TRAFFIC IMPACT ANALYSIS

4800 Montgomery Blvd NE
Albuquerque, New Mexico

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Prepared for:

Raising Cane's Restaurants, LLC

04/27/22

Kimley»Horn

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4800 Montgomery Blvd NE
Albuquerque, New Mexico

Prepared for:

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Contents

Figures

Tables

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This report documents a traffic impact study (TIS) for a proposed Raising Cane's Chicken Fingers (Cane's) development located at 4800 Montgomery Blvd NE on the southwest corner of the intersection of Montgomery Blvd NE and San Mateo Blvd NE in Albuquerque, NM. The development will consist of a 3,331 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. The site will be accessed via existing driveways located along Montgomery Blvd NE.

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

The TIS 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 TIS 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 1,570 daily trips, with 0 or negligible trips occurring in the AM peak hour and 109 trips occurring in the PM peak hour.

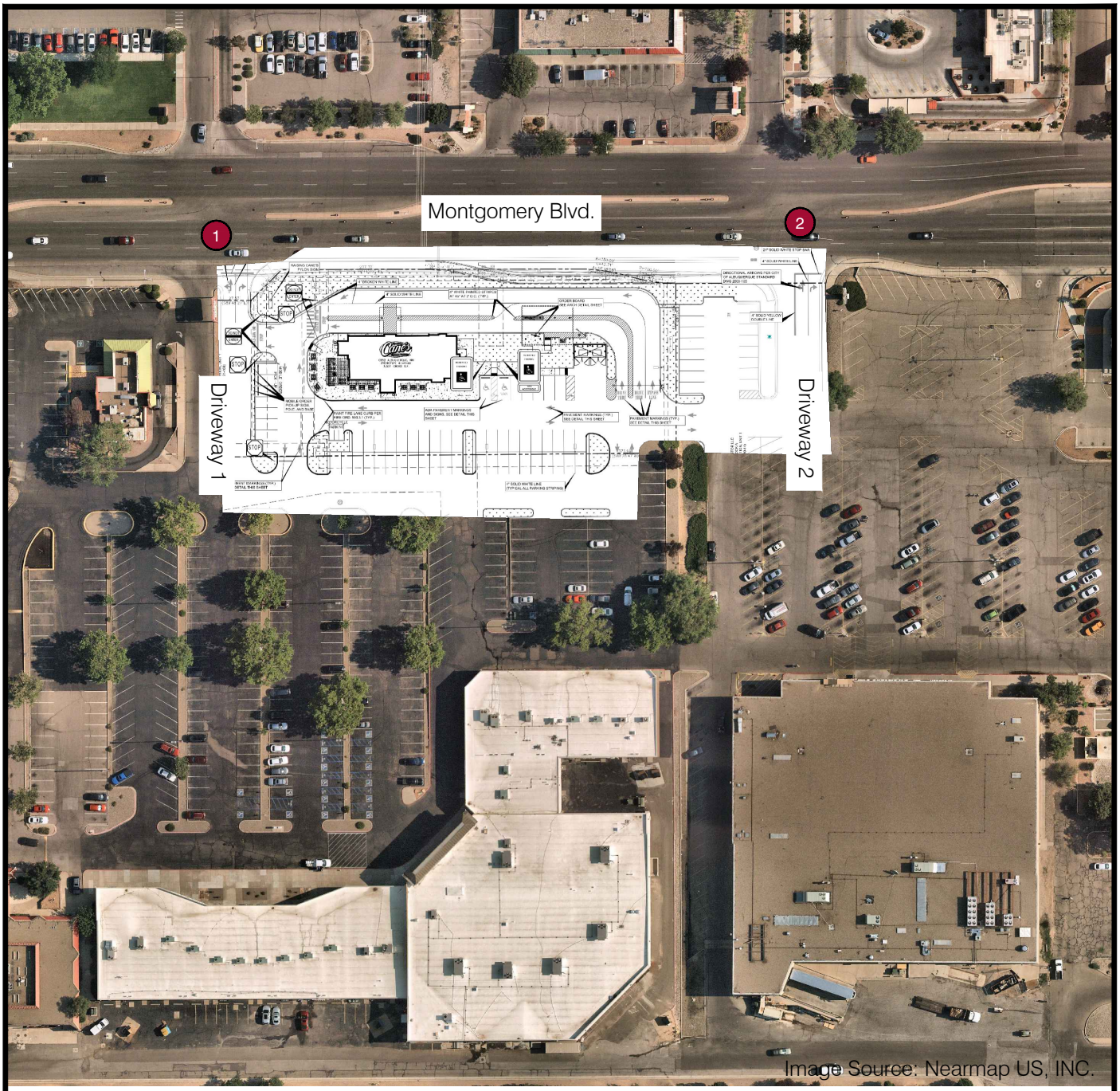
This analysis concludes that the proposed development will be accommodated by the surrounding street network, with the following findings and recommendations:

- The development will be accessed from two existing driveway connections on Montgomery Boulevard NE. The proposed site accesses will be full access to accommodate passenger cars. No new driveways are proposed.

- 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 northbound shared thru/left-turn movement at both Driveway 1 and Driveway 2 show LOS F 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.
    - The LOS for the southbound shared thru/left-turn movement at Driveway 1 cannot be defined by HCM 6th Edition methodology for the 2032 background and total traffic scenarios and is assumed to be LOS F due to the increase in conflicting traffic associated with background traffic growth from 2022 to 2032.
    - Since no project traffic is added to the movement and only 5 vehicles are attempting the movement with current traffic conditions it is assumed that vehicles will continue to find alternate routes if delay increases further. No mitigation is recommended as part of the proposed development.
    - The southbound shared thru/left-turn movement at Driveway 2 shows LOS E in the 2032 total traffic scenario PM peak hour. Since no project traffic is added to the movement and only 3 vehicles are attempting the movement with current traffic conditions it is assumed that vehicles will continue to find alternate routes if delay increases further. No mitigation is recommended as part of the proposed development.
- The existing left turn lanes at Driveway 1 and Driveway 2 are anticipated to accommodate 2032 horizon year PM peak hour queue lengths for all impacted left turn lanes. No mitigation is recommended as part of the proposed development.
    - Note: The existing westbound left turn at Driveway 2 is shorter than required per the City of Albuquerque Development Process Manual (CABQ DPM). However, based on existing constraints the storage length cannot be extended without adversely impacting available storage for the signalized intersection at Montgomery Blvd and San Mateo Blvd. Per coordination with City staff, no mitigation is recommended as part of the proposed development.
- The proposed drive-thru and parking lot are expected to provide enough space for on-site circulation during typical- and high-traffic demands. It is anticipated that the drive-thru queue will be maintained on-site during high-volume periods by rerouting the queue through the parking lot to increase capacity.
- Recommended improvements:
    - The NB approaches at Driveway 1 and Driveway 2 were modeled as two-lane egress (a shared through-left lane and an exclusive right turn lane) based on existing pavement width and turning volumes. Per City staff, the northbound right turn volume at both driveways exceeds the peak hour volume requirement for a right turn lane. Therefore, it is recommended that new signage and pavement markings be added to the existing driveways to designate two egress lanes – a shared through-left lane and an exclusive right turn lane. Additional striping and signing shall be installed per current MUTCD and City of Albuquerque standards.

- The existing eastbound right turn lane at Driveway 2 is shorter than the required 250 foot plus taper length per the CABQ DPM. It is recommended that the turn lane be extended along the project frontage to maximize the turn lane length without triggering significant utility relocations. Based on aerial measurements, it appears that a turn lane length up to 200 feet plus taper length could be provided without impacting the electrical transmission pole to the west.

Recommended lane configuration is shown in **Figure 12**.



Study Area Intersections:

1. Montgomery Boulevard / Driveway 1
2. Montgomery Boulevard / Driveway 2

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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 at 4800 Montgomery Blvd NE on the southwest corner of the intersection of Montgomery Blvd NE and San Mateo Blvd NE in Albuquerque, NM. The City of Albuquerque classifies the existing site's land use as commercial retail. The site is located on a parcel currently developed as a restaurant.

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

2.2 LAND USE AND SITE PLAN

The total site area is approximately 1.26-acres. The area to be developed is proposed to consist of a 3,331 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 development will be primarily accessed via two driveways (Driveway 1 and Driveway 2) that intersect Montgomery Blvd NE on the south side of the road. The development will also be accessible internally from the south via the existing commercial retail development located on the southwest corner of Montgomery Blvd NE and San Mateo Blvd.

Driveway 1 is an existing full access driveway located northwest of the site. Driveway 2 is an existing full access driveway located northeast of the site.

2.4 SITE CIRCULATION

The developer is proposing two site access points via Driveway 1 and Driveway 2, per the provided site plan. The site access is proposed to remain full access and will primarily service passenger vehicles.

The development will include 58 parking stalls, concentrated primarily in the southern portion of the site. The Northern portion of the development will include the 3,331 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 northwest of the restaurant. The proposed drive-thru will consist of two queuing lanes and a third outside bypass lane. During peak periods, the bypass lane may be opened for ordering and hand deliveries to manage on-site queuing. Queues can also be routed through the drive aisle south of the restaurant to provide additional storage capacity if needed.

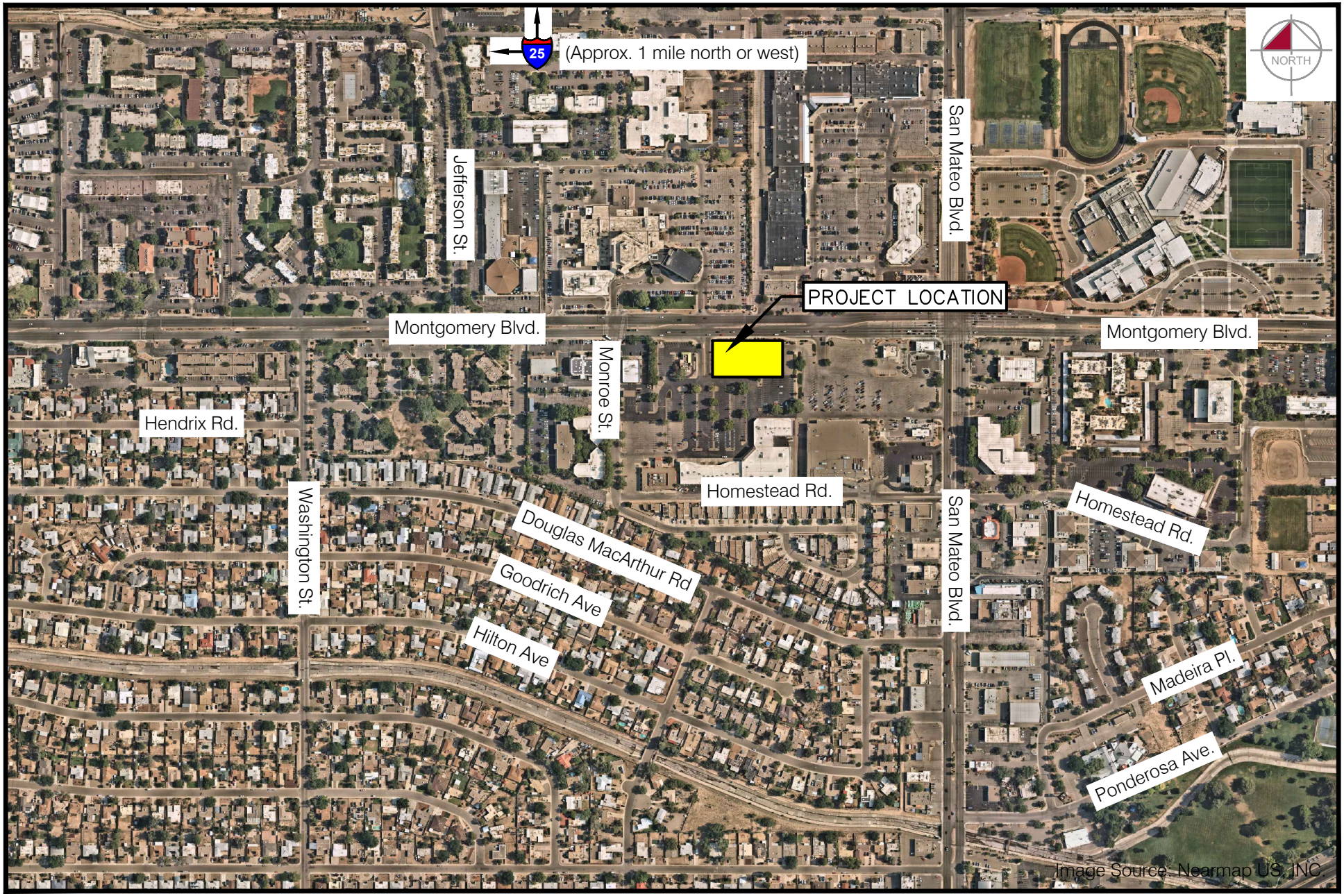

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Figure 1
Vicinity Map

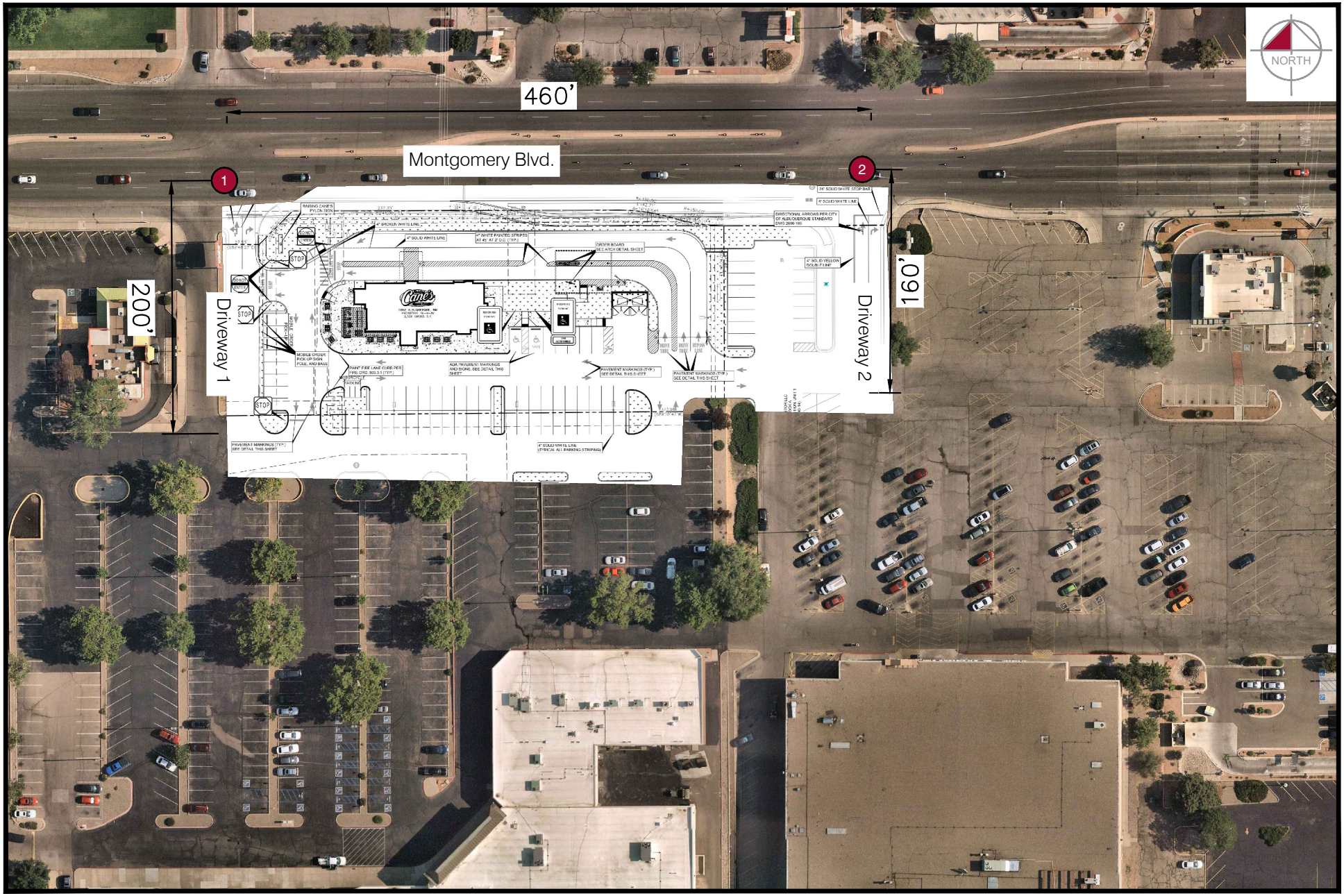

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Figure 2
Preliminary Concept Plan

3.0 STUDY AREA

3.1 STUDY AREA

Per the TIS Scoping Meeting held virtually on October 26, 2021 with City of Albuquerque staff, the study area includes the unsignalized intersections of Montgomery Blvd NE and Driveway 1 and the unsignalized intersection of Montgomery Blvd NE and Driveway 2.

As discussed with City staff at the scoping meeting, there are no signalized intersections included in the study area. Signalized analysis was not required, because the adjacent signalized intersections are fully built out and there are therefore no reasonable infrastructure improvements that can be made.

The study area intersections are shown previously in **Figure 2**.

3.2 ADJACENT LAND USE

The site is located in a commercial retail development and is immediately surrounded by commercial retail, office, and medical/institutional land uses. A high school is located on the northeast corner of Montgomery Blvd NE and San Mateo Blvd.

Further, the site is surrounded primarily by residential land uses to the south, east, and northeast. Land uses north and west of the site are primarily a mixture of industrial, commercial retail, and office land uses.

Interstate 25 (I-25) is located approximately 1 mile northwest of the site. It is most directly accessed via a traffic interchange west of the site at Montgomery Blvd NE, but can also be accessed via Jefferson St NE or San Mateo Blvd NE.

4.0 EXISTING CONDITIONS

4.1 PHYSICAL CHARACTERISTICS

The primary existing roadway network within the study area includes Montgomery Boulevard NE, Driveway 1, and Driveway 2. The existing lane configurations and intersection control types for the study intersections are shown in **Figure 3**.

Montgomery Boulevard NE is an east-west 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.

Driveway 1 is a north-south driveway with one travel lane in each direction separated by a raised median. There is a curb, gutter, and sidewalk on the entire west side and curb and gutter only on the east side of the driveway adjacent to the site.

Driveway 2 is a north-south driveway with one travel lane in each direction. There is a curb and gutter both sides of the driveway adjacent to the site.

The Mid-Region Council of Governments (MRCOG) classifies Montgomery Blvd NE as a principal arterial. Driveway 1 and Driveway 2 are private roads within a larger commercial development.

The posted speed limit for Montgomery Blvd NE is 35 miles per hour (mph) within the vicinity of the site. Driveway 1 and Driveway 2 are private commercial driveways with no posted speed limits. The assumed speed limit for these driveways is 25 mph.

*NOTE: Where existing "unstriped" driveways have sufficient width to accommodate more than one approach lane, they were modeled accordingly. Existing signage (if applicable), turning movement data, and engineering judgement were used to determine the appropriate approach geometry for modeling purposes (see **Figure 3**). For example, the northbound approach at Driveway 1 and Driveway 2 were both modeled as two-lane approaches with a shared through-left lane and an exclusive right turn lane.*

4.2 TRAFFIC VOLUMES

Peak period turning movement counts (TMCs) were collected on Thursday, October 28, 2021 at the intersections of Montgomery Boulevard NE/Driveway 1 and Montgomery Boulevard NE/Driveway 2. TMCs were collected between 4:00 PM and 6:00 PM.

24-hour average annual daily traffic (AADT) volumes were obtained from MRCOG 2019 Traffic Flow Map for Montgomery Boulevard NE adjacent to the proposed development. Data from the year 2020 was disregarded due to the COVID-19 pandemic. The 2019 AADT was grown at 0.5% annually to existing 2021 daily volume. The adjusted 2021 daily volume adjacent to the site on Montgomery Boulevard NE is 42,118 vpd.

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

NOTE: Per the TIS scoping meeting, analysis for the AM peak hour was not required by the City and AM peak hour counts were not collected.

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 unsignalized intersections, LOS and delay are reported for minor movements only and an overall intersection LOS or delay is not provided.

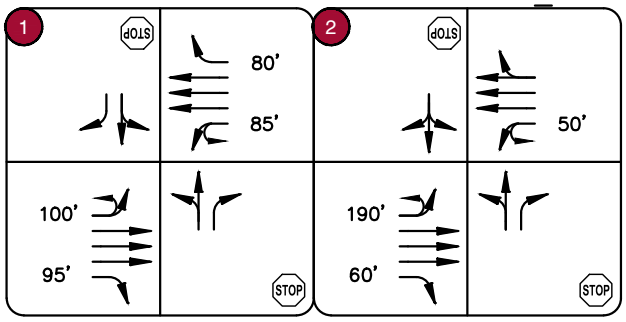
The analysis results are shown in **Table 1** and reported as "LOS/delay". Delay is rounded to the nearest whole second. A dash (-) indicates a free movement. **Bolded** values indicate a movement is operating at an unacceptable LOS. LOS analysis reports for the existing condition are included in **Appendix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

Table 1. Existing Level of Service and Delay

Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*		
	L	T	R	L	T	R	L	T	R	L	T	R
1. *Driveway 1 / Montgomery Boulevard*												
PM Peak	F/*		B/14	D/27		B/12	B/10	-	-	B/12	-	-
2. *Driveway 2 / Montgomery Boulevard*												
PM Peak	F/*		B/13	C/22			B/14	-	-	B/11	-	
** Delay Exceeds 50 seconds*												

The northbound shared thru/left-turn movement of both Driveway 1 and Driveway 2 intersections with Montgomery Boulevard NE operate at LOS F during the existing PM peak period. Notably, the reported delay value is very high, and the number of northbound turning vehicles is very low. This is an indication that there are very few gaps in the traffic stream to allow for vehicles to make a northbound left or through movement. This was taken into consideration when developing the trip assignments for the proposed site as discussed in **Section 5.1.4** of this report.

All other movements operate at acceptable LOS D or better.



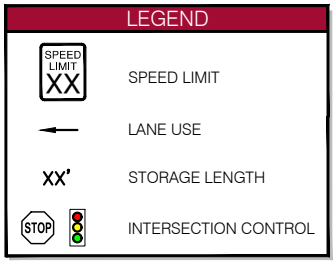


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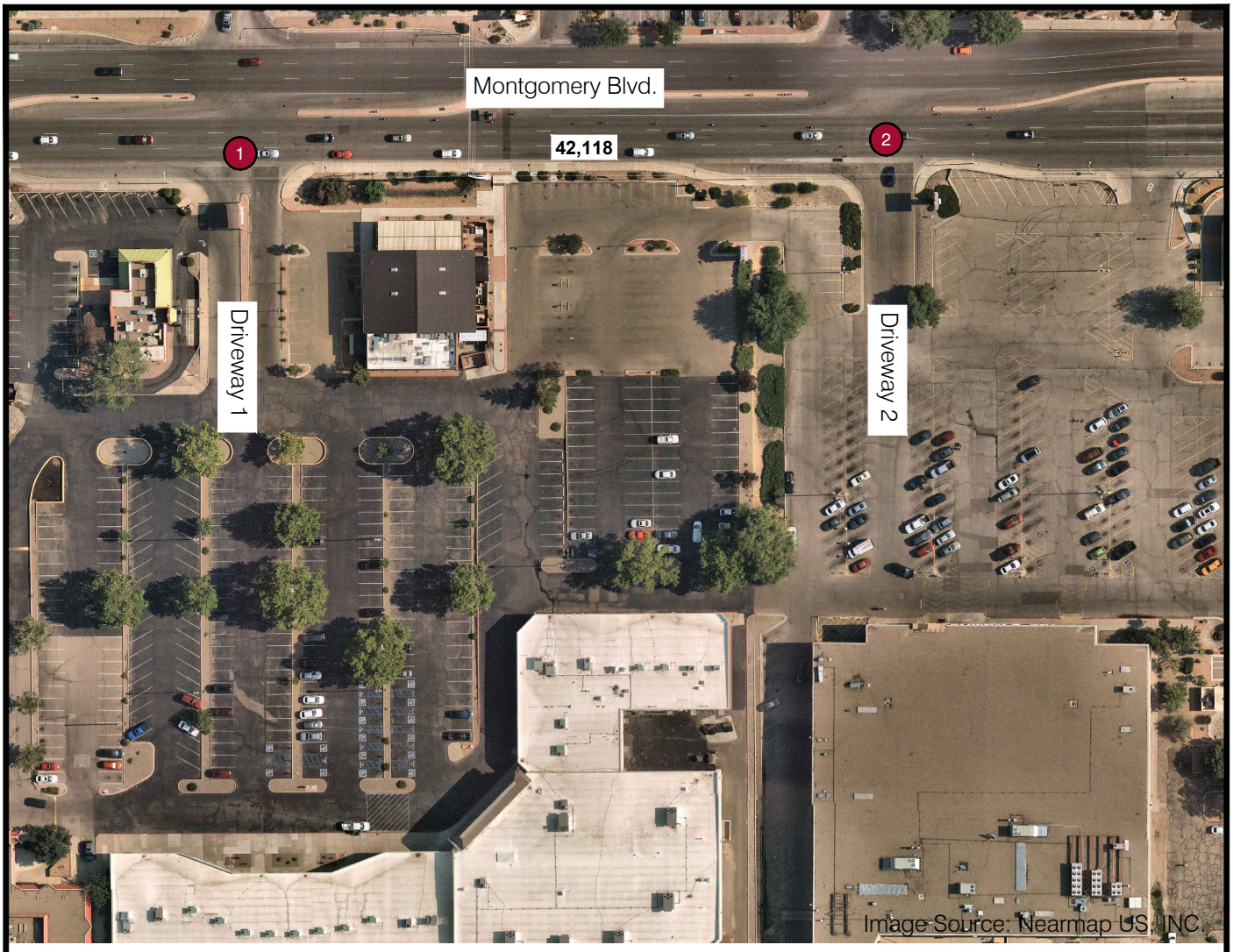
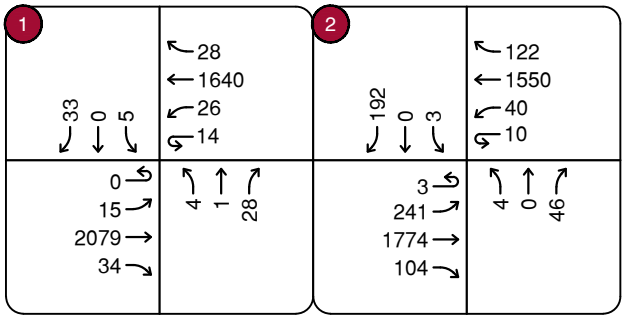
Figure 3
Existing Lane Configuration and Control





LEGEND	
← XX	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	3.331	1,000 SF	1,570	0	0	0	57	52	109

**Note: AM Peak Hour trips are assumed to be zero or negligible and were not included in this analysis, per discussion with City staff at the TIS scoping meeting. 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 typical 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, ITE trip generation data for the AM Peak Hour is not applicable for this development.*

The proposed development is estimated to generate **1,570** daily trips with **109** 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 50% for PM trips. 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 the population projections, it is anticipated that 18% of trips will travel to/from the north, 27% to/from the south, 34% 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 PM peak period.

Based on the layout of the surrounding development and roadway network the site can be accessed internally from the larger retail development via several points along Monroe Street NE and Homestead Rd NE. These minor roadways operate as service access driveways for the overall development and a small portion of the surrounding office and residential land uses. It is anticipated that the majority of site traffic will access via Montgomery Boulevard, however a small portion of trips were assigned to these minor roadways to account for drivers accessing the site via potential “back way” routes.

It should be noted that there is a slight difference between the routing for inbound site trips versus the routing for outbound site trips. Based on existing volumes, roadway geometry, and delay calculations a northbound left turn appears to be a very difficult maneuver at these two driveway locations:

- Under existing conditions, the volume of traffic that makes a northbound left turn out of both site driveways is less than five vehicles per hour (PM Peak).
- The existing roadway cross section is very wide. A northbound left turn would need to find a gap in both directions and cross three lanes of eastbound traffic to enter the westbound traffic stream.
- As shown previously in **Section 4.3**, the northbound left turn experiences significant control delay due to the high through volumes on Montgomery Boulevard. This is an indication that there are insufficient gaps available to make this maneuver safely and comfortably.

For the reasons listed above, is not anticipated that additional vehicles will attempt to make such a difficult maneuver. Therefore, none of the outbound site trips were assigned to the northbound left turn movement for either site driveway. Instead, all site trips were assumed to make a northbound right turn to exit the site onto Montgomery Boulevard. The portion of trips that would have made a northbound left turn from the site driveways were assigned as U-turns at downstream intersections. **Figure 6** shows the project development traffic assignment for the PM peak period.

5.2 FUTURE TRAFFIC FORECASTING

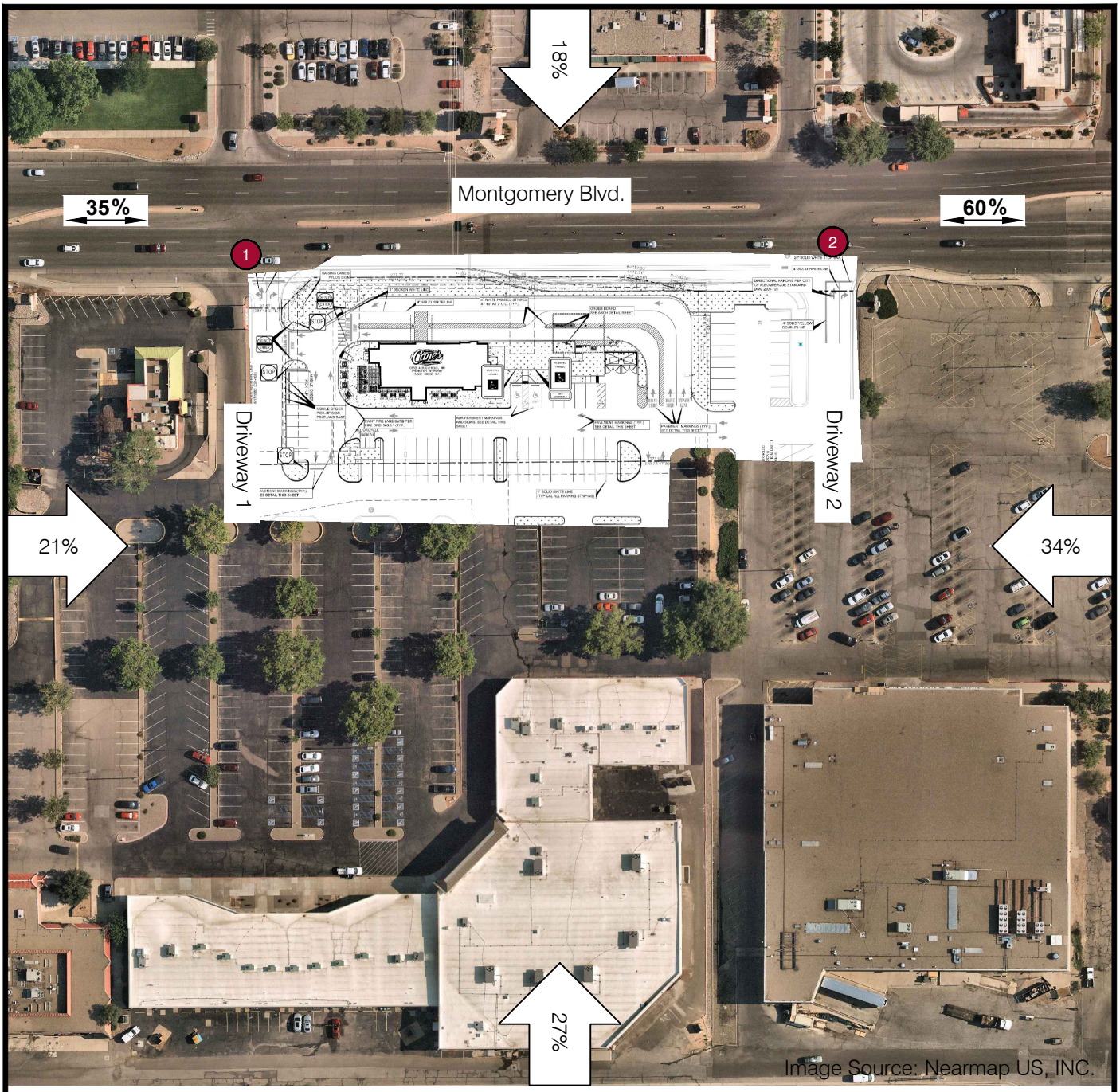
Background traffic volumes for the anticipated buildout year of 2022 and horizon year 2032 were estimated using the eleven-year historical traffic growth rate from 2009 to 2019. Traffic data for this calculation was obtained from MRCOG traffic counts. The 2020 historical volume data was not included 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 2009 to 2019 was calculated to be -1.3%. To avoid using a negative growth rate, the minimum 0.5% growth rate (as discussed at the TIA scoping meeting) 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.



Note: This analysis assumes that 5% of trips will travel to/from the site using access points elsewhere in the commercial development which were not included in the slope of the study area.

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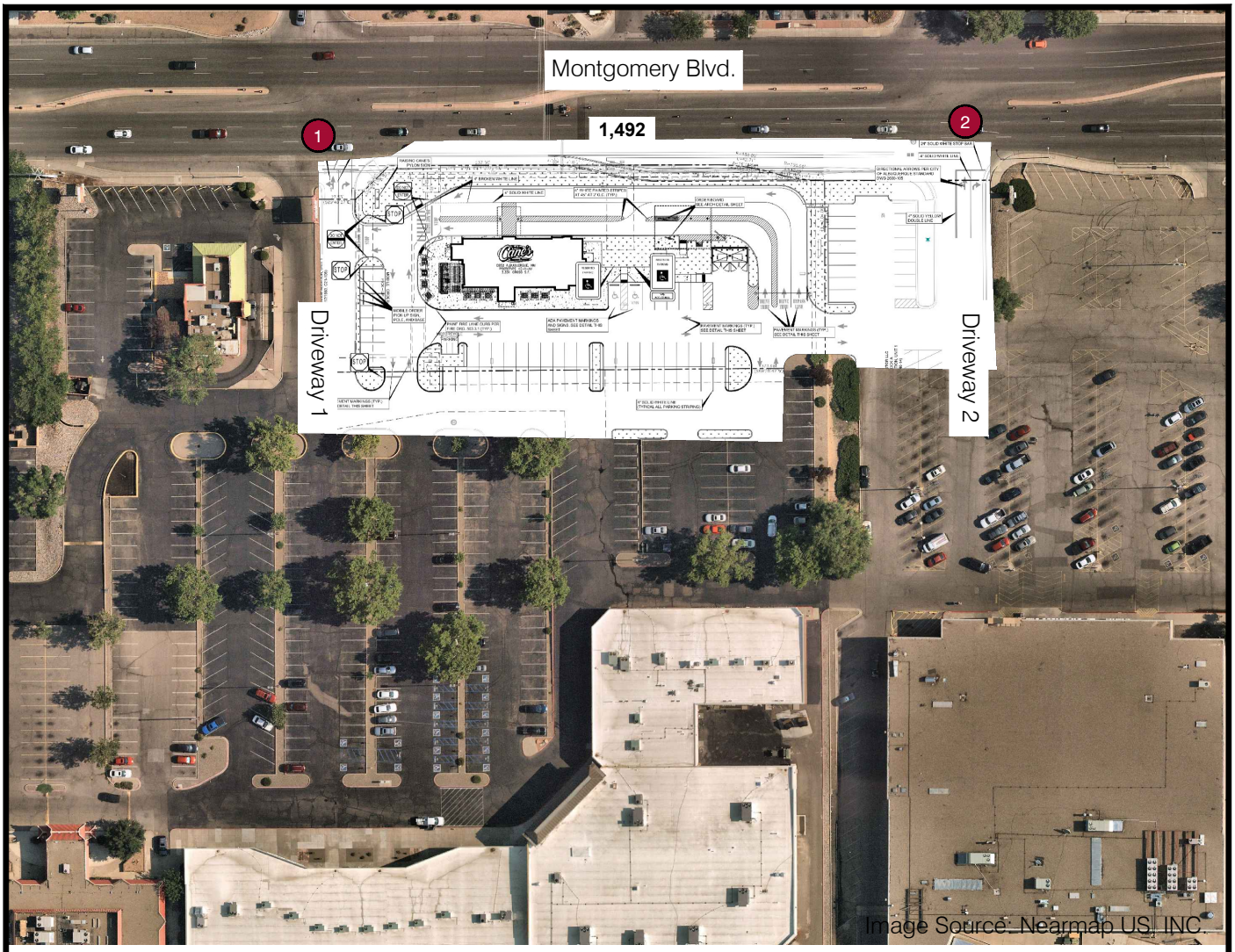
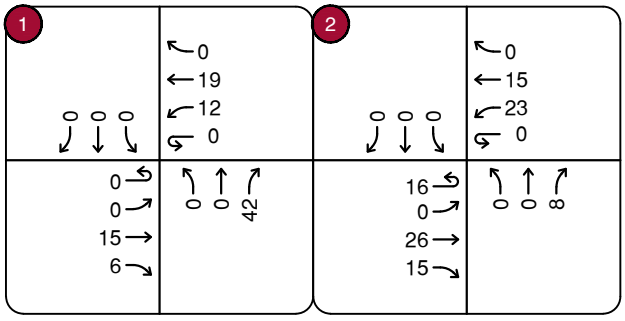
Figure 5
Trip Distribution





LEGEND	
← XX	PM PEAK HOUR TRAFFIC VOLUMES
XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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Figure 6
Assignment Traffic Volume

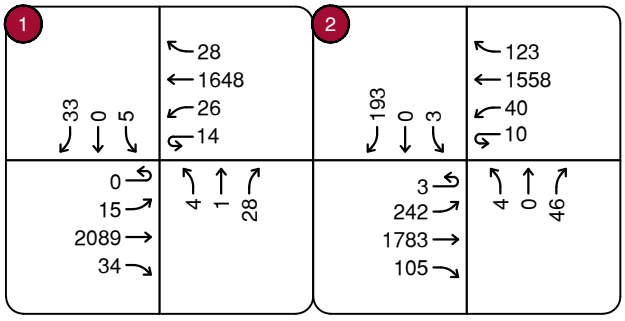

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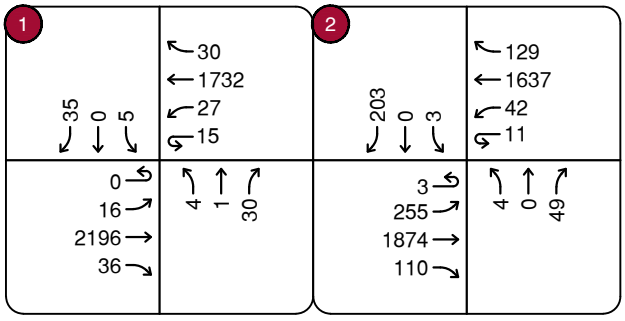
Figure 7
2022 Background Traffic Volumes



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XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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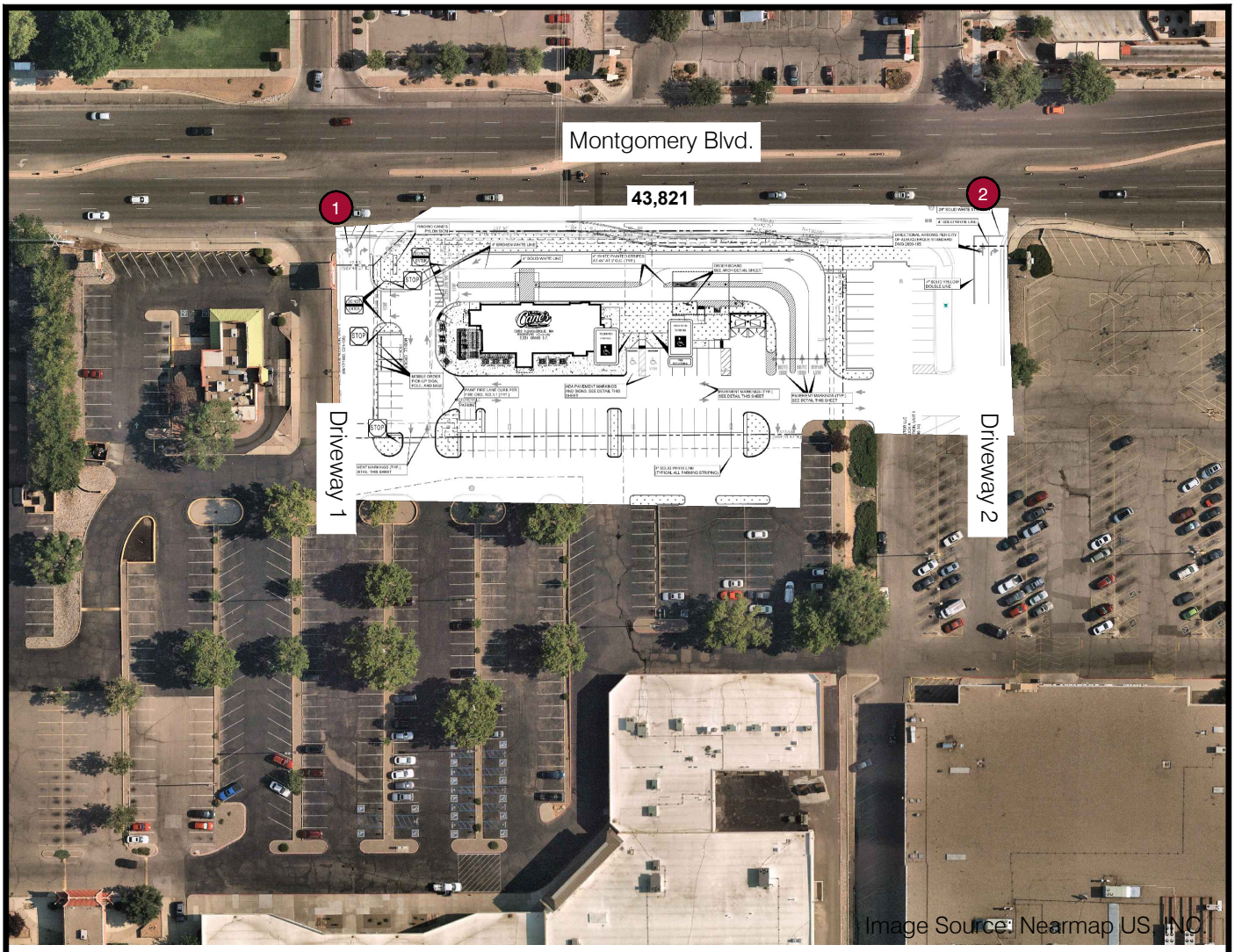
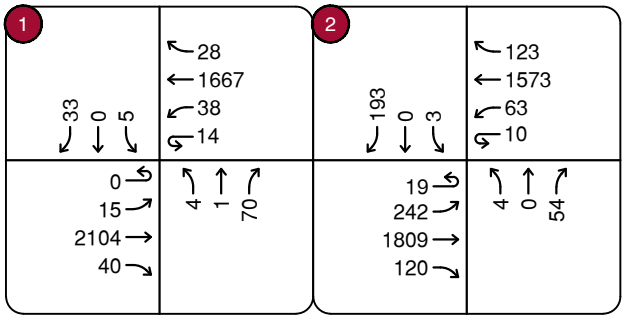
Figure 8
2032 Background Traffic Volumes





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XXXX	AVERAGE DAILY TRAFFIC VOLUMES

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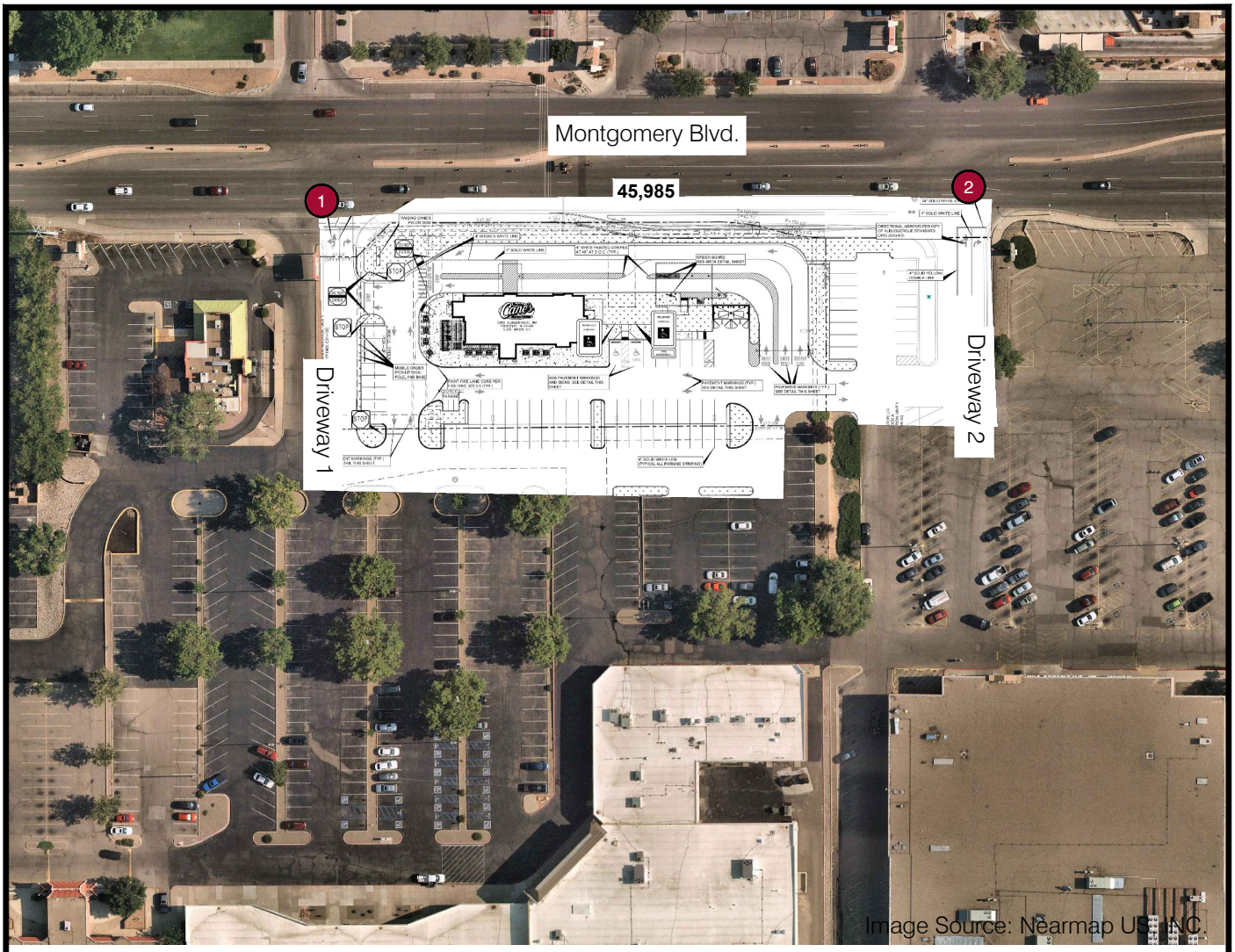
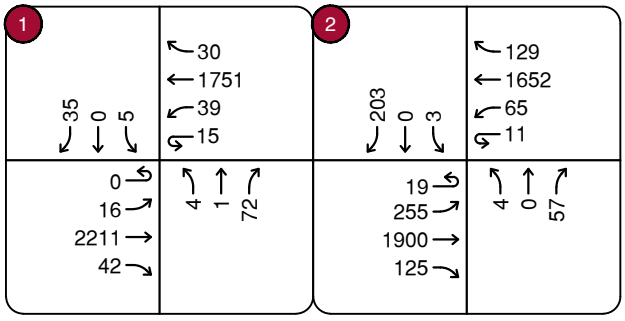
Figure 9
2022 Total Buildout Traffic Volumes





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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. 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 study intersections are shown in **Table 3** and **Table 4** for background year 2022 and 2032, respectively.

Delay is rounded to the nearest whole second. 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*		
	L	T	R	L	T	R	L	T	R	L	T	R
1. *Driveway 1 / Montgomery Boulevard*												
PM Peak	F/*		B/14	D/29		B/12	B/10	-	-	B/12	-	-
2. *Driveway 2 / Montgomery Boulevard*												
PM Peak	F/*		B/13	C/22			B/15	-	-	B/11	-	
** Delay Exceeds 50 seconds*												

Table 4. 2032 Background Traffic Level of Service and Delay

Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*		
	L	T	R	L	T	R	L	T	R	L	T	R
1. *Driveway 1 / Montgomery Boulevard*												
PM Peak	F/*		B/15	*F/+*		B/13	B/10	-	-	B/12	-	-
2. *Driveway 2 / Montgomery Boulevard*												
PM Peak	F/*		B/14	D/28			C/15	-	-	B/11	-	
** Delay Exceeds 50 seconds* *+ Computation Not Supported by HCM 6th Edition Methodology*												

The northbound shared thru/left-turn movement of both Driveway 1 and Driveway 2 intersections with Montgomery Boulevard NE operate at LOS F during both the 2022 and 2032 background scenarios PM peak period.

The LOS for the southbound shared thru/left-turn movement at Driveway 1 cannot be defined by HCM 6th Edition methodology for the 2032 Scenario and is assumed to be LOS F due to the increase in conflicting traffic associated with background traffic growth from 2022 to 2032.

All other movements operate at acceptable LOS D or better.

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 12**. The results of the analysis for the study intersections 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*		
	L	T	R	L	T	R	L	T	R	L	T	R
1. *Driveway 1 / Montgomery Boulevard*												
PM Peak	F/*		C/16	E/41		B/13	B/11	-	-	B/12	-	-
2. *Driveway 2 / Montgomery Boulevard*												
PM Peak	F/*		B/13	D/27			C/15	-	-	B/11	-	
** Delay Exceeds 50 seconds*												

Table 6. 2032 Total Traffic Level of Service and Delay

Intersection	*NB Approach*			*SB Approach*			*EB Approach*			*WB Approach*		
	L	T	R	L	T	R	L	T	R	L	T	R
1. *Driveway 1 / Montgomery Boulevard*												
PM Peak	F/*		C/17	*F/+*		B/13	B/11	-	-	B/13	-	-
2. *Driveway 2 / Montgomery Boulevard*												
PM Peak	F/*		B/14	E/38			C/16	-	-	B/12	-	
** Delay Exceeds 50 seconds* *+ Computation Not Supported by HCM 6th Edition Methodology*												

The northbound shared thru/left-turn movement of both Driveway 1 and Driveway 2 intersections with Montgomery Boulevard NE operate at LOS F during both the 2022 and 2032 total scenarios PM peak period.

The LOS for the southbound shared thru/left-turn movement at Driveway 1 cannot be defined by HCM 6th Edition methodology for the 2032 Scenario and is assumed to be LOS F due to the increase in conflicting traffic associated with background traffic growth from 2022 to 2032.

Additionally, the southbound shared thru/left-turn movement at Driveway 2 operates at LOS E in the 2032 total scenario PM peak period.

All other movements operate at acceptable LOS D or better.

6.2 LEFT-TURN QUEUE ANALYSIS

The queue analysis results for each *impacted* left-turn movement is summarized in **Table 7**. 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 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.

Table 7. Left-Turn Storage

Intersection and Approach	*Existing*	Calculated
1. Driveway 1 and Montgomery Boulevard		
Westbound Approach	85 ft	25 ft *
2. Driveway 2 and Montgomery Boulevard		
Eastbound Approach	190 ft	63 ft
Westbound Approach	50 ft	25 ft *

* 25-foot minimum for one (1) vehicle
Bold indicates calculated queue length is greater than existing storage length.

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

6.2 RIGHT-TURN QUEUE ANALYSIS

Right turn queues were not evaluated because all impacted right turn movements are free flow movements.

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 enter the dual lane drive-thru directly via the drive-thru entrance east of the building. When traffic loads exceed the drive-thru's capacity of approximately 25 vehicles, employees will reroute entering traffic west through the parking lot's northern aisle and back east through the southern aisle. This path will increase storage capacity by approximately 23 vehicles before overflowing into the intersection at Driveway 2, increasing the maximum drive-thru capacity to approximately 48 vehicles.

The anticipated peak hour entering trips to the site is 57 vehicles. It is anticipated that the drive-thru queue will be maintained on site.

The proposed overflow routing is shown in **Figure 11**.

6.4 CRASH ANALYSIS

Per discussion with City staff during the TIS scoping meeting, a crash analysis is not required for this site.

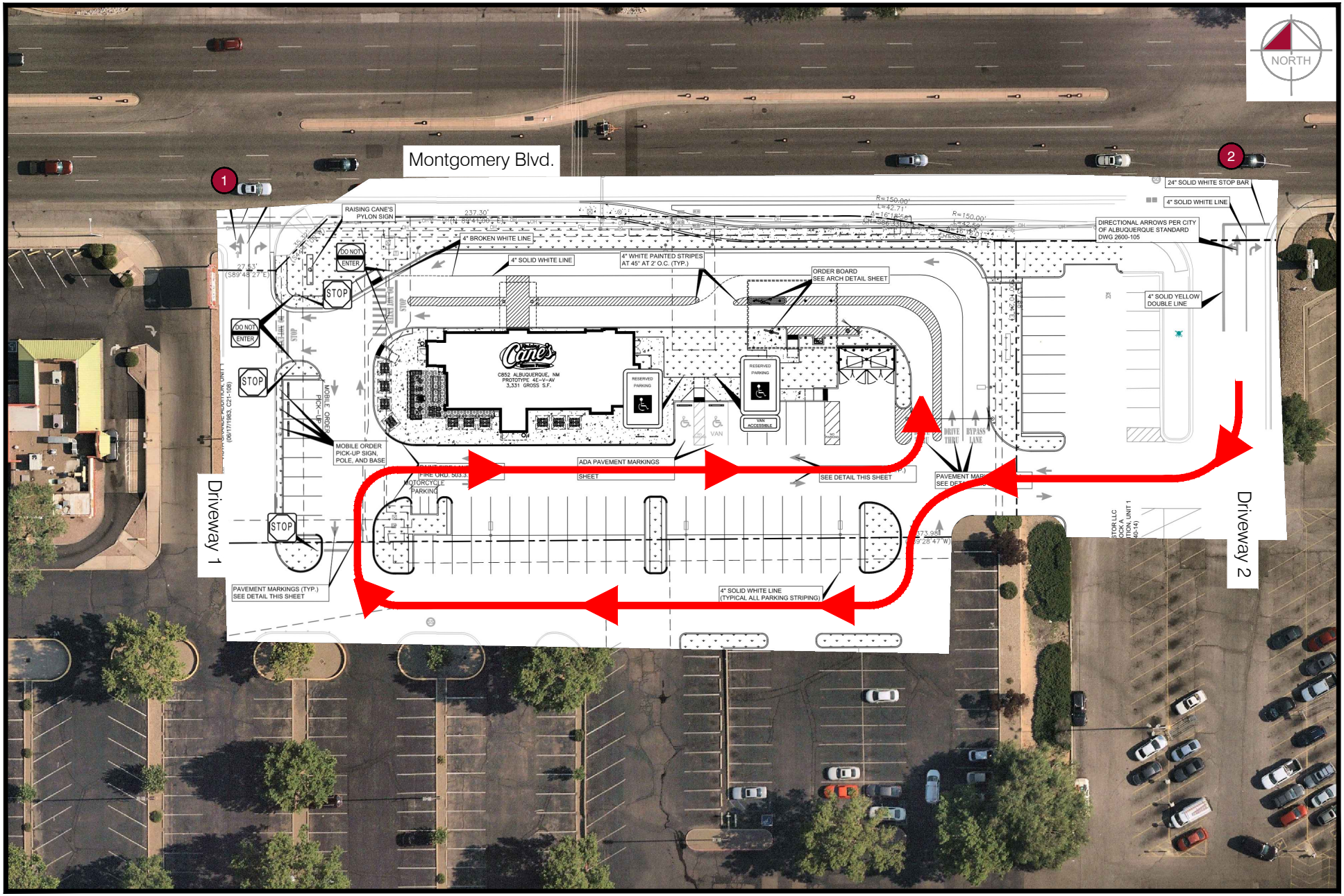


Figure 11
Drive-Thru Overflow Routing

7.0 RECOMMENDATIONS

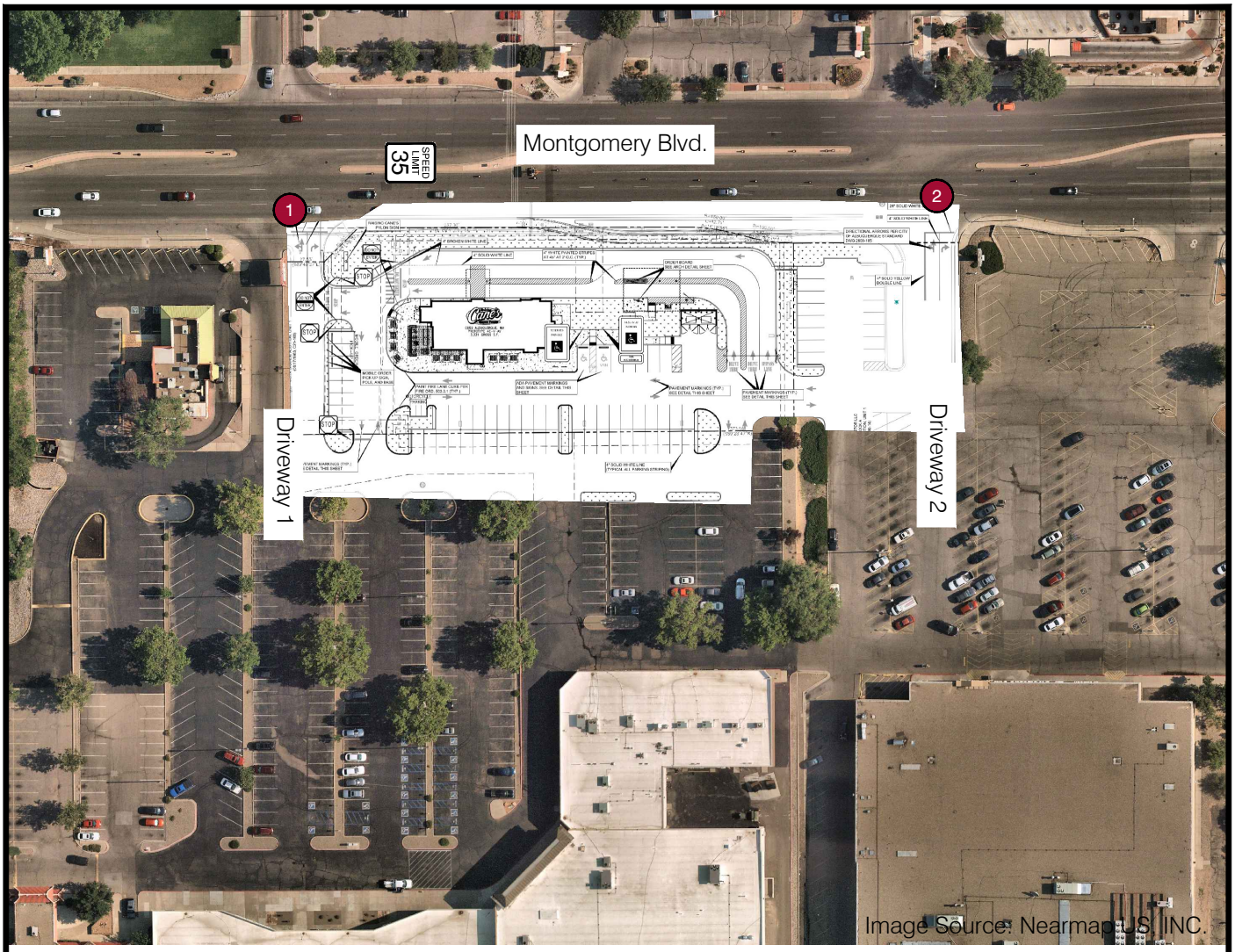
The proposed development is estimated to generate 1,570 daily trips, with 0 or negligible trips occurring in the AM peak hour and 109 trips occurring in the PM peak hour.

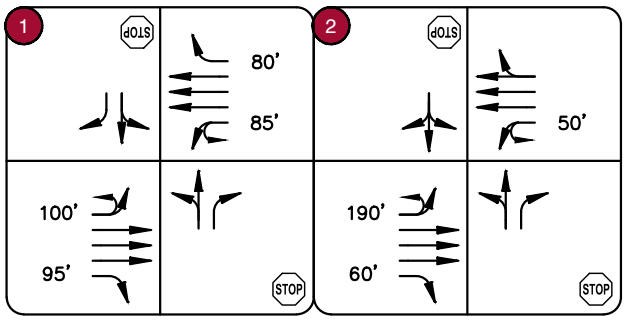
This analysis concludes that the proposed development will be accommodated by the surrounding street network, with the following findings and recommendations:

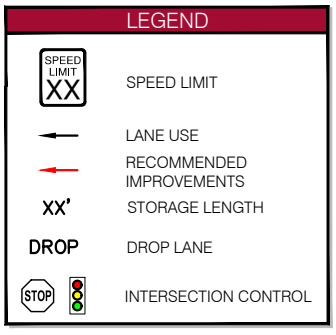
- The development will be accessed from two existing driveway connections on Montgomery Boulevard NE. The proposed site accesses will be full access to accommodate passenger cars. No new driveways are proposed.
- Study area intersections operate at acceptable LOS in each analysis scenario, including existing, 2022 background and total, and 2032 background and total traffic scenarios with the following exceptions:
    - The northbound shared thru/left-turn movement at both Driveway 1 and Driveway 2 show LOS F 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.
    - The LOS for the southbound shared thru/left-turn movement at Driveway 1 cannot be defined by HCM 6th Edition methodology for the 2032 background and total traffic scenarios and is assumed to be LOS F due to the increase in conflicting traffic associated with background traffic growth from 2022 to 2032.
    - Since no project traffic is added to the movement and only 5 vehicles are attempting the movement with current traffic conditions it is assumed that vehicles will continue to find alternate routes if delay increases further. No mitigation is recommended as part of the proposed development.
    - The southbound shared thru/left-turn movement at Driveway 2 shows LOS E in the 2032 total traffic scenario PM peak hour. Since no project traffic is added to the movement and only 3 vehicles are attempting the movement with current traffic conditions it is assumed that vehicles will continue to find alternate routes if delay increases further. No mitigation is recommended as part of the proposed development.
- The existing left turn lanes at Driveway 1 and Driveway 2 are anticipated to accommodate 2032 horizon year PM peak hour queue lengths for all impacted left turn lanes. No mitigation is recommended as part of the proposed development.
    - Note: The existing westbound left turn at Driveway 2 is shorter than required per the City of Albuquerque Development Process Manual (CABQ DPM). However, based on existing constraints the storage length cannot be extended without adversely impacting available storage for the signalized intersection at Montgomery Blvd and San Mateo Blvd. Per coordination with City staff, no mitigation is recommended as part of the proposed development.
- The proposed drive-thru and parking lot are expected to provide enough space for on-site circulation during typical- and high-traffic demands. It is anticipated that the drive-thru queue will

be maintained on-site during high-volume periods by rerouting the queue through the parking lot to increase capacity.

- Recommended improvements:
    - The NB approaches at Driveway 1 and Driveway 2 were modeled as two-lane egress (a shared through-left lane and an exclusive right turn lane) based on existing pavement width and turning volumes. Per City staff, the northbound right turn volume at both driveways exceeds the peak hour volume requirement for a right turn lane. Therefore, it is recommended that new signage and pavement markings be added to the existing driveways to designate two egress lanes – a shared through-left lane and an exclusive right turn lane. Additional striping and signing shall be installed per current MUTCD and City of Albuquerque standards.
    - The existing eastbound right turn lane at Driveway 2 is shorter than the required 250 foot plus taper length per the CABQ DPM. It is recommended that the turn lane be extended along the project frontage to maximize the turn lane length without triggering significant utility relocations. Based on aerial measurements, it appears that a turn lane length up to 200 feet plus taper length could be provided without impacting the electrical transmission pole to the west.
- Recommended lane configuration is shown in **Figure 12**.







Kimley»Horn

Figure 12
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: Shannon Ness, PE (NM)
Kimley-Horn
1000 2nd Avenue, Suite 3900
Seattle, WA 98104

MEETING DATE: 10/26/2021

ATTENDEES: Shannon Ness, Cassie Kussow, Taylor Dunkle, and Liz Willmot from Kimley-Horn; Matt Grush, Senior Engineer (City of Albuquerque)

PROJECT: Raising Cane's Chicken Fingers (Store RC 0852) - 4800 Montgomery Blvd NE

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 3,331 square foot Raising Cane's Chicken Fingers Drive-Thru restaurant located at 4800 Montgomery Blvd NE. Scope of work includes demolition of the existing restaurant building and construction of a new Raising Cane's Chicken Fingers 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, PM peak hour (4-6pm) rate: 32.67 trips per ksf)
- **Note Cane's will open at 10am each day, which is outside the standard 7-9am AM peak period. AM Peak Hour is not required to be evaluated.*

2. Appropriate study area:
   Signalized Intersections;
   a. N/A
      **Note: Signalized analysis not required, because intersections are built out and there are no reasonable infrastructure improvements.*

   Unsignalized Intersections;
   a. Intersection 1: Montgomery & NW Site Driveway
   b. Intersection 2: Montgomery & NE Site Driveway

3. Intersection turning movement counts
   Study Time – 4-6 p.m. peak hour
   Consultant to provide for all intersections listed above.
   **Note: AM counts not required based on Analysis time periods (See #1).*

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.

- N/A

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 __ yes _X_ no; Location(s): N/A
g. Weaving analyses __ yes _X_ no; Location(s): N/A

14. Other: N/A
    a. Add queuing information to site plan.
    b. Synchro to be used for analysis.

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. 10/26/2021

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

via: email
C: TIS Task Force Attendees, file

APPENDIX B

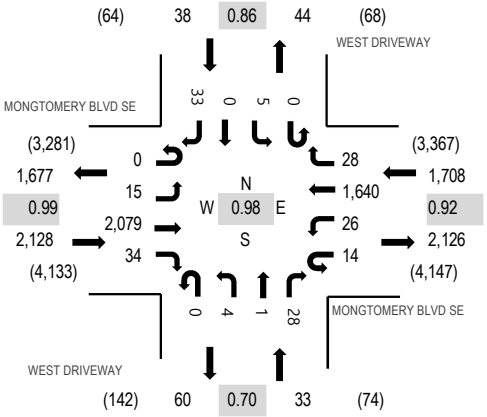
TRAFFIC COUNT DATA

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

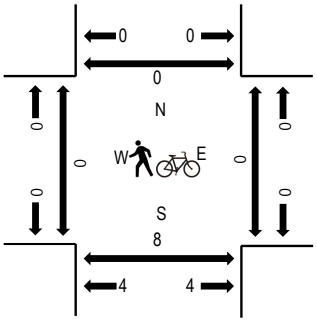
Location: 1 WEST DRIVEWAY & MONGTOMERY BLVD SE PM
Date: Thursday, October 28, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



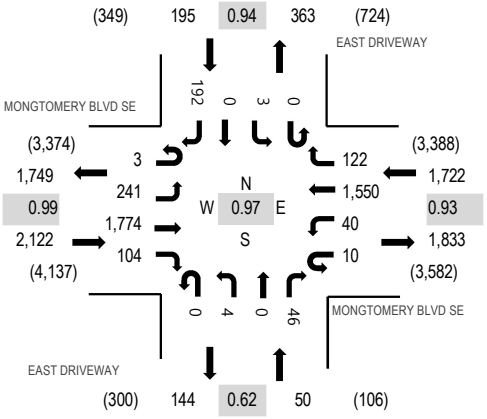
Traffic Counts

Interval Start Time	MONGTOMERY BLVD SE Eastbound				MONGTOMERY BLVD SE Westbound				WEST DRIVEWAY Northbound				WEST 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	1	528	11	2	4	427	7	0	0	1	6	0	0	0	8	995	3,907	0	0	1	0
4:15 PM	0	4	508	7	0	8	451	7	0	0	0	7	0	2	0	7	1,001	3,835	0	0	1	0
4:30 PM	0	5	516	8	7	6	413	4	0	2	0	6	0	3	0	8	978	3,802	0	0	0	0
4:45 PM	0	5	527	8	5	8	349	10	0	2	0	9	0	0	0	10	933	3,713	0	0	6	0
5:00 PM	0	1	536	9	9	9	332	6	0	0	0	15	0	3	0	3	923	3,731	0	0	1	0
5:15 PM	0	0	523	15	2	12	395	6	0	0	0	5	0	1	0	9	968		0	0	1	0
5:30 PM	1	3	428	10	3	12	415	1	0	0	0	11	0	1	0	4	889		0	0	1	0
5:45 PM	1	1	470	7	4	8	439	6	0	1	0	9	0	1	0	4	951		0	0	4	0
Count Total	2	20	4,036	75	32	67	3,221	47	0	5	1	68	0	11	0	53	7,638		0	0	15	0
Peak Hour	0	15	2,079	34	14	26	1,640	28	0	4	1	28	0	5	0	33	3,907		0	0	8	0

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

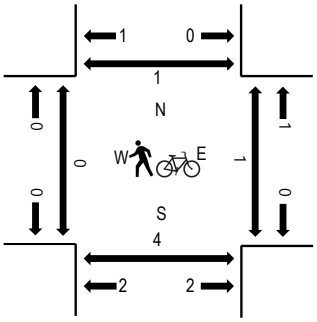
Location: 2 EAST DRIVEWAY & MONGTOMERY BLVD SE PM
Date: Thursday, October 28, 2021
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	MONGTOMERY BLVD SE Eastbound				MONGTOMERY BLVD SE Westbound				EAST DRIVEWAY Northbound				EAST 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	2	59	426	28	3	12	380	34	0	2	0	13	0	0	0	52	1,011	4,089	0	0	0	0
4:15 PM	0	62	449	22	2	7	424	28	0	1	0	9	0	1	0	50	1,055	4,040	0	1	1	0
4:30 PM	1	64	442	34	1	9	395	29	0	1	0	11	0	0	0	45	1,032	3,958	0	0	0	0
4:45 PM	0	56	457	20	4	12	351	31	0	0	0	13	0	2	0	45	991	3,871	0	0	3	1
5:00 PM	0	43	461	37	0	8	339	31	0	0	0	10	0	1	0	32	962	3,891	0	0	1	1
5:15 PM	0	49	446	28	3	7	343	46	0	0	0	11	0	0	0	40	973		0	1	0	1
5:30 PM	1	62	383	24	2	11	358	43	0	0	0	23	0	1	0	37	945		0	0	0	2
5:45 PM	0	56	396	29	1	12	431	31	0	1	0	11	0	0	0	43	1,011		1	3	0	0
Count Total	4	451	3,460	222	16	78	3,021	273	0	5	0	101	0	5	0	344	7,980		1	5	5	5
Peak Hour	3	241	1,774	104	10	40	1,550	122	0	4	0	46	0	3	0	192	4,089		0	1	4	1

APPENDIX C

EXISTING SYNCHRO REPORTS

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	15	2079	34	14	26	1640	28	4	1	28	5	0	33
Future Vol, veh/h	15	2079	34	14	26	1640	28	4	1	28	5	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	100	-	95	-	85	-	80	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	92	92	92	92	75	75	75	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	2100	34	15	28	1783	30	5	1	37	6	0	38

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	1813	0	0	1533	2134	0	0	2929	4029	1050	2740	4033	892
Stage 1	-	-	-	-	-	-	-	2130	2130	-	1869	1869	-
Stage 2	-	-	-	-	-	-	-	799	1899	-	871	2164	-
Critical Hdwy	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*682	-	-	*733	*546	-	-	*251	*5	*434	*251	*5	*542
Stage 1	-	-	-	-	-	-	-	*445	*424	-	*515	*503	-
Stage 2	-	-	-	-	-	-	-	*557	*479	-	*445	*424	-
Platoon blocked, %	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*682	-	-	*588	*588	-	-	*217	*5	*434	*170	*5	*542
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	*217	*5	-	*170	*5	-
Stage 1	-	-	-	-	-	-	-	*435	*414	-	*503	*466	-
Stage 2	-	-	-	-	-	-	-	*479	*444	-	*397	*414	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	44.7	14
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	23	434	* 682	-	-	* 588	-	-	170	542
HCM Lane V/C Ratio	0.29	0.086	0.022	-	-	0.074	-	-	0.034	0.071
HCM Control Delay (s)	216.1	14.1	10.4	-	-	11.6	-	-	26.9	12.1
HCM Lane LOS	F	B	B	-	-	B	-	-	D	B
HCM 95th %tile Q(veh)	0.9	0.3	0.1	-	-	0.2	-	-	0.1	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.5

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	241	1774	104	10	40	1550	122	4	0	46	3	0	192
Future Vol, veh/h	3	241	1774	104	10	40	1550	122	4	0	46	3	0	192
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	190	-	60	-	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	93	93	93	93	83	83	83	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	246	1810	106	11	43	1667	131	5	0	55	3	0	204

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	1312	1798	0	0	1321	1916	0	0	3083	4214	905	3063	4255	899
Stage 1	-	-	-	-	-	-	-	-	2308	2308	-	1841	1841	-
Stage 2	-	-	-	-	-	-	-	-	775	1906	-	1222	2414	-
Critical Hdwy	5.64	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*954	633	-	-	*844	*627	-	-	*39	2	*499	*41	2	*564
Stage 1	-	-	-	-	-	-	-	-	*249	303	-	*442	462	-
Stage 2	-	-	-	-	-	-	-	-	*579	415	-	*512	248	-
Platoon blocked, %	1	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*633	633	-	-	*651	*651	-	-	*16	1	*499	*24	1	*564
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	*16	1	-	*24	1	-
Stage 1	-	-	-	-	-	-	-	-	*151	184	-	*269	424	-
Stage 2	-	-	-	-	-	-	-	-	*339	381	-	*276	150	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0.3	36.7	21.7
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	16	499	633	-	-	* 651	-	-	419
HCM Lane V/C Ratio	0.301	0.111	0.393	-	-	0.083	-	-	0.495
HCM Control Delay (s)	$ 307.8	13.1	14.3	-	-	11	-	-	21.7
HCM Lane LOS	F	B	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.8	0.4	1.9	-	-	0.3	-	-	2.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

APPENDIX D

TRIP GENERATION INFORMATION

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

Kimley»Horn

Weekday Trip Generation
Trips Based on Average Rates/Equations

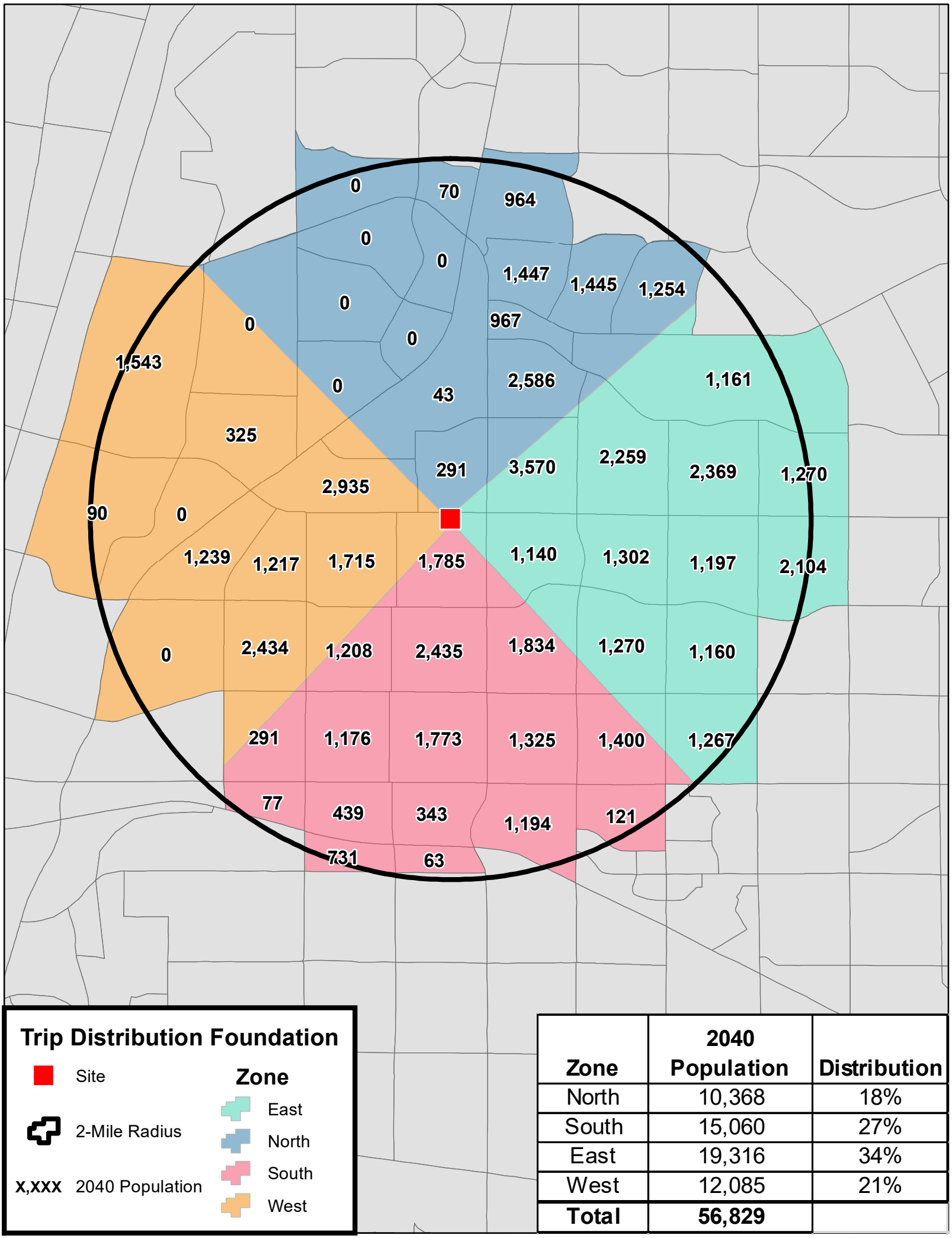
Project Name **NEC Wyoming Blvd & Northeastern Blvd**
Project Number **06931344**

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	3.331	Avg	470.95		32.67	1,570		109			57	52
								Grand Total		1,570		109			57	52

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	10,368	18%
South	15,060	27%
East	19,316	34%
West	12,085	21%
Total	**56,829**	

APPENDIX F

BACKGROUND SYNCHRO REPORTS

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	15	2089	34	14	26	1648	28	4	1	28	5	0	33
Future Vol, veh/h	15	2089	34	14	26	1648	28	4	1	28	5	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	100	-	95	-	85	-	80	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	92	92	92	92	75	75	75	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	2110	34	15	28	1791	30	5	1	37	6	0	38

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	1821	0	0	1540	2144	0	0	2942	4047	1055	2752	4051	896
Stage 1	-	-	-	-	-	-	-	2140	2140	-	1877	1877	-
Stage 2	-	-	-	-	-	-	-	802	1907	-	875	2174	-
Critical Hdwy	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*682	-	-	*733	*546	-	-	*251	*5	*434	*251	*5	*542
Stage 1	-	-	-	-	-	-	-	*445	*424	-	*505	*496	-
Stage 2	-	-	-	-	-	-	-	*557	*472	-	*445	*424	-
Platoon blocked, %	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*682	-	-	*588	*588	-	-	*217	*4	*434	*159	*4	*542
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	*217	*4	-	*159	*4	-
Stage 1	-	-	-	-	-	-	-	*435	*414	-	*494	*460	-
Stage 2	-	-	-	-	-	-	-	*479	*438	-	*397	*414	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	53.6	14.3
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	19	434	* 682	-	-	* 588	-	-	159	542
HCM Lane V/C Ratio	0.351	0.086	0.022	-	-	0.074	-	-	0.037	0.071
HCM Control Delay (s)	274.8	14.1	10.4	-	-	11.6	-	-	28.5	12.1
HCM Lane LOS	F	B	B	-	-	B	-	-	D	B
HCM 95th %tile Q(veh)	1	0.3	0.1	-	-	0.2	-	-	0.1	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.6

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	242	1783	105	10	40	1558	123	4	0	46	3	0	193
Future Vol, veh/h	3	242	1783	105	10	40	1558	123	4	0	46	3	0	193
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	190	-	60	-	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	93	93	93	93	83	83	83	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	247	1819	107	11	43	1675	132	5	0	55	3	0	205

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	1319	1807	0	0	1328	1926	0	0	3097	4234	910	3077	4275	904
Stage 1	-	-	-	-	-	-	-	-	2319	2319	-	1849	1849	-
Stage 2	-	-	-	-	-	-	-	-	778	1915	-	1228	2426	-
Critical Hdwy	5.64	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*954	624	-	-	*844	*627	-	-	*38	2	*499	*40	1	*564
Stage 1	-	-	-	-	-	-	-	-	*241	297	-	*434	456	-
Stage 2	-	-	-	-	-	-	-	-	*579	409	-	*512	242	-
Platoon blocked, %	1	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*624	624	-	-	*651	*651	-	-	*16	1	*499	*23	1	*564
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	*16	1	-	*23	1	-
Stage 1	-	-	-	-	-	-	-	-	*144	178	-	*260	418	-
Stage 2	-	-	-	-	-	-	-	-	*338	375	-	*273	145	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.3	36.7	22.1
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	16	499	624	-	-	* 651	-	-	415
HCM Lane V/C Ratio	0.301	0.111	0.401	-	-	0.083	-	-	0.502
HCM Control Delay (s)	$ 307.8	13.1	14.6	-	-	11	-	-	22.1
HCM Lane LOS	F	B	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.8	0.4	1.9	-	-	0.3	-	-	2.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	16	2196	36	15	27	1732	30	4	1	30	5	0	35
Future Vol, veh/h	16	2196	36	15	27	1732	30	4	1	30	5	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	100	-	95	-	85	-	80	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	92	92	92	92	75	75	75	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2218	36	16	29	1883	33	5	1	40	6	0	41

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	1916	0	0	1619	2254	0	0	3093	4256	1109	2893	4259	942
Stage 1	-	-	-	-	-	-	-	2250	2250	-	1973	1973	-
Stage 2	-	-	-	-	-	-	-	843	2006	-	920	2286	-
Critical Hdwy	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*655	-	-	*697	*518	-	-	*229	*1	*412	*229	*1	*521
Stage 1	-	-	-	-	-	-	-	*423	*402	-	*496	*484	-
Stage 2	-	-	-	-	-	-	-	*534	*457	-	*423	*402	-
Platoon blocked, %	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*655	-	-	*557	*557	-	-	*194	*~ 1	*412	-	*1	*521
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	*194	*~ 1	-	-	*1	-
Stage 1	-	-	-	-	-	-	-	*413	*393	-	*484	*444	-
Stage 2	-	-	-	-	-	-	-	*452	*419	-	*371	*393	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	221.4	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	5	412	* 655	-	-	* 557	-	-	-	521
HCM Lane V/C Ratio	1.333	0.097	0.025	-	-	0.082	-	-	-	0.078
HCM Control Delay (s)	$ 1461.5	14.7	10.6	-	-	12	-	-	-	12.5
HCM Lane LOS	F	B	B	-	-	B	-	-	-	B
HCM 95th %tile Q(veh)	1.7	0.3	0.1	-	-	0.3	-	-	-	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.2

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	255	1874	110	11	42	1637	129	4	0	49	3	0	203
Future Vol, veh/h	3	255	1874	110	11	42	1637	129	4	0	49	3	0	203
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	190	-	60	-	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	93	93	93	93	83	83	83	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	260	1912	112	12	45	1760	139	5	0	59	3	0	216

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	1386	1899	0	0	1396	2024	0	0	3256	4451	956	3235	4494	950
Stage 1	-	-	-	-	-	-	-	-	2438	2438	-	1944	1944	-
Stage 2	-	-	-	-	-	-	-	-	818	2013	-	1291	2550	-
Critical Hdwy	5.64	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*917	612	-	-	*807	*600	-	-	*27	1	*477	*29	1	*542
Stage 1	-	-	-	-	-	-	-	-	*214	271	-	*425	444	-
Stage 2	-	-	-	-	-	-	-	-	*557	395	-	*490	216	-
Platoon blocked, %	1	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*612	612	-	-	*622	*622	-	-	*10	0	*477	*16	0	*542
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	*10	0	-	*16	0	-
Stage 1	-	-	-	-	-	-	-	-	*122	154	-	*242	403	-
Stage 2	-	-	-	-	-	-	-	-	*304	358	-	*245	123	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0.3	54.2	28.3
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	10	477	612	-	-	* 622	-	-	367
HCM Lane V/C Ratio	0.482	0.124	0.43	-	-	0.092	-	-	0.597
HCM Control Delay (s)	$ 551.2	13.6	15.3	-	-	11.4	-	-	28.3
HCM Lane LOS	F	B	C	-	-	B	-	-	D
HCM 95th %tile Q(veh)	1.1	0.4	2.2	-	-	0.3	-	-	3.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

APPENDIX G

TOTAL SYNCHRO REPORTS

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	15	2104	40	14	38	1667	28	4	1	70	5	0	33
Future Vol, veh/h	15	2104	40	14	38	1667	28	4	1	70	5	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	100	-	95	-	85	-	80	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	92	92	92	92	75	75	75	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	2125	40	15	41	1812	30	5	1	93	6	0	38

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	1842	0	0	1551	2165	0	0	2992	4109	1063	2805	4119	906
Stage 1	-	-	-	-	-	-	-	2155	2155	-	1924	1924	-
Stage 2	-	-	-	-	-	-	-	837	1954	-	881	2195	-
Critical Hdwy	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*655	-	-	*733	*546	-	-	*229	*4	*434	*229	*4	*521
Stage 1	-	-	-	-	-	-	-	*445	*424	-	*534	*508	-
Stage 2	-	-	-	-	-	-	-	*534	*500	-	*445	*424	-
Platoon blocked, %	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*655	-	-	*563	*563	-	-	*192	*3	*434	*107	*3	*521
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	*192	*3	-	*107	*3	-
Stage 1	-	-	-	-	-	-	-	*435	*414	-	*522	*457	-
Stage 2	-	-	-	-	-	-	-	*445	*450	-	*340	*414	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	41.7	16.2
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	14	434	* 655	-	-	* 563	-	-	107	521
HCM Lane V/C Ratio	0.476	0.215	0.023	-	-	0.1	-	-	0.054	0.074
HCM Control Delay (s)	$ 407	15.6	10.6	-	-	12.1	-	-	40.6	12.5
HCM Lane LOS	F	C	B	-	-	B	-	-	E	B
HCM 95th %tile Q(veh)	1.2	0.8	0.1	-	-	0.3	-	-	0.2	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.1

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	19	242	1809	120	10	63	1573	123	4	0	54	3	0	193
Future Vol, veh/h	19	242	1809	120	10	63	1573	123	4	0	54	3	0	193
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	190	-	60	-	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	93	93	93	93	83	83	83	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	247	1846	122	11	68	1691	132	5	0	65	3	0	205

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	1331	1823	0	0	1348	1968	0	0	3212	4359	923	3185	4415	912
Stage 1	-	-	-	-	-	-	-	-	2378	2378	-	1915	1915	-
Stage 2	-	-	-	-	-	-	-	-	834	1981	-	1270	2500	-
Critical Hdwy	5.64	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*954	607	-	-	*844	*627	-	-	*28	1	*499	*30	1	*564
Stage 1	-	-	-	-	-	-	-	-	*204	266	-	*368	409	-
Stage 2	-	-	-	-	-	-	-	-	*579	367	-	*512	210	-
Platoon blocked, %	1	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*608	608	-	-	*642	*642	-	-	*11	1	*499	*16	1	*564
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	*11	1	-	*16	1	-
Stage 1	-	-	-	-	-	-	-	-	*115	150	-	*207	359	-
Stage 2	-	-	-	-	-	-	-	-	*323	322	-	*251	118	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0.5	46.1	26.6
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	11	499	608	-	-	* 642	-	-	370
HCM Lane V/C Ratio	0.438	0.13	0.438	-	-	0.122	-	-	0.564
HCM Control Delay (s)	$ 489.6	13.3	15.4	-	-	11.4	-	-	26.6
HCM Lane LOS	F	B	C	-	-	B	-	-	D
HCM 95th %tile Q(veh)	1	0.4	2.2	-	-	0.4	-	-	3.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	16	2211	42	15	39	1751	30	4	1	72	5	0	35
Future Vol, veh/h	16	2211	42	15	39	1751	30	4	1	72	5	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	100	-	95	-	85	-	80	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	92	92	92	92	75	75	75	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	2233	42	16	42	1903	33	5	1	96	6	0	41

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	1936	0	0	1630	2275	0	0	3142	4317	1117	2945	4326	952
Stage 1	-	-	-	-	-	-	-	2265	2265	-	2019	2019	-
Stage 2	-	-	-	-	-	-	-	877	2052	-	926	2307	-
Critical Hdwy	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*655	-	-	*660	*491	-	-	*229	*~ 1	*391	*229	*1	*521
Stage 1	-	-	-	-	-	-	-	*401	*381	-	*438	*447	-
Stage 2	-	-	-	-	-	-	-	*534	*421	-	*401	*381	-
Platoon blocked, %	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*655	-	-	*503	*503	-	-	*189	*~ 1	*391	-	*1	*521
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	*189	*~ 1	-	-	*1	-
Stage 1	-	-	-	-	-	-	-	*391	*372	-	*428	*395	-
Stage 2	-	-	-	-	-	-	-	*435	*372	-	*294	*372	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	111	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	5	391	* 655	-	-	* 503	-	-	-	521
HCM Lane V/C Ratio	1.333	0.246	0.025	-	-	0.117	-	-	-	0.078
HCM Control Delay (s)	$ 1461.5	17.2	10.6	-	-	13.1	-	-	-	12.5
HCM Lane LOS	F	C	B	-	-	B	-	-	-	B
HCM 95th %tile Q(veh)	1.7	1	0.1	-	-	0.4	-	-	-	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.1

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	19	255	1900	125	11	65	1652	129	4	0	57	3	0	203
Future Vol, veh/h	19	255	1900	125	11	65	1652	129	4	0	57	3	0	203
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	190	-	60	-	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	93	93	93	93	83	83	83	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	260	1939	128	12	70	1776	139	5	0	69	3	0	216

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	1398	1915	0	0	1415	2067	0	0	3371	4576	970	3344	4635	958
Stage 1	-	-	-	-	-	-	-	-	2497	2497	-	2010	2010	-
Stage 2	-	-	-	-	-	-	-	-	874	2079	-	1334	2625	-
Critical Hdwy	5.64	5.34	-	-	5.64	5.34	-	-	6.44	6.54	7.14	6.44	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	7.34	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.74	5.54	-	6.74	5.54	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	3.12	-	-	3.82	4.02	3.92	3.82	4.02	3.92
Pot Cap-1 Maneuver	*917	595	-	-	*807	*600	-	-	*20	1	*477	*22	1	*542
Stage 1	-	-	-	-	-	-	-	-	*180	240	-	*358	396	-
Stage 2	-	-	-	-	-	-	-	-	*557	352	-	*490	185	-
Platoon blocked, %	1	1	-	-	1	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*593	593	-	-	*614	*614	-	-	*7	0	*477	*11	0	*542
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	*7	0	-	*11	0	-
Stage 1	-	-	-	-	-	-	-	-	*95	127	-	*189	343	-
Stage 2	-	-	-	-	-	-	-	-	*290	305	-	*221	98	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.5	68.9	38
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	7	477	593	-	-	* 614	-	-	318
HCM Lane V/C Ratio	0.688	0.144	0.471	-	-	0.133	-	-	0.689
HCM Control Delay (s)	$ 854.5	13.8	16.4	-	-	11.8	-	-	38
HCM Lane LOS	F	B	C	-	-	B	-	-	E
HCM 95th %tile Q(veh)	1.2	0.5	2.5	-	-	0.5	-	-	4.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon