southbound left-turn[7] treatments are not necessary:

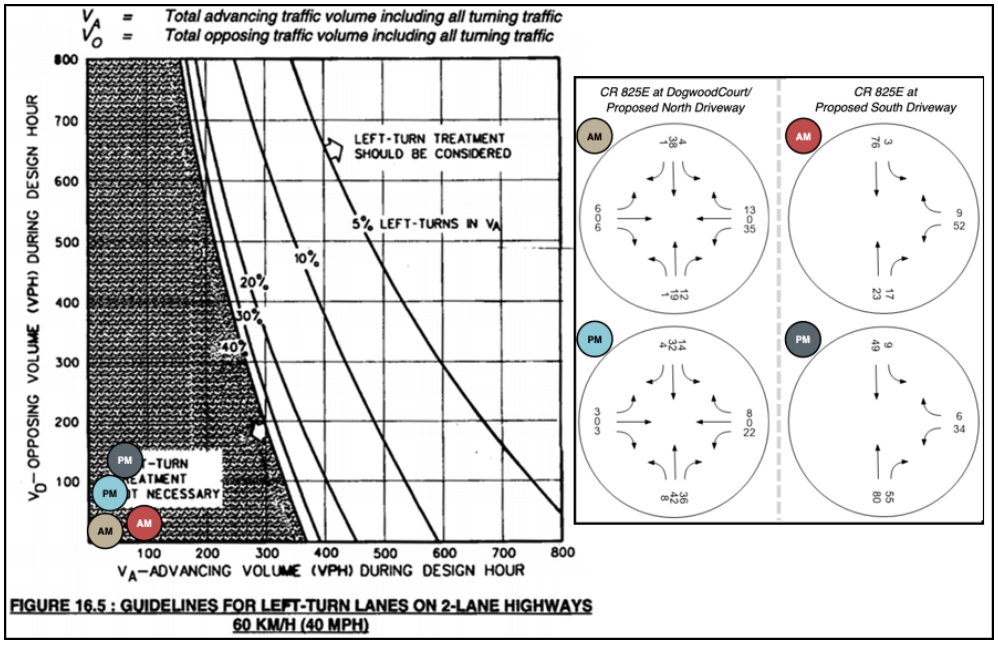


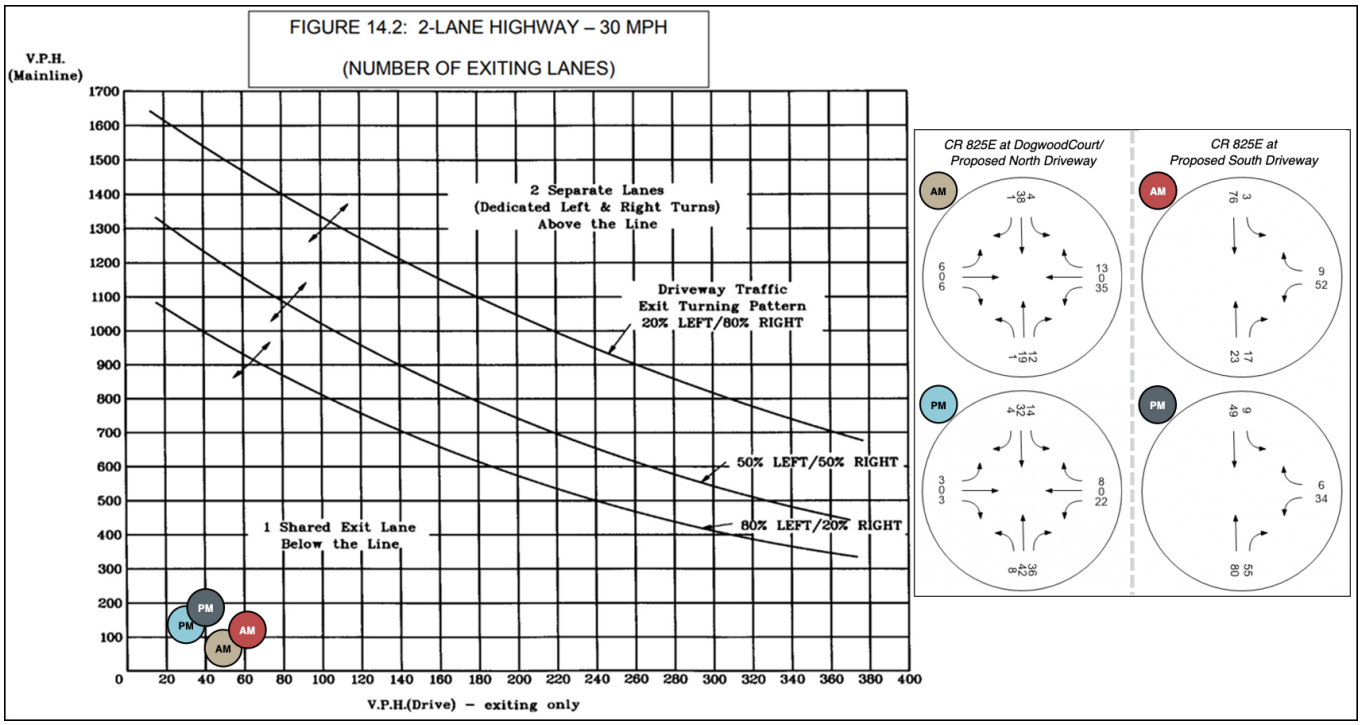
FIGURE 16.5 : GUIDELINES FOR LEFT-TURN LANES ON 2-LANE HIGHWAYS 60 KM/H (40 MPH)

[6] *INDOT Driveway Permit Manual 2018*

[7] Using projected 2035 turning movements (existing traffic + background growth + projected site traffic)

Dual Exit Lanes Analysis – CR 825E at Proposed Site Driveways

Dual exit lanes[8] are not necessary[9] based on INDOT guidelines below:



Level of Service (LOS) Summary

The individual turning movements are provided in terms of Level of Service (LOS). In general, LOS "D" or better is considered acceptable while LOS "E" or "F" suggest volume exceeding the capacity of the intersection, approach, or turning movement:

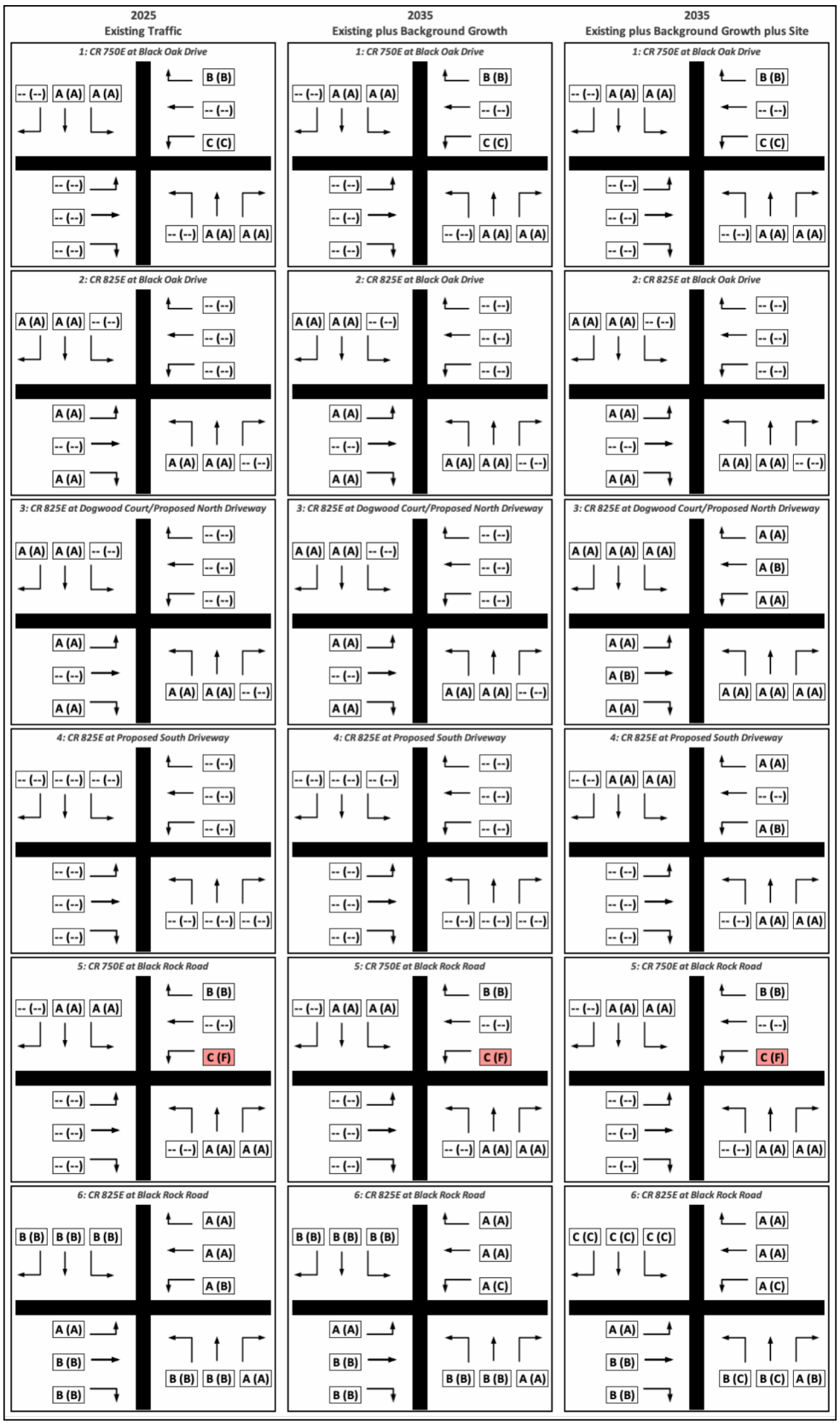
LOS vs. Delay		
LOS	**Signalized Intersection**	**Unsignalized Intersection**
A	<10 seconds	<10 seconds
B	10-20 seconds	10-15 seconds
C	20-35 seconds	15-25 seconds
D	35-55 seconds	25-35 seconds
E	55-80 seconds	35-50 seconds
F	>80 seconds	>50 seconds

Source: Federal Highway Administration (FHWA)

[8] *INDOT Driveway Permit Manual 2018*
[9] Using projected 2035 turning movements (existing traffic + background growth + projected site traffic)

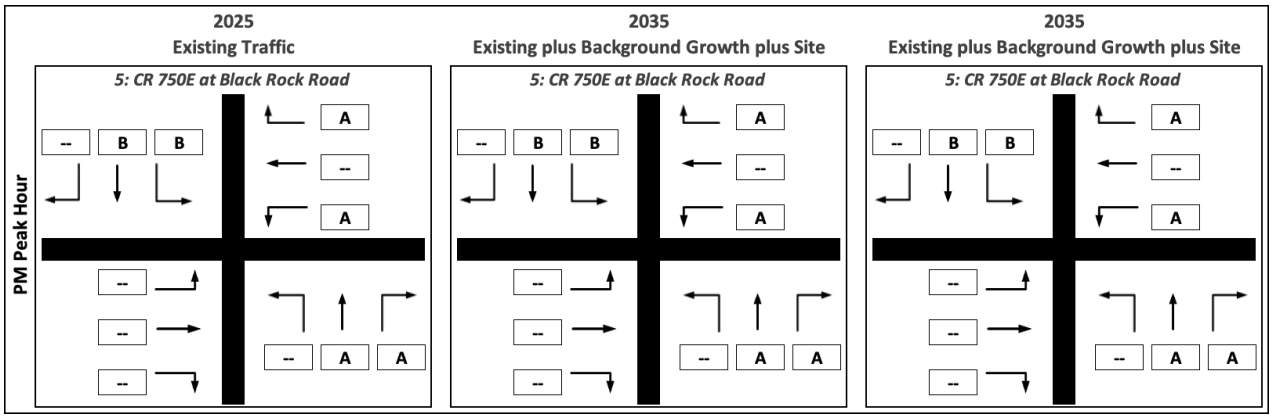
LOS – AM and PM Peak Hour Turning Movements

Projected traffic volumes at full build-out during the AM and PM peak hours indicate that individual turning movements at five of the six studied locations, including both proposed driveways, are expected to operate at LOS "C" or better. The only exception is the westbound left-turn movement from Black Rock Road onto CR 750E, which is failing under existing conditions during the PM peak hour. Mitigation in the form of a roundabout at the CR 750E and Black Rock Road intersection improves operations for the Black Rock Road approach while maintaining acceptable LOS for the CR 750E approaches, as shown on the following page. Under existing conditions, the 95th-percentile vehicle queue for the westbound left-turn movement is excessive (approximately 16 vehicles) and is projected to be reduced to approximately two vehicles under future conditions with the proposed roundabout (see attached Level of Service Analysis for vehicle queuing details).



AM (PM)

LOS Mitigation – Roundabout – CR 750E at Black Rock Road



APPENDIX – Submitted Separately

Turning Movement Volumes Analysis

Level of Service Analysis

Mitigation – Level of Service Analysis

Site Layout Plan (Submitted by Client)

Traffic

TRAFFICENGINEERING.com
BY CHET SKWARCAN

Level of Service Analysis

Daum Property

Residential Development
Plainfield, Indiana

Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro

Scenario 1 AM PH - 2025 Existing

Report File: C:\...\Daum Property - LOS AM PH - 2025 Existing 01272026.pdf

1/27/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	CR 750E at Black Oak Drive	Two-way stop	HCM 7th Edition	WB Left	0.006	15.5	C
2	CR 825E at Black Oak Drive	Two-way stop	HCM 7th Edition	EB Right	0.012	8.6	A
3	CR 825E at Dogwood Court/Proposed North Driveway	Two-way stop	HCM 7th Edition	EB Left	0.006	8.8	A
4	CR 825E at Proposed South Driveway	Two-way stop	HCM 7th Edition	SB Thru	0.001	0.0	A
5	CR 750E at Black Rock Road	Two-way stop	HCM 7th Edition	WB Left	0.180	16.4	C
6	CR 825E at Black Rock Road	Signalized	HCM 7th Edition	SB Left	0.442	11.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: CR 750E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	328	2	6	257	2	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	50.00	13.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	328	2	6	257	2	16
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	1	2	73	1	5
Total Analysis Volume [veh/h]	373	2	7	292	2	18
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.05	0.00	15.53	10.76
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.29	0.29	2.60	2.60
d_A, Approach Delay [s/veh]	0.00		0.19		11.24	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.41					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: CR 825E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	9	8	22	4	0	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	22.00	25.00	2.00	25.00	2.00	10.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	8	22	4	0	10
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	7	1	0	3
Total Analysis Volume [veh/h]	11	10	27	5	0	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	0.00	8.88	8.56
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.46	0.46	0.00	0.00	0.89	0.89
d_A, Approach Delay [s/veh]	3.92		0.00		8.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.85					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: CR 825E at Dogwood Court/Proposed North Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	1	9	32	1	5	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	100.00	44.00	2.00	2.00	2.00	20.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	9	32	1	5	5
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	10	0	2	2
Total Analysis Volume [veh/h]	1	12	41	1	6	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	8.23	0.00	0.00	0.00	8.83	8.72
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.94	0.94
d_A, Approach Delay [s/veh]	0.63		0.00		8.78	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.69					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: CR 825E at Proposed South Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name		
Approach	Northbound	Southbound
Lane Configuration		
Turning Movement	Thru	Thru
Lane Width [ft]	12.00	12.00
No. of Lanes in Entry Pocket	0	0
Entry Pocket Length [ft]	100.00	100.00
No. of Lanes in Exit Pocket	0	0
Exit Pocket Length [ft]	0.00	0.00
Speed [mph]	35.00	35.00
Grade [%]	0.00	0.00
Crosswalk	No	No

Volumes

Name		
Base Volume Input [veh/h]	10	37
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	50.00	3.00
Growth Factor	1.0000	1.0000
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	0	0
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	10	37
Peak Hour Factor	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	13
Total Analysis Volume [veh/h]	14	51
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free
Flared Lane		
Storage Area [veh]	0	0
Two-Stage Gap Acceptance		
Number of Storage Spaces in Median	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00
Movement LOS	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00
d_A, Approach Delay [s/veh]	0.00	0.00
Approach LOS	A	A
d_I, Intersection Delay [s/veh]	0.00	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 5: CR 750E at Black Rock Road

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.180

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	100.00	400.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	260	322	46	195	57	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	7.00	4.00	12.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	260	322	46	195	57	65
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	78	97	14	59	17	20
Total Analysis Volume [veh/h]	313	388	55	235	69	78
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.06	0.00	0.18	0.11
d_M, Delay for Movement [s/veh]	0.00	0.00	9.19	0.00	16.42	10.56
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.09	0.09	0.65	0.36
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.36	2.36	16.17	9.00
d_A, Approach Delay [s/veh]	0.00		1.74		13.31	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.16					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: CR 825E at Black Rock Road

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	100.00	150.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	16	2	298	33	5	1	3	375	10	159	112	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	50.00	2.00	2.00	20.00	2.00	33.00	3.00	2.00	4.00	4.00	14.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	89	0	0	0	0	0	2	0	0	1
Total Hourly Volume [veh/h]	16	2	209	33	5	1	3	375	8	159	112	6
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	56	9	1	0	1	101	2	43	30	2
Total Analysis Volume [veh/h]	17	2	225	35	5	1	3	403	9	171	120	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	1	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	0	25	8	0	25	0	8	45	0	8	40	0
Amber [s]	0.0	3.5	4.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	1.5	1.5	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	3.5	0.0	3.0	0.0	3.5	3.5	0.0	3.5	3.5	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	9.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	8	0	8	0	8	15	0	8	15	0
Vehicle Extension [s]	0.0	2.0	3.0	0.0	2.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No	No		No		No	No		No	No	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	L	C
C, Calculated Cycle Length [s]	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.50	5.00	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	0.00	3.00	0.00	3.50	0.00	3.50
g_i, Effective Green Time [s]	7.7	19.9	7.7	27.7	15.0	27.7	21.8
g / C, Green / Cycle	0.17	0.43	0.17	0.60	0.33	0.60	0.48
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.06	0.00	0.25	0.15	0.08
s, saturation flow rate [veh/h]	910	1431	725	786	1663	1137	1642
c, Capacity [veh/h]	302	621	268	783	544	723	781
d1, Uniform Delay [s]	16.20	8.76	17.72	3.73	13.86	5.44	6.86
k, delay calibration	0.04	0.21	0.04	0.11	0.11	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.69	0.10	0.00	2.18	0.29	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.36	0.15	0.00	0.76	0.24	0.16
d, Delay for Lane Group [s/veh]	16.23	9.45	17.81	3.73	16.04	5.73	6.96
Lane Group LOS	B	A	B	A	B	A	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	1.22	0.35	0.00	3.08	0.35	0.45
50th-Percentile Queue Length [ft/ln]	3.69	30.44	8.74	0.12	76.88	8.66	11.16
95th-Percentile Queue Length [veh/ln]	0.27	2.19	0.63	0.01	5.54	0.62	0.80
95th-Percentile Queue Length [ft/ln]	6.65	54.80	15.73	0.22	138.39	15.58	20.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.23	16.23	9.45	17.81	17.81	17.81	3.73	16.04	16.04	5.73	6.96	6.96
Movement LOS	B	B	A	B	B	B	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	9.98			17.81			15.95			6.25		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	11.68											
Intersection LOS	B											
Intersection V/C	0.442											

Emissions

Vehicle Miles Traveled [mph]	2.75	32.59	7.77	1.46	200.60	27.02	19.91
Stops [stops/h]	11.59	95.53	27.42	0.39	241.23	27.16	35.01
Fuel consumption [US gal/h]	0.25	2.39	0.65	0.06	11.22	1.46	1.30
CO [g/h]	17.81	167.33	45.52	4.00	784.32	102.29	90.60
NOx [g/h]	3.47	32.56	8.86	0.78	152.60	19.90	17.63
VOC [g/h]	4.13	38.78	10.55	0.93	181.77	23.71	21.00

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1089	1089	1961	1743
d_b, Bicycle Delay [s]	4.76	4.76	0.01	0.38
l_b,int, Bicycle LOS Score for Intersection	2.109	1.627	2.248	2.051
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro

Scenario 1 AM PH - 2025 Existing

Report File: C:\...\Daum Property - LOS AM PH - 2025 Existing 01272026.pdf

1/27/2026

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
1	CR 750E at Black Oak Drive	Final Base	328	2	6	257	2	16	611
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**328**	**2**	**6**	**257**	**2**	**16**	**611**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	CR 825E at Black Oak Drive	Final Base	9	8	22	4	0	10	53
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**9**	**8**	**22**	**4**	**0**	**10**	**53**

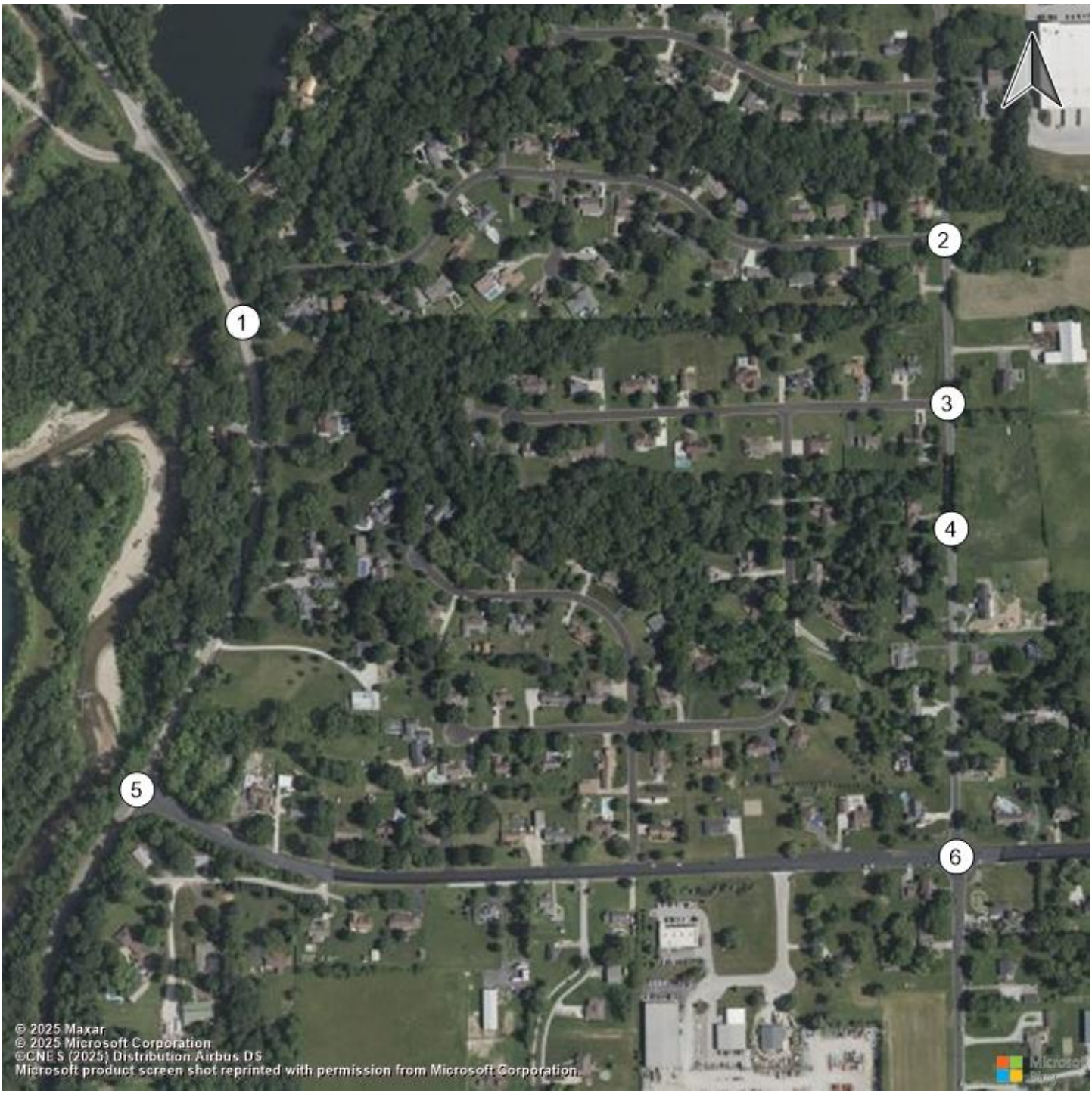
ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	CR 825E at Dogwood Court/Proposed North Driveway	Final Base	1	9	32	1	5	5	53
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**1**	**9**	**32**	**1**	**5**	**5**	**53**

ID	Intersection Name	Volume Type	Northbound	Southbound	Total Volume
			Thru	Thru	
4	CR 825E at Proposed South Driveway	Final Base	10	37	47
		Growth Factor	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	0	0	0
		Other	0	0	0
		Future Total	**10**	**37**	**47**

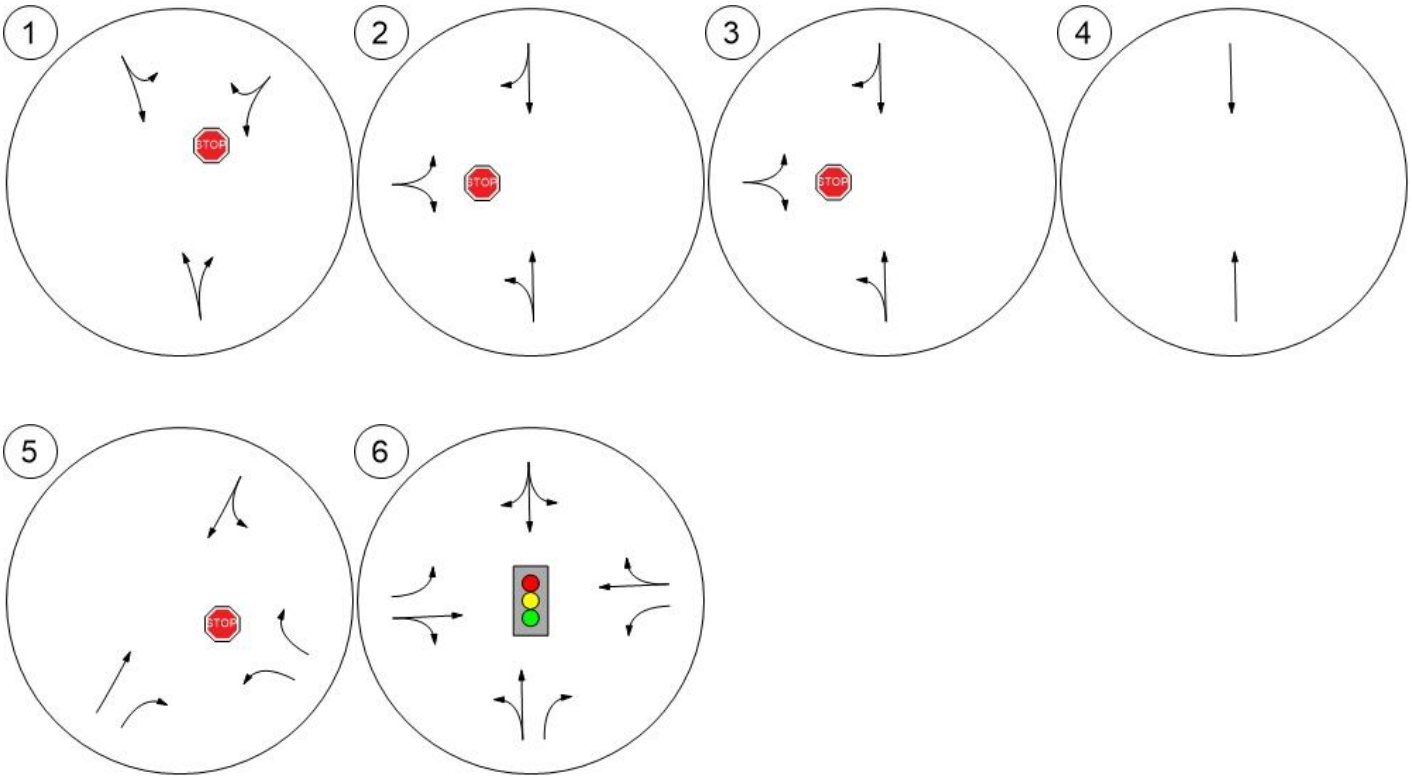
ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
5	CR 750E at Black Rock Road	Final Base	260	322	46	195	57	65	945
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**260**	**322**	**46**	**195**	**57**	**65**	**945**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	CR 825E at Black Rock Road	Final Base	16	2	298	33	5	1	3	375	10	159	112	7	1021
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**16**	**2**	**298**	**33**	**5**	**1**	**3**	**375**	**10**	**159**	**112**	**7**	**1021**

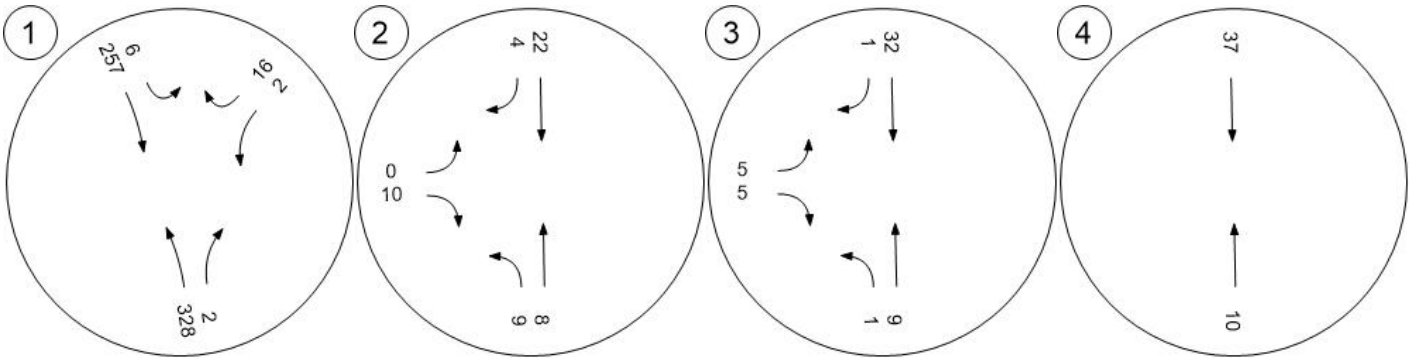
Study Intersections

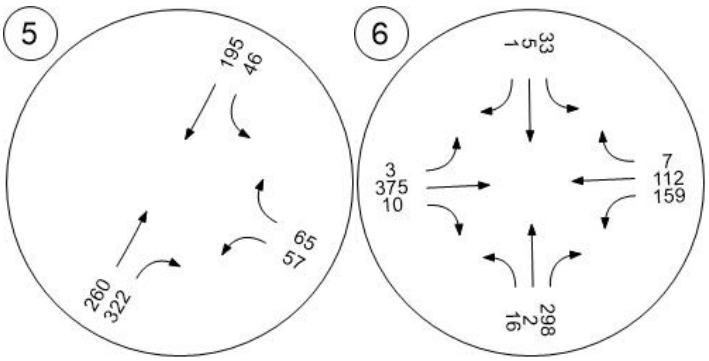


Lane Configuration and Traffic Control

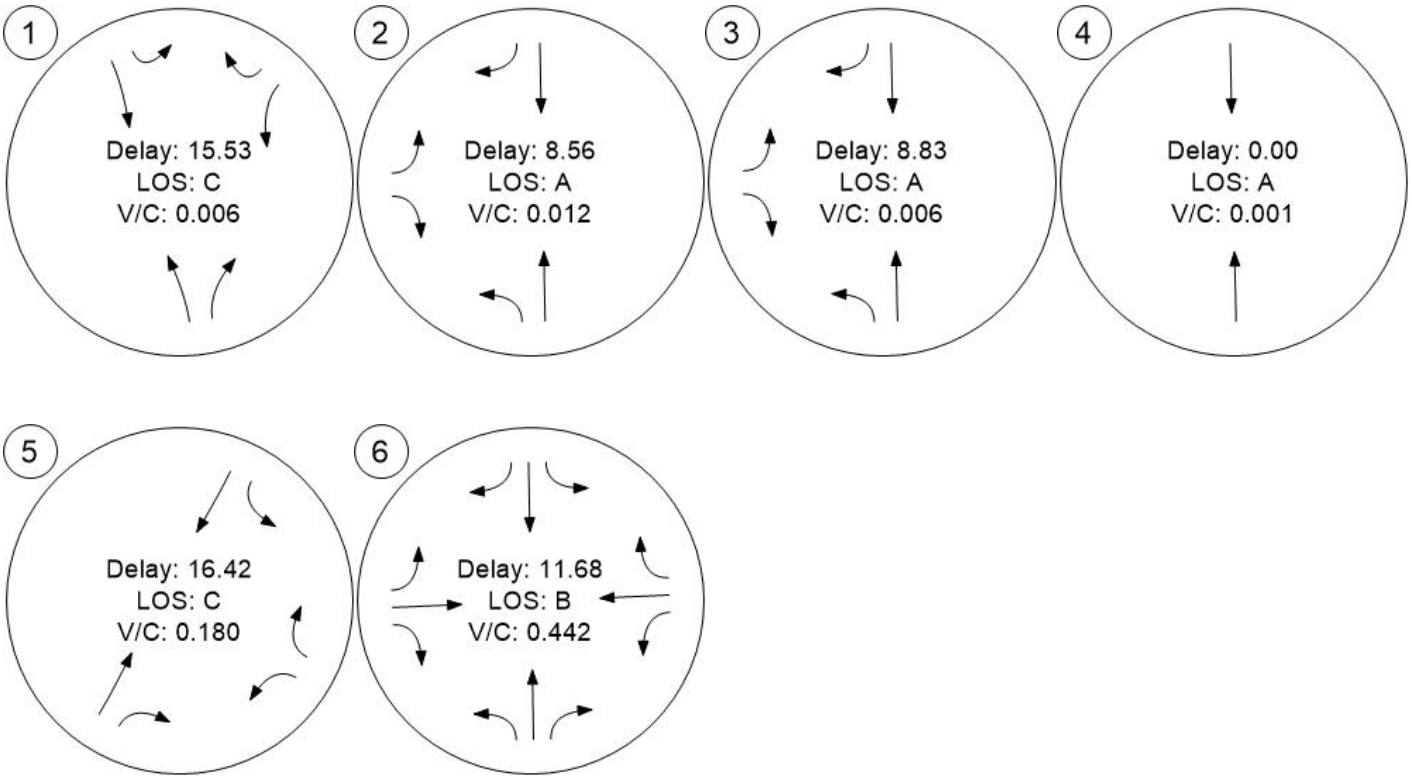


Traffic Volume - Base Volume





Traffic Conditions



Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro
Report File: C:\...\Daum Property - LOS AM PH - 2035 Existing plus BG 01272026.pdf

Scenario 2 AM PH - 2035 Existing + BG

1/27/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	CR 750E at Black Oak Drive	Two-way stop	HCM 7th Edition	WB Left	0.006	16.7	C
2	CR 825E at Black Oak Drive	Two-way stop	HCM 7th Edition	EB Right	0.013	8.6	A
3	CR 825E at Dogwood Court/Proposed North Driveway	Two-way stop	HCM 7th Edition	EB Left	0.008	8.9	A
4	CR 825E at Proposed South Driveway	Two-way stop	HCM 7th Edition	SB Thru	0.001	0.0	A
5	CR 750E at Black Rock Road	Two-way stop	HCM 7th Edition	WB Left	0.221	18.4	C
6	CR 825E at Black Rock Road	Signalized	HCM 7th Edition	SB Left	0.487	12.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: CR 750E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	16.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	328	2	6	257	2	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	50.00	13.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	362	2	7	284	2	18
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	1	2	81	1	5
Total Analysis Volume [veh/h]	411	2	8	323	2	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.15	0.00	16.70	11.09
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.33	0.33	3.02	3.02
d_A, Approach Delay [s/veh]	0.00		0.20		11.60	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.42					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: CR 825E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	9	8	22	4	0	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	22.00	25.00	2.00	25.00	2.00	10.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	9	24	4	0	11
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	7	1	0	3
Total Analysis Volume [veh/h]	12	11	29	5	0	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	0.00	8.91	8.58
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.50	0.50	0.00	0.00	0.97	0.97
d_A, Approach Delay [s/veh]	3.90		0.00		8.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.88					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: CR 825E at Dogwood Court/Proposed North Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	1	9	32	1	5	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	100.00	44.00	2.00	2.00	2.00	20.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	10	35	1	6	6
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	11	0	2	2
Total Analysis Volume [veh/h]	1	13	45	1	8	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	8.25	0.00	0.00	0.00	8.87	8.75
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	1.27	1.27
d_A, Approach Delay [s/veh]	0.59		0.00		8.81	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.96					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: CR 825E at Proposed South Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name		
Approach	Northbound	Southbound
Lane Configuration		
Turning Movement	Thru	Thru
Lane Width [ft]	12.00	12.00
No. of Lanes in Entry Pocket	0	0
Entry Pocket Length [ft]	100.00	100.00
No. of Lanes in Exit Pocket	0	0
Exit Pocket Length [ft]	0.00	0.00
Speed [mph]	35.00	35.00
Grade [%]	0.00	0.00
Crosswalk	No	No

Volumes

Name		
Base Volume Input [veh/h]	10	37
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	50.00	3.00
Growth Factor	1.1046	1.1046
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	0	0
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	11	41
Peak Hour Factor	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	14
Total Analysis Volume [veh/h]	15	56
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free
Flared Lane		
Storage Area [veh]	0	0
Two-Stage Gap Acceptance		
Number of Storage Spaces in Median	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00
Movement LOS	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00
d_A, Approach Delay [s/veh]	0.00	0.00
Approach LOS	A	A
d_I, Intersection Delay [s/veh]	0.00	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 5: CR 750E at Black Rock Road

Control Type:	Two-way stop	Delay (sec / veh):	18.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.221

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	100.00	400.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	260	322	46	195	57	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	7.00	4.00	12.00	3.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	287	356	51	215	63	72
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	107	15	65	19	22
Total Analysis Volume [veh/h]	346	429	61	259	76	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.07	0.00	0.22	0.13
d_M, Delay for Movement [s/veh]	0.00	0.00	9.47	0.00	18.42	10.92
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.11	0.11	0.83	0.43
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.63	2.63	20.77	10.68
d_A, Approach Delay [s/veh]	0.00		1.80		14.42	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.33					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: CR 825E at Black Rock Road

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	100.00	150.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	16	2	298	33	5	1	3	375	10	159	112	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	50.00	2.00	2.00	20.00	2.00	33.00	3.00	2.00	4.00	4.00	14.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	99	0	0	0	0	0	2	0	0	2
Total Hourly Volume [veh/h]	18	2	230	36	6	1	3	414	9	176	124	6
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	1	62	10	2	0	1	111	2	47	33	2
Total Analysis Volume [veh/h]	19	2	247	39	6	1	3	445	10	189	133	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	1	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	0	25	8	0	25	0	8	45	0	8	40	0
Amber [s]	0.0	3.5	4.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	1.5	1.5	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	3.5	0.0	3.0	0.0	3.5	3.5	0.0	3.5	3.5	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	9.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	8	0	8	0	8	15	0	8	15	0
Vehicle Extension [s]	0.0	2.0	3.0	0.0	2.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No	No		No		No	No		No	No	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	L	C
C, Calculated Cycle Length [s]	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.50	5.00	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	0.00	3.00	0.00	3.50	0.00	3.50
g_i, Effective Green Time [s]	7.9	20.2	7.9	27.8	15.0	27.8	22.0
g / C, Green / Cycle	0.17	0.44	0.17	0.60	0.32	0.60	0.48
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.07	0.00	0.27	0.17	0.08
s, saturation flow rate [veh/h]	901	1431	679	763	1663	1119	1643
c, Capacity [veh/h]	303	626	260	761	540	688	783
d1, Uniform Delay [s]	16.25	8.85	18.09	3.78	14.54	6.09	6.94
k, delay calibration	0.04	0.26	0.04	0.11	0.11	0.25	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.98	0.12	0.00	3.65	0.49	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.39	0.18	0.00	0.84	0.27	0.18
d, Delay for Lane Group [s/veh]	16.29	9.83	18.21	3.79	18.19	6.59	7.05
Lane Group LOS	B	A	B	A	B	A	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.16	1.40	0.40	0.01	3.75	0.43	0.50
50th-Percentile Queue Length [ft/ln]	4.12	34.95	10.04	0.13	93.64	10.65	12.57
95th-Percentile Queue Length [veh/ln]	0.30	2.52	0.72	0.01	6.74	0.77	0.91
95th-Percentile Queue Length [ft/ln]	7.41	62.91	18.08	0.23	168.56	19.18	22.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.29	16.29	9.83	18.21	18.21	18.21	3.79	18.19	18.19	6.59	7.05	7.05
Movement LOS	B	B	A	B	B	B	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	10.34			18.21			18.10			6.78		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	12.84											
Intersection LOS	B											
Intersection V/C	0.487											

Emissions

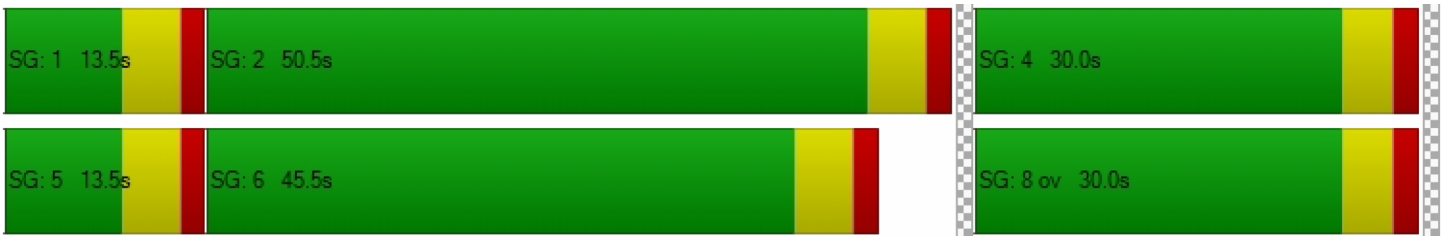
Vehicle Miles Traveled [mph]	3.04	35.78	8.72	1.46	221.53	29.86	21.96
Stops [stops/h]	12.83	108.88	31.29	0.40	291.74	33.19	39.17
Fuel consumption [US gal/h]	0.28	2.68	0.74	0.06	12.91	1.69	1.44
CO [g/h]	19.72	187.12	51.61	4.00	902.12	118.12	100.60
NOx [g/h]	3.84	36.41	10.04	0.78	175.52	22.98	19.57
VOC [g/h]	4.57	43.37	11.96	0.93	209.07	27.37	23.32

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1082	1082	1947	1731
d_b, Bicycle Delay [s]	4.87	4.87	0.02	0.42
l_b,int, Bicycle LOS Score for Intersection	2.165	1.636	2.319	2.104
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
1	CR 750E at Black Oak Drive	Final Base	328	2	6	257	2	16	611
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**362**	**2**	**7**	**284**	**2**	**18**	**675**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	CR 825E at Black Oak Drive	Final Base	9	8	22	4	0	10	53
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**10**	**9**	**24**	**4**	**0**	**11**	**58**

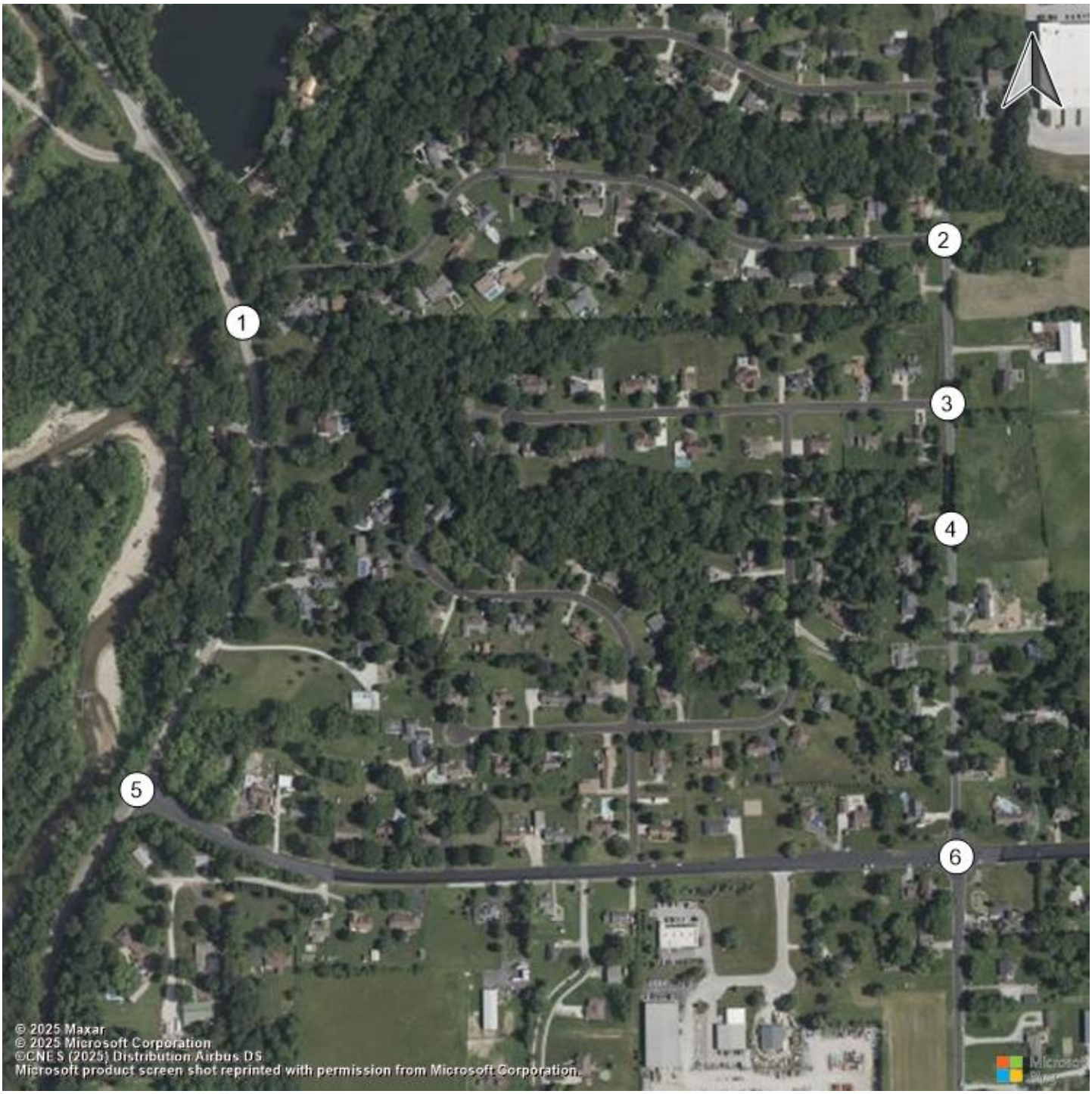
ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	CR 825E at Dogwood Court/Proposed North Driveway	Final Base	1	9	32	1	5	5	53
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**1**	**10**	**35**	**1**	**6**	**6**	**59**

ID	Intersection Name	Volume Type	Northbound	Southbound	Total Volume
			Thru	Thru	
4	CR 825E at Proposed South Driveway	Final Base	10	37	47
		Growth Factor	1.10	1.10	-
		In Process	0	0	0
		Net New Trips	0	0	0
		Other	0	0	0
		Future Total	**11**	**41**	**52**

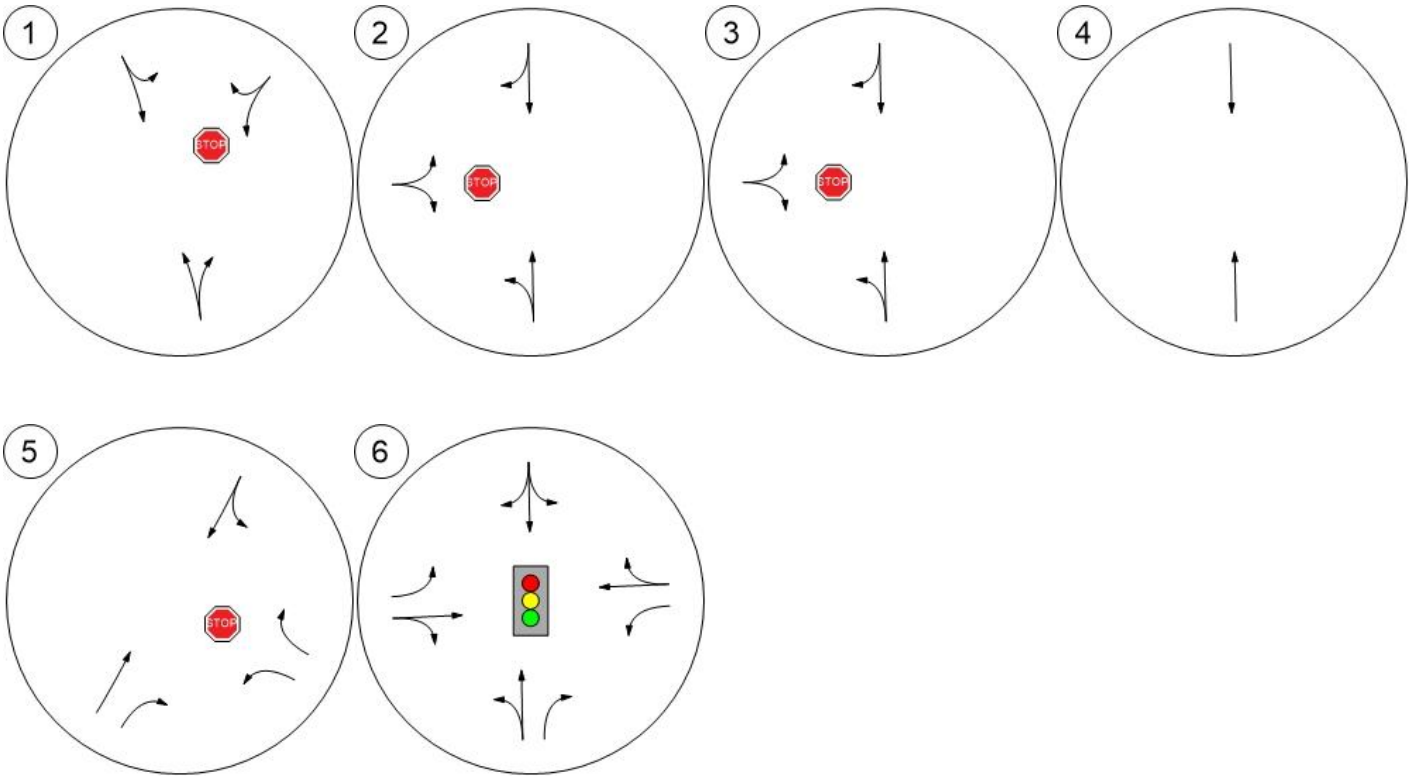
ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
5	CR 750E at Black Rock Road	Final Base	260	322	46	195	57	65	945
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**287**	**356**	**51**	**215**	**63**	**72**	**1044**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	CR 825E at Black Rock Road	Final Base	16	2	298	33	5	1	3	375	10	159	112	7	1021
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**18**	**2**	**329**	**36**	**6**	**1**	**3**	**414**	**11**	**176**	**124**	**8**	**1128**

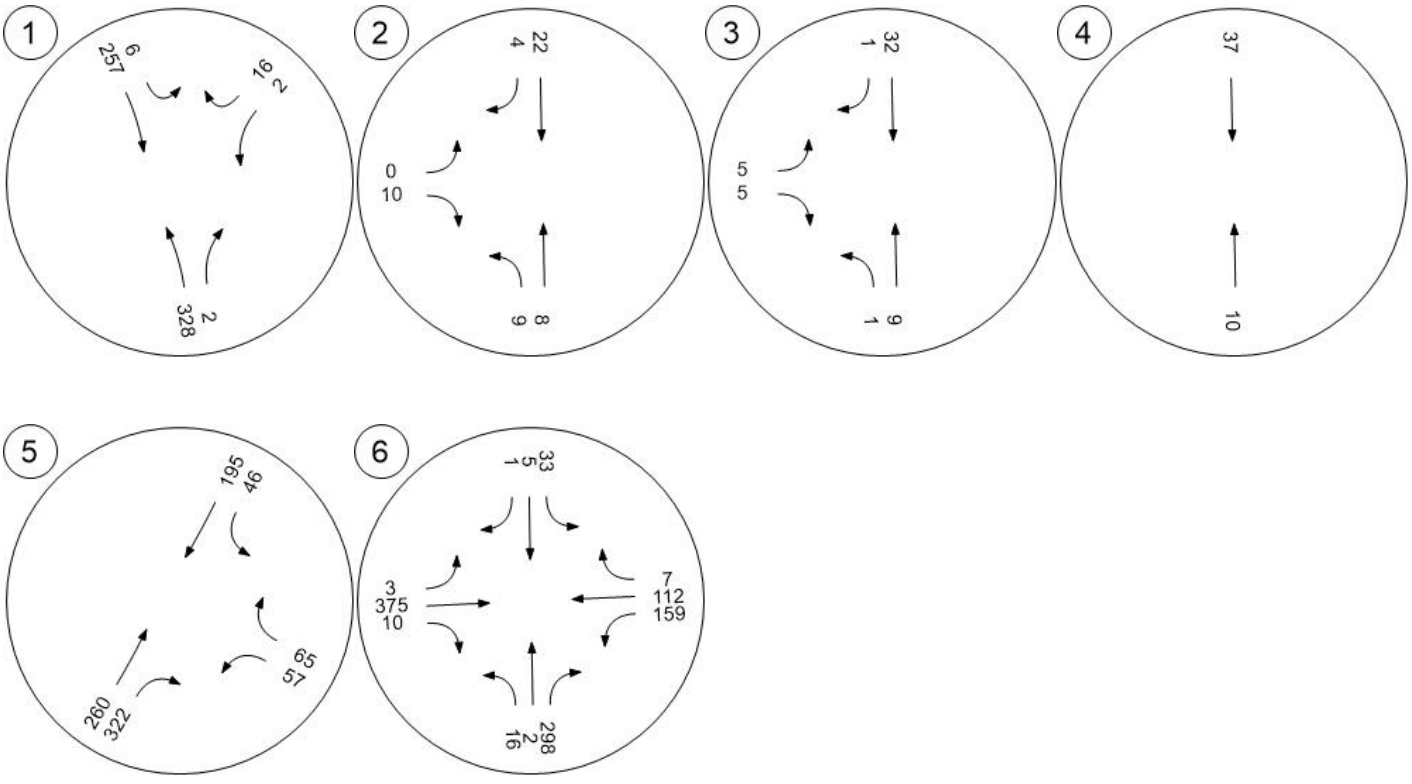
Study Intersections



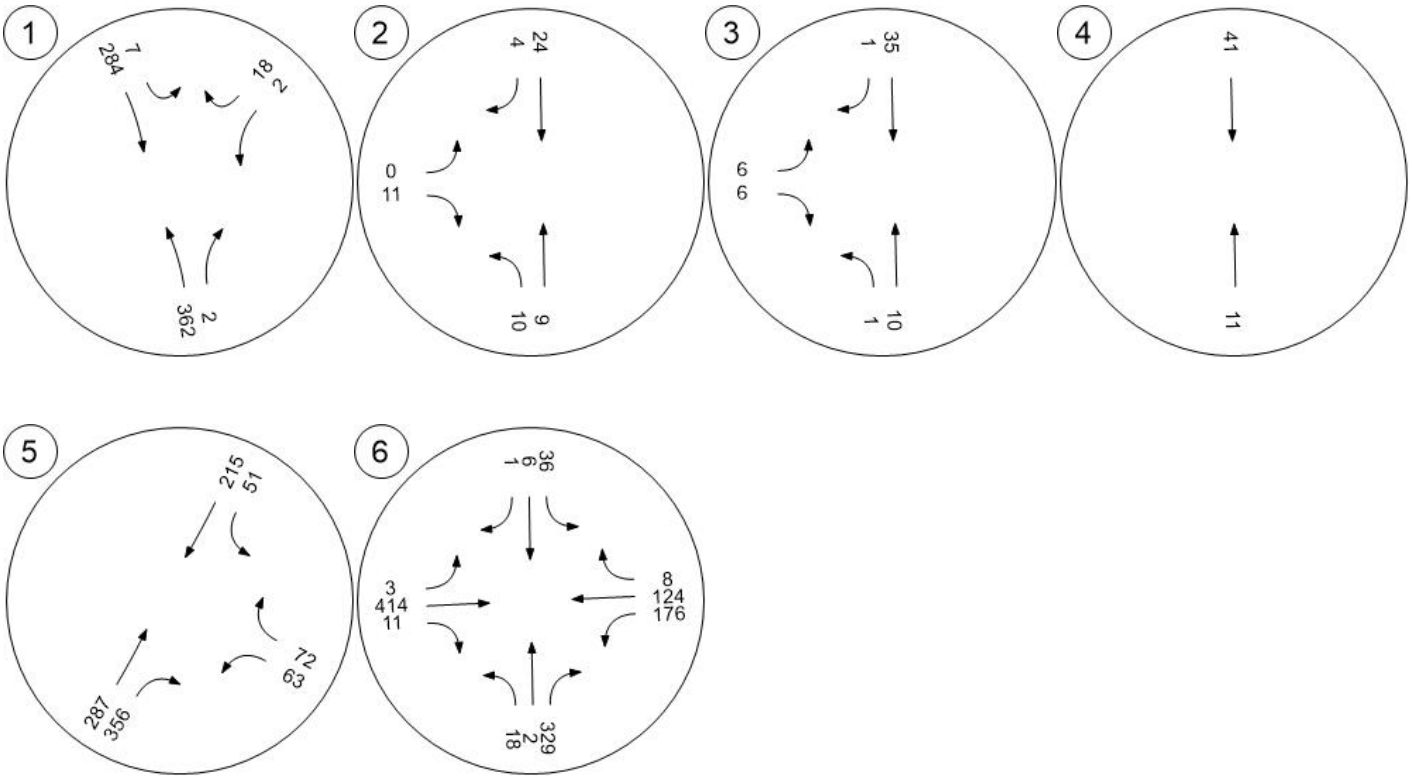
Lane Configuration and Traffic Control



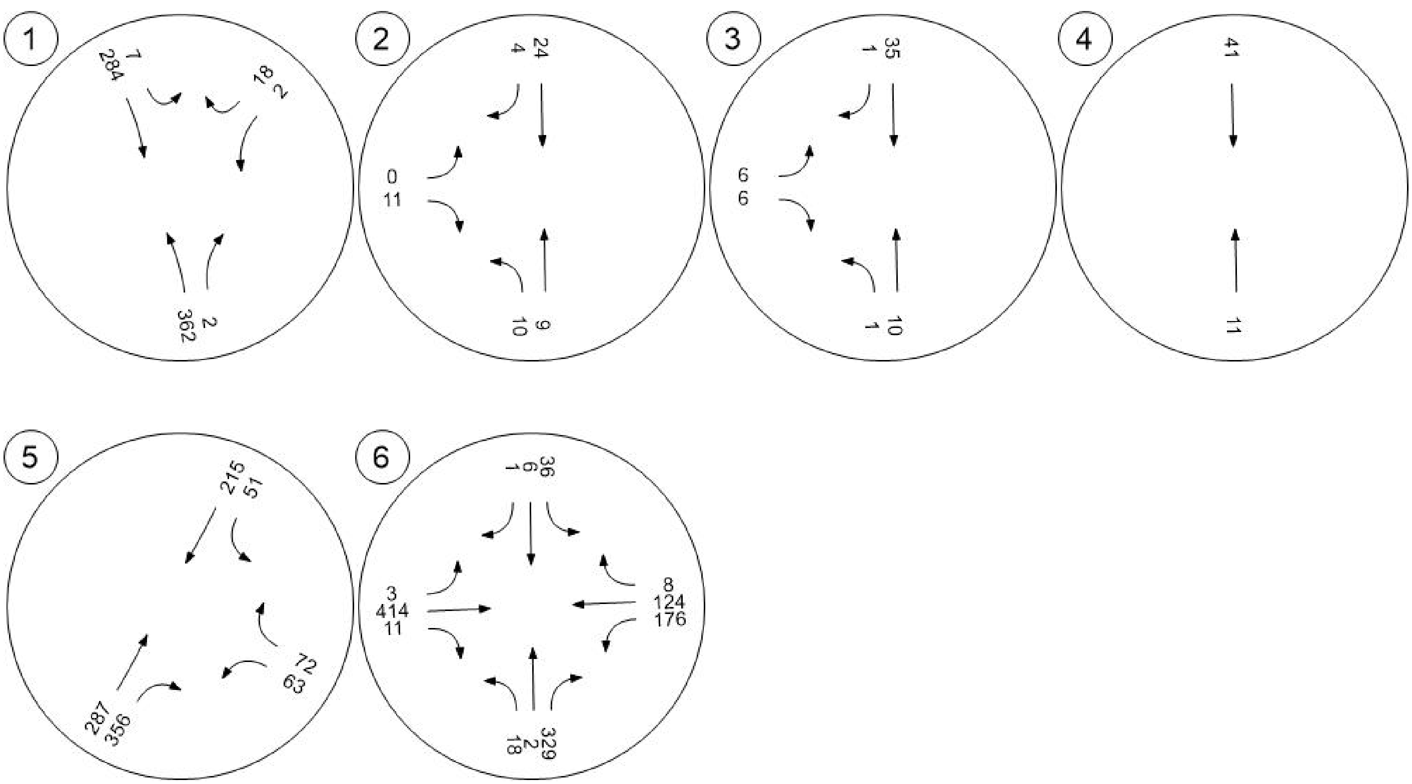
Traffic Volume - Base Volume



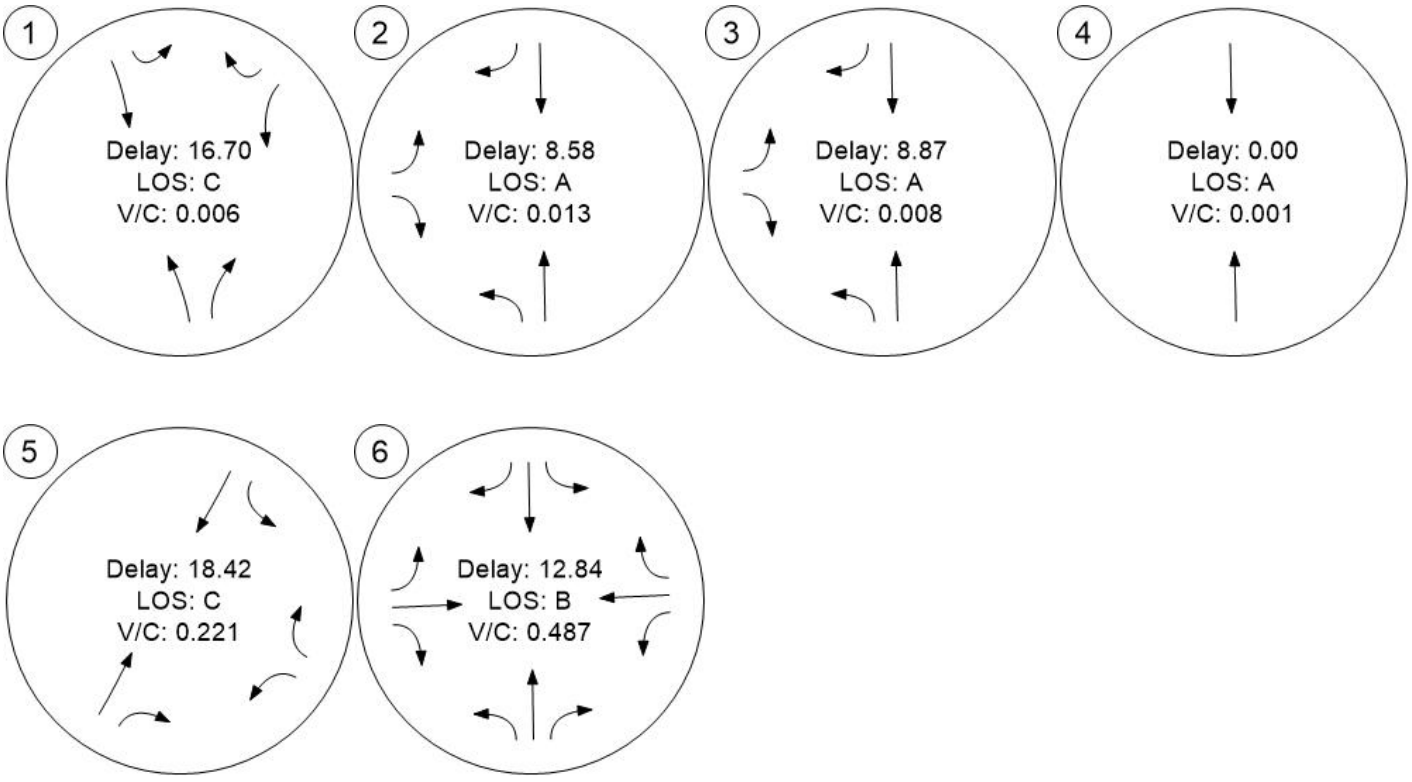
Traffic Volume - Future Background Volume



Traffic Volume - Future Total Volume



Traffic Conditions



Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro
Report File: C:\...\Daum Property - LOS AM PH - 2035 Existing plus BG plus Site 01272026.pdf

Scenario 3 AM PH - 2035 Existing + BG + Site

1/27/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	CR 750E at Black Oak Drive	Two-way stop	HCM 7th Edition	WB Left	0.007	17.3	C
2	CR 825E at Black Oak Drive	Two-way stop	HCM 7th Edition	EB Right	0.022	8.6	A
3	CR 825E at Dogwood Court/Proposed North Driveway	Two-way stop	HCM 7th Edition	WB Left	0.051	9.4	A
4	CR 825E at Proposed South Driveway	Two-way stop	HCM 7th Edition	WB Left	0.085	9.8	A
5	CR 750E at Black Rock Road	Two-way stop	HCM 7th Edition	WB Left	0.259	19.1	C
6	CR 825E at Black Rock Road	Signalized	HCM 7th Edition	SB Left	0.531	13.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: CR 750E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	17.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	328	2	6	257	2	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	50.00	13.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	7	0	0	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	362	2	14	284	2	40
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	1	4	81	1	11
Total Analysis Volume [veh/h]	411	2	16	323	2	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.01	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	8.16	0.00	17.34	11.36
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.03	0.03	0.26	0.26
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.67	0.67	6.45	6.45
d_A, Approach Delay [s/veh]	0.00		0.39		11.62	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.85					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: CR 825E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	9	8	22	4	0	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	22.00	25.00	2.00	25.00	2.00	10.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	9	24	4	0	18
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	3	7	1	0	5
Total Analysis Volume [veh/h]	39	11	29	5	0	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.51	0.00	0.00	0.00	9.31	8.61
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	1.66	1.66	0.00	0.00	1.65	1.65
d_A, Approach Delay [s/veh]	5.86		0.00		8.61	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.55					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: CR 825E at Dogwood Court/Proposed North Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	1	9	0	0	32	1	5	0	5	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	100.00	44.00	2.00	2.00	2.00	2.00	2.00	2.00	20.00	2.00	2.00	2.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	9	12	4	3	0	0	0	0	35	0	13
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	19	12	4	38	1	6	0	6	35	0	13
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	4	1	12	0	2	0	2	11	0	4
Total Analysis Volume [veh/h]	1	24	15	5	49	1	8	0	8	45	0	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.05	0.00	0.02
d_M, Delay for Movement [s/veh]	8.26	0.00	0.00	7.30	0.00	0.00	9.25	9.65	8.78	9.40	9.82	8.74
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.01	0.01	0.01	0.05	0.05	0.05	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.04	0.21	0.21	0.21	1.34	1.34	1.34	5.44	5.44	5.44
d_A, Approach Delay [s/veh]	0.21			0.66			9.02			9.22		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.40											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: CR 825E at Proposed South Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.085

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	10	0	0	37	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	50.00	2.00	2.00	3.00	2.00	2.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	17	3	35	52	9
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	17	3	76	52	9
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	6	1	26	18	3
Total Analysis Volume [veh/h]	32	23	4	104	71	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.09	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.33	0.00	9.77	8.96
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.32	0.32
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.17	0.17	8.02	8.02
d_A, Approach Delay [s/veh]	0.00		0.27		9.65	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.38					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 5: CR 750E at Black Rock Road

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.259

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	100.00	400.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	260	322	46	195	57	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	7.00	4.00	12.00	3.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	11	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	287	360	51	215	74	72
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	108	15	65	22	22
Total Analysis Volume [veh/h]	346	434	61	259	89	87
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.07	0.00	0.26	0.13
d_M, Delay for Movement [s/veh]	0.00	0.00	9.49	0.00	19.10	10.92
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.11	0.11	1.02	0.43
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.63	2.63	25.40	10.68
d_A, Approach Delay [s/veh]	0.00		1.81		15.06	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	2.53					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: CR 825E at Black Rock Road

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	100.00	150.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	16	2	298	33	5	1	3	375	10	159	112	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	50.00	2.00	2.00	20.00	2.00	33.00	3.00	2.00	4.00	4.00	14.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	54	22	11	4	0	0	0	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	99	0	0	2	0	0	2	0	0	5
Total Hourly Volume [veh/h]	18	9	230	90	28	10	7	414	9	176	124	21
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	2	62	24	8	3	2	111	2	47	33	6
Total Analysis Volume [veh/h]	19	10	247	97	30	11	8	445	10	189	133	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	1	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	0	25	8	0	25	0	8	45	0	8	40	0
Amber [s]	0.0	3.5	4.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	1.5	1.5	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	3.5	0.0	3.0	0.0	3.5	3.5	0.0	3.5	3.5	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	9.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	8	0	8	0	8	15	0	8	15	0
Vehicle Extension [s]	0.0	2.0	3.0	0.0	2.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No	No		No		No	No		No	No	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	L	C
C, Calculated Cycle Length [s]	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	5.00	5.50	5.00	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	0.00	3.00	0.00	3.50	0.00	3.50
g_i, Effective Green Time [s]	9.1	21.5	9.1	28.1	15.2	28.1	21.8
g / C, Green / Cycle	0.19	0.45	0.19	0.59	0.32	0.59	0.46
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.18	0.01	0.27	0.17	0.10
s, saturation flow rate [veh/h]	874	1431	762	731	1663	1118	1614
c, Capacity [veh/h]	291	642	273	719	532	669	739
d1, Uniform Delay [s]	16.10	8.74	19.73	4.18	15.15	6.50	7.75
k, delay calibration	0.04	0.28	0.04	0.11	0.11	0.26	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	0.97	0.54	0.01	4.04	0.56	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.38	0.51	0.01	0.85	0.28	0.21
d, Delay for Lane Group [s/veh]	16.16	9.71	20.27	4.18	19.19	7.06	7.89
Lane Group LOS	B	A	C	A	B	A	A
Critical Lane Group	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.23	1.42	1.35	0.02	4.01	0.51	0.66
50th-Percentile Queue Length [ft/ln]	5.79	35.48	33.79	0.41	100.31	12.71	16.41
95th-Percentile Queue Length [veh/ln]	0.42	2.55	2.43	0.03	7.22	0.91	1.18
95th-Percentile Queue Length [ft/ln]	10.42	63.87	60.81	0.74	180.56	22.87	29.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.16	16.16	9.71	20.27	20.27	20.27	4.18	19.19	19.19	7.06	7.89	7.89
Movement LOS	B	B	A	C	C	C	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	10.39			20.27			18.93			7.44		
Approach LOS	B			C			B			A		
d_I, Intersection Delay [s/veh]	13.91											
Intersection LOS	B											
Intersection V/C	0.531											

Emissions

Vehicle Miles Traveled [mph]	4.20	35.78	26.17	3.90	221.53	29.86	24.65
Stops [stops/h]	17.47	107.13	102.00	1.24	302.85	38.36	49.55
Fuel consumption [US gal/h]	0.39	2.66	2.33	0.16	13.14	1.77	1.71
CO [g/h]	27.04	185.77	163.15	10.88	918.23	123.87	119.64
NOx [g/h]	5.26	36.14	31.74	2.12	178.65	24.10	23.28
VOC [g/h]	6.27	43.06	37.81	2.52	212.81	28.71	27.73

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1048	1048	1887	1677
d_b, Bicycle Delay [s]	5.40	5.40	0.08	0.62
l_b,int, Bicycle LOS Score for Intersection	2.178	1.791	2.327	2.137
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro
Report File: C:\...\Daum Property - LOS AM PH - 2035 Existing plus BG plus Site 01272026.pdf

Scenario 3 AM PH - 2035 Existing + BG + Site

1/27/2026

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
1	CR 750E at Black Oak Drive	Final Base	328	2	6	257	2	16	611
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	7	0	0	22	29
		Other	0	0	0	0	0	0	0
		Future Total	**362**	**2**	**14**	**284**	**2**	**40**	**704**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	CR 825E at Black Oak Drive	Final Base	9	8	22	4	0	10	53
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	22	0	0	0	0	7	29
		Other	0	0	0	0	0	0	0
		Future Total	**32**	**9**	**24**	**4**	**0**	**18**	**87**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	CR 825E at Dogwood Court/Proposed North Driveway	Final Base	1	9	0	0	32	1	5	0	5	0	0	0	53
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	9	12	4	3	0	0	0	0	35	0	13	76
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**1**	**19**	**12**	**4**	**38**	**1**	**6**	**0**	**6**	**35**	**0**	**13**	**135**

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
4	CR 825E at Proposed South Driveway	Final Base	10	0	0	37	0	0	47
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	12	17	3	35	52	9	128
		Other	0	0	0	0	0	0	0
		Future Total	**23**	**17**	**3**	**76**	**52**	**9**	**180**

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
5	CR 750E at Black Rock Road	Final Base	260	322	46	195	57	65	945
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	4	0	0	11	0	15
		Other	0	0	0	0	0	0	0
		Future Total	**287**	**360**	**51**	**215**	**74**	**72**	**1059**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	CR 825E at Black Rock Road	Final Base	16	2	298	33	5	1	3	375	10	159	112	7	1021
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	7	0	54	22	11	4	0	0	0	0	18	116
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**18**	**9**	**329**	**90**	**28**	**12**	**7**	**414**	**11**	**176**	**124**	**26**	**1244**

Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro

Scenario 3 AM PH - 2035 Existing + BG + Site

Report File: C:\...\Daum Property - LOS AM PH - 2035 Existing plus BG plus Site 01272026.pdf

1/27/2026

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	% Int. Capture	Trips In Adj.	Trips Out Adj.	Total Trips Adj.	% of Total Trips
1: Zone	Residential Development	210/220			0.000	50.00	50.00	0.00	35	109	144	100.00
					Added Trips Total				**35**	**109**	**144**	**100.00**

Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro

Scenario 3 AM PH - 2035 Existing + BG + Site

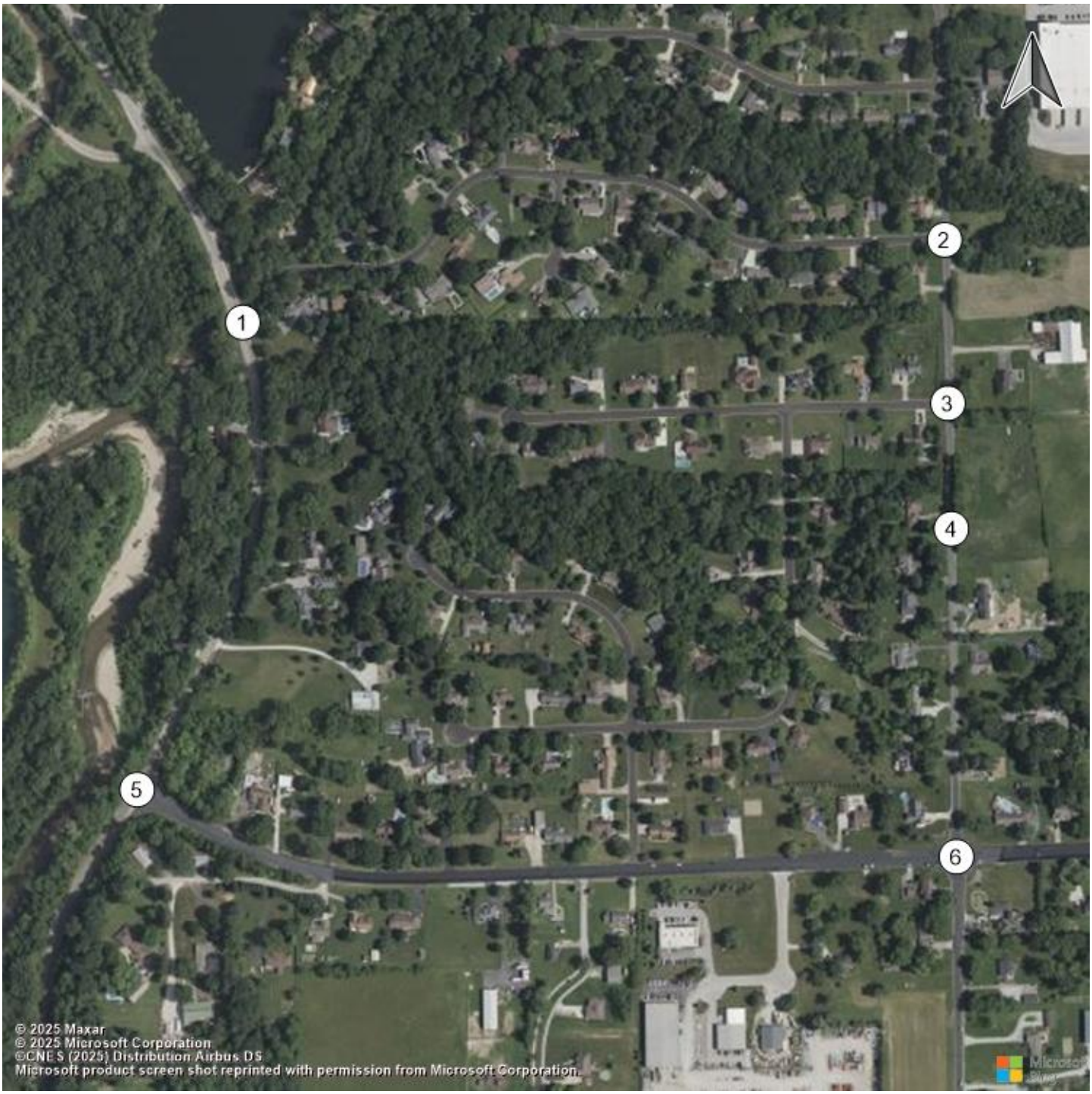
Report File: C:\...\Daum Property - LOS AM PH - 2035 Existing plus BG plus Site 01272026.pdf

1/27/2026

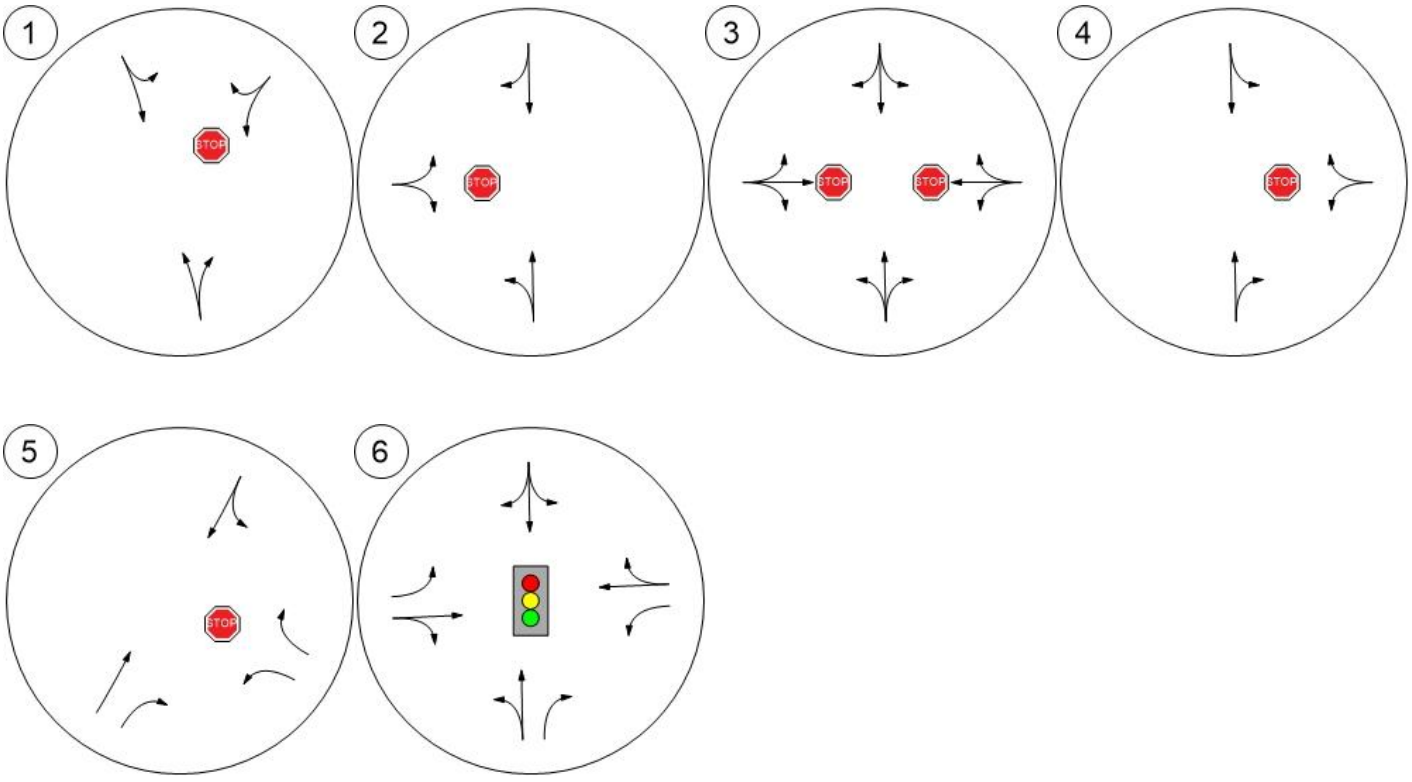
Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	20.00	7	20.00	22
3: Gate	50.00	18	50.00	54
4: Gate	20.00	7	20.00	22
5: Gate	10.00	4	10.00	11
Total	**100.00**	**36**	**100.00**	**109**

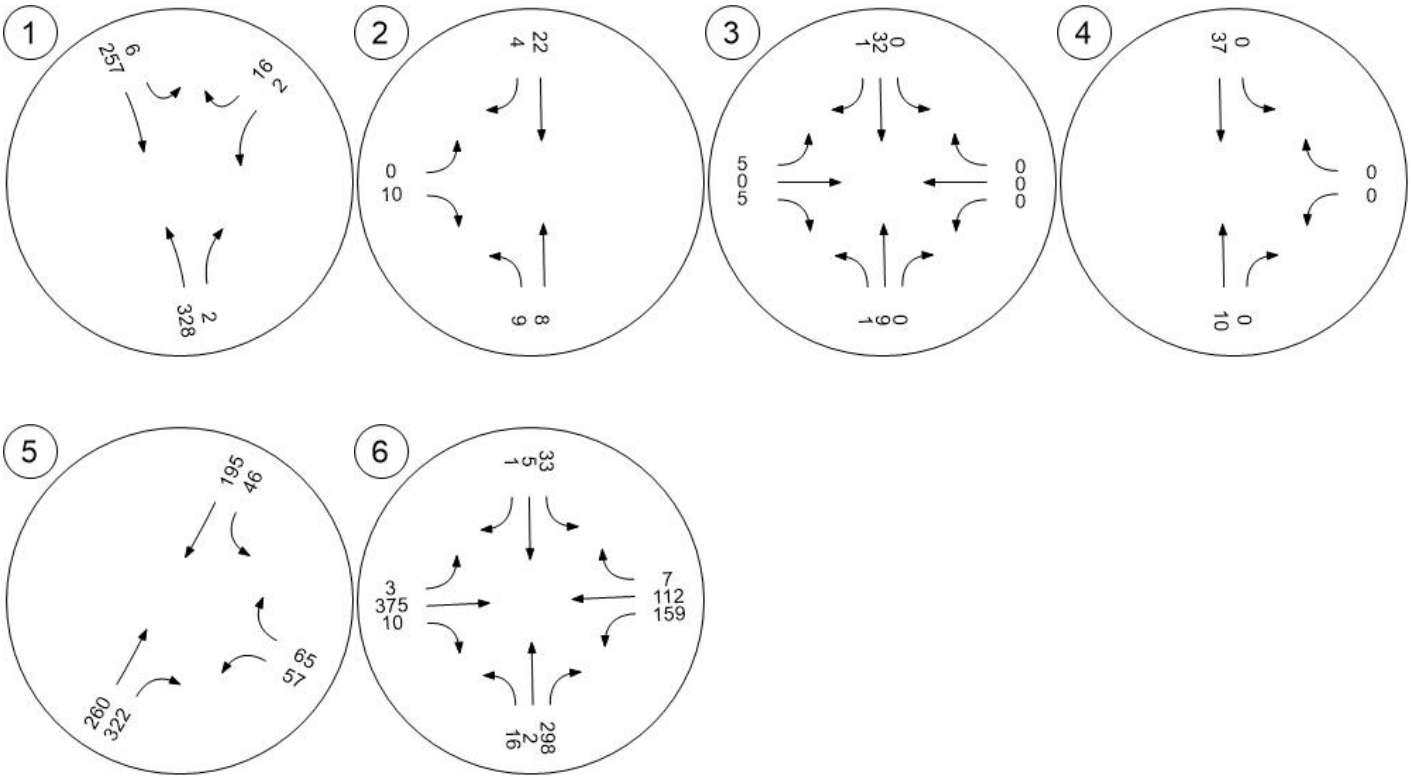
Study Intersections



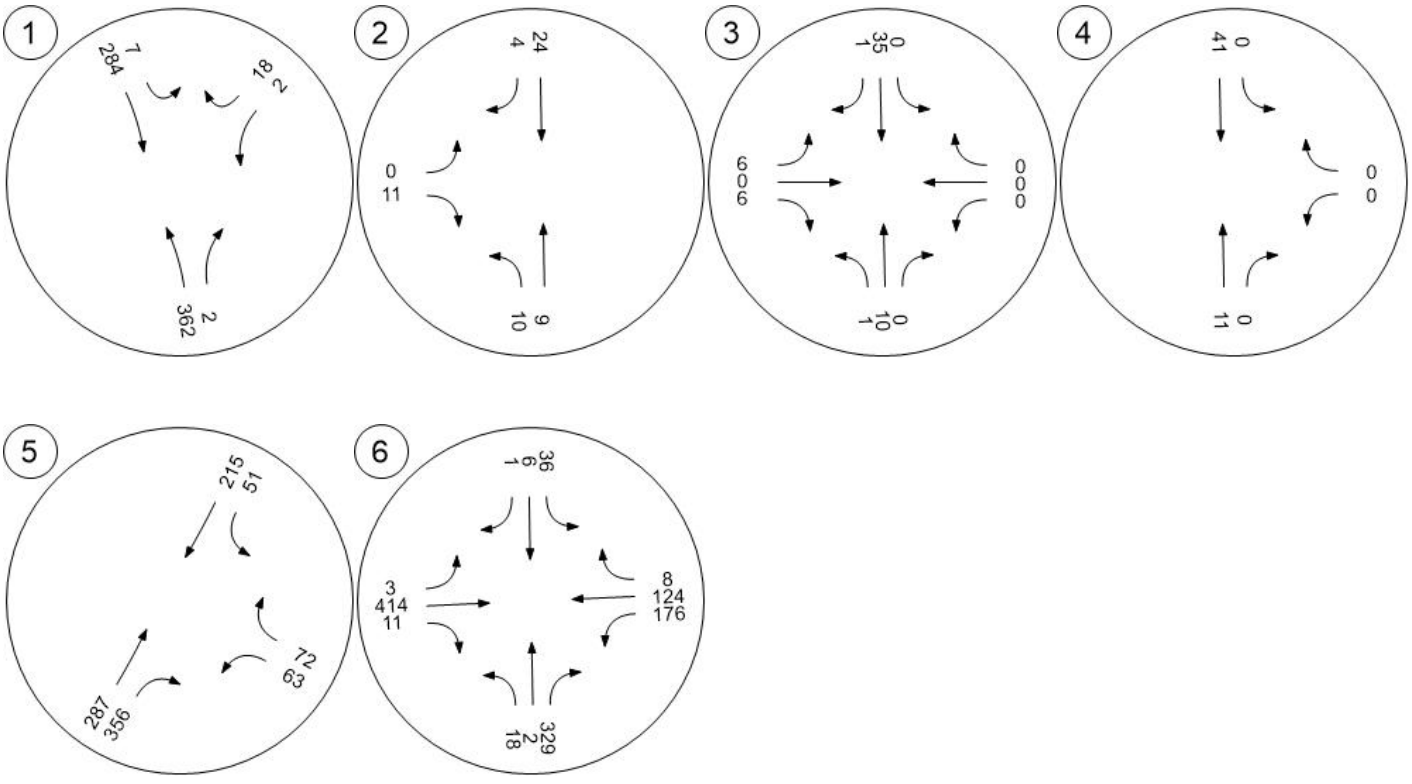
Lane Configuration and Traffic Control



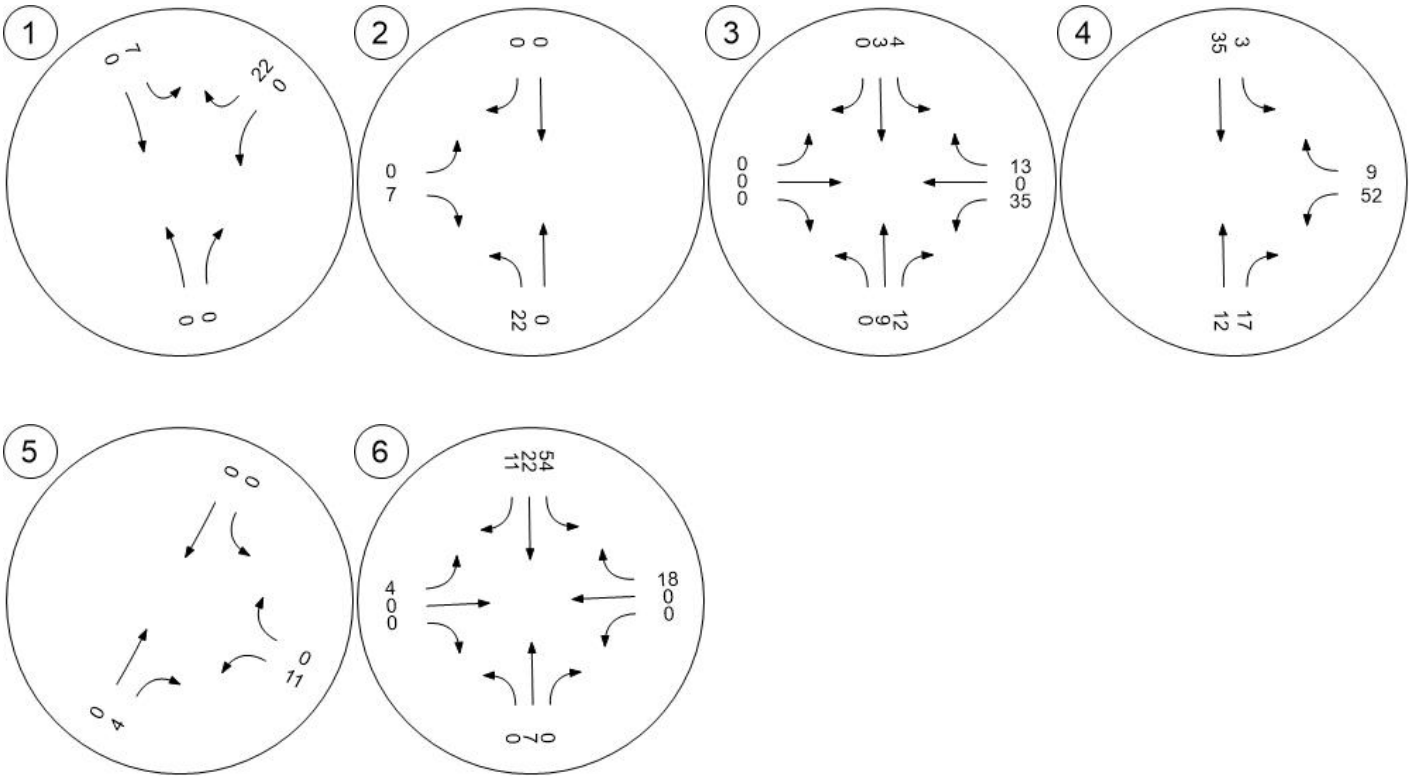
Traffic Volume - Base Volume



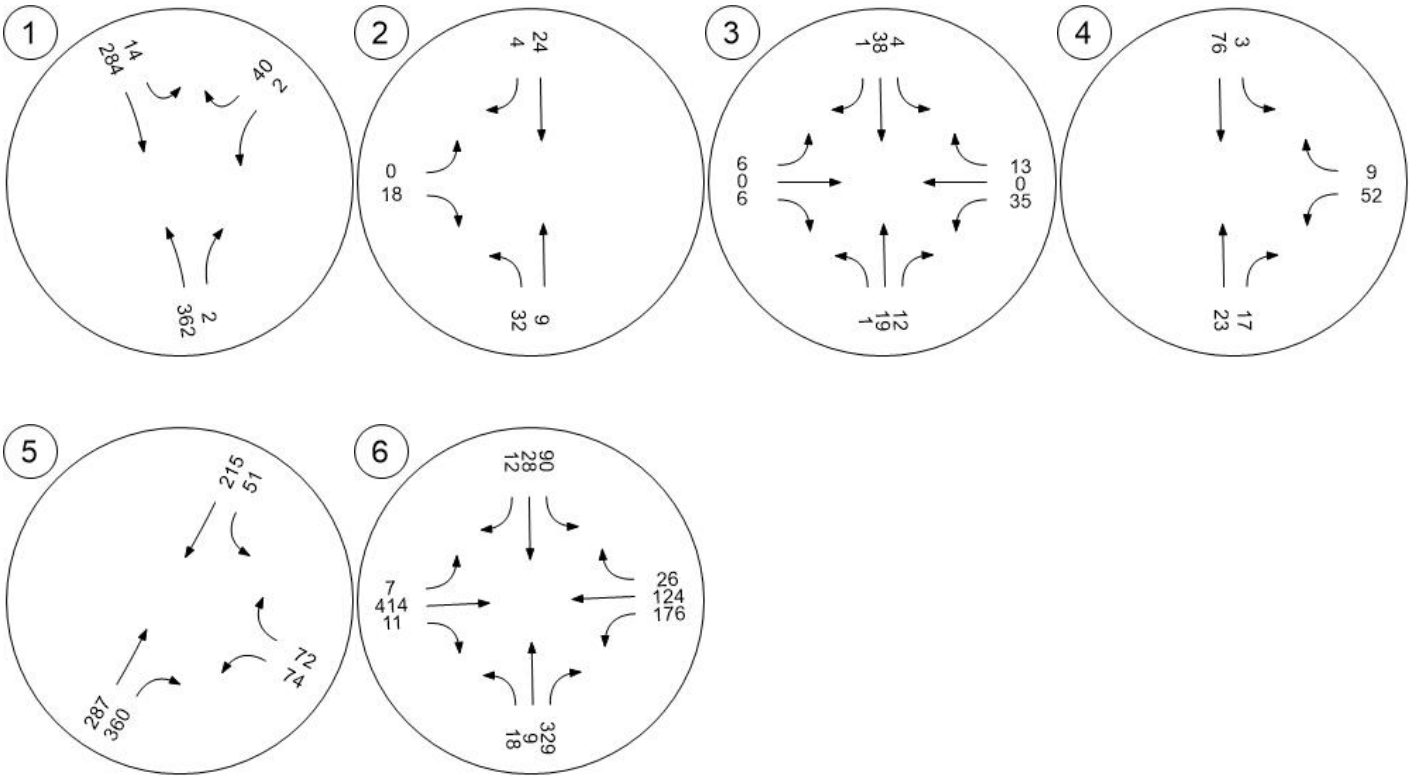
Traffic Volume - Future Background Volume



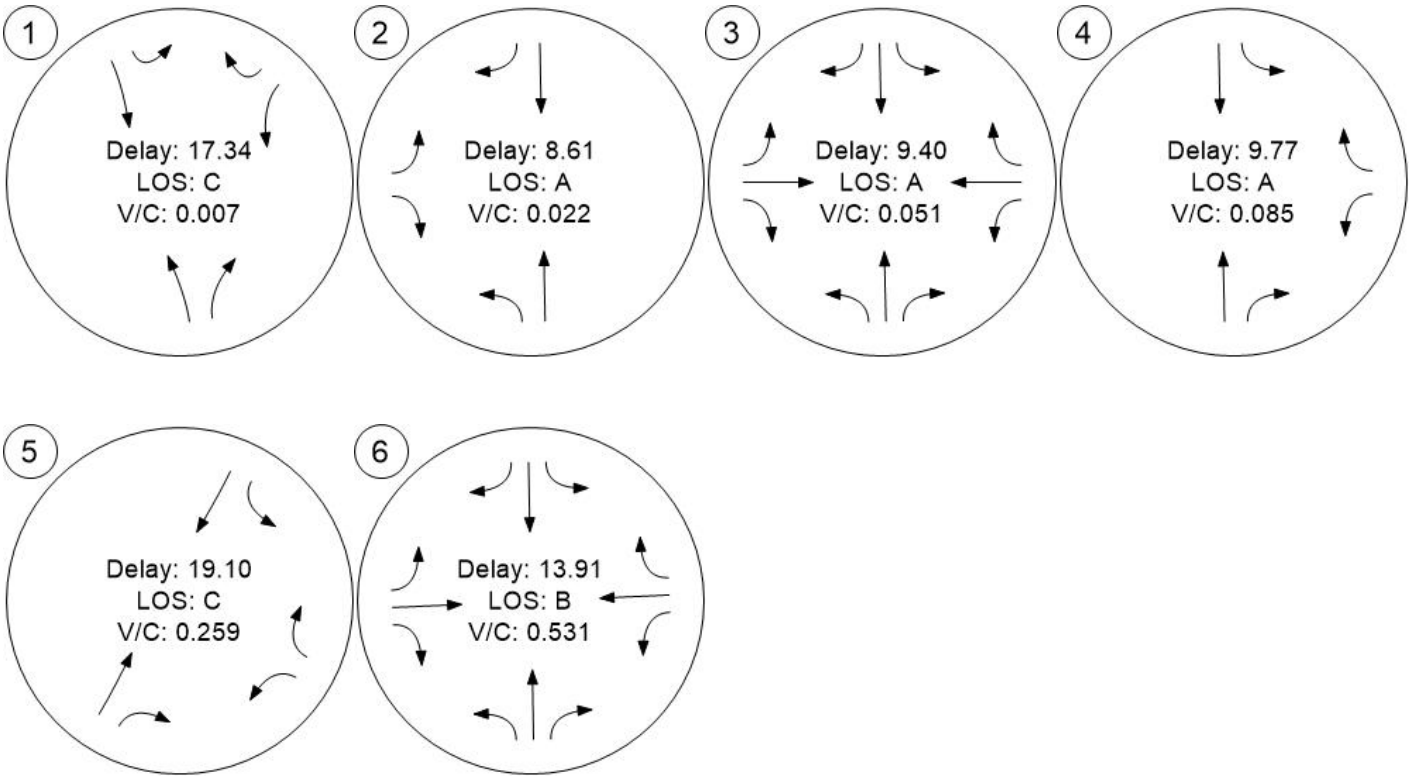
Traffic Volume - Net New Site Trips



Traffic Volume - Future Total Volume



Traffic Conditions



Daum Property - Residential Development

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Scenario 4 PM PH - 2025 Existing

Report File: C:\...\Daum Property - LOS PM PH - 2025 Existing 01272026.pdf

1/27/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	CR 750E at Black Oak Drive	Two-way stop	HCM 7th Edition	WB Left	0.007	18.4	C
2	CR 825E at Black Oak Drive	Two-way stop	HCM 7th Edition	EB Left	0.010	9.1	A
3	CR 825E at Dogwood Court/Proposed North Driveway	Two-way stop	HCM 7th Edition	EB Left	0.004	9.0	A
4	CR 825E at Proposed South Driveway	Two-way stop	HCM 7th Edition	NB Thru	0.001	0.0	A
5	CR 750E at Black Rock Road	Two-way stop	HCM 7th Edition	WB Left	1.010	101.4	F
6	CR 825E at Black Rock Road	Signalized	HCM 7th Edition	SB Left	0.531	12.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: CR 750E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	18.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	359	7	15	554	2	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	12.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	359	7	15	554	2	17
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	93	2	4	143	1	4
Total Analysis Volume [veh/h]	370	7	15	571	2	18
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.01	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.06	0.00	18.37	10.76
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.03	0.03	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.63	0.63	2.71	2.71
d_A, Approach Delay [s/veh]	0.00		0.21		11.52	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.36					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: CR 825E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	19	13	12	7	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	19	13	12	7	12
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	6	4	4	2	4
Total Analysis Volume [veh/h]	23	24	17	15	9	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.30	0.00	0.00	0.00	9.13	8.51
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.97	0.97	0.00	0.00	1.87	1.87
d_A, Approach Delay [s/veh]	3.57		0.00		8.74	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.67					
Intersection LOS	A					

Intersection Level Of Service Report

Intersection 3: CR 825E at Dogwood Court/Proposed North Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	7	33	21	4	3	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	5.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	33	21	4	3	3
Peak Hour Factor	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	11	7	1	1	1
Total Analysis Volume [veh/h]	9	43	27	5	4	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	0.00	9.01	8.48
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.38	0.38	0.00	0.00	0.62	0.62
d_A, Approach Delay [s/veh]	1.26		0.00		8.74	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.47					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: CR 825E at Proposed South Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name		
Approach	Northbound	Southbound
Lane Configuration		
Turning Movement	Thru	Thru
Lane Width [ft]	12.00	12.00
No. of Lanes in Entry Pocket	0	0
Entry Pocket Length [ft]	100.00	100.00
No. of Lanes in Exit Pocket	0	0
Exit Pocket Length [ft]	0.00	0.00
Speed [mph]	35.00	35.00
Grade [%]	0.00	0.00
Crosswalk	No	No

Volumes

Name		
Base Volume Input [veh/h]	40	24
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00
Growth Factor	1.0000	1.0000
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	0	0
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	40	24
Peak Hour Factor	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	8
Total Analysis Volume [veh/h]	55	33
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free
Flared Lane		
Storage Area [veh]	0	0
Two-Stage Gap Acceptance		
Number of Storage Spaces in Median	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00
Movement LOS	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00
d_A, Approach Delay [s/veh]	0.00	0.00
Approach LOS	A	A
d_I, Intersection Delay [s/veh]	0.00	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 5: CR 750E at Black Rock Road

Control Type:	Two-way stop	Delay (sec / veh):	101.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.010

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	100.00	400.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	294	115	90	450	250	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	4.00	2.00	2.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	294	115	90	450	250	71
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	30	23	116	64	18
Total Analysis Volume [veh/h]	303	119	93	464	258	73
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.08	0.00	1.01	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	8.30	0.00	101.37	10.50
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.16	0.16	10.00	0.33
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.08	4.08	249.88	8.33
d_A, Approach Delay [s/veh]	0.00		1.39		81.33	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	21.14					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: CR 825E at Black Rock Road

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	100.00	150.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	13	1	236	24	1	0	3	198	43	586	295	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	33.00	3.00	2.00	2.00	2.00	5.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	71	0	0	0	0	0	9	0	0	8
Total Hourly Volume [veh/h]	13	1	165	24	1	0	3	198	34	586	295	32
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	47	7	0	0	1	56	10	166	84	9
Total Analysis Volume [veh/h]	15	1	188	27	1	0	3	225	39	666	335	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	1	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	0	25	8	0	25	0	8	45	0	8	40	0
Amber [s]	0.0	3.5	4.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	1.5	1.5	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	3.5	0.0	3.0	0.0	3.5	3.5	0.0	3.5	3.5	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	9.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	8	0	8	0	8	15	0	8	15	0
Vehicle Extension [s]	0.0	2.0	3.0	0.0	2.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No	No		No		No	No		No	No	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	L	C
C, Calculated Cycle Length [s]	46	46	46	46	46	46	46
L, Total Lost Time per Cycle [s]	5.00	5.50	5.00	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	0.00	3.00	0.00	3.50	0.00	3.50
g_i, Effective Green Time [s]	7.4	20.4	7.4	28.1	14.6	28.1	22.3
g / C, Green / Cycle	0.16	0.44	0.16	0.61	0.32	0.61	0.48
(v / s)_i Volume / Saturation Flow Rate	0.01	0.13	0.04	0.01	0.16	0.53	0.22
s, saturation flow rate [veh/h]	1500	1431	776	429	1627	1248	1655
c, Capacity [veh/h]	394	635	279	558	518	866	802
d1, Uniform Delay [s]	16.37	8.23	18.32	4.49	12.81	7.62	7.90
k, delay calibration	0.04	0.13	0.04	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.31	0.06	0.00	0.78	6.52	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.30	0.10	0.01	0.51	0.77	0.46
d, Delay for Lane Group [s/veh]	16.38	8.53	18.38	4.49	13.59	14.14	8.32
Lane Group LOS	B	A	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.12	0.92	0.24	0.00	1.74	3.19	1.54
50th-Percentile Queue Length [ft/ln]	3.12	22.99	6.01	0.12	43.53	79.63	38.58
95th-Percentile Queue Length [veh/ln]	0.22	1.66	0.43	0.01	3.13	5.73	2.78
95th-Percentile Queue Length [ft/ln]	5.61	41.38	10.81	0.22	78.36	143.33	69.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.38	16.38	8.53	18.38	18.38	18.38	4.49	13.59	13.59	14.14	8.32	8.32
Movement LOS	B	B	A	B	B	B	A	B	B	B	A	A
d_A, Approach Delay [s/veh]	9.15			18.38			13.49			12.06		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.03											
Intersection LOS	B											
Intersection V/C	0.531											

Emissions

Vehicle Miles Traveled [mph]	2.32	27.23	5.31	1.46	128.54	105.24	58.62
Stops [stops/h]	9.75	71.91	18.79	0.38	136.18	249.10	120.70
Fuel consumption [US gal/h]	0.21	1.91	0.45	0.06	6.83	8.62	4.14
CO [g/h]	15.03	133.20	31.34	4.02	477.37	602.57	289.28
NOx [g/h]	2.92	25.92	6.10	0.78	92.88	117.24	56.28
VOC [g/h]	3.48	30.87	7.26	0.93	110.64	139.65	67.04

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1086	1086	1955	1738
d_b, Bicycle Delay [s]	4.80	4.80	0.01	0.40
l_b,int, Bicycle LOS Score for Intersection	2.013	1.606	2.015	3.284
Bicycle LOS	B	A	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Daum Property - Residential Development

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Scenario 4 PM PH - 2025 Existing

Report File: C:\...\Daum Property - LOS PM PH - 2025 Existing 01272026.pdf

1/27/2026

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
1	CR 750E at Black Oak Drive	Final Base	359	7	15	554	2	17	954
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**359**	**7**	**15**	**554**	**2**	**17**	**954**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	CR 825E at Black Oak Drive	Final Base	18	19	13	12	7	12	81
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**18**	**19**	**13**	**12**	**7**	**12**	**81**

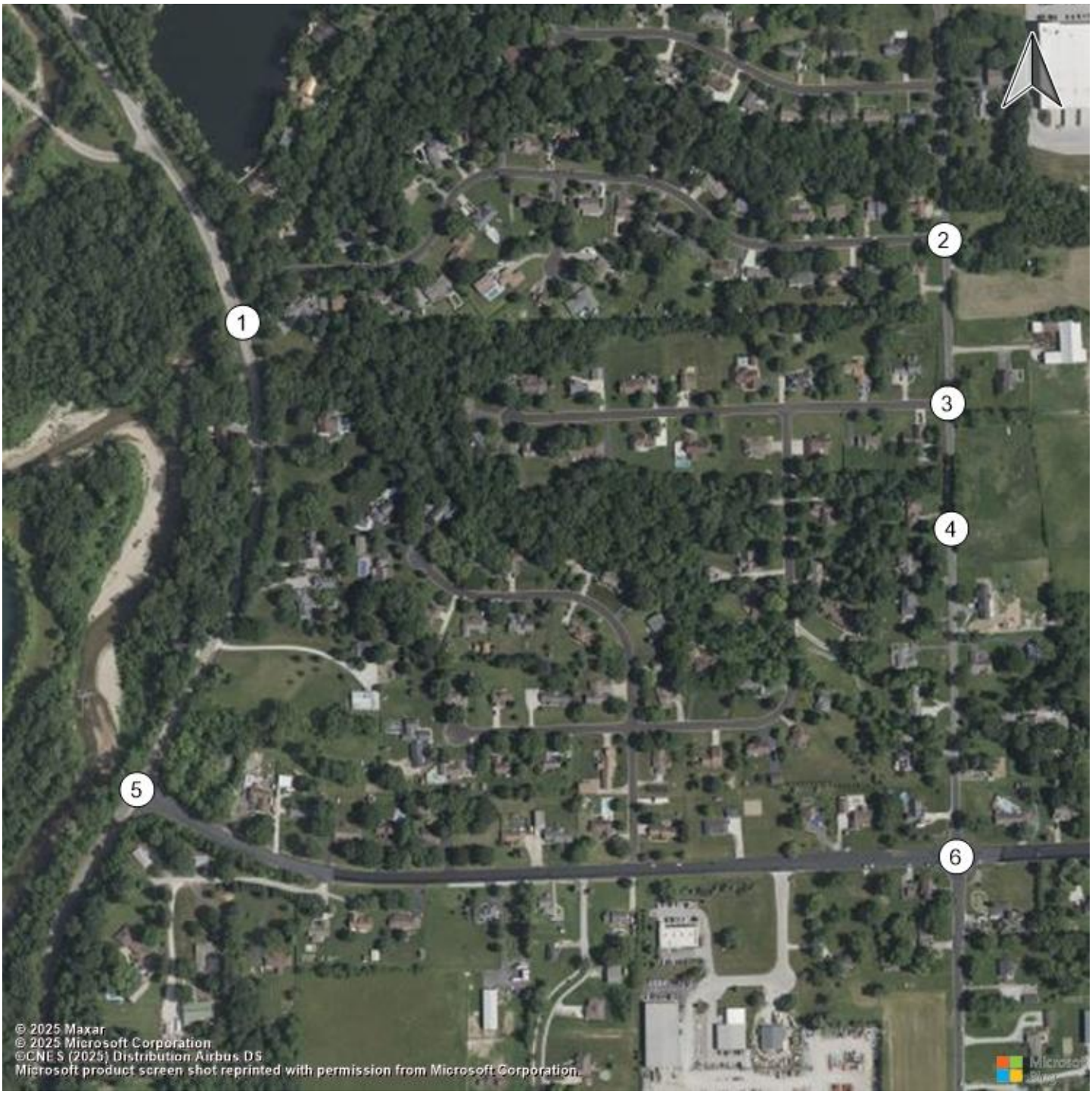
ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	CR 825E at Dogwood Court/Proposed North Driveway	Final Base	7	33	21	4	3	3	71
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**7**	**33**	**21**	**4**	**3**	**3**	**71**

ID	Intersection Name	Volume Type	Northbound	Southbound	Total Volume
			Thru	Thru	
4	CR 825E at Proposed South Driveway	Final Base	40	24	64
		Growth Factor	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	0	0	0
		Other	0	0	0
		Future Total	**40**	**24**	**64**

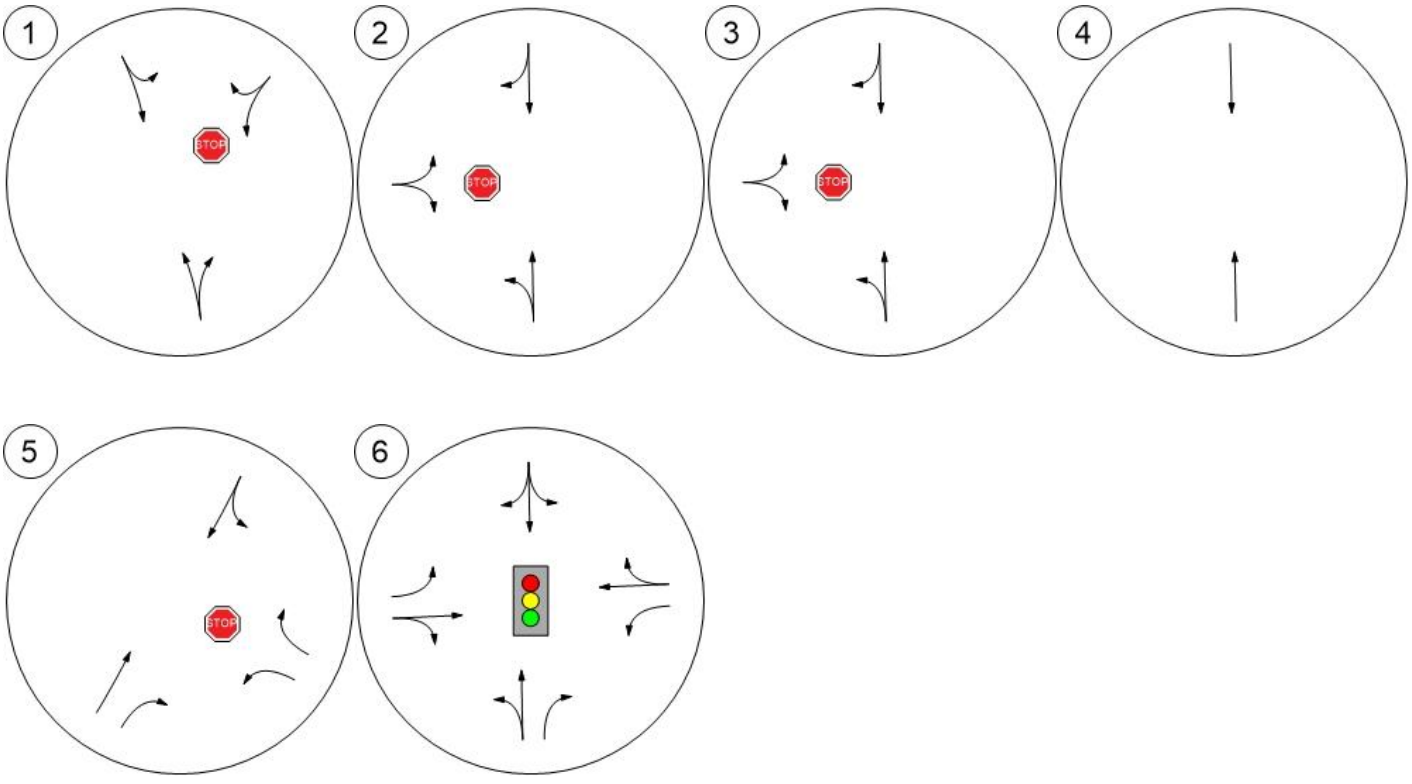
ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
5	CR 750E at Black Rock Road	Final Base	294	115	90	450	250	71	1270
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**294**	**115**	**90**	**450**	**250**	**71**	**1270**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	CR 825E at Black Rock Road	Final Base	13	1	236	24	1	0	3	198	43	586	295	40	1440
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**13**	**1**	**236**	**24**	**1**	**0**	**3**	**198**	**43**	**586**	**295**	**40**	**1440**

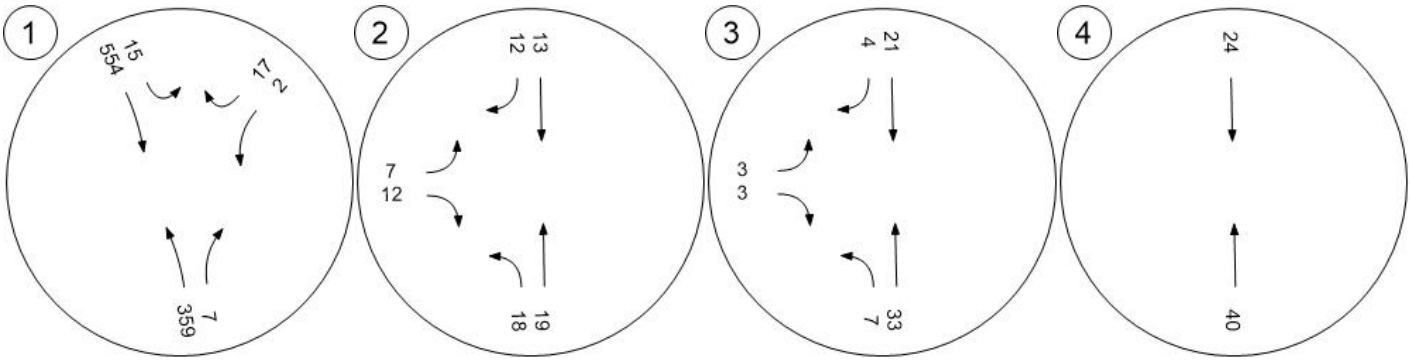
Study Intersections

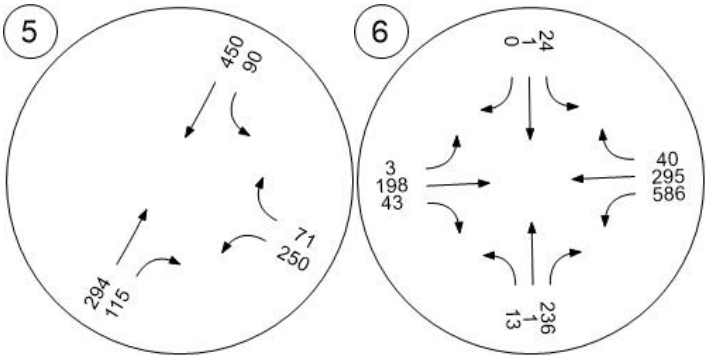


Lane Configuration and Traffic Control

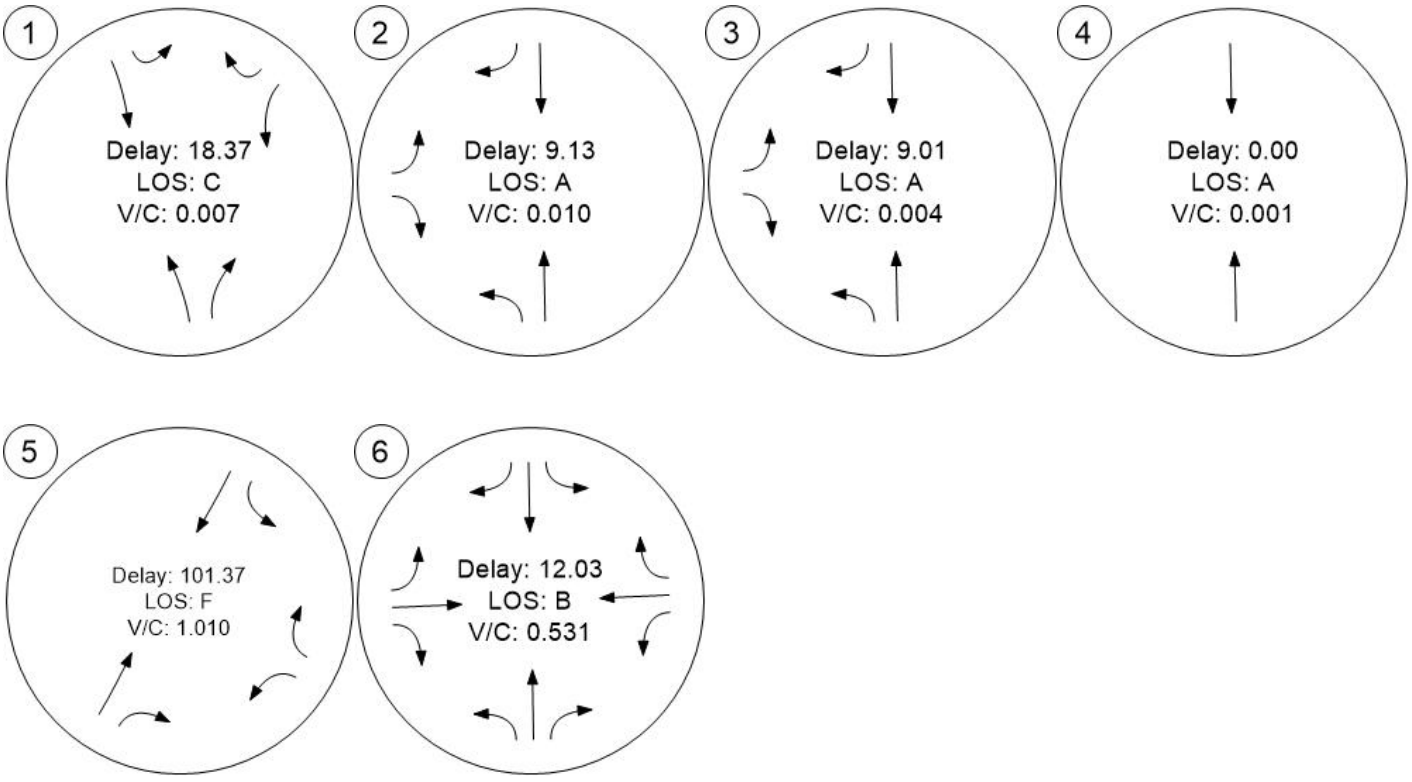


Traffic Volume - Base Volume





Traffic Conditions



Daum Property - Residential Development

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Scenario 5 PM PH - 2035 Existing + BG

Report File: C:\...\Daum Property - LOS PM PH - 2035 Existing plus BG 01272026.pdf

1/27/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	CR 750E at Black Oak Drive	Two-way stop	HCM 7th Edition	WB Left	0.008	20.6	C
2	CR 825E at Black Oak Drive	Two-way stop	HCM 7th Edition	EB Left	0.011	9.2	A
3	CR 825E at Dogwood Court/Proposed North Driveway	Two-way stop	HCM 7th Edition	EB Left	0.004	9.1	A
4	CR 825E at Proposed South Driveway	Two-way stop	HCM 7th Edition	NB Thru	0.001	0.0	A
5	CR 750E at Black Rock Road	Two-way stop	HCM 7th Edition	WB Left	1.306	210.4	F
6	CR 825E at Black Rock Road	Signalized	HCM 7th Edition	WB Left	0.576	15.4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: CR 750E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	20.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	359	7	15	554	2	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	12.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	397	8	17	612	2	19
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	2	4	158	1	5
Total Analysis Volume [veh/h]	409	8	18	631	2	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.01	0.01	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	8.17	0.00	20.57	11.11
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.03	0.03	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.76	0.76	3.19	3.19
d_A, Approach Delay [s/veh]	0.00		0.23		11.97	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.38					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: CR 825E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	19	13	12	7	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	21	14	13	8	13
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	7	4	4	3	4
Total Analysis Volume [veh/h]	26	27	18	17	10	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.31	0.00	0.00	0.00	9.21	8.54
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.09	0.09
95th-Percentile Queue Length [ft/ln]	1.10	1.10	0.00	0.00	2.13	2.13
d_A, Approach Delay [s/veh]	3.59		0.00		8.78	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: CR 825E at Dogwood Court/Proposed North Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	7	33	21	4	3	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	5.00	2.00	2.00	2.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	36	23	4	3	3
Peak Hour Factor	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	12	7	1	1	1
Total Analysis Volume [veh/h]	10	47	30	5	4	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.30	0.00	0.00	0.00	9.06	8.49
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.42	0.42	0.00	0.00	0.63	0.63
d_A, Approach Delay [s/veh]	1.28		0.00		8.77	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.43					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: CR 825E at Proposed South Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name		
Approach	Northbound	Southbound
Lane Configuration		
Turning Movement	Thru	Thru
Lane Width [ft]	12.00	12.00
No. of Lanes in Entry Pocket	0	0
Entry Pocket Length [ft]	100.00	100.00
No. of Lanes in Exit Pocket	0	0
Exit Pocket Length [ft]	0.00	0.00
Speed [mph]	35.00	35.00
Grade [%]	0.00	0.00
Crosswalk	No	No

Volumes

Name		
Base Volume Input [veh/h]	40	24
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	4.00
Growth Factor	1.1046	1.1046
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	0	0
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	44	27
Peak Hour Factor	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	9
Total Analysis Volume [veh/h]	60	37
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free
Flared Lane		
Storage Area [veh]	0	0
Two-Stage Gap Acceptance		
Number of Storage Spaces in Median	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00
Movement LOS	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00
d_A, Approach Delay [s/veh]	0.00	0.00
Approach LOS	A	A
d_I, Intersection Delay [s/veh]	0.00	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 5: CR 750E at Black Rock Road

Control Type:	Two-way stop	Delay (sec / veh):	210.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.306

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	100.00	400.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	294	115	90	450	250	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	4.00	2.00	2.00	6.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	325	127	99	497	276	78
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	33	26	128	71	20
Total Analysis Volume [veh/h]	335	131	102	512	285	80
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.09	0.01	1.31	0.11
d_M, Delay for Movement [s/veh]	0.00	0.00	8.44	0.00	210.44	10.83
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.18	0.18	15.32	0.39
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.50	4.50	383.01	9.66
d_A, Approach Delay [s/veh]	0.00		1.40		166.69	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	42.70					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: CR 825E at Black Rock Road

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	100.00	150.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	13	1	236	24	1	0	3	198	43	586	295	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	33.00	3.00	2.00	2.00	2.00	5.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	78	0	0	0	0	0	9	0	0	9
Total Hourly Volume [veh/h]	14	1	183	27	1	0	3	219	38	647	326	35
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	52	8	0	0	1	62	11	184	93	10
Total Analysis Volume [veh/h]	16	1	208	31	1	0	3	249	43	735	370	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	1	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	0	25	8	0	25	0	8	45	0	8	40	0
Amber [s]	0.0	3.5	4.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	1.5	1.5	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	3.5	0.0	3.0	0.0	3.5	3.5	0.0	3.5	3.5	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	9.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	8	0	8	0	8	15	0	8	15	0
Vehicle Extension [s]	0.0	2.0	3.0	0.0	2.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No	No		No		No	No		No	No	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	L	C
C, Calculated Cycle Length [s]	48	48	48	48	48	48	48
L, Total Lost Time per Cycle [s]	5.00	5.50	5.00	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	0.00	3.00	0.00	3.50	0.00	3.50
g_i, Effective Green Time [s]	7.6	20.6	7.6	29.5	16.0	29.5	23.6
g / C, Green / Cycle	0.16	0.43	0.16	0.62	0.34	0.62	0.50
(v / s)_i Volume / Saturation Flow Rate	0.01	0.15	0.04	0.01	0.18	0.60	0.25
s, saturation flow rate [veh/h]	1528	1431	742	393	1627	1219	1654
c, Capacity [veh/h]	388	615	266	534	554	842	829
d1, Uniform Delay [s]	17.14	9.11	19.39	4.64	12.70	9.45	7.94
k, delay calibration	0.04	0.19	0.04	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.57	0.07	0.00	0.78	12.12	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.34	0.12	0.01	0.53	0.87	0.49
d, Delay for Lane Group [s/veh]	17.16	9.69	19.47	4.64	13.48	21.57	8.40
Lane Group LOS	B	A	B	A	B	C	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.14	1.16	0.29	0.01	1.98	4.82	1.78
50th-Percentile Queue Length [ft/ln]	3.48	29.08	7.26	0.13	49.40	120.60	44.62
95th-Percentile Queue Length [veh/ln]	0.25	2.09	0.52	0.01	3.56	8.43	3.21
95th-Percentile Queue Length [ft/ln]	6.26	52.34	13.06	0.23	88.91	210.65	80.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.16	17.16	9.69	19.47	19.47	19.47	4.64	13.48	13.48	21.57	8.40	8.40
Movement LOS	B	B	A	B	B	B	A	B	B	C	A	A
d_A, Approach Delay [s/veh]	10.25			19.47			13.39			16.86		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.43											
Intersection LOS	B											
Intersection V/C	0.576											

Emissions

Vehicle Miles Traveled [mph]	2.46	30.13	6.07	1.46	142.17	116.14	64.79
Stops [stops/h]	10.52	88.02	21.97	0.38	149.53	365.08	135.08
Fuel consumption [US gal/h]	0.23	2.22	0.52	0.06	7.53	11.75	4.60
CO [g/h]	16.24	155.22	36.58	4.03	526.61	821.08	321.64
NOx [g/h]	3.16	30.20	7.12	0.78	102.46	159.75	62.58
VOC [g/h]	3.76	35.97	8.48	0.93	122.05	190.29	74.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1051	1051	1892	1682
d_b, Bicycle Delay [s]	5.35	5.35	0.07	0.60
l_b,int, Bicycle LOS Score for Intersection	2.060	1.612	2.061	3.464
Bicycle LOS	B	A	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro
Report File: C:\...\Daum Property - LOS PM PH - 2035 Existing plus BG 01272026.pdf

Scenario 5 PM PH - 2035 Existing + BG

1/27/2026

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
1	CR 750E at Black Oak Drive	Final Base	359	7	15	554	2	17	954
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**397**	**8**	**17**	**612**	**2**	**19**	**1055**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	CR 825E at Black Oak Drive	Final Base	18	19	13	12	7	12	81
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**20**	**21**	**14**	**13**	**8**	**13**	**89**

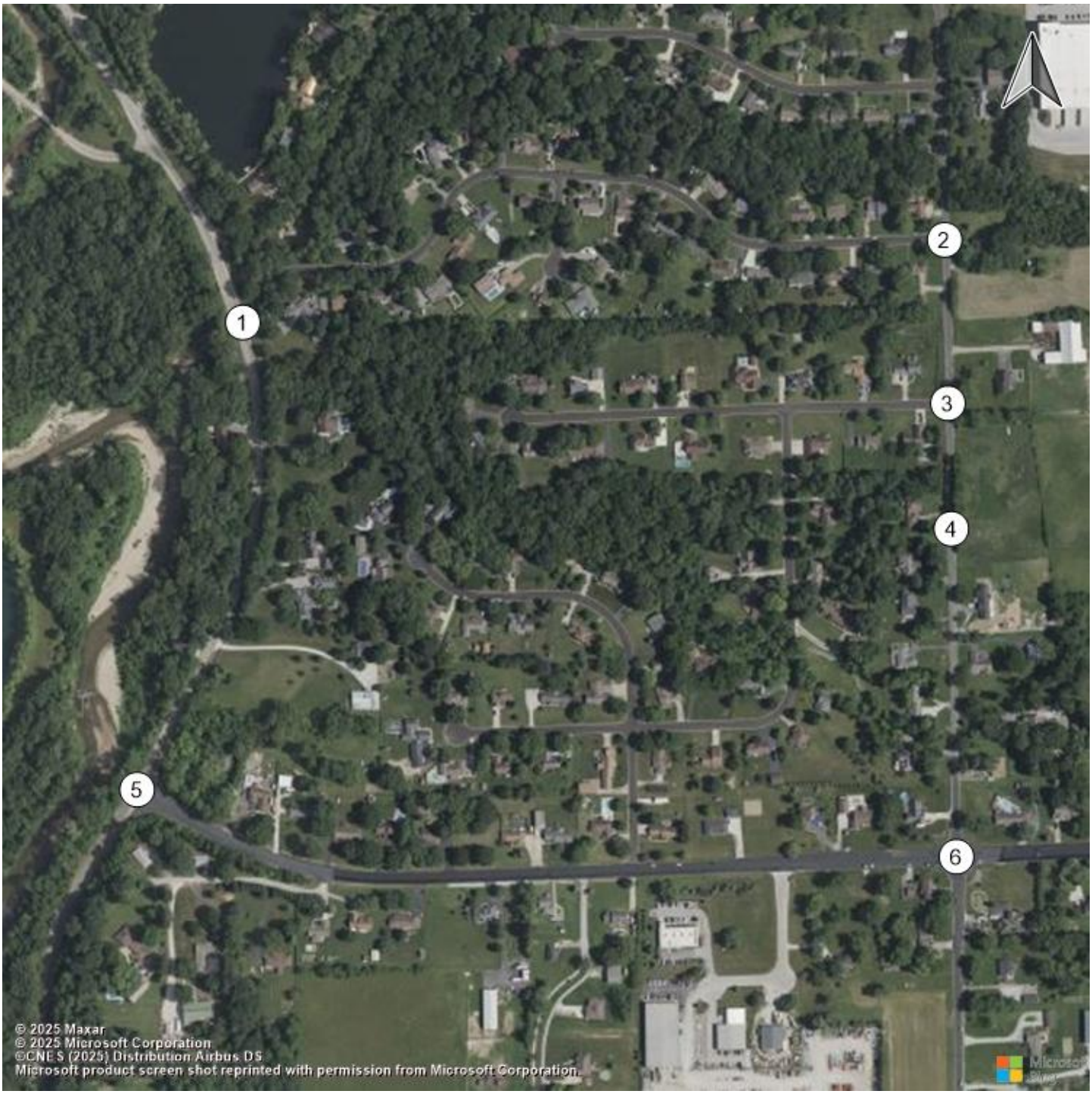
ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	CR 825E at Dogwood Court/Proposed North Driveway	Final Base	7	33	21	4	3	3	71
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**8**	**36**	**23**	**4**	**3**	**3**	**77**

ID	Intersection Name	Volume Type	Northbound	Southbound	Total Volume
			Thru	Thru	
4	CR 825E at Proposed South Driveway	Final Base	40	24	64
		Growth Factor	1.10	1.10	-
		In Process	0	0	0
		Net New Trips	0	0	0
		Other	0	0	0
		Future Total	**44**	**27**	**71**

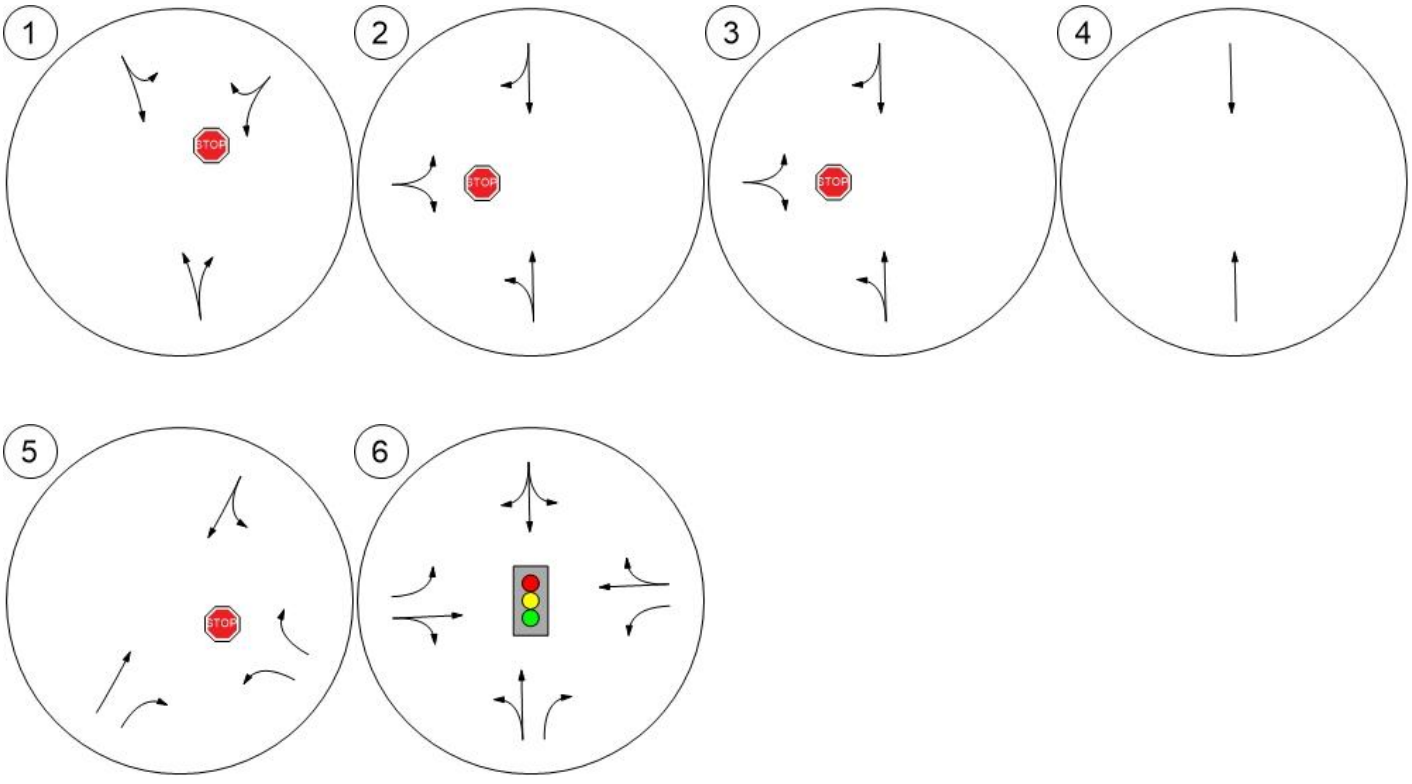
ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
5	CR 750E at Black Rock Road	Final Base	294	115	90	450	250	71	1270
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**325**	**127**	**99**	**497**	**276**	**78**	**1402**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	CR 825E at Black Rock Road	Final Base	13	1	236	24	1	0	3	198	43	586	295	40	1440
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**14**	**1**	**261**	**27**	**1**	**0**	**3**	**219**	**47**	**647**	**326**	**44**	**1590**

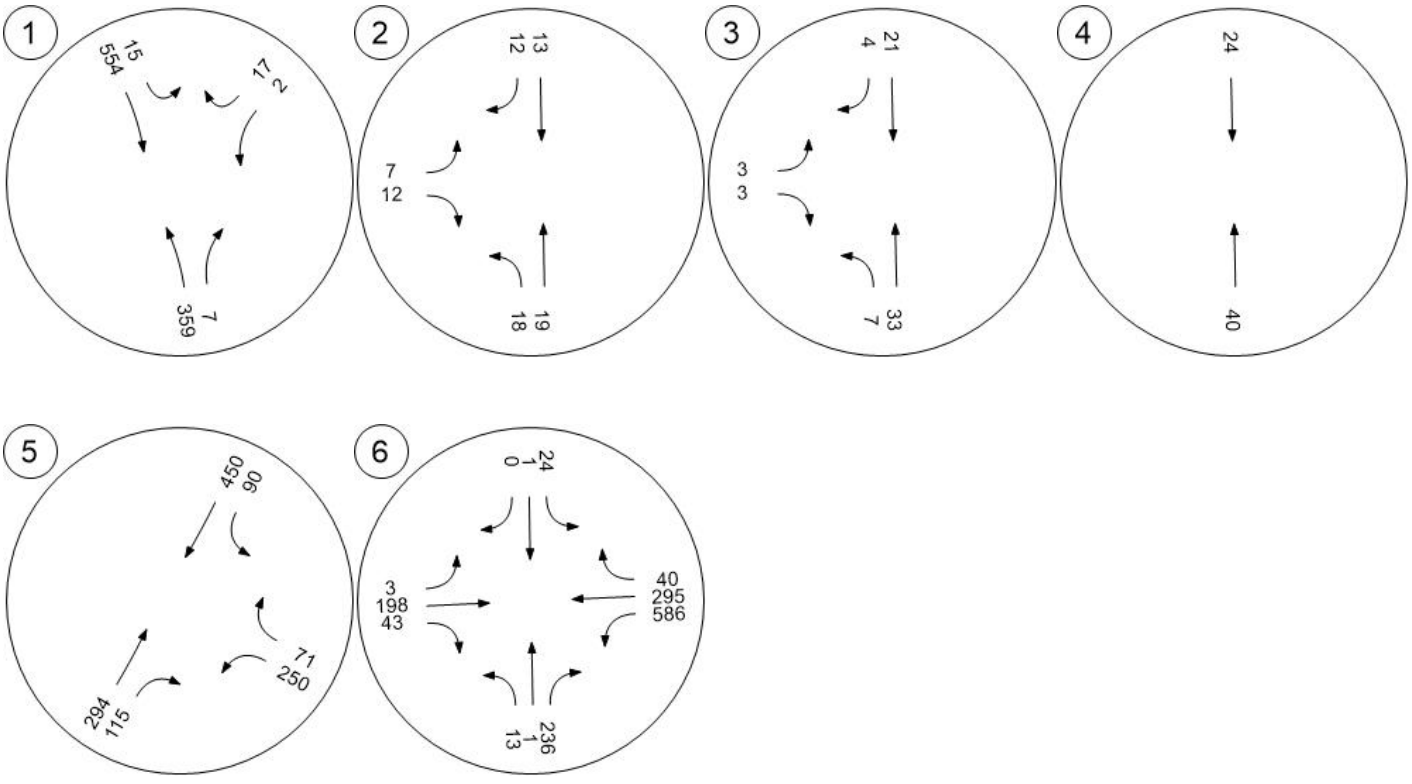
Study Intersections



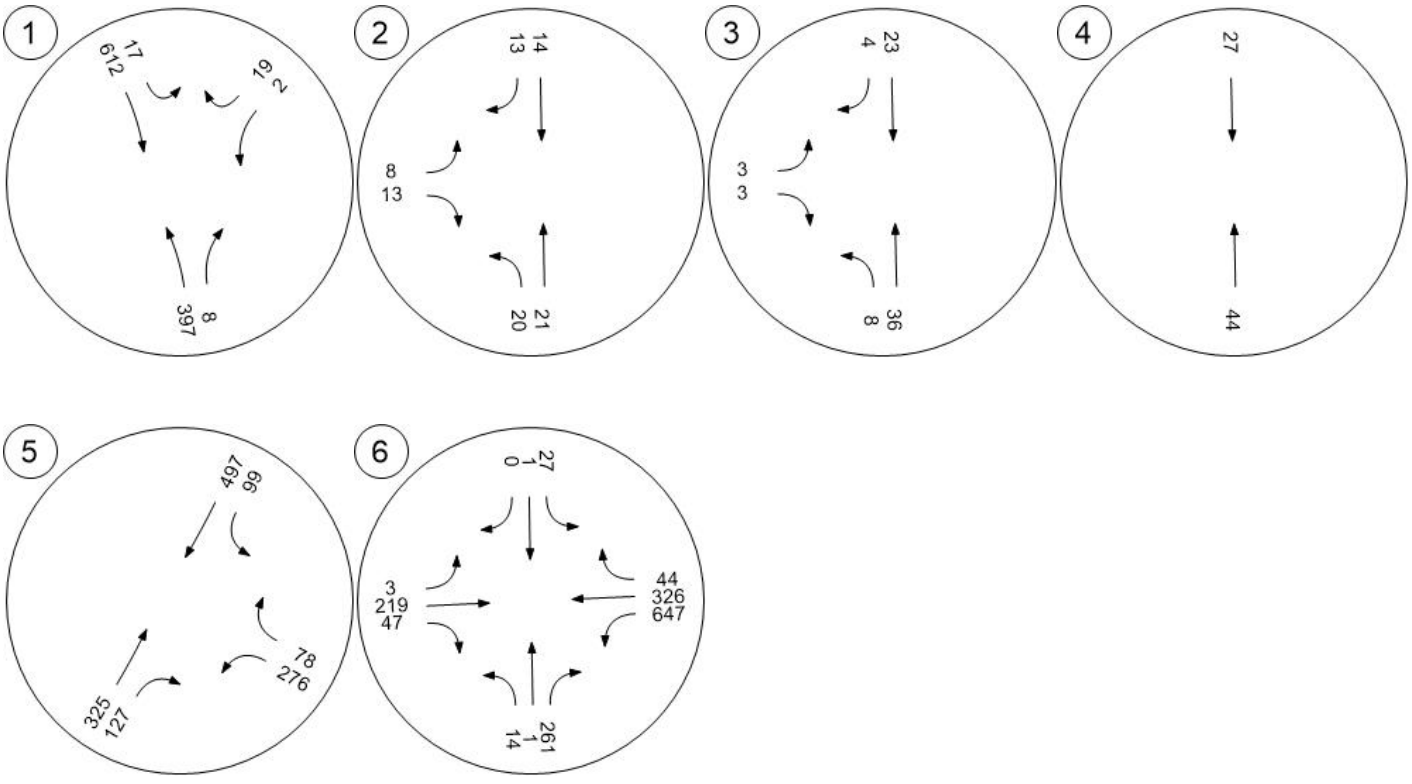
Lane Configuration and Traffic Control



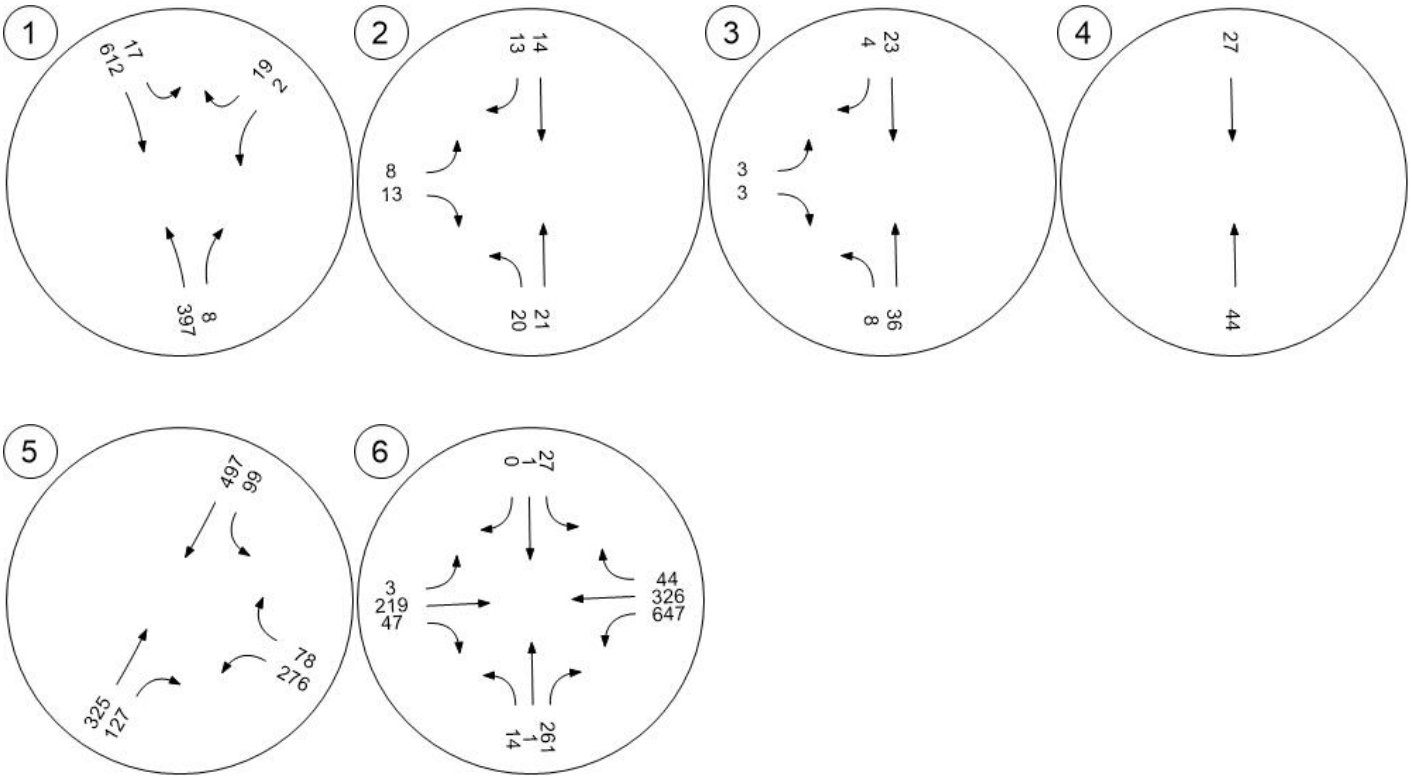
Traffic Volume - Base Volume



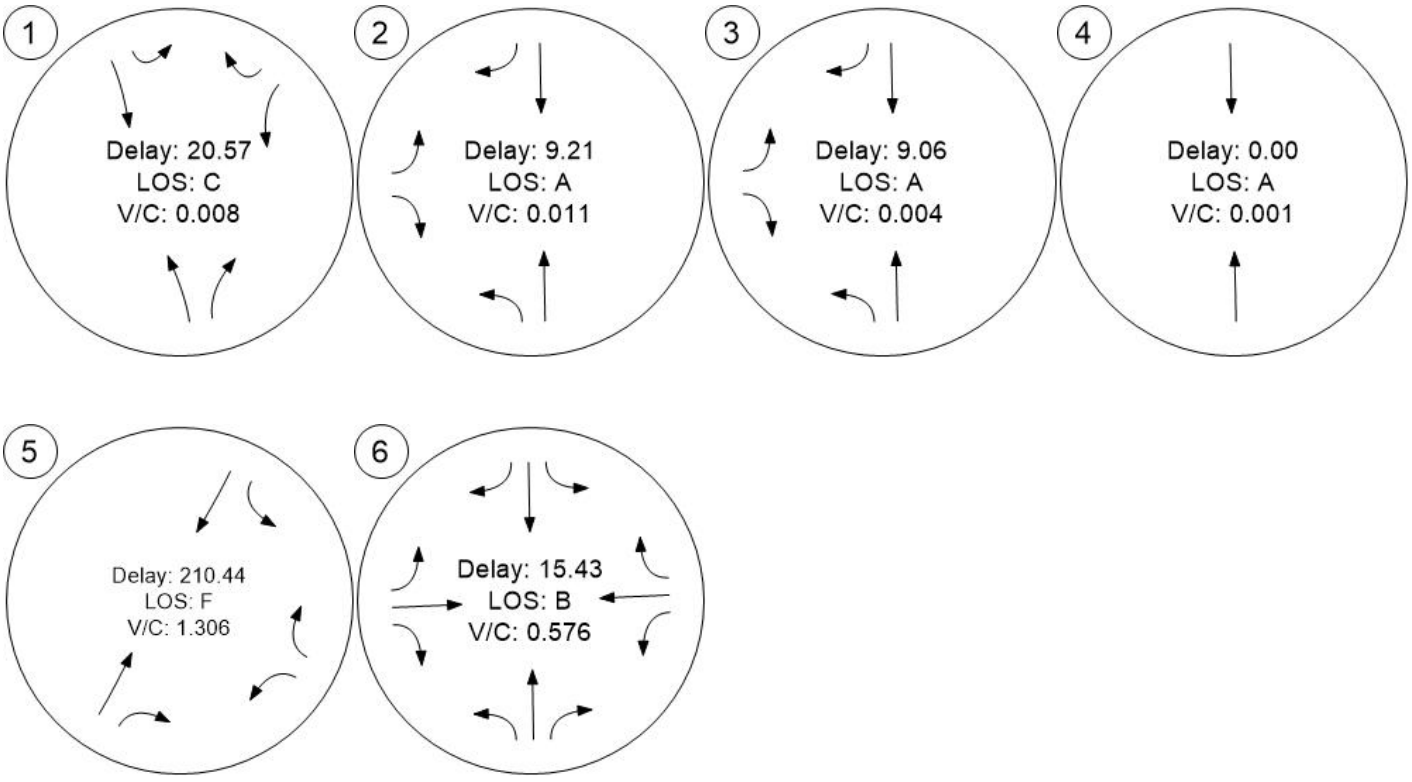
Traffic Volume - Future Background Volume



Traffic Volume - Future Total Volume



Traffic Conditions



Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro
Report File: C:\...\Daum Property - LOS PM PH - 2035 Existing plus BG plus Site 01272026.pdf

Scenario 6 PM PH - 2035 Existing + BG + Site

1/27/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	CR 750E at Black Oak Drive	Two-way stop	HCM 7th Edition	WB Left	0.009	22.3	C
2	CR 825E at Black Oak Drive	Two-way stop	HCM 7th Edition	EB Left	0.012	9.6	A
3	CR 825E at Dogwood Court/Proposed North Driveway	Two-way stop	HCM 7th Edition	WB Left	0.038	9.9	A
4	CR 825E at Proposed South Driveway	Two-way stop	HCM 7th Edition	WB Left	0.063	10.2	B
5	CR 750E at Black Rock Road	Two-way stop	HCM 7th Edition	WB Left	1.340	223.7	F
6	CR 825E at Black Rock Road	Signalized	HCM 7th Edition	SB Left	0.512	17.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: CR 750E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	22.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	359	7	15	554	2	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	12.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	23	0	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	397	8	40	612	2	33
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	102	2	10	158	1	9
Total Analysis Volume [veh/h]	409	8	41	631	2	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.04	0.01	0.01	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	8.20	0.00	22.26	11.27
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.07	0.07	0.21	0.21
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.75	1.75	5.14	5.14
d_A, Approach Delay [s/veh]	0.00		0.50		11.88	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.68					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: CR 825E at Black Oak Drive

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	19	13	12	7	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	0	0	0	23
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	21	14	13	8	36
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	7	4	4	3	12
Total Analysis Volume [veh/h]	44	27	18	17	10	46
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.01	0.04
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	0.00	9.56	8.64
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	1.88	1.88	0.00	0.00	4.44	4.44
d_A, Approach Delay [s/veh]	4.55		0.00		8.81	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.04					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: CR 825E at Dogwood Court/Proposed North Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.038

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	7	33	0	0	21	4	3	0	3	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	5.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	36	14	9	0	0	0	0	22	0	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	42	36	14	32	4	3	0	3	22	0	8
Peak Hour Factor	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	12	5	10	1	1	0	1	7	0	3
Total Analysis Volume [veh/h]	10	55	47	18	42	5	4	0	4	29	0	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.01
d_M, Delay for Movement [s/veh]	7.32	0.00	0.00	7.44	0.00	0.00	9.81	10.33	8.55	9.95	10.38	8.89
Movement LOS	A	A	A	A	A	A	A	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.15	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.46	0.46	0.46	0.77	0.77	0.77	0.70	0.70	0.70	3.79	3.79	3.79
d_A, Approach Delay [s/veh]	0.65			2.06			9.18			9.68		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.94											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: CR 825E at Proposed South Driveway

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	40	0	0	24	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	4.00	2.00	2.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	36	55	9	22	34	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	55	9	49	34	6
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.7300	0.7300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	19	3	17	12	2
Total Analysis Volume [veh/h]	110	75	12	67	47	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.06	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.60	0.00	10.21	9.37
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.23	0.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.50	0.50	5.82	5.82
d_A, Approach Delay [s/veh]	0.00		1.16		10.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.03					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: CR 750E at Black Rock Road

Control Type:	Two-way stop	Delay (sec / veh):	223.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.340

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	1
Entry Pocket Length [ft]	100.00	200.00	100.00	100.00	100.00	400.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	294	115	90	450	250	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	3.00	4.00	2.00	2.00	6.00
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	11	0	0	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	325	138	99	497	283	78
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	36	26	128	73	20
Total Analysis Volume [veh/h]	335	142	102	512	292	80
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.09	0.01	1.34	0.11
d_M, Delay for Movement [s/veh]	0.00	0.00	8.47	0.00	223.71	10.83
Movement LOS	A	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.18	0.18	16.07	0.39
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.50	4.50	401.79	9.66
d_A, Approach Delay [s/veh]	0.00		1.41		177.93	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	45.83					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: CR 825E at Black Rock Road

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	100.00	150.00	100.00	100.00	250.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	13	1	236	24	1	0	3	198	43	586	295	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	33.00	3.00	2.00	2.00	2.00	5.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046	1.1046
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	0	35	14	7	11	0	0	0	0	57
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	78	0	0	1	0	0	9	0	0	20
Total Hourly Volume [veh/h]	14	24	183	62	15	6	14	219	38	647	326	81
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	52	18	4	2	4	62	11	184	93	23
Total Analysis Volume [veh/h]	16	27	208	70	17	7	16	249	43	735	370	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	*Free Running*
Actuation Type	*Fully actuated*
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	1	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	0	25	8	0	25	0	8	45	0	8	40	0
Amber [s]	0.0	3.5	4.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	1.5	1.5	0.0	1.5	0.0	1.5	1.5	0.0	1.5	1.5	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	3.5	0.0	3.0	0.0	3.5	3.5	0.0	3.5	3.5	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	9.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	8	0	8	0	8	15	0	8	15	0
Vehicle Extension [s]	0.0	2.0	3.0	0.0	2.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall		No	No		No		No	No		No	No	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	L	C
C, Calculated Cycle Length [s]	64	64	64	64	64	64	64
L, Total Lost Time per Cycle [s]	5.00	5.50	5.00	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	0.00	3.00	0.00	3.50	0.00	3.50
g_i, Effective Green Time [s]	9.5	22.5	9.5	44.3	30.8	44.3	36.8
g / C, Green / Cycle	0.15	0.35	0.15	0.69	0.48	0.69	0.57
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.11	0.03	0.18	0.64	0.28
s, saturation flow rate [veh/h]	1592	1431	847	461	1627	1140	1626
c, Capacity [veh/h]	313	501	223	508	780	837	930
d1, Uniform Delay [s]	23.97	15.92	27.28	4.38	10.65	10.38	8.23
k, delay calibration	0.04	0.35	0.04	0.11	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	1.80	0.47	0.02	0.30	12.60	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.42	0.42	0.03	0.37	0.88	0.50
d, Delay for Lane Group [s/veh]	24.05	17.71	27.75	4.40	10.95	22.98	8.64
Lane Group LOS	C	B	C	A	B	C	A
Critical Lane Group	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	2.32	1.34	0.04	2.11	5.64	2.74
50th-Percentile Queue Length [ft/ln]	13.51	57.91	33.45	0.90	52.75	141.03	68.49
95th-Percentile Queue Length [veh/ln]	0.97	4.17	2.41	0.06	3.80	9.54	4.93
95th-Percentile Queue Length [ft/ln]	24.32	104.23	60.22	1.62	94.96	238.41	123.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.05	24.05	17.71	27.75	27.75	27.75	4.40	10.95	10.95	22.98	8.64	8.64
Movement LOS	C	C	B	C	C	C	A	B	B	C	A	A
d_A, Approach Delay [s/veh]	18.80			27.75			10.61			17.44		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	17.01											
Intersection LOS	B											
Intersection V/C	0.512											

Emissions

Vehicle Miles Traveled [mph]	6.23	30.13	17.82	7.79	142.17	116.14	73.00
Stops [stops/h]	30.26	129.71	74.93	2.01	118.16	315.89	153.42
Fuel consumption [US gal/h]	0.68	2.87	1.77	0.31	6.99	11.35	5.22
CO [g/h]	47.21	200.88	123.99	21.42	488.82	793.03	365.05
NOx [g/h]	9.19	39.08	24.12	4.17	95.11	154.29	71.03
VOC [g/h]	10.94	46.56	28.74	4.96	113.29	183.79	84.60

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	778	778	1400	1244
d_b, Bicycle Delay [s]	12.01	12.01	2.89	4.59
l_b,int, Bicycle LOS Score for Intersection	2.102	1.716	2.083	3.568
Bicycle LOS	B	A	B	D

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Daum Property - Residential Development

Vistro File: C:\...\LOS Model - Daum Property - Residential Flex Development - Plainfield IN 01212026-bjf.vistro
Report File: C:\...\Daum Property - LOS PM PH - 2035 Existing plus BG plus Site 01272026.pdf

Scenario 6 PM PH - 2035 Existing + BG + Site

1/27/2026

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
1	CR 750E at Black Oak Drive	Final Base	359	7	15	554	2	17	954
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	23	0	0	14	37
		Other	0	0	0	0	0	0	0
		Future Total	**397**	**8**	**40**	**612**	**2**	**33**	**1092**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	CR 825E at Black Oak Drive	Final Base	18	19	13	12	7	12	81
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	14	0	0	0	0	23	37
		Other	0	0	0	0	0	0	0
		Future Total	**34**	**21**	**14**	**13**	**8**	**36**	**126**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	CR 825E at Dogwood Court/Proposed North Driveway	Final Base	7	33	0	0	21	4	3	0	3	0	0	0	71
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	6	36	14	9	0	0	0	0	22	0	8	95
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**8**	**42**	**36**	**14**	**32**	**4**	**3**	**0**	**3**	**22**	**0**	**8**	**172**

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
4	CR 825E at Proposed South Driveway	Final Base	40	0	0	24	0	0	64
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	36	55	9	22	34	6	162
		Other	0	0	0	0	0	0	0
		Future Total	**80**	**55**	**9**	**49**	**34**	**6**	**233**

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
5	CR 750E at Black Rock Road	Final Base	294	115	90	450	250	71	1270
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	11	0	0	7	0	18
		Other	0	0	0	0	0	0	0
		Future Total	**325**	**138**	**99**	**497**	**283**	**78**	**1420**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	CR 825E at Black Rock Road	Final Base	13	1	236	24	1	0	3	198	43	586	295	40	1440
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	23	0	35	14	7	11	0	0	0	0	57	147
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**14**	**24**	**261**	**62**	**15**	**7**	**14**	**219**	**47**	**647**	**326**	**101**	**1737**

Daum Property - Residential Development

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Scenario 6 PM PH - 2035 Existing + BG + Site

Report File: C:\...\Daum Property - LOS PM PH - 2035 Existing plus BG plus Site 01272026.pdf

1/27/2026

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	% Int. Capture	Trips In Adj.	Trips Out Adj.	Total Trips Adj.	% of Total Trips
1: Zone	Residential Development	210/220			0.000	50.00	50.00	0.00	113	70	183	100.00
					Added Trips Total				**113**	**70**	**183**	**100.00**

Daum Property - Residential Development

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Scenario 6 PM PH - 2035 Existing + BG + Site

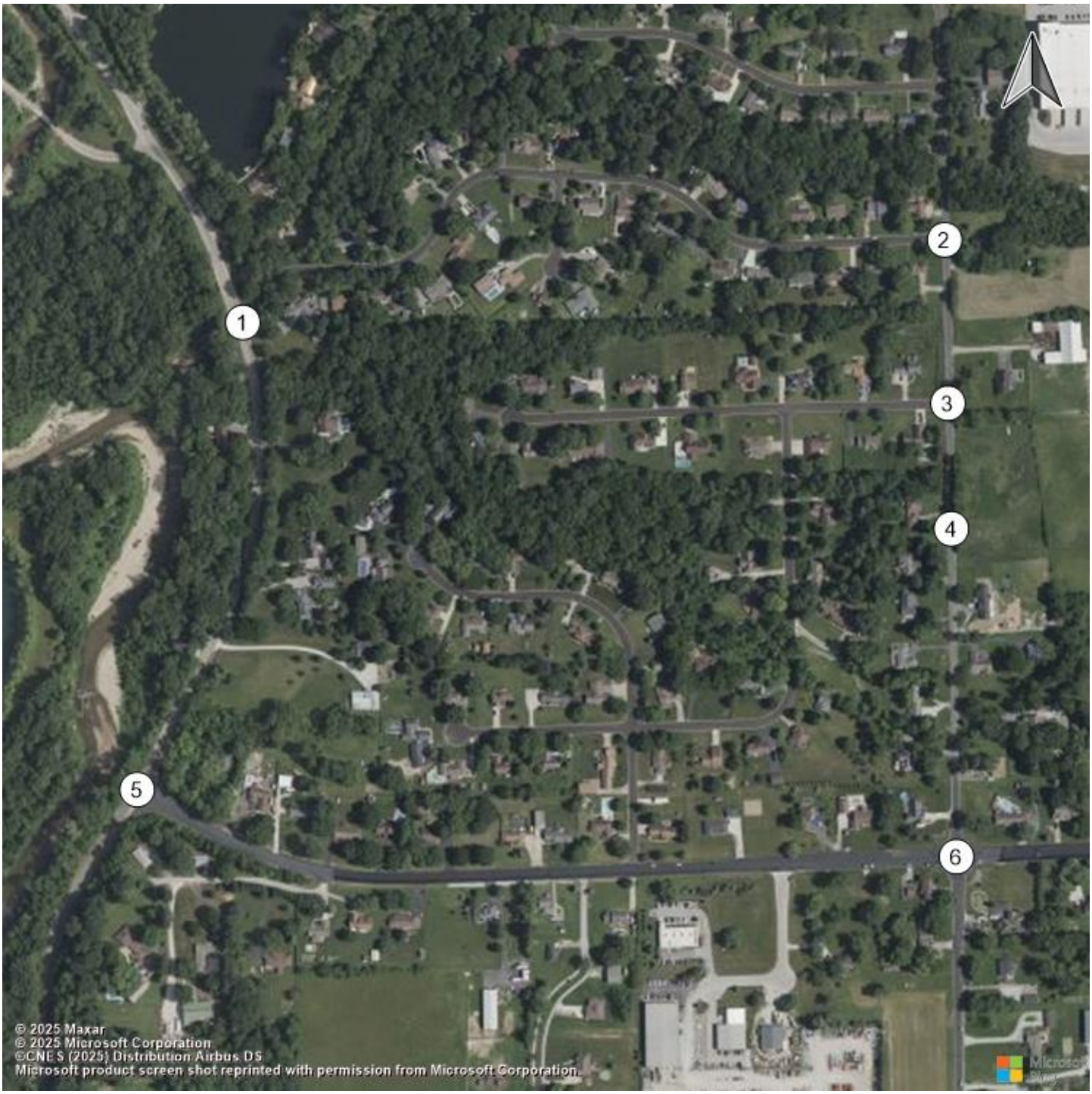
Report File: C:\...\Daum Property - LOS PM PH - 2035 Existing plus BG plus Site 01272026.pdf

1/27/2026

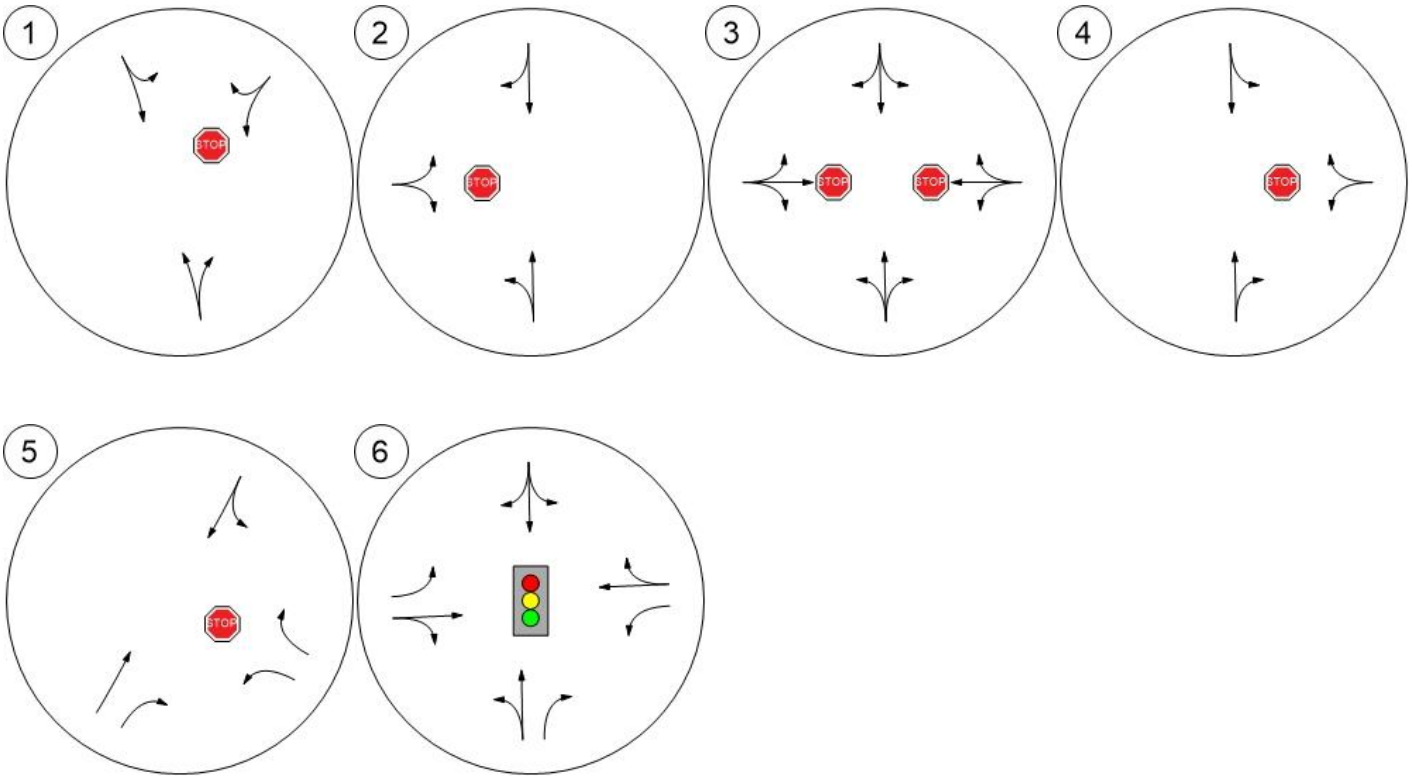
Trip Distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Gate	20.00	23	20.00	14
3: Gate	50.00	57	50.00	35
4: Gate	20.00	23	20.00	14
5: Gate	10.00	11	10.00	7
Total	**100.00**	**114**	**100.00**	**70**

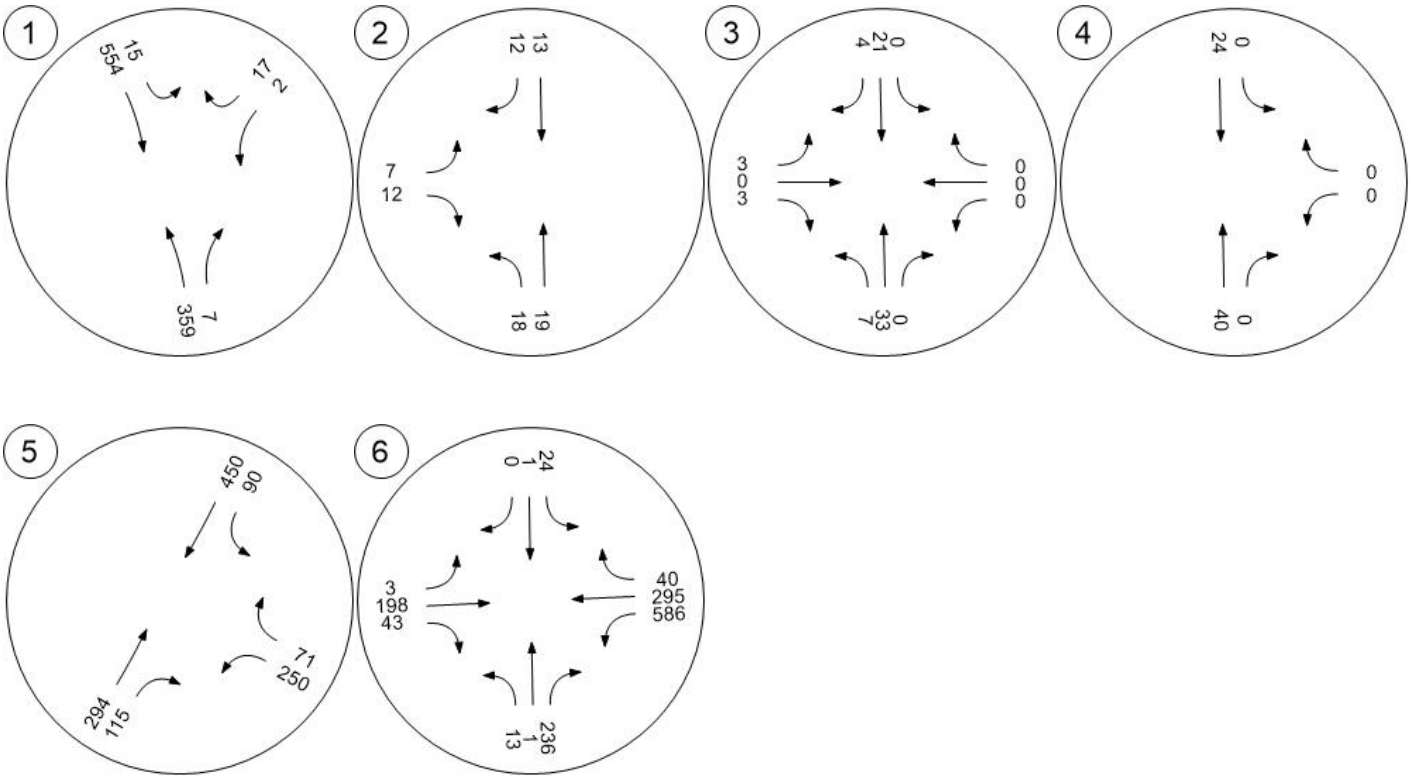
Study Intersections



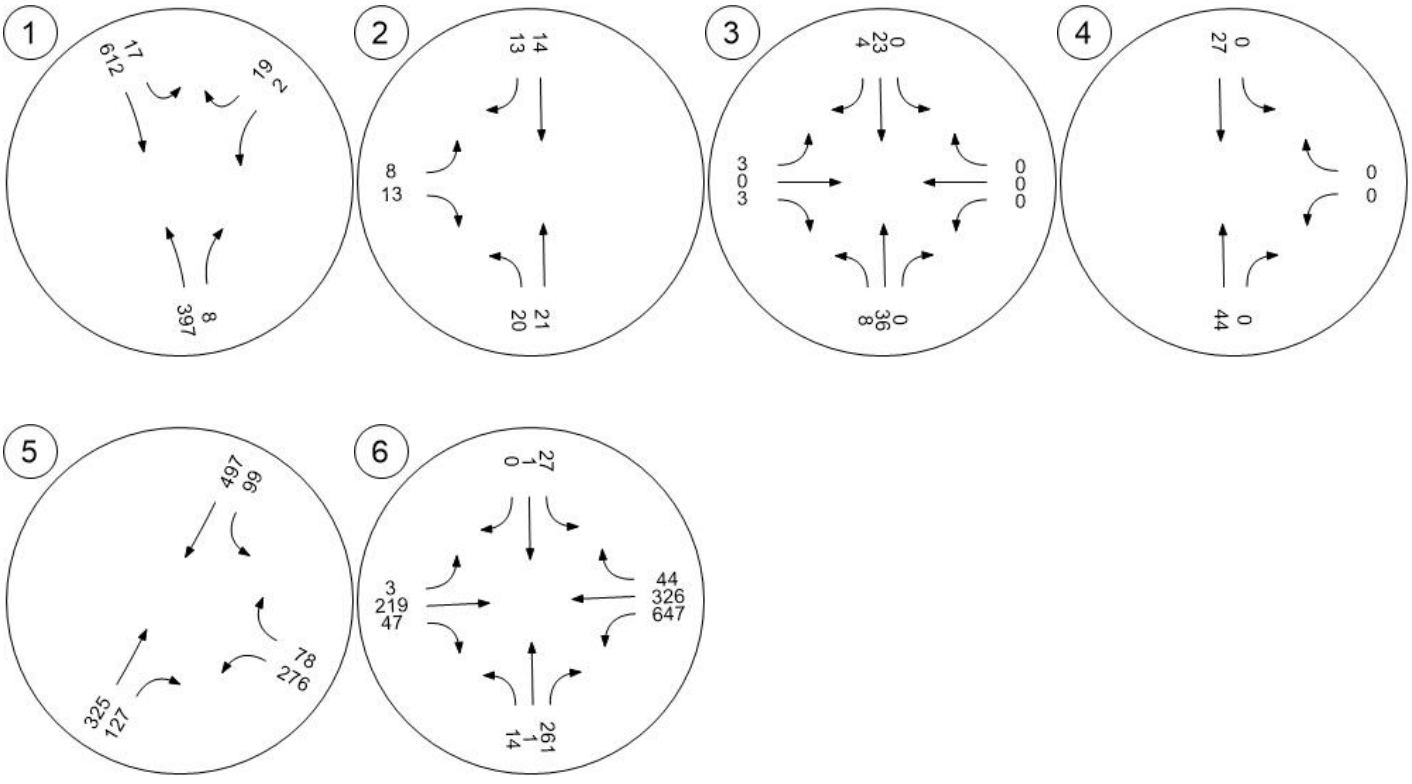
Lane Configuration and Traffic Control



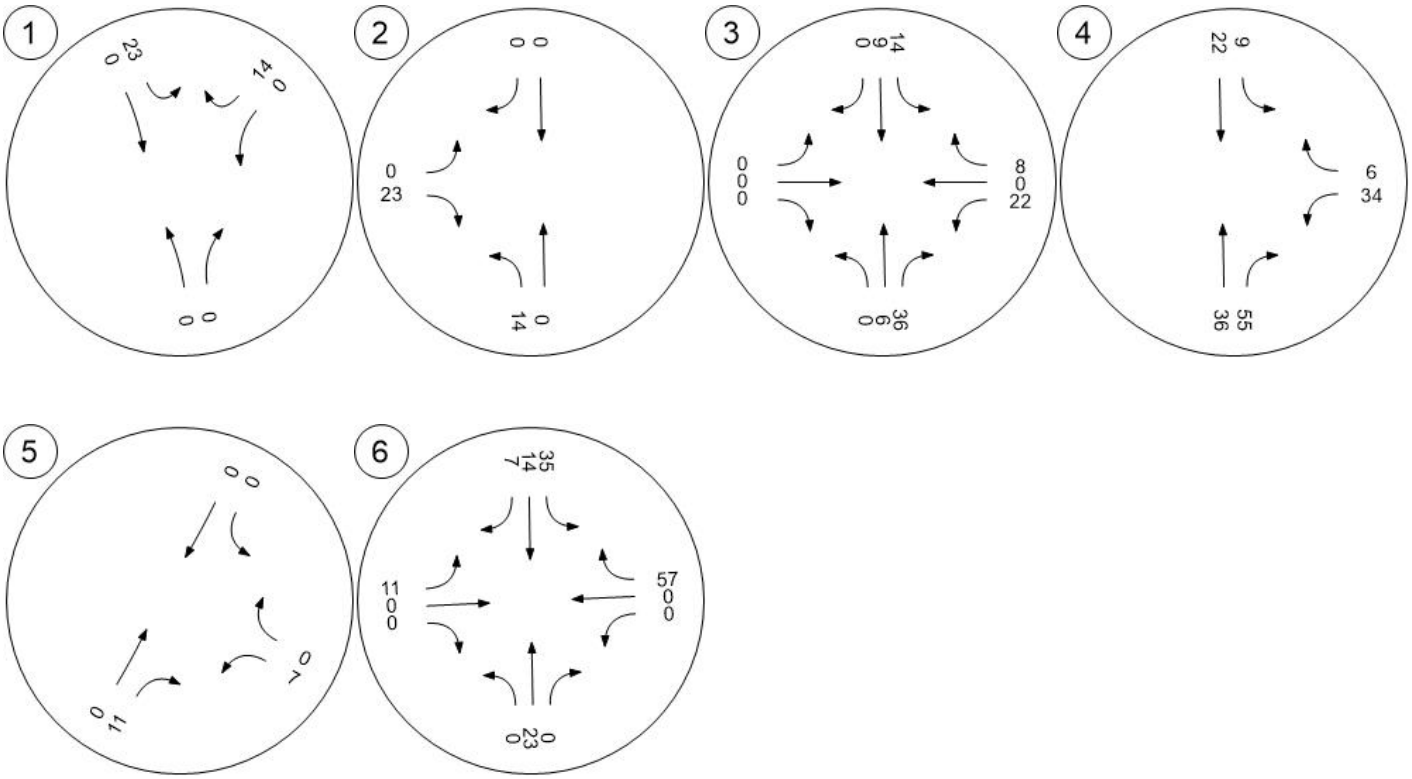
Traffic Volume - Base Volume



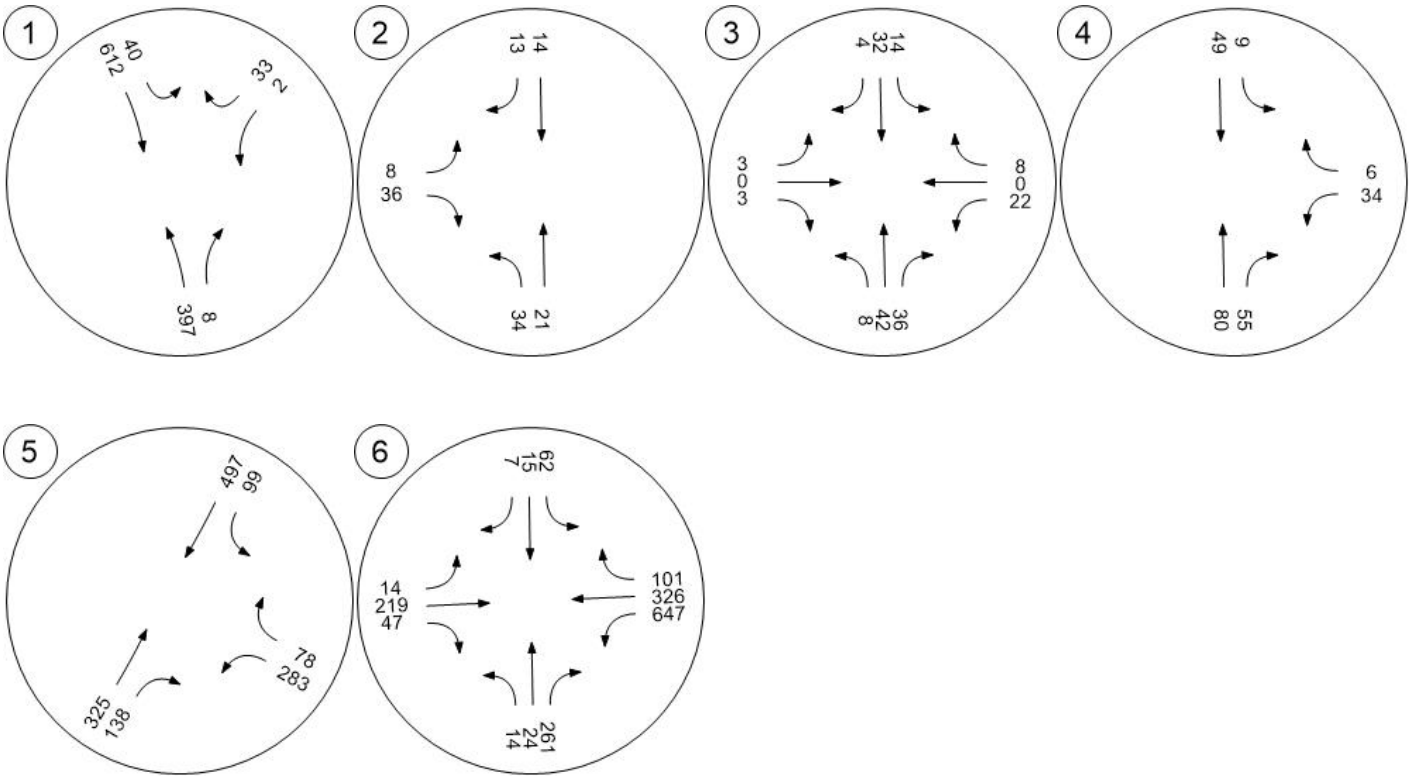
Traffic Volume - Future Background Volume



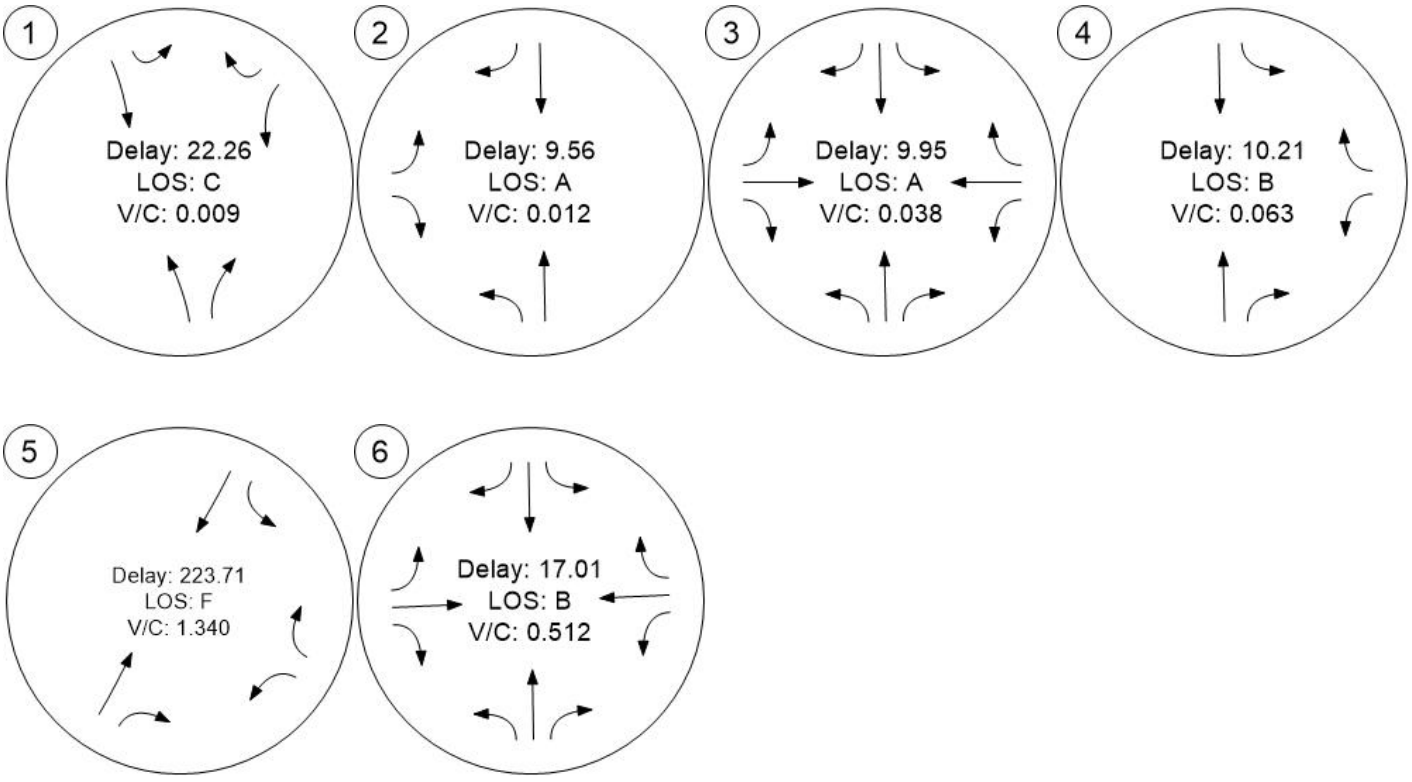
Traffic Volume - Net New Site Trips



Traffic Volume - Future Total Volume



Traffic Conditions



Traffic

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Mitigation – Level of Service Analysis

Daum Property
Residential Development
Plainfield, Indiana

Option 1: RAB

Number	5					
Intersection	CR 750E at Black Rock Road					
Control Type	Roundabout					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Base Volume Input [veh/h]	294	115	90	450	250	71
Total Analysis Volume [veh/h]	303	119	93	464	258	73

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	97		263		309	
Exiting Flow Rate [veh/h]	736		386		219	
Demand Flow Rate [veh/h]	294	115	90	450	250	71
Adjusted Demand Flow Rate [veh/h]	303	119	93	464	258	73

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.97
Entry Flow Rate [veh/h]	432	570	341
Capacity of Entry and Bypass Lanes [veh/h]	1251	1056	1007
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1223	1032	979
X, volume / capacity	0.35	0.54	0.34

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	6.22	10.22	7.24
Lane LOS	A	B	A
95th-Percentile Queue Length [veh]	1.56	3.34	1.50
95th-Percentile Queue Length [ft]	38.93	83.41	37.62
Approach Delay [s/veh]	6.22	10.22	7.24
Approach LOS	A	B	A
Intersection Delay [s/veh]	8.17		
Intersection LOS	A		

Option 1: RAB

Number	5					
Intersection	CR 750E at Black Rock Road					
Control Type	Roundabout					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Base Volume Input [veh/h]	294	115	90	450	250	71
Total Analysis Volume [veh/h]	335	131	102	512	285	80

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	106		291		342	
Exiting Flow Rate [veh/h]	813		427		241	
Demand Flow Rate [veh/h]	325	127	99	497	276	78
Adjusted Demand Flow Rate [veh/h]	335	131	102	512	285	80

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.97
Entry Flow Rate [veh/h]	477	629	376
Capacity of Entry and Bypass Lanes [veh/h]	1239	1026	974
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1211	1003	947
X, volume / capacity	0.38	0.61	0.39

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	6.74	12.15	8.09
Lane LOS	A	B	A
95th-Percentile Queue Length [veh]	1.84	4.35	1.84
95th-Percentile Queue Length [ft]	46.01	108.77	45.89
Approach Delay [s/veh]	6.74	12.15	8.09
Approach LOS	A	B	A
Intersection Delay [s/veh]	9.38		
Intersection LOS	A		

Option 1: RAB

Number	5					
Intersection	CR 750E at Black Rock Road					
Control Type	Roundabout					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Base Volume Input [veh/h]	294	115	90	450	250	71
Total Analysis Volume [veh/h]	335	142	102	512	292	80

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	106		298		342	
Exiting Flow Rate [veh/h]	820		427		252	
Demand Flow Rate [veh/h]	325	138	99	497	283	78
Adjusted Demand Flow Rate [veh/h]	335	142	102	512	292	80

Lanes

Overwrite Calculated Critical Headway	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.97
Entry Flow Rate [veh/h]	488	629	383
Capacity of Entry and Bypass Lanes [veh/h]	1239	1019	974
Pedestrian Impedance	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1211	996	948
X, volume / capacity	0.39	0.62	0.39

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	6.86	12.34	8.20
Lane LOS	A	B	A
95th-Percentile Queue Length [veh]	1.91	4.42	1.89
95th-Percentile Queue Length [ft]	47.77	110.52	47.28
Approach Delay [s/veh]	6.86	12.34	8.20
Approach LOS	A	B	A
Intersection Delay [s/veh]	9.50		
Intersection LOS	A		