TRAFFIC IMPACT ANALYSIS

NEC Wyoming Boulevard and Northeastern Boulevard

Albuquerque, New Mexico

HT#H20D032A
received 2/15/2022

10/7/2021

Prepared for:

Raising Cane's Restaurants, LLC

Kimley»Horn

TRAFFIC IMPACT ANALYSIS

NEC Wyoming Boulevard and Northeastern Boulevard

Albuquerque, New Mexico

Prepared for:

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This report documents a traffic impact analysis (TIA) for a proposed Raising Cane's Chicken Fingers (Cane's) development located on the northeast corner of the intersection of Wyoming Boulevard and Northeastern Boulevard in Albuquerque, NM. The development will consist of a 3,443 square-foot (SF) quick-serve restaurant (QSR) with drive-thru.

The Cane's location and study area intersections are identified in **Figure ES-1**.

No new access drives are proposed to be constructed with the development. An existing access drive is planned to be removed from the northeastern corner of the site.

Construction of the new development is anticipated to be completed by 2022 in one phase.

The scoping document for this analysis can be found in **Appendix A**.

1.2 REPORT PURPOSE AND OBJECTIVES

Kimley-Horn and Associates, Inc. has been retained by Raising Cane's Restaurants, LLC. to prepare a TIA for the proposed development. The analysis addresses traffic impacts of the proposed Cane's on surrounding streets and intersections. This traffic impact study was prepared to address the following objectives:

- Evaluate lane requirements on existing roadway links and at existing intersections within the study area;
- Determine future level of service (LOS) for existing study area intersections and recommend capacity improvement needs;
- Determine necessary lane configurations at driveways within the proposed development to provide acceptable future levels of service; and
- Evaluate the need for auxiliary lanes at study area intersections.

1.3 PRINCIPAL FINDINGS AND RECOMMENDATIONS

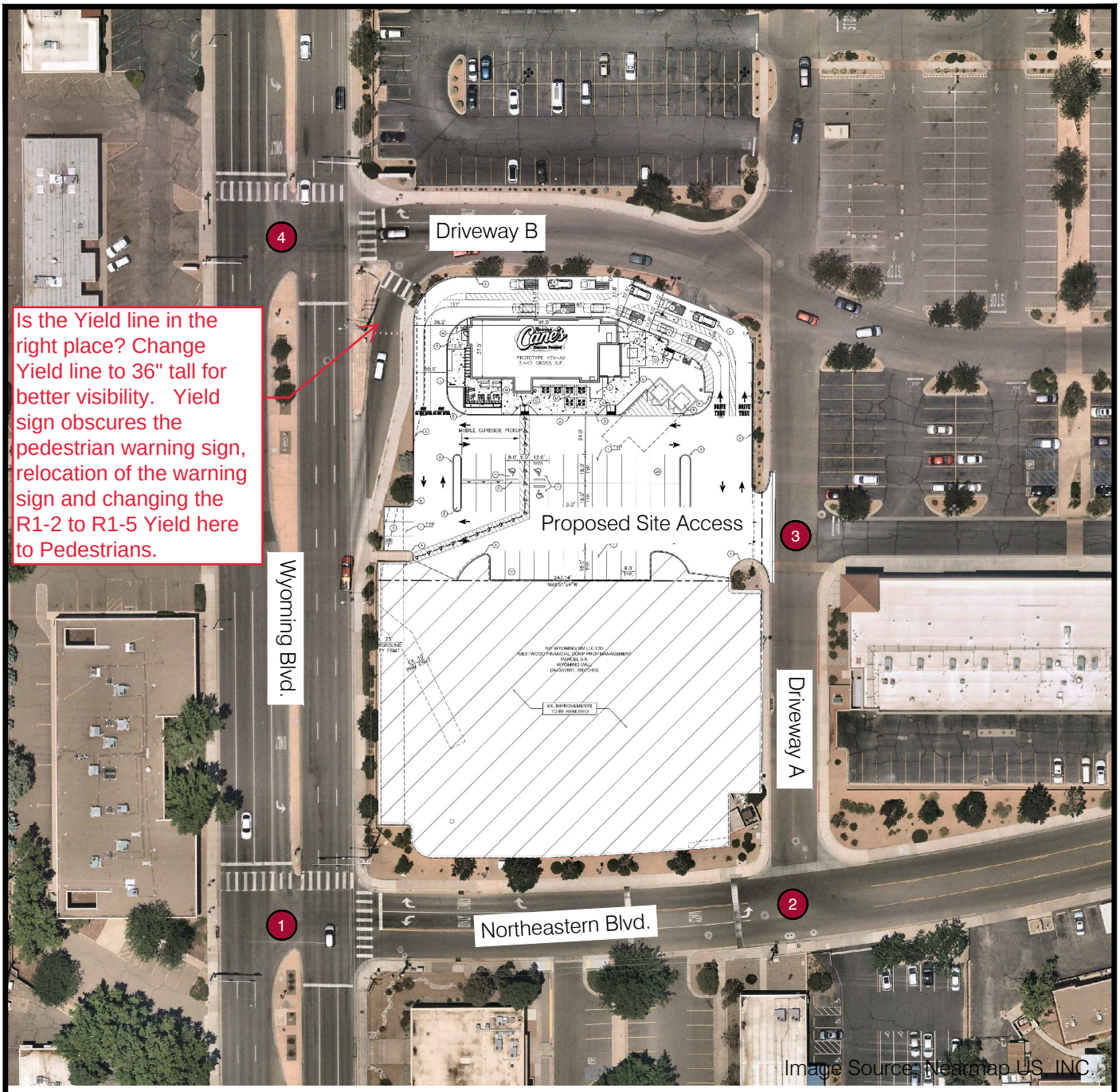
The proposed development is estimated to generate 1,622 daily trips, with 0 or negligible trips occurring in the AM peak hour and 112 trips occurring in the PM peak hour.

This analysis concludes that the proposed development will be accommodated by the surrounding street network, with the following findings and recommendations:

- The development will be accessed from an existing driveway connection on Driveway A. The proposed site access will be full access to accommodate passenger cars. No new driveways are proposed. An existing site driveway on the site's northeast corner is to be removed.

- Study area intersections operate at acceptable LOS in each analysis scenario, including existing, 2022 background and total, and 2032 background and total traffic scenarios with the following exceptions:
    - The westbound left-turn movement at Northeastern Boulevard (Intersection 1) shows LOS E in all study scenarios during the PM peak hour. Since the reported LOS and delay do not worsen from existing conditions, no mitigation is recommended as part of the proposed development.
        - Note: It is recommended that the City monitor signal timings at this location as traffic patterns change and evaluate if any adjustments to signal timings (e.g. splits, offsets, cycle length, etc.) could improve LOS for this movement.
    - The westbound left-turn movement at Driveway B (Intersection 4) shows LOS E in all study scenarios during both the AM and PM peak hours. Since the reported LOS and delay do not worsen from existing conditions, no mitigation is recommended as part of the proposed development.
        - Note: It is recommended that the City monitor signal timings at this location as traffic patterns change and evaluate if any adjustments to signal timings (e.g. splits, offsets, cycle length, etc.) could improve LOS for this movement.
- The 2032 horizon year queue length of the westbound left-turn movement on Northeastern Boulevard (Intersection 1) exceeds the existing striped storage length. The storage lane cannot be extended without reducing the left turn storage for the eastbound left turn at Intersection 2. Since the calculated queue does not block the nearest upstream intersection (Intersection 2), no mitigation is recommended. All other queues are accommodated by existing storage lengths.
- The proposed drive-thru and parking lot are expected to provide enough space for on-site circulation during typical- and high-traffic demands. Traffic from the drive-thru is unlikely to spill back onto Driveway A (Intersection 3).
- The intersection of Wyoming Boulevard and Northeastern Boulevard experienced 48 crashes from 2017 to 2019. The average crash rate at the intersection is 1.22 crashes per million entering vehicles. The rate of severe crashes is higher at the intersection than the regional average. However, because about 25% of crashes included in the data set were under-reported there are no recommended safety mitigations as part of this development. It is recommended that the City continue to monitor this area on an ongoing basis as new crash data becomes available.

Recommended lane configuration is shown in **Figure 11**.



Study Area Intersections:

1. Wyoming Boulevard / Northeastern Boulevard
2. Driveway A / Northeastern Boulevard
3. Driveway A / Proposed Site Access

Additional Analysis Intersections:

4. Wyoming Boulevard / Driveway B

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Figure ES-1
Study Area Intersections and Roadway Segments

2.0 PROPOSED DEVELOPMENT

2.1 SITE LOCATION

The proposed Cane's development consists of a quick-serve (QSR) restaurant with drive-thru located on the northeast corner of the intersection of Wyoming Boulevard and Northeastern Boulevard in Albuquerque, NM. The city of Albuquerque classifies the existing site's land use as mixed-use – moderate intensity (MX-M). The site is located on a parcel currently developed as a parking lot.

The project location is shown in **Figure 1**.

2.2 LAND USE AND SITE PLAN

The total site area is approximately 2.02-acres. The area to be developed is proposed to consist of a 3,443 SF fast-food restaurant with multi-lane drive-thru. The preliminary concept plan for the development is shown in **Figure 2**.

2.3 SITE ACCESSIBILITY

The site is accessed via a single driveway (Proposed Site Access) that intersects Driveway A. The Proposed Site Access is an existing full access driveway. Vehicles will enter the existing commercial development parking lot via Driveway A on Northeastern Boulevard or Driveway B on Wyoming Boulevard.

2.4 SITE CIRCULATION

The developer is proposing one site access located on Driveway A, per the provided site plan. The site access is proposed to remain full access and will primarily service passenger vehicles.

The southern portion of the development will include 42 parking stalls. The Northern portion of the development will include the 3,443 SF fast-food restaurant with drive-thru. Drive-thru traffic will enter on the east side of the restaurant, proceed along the north side of the restaurant, and exit on the west side of the restaurant. The proposed drive-thru will consist of two queuing lanes.

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Figure 1
Vicinity Map

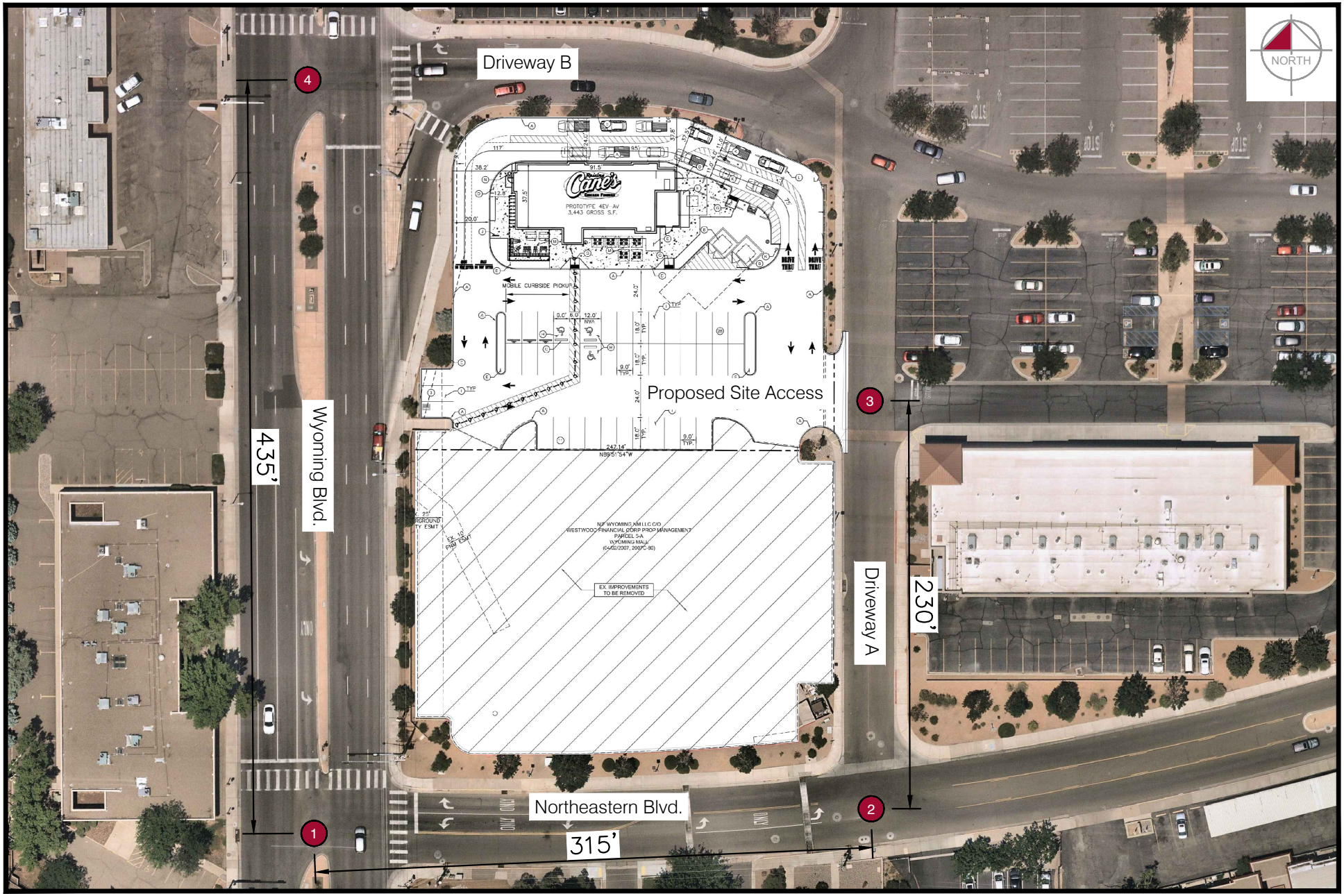

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Figure 2
Preliminary Concept Plan

3.0 STUDY AREA

3.1 STUDY AREA

Per the TIA Scoping Meeting held virtually on August 20, 2021 with City of Albuquerque staff, the study area includes the Proposed Site Access, the adjacent unsignalized intersection of Northeastern Boulevard and Driveway A, and the signalized intersection of Wyoming Boulevard and Northeastern Boulevard.

The signalized intersection of Wyoming Boulevard and Driveway B was included in the analysis as an additional analysis Intersection due to its proximity to the site and the assumption that a portion of site generated trips will utilize that intersection to access the proposed development.

The proposed access drive and study area intersections are shown previously in **Figure 2**.

3.2 ADJACENT LAND USE

The area directly surrounding the site consists of commercial land uses. The site is surrounded by primarily residential land uses further away in all directions.

Interstate 40 (I-40) is located approximately 1 mile to the south and is accessed via a traffic interchange at Wyoming Boulevard.

4.0 EXISTING CONDITIONS

4.1 PHYSICAL CHARACTERISTICS

The primary existing roadway network within the study area includes Wyoming Boulevard, Northeastern Boulevard, Driveway A, and the Proposed Site Access. The existing lane configurations and intersection control types for the study intersections are shown in **Figure 3**.

Wyoming Boulevard is a north-south roadway within the study area, with three through travel lanes in each direction separated by a raised median. There is a curb, gutter, and sidewalk on both sides of the roadway.

Northeastern Boulevard is an east-west roadway within the study area, with one through travel lane in each direction. There are back-to-back, opposing left turn lanes with no median separation between Wyoming Boulevard and Driveway A. East of Driveway A, median separation begins with a two-way left-turn lane (TWLTL) before becoming a raised median further to the east. There is a curb, gutter, and sidewalk on both sides of the roadway.

Driveway A is a north-south driveway with one travel lane in each direction. There is a curb, gutter, and sidewalk on the entire west side and the southern part of the east side of the driveway adjacent to the site.

Driveway B is an east-west driveway with one travel lane in each direction. There is a curb, gutter, and sidewalk on the north side of the roadway only.

The ***Proposed Site Access*** is an east-west driveway with one travel lane in each direction. There is a curb and gutter on both sides of the driveway. The south side of the driveway has a crosswalk and curb ramps.

The Mid-Region Council of Governments (MRCOG) classifies Wyoming Boulevard as a principal arterial. Northeastern Boulevard is a local street unclassified by MRCOG. Driveway A, Driveway B, and the Proposed Site Access are private roads within a larger commercial development.

The posted speed limit for Wyoming Boulevard is 40 miles per hour (mph) and the posted speed limit for Northeastern Boulevard is 30 mph within the vicinity of the site. Driveway A, Driveway B, and the Proposed Site Access are private commercial driveways with no posted speed limits. The assumed speed limit for these driveways is 25 mph.

4.2 TRAFFIC VOLUMES

Peak period turning movement counts (TMCs) were collected on Tuesday, August 31, 2021 at the intersections of Wyoming Boulevard/Northeastern Boulevard, Driveway A/Northeastern Boulevard, Driveway A/Proposed Site Access, and Wyoming Boulevard/Driveway B. TMCs were collected between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM.

24-hour counts for Wyoming Boulevard north of Indian School Road were obtained from MRCOG. The data was collected on March 25, 2019 and shows a daily traffic volume of approximately 35,254 vehicles per day. 24-hour counts were unavailable from MRCOG for all other roadways studied.

The existing peak hour turning movements are shown in **Figure 4**. Detailed reports with AM and PM peak period turning movements are included in **Appendix B**.

4.3 EXISTING LEVEL OF SERVICE

The LOS at the existing study area intersection was evaluated using traffic count data described previously and existing intersection geometry and control, shown in **Figure 3**. Highway Capacity Manual (HCM) 6th Edition methodology is used to analyze intersection operations within Synchro 11 analysis software. For signalized intersections, LOS and delay are reported for each movement and the intersection as a whole. For unsignalized intersections, LOS and delay are reported for minor movements only and an overall intersection LOS or delay is not provided. Synchro analysis results are reported for the intersection of Wyoming Boulevard/Driveway B, which operates with non-NEMA signal phasing. HCM 6th Edition cannot analyze this type of phasing; Synchro analysis results are therefore reported for the intersection.

The analysis results are shown in **Table 1** and reported as "LOS/delay". Delay is rounded to the nearest whole second. Note that an asterisk (*) denotes the movement had zero traffic volume during the study period. A dash (-) indicates a free movement. **Bolded** values indicate a movement is operating at an unacceptable LOS. LOS analysis reports for the existing condition are included in **Appendix C**.

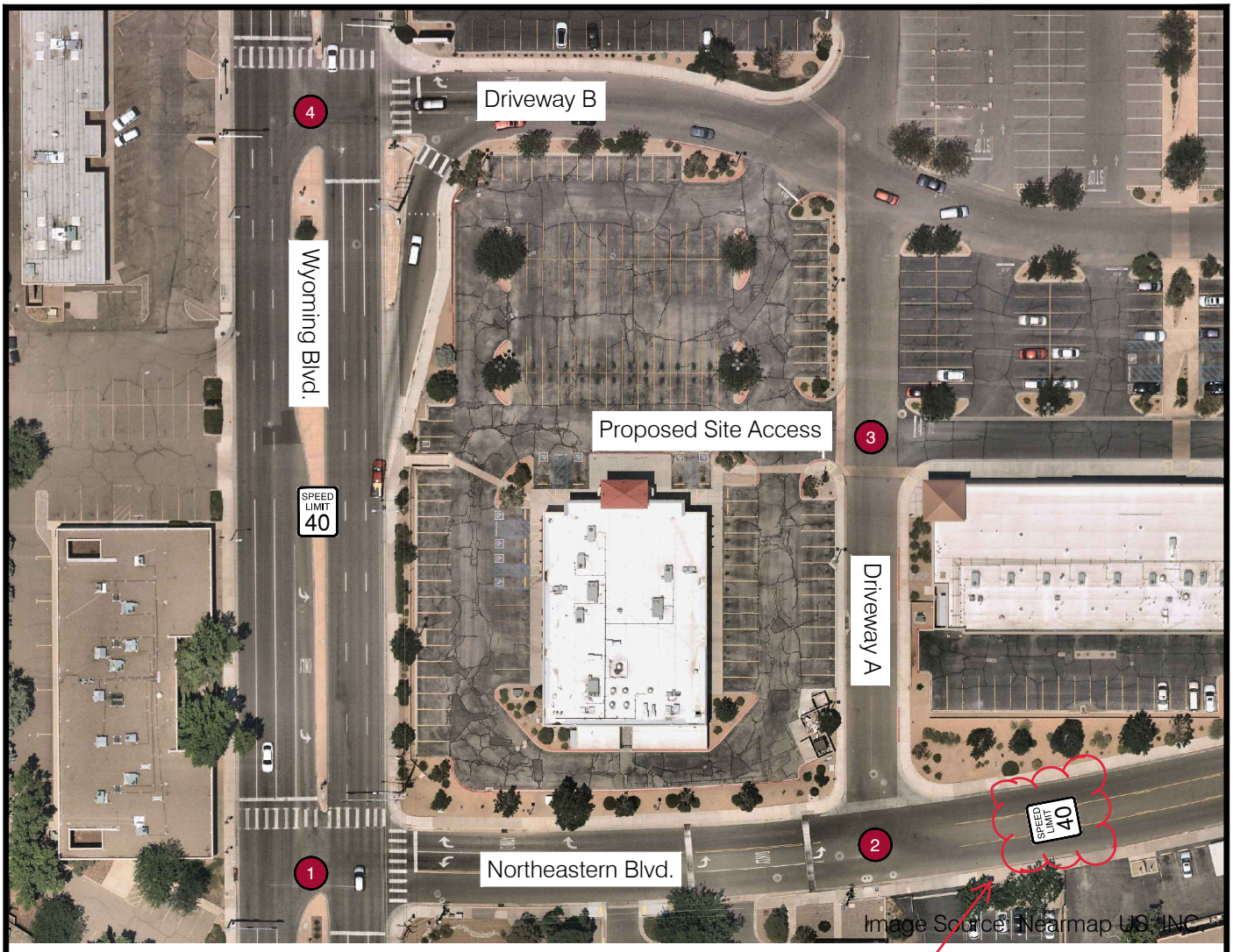
Table 1. Existing Level of Service and Delay

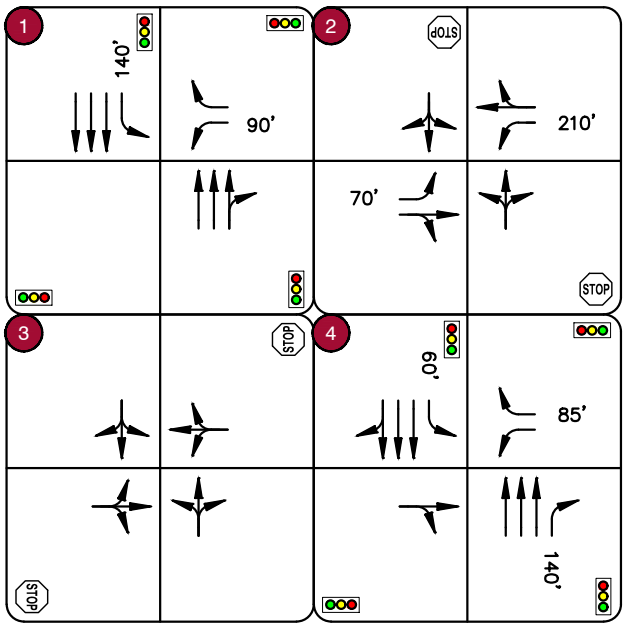
Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*			*Overall*
	L	T	R	L	T	R	L	T	R	L	T	R	
1. *Wyoming Boulevard / Northeastern Boulevard*													
AM Peak		A/2	A/3	A/1	A/1					D/52		D/49	A/3
PM Peak		A/3	A/4	A/2	A/1					E/57		D/52	A/5
2. *Driveway A / Northeastern Boulevard*													
AM Peak	*			A/10			A/7	-		A/7	-		-
PM Peak	B/11			B/13			A/8	-		*	-		-
3. *Driveway A / Proposed Site Access*													
AM Peak	*	-		A/7	-		A/9			A/9			-
PM Peak	*	-		A/7	-		A/9			A/10			-
4. *Wyoming Boulevard / Driveway B*													
AM Peak		A/10	A/4	A/3	A/2	*		*		E/60		A/4	A/7
PM Peak		B/17	A/7	A/6	A/5	*		*		E/69		B/11	B/15

The westbound left-turn (WBL) movement of the intersection of Wyoming Boulevard/Northeastern Boulevard (Intersection 1) operates at LOS E during the existing PM peak period.

The WBL movement of Wyoming Boulevard/Driveway B (Intersection 4) operates at LOS E in both the existing AM and PM peak periods.

All other movements operate at acceptable LOS D or better. All intersections operate at an acceptable overall LOS.





Posted speed in figure 3 shows speed limit on Northeastern as 40 MPH, it is 30 MPH, report text has the correct speed limit.

NORTH

LEGEND

SPEED LIMIT XX	SPEED LIMIT
	LANE USE
XX'	STORAGE LENGTH
STOP	INTERSECTION CONTROL

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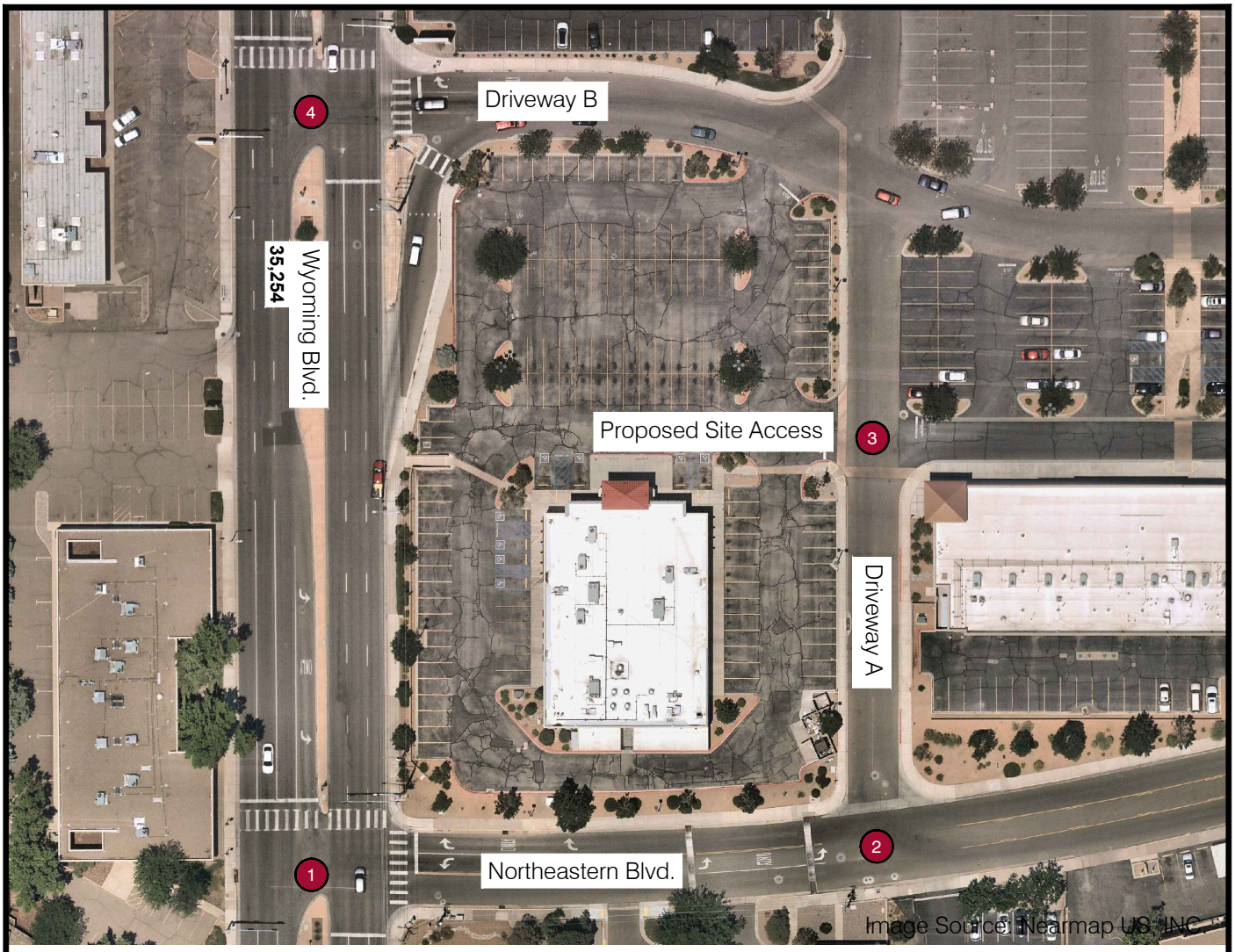
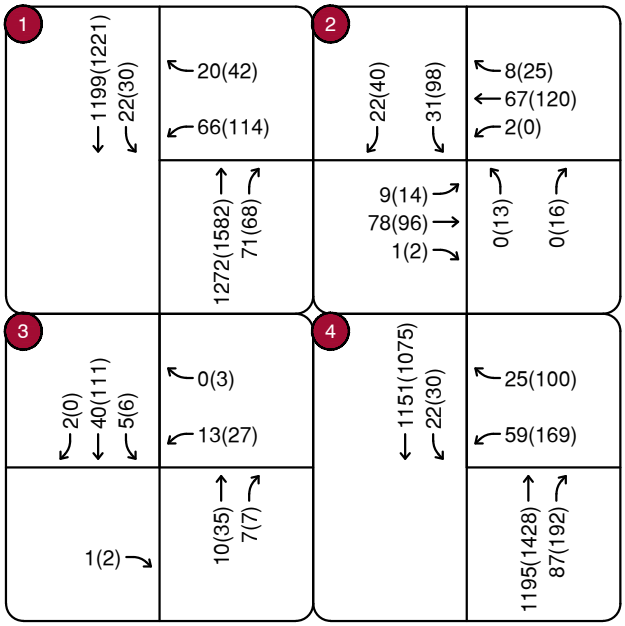
Figure 3
Existing Lane Configuration and Control





LEGEND	
← XX(XX)	AM(PM) PEAK HOUR TRAFFIC VOLUMES
XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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Figure 4
2021 Existing Traffic Volumes

5.0 PROJECTED TRAFFIC

5.1 SITE TRAFFIC FORECASTS

5.1.1 TRIP GENERATION

The Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* was used to estimate the number of new trips that are anticipated to be generated by the Cane's development. The ITE *Trip Generation Manual* is a widely accepted reference that contains a compilation of trip generation studies completed at sites throughout the country. Daily and peak hour trips, shown in Table 2, were calculated using the applicable regression equation/rates from the ITE *Trip Generation Manual*. The ITE *Trip Generation Manual* information is provided in **Appendix D.**

Table 2. Project Trip Generation

Land Use	Land Use Code	Size/Qty	Units	Total Trips						
				Weekday						
				Daily	AM Peak Hour*			PM Peak Hour		
					In	Out	Total	In	Out	Total
Fast-Food Restaurant w/ Drive-Thru	934	3.443	1,000 SF	1,622	0	0	0	58	54	112

**Note: AM Peak Hour trips are assumed to be zero or negligible. This is based on the following information:*

- *The Cane's restaurant will not open until 10:00 AM daily, which is outside the timeframe of the AM Peak Analysis Period.*
- *The ITE Trip Generation Manual has intentionally removed restaurants that are closed for breakfast from the data set for the AM Peak Hour of adjacent street traffic. Therefore, data for the AM Peak Hour is not applicable for this development.*

The proposed development is estimated to generate **1,622** daily trips with **0** or negligible trips occurring during the AM peak hour and **112** trips occurring during the PM peak hour.

5.1.2 TRIP REDUCTIONS

Trip generation estimates in **Table 2** utilized ITE Land Use Code 934. This land use code is described as a fast-food restaurant with drive-thru. This land use generates significant pass-by traffic, meaning commuters may stop by the facility while traveling to their ultimate destination. Pass-by trips increase the volume of traffic to the site but do not increase the volume on the adjacent street network.

ITE Land Use Code 934 has published trip by-pass reduction rates of 49% and 50% for AM and PM trips, respectively. However, **no pass-by trip reduction or internal capture was assumed for the Cane's development in this analysis.** This represents a conservative estimate of the number of new trips anticipated to be added to the adjacent street network, as it is reasonable to assume that there will be some pass-by trips associated with the Cane's restaurant.

5.1.3 TRIP DISTRIBUTION

Trips were distributed based on the surrounding roadway system using MRCOG population data projections for 2040. Based on analysis of population projects it is anticipated that 26% of trips will travel to/from the north, 29% to/from the south, 24% to/from the east, and 21% to/from the west. A map showing the basis of trip distribution estimates is included in **Appendix E**.

Figure 5 illustrates the proposed trip distribution for the study area.

5.1.4 TRAFFIC ASSIGNMENT

Trips generated by the proposed development were assigned to the roadway network based on the trip distribution and likely travel patterns to and from the site. **Figure 6** shows the project development traffic assignment for the AM and PM peak periods.

5.2 FUTURE TRAFFIC FORECASTING

Background traffic volumes for the anticipated buildout year of 2022 and horizon year 2032 were estimated using the ten-year historical traffic growth rate from 2010 to 2019. Traffic data for this calculation was obtained from MRCOG traffic counts. The 2020 annual growth rate was not included in the calculation for the average annual growth rate due to a significant change in traffic volumes associated with the COVID-19 pandemic.

The historical growth rate from 2010 to 2019 of 1% was applied to existing traffic volumes to obtain background traffic volumes for 2022 buildout and 2032 horizon years. The resulting background traffic volumes are shown in **Figure 7** and **Figure 8**, respectively.

5.3 TOTAL TRAFFIC

The results of the traffic assignment (**Figure 6**) for the project development were added to the background traffic volumes (**Figure 7** and **Figure 8**) to produce 2022 and 2032 total traffic volumes for the study area, shown in **Figure 9** and **Figure 10**, respectively.

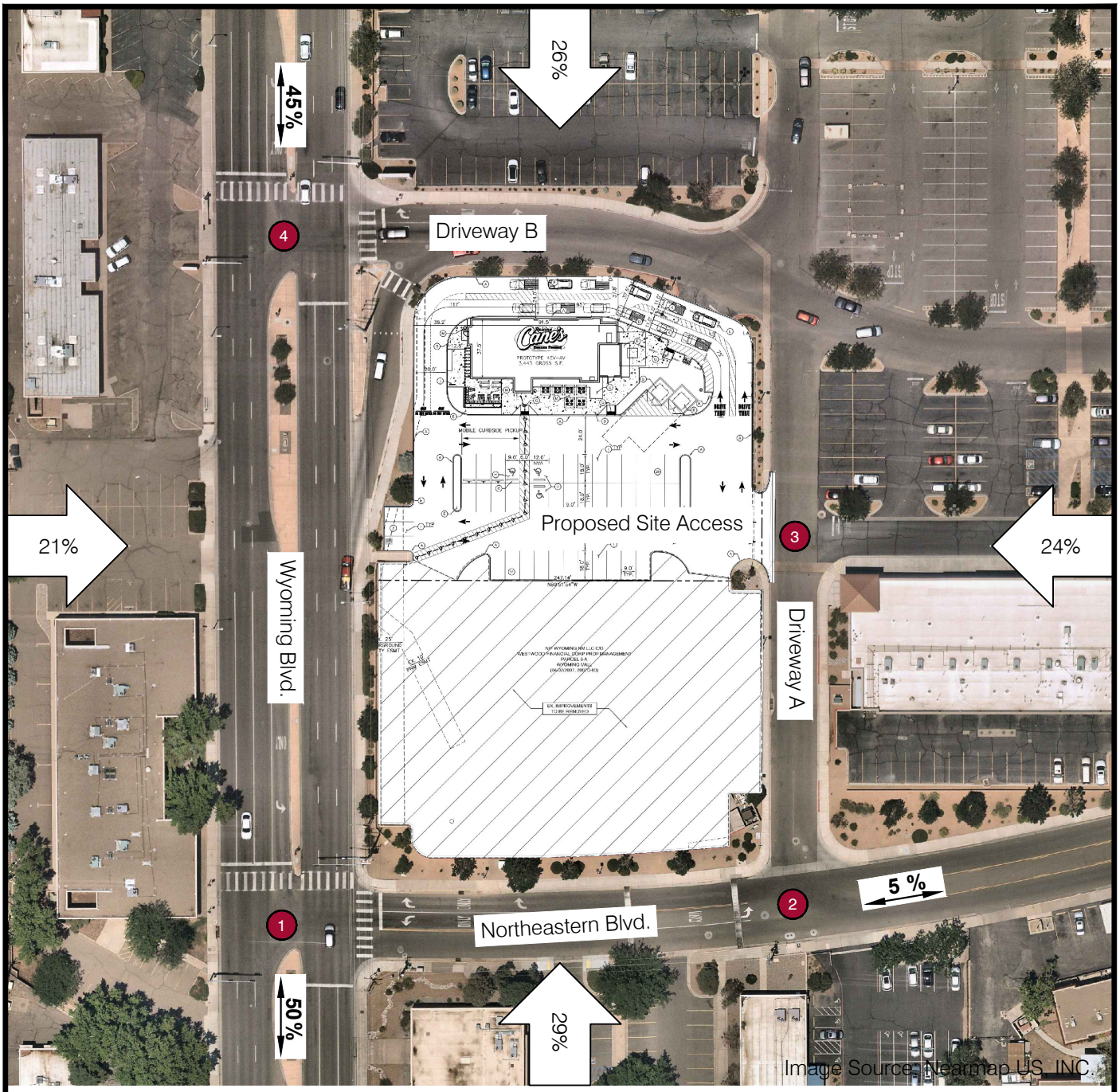

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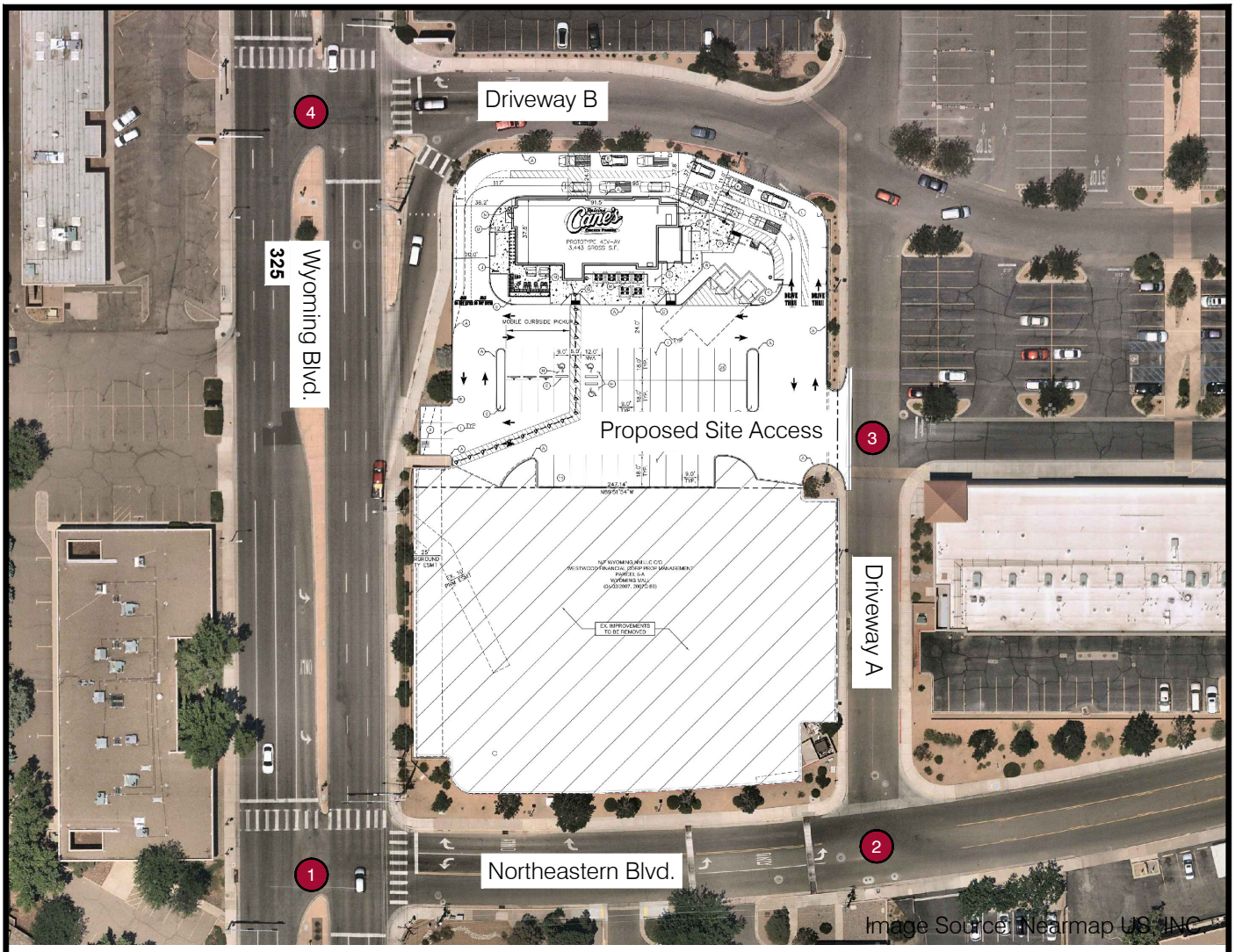
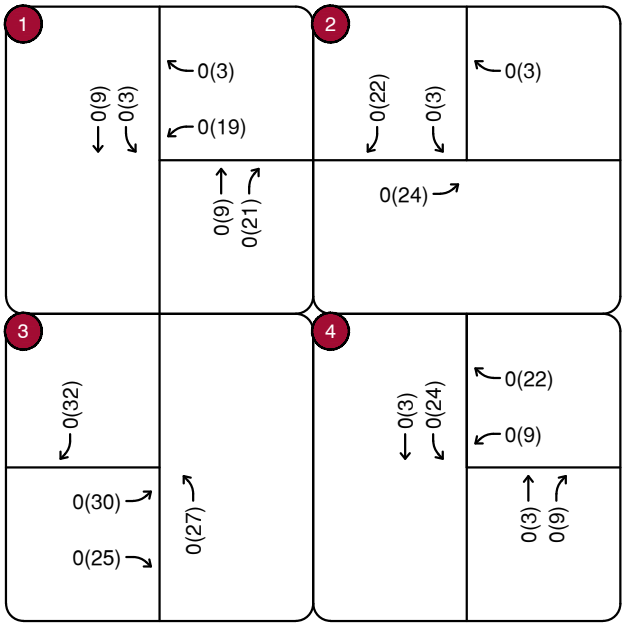
Figure 5
Trip Distribution





LEGEND	
← XX(XX)	AM(PM) PEAK HOUR TRAFFIC VOLUMES
XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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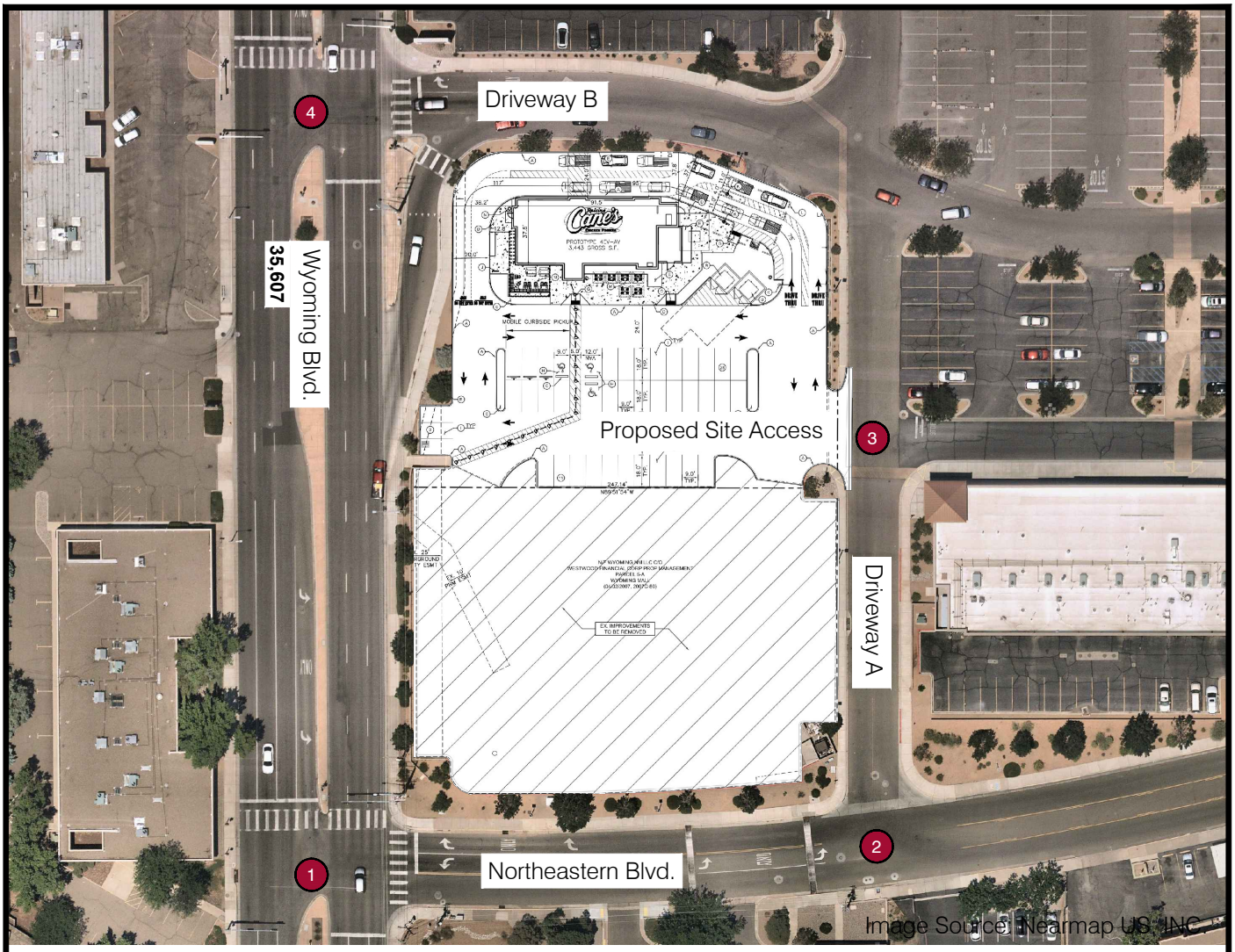
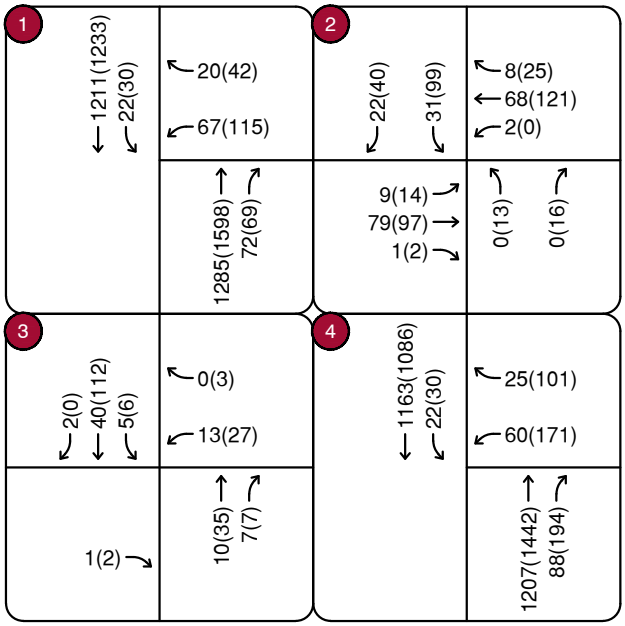
Figure 6
Assignment Traffic Volume





LEGEND	
← XX(XX)	AM(PM) PEAK HOUR TRAFFIC VOLUMES
XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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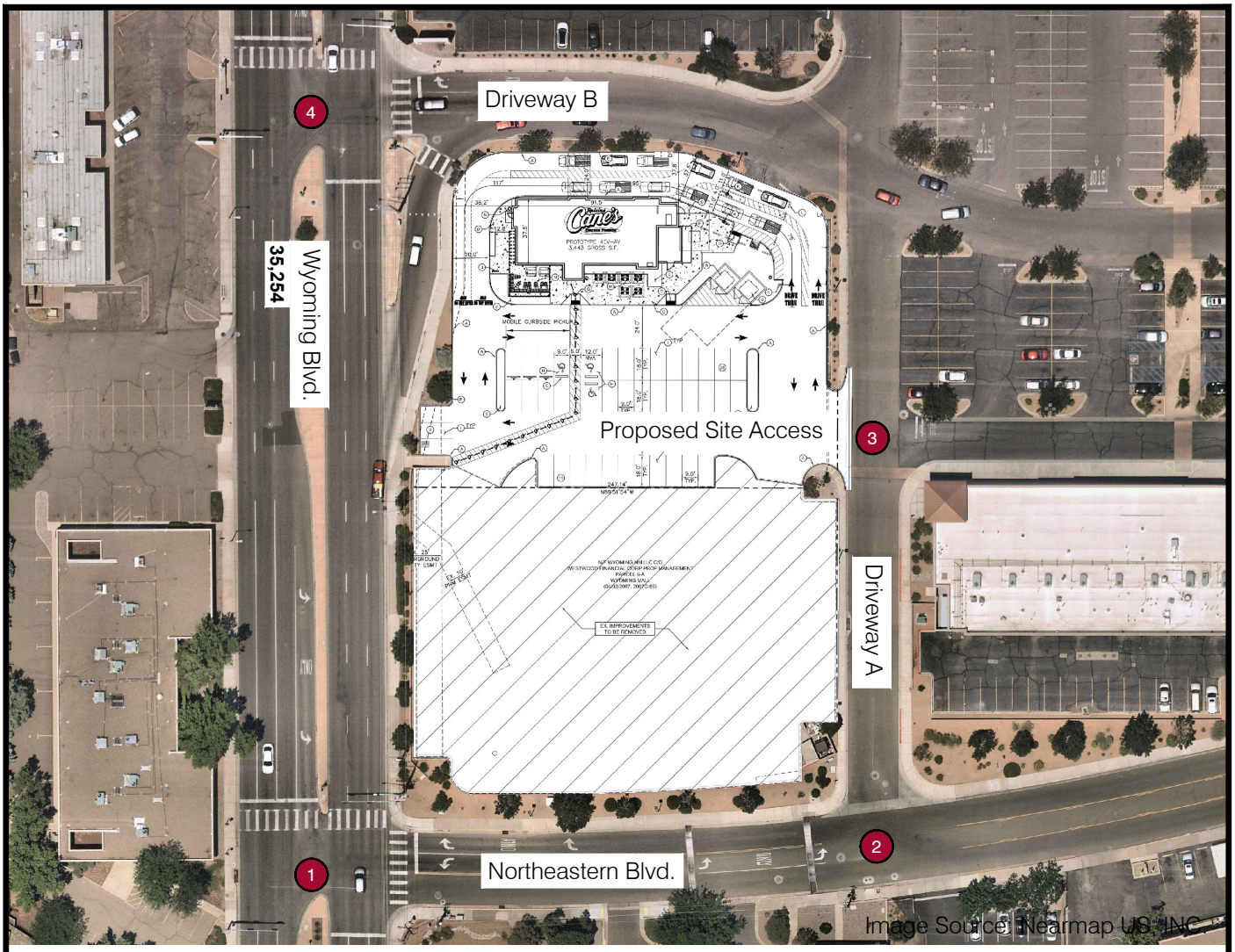
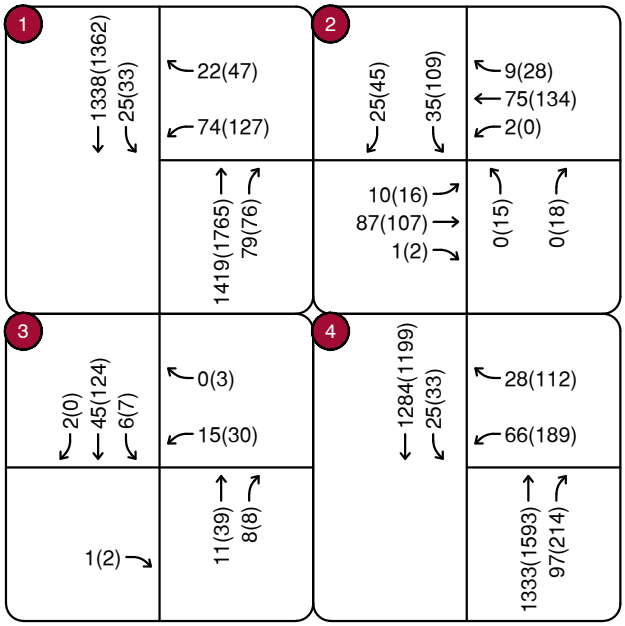
Figure 7
2022 Background Traffic Volumes





LEGEND	
← XX(XX)	AM(PM) PEAK HOUR TRAFFIC VOLUMES
XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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Figure 8
2032 Background Traffic Volumes

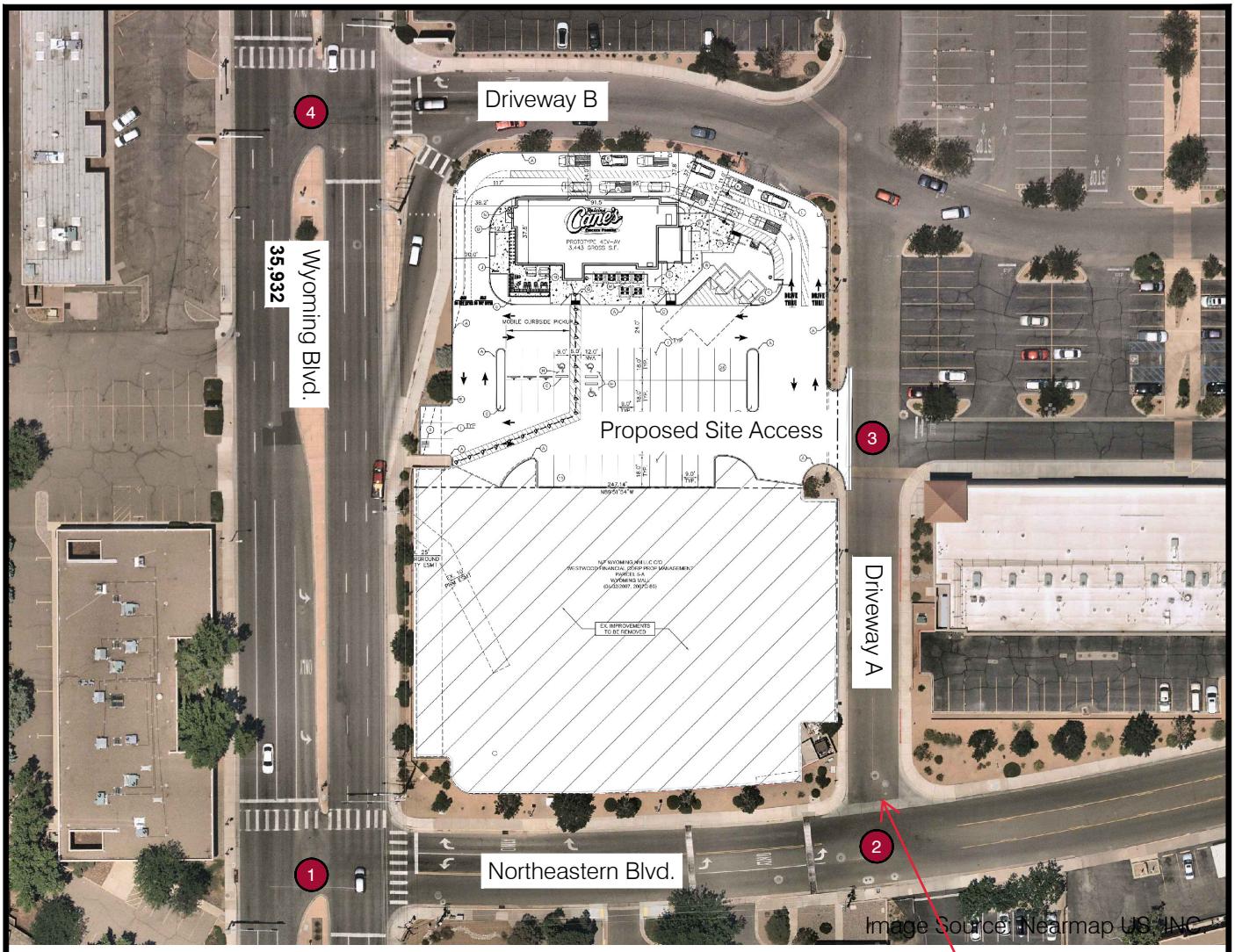

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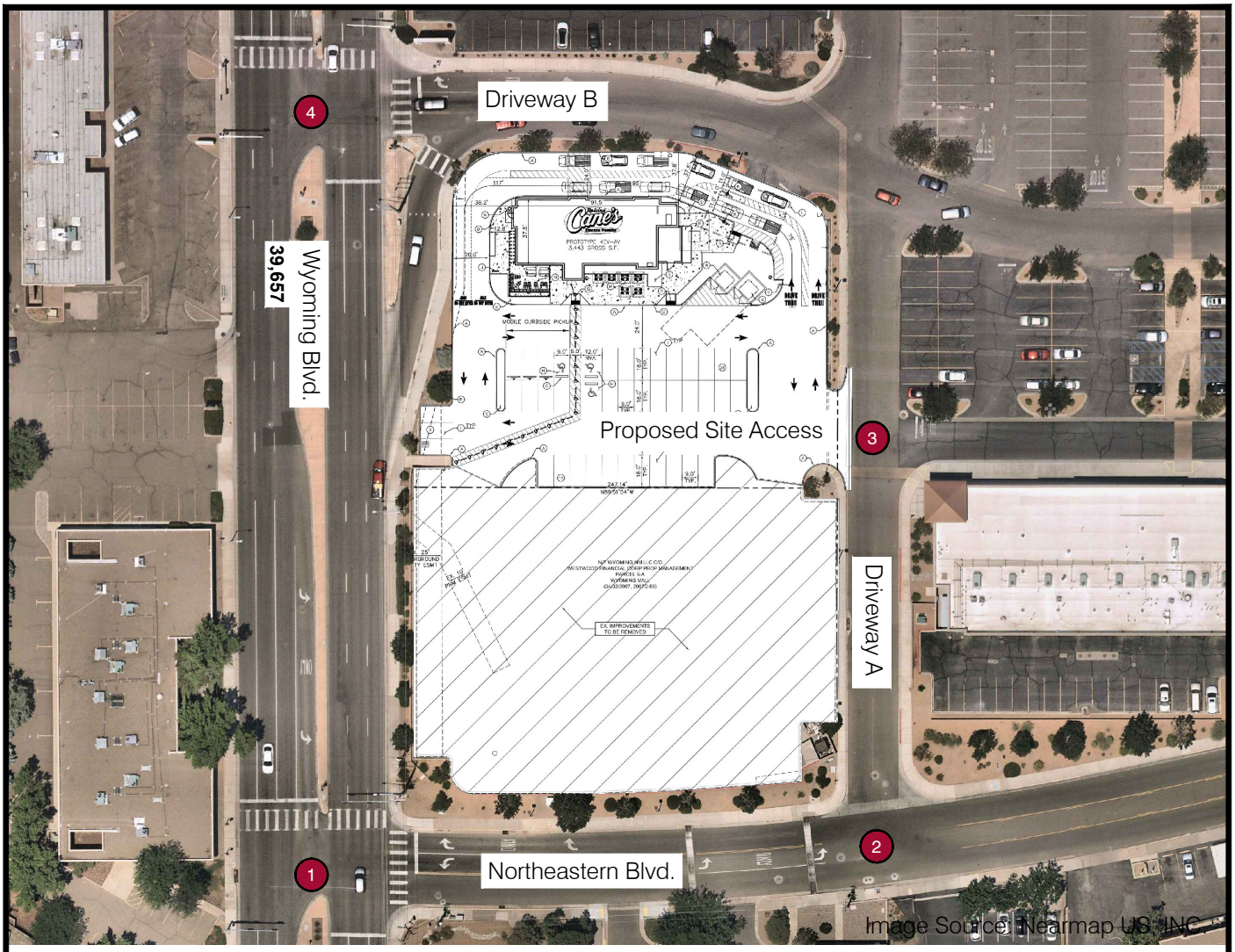
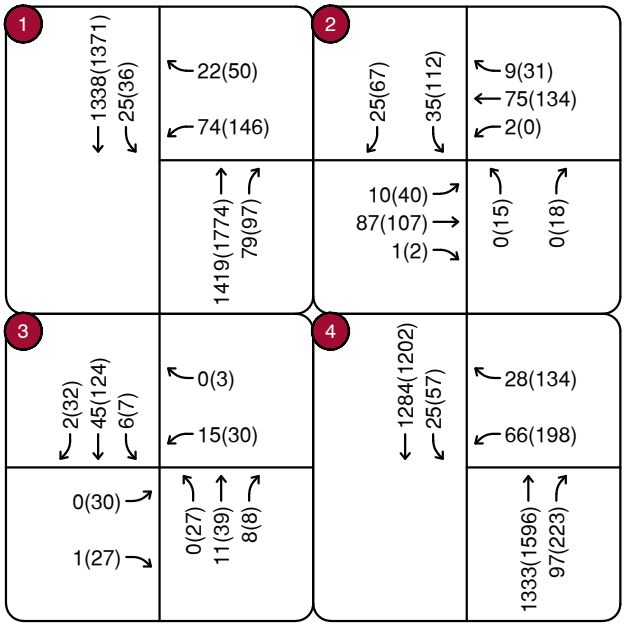
Figure 9
2022 Total Buildout Traffic Volumes





LEGEND	
← XX(XX)	AM(PM) PEAK HOUR TRAFFIC VOLUMES
XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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Figure 10
2032 Total Buildout Traffic Volumes

6.0 TRAFFIC AND IMPROVEMENT ANALYSIS

6.1 LEVEL OF SERVICE ANALYSIS

The LOS for the study area intersections were evaluated using HCM 6th Edition methodology and Synchro 11 analysis software. Synchro analysis results are reported for the intersection of Wyoming Boulevard/Driveway B, which operates with non-NEMA signal phasing. HCM 6th Edition will not analyze this type of phasing; Synchro analysis results are therefore reported for the intersection. LOS analysis reports are included in **Appendix F** for background and **Appendix G** for total scenarios.

6.1.1 BACKGROUND TRAFFIC LEVEL OF SERVICE ANALYSIS

The study area intersections were evaluated based on the background traffic shown in **Figure 7** and **Figure 8** and the intersection geometry shown in shown in **Figure 3**. The results of the analysis for the intersection and site driveways are shown in **Table 4** and **Table 5** for background year 2022 and 2032, respectively.

Delay is rounded to the nearest whole second. Note that an asterisk (*) denotes the movement had zero traffic volume during the study period. A dash (-) indicates a free movement. **Bolded** values indicate a movement is operating at an unacceptable LOS.

Table 3. 2022 Background Traffic Level of Service and Delay

Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*			*Overall*
	L	T	R	L	T	R	L	T	R	L	T	R	
1. *Wyoming Boulevard / Northeastern Boulevard*													
AM Peak		A/3	A/3	A/1	A/1					D/52		D/49	A/3
PM Peak		A/3	A/4	A/2	A/1					E/57		D/52	A/5
2. *Driveway A / Northeastern Boulevard*													
AM Peak	*			A/10			A/7	-		A/7	-		-
PM Peak	B/11			B/13			A/8	-		*	-		-
3. *Driveway A / Proposed Site Access*													
AM Peak	*	-		A/7	-		A/9			A/9			-
PM Peak	*	-		A/7	-		A/9			A/10			-
4. *Wyoming Boulevard / Driveway B*													
AM Peak		A/10	A/4	A/3	A/3	*		*		E/60		A/4	A/7
PM Peak		B/17	A/8	A/6	A/5	*		*		E/69		B/11	B/15

Table 4. 2032 Background Traffic Level of Service and Delay

Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*			*Overall*
	L	T	R	L	T	R	L	T	R	L	T	R	
1. *Wyoming Boulevard / Northeastern Boulevard*													
AM Peak		A/3	A/3	A/1	A/1					D/53		D/49	A/3
PM Peak		A/4	A/5	A/4	A/1					E/57		D/51	A/5
2. *Driveway A / Northeastern Boulevard*													
AM Peak	*			B/10			A/8	-		A/7	-		-
PM Peak	B/11			B/14			A/8	-		*	-		-
3. *Driveway A / Proposed Site Access*													
AM Peak	*	-		A/7	-		A/9			A/9			-
PM Peak	*	-		A/7	-		A/9			B/10			-
4. *Wyoming Boulevard / Driveway B*													
AM Peak		B/12	A/5	A/3	A/3	*		*		E/61		A/6	A/8
PM Peak		C/21	B/10	A/7	A/6	*		*		E/69		B/12	B/18

The WBL movement of Intersection 1 operates at LOS E during the PM peak periods of both the 2022 and 2032 background and horizon years.

The WBL movement of Intersection 4 operates at LOS E in both the AM and PM peak periods of the 2022 and 2032 background and horizon years.

All other movements operate at acceptable LOS in both the 2022 and 2032 background and horizon years. All intersections operate at an acceptable overall LOS.

6.1.2 TOTAL TRAFFIC LEVEL OF SERVICE ANALYSIS

The study area intersections were evaluated based on the total traffic shown in **Figure 9** and **Figure 10** and the intersection geometry shown in shown in **Figure 11**. The results of the analysis for the intersection and site driveway are shown in **Table 5** and **Table 6** for buildout year 2022 and horizon year 2032, respectively.

Table 5. 2022 Total Traffic Level of Service and Delay

Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*			*Overall*
	L	T	R	L	T	R	L	T	R	L	T	R	
1. *Wyoming Boulevard / Northeastern Boulevard*													
AM Peak		A/3	A/3	A/1	A/1					D/52		D/49	A/3
PM Peak		A/4	A/5	A/3	A/1					E/57		D/50	A/6
2. *Driveway A / Northeastern Boulevard*													
AM Peak	*			A/10			A/7	-	-	A/7	-	-	-
PM Peak	B/11			B/14			A/8	-	-	*	-	-	-
3. *Driveway A / Proposed Site Access*													
AM Peak	*	-		A/7	-		A/9			A/9			-
PM Peak	A/8	-		A/7	-		B/10			B/11			-
4. *Wyoming Boulevard / Driveway B*													
AM Peak		A/10	A/4	A/3	A/3	*		*	*	E/60		A/4	A/7
PM Peak		B/19	A/8	A/7	A/6	*		*	*	E/69		B/12	B/16

Table 6. 2032 Total Traffic Level of Service and Delay

Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*			*Overall*
	L	T	R	L	T	R	L	T	R	L	T	R	
1. *Wyoming Boulevard / Northeastern Boulevard*													
AM Peak		A/3	A/3	A/1	A/1					D/53		D/49	A/3
PM Peak		A/5	A/5	A/5	A/1					E/56		D/50	A/6
2. *Driveway A / Northeastern Boulevard*													
AM Peak	*			B/10			A/8	-	-	A/7	-	-	-
PM Peak	B/12			C/15			A/8	-	-	*	-	-	-
3. *Driveway A / Proposed Site Access*													
AM Peak	*	-		A/7	-		A/9			A/9			-
PM Peak	A/8	-		A/7	-		B/10			B/11			-
4. *Wyoming Boulevard / Driveway B*													
AM Peak		B/12	A/5	A/3	A/3	*		*	*	E/61		A/6	A/8
PM Peak		C/23	B/11	A/8	A/6	*		*	*	E/70		B/13	B/19

The WBL movement of Intersection 1 operates at LOS E during the PM peak periods of both the 2022 and 2032 buildout and horizon years.

The WBL movement of Intersection 4 operates at LOS E in both the AM and PM peak periods of the 2022 and 2032 buildout and horizon years.

All other movements operate at acceptable LOS in the 2022 and 2032 background and horizon years.

6.2 LEFT-TURN QUEUE ANALYSIS

The queue analysis results for each impacted left-turn movement is summarized in **Table 8**. Existing left-turn lane storage lengths were obtained via satellite imagery measurements rounded to the nearest five foot increment. 95th percentile queue lengths for the 2032 horizon year were calculated using Synchro methodology for signalized intersections and HCM methodology for unsignalized intersections. HCM reports queues as number of vehicles. An average vehicle length of 25 feet was utilized to estimate total

queue length. Note that calculated values represent the movement's greatest queue length across both the AM and PM peak periods in the 2032 horizon year.

Table 7. Left-Turn Storage

Intersection and Approach	*Existing*	Calculated
1. Wyoming Boulevard / Northeastern Boulevard		
Southbound Approach	140 ft	54 ft
Westbound Approach	90 ft	185 ft
2. Driveway A / Northeastern Boulevard		
Northbound Approach	^	25 ft *
Southbound Approach	^	45 ft
Eastbound Approach	70 ft	25 ft *
Westbound Approach	210 ft ^^	25 ft *
3. Driveway A / Proposed Site Access		
Northbound Approach	^	25 ft *
Southbound Approach	^	25 ft *
Eastbound Approach	^	25 ft *
Westbound Approach	^	25 ft *
4. Wyoming Boulevard / Driveway B		
Southbound Approach	60 ft	29 ft
Westbound Approach	250 ft**	234 ft

* 25-foot minimum for one (1) vehicle
** Trap Lane (250 ft to upstream intersection)
^ Shared through and left-turn movement
^^ Two-way left turn lane (210 ft to upstream raised median)
Bold indicates calculated queue length is greater than existing storage length.

Increase the WB left-turn storage at Northeastern/ Wyoming

Reduce the EB left-turn storage at driveway A. This turn lane can be removed because the peak hour turns are less than required for a left-turn lane.

The queue of the WBL movement of Intersection 1 exceeds its existing striped storage length. The WBL storage is constrained by the EBL storage at Intersection 2 and cannot be extended without reducing the striped storage length at Intersection 2. Notably, the calculated storage length for the EBL at Intersection 2 is only 25 feet. Therefore, the sum of the calculated WBL queue at Intersection 1 and the calculated EBL queue at Intersection 2 is 210 feet. This sum is less than the distance between the two intersections (240 feet) and means the WBL queue is not expected to block Intersection 2. Due to the physical constraints of the existing left turn lanes, no lane modifications are recommended at this time.

The queues of all other left-turn movements impacted by the project are accommodated by the existing storage lengths in the 2032 horizon year.

6.3 ON-SITE CIRCULATION ANALYSIS

Circulation patterns within the site can be modified to accommodate traffic loads in real-time. During typical traffic loads, drivers will turn right upon entering the site and enter the dual lane drive-thru directly to the north. When traffic loads exceed the drive-thru's capacity of approximately 17 vehicles, employees will reroute entering traffic west through the parking lot's southern aisle and back east through the northern aisle. This path will increase storage capacity by an additional 20 vehicles before overflowing into the intersection at Driveway A, increasing the maximum drive-thru capacity to approximately 37 vehicles.

The anticipated peak hour entering trips to the site is 58 vehicles. It is anticipated that the drive-thru queue will be maintained on site.

6.4 CRASH ANALYSIS

Crash count data (2017-2019) was obtained from the New Mexico Department of Transportation (NMDOT) for the intersection of Wyoming Boulevard and Northeastern Boulevard. Crash data was unavailable for other locations within the study area.

text error in section 6.4

During the three-year period, there were 48 crashes at the Wyoming Boulevard and Northeastern Boulevard intersection. The total crashes include 27 property damage only crashes, 21 injury crashes, and 0 fatal crashes. Crash data is summarized in **Table 8**Error! Reference source not found..

Table 8: Crash Data

Wyoming Boulevard / Northeastern Boulevard				
Crash Severity	Year			Severity Total
	2017	2018	2019	
Property Damage Only Crash	8	14	5	27
Injury Crash	6	10	5	21
Fatal Crash	0	0	0	0
Annual Total	14	24	10	48

A significant portion of the crash data (13 of 48 reports) were under-reported and did not list the type of crash. As a result, specific crash patterns could not be definitively identified. However, of the crashes that were fully reported, the following items are noted:

- About a third of the crashes (15 out of 48) mentioned a left turn.
- Four of the crashes involved pedestrians, with three of the four crashes resulting in serious injury.
- About a third of all crashes (15 out of 48) are attributed to drivers disregarding the traffic signal. Other frequently-reported crash factors include driver inattention (9 crashes) and failure to yield right-of-way (6 crashes).

Crash rate data (2015-2019) was obtained from MRCOG for the intersection of Wyoming Boulevard and Northeastern Boulevard. The total crash rate over the five-year period was 1.22 crashes per million entering vehicles. The rate of severe crashes at the intersection was found to be 1 to 1.5 times the regional average severity. This indicates that the intersection experiences more severe crashes on average compared to other intersections in the area.

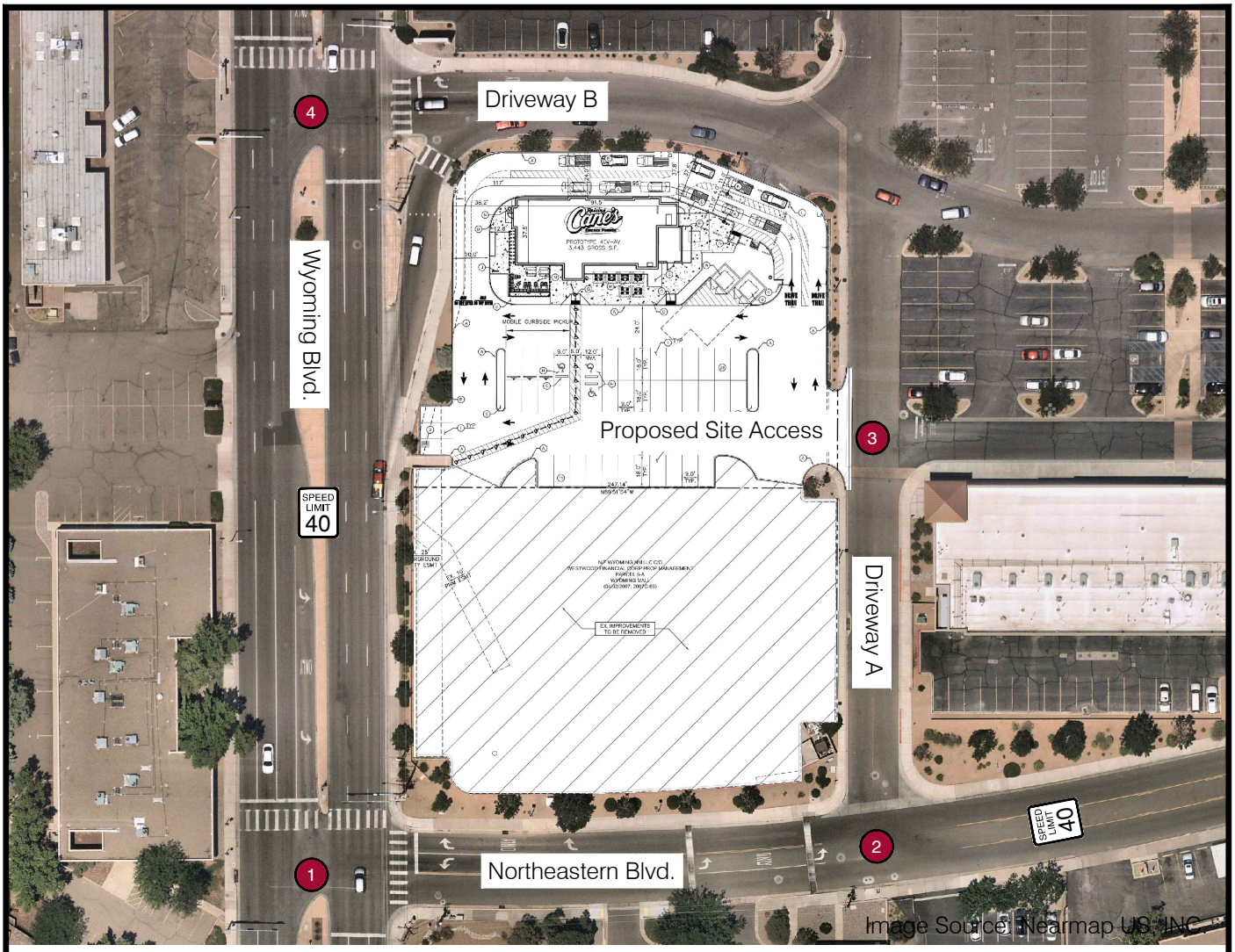
Because a large percentage of crashes were under-reported and crash patterns cannot be definitively identified, there are no crash-related mitigations recommended at this time. However, it is recommended that the City continue to monitor this location for potential safety improvements as new crash data continues to become available.

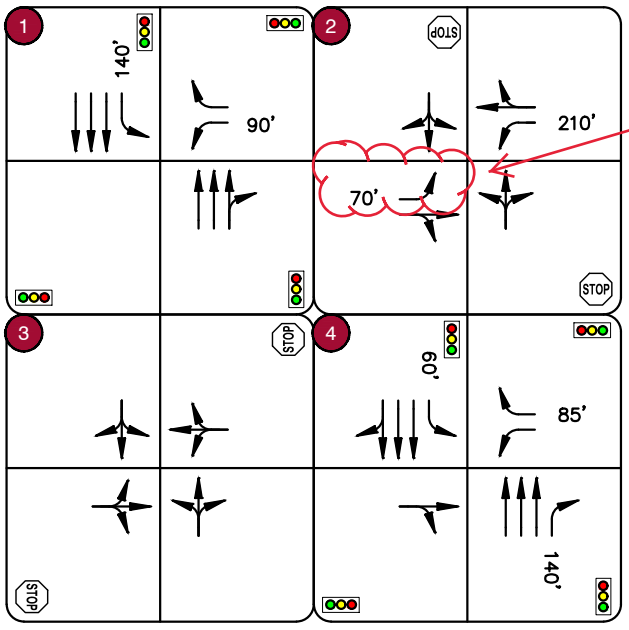
7.0 RECOMMENDATIONS

The proposed development is estimated to generate 1,622 daily trips, with 0 or negligible trips occurring in the AM peak hour and 112 trips occurring in the PM peak hour.

This analysis concludes that the proposed development will be accommodated by the surrounding street network, with the following findings and recommendations:

- The development will be accessed from an existing driveway connection on Driveway A. The proposed site access will be full access to accommodate passenger cars. No new driveways are proposed. An existing site driveway on the site's northeast corner is to be removed.
- Study area intersections operate at acceptable LOS in each analysis scenario, including existing, 2022 background and total, and 2032 background and total traffic scenarios with the following exceptions:
    - The westbound left-turn movement at Northeastern Boulevard (Intersection 1) shows LOS E in all study scenarios during the PM peak hour. Since the reported LOS and delay do not worsen from existing conditions, no mitigation is recommended as part of the proposed development.
        - Note: It is recommended that the City monitor signal timings at this location as traffic patterns change and evaluate if any adjustments to signal timings (e.g. splits, offsets, cycle length, etc.) could improve LOS for this movement.
    - The westbound left-turn movement at Driveway B (Intersection 4) shows LOS E in all study scenarios during both the AM and PM peak hours. Since the reported LOS and delay do not worsen from existing conditions, no mitigation is recommended as part of the proposed development.
        - Note: It is recommended that the City monitor signal timings at this location as traffic patterns change and evaluate if any adjustments to signal timings (e.g. splits, offsets, cycle length, etc.) could improve LOS for this movement.
- The 2032 horizon year queue length of the westbound left-turn movement on Northeastern Boulevard (Intersection 1) exceeds the existing striped storage length. The storage lane cannot be extended without reducing the left turn storage for the eastbound left turn at Intersection 2. Since the calculated queue does not block the nearest upstream intersection (Intersection 2), no mitigation is recommended. All other queues are accommodated by existing storage lengths.
- The proposed drive-thru and parking lot are expected to provide enough space for on-site circulation during typical- and high-traffic demands. Traffic from the drive-thru is unlikely to spill back onto Driveway A (Intersection 3).
- The intersection of Wyoming Boulevard and Northeastern Boulevard experienced 48 crashes from 2017 to 2019. The average crash rate at the intersection is 1.22 crashes per million entering vehicles. The rate of severe crashes is higher at the intersection than the regional average. However, because about 25% of crashes included in the data set were under-reported there are no recommended safety mitigations as part of this development. It is recommended that the City continue to monitor this area on an ongoing basis as new crash data becomes available.
- Recommended lane configuration is shown in **Figure 11**.





EB left-turn lane at driveway 2 not warranted.

NORTH

LEGEND

- SPEED LIMIT XX — SPEED LIMIT
- LANE USE
- RECOMMENDED IMPROVEMENTS
- XX' — STORAGE LENGTH
- DROP — DROP LANE
- STOP — INTERSECTION CONTROL

Kimley»Horn

Figure 13
Recommended Lane Configuration and Control

APPENDIX

- Appendix A: Analysis Scope
- Appendix B: Traffic Count Data
- Appendix C: Existing Synchro Reports
- Appendix D: Trip Generation Information
- Appendix E: Trip Distribution Map
- Appendix F: Background Synchro Reports
- Appendix G: Total Synchro Reports

APPENDIX A

ANALYSIS SCOPE

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Cassie Kussow
Kimley-Horn
1000 2nd Avenue, Suite 3900
Seattle, WA 98104

MEETING DATE: 08/20/2021

ATTENDEES: Cassie Kussow, Shannon Ness, and Taylor Dunkle from Kimley-Horn; Matt Grush, Senior Engineer

PROJECT: Raising Cane's Chicken Fingers (Store RC 0705) 2400 Wyoming Blvd NE & Northeastern, Zone Atlas # H-20-Z

REQUESTED CITY ACTION: ___ Zone Change X Site Development Plan

___ Subdivision ___ Building Permit ___ Sector Plan ___ Sector Plan Amendment

___ Curb Cut Permit ___ Conditional Use ___ Annexation ___ Site Plan Amendment

ASSOCIATED APPLICATION: New 3,443 square foot Raising Cane's Chicken Fingers Drive-Thru restaurant on the NE corner of Wyoming Blvd and Northeastern Blvd. Scope of work includes demolition of the existing Furr's restaurant building and construction of a new drive-thru restaurant and associated site improvements.

SCOPE OF REPORT:
The Traffic Impact Study should follow the standard report format, which is outlined in the DPM. The following supplemental information is provided for the preparation of this specific study.

1. Trip Generation - Use Trip Generation Manual, 10th Edition.
   Land Use Code 934 – Fast-Food Restaurant with Drive-Thru (Daily Rate: 470.95 trips per ksf, AM peak hour of generator rate: 50.97 trips per ksf, PM peak hour (4-6 p.m.) rate: 32.67 trips per ksf)
   *Note Canes will open at 10 a.m. each day, which is outside the standard 7-9 a.m. AM peak period, so the peak hour of generator rates will be used for the AM/midday period.

2. Appropriate study area:
   Signalized Intersections;
   a. Intersection 1: Northeastern Blvd & Wyoming Blvd

   Unsignalized Intersections;
   a. Intersection 1: Entry to shopping center on Northeastern Blvd (south)
   b. Intersection 2: Entry to Canes within shopping center (east) (site driveway)

3. Intersection turning movement counts
   Study Time – 7-9 a.m. peak hour, 4-6 p.m. peak hour – ~~Canes operational hours are 10 a.m. to 12 a.m. M-F. Recommending to collect data 11 a.m. – 1 p.m. for midday peak hour in lieu of AM peak hour.~~ (mpg 8/27/2021)
   Consultant to provide for all intersections listed above.

4. Type of intersection progression and factors to be used.

Type III arrival type (see "Highway Capacity Manual, current edition" or equivalent as approved by staff). Unless otherwise justified, peak hour factors and % heavy commercial should be taken directly from the MRCOG turning movement data provided or as calculated from current count data by consultant.

5. Boundaries of area to be used for trip distribution.

   2 mile radius – commercial;

6. Basis for trip distribution.

Commercial - Use relationship based upon population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Commercial -
Ts = (Tt) (Sp) / (Sp)
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population

7. Traffic Assignment. Logical routing on the major street system.

8. Proposed developments which have been approved but not constructed that are to be Included in the analyses. Projects in the area include:
   a. N/A

9. Method of intersection capacity analysis - planning or operational (see "2016 Highway Capacity Manual" or equivalent [i.e. HCS, Synchro, Teapac, etc.] as approved by staff). Must use latest version of design software and/or current edition of design manual.

   Implementation Year: 2022

10. Traffic conditions for analysis:
    a. Existing analysis x__ yes __ no - year (2021);
    b. Project completion year without proposed development – 2022
    c. Project completion year with proposed development – 2022
    d. Other – 10-year horizon (2032)

11. Background traffic growth.
    Method: use 10-year historical growth based on standard data from the MRCOG Traffic Flow Maps. Minimum growth rate to be used is 1/2%.

12. Planned (programmed) traffic improvements.
    List planned CIP improvements in study area and projected project implementation year:
    a. N/A

13. Items to be included in the study:
    a. Intersection analysis.
    b. Recommended street, intersection and signal improvements.

c. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility.
d. Transportation system impacts.
e. Other mitigating measures.
f. Accident analyses _X_ yes __ no; Location(s): Northeastern Blvd & Wyoming Blvd; Shopping Center Driveway & Northeastern Blvd
g. Weaving analyses __ yes _X_ no; Location(s):

14. Other: Include 3-years of crash data in accident analysis, develop intersection crash rate, and include comparison to normal averages from Albuquerque Area High Fatal and Injury Network (HFIN).

SUBMITTAL REQUIREMENTS:

1. Number of copies of report required
   a. 1 digital copy
2. Submittal Fee – $1300 for up to 3 reviews

The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 924-3362.

P.E.

8/27/2021

Matt Grush, P.E., PTOE
Senior Engineer
City of Albuquerque, Planning
Transportation Development Section

Date

via: email
C: TIS Task Force Attendees, file

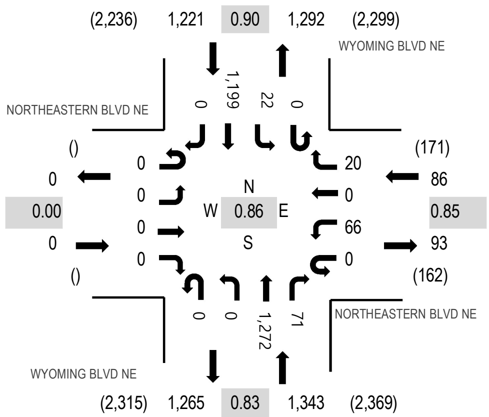
APPENDIX B

TRAFFIC COUNT DATA

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

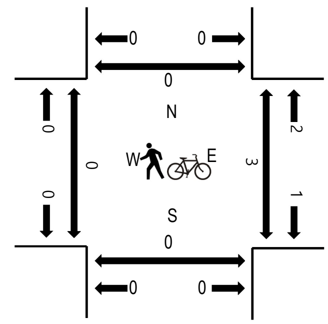
Location: 1 WYOMING BLVD NE & NORTHEASTERN BLVD NE AM
Date: Tuesday, August 31, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



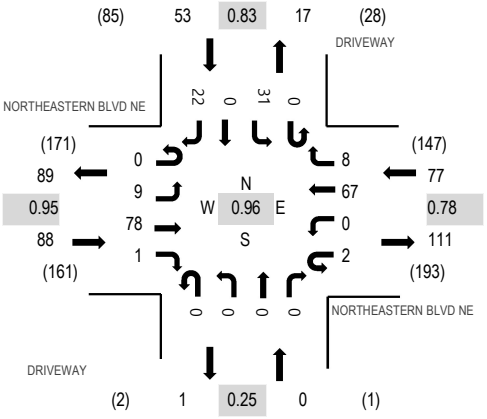
Traffic Counts

Interval Start Time	NORTHEASTERN BLVD NE Eastbound U-Turn	Left	Thru	Right	NORTHEASTERN BLVD NE Westbound U-Turn	Left	Thru	Right	WYOMING BLVD NE Northbound U-Turn	Left	Thru	Right	WYOMING BLVD NE Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	0	0	0	0	11	0	8	0	0	257	7	0	6	213	0	502	2,438	0	0	0	0
7:15 AM	0	0	0	0	0	10	0	9	0	0	230	8	0	4	284	0	545	2,595	0	0	0	0
7:30 AM	0	0	0	0	0	15	0	4	0	0	283	21	0	3	292	0	618	2,650	0	1	0	0
7:45 AM	0	0	0	0	0	16	0	7	0	0	386	19	0	6	339	0	773	2,583	0	1	0	0
8:00 AM	0	0	0	0	0	20	0	7	0	0	306	18	0	3	305	0	659	2,338	0	0	0	0
8:15 AM	0	0	0	0	0	15	0	2	0	0	297	13	0	10	263	0	600		0	1	0	0
8:30 AM	0	0	0	0	0	17	0	8	0	0	248	13	0	4	261	0	551		0	0	0	0
8:45 AM	0	0	0	0	0	14	0	8	0	0	239	24	0	3	240	0	528		0	0	0	0
Count Total	0	0	0	0	0	118	0	53	0	0	2,246	123	0	39	2,197	0	4,776		0	3	0	0
Peak Hour	0	0	0	0	0	66	0	20	0	0	1,272	71	0	22	1,199	0	2,650		0	3	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

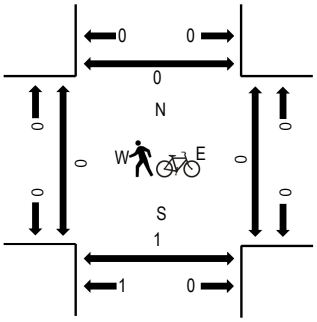
Location: 2 DRIVEWAY & NORTHEASTERN BLVD NE AM
Date: Tuesday, August 31, 2021
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



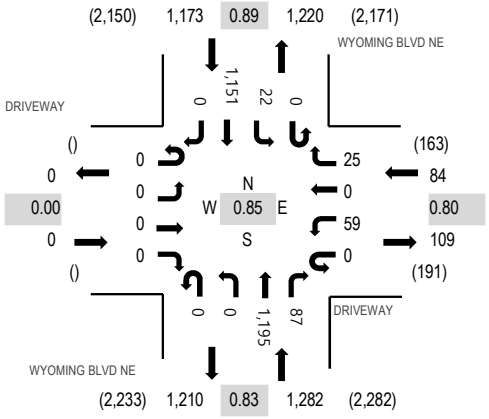
Traffic Counts

Interval Start Time	NORTHEASTERN BLVD NE Eastbound				NORTHEASTERN BLVD NE Westbound				DRIVEWAY Northbound				DRIVEWAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	13	0	0	0	14	1	0	0	0	1	0	2	1	5	37	176	1	0	0	1
7:15 AM	0	1	11	0	0	0	19	1	0	0	0	0	0	3	0	3	38	196	0	0	0	0
7:30 AM	0	4	20	0	0	0	15	2	0	0	0	0	0	4	0	2	47	209	0	0	0	0
7:45 AM	0	1	23	0	0	0	17	1	0	0	0	0	0	5	0	7	54	215	0	0	0	0
8:00 AM	0	2	18	0	1	0	24	1	0	0	0	0	0	7	0	4	57	218	0	0	0	0
8:15 AM	0	2	21	0	1	0	10	4	0	0	0	0	0	8	0	5	51		0	0	0	0
8:30 AM	0	2	16	0	0	0	17	2	0	0	0	0	0	7	0	9	53		0	0	0	0
8:45 AM	0	3	23	1	0	0	16	1	0	0	0	0	0	9	0	4	57		0	0	1	0
Count Total	0	15	145	1	2	0	132	13	0	0	0	1	0	45	1	39	394		1	0	1	1
Peak Hour	0	9	78	1	2	0	67	8	0	0	0	0	0	31	0	22	218		0	0	1	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

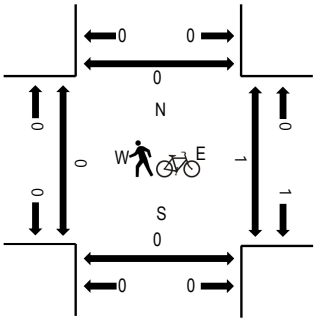
Location: 3 WYOMING BLVD NE & DRIVEWAY AM
Date: Tuesday, August 31, 2021
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



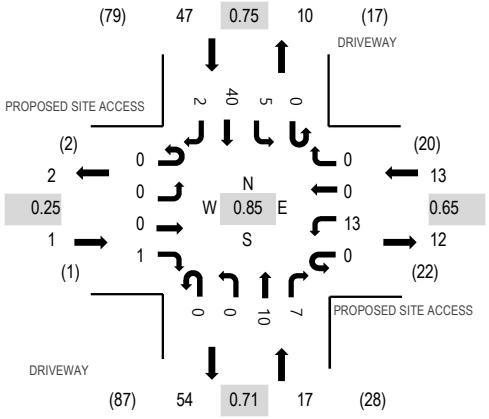
Traffic Counts

Interval Start Time	DRIVEWAY Eastbound				DRIVEWAY Westbound				WYOMING BLVD NE Northbound				WYOMING BLVD NE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	10	0	3	0	0	253	10	0	0	207	0	483	2,359	0	0	0	0
7:15 AM	0	0	0	0	0	11	0	2	0	0	222	15	0	3	290	0	543	2,491	0	0	0	0
7:30 AM	0	0	0	0	0	14	0	7	0	0	260	23	0	3	282	0	589	2,539	0	1	0	0
7:45 AM	0	0	0	0	0	17	0	6	0	0	362	22	0	8	329	0	744	2,483	0	0	0	0
8:00 AM	0	0	0	0	0	15	0	5	0	0	290	21	0	5	279	0	615	2,236	0	0	0	0
8:15 AM	0	0	0	0	0	13	0	7	0	0	283	21	0	6	261	0	591		0	0	0	0
8:30 AM	0	0	0	0	0	19	0	10	0	0	238	20	0	5	241	0	533		0	0	0	0
8:45 AM	0	0	0	0	0	19	0	5	0	0	218	24	0	5	226	0	497		0	0	0	0
Count Total	0	0	0	0	0	118	0	45	0	0	2,126	156	0	35	2,115	0	4,595		0	1	0	0
Peak Hour	0	0	0	0	0	59	0	25	0	0	1,195	87	0	22	1,151	0	2,539		0	1	0	0

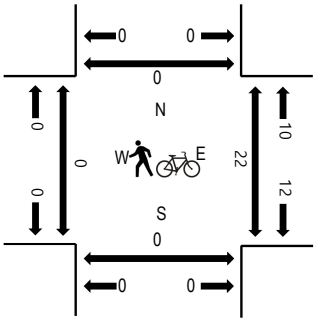
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 DRIVEWAY & PROPOSED SITE ACCESS AM
Date: Tuesday, August 31, 2021
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

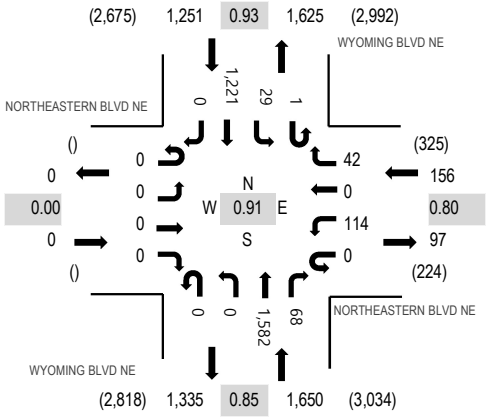
Traffic Counts

Interval Start Time	PROPOSED SITE ACCESS Eastbound				PROPOSED SITE ACCESS Westbound				DRIVEWAY Northbound				DRIVEWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	8	0	10	50	0	0	0	0
7:15 AM	0	0	0	0	0	2	0	0	0	0	1	1	0	0	5	0	9	56	0	0	0	0
7:30 AM	0	0	0	0	0	2	0	0	0	0	3	3	0	2	4	0	14	67	0	4	0	1
7:45 AM	0	0	0	0	0	2	0	0	0	0	1	1	0	3	10	0	17	76	0	3	1	0
8:00 AM	0	0	0	1	0	2	0	0	0	0	2	1	0	1	8	1	16	78	0	6	0	0
8:15 AM	0	0	0	0	0	5	0	0	0	0	4	2	0	1	8	0	20		0	3	0	0
8:30 AM	0	0	0	0	0	3	0	0	0	0	3	1	0	0	15	1	23		0	3	0	0
8:45 AM	0	0	0	0	0	3	0	0	0	0	1	3	0	3	9	0	19		0	10	0	0
Count Total	0	0	0	1	0	19	0	1	0	0	16	12	0	10	67	2	128		0	29	1	1
Peak Hour	0	0	0	1	0	13	0	0	0	0	10	7	0	5	40	2	78		0	22	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

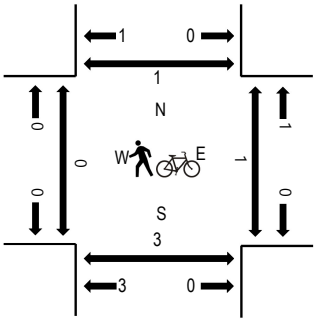
Location: 1 WYOMING BLVD NE & NORTHEASTERN BLVD NE PM
Date: Tuesday, August 31, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



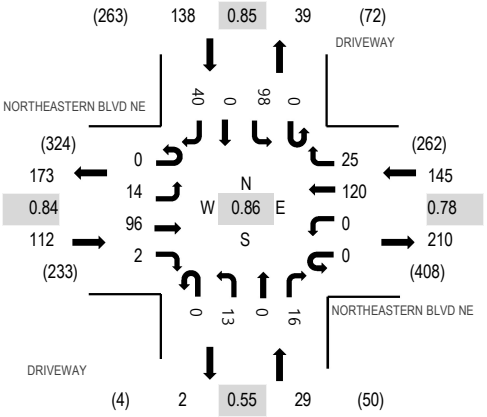
Traffic Counts

Interval Start Time	NORTHEASTERN BLVD NE Eastbound				NORTHEASTERN BLVD NE Westbound				WYOMING BLVD NE Northbound				WYOMING BLVD NE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	28	0	11	0	0	472	16	0	5	311	0	843	3,057	0	1	0	1
4:15 PM	0	0	0	0	0	33	0	12	0	0	390	17	1	9	276	0	738	3,009	0	0	0	0
4:30 PM	0	0	0	0	0	28	0	10	0	0	406	19	0	7	327	0	797	2,995	0	0	3	0
4:45 PM	0	0	0	0	0	25	0	9	0	0	314	16	0	8	307	0	679	2,951	0	0	0	0
5:00 PM	0	0	0	0	0	41	0	12	0	0	340	19	1	11	371	0	795	2,977	0	0	0	0
5:15 PM	0	0	0	0	0	21	0	14	0	0	332	15	1	14	327	0	724		0	0	0	0
5:30 PM	0	0	0	0	0	29	0	12	0	0	336	15	0	24	337	0	753		0	0	0	0
5:45 PM	0	0	0	0	0	32	0	8	0	0	311	16	0	13	325	0	705		0	1	0	1
Count Total	0	0	0	0	0	237	0	88	0	0	2,901	133	3	91	2,581	0	6,034		0	2	3	2
Peak Hour	0	0	0	0	0	114	0	42	0	0	1,582	68	1	29	1,221	0	3,057		0	1	3	1

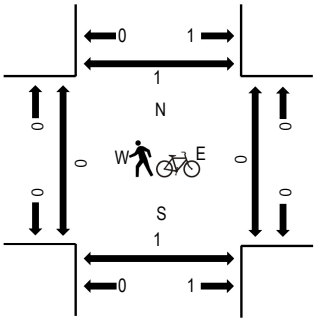
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 DRIVEWAY & NORTHEASTERN BLVD NE PM
Date: Tuesday, August 31, 2021
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

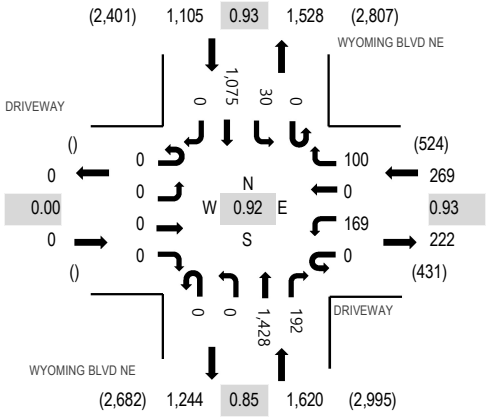
Traffic Counts

Interval Start Time	NORTHEASTERN BLVD NE Eastbound				NORTHEASTERN BLVD NE Westbound				DRIVEWAY Northbound				DRIVEWAY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	2	21	0	1	0	18	7	0	12	0	8	0	17	0	9	95	396	0	1	0	0
4:15 PM	0	3	25	0	0	0	32	4	0	12	0	10	0	22	0	9	117	424	0	0	1	1
4:30 PM	0	4	21	1	0	0	22	5	0	1	0	5	0	21	0	9	89	400	0	0	0	0
4:45 PM	0	4	20	1	0	0	29	6	0	0	0	0	0	28	0	7	95	417	0	0	0	0
5:00 PM	0	3	30	0	0	0	37	10	0	0	0	1	0	27	0	15	123	412	0	0	0	0
5:15 PM	0	2	27	0	0	0	23	7	0	0	1	0	0	24	0	9	93		0	0	0	0
5:30 PM	0	1	38	0	0	0	29	6	0	0	0	0	0	18	0	14	106		0	1	0	0
5:45 PM	0	3	25	2	1	0	21	4	0	0	0	0	0	18	0	16	90		0	0	0	0
Count Total	0	22	207	4	2	0	211	49	0	25	1	24	0	175	0	88	808		0	2	1	1
Peak Hour	0	14	96	2	0	0	120	25	0	13	0	16	0	98	0	40	424		0	0	1	1

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

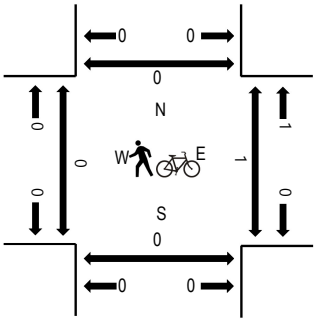
Location: 3 WYOMING BLVD NE & DRIVEWAY PM
Date: Tuesday, August 31, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



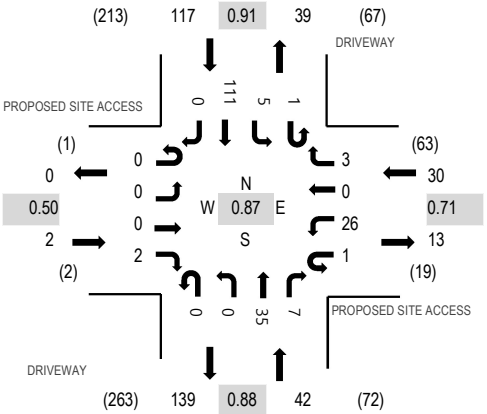
Traffic Counts

Interval Start Time	DRIVEWAY Eastbound				DRIVEWAY Westbound				WYOMING BLVD NE Northbound				WYOMING BLVD NE Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	45	0	18	0	0	416	58	0	8	272	0	817	2,994	0	0	0	0
4:15 PM	0	0	0	0	0	46	0	24	0	0	361	44	0	11	238	0	724	2,935	0	1	0	0
4:30 PM	0	0	0	0	0	45	0	28	0	0	357	59	0	6	281	0	776	2,944	0	0	0	0
4:45 PM	0	0	0	0	0	33	0	30	0	0	294	31	0	5	284	0	677	2,905	0	0	0	0
5:00 PM	0	0	0	0	0	43	0	22	0	0	303	41	0	6	343	0	758	2,926	0	0	0	0
5:15 PM	0	0	0	0	0	38	0	25	0	0	310	45	1	3	311	0	733		0	0	0	0
5:30 PM	0	0	0	0	0	38	0	23	0	0	297	51	0	5	323	0	737		0	0	0	0
5:45 PM	0	0	0	0	0	44	0	22	0	0	276	52	0	6	298	0	698		0	0	0	0
Count Total	0	0	0	0	0	332	0	192	0	0	2,614	381	1	50	2,350	0	5,920		0	1	0	0
Peak Hour	0	0	0	0	0	169	0	100	0	0	1,428	192	0	30	1,075	0	2,994		0	1	0	0

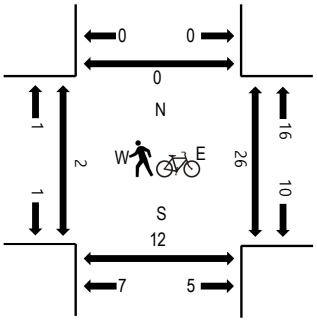
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 DRIVEWAY & PROPOSED SITE ACCESS PM
Date: Tuesday, August 31, 2021
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	PROPOSED SITE ACCESS Eastbound				PROPOSED SITE ACCESS Westbound				DRIVEWAY Northbound				DRIVEWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	9	0	0	0	0	6	3	0	0	18	0	36	165	1	13	0	1
4:15 PM	0	0	0	0	0	6	0	1	0	1	6	0	0	0	25	0	39	184	0	13	0	1
4:30 PM	0	0	0	1	0	5	0	3	0	0	8	1	1	1	24	0	44	191	1	13	3	0
4:45 PM	0	0	0	0	0	5	0	0	0	0	6	4	0	1	30	0	46	186	0	6	3	0
5:00 PM	0	0	0	0	1	11	0	0	0	0	10	1	0	0	32	0	55	185	0	3	3	0
5:15 PM	0	0	0	1	0	5	0	0	0	0	11	1	0	3	25	0	46		1	4	3	0
5:30 PM	0	0	0	0	0	8	0	0	0	0	6	0	0	1	24	0	39		0	4	1	0
5:45 PM	0	0	0	0	0	7	0	2	0	0	7	1	0	1	27	0	45		0	6	0	0
Count Total	0	0	0	2	1	56	0	6	0	1	60	11	1	7	205	0	350		3	62	13	2
Peak Hour	0	0	0	2	1	26	0	3	0	0	35	7	1	5	111	0	191		2	26	12	0

MRCOG Traffic Counts
Summary Statistics
See notes, bottom of report

9/1/2021 10:19:18 AM

					Direction 1		Direction 2		AM Peak Hour					PM Peak Hour						
COGID	Route Name	Location Description	Count Date	Total Volume	Daily Volume	Dir	Daily Volume	Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Count Quality	Count Type
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/1/2010	32,870	15,881	S	16,989	N	745	2,154	6.55	0.53	S	1615	2,620	7.97	0.54	N	T	VC
235081	WYOMING	NORTH OF INDIAN SCHOOL	10/1/1991	37,950	19,210	N	18,740	S	715	2,446	6.45	0.60	S	1630	3,349	8.82	0.59	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/1/1992	41,034	20,818	N	20,216	S	700	2,804	6.83	0.64	S	1645	3,700	9.02	0.60	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/1/2001	42,695	21,754	N	20,941	S	730	3,006	7.04	0.58	S	1645	3,934	9.21	0.58	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/1/1998	41,095	19,498	S	21,597	N	730	2,826	6.88	0.55	S	1630	3,657	8.90	0.59	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/1/2004	39,315	20,013	N	19,302	S	715	2,744	6.98	0.56	S	1645	3,629	9.23	0.60	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/1/2007	32,239	16,034	N	16,205	S	700	2,102	6.52	0.61	S	1630	2,982	9.25	0.60	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/1/1995	44,021	21,525	N	22,496	S	715	3,298	7.49	0.67	S	1700	3,933	8.93	0.58	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	2/12/2013	39,747	20,164	N	19,583	S	715	2,580	6.49	0.59	S	1645	3,753	9.44	0.58	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	5/12/2020	27,660	13,946	N	13,714	S	1000	1,730	6.25	0.53	N	1630	2,323	8.40	0.55	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	7/14/2020	32,518	16,288	N	16,230	S	1000	1,987	6.11	0.52	N	1630	2,904	8.93	0.52	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	5/18/2021	32,335	17,549	N	14,786	S	730	2,041	6.31	0.56	N	1515	2,524	7.81	0.61	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	3/1/2016	38,468	19,014	N	19,454	S	730	2,704	7.03	0.55	S	1630	3,207	8.34	0.53	N	T	Vol
235081	WYOMING	NORTH OF INDIAN SCHOOL	3/25/2019	35,254	17,982	N	17,272	S	715	2,475	7.02	0.53	S	1630	2,892	8.20	0.57	N	T	VC
235081	WYOMING	NORTH OF INDIAN SCHOOL	10/20/2020	34,129	16,937	N	17,192	S	715	1,836	5.38	0.56	S	1615	3,041	8.91	0.54	N	T	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	12/1/2004	10,954	5,386	E	5,568	W	730	760	6.94	0.79	W	1630	1,130	10.32	0.61	E	T	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	4/1/2002	14,144	6,962	W	7,182	E	715	974	6.89	0.76	W	1645	1,505	10.64	0.68	E	T	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	10/1/1993	15,764	7,935	E	7,829	W	715	1,233	7.82	0.81	W	1645	1,658	10.52	0.68	E	T	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	5/1/1999	15,587	7,811	W	7,776	E	730	1,288	8.26	0.78	W	1645	1,583	10.16	0.66	E	T	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	11/1/1990	14,855	7,809	W	7,046	E	730	1,331	8.96	0.81	W	1645	1,666	11.22	0.66	E	Q	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	5/1/1996	16,469	8,445	W	8,024	E	715	1,226	7.44	0.86	W	1645	1,567	9.51	0.67	E	T	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	12/1/2008	15,470	8,819	E	6,651	W	730	1,148	7.42	0.66	W	1645	1,754	11.34	0.70	E	Q	Vol
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	12/19/2011	12,168	6,454	E	5,714	W	900	620	5.10	0.63	W	1645	1,181	9.71	0.60	E	T	VC
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	12/1/2014	11,146	5,684	E	5,462	W	730	673	6.04	0.71	W	1630	1,021	9.16	0.66	E	T	VC
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	12/18/2017	13,165	6,685	E	6,480	W	1000	776	5.89	0.63	W	1645	1,257	9.55	0.58	E	T	VC
235161	INDIAN SCHOOL	EAST OF PENNSYLVANIA	12/18/2018	13,130	6,538	E	6,592	W	745	716	5.45	0.75	W	1630	1,195	9.10	0.62	E	T	VC
235441	INDIAN SCHOOL	EAST OF WYOMING	4/1/2002	15,298	8,049	E	7,249	W	730	1,115	7.29	0.67	W	1645	1,469	9.60	0.70	E	T	Vol
235441	INDIAN SCHOOL	EAST OF WYOMING	2/1/1992	15,837	7,551	W	8,286	E	715	1,274	8.04	0.77	W	1630	1,739	10.98	0.69	E	T	Vol
235441	INDIAN SCHOOL	EAST OF WYOMING	8/1/1993	16,456	7,756	E	8,700	W	715	1,237	7.52	0.82	W	1645	1,710	10.39	0.64	E	T	Vol
235441	INDIAN SCHOOL	EAST OF WYOMING	4/1/2006	12,018	5,914	E	6,104	W	730	947	7.88	0.73	W	1645	1,188	9.89	0.62	E	T	Vol

					Direction 1		Direction 2		AM Peak Hour					PM Peak Hour						
COGID	Route Name	Location Description	Count Date	Total Volume	Daily Volume	Dir	Daily Volume	Dir	Time Begin	Volume	% Daily	Dir Split	Pk Dir	Time Begin	Volume	% Daily	Dlr Split	Pk Dir	Count Quality	Count Type
235441	INDIAN SCHOOL	EAST OF WYOMING	4/1/1996	17,268	7,670	E	9,598	W	715	1,120	6.49	0.81	W	1645	1,589	9.20	0.63	E	Q	Vol
235441	INDIAN SCHOOL	EAST OF WYOMING	4/1/2009	13,744	6,842	E	6,902	W	730	924	6.72	0.70	W	1700	1,247	9.07	0.62	E	T	Vol
235441	INDIAN SCHOOL	EAST OF WYOMING	4/10/2012	13,427	6,235	E	7,192	W	730	900	6.70	0.68	W	1645	1,272	9.47	0.55	E	T	Vol
235441	INDIAN SCHOOL	EAST OF WYOMING	4/8/2014	12,066	5,664	E	6,402	W	715	851	7.05	0.75	W	1645	1,022	8.47	0.59	E	T	VC
235441	INDIAN SCHOOL	EAST OF WYOMING	4/25/2017	12,496	5,998	E	6,498	W	730	992	7.94	0.74	W	1645	1,243	9.95	0.57	E	T	Vol
235441	INDIAN SCHOOL	EAST OF WYOMING	4/19/2021	11,560	5,517	E	6,043	W	730	731	6.32	0.67	W	1645	1,066	9.22	0.56	E	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	9/1/2009	31,813	16,470	S	15,343	N	730	2,285	7.18	0.57	S	1600	2,499	7.86	0.54	N	T	VC
239801	WYOMING	NORTH OF CONSTITUTION	2/1/1992	37,240	18,322	N	18,918	S	700	2,736	7.35	0.68	S	1615	3,263	8.76	0.61	N	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	9/1/2003	46,169	23,753	N	22,416	S	715	3,454	7.48	0.55	S	1615	4,041	8.75	0.64	N	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	9/1/1993	39,638	19,426	N	20,212	S	715	2,772	6.99	0.64	S	1630	3,418	8.62	0.59	N	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	9/1/2006	35,223	15,742	N	19,481	S	730	2,341	6.65	0.60	S	1645	3,113	8.84	0.53	S	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	9/1/1999	36,660	17,874	N	18,786	S	715	2,702	7.37	0.61	S	1645	3,262	8.90	0.57	N	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	9/1/1996	42,423	19,966	N	22,457	S	715	2,856	6.73	0.62	S	1630	3,759	8.86	0.54	N	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	10/30/2012	37,284	18,548	N	18,736	S	730	2,569	6.89	0.59	S	1630	3,448	9.25	0.58	N	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	10/20/2015	35,404	17,586	N	17,818	S	715	2,760	7.80	0.58	S	1545	3,298	9.32	0.59	N	T	Vol
239801	WYOMING	NORTH OF CONSTITUTION	10/23/2018	35,473	17,853	N	17,620	S	715	2,670	7.53	0.57	S	1645	3,096	8.73	0.58	N	T	Vol

Notes:

1. Daily volumes are averages for a 24 hour period.

2. AM Peak Period: 6 AM to 9 AM; PM Peak Period: 3 PM to 6 PM.

*3. Peak **hours** are defined by the maximum hourly 2-way volume occuring during the peak **period**.*

4. 'Time Begin' is the beginning time of the peak hour (24 hour military time)

5. Peak hour % is the percentage of 2-way volume appearing in the peak hour.

6. 'Dir Split' is the directional split: the percentage of the 2-way peak hour volume traveling in the peak direction.

7. 'Pk Dir' indicates the peak direction. E.g., 'E' means "Eastbound'.

8. 'Count Quality' is defined by NMDOT and MRCOG count standards. 'T' indicates a good count. 'Q' indicates a count that meets NMDOT standards but does not meet MRCOG standards. 'F' indicates a bad count.

9. 'Count Type': 'Vol' refers to a regular volume tube count; 'VC' refers to a vehicle classification count.

APPENDIX C

EXISTING SYNCHRO REPORTS

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	66	20	1272	71	22	1199
Future Volume (veh/h)	66	20	1272	71	22	1199
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	25	1533	86	25	1362
Peak Hour Factor	0.80	0.80	0.83	0.83	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	125	111	4151	233	305	4285
Arrive On Green	0.07	0.07	0.84	0.84	1.00	1.00
Sat Flow, veh/h	1781	1585	5115	277	312	5274
Grp Volume(v), veh/h	82	25	1055	564	25	1362
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1820	312	1702
Q Serve(g_s), s	4.9	1.6	7.9	7.9	0.8	0.0
Cycle Q Clear(g_c), s	4.9	1.6	7.9	7.9	8.8	0.0
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	125	111	2856	1528	305	4285
V/C Ratio(X)	0.66	0.23	0.37	0.37	0.08	0.32
Avail Cap(c_a), veh/h	453	403	2856	1528	305	4285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.96	0.96
Uniform Delay (d), s/veh	49.9	48.3	2.1	2.1	0.4	0.0
Incr Delay (d2), s/veh	2.2	0.4	0.4	0.7	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.7	1.3	1.6	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.1	48.7	2.4	2.8	0.9	0.2
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	107		1619			1387
Approach Delay, s/veh	51.3		2.5			0.2
Approach LOS	D		A			A

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		97.3		12.7	97.3
Change Period (Y+Rc), s		5.0		5.0	5.0
Max Green Setting (Gmax), s		72.0		28.0	72.0
Max Q Clear Time (g_c+I1), s		9.9		6.9	10.8
Green Ext Time (p_c), s		26.3		0.1	22.1

Intersection Summary	
HCM 6th Ctrl Delay	3.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	78	1	2	67	8	0	0	0	31	0	22
Future Vol, veh/h	9	78	1	2	67	8	0	0	0	31	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	74	74	74	25	25	25	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	96	1	3	91	11	0	0	0	37	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	102	0	0	97	0	0	235	227	97	222	222	97
Stage 1	-	-	-	-	-	-	119	119	-	103	103	-
Stage 2	-	-	-	-	-	-	116	108	-	119	119	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1490	-	-	1496	-	-	720	672	959	734	677	959
Stage 1	-	-	-	-	-	-	885	797	-	903	810	-
Stage 2	-	-	-	-	-	-	889	806	-	885	797	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1490	-	-	1496	-	-	695	666	959	729	671	959
Mov Cap-2 Maneuver	-	-	-	-	-	-	695	666	-	729	671	-
Stage 1	-	-	-	-	-	-	879	791	-	897	808	-
Stage 2	-	-	-	-	-	-	863	804	-	878	791	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.2	0	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1490	-	-	1496	-	-	810
HCM Lane V/C Ratio	-	0.007	-	-	0.002	-	-	0.079
HCM Control Delay (s)	0	7.4	-	-	7.4	-	-	9.8
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	1	13	0	0	0	10	7	5	40	2
Future Vol, veh/h	0	0	1	13	0	0	0	10	7	5	40	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	65	65	65	71	71	71	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	20	0	0	0	14	10	7	55	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	90	95	57	92	91	19	58	0	0	24	0	0
Stage 1	71	71	-	19	19	-	-	-	-	-	-	-
Stage 2	19	24	-	73	72	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	895	795	1009	892	799	1059	1546	-	-	1591	-	-
Stage 1	939	836	-	1000	880	-	-	-	-	-	-	-
Stage 2	1000	875	-	937	835	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	891	791	1009	885	795	1059	1546	-	-	1591	-	-
Mov Cap-2 Maneuver	891	791	-	885	795	-	-	-	-	-	-	-
Stage 1	939	832	-	1000	880	-	-	-	-	-	-	-
Stage 2	1000	875	-	929	831	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.6	9.2	0	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1546	-	-	1009	885	1591	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.023	0.004	-	-
HCM Control Delay (s)	0	-	-	8.6	9.2	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	59	0	25	0	1195	87	22	1151	0
Future Volume (vph)	0	0	0	59	0	25	0	1195	87	22	1151	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.150		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	279	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						55			70			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.91	0.91	0.91	0.83	0.83	0.83	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	65	0	27	0	1440	105	25	1323	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	65	0	27	0	1440	105	25	1323	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		33.0		33.0		33.0		63.8	63.8	13.2		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		27.0		27.0		27.0		58.8	58.8	9.7		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				10.2		10.2		75.2	75.2	89.6	93.8	
Actuated g/C Ratio				0.09		0.09		0.68	0.68	0.81	0.85	
v/c Ratio				0.50		0.14		0.41	0.10	0.06	0.31	
Control Delay				60.2		4.4		9.5	3.9	2.5	2.4	
Queue Delay				0.0		0.0		0.2	0.0	0.0	0.0	
Total Delay				60.2		4.4		9.8	3.9	2.5	2.4	
LOS				E		A		A	A	A	A	
Approach Delay					43.8			9.4			2.4	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 96.8 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 38.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	114	42	1582	68	30	1221
Future Volume (veh/h)	114	42	1582	68	30	1221
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	48	1861	80	32	1299
Peak Hour Factor	0.87	0.87	0.85	0.85	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	161	143	4148	178	225	4219
Arrive On Green	0.09	0.09	0.83	0.83	1.00	1.00
Sat Flow, veh/h	1781	1585	5188	215	228	5274
Grp Volume(v), veh/h	131	48	1261	680	32	1299
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1832	228	1702
Q Serve(g_s), s	8.7	3.4	12.3	12.3	2.5	0.0
Cycle Q Clear(g_c), s	8.7	3.4	12.3	12.3	14.8	0.0
Prop In Lane	1.00	1.00		0.12	1.00	
Lane Grp Cap(c), veh/h	161	143	2813	1513	225	4219
V/C Ratio(X)	0.81	0.34	0.45	0.45	0.14	0.31
Avail Cap(c_a), veh/h	371	330	2813	1513	225	4219
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	53.6	51.2	2.9	2.9	0.9	0.0
Incr Delay (d2), s/veh	3.7	0.5	0.5	1.0	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.4	2.7	3.1	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.3	51.7	3.4	3.8	2.2	0.2
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	179		1941			1331
Approach Delay, s/veh	55.8		3.6			0.2
Approach LOS	E		A			A

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	104.2	15.8	104.2
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	85.0	25.0	85.0
Max Q Clear Time (g_c+I1), s	14.3	10.7	16.8
Green Ext Time (p_c), s	37.9	0.2	22.3

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	96	2	0	120	25	13	0	16	98	0	40
Future Vol, veh/h	14	96	2	0	120	25	13	0	16	98	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	77	77	77	33	33	33	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	113	2	0	156	32	39	0	48	120	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	188	0	0	115	0	0	343	334	114	342	319	172
Stage 1	-	-	-	-	-	-	146	146	-	172	172	-
Stage 2	-	-	-	-	-	-	197	188	-	170	147	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1386	-	-	1474	-	-	611	586	939	612	598	872
Stage 1	-	-	-	-	-	-	857	776	-	830	756	-
Stage 2	-	-	-	-	-	-	805	745	-	832	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1386	-	-	1474	-	-	572	579	939	575	591	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	572	579	-	575	591	-
Stage 1	-	-	-	-	-	-	847	767	-	820	756	-
Stage 2	-	-	-	-	-	-	760	745	-	780	766	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	10.6	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	729	1386	-	-	1474	-	-	638
HCM Lane V/C Ratio	0.121	0.012	-	-	-	-	-	0.264
HCM Control Delay (s)	10.6	7.6	-	-	0	-	-	12.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	1.1

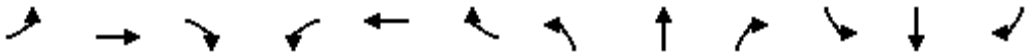
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	2	27	0	3	0	35	7	6	111	0
Future Vol, veh/h	0	0	2	27	0	3	0	35	7	6	111	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	63	63	63	88	88	88	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	43	0	5	0	40	8	7	122	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	183	184	122	182	180	44	122	0	0	48	0	0
Stage 1	136	136	-	44	44	-	-	-	-	-	-	-
Stage 2	47	48	-	138	136	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	778	710	929	779	714	1026	1465	-	-	1559	-	-
Stage 1	867	784	-	970	858	-	-	-	-	-	-	-
Stage 2	967	855	-	865	784	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	772	706	929	773	710	1026	1465	-	-	1559	-	-
Mov Cap-2 Maneuver	772	706	-	773	710	-	-	-	-	-	-	-
Stage 1	867	780	-	970	858	-	-	-	-	-	-	-
Stage 2	963	855	-	857	780	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.9	9.8	0	0.4
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1465	-	-	929	793	1559	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.06	0.004	-	-
HCM Control Delay (s)	0	-	-	8.9	9.8	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	169	0	100	0	1428	192	30	1075	0
Future Volume (vph)	0	0	0	169	0	100	0	1428	192	30	1075	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.098		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	183	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						104			119			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.92	0.92	0.92	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	184	0	109	0	1680	226	31	1120	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	184	0	109	0	1680	226	31	1120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	15		9	60		9	15		60
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		36.0		36.0		36.0		69.6	69.6	14.4		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		30.0		30.0		30.0		64.6	64.6	10.9		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				20.0		20.0		72.5	72.5	87.0	90.5	
Actuated g/C Ratio				0.17		0.17		0.60	0.60	0.72	0.75	
v/c Ratio				0.78		0.31		0.55	0.23	0.10	0.29	
Control Delay				69.4		10.6		16.3	7.3	5.7	5.4	
Queue Delay				0.0		0.0		0.7	0.0	0.0	0.0	
Total Delay				69.4		10.6		17.0	7.3	5.7	5.4	
LOS				E		B		B	A	A	A	
Approach Delay					47.5			15.9			5.4	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 105.6 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

APPENDIX D

TRIP GENERATION INFORMATION

Land Use: 934
Fast-Food Restaurant with Drive-Through Window

Description

This category includes fast-food restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 46 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively. For the one dense multi-use urban site with data, the same AM and PM peak hours were observed.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alaska, Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

163, 164, 168, 180, 181, 241, 245, 278, 294, 300, 301, 319, 338, 340, 342, 358, 389, 438, 502, 552, 577, 583, 584, 617, 640, 641, 704, 715, 728, 810, 866, 867, 869, 885, 886, 927, 935, 962, 977

Fast-Food Restaurant with Drive-Through Window
(934)

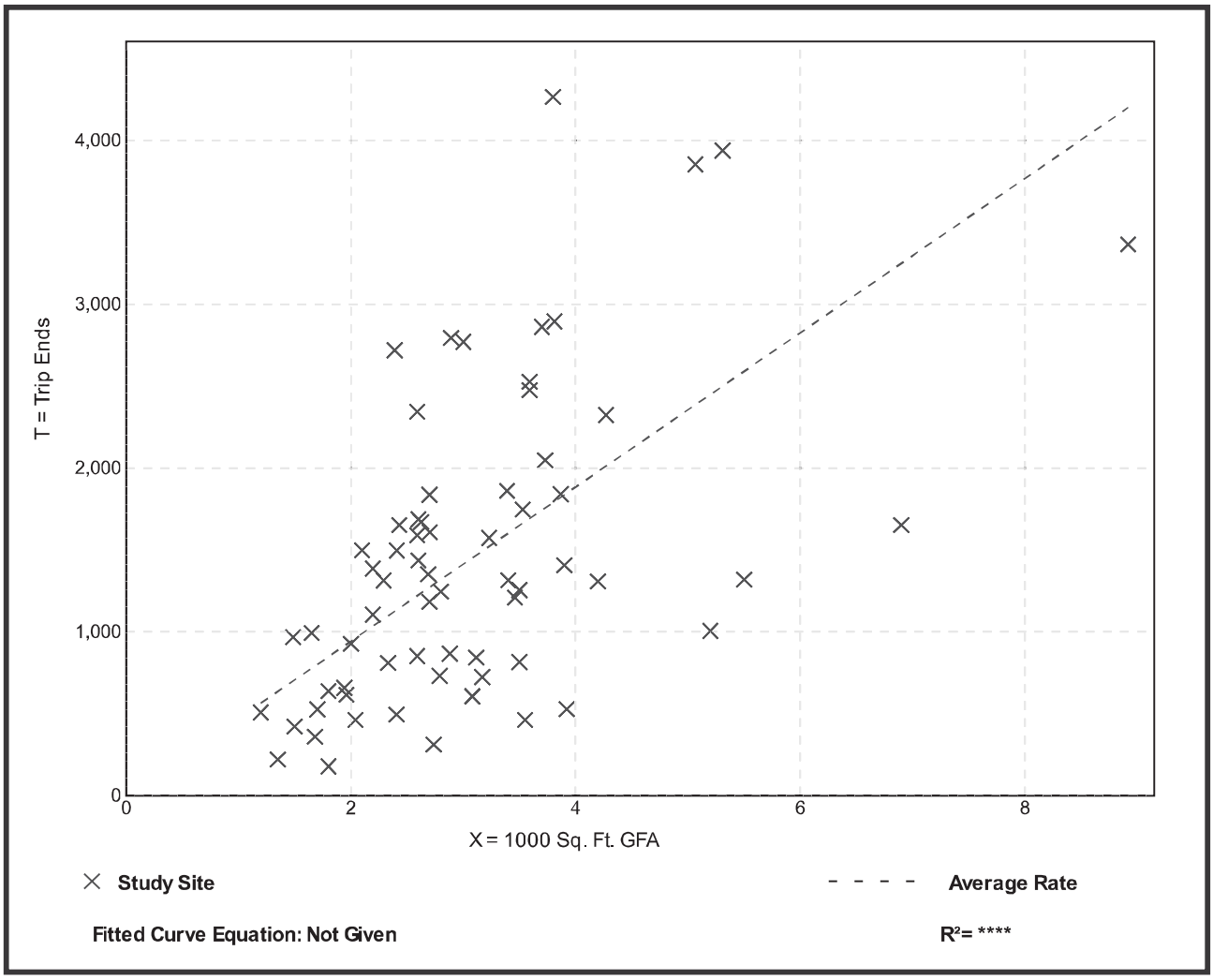
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 67
1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
470.95	98.89 - 1137.66	244.44

Data Plot and Equation



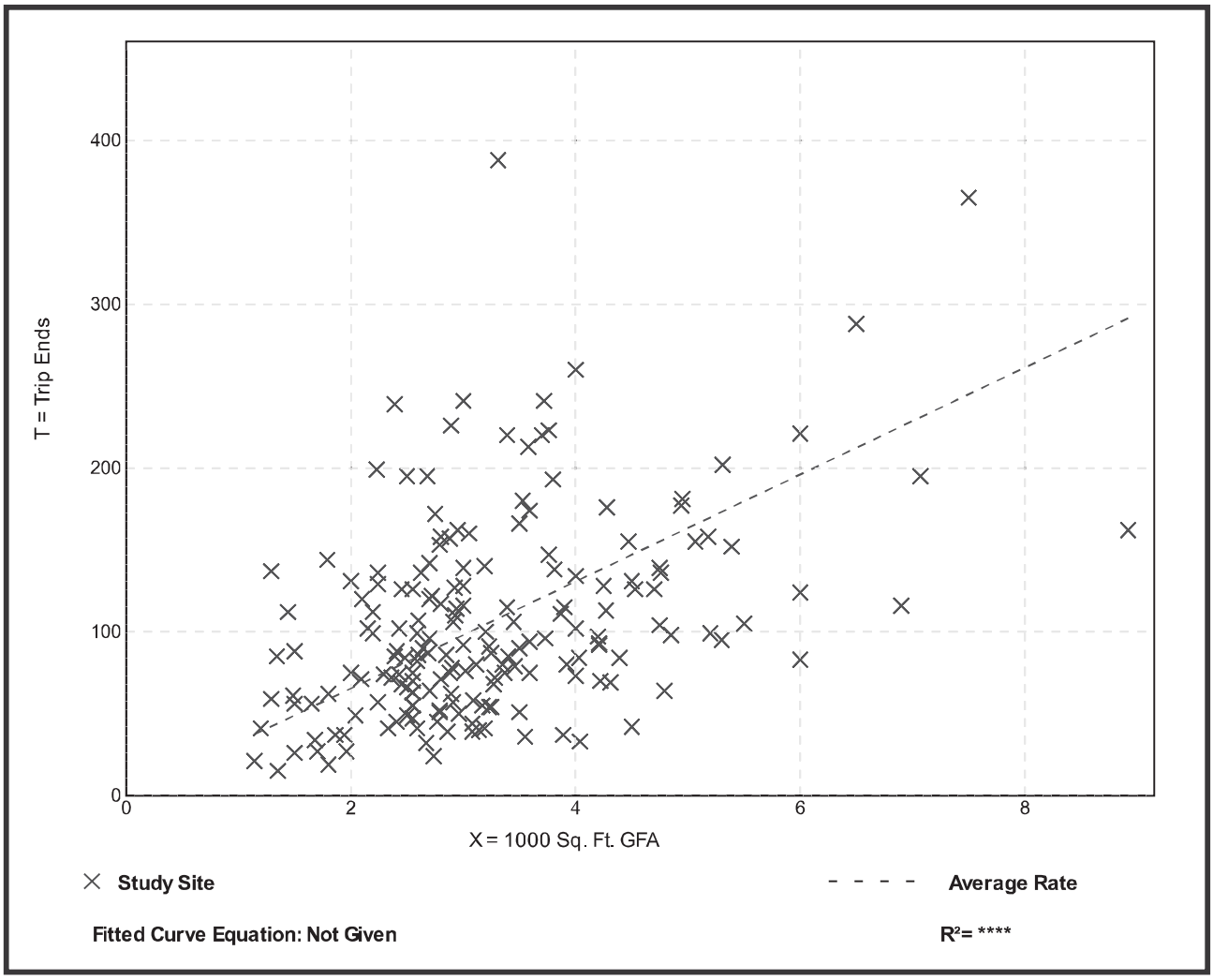
Fast-Food Restaurant with Drive-Through Window
(934)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	185
1000 Sq. Ft. GFA:	3
Directional Distribution:	52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
32.67	8.17 - 117.22	17.87

Data Plot and Equation



Trip Generation Planner (ITE 10th Edition) - Summary Report

Kimley»Horn

Weekday Trip Generation
Trips Based on Average Rates/Equations

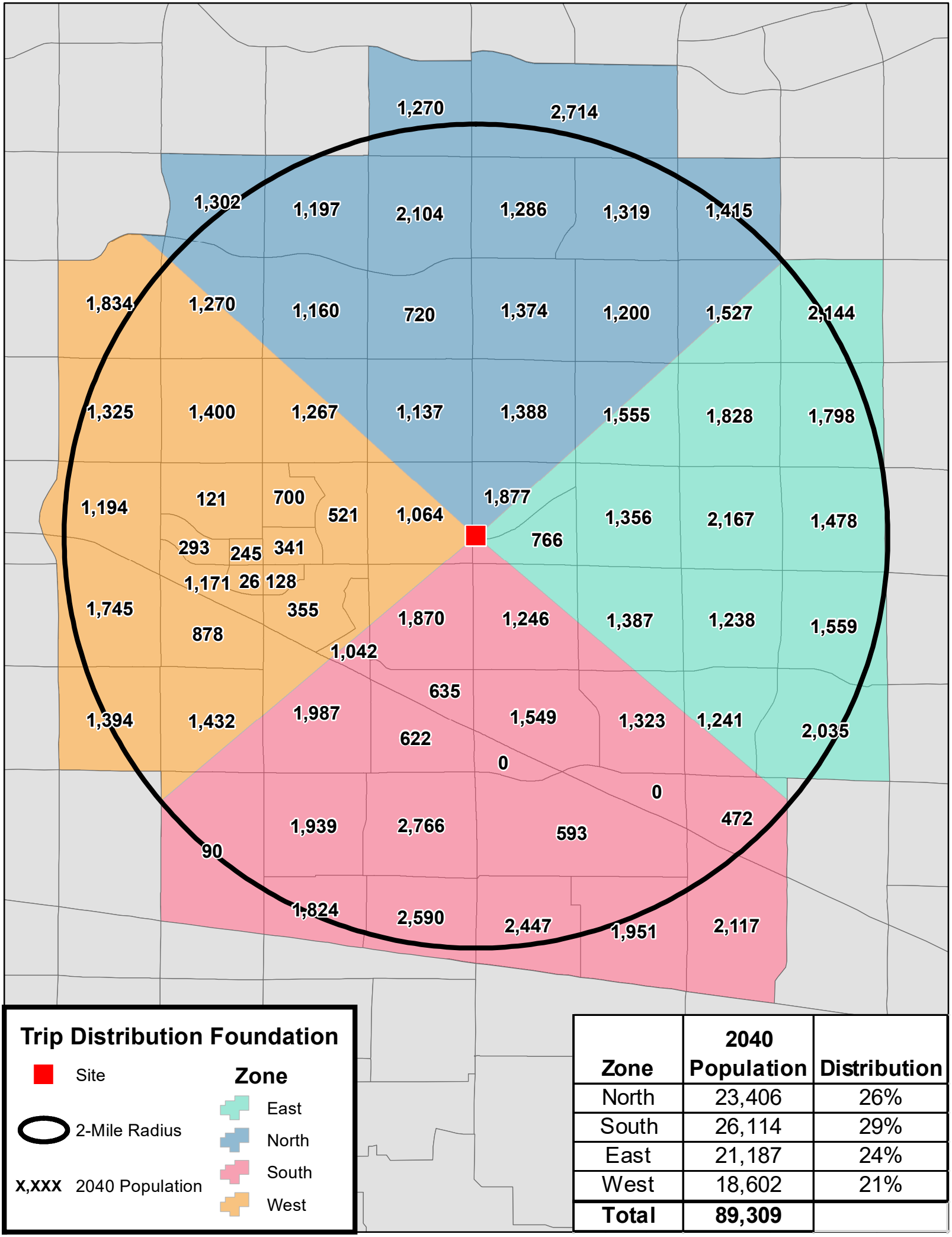
Project Name **NEC Wyoming Blvd & Northeastern Blvd**
Project Number **06931344**

ITE Code	Internal Capture Land Use	Land Use Description	Independent Variable	Setting/Location	No. of Units	Avg Rate or Eq	Rates: Daily Rate	Rates: AM Rate	Rates: PM Rate	Total Trips: Daily Trips	Total Trips: AM Trips	Total Trips: PM Trips	Total Trips: AM Trips In	Total Trips: AM Trips Out	Total Trips: PM Trips In	Total Trips: PM Trips Out
934		Fast-Food Restaurant w/ D.T.	1,000 Sq Ft	General Urban/Suburban	3.443	Avg	470.95		32.67	1,622		112			58	54
									Grand Total	1,622		112			58	54

Notes:
(1) AM and/or PM rates correspond to peak hour of generator
(2) Land use was removed in *Trip Generation, 10 Edition,* trip generation data from the ITE *Trip Generation, 9th Edition*

APPENDIX E

TRIP DISTRIBUTION MAP



Trip Distribution Foundation

- Site
- 2-Mile Radius
- X,XXX 2040 Population

Zone

- East
- North
- South
- West

Zone	2040 Population	Distribution
North	23,406	26%
South	26,114	29%
East	21,187	24%
West	18,602	21%
Total	**89,309**	

APPENDIX F

BACKGROUND SYNCHRO REPORTS

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	67	20	1285	72	22	1211
Future Volume (veh/h)	67	20	1285	72	22	1211
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	25	1548	87	25	1376
Peak Hour Factor	0.80	0.80	0.83	0.83	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	125	111	4150	233	301	4284
Arrive On Green	0.07	0.07	0.84	0.84	1.00	1.00
Sat Flow, veh/h	1781	1585	5115	278	307	5274
Grp Volume(v), veh/h	84	25	1065	570	25	1376
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1820	307	1702
Q Serve(g_s), s	5.1	1.6	8.1	8.1	0.9	0.0
Cycle Q Clear(g_c), s	5.1	1.6	8.1	8.1	8.9	0.0
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	125	111	2856	1527	301	4284
V/C Ratio(X)	0.67	0.22	0.37	0.37	0.08	0.32
Avail Cap(c_a), veh/h	453	403	2856	1527	301	4284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.96	0.96
Uniform Delay (d), s/veh	49.9	48.3	2.1	2.1	0.4	0.0
Incr Delay (d2), s/veh	2.3	0.4	0.4	0.7	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.7	1.4	1.6	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.2	48.7	2.5	2.8	0.9	0.2
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	109		1635			1401
Approach Delay, s/veh	51.4		2.6			0.2
Approach LOS	D		A			A

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		97.3		12.7	97.3
Change Period (Y+Rc), s		5.0		5.0	5.0
Max Green Setting (Gmax), s		72.0		28.0	72.0
Max Q Clear Time (g_c+I1), s		10.1		7.1	10.9
Green Ext Time (p_c), s		26.7		0.1	22.5

Intersection Summary	
HCM 6th Ctrl Delay	3.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	79	1	2	68	8	0	0	0	31	0	22
Future Vol, veh/h	9	79	1	2	68	8	0	0	0	31	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	74	74	74	25	25	25	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	98	1	3	92	11	0	0	0	37	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	103	0	0	99	0	0	238	230	99	225	225	98
Stage 1	-	-	-	-	-	-	121	121	-	104	104	-
Stage 2	-	-	-	-	-	-	117	109	-	121	121	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1489	-	-	1494	-	-	716	670	957	730	674	958
Stage 1	-	-	-	-	-	-	883	796	-	902	809	-
Stage 2	-	-	-	-	-	-	888	805	-	883	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1489	-	-	1494	-	-	691	664	957	725	668	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	691	664	-	725	668	-
Stage 1	-	-	-	-	-	-	877	790	-	896	807	-
Stage 2	-	-	-	-	-	-	862	803	-	876	790	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.2	0	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1489	-	-	1494	-	-	806
HCM Lane V/C Ratio	-	0.007	-	-	0.002	-	-	0.079
HCM Control Delay (s)	0	7.4	-	-	7.4	-	-	9.9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	13	0	0	0	10	7	5	40	2
Future Vol, veh/h	0	0	1	13	0	0	0	10	7	5	40	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	65	65	65	71	71	71	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	20	0	0	0	14	10	7	55	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	90	95	57	92	91	19	58	0	0	24	0	0
Stage 1	71	71	-	19	19	-	-	-	-	-	-	-
Stage 2	19	24	-	73	72	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	895	795	1009	892	799	1059	1546	-	-	1591	-	-
Stage 1	939	836	-	1000	880	-	-	-	-	-	-	-
Stage 2	1000	875	-	937	835	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	891	791	1009	885	795	1059	1546	-	-	1591	-	-
Mov Cap-2 Maneuver	891	791	-	885	795	-	-	-	-	-	-	-
Stage 1	939	832	-	1000	880	-	-	-	-	-	-	-
Stage 2	1000	875	-	929	831	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.6	9.2	0	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1546	-	-	1009	885	1591	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.023	0.004	-	-
HCM Control Delay (s)	0	-	-	8.6	9.2	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	0	25	0	1207	88	22	1163	0
Future Volume (vph)	0	0	0	60	0	25	0	1207	88	22	1163	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.147		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	274	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						55			70			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.91	0.91	0.91	0.83	0.83	0.83	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	66	0	27	0	1454	106	25	1337	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	66	0	27	0	1454	106	25	1337	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		33.0		33.0		33.0		63.8	63.8	13.2		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		27.0		27.0		27.0		58.8	58.8	9.7		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				10.2		10.2		75.0	75.0	89.6	93.8	
Actuated g/C Ratio				0.09		0.09		0.68	0.68	0.81	0.85	
v/c Ratio				0.50		0.14		0.42	0.10	0.06	0.31	
Control Delay				60.2		4.3		9.7	4.0	2.5	2.5	
Queue Delay				0.0		0.0		0.2	0.0	0.0	0.0	
Total Delay				60.2		4.3		9.9	4.0	2.5	2.5	
LOS				E		A		A	A	A	A	
Approach Delay					44.0			9.5			2.5	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 96.8 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	115	42	1598	69	30	1233
Future Volume (veh/h)	115	42	1598	69	30	1233
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	48	1880	81	32	1312
Peak Hour Factor	0.87	0.87	0.85	0.85	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	162	144	4145	178	221	4216
Arrive On Green	0.09	0.09	0.83	0.83	1.00	1.00
Sat Flow, veh/h	1781	1585	5188	216	224	5274
Grp Volume(v), veh/h	132	48	1274	687	32	1312
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1831	224	1702
Q Serve(g_s), s	8.7	3.4	12.5	12.6	2.6	0.0
Cycle Q Clear(g_c), s	8.7	3.4	12.5	12.6	15.2	0.0
Prop In Lane	1.00	1.00		0.12	1.00	
Lane Grp Cap(c), veh/h	162	144	2811	1512	221	4216
V/C Ratio(X)	0.81	0.33	0.45	0.45	0.14	0.31
Avail Cap(c_a), veh/h	371	330	2811	1512	221	4216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	53.6	51.1	2.9	2.9	1.0	0.0
Incr Delay (d2), s/veh	3.8	0.5	0.5	1.0	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	1.4	2.7	3.1	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.3	51.6	3.4	3.9	2.3	0.2
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	180		1961			1344
Approach Delay, s/veh	55.8		3.6			0.2
Approach LOS	E		A			A

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	104.1	15.9	104.1
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	85.0	25.0	85.0
Max Q Clear Time (g_c+I1), s	14.6	10.7	17.2
Green Ext Time (p_c), s	38.5	0.2	22.7

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	97	2	0	121	25	13	0	16	99	0	40
Future Vol, veh/h	14	97	2	0	121	25	13	0	16	99	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	77	77	77	33	33	33	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	114	2	0	157	32	39	0	48	121	0	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	189	0	0	116	0	0	345	336	115	344	321	173
Stage 1	-	-	-	-	-	-	147	147	-	173	173	-
Stage 2	-	-	-	-	-	-	198	189	-	171	148	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1385	-	-	1473	-	-	609	585	937	610	596	871
Stage 1	-	-	-	-	-	-	856	775	-	829	756	-
Stage 2	-	-	-	-	-	-	804	744	-	831	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1385	-	-	1473	-	-	570	578	937	573	589	871
Mov Cap-2 Maneuver	-	-	-	-	-	-	570	578	-	573	589	-
Stage 1	-	-	-	-	-	-	846	766	-	819	756	-
Stage 2	-	-	-	-	-	-	759	744	-	779	766	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	10.6	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	727	1385	-	-	1473	-	-	636
HCM Lane V/C Ratio	0.121	0.012	-	-	-	-	-	0.267
HCM Control Delay (s)	10.6	7.6	-	-	0	-	-	12.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	1.1

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	2	27	0	3	0	35	7	6	112	0
Future Vol, veh/h	0	0	2	27	0	3	0	35	7	6	112	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	63	63	63	88	88	88	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	43	0	5	0	40	8	7	123	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	184	185	123	183	181	44	123	0	0	48	0	0
Stage 1	137	137	-	44	44	-	-	-	-	-	-	-
Stage 2	47	48	-	139	137	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	777	709	928	778	713	1026	1464	-	-	1559	-	-
Stage 1	866	783	-	970	858	-	-	-	-	-	-	-
Stage 2	967	855	-	864	783	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	771	705	928	772	709	1026	1464	-	-	1559	-	-
Mov Cap-2 Maneuver	771	705	-	772	709	-	-	-	-	-	-	-
Stage 1	866	779	-	970	858	-	-	-	-	-	-	-
Stage 2	963	855	-	856	779	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.9	9.8	0	0.4
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1464	-	-	928	792	1559	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.06	0.004	-	-
HCM Control Delay (s)	0	-	-	8.9	9.8	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	171	0	101	0	1442	194	30	1086	0
Future Volume (vph)	0	0	0	171	0	101	0	1442	194	30	1086	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.095		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	177	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						104			119			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.92	0.92	0.92	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	186	0	110	0	1696	228	31	1131	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	186	0	110	0	1696	228	31	1131	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		36.0		36.0		36.0		69.6	69.6	14.4		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		30.0		30.0		30.0		64.6	64.6	10.9		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				20.2		20.2		72.3	72.3	86.8	90.3	
Actuated g/C Ratio				0.17		0.17		0.60	0.60	0.72	0.75	
v/c Ratio				0.78		0.31		0.55	0.23	0.10	0.30	
Control Delay				69.3		10.8		16.6	7.5	5.7	5.4	
Queue Delay				0.0		0.0		0.7	0.0	0.0	0.0	
Total Delay				69.3		10.8		17.4	7.5	5.7	5.4	
LOS				E		B		B	A	A	A	
Approach Delay					47.5			16.2			5.4	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 105.6 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	74	22	1419	79	25	1338
Future Volume (veh/h)	74	22	1419	79	25	1338
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	28	1710	95	28	1520
Peak Hour Factor	0.80	0.80	0.83	0.83	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	126	112	4149	230	262	4280
Arrive On Green	0.07	0.07	0.84	0.84	1.00	1.00
Sat Flow, veh/h	1781	1585	5119	275	260	5274
Grp Volume(v), veh/h	92	28	1175	630	28	1520
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1821	260	1702
Q Serve(g_s), s	5.6	1.8	9.4	9.4	1.4	0.0
Cycle Q Clear(g_c), s	5.6	1.8	9.4	9.4	10.8	0.0
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	126	112	2853	1526	262	4280
V/C Ratio(X)	0.73	0.25	0.41	0.41	0.11	0.36
Avail Cap(c_a), veh/h	453	403	2853	1526	262	4280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	50.1	48.3	2.2	2.2	0.6	0.0
Incr Delay (d2), s/veh	3.0	0.4	0.4	0.8	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.7	1.6	1.9	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.1	48.8	2.6	3.0	1.3	0.2
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	120		1805			1548
Approach Delay, s/veh	52.1		2.8			0.2
Approach LOS	D		A			A

Timer - Assigned Phs			4		6	8
Phs Duration (G+Y+Rc), s			97.2		12.8	97.2
Change Period (Y+Rc), s			5.0		5.0	5.0
Max Green Setting (Gmax), s			72.0		28.0	72.0
Max Q Clear Time (g_c+I1), s			11.4		7.6	12.8
Green Ext Time (p_c), s			31.2		0.1	26.5

Intersection Summary	
HCM 6th Ctrl Delay	3.3
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	87	1	2	75	9	0	0	0	35	0	25
Future Vol, veh/h	10	87	1	2	75	9	0	0	0	35	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	74	74	74	25	25	25	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	107	1	3	101	12	0	0	0	42	0	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	108	0	0	260	251	108	245	245	107
Stage 1	-	-	-	-	-	-	132	132	-	113	113	-
Stage 2	-	-	-	-	-	-	128	119	-	132	132	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1483	-	-	693	652	946	709	657	947
Stage 1	-	-	-	-	-	-	871	787	-	892	802	-
Stage 2	-	-	-	-	-	-	876	797	-	871	787	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1483	-	-	666	645	946	703	650	947
Mov Cap-2 Maneuver	-	-	-	-	-	-	666	645	-	703	650	-
Stage 1	-	-	-	-	-	-	864	781	-	885	800	-
Stage 2	-	-	-	-	-	-	846	795	-	864	781	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.2	0	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1476	-	-	1483	-	-	788
HCM Lane V/C Ratio	-	0.008	-	-	0.002	-	-	0.092
HCM Control Delay (s)	0	7.5	-	-	7.4	-	-	10
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	15	0	0	0	11	8	6	45	2
Future Vol, veh/h	0	0	1	15	0	0	0	11	8	6	45	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	25	65	65	65	71	71	71	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	23	0	0	0	15	11	8	62	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	101	106	64	103	102	21	65	0	0	26	0	0
Stage 1	80	80	-	21	21	-	-	-	-	-	-	-
Stage 2	21	26	-	82	81	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	880	784	1000	877	788	1056	1537	-	-	1588	-	-
Stage 1	929	828	-	998	878	-	-	-	-	-	-	-
Stage 2	998	874	-	926	828	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	876	780	1000	870	784	1056	1537	-	-	1588	-	-
Mov Cap-2 Maneuver	876	780	-	870	784	-	-	-	-	-	-	-
Stage 1	929	824	-	998	878	-	-	-	-	-	-	-
Stage 2	998	874	-	918	824	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.6	9.3	0	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1537	-	-	1000	870	1588	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.027	0.005	-	-
HCM Control Delay (s)	0	-	-	8.6	9.3	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	66	0	28	0	1333	97	25	1284	0
Future Volume (vph)	0	0	0	66	0	28	0	1333	97	25	1284	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.117		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	218	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						55			70			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.91	0.91	0.91	0.83	0.83	0.83	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	73	0	31	0	1606	117	29	1476	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	73	0	31	0	1606	117	29	1476	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		33.0		33.0		33.0		63.8	63.8	13.2		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		27.0		27.0		27.0		58.8	58.8	9.7		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				10.7		10.7		72.7	72.7	89.1	93.3	
Actuated g/C Ratio				0.10		0.10		0.66	0.66	0.81	0.85	
v/c Ratio				0.54		0.15		0.48	0.11	0.07	0.34	
Control Delay				61.0		5.9		11.4	5.0	2.8	2.7	
Queue Delay				0.0		0.0		0.2	0.0	0.0	0.0	
Total Delay				61.0		5.9		11.6	5.0	2.8	2.7	
LOS				E		A		B	A	A	A	
Approach Delay					44.6			11.2			2.7	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 96.8 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 41.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	127	47	1765	76	33	1362
Future Volume (veh/h)	127	47	1765	76	33	1362
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	146	54	2076	89	35	1449
Peak Hour Factor	0.87	0.87	0.85	0.85	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	176	157	4106	175	186	4175
Arrive On Green	0.10	0.10	0.82	0.82	1.00	1.00
Sat Flow, veh/h	1781	1585	5190	215	183	5274
Grp Volume(v), veh/h	146	54	1405	760	35	1449
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1832	183	1702
Q Serve(g_s), s	9.7	3.8	15.4	15.5	4.7	0.0
Cycle Q Clear(g_c), s	9.7	3.8	15.4	15.5	20.2	0.0
Prop In Lane	1.00	1.00		0.12	1.00	
Lane Grp Cap(c), veh/h	176	157	2784	1498	186	4175
V/C Ratio(X)	0.83	0.34	0.50	0.51	0.19	0.35
Avail Cap(c_a), veh/h	371	330	2784	1498	186	4175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.92	0.92
Uniform Delay (d), s/veh	53.1	50.4	3.4	3.4	1.6	0.0
Incr Delay (d2), s/veh	3.8	0.5	0.7	1.2	2.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	1.5	3.5	4.1	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.8	50.9	4.1	4.6	3.7	0.2
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	200		2165			1484
Approach Delay, s/veh	55.2		4.3			0.3
Approach LOS	E		A			A

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	103.1	16.9	103.1
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	85.0	25.0	85.0
Max Q Clear Time (g_c+I1), s	17.5	11.7	22.2
Green Ext Time (p_c), s	43.9	0.2	26.8

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	107	2	0	134	28	15	0	18	109	0	45
Future Vol, veh/h	16	107	2	0	134	28	15	0	18	109	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	77	77	77	33	33	33	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	126	2	0	174	36	45	0	55	133	0	55

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	210	0	0	128	0	0	385	375	127	385	358	192
Stage 1	-	-	-	-	-	-	165	165	-	192	192	-
Stage 2	-	-	-	-	-	-	220	210	-	193	166	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1361	-	-	1458	-	-	573	556	923	573	568	850
Stage 1	-	-	-	-	-	-	837	762	-	810	742	-
Stage 2	-	-	-	-	-	-	782	728	-	809	761	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1361	-	-	1458	-	-	530	548	923	533	560	850
Mov Cap-2 Maneuver	-	-	-	-	-	-	530	548	-	533	560	-
Stage 1	-	-	-	-	-	-	825	751	-	799	742	-
Stage 2	-	-	-	-	-	-	732	728	-	751	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	11.1	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	690	1361	-	-	1458	-	-	598
HCM Lane V/C Ratio	0.145	0.014	-	-	-	-	-	0.314
HCM Control Delay (s)	11.1	7.7	-	-	0	-	-	13.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	1.3

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	2	30	0	3	0	39	8	7	124	0
Future Vol, veh/h	0	0	2	30	0	3	0	39	8	7	124	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	63	63	63	88	88	88	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	48	0	5	0	44	9	8	136	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	203	205	136	203	201	49	136	0	0	53	0	0
Stage 1	152	152	-	49	49	-	-	-	-	-	-	-
Stage 2	51	53	-	154	152	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	755	691	913	755	695	1020	1448	-	-	1553	-	-
Stage 1	850	772	-	964	854	-	-	-	-	-	-	-
Stage 2	962	851	-	848	772	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	748	687	913	748	691	1020	1448	-	-	1553	-	-
Mov Cap-2 Maneuver	748	687	-	748	691	-	-	-	-	-	-	-
Stage 1	850	767	-	964	854	-	-	-	-	-	-	-
Stage 2	958	851	-	839	767	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	10	0	0.4
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	913	767	1553	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.068	0.005	-	-
HCM Control Delay (s)	0	-	-	9	10	7.3	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	189	0	112	0	1593	214	33	1199	0
Future Volume (vph)	0	0	0	189	0	112	0	1593	214	33	1199	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.069		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	129	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						105			119			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.92	0.92	0.92	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	205	0	122	0	1874	252	34	1249	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	205	0	122	0	1874	252	34	1249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		36.0		36.0		36.0		69.6	69.6	14.4		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		30.0		30.0		30.0		64.6	64.6	10.9		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				21.8		21.8		70.3	70.3	85.2	88.7	
Actuated g/C Ratio				0.18		0.18		0.59	0.59	0.71	0.74	
v/c Ratio				0.80		0.33		0.63	0.26	0.12	0.33	
Control Delay				68.8		12.2		19.8	9.6	6.5	6.2	
Queue Delay				0.0		0.0		1.5	0.4	0.0	0.0	
Total Delay				68.8		12.2		21.3	10.0	6.5	6.2	
LOS				E		B		C	B	A	A	
Approach Delay					47.7			20.0			6.2	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 105.6 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 48.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

APPENDIX G

TOTAL SYNCHRO REPORTS

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	67	20	1285	72	22	1211
Future Volume (veh/h)	67	20	1285	72	22	1211
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	25	1548	87	25	1376
Peak Hour Factor	0.80	0.80	0.83	0.83	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	125	111	4150	233	301	4284
Arrive On Green	0.07	0.07	0.84	0.84	1.00	1.00
Sat Flow, veh/h	1781	1585	5115	278	307	5274
Grp Volume(v), veh/h	84	25	1065	570	25	1376
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1820	307	1702
Q Serve(g_s), s	5.1	1.6	8.1	8.1	0.9	0.0
Cycle Q Clear(g_c), s	5.1	1.6	8.1	8.1	8.9	0.0
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	125	111	2856	1527	301	4284
V/C Ratio(X)	0.67	0.22	0.37	0.37	0.08	0.32
Avail Cap(c_a), veh/h	453	403	2856	1527	301	4284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.96	0.96
Uniform Delay (d), s/veh	49.9	48.3	2.1	2.1	0.4	0.0
Incr Delay (d2), s/veh	2.3	0.4	0.4	0.7	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.7	1.4	1.6	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.2	48.7	2.5	2.8	0.9	0.2
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	109		1635			1401
Approach Delay, s/veh	51.4		2.6			0.2
Approach LOS	D		A			A

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		97.3		12.7	97.3
Change Period (Y+Rc), s		5.0		5.0	5.0
Max Green Setting (Gmax), s		72.0		28.0	72.0
Max Q Clear Time (g_c+I1), s		10.1		7.1	10.9
Green Ext Time (p_c), s		26.7		0.1	22.5

Intersection Summary	
HCM 6th Ctrl Delay	3.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	79	1	2	68	8	0	0	0	31	0	22
Future Vol, veh/h	9	79	1	2	68	8	0	0	0	31	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	74	74	74	25	25	25	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	98	1	3	92	11	0	0	0	37	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	103	0	0	99	0	0	238	230	99	225	225	98
Stage 1	-	-	-	-	-	-	121	121	-	104	104	-
Stage 2	-	-	-	-	-	-	117	109	-	121	121	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1489	-	-	1494	-	-	716	670	957	730	674	958
Stage 1	-	-	-	-	-	-	883	796	-	902	809	-
Stage 2	-	-	-	-	-	-	888	805	-	883	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1489	-	-	1494	-	-	691	664	957	725	668	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	691	664	-	725	668	-
Stage 1	-	-	-	-	-	-	877	790	-	896	807	-
Stage 2	-	-	-	-	-	-	862	803	-	876	790	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.2	0	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1489	-	-	1494	-	-	806
HCM Lane V/C Ratio	-	0.007	-	-	0.002	-	-	0.079
HCM Control Delay (s)	0	7.4	-	-	7.4	-	-	9.9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	13	0	0	0	10	7	5	40	2
Future Vol, veh/h	0	0	1	13	0	0	0	10	7	5	40	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	65	65	65	71	71	71	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	20	0	0	0	14	10	7	55	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	90	95	57	90	91	19	58	0	0	24	0	0
Stage 1	71	71	-	19	19	-	-	-	-	-	-	-
Stage 2	19	24	-	71	72	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	895	795	1009	895	799	1059	1546	-	-	1591	-	-
Stage 1	939	836	-	1000	880	-	-	-	-	-	-	-
Stage 2	1000	875	-	939	835	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	891	791	1009	891	795	1059	1546	-	-	1591	-	-
Mov Cap-2 Maneuver	891	791	-	891	795	-	-	-	-	-	-	-
Stage 1	939	832	-	1000	880	-	-	-	-	-	-	-
Stage 2	1000	875	-	933	831	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.6	9.1	0	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1546	-	-	1009	891	1591	-	-
HCM Lane V/C Ratio	-	-	-	0.001	0.022	0.004	-	-
HCM Control Delay (s)	0	-	-	8.6	9.1	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	0	25	0	1207	88	22	1163	0
Future Volume (vph)	0	0	0	60	0	25	0	1207	88	22	1163	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.147		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	274	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						55			70			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.91	0.91	0.91	0.83	0.83	0.83	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	66	0	27	0	1454	106	25	1337	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	66	0	27	0	1454	106	25	1337	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		33.0		33.0		33.0		63.8	63.8	13.2		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		27.0		27.0		27.0		58.8	58.8	9.7		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				10.2		10.2		75.0	75.0	89.6	93.8	
Actuated g/C Ratio				0.09		0.09		0.68	0.68	0.81	0.85	
v/c Ratio				0.50		0.14		0.42	0.10	0.06	0.31	
Control Delay				60.2		4.3		9.7	4.0	2.5	2.5	
Queue Delay				0.0		0.0		0.2	0.0	0.0	0.0	
Total Delay				60.2		4.3		9.9	4.0	2.5	2.5	
LOS				E		A		A	A	A	A	
Approach Delay					44.0			9.5			2.5	
Approach LOS					D			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 96.8 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	134	45	1607	90	33	1242
Future Volume (veh/h)	134	45	1607	90	33	1242
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	154	52	1891	106	35	1321
Peak Hour Factor	0.87	0.87	0.85	0.85	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	184	164	4024	225	211	4153
Arrive On Green	0.10	0.10	0.81	0.81	1.00	1.00
Sat Flow, veh/h	1781	1585	5116	277	216	5274
Grp Volume(v), veh/h	154	52	1299	698	35	1321
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1821	216	1702
Q Serve(g_s), s	10.2	3.6	13.8	13.9	3.5	0.0
Cycle Q Clear(g_c), s	10.2	3.6	13.8	13.9	17.4	0.0
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	184	164	2768	1481	211	4153
V/C Ratio(X)	0.84	0.32	0.47	0.47	0.17	0.32
Avail Cap(c_a), veh/h	371	330	2768	1481	211	4153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	52.8	49.9	3.4	3.4	1.2	0.0
Incr Delay (d2), s/veh	3.8	0.4	0.6	1.1	1.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	1.5	3.3	3.7	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.6	50.3	4.0	4.5	2.8	0.2
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	206		1997			1356
Approach Delay, s/veh	55.0		4.1			0.3
Approach LOS	E		A			A

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	102.6	17.4	102.6
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	85.0	25.0	85.0
Max Q Clear Time (g_c+I1), s	15.9	12.2	19.4
Green Ext Time (p_c), s	39.3	0.2	23.1

Intersection Summary	
HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	97	2	0	121	28	13	0	16	102	0	62
Future Vol, veh/h	38	97	2	0	121	28	13	0	16	102	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	77	77	77	33	33	33	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	45	114	2	0	157	36	39	0	48	124	0	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	193	0	0	116	0	0	418	398	115	404	381	175
Stage 1	-	-	-	-	-	-	205	205	-	175	175	-
Stage 2	-	-	-	-	-	-	213	193	-	229	206	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1380	-	-	1473	-	-	545	540	937	557	552	868
Stage 1	-	-	-	-	-	-	797	732	-	827	754	-
Stage 2	-	-	-	-	-	-	789	741	-	774	731	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1380	-	-	1473	-	-	485	522	937	515	534	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	485	522	-	515	534	-
Stage 1	-	-	-	-	-	-	771	708	-	800	754	-
Stage 2	-	-	-	-	-	-	720	741	-	710	707	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	11.3	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	661	1380	-	-	1473	-	-	609
HCM Lane V/C Ratio	0.133	0.032	-	-	-	-	-	0.328
HCM Control Delay (s)	11.3	7.7	-	-	0	-	-	13.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	1.4

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	30	0	27	27	0	3	27	35	7	6	112	32
Future Vol, veh/h	30	0	27	27	0	3	27	35	7	6	112	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	63	63	63	88	88	88	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	0	29	43	0	5	31	40	8	7	123	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	264	265	141	275	278	44	158	0	0	48	0	0
Stage 1	155	155	-	106	106	-	-	-	-	-	-	-
Stage 2	109	110	-	169	172	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	689	640	907	677	630	1026	1422	-	-	1559	-	-
Stage 1	847	769	-	900	807	-	-	-	-	-	-	-
Stage 2	896	804	-	833	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	672	623	907	642	613	1026	1422	-	-	1559	-	-
Mov Cap-2 Maneuver	672	623	-	642	613	-	-	-	-	-	-	-
Stage 1	828	765	-	880	789	-	-	-	-	-	-	-
Stage 2	872	786	-	802	752	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10.8	3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	766	667	1559	-	-
HCM Lane V/C Ratio	0.022	-	-	0.081	0.071	0.004	-	-
HCM Control Delay (s)	7.6	0	-	10.1	10.8	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	180	0	123	0	1445	203	54	1089	0
Future Volume (vph)	0	0	0	180	0	123	0	1445	203	54	1089	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.093		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	173	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						120			125			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.92	0.92	0.92	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	196	0	134	0	1700	239	56	1134	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	196	0	134	0	1700	239	56	1134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		36.0		36.0		36.0		69.6	69.6	14.4		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		30.0		30.0		30.0		64.6	64.6	10.9		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				21.0		21.0		71.6	71.6	86.0	89.5	
Actuated g/C Ratio				0.18		0.18		0.60	0.60	0.72	0.75	
v/c Ratio				0.80		0.36		0.56	0.24	0.19	0.30	
Control Delay				69.3		11.5		17.7	8.3	6.7	5.7	
Queue Delay				0.0		0.0		0.9	0.0	0.0	0.0	
Total Delay				69.3		11.5		18.6	8.3	6.7	5.7	
LOS				E		B		B	A	A	A	
Approach Delay					45.8			17.4			5.8	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 105.6 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 52.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	74	22	1419	79	25	1338
Future Volume (veh/h)	74	22	1419	79	25	1338
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	28	1710	95	28	1520
Peak Hour Factor	0.80	0.80	0.83	0.83	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	126	112	4149	230	262	4280
Arrive On Green	0.07	0.07	0.84	0.84	1.00	1.00
Sat Flow, veh/h	1781	1585	5119	275	260	5274
Grp Volume(v), veh/h	92	28	1175	630	28	1520
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1821	260	1702
Q Serve(g_s), s	5.6	1.8	9.4	9.4	1.4	0.0
Cycle Q Clear(g_c), s	5.6	1.8	9.4	9.4	10.8	0.0
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	126	112	2853	1526	262	4280
V/C Ratio(X)	0.73	0.25	0.41	0.41	0.11	0.36
Avail Cap(c_a), veh/h	453	403	2853	1526	262	4280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	50.1	48.3	2.2	2.2	0.6	0.0
Incr Delay (d2), s/veh	3.0	0.4	0.4	0.8	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.7	1.6	1.9	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.1	48.8	2.6	3.0	1.3	0.2
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	120		1805			1548
Approach Delay, s/veh	52.1		2.8			0.2
Approach LOS	D		A			A

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	97.2	12.8	97.2
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	72.0	28.0	72.0
Max Q Clear Time (g_c+I1), s	11.4	7.6	12.8
Green Ext Time (p_c), s	31.2	0.1	26.5

Intersection Summary	
HCM 6th Ctrl Delay	3.3
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	87	1	2	75	9	0	0	0	35	0	25
Future Vol, veh/h	10	87	1	2	75	9	0	0	0	35	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	74	74	74	25	25	25	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	107	1	3	101	12	0	0	0	42	0	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	108	0	0	260	251	108	245	245	107
Stage 1	-	-	-	-	-	-	132	132	-	113	113	-
Stage 2	-	-	-	-	-	-	128	119	-	132	132	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1483	-	-	693	652	946	709	657	947
Stage 1	-	-	-	-	-	-	871	787	-	892	802	-
Stage 2	-	-	-	-	-	-	876	797	-	871	787	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1483	-	-	666	645	946	703	650	947
Mov Cap-2 Maneuver	-	-	-	-	-	-	666	645	-	703	650	-
Stage 1	-	-	-	-	-	-	864	781	-	885	800	-
Stage 2	-	-	-	-	-	-	846	795	-	864	781	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.2	0	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1476	-	-	1483	-	-	788
HCM Lane V/C Ratio	-	0.008	-	-	0.002	-	-	0.092
HCM Control Delay (s)	0	7.5	-	-	7.4	-	-	10
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.3

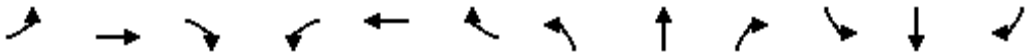
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	15	0	0	0	11	8	6	45	2
Future Vol, veh/h	0	0	1	15	0	0	0	11	8	6	45	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	65	65	65	71	71	71	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	23	0	0	0	15	11	8	62	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	101	106	64	101	102	21	65	0	0	26	0	0
Stage 1	80	80	-	21	21	-	-	-	-	-	-	-
Stage 2	21	26	-	80	81	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	880	784	1000	880	788	1056	1537	-	-	1588	-	-
Stage 1	929	828	-	998	878	-	-	-	-	-	-	-
Stage 2	998	874	-	929	828	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	876	780	1000	876	784	1056	1537	-	-	1588	-	-
Mov Cap-2 Maneuver	876	780	-	876	784	-	-	-	-	-	-	-
Stage 1	929	824	-	998	878	-	-	-	-	-	-	-
Stage 2	998	874	-	923	824	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.6	9.2	0	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1537	-	-	1000	876	1588	-	-
HCM Lane V/C Ratio	-	-	-	0.001	0.026	0.005	-	-
HCM Control Delay (s)	0	-	-	8.6	9.2	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	66	0	28	0	1333	97	25	1284	0
Future Volume (vph)	0	0	0	66	0	28	0	1333	97	25	1284	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.117		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	218	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						55			70			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.91	0.91	0.91	0.83	0.83	0.83	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	73	0	31	0	1606	117	29	1476	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	73	0	31	0	1606	117	29	1476	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		33.0		33.0		33.0		63.8	63.8	13.2		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		27.0		27.0		27.0		58.8	58.8	9.7		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				10.7		10.7		72.7	72.7	89.1	93.3	
Actuated g/C Ratio				0.10		0.10		0.66	0.66	0.81	0.85	
v/c Ratio				0.54		0.15		0.48	0.11	0.07	0.34	
Control Delay				61.0		5.9		11.4	5.0	2.8	2.7	
Queue Delay				0.0		0.0		0.2	0.0	0.0	0.0	
Total Delay				61.0		5.9		11.6	5.0	2.8	2.7	
LOS				E		A		B	A	A	A	
Approach Delay					44.6			11.2			2.7	
Approach LOS					D			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 96.8 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 41.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

Queues
1: Wyoming Blvd & Northeastern Blvd

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	93	28	1805	28	1520
v/c Ratio	0.54	0.16	0.42	0.16	0.35
Control Delay	58.8	17.5	3.2	5.0	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.1
Total Delay	58.8	17.5	3.2	5.0	2.8
Queue Length 50th (ft)	64	0	100	3	73
Queue Length 95th (ft)	100	22	134	13	109
Internal Link Dist (ft)	237		557		347
Turn Bay Length (ft)	90			140	
Base Capacity (vph)	450	423	4266	171	4297
Starvation Cap Reductn	0	0	0	0	1407
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.07	0.42	0.16	0.53

Intersection Summary

Queues
4: Wyoming Blvd & Driveway B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	31	1606	117	29	1476
v/c Ratio	0.54	0.15	0.48	0.11	0.07	0.34
Control Delay	61.0	5.9	11.4	5.0	2.8	2.7
Queue Delay	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	61.0	5.9	11.6	5.0	2.8	2.7
Queue Length 50th (ft)	50	0	201	11	3	72
Queue Length 95th (ft)	95	13	258	37	9	109
Internal Link Dist (ft)			347			261
Turn Bay Length (ft)		85		100	60	
Base Capacity (vph)	346	430	3358	1069	396	4307
Starvation Cap Reductn	0	0	833	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.07	0.64	0.11	0.07	0.34

Intersection Summary

HCM 6th Signalized Intersection Summary
1: Wyoming Blvd & Northeastern Blvd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	146	50	1774	97	36	1371
Future Volume (veh/h)	146	50	1774	97	36	1371
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	57	2087	114	38	1459
Peak Hour Factor	0.87	0.87	0.85	0.85	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	198	176	3992	217	177	4112
Arrive On Green	0.11	0.11	0.81	0.81	1.00	1.00
Sat Flow, veh/h	1781	1585	5125	269	177	5274
Grp Volume(v), veh/h	168	57	1430	771	38	1459
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1822	177	1702
Q Serve(g_s), s	11.1	4.0	16.9	17.1	6.2	0.0
Cycle Q Clear(g_c), s	11.1	4.0	16.9	17.1	23.4	0.0
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	198	176	2742	1467	177	4112
V/C Ratio(X)	0.85	0.32	0.52	0.53	0.21	0.35
Avail Cap(c_a), veh/h	371	330	2742	1467	177	4112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.92	0.92
Uniform Delay (d), s/veh	52.3	49.2	3.9	3.9	2.1	0.0
Incr Delay (d2), s/veh	3.8	0.4	0.7	1.3	2.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	1.6	4.1	4.8	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.2	49.5	4.6	5.3	4.6	0.2
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	225		2201			1497
Approach Delay, s/veh	54.5		4.9			0.3
Approach LOS	D		A			A

Timer - Assigned Phs				4		6	8
Phs Duration (G+Y+Rc), s				101.6		18.4	101.6
Change Period (Y+Rc), s				5.0		5.0	5.0
Max Green Setting (Gmax), s				85.0		25.0	85.0
Max Q Clear Time (g_c+I1), s				19.1		13.1	25.4
Green Ext Time (p_c), s				44.3		0.3	27.0

Intersection Summary			
HCM 6th Ctrl Delay		6.0	
HCM 6th LOS		A	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	107	2	0	134	31	15	0	18	112	0	67
Future Vol, veh/h	40	107	2	0	134	31	15	0	18	112	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	210	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	77	77	77	33	33	33	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	126	2	0	174	40	45	0	55	137	0	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	128	0	0	456	435	127	443	416	194
Stage 1	-	-	-	-	-	-	221	221	-	194	194	-
Stage 2	-	-	-	-	-	-	235	214	-	249	222	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1356	-	-	1458	-	-	515	514	923	525	527	847
Stage 1	-	-	-	-	-	-	781	720	-	808	740	-
Stage 2	-	-	-	-	-	-	768	725	-	755	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1458	-	-	453	496	923	481	509	847
Mov Cap-2 Maneuver	-	-	-	-	-	-	453	496	-	481	509	-
Stage 1	-	-	-	-	-	-	754	695	-	780	740	-
Stage 2	-	-	-	-	-	-	694	725	-	686	695	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	11.8	15.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	627	1356	-	-	1458	-	-	574
HCM Lane V/C Ratio	0.159	0.035	-	-	-	-	-	0.38
HCM Control Delay (s)	11.8	7.8	-	-	0	-	-	15.1
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-	-	1.8

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	30	0	27	30	0	3	27	39	8	7	124	32
Future Vol, veh/h	30	0	27	30	0	3	27	39	8	7	124	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	63	63	63	88	88	88	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	0	29	48	0	5	31	44	9	8	136	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	283	285	154	295	298	49	171	0	0	53	0	0
Stage 1	170	170	-	111	111	-	-	-	-	-	-	-
Stage 2	113	115	-	184	187	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	669	624	892	657	614	1020	1406	-	-	1553	-	-
Stage 1	832	758	-	894	804	-	-	-	-	-	-	-
Stage 2	892	800	-	818	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	651	606	892	622	596	1020	1406	-	-	1553	-	-
Mov Cap-2 Maneuver	651	606	-	622	596	-	-	-	-	-	-	-
Stage 1	813	753	-	873	786	-	-	-	-	-	-	-
Stage 2	867	782	-	786	741	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	11.1	2.8	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	747	645	1553	-	-
HCM Lane V/C Ratio	0.022	-	-	0.083	0.081	0.005	-	-
HCM Control Delay (s)	7.6	0	-	10.3	11.1	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	198	0	134	0	1596	223	57	1202	0
Future Volume (vph)	0	0	0	198	0	134	0	1596	223	57	1202	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		85	0		100	60		0
Storage Lanes	0		0	1		1	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Frt						0.850			0.850			
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1863	0	1770	0	1583	0	5085	1583	1770	5085	0
Flt Permitted				0.757						0.068		
Satd. Flow (perm)	0	1863	0	1410	0	1583	0	5085	1583	127	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						120			124			
Link Speed (mph)		20			20			40			40	
Link Distance (ft)		119			272			427			341	
Travel Time (s)		4.1			9.3			7.3			5.8	
Peak Hour Factor	0.25	0.25	0.25	0.92	0.92	0.92	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	215	0	146	0	1878	262	59	1252	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	215	0	146	0	1878	262	59	1252	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1		1		2	1	1	2	
Detector Template		Thru		Left		Right		Thru	Right	Left	Thru	
Leading Detector (ft)		100		20		20		100	20	20	100	
Trailing Detector (ft)		0		0		0		0	0	0	0	
Detector 1 Position(ft)		0		0		0		0	0	0	0	
Detector 1 Size(ft)		6		20		20		6	20	20	6	
Detector 1 Type		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)		0.0		0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type				D.Pm		Perm		NA	Perm	pm+pt	NA	
Protected Phases		4						2		1	1 2	
Permitted Phases				4		4			2	1 2		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4		4		4		2	2	1	1 2	
Switch Phase												
Minimum Initial (s)		8.0		8.0		8.0		18.0	18.0	3.0		
Minimum Split (s)		36.0		36.0		36.0		23.0	23.0	8.0		
Total Split (s)		36.0		36.0		36.0		69.6	69.6	14.4		
Total Split (%)		30.0%		30.0%		30.0%		58.0%	58.0%	12.0%		
Maximum Green (s)		30.0		30.0		30.0		64.6	64.6	10.9		
Yellow Time (s)		4.0		4.0		4.0		4.0	4.0	3.0		
All-Red Time (s)		2.0		2.0		2.0		1.0	1.0	0.5		
Lost Time Adjust (s)		0.0		0.0		0.0		0.0	0.0	0.0		
Total Lost Time (s)		6.0		6.0		6.0		5.0	5.0	3.5		
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)		2.0		2.0		2.0		4.0	4.0	1.5		
Recall Mode		None		None		None		C-Max	C-Max	None		
Walk Time (s)		7.0		7.0		7.0		7.0	7.0			
Flash Dont Walk (s)		23.0		23.0		23.0		10.0	10.0			
Pedestrian Calls (#/hr)		0		0		0		0	0			
Act Effct Green (s)				22.4		22.4		69.7	69.7	84.6	88.1	
Actuated g/C Ratio				0.19		0.19		0.58	0.58	0.70	0.73	
v/c Ratio				0.82		0.37		0.64	0.27	0.22	0.34	
Control Delay				69.9		12.9		21.3	10.7	7.6	6.4	
Queue Delay				0.0		0.0		2.1	0.5	0.0	0.0	
Total Delay				69.9		12.9		23.4	11.2	7.6	6.4	
LOS				E		B		C	B	A	A	
Approach Delay					46.9			21.9			6.5	
Approach LOS					D			C			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 105.6 (88%), Referenced to phase 2:NBSB, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 56.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Wyoming Blvd & Driveway B

Queues
1: Wyoming Blvd & Northeastern Blvd

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	168	57	2201	38	1459
v/c Ratio	0.72	0.25	0.55	0.42	0.37
Control Delay	67.1	34.0	5.9	27.1	3.7
Queue Delay	0.0	0.0	0.1	0.0	0.3
Total Delay	67.1	34.0	6.0	27.1	3.9
Queue Length 50th (ft)	127	26	195	6	83
Queue Length 95th (ft)	185	60	259	m54	125
Internal Link Dist (ft)	237		557		347
Turn Bay Length (ft)	90			140	
Base Capacity (vph)	368	345	3966	91	3994
Starvation Cap Reductn	0	0	0	0	1607
Spillback Cap Reductn	0	22	339	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.18	0.61	0.42	0.61

Intersection Summary

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

Queues
4: Wyoming Blvd & Driveway B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	215	146	1878	262	59	1252
v/c Ratio	0.82	0.37	0.64	0.27	0.22	0.34
Control Delay	69.9	12.9	21.3	10.7	7.6	6.4
Queue Delay	0.0	0.0	2.1	0.5	0.0	0.0
Total Delay	69.9	12.9	23.4	11.2	7.6	6.4
Queue Length 50th (ft)	161	17	344	48	11	110
Queue Length 95th (ft)	234	69	442	138	29	167
Internal Link Dist (ft)			347			261
Turn Bay Length (ft)		85		100	60	
Base Capacity (vph)	352	485	2952	971	273	3705
Starvation Cap Reductn	0	0	885	369	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.30	0.91	0.44	0.22	0.34

Intersection Summary