Traffic Impact Study
Proposed Dunkin Drive-Through

Albuquerque, New Mexico

Prepared For:

NMR, LLC

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

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I. Executive Summary

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed Dunkin Drive-Through (Dunkin) and retail building to be located in the southeast quadrant of the intersection of Central Avenue NW and 98th Street SW in Albuquerque, New Mexico. This report is an update to the traffic study previously prepared by Lee Engineering dated May 2022. The objectives of the traffic study are as follows:

- Determine the existing vehicular conditions in the study area to establish a base condition.
- Assess the impact that the proposed development will have on traffic conditions in the area.
- Determine any roadway or access modifications and/or improvements that will be necessary to effectively accommodate and mitigate future conditions.

Vehicle, pedestrian, and bicycle counts conducted during the weekday morning and weekday evening peak periods at the intersections of Central Avenue with 98th Street, Westland Road, and Unser Boulevard were utilized to determine the peak hour of traffic activity during these time periods.

As proposed, the site will be developed with an approximately 2,490 square-foot Dunkin and an approximately 6,000 square-foot strip retail plaza. A total of 14 parking spaces will serve the proposed Dunkin and a total of 20 parking spaces will serve the proposed retail building. The proposed Dunkin will be served with a drive-through that will provide stacking for up to 16 vehicles. Access to the site will be provided via a proposed access drive on Central Avenue and a proposed access drive on 98th Street.

It should be noted that the site plan has been modified from its original version to swap the locations of the proposed Dunkin and proposed strip retail building. This change was made to locate the Dunkin to the east, farther away from signalized intersection of Central Avenue with 98th Street, to ensure drive-through operations and queues do not impact the adjacent roadways, particularly 98th Street.

Based on the proceeding analyses and recommendations, the following conclusions have been made:

- The proposed Dunkin and retail building will be located at 9700 Central Avenue SW. The buildings will be 2,490 and 6,000 square feet, respectively, and will share a 34-space parking lot. The Dunkin will provide a drive-through that will accommodate 16 vehicles.
- Access to the site will be provided via the two right-in/right-out access drives with one located off 98th Street and the second access located off Central Avenue.
- The volume of traffic estimated to be generated by Dunkin will be reduced due to the volume of pass-by trips anticipated to be diverted from the existing traffic on the roadways, primarily in the northbound direction on 98th Street and eastbound direction on Central Avenue.

- The access drives are projected to be adequate in accommodating the traffic estimated to be generated by the development and will provide flexible and efficient access to the site.

- The provision of a right-in/right-out access drive on 98th Street will be beneficial based on the following:

    - Given that the northbound traffic on 98th Street, especially in the morning peak hour, is significantly higher than the two-way traffic on Central Avenue, a direct access to 98th Street will provide convenient entry/exit to the site without the traffic having to travel onto Central Avenue.

    - This will in turn reduce the traffic load at the intersection of 98th Street with Central Avenue by eliminating the additional right-turn movements that will occur (northbound and westbound right turns).

    - A northbound right-turn lane currently exists on 98th Street, which can also serve as a deceleration lane for the proposed access drive. This right turn lane currently operates under yield control at Central Avenue

    - The provision of right-turn movements out onto 98th Street will significantly reduce the need for vehicles to perform U-turn maneuvers at Westland Road.

- Given the location of the site to the southwest of downtown Albuquerque, it is anticipated that the majority of northbound traffic in the weekday morning peak hour is traffic desiring to travel east on I-40. In lieu of performing a U-turn at Westland Road, these vehicles have the ability to access 98th Street directly or I-40 via the Unser Boulevard SW interchange.

- It is recommended that the median "nose" be modified similar to the intersections of Central Avenue with 94th Street and 90th Street, where the median opening accommodates left-turn movements/U-turns without left-turn lanes.

- As part of the proposed development, stop signs should be provided for outbound traffic from both access drives.

- The drive-through stacking of 16 vehicles will be adequate in accommodating the peak drive-through activity for the coffee shop. The final site traffic layout and queueing acceptance is dependent on the Traffic Circulation Layout (TCL) approval by the City.

- Clear intersection sight distance should be provided at each driveway as per COA DPM 7-4(I)(5)(iii) Intersection Sight Distance.

1. Introduction

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed Dunkin Drive-Through (Dunkin) and retail building to be located in the southeast quadrant of the intersection of Central Avenue and 98th Street in Albuquerque, New Mexico. This report is an update to the traffic study previously prepared by Lee Engineering dated May 2022. The scoping document for the original traffic impact study can be found in the Appendix.

As proposed, the site will be developed with an approximately 2,490 square-foot Dunkin and an approximately 6,000 square-foot strip retail plaza. A total of 14 parking spaces will serve the proposed Dunkin and a total of 20 parking spaces will serve the proposed retail building. The proposed Dunkin will be served with a drive-through that will provide stacking for up to 16 vehicles. Access to the development is proposed off Central Avenue and 98th Street.

Figure 1 shows the location of the site in relation to the area roadway network. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

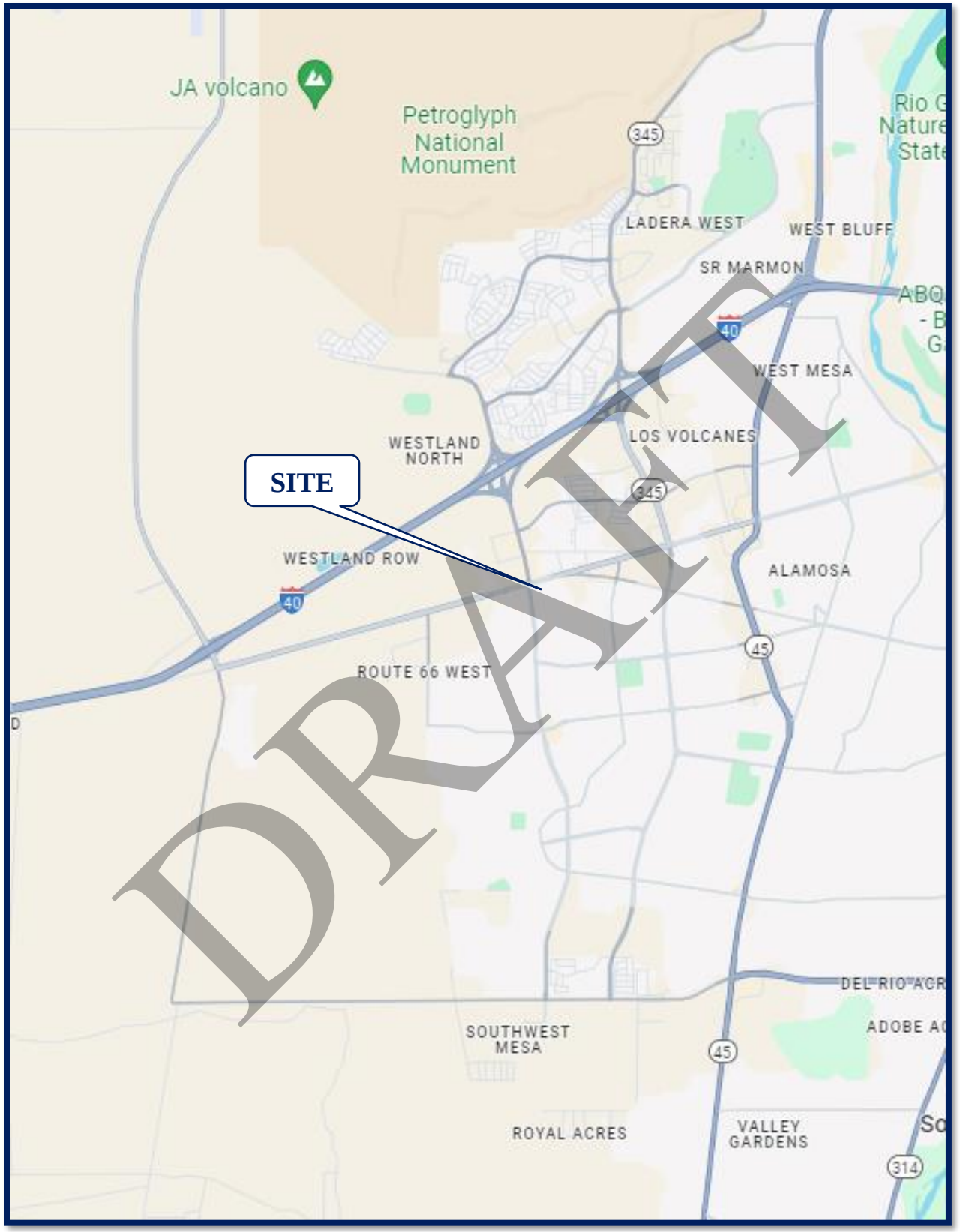
- Existing roadway conditions
- Crash summary for the intersections of Central Avenue with 98th Street and Central Avenue with Westland Road
- A description of the proposed site
- Directional distribution of the site traffic
- Vehicle trip generation for the site
- Future traffic conditions, including access to the site
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to the adequacy of site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. No-Build Conditions – Analyzes the capacity of the existing roadway system using the ambient area growth not attributable to any particular development and the traffic anticipated to be generated by other area developments.

3. Total Projected – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth, the traffic generated by other area developments, and traffic estimated to be generated by the proposed development.



Site Location **Figure 1**

Aerial View of Site **Figure 2**

2. Existing Conditions

The following provides a detailed description of the physical characteristics of the adjacent roadways, including geometry and traffic control, adjacent land uses, and peak hour traffic flows.

Site Location

The site of the proposed Dunkin is located on the southeast corner of the intersection of Central Avenue with 98th Street. Land uses within the vicinity of the site are primarily commercial along Central Avenue and along 98th Street north of Central Avenue. South of Central Avenue, residential land uses are located on both sides of the road.

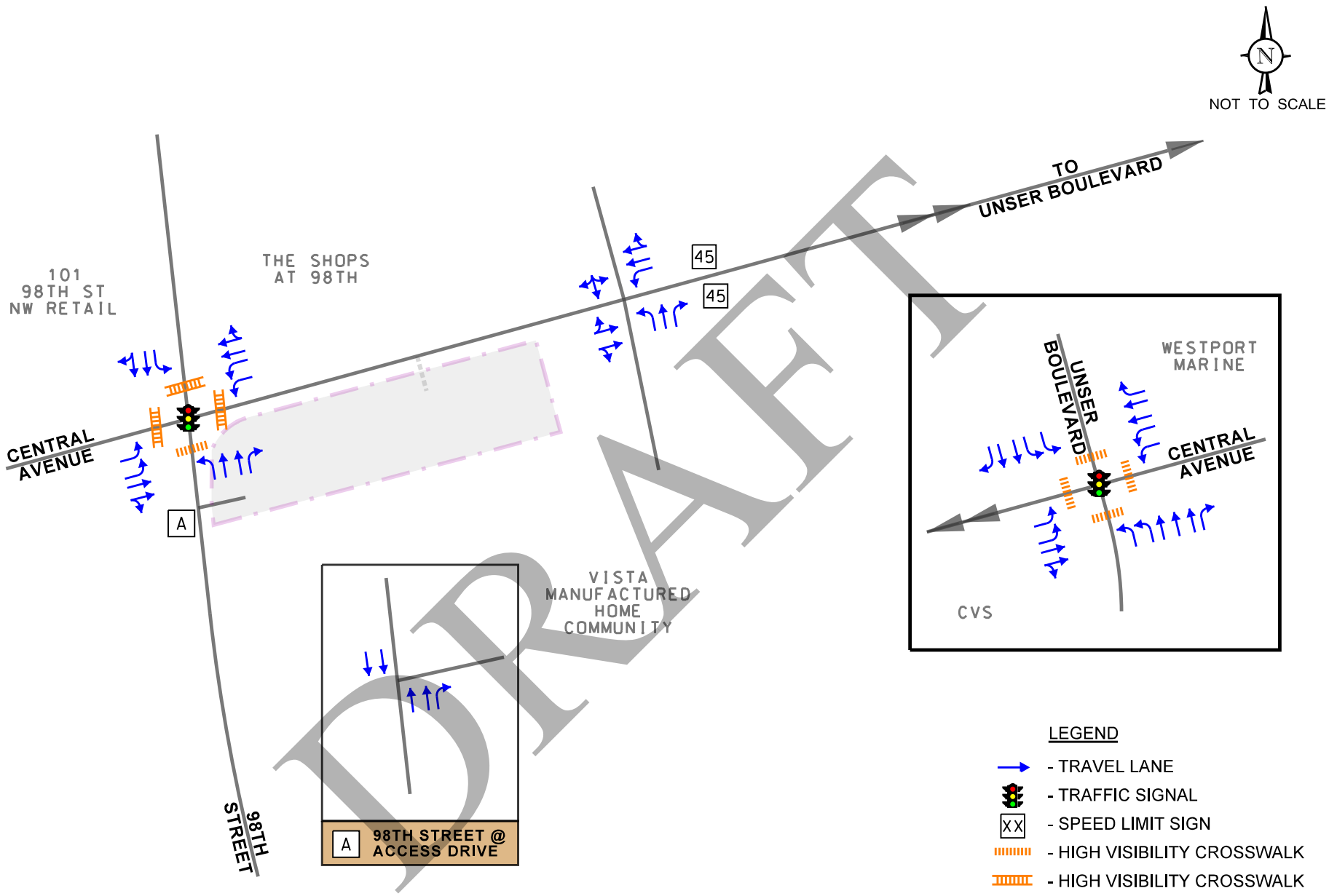
Existing Roadway Characteristics

Some of the key characteristics of the existing roadways within the study area are described below and illustrated in **Figure 3**.

Central Avenue is an east-west urban principal arterial roadway that provides two lanes in each direction. At its signalized intersection with 98th Street, Central Avenue provides dual left-turn lanes, a through lane, and a combined through/channelized right-turn lane on the eastbound and westbound approaches. High-visibility crosswalks are provided on the east and west legs of the intersection. At its unsignalized intersection with Westland Drive, Central Avenue provides a combined left-turn lane/through lane and a combined through/right-turn lane on the eastbound approach. On the westbound approach, Central Avenue provide a left-turn lane, a through lane, and a combined through/right-turn lane. At its signalized intersection with Unser Boulevard, Central Avenue provides dual left-turn lanes, a through lane, and a combined through/right-turn lane on the eastbound approach. On the westbound approach, Central Avenue provides dual left-turn lanes, two through lanes, and a right-turn lane. An on-roadway bike lane is provided on the north side of the roadway. High-visibility crosswalks are provided on the east and west legs of the intersection. Central Avenue is under the jurisdiction of the City of Albuquerque and has a posted speed limit of 45 miles per hour.

98th Street is a north-south urban principal arterial roadway that provides two lanes in each direction. At its signalized intersection with Central Avenue, 98th Street provides a left-turn lane, two through lanes, and a channelized right-turn lane on the northbound approach. On the southbound approach, 98th Street provides a left-turn lane, a through lane, and a combined though/channelized right-turn lane. High-visibility crosswalks are provided on the north and south legs of the intersection. 98th Street is under the jurisdiction of the City of Albuquerque and has a posted speed limit of 45 miles per hour.

Westland Drive is a north-south local roadway that provides access to commercial uses to the north and the Vista Manufactured Home Community to the south. At its unsignalized intersection with Central Avenue, Westland Drive provides a left-turn lane, a through lane, and a right-turn lane on the northbound approach and a combined left-turn/through/right-turn lane on the southbound approach.



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Existing Roadway Characteristics

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Figure: 3

Unser Boulevard is a north-south arterial roadway that generally provides two lanes in each direction. At its signalized intersection with Central Avenue, Unser Boulevard provides dual left-turn lanes, three through lanes, and a right-turn lane on the northbound approach. On the southbound approach, Unser Boulevard provides dual left-turn lanes, two through lanes, and a right-turn lane. High-visibility crosswalks are provided on the north and south legs of the intersection. A two-way multi-use path parallels the east side of the roadway and there are bike lanes provided on the northbound and southbound roadway. Under Boulevard is under the jurisdiction of the State of New Mexico and has a posted speed limit of 40 miles per hour.

Existing Traffic Volumes

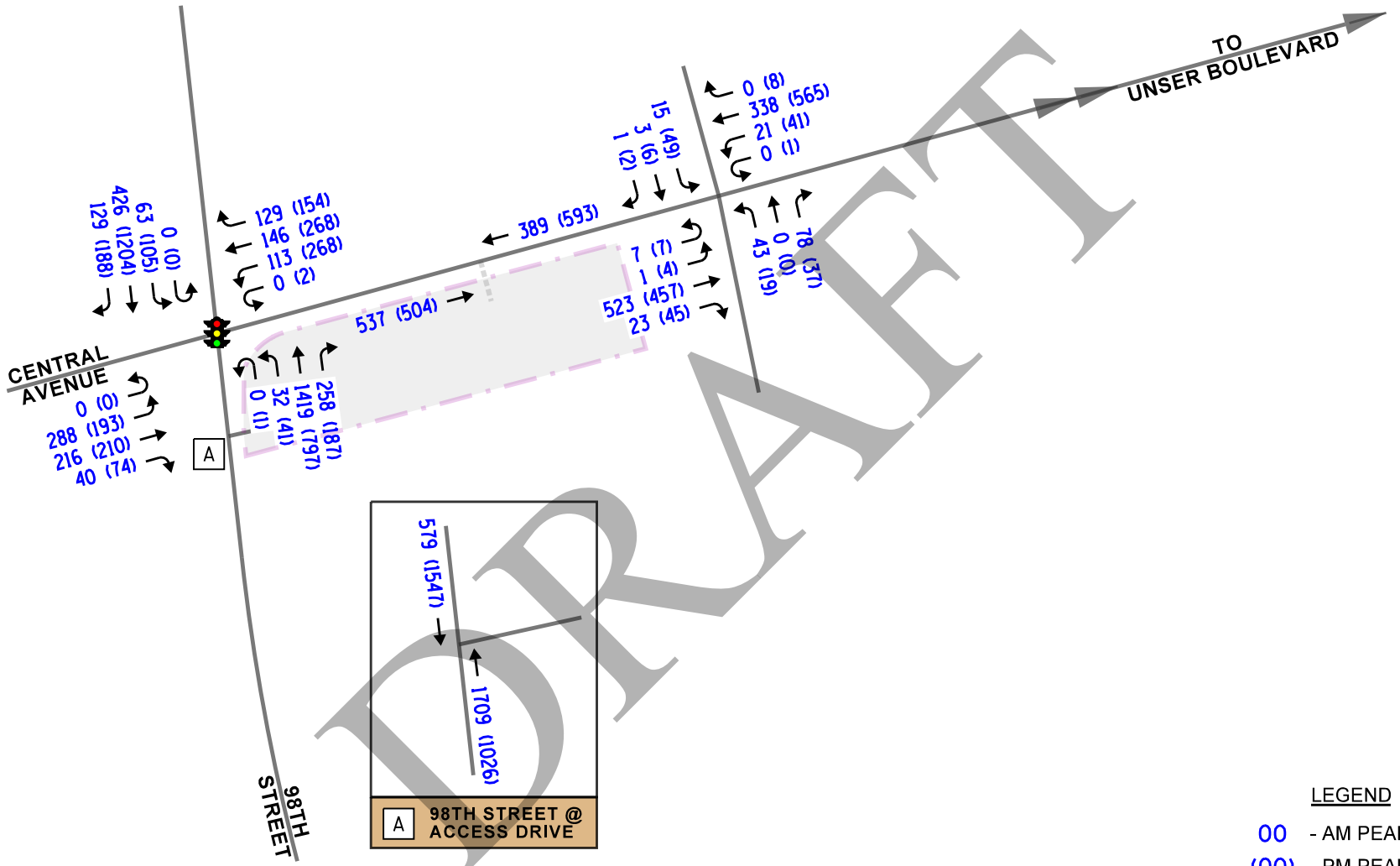
In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, peak period turning movement, pedestrian, and bicycle counts that were collected as part of the original traffic impact study were utilized. These counts were conducted on March 27, 2023 during the weekday morning (6:00 A.M. to 9:00 A.M.) and evening (4:00 P.M. to 6:00 P.M.) peak periods at the intersections of Central Avenue with 98th Street and Central Avenue with Westland Road. **Figure 4** illustrates the existing peak hour vehicle traffic volumes. Summaries of the traffic counts are included in the Appendix.

Crash Data

A crash summary for the intersections within the study area has been completed. This summary aims to highlight trends and observations from summarized crash data. Crash data was provided by NMDOT for 2016 to 2020 in aggregate form and is summarized in **Table 1**. From Table 1, the following observations are made:

- The intersection of 98th Street with Central Avenue experienced 296 crashes between 2016 and 2020.
  - The most frequent crash type involved vehicles traveling in the same direction resulting in a rear end collision.
  - Approximately 50 percent of crashes occurred in the daylight, resulting in property damage only.
  - No fatal crashes were reported between 2016 and 2020 with approximately 30 percent of crashes involving an injury.
  - The most common cause of a crash was due to driver inattention.
  - Four crashes reported involved a pedestrian.

- The intersection of Central Avenue with Westland Road experienced 14 crashes between 2016 and 2020.
  - The most common crash type was vehicles traveling in the same direction, both going straight.
  - Approximately 40 percent of crashes occurred in the daylight with another 40 percent of crashes occurring in the dark.
  - No fatal crashes were reported between 2016 and 2020 with 43 percent of crashes involving an injury.
  - The most common cause of a crash was due to a vehicle failing to yield right of way.



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Existing Traffic Volumes

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Table 1
CRASH SUMMARY

Crash Summary		98th St & Central Ave	Central Ave & Westland Rd
Total Crashes		**296**	**14**
By Year	2016	73	2
	2017	58	2
	2018	74	4
	2019	43	5
	2020	48	1
By Type	Fixed Object	8	1
	Other Vehicle - Both Going Straight/Entering At Angle	26	1
	Other Vehicle - From Opposite Direction	23	2
	Other Vehicle - From Opposite Direction/Both Going	8	0
	Other Vehicle - From Same Direction/Both Going Straight	33	2
	Other Vehicle - From Same Direction/Rear End Collision	27	0
	Other Vehicle - One Left Turn/Entering At Angle	23	2
	Pedestrian	4	0
	% Other Vehicle - From Same Direction/Both Going Straight	*11%*	*14%*
	% Other Vehicle - From Same Direction/Rear End Collision	*9%*	*0%*
	% Other Vehicle - Both Going Straight/Entering At Angle	*9%*	*7%*
By Lighting Conditions	Daylight	138	6
	Dawn/Dusk	0	0
	Dark	60	6
	Left Blank	83	2
	% Day	*47%*	*43%*
By Severity	Property Damage Only	206	8
	Injury	90	6
	Fatality	0	0
	% Property Damage Only	*70%*	*57%*
	% Injury	*30%*	*43%*
By Cause	Alcohol/Drug Involved	9	1
	Collision with Motor Vehicle	41	1
	Collision with Person	1	0
	Disregarded Traffic Signal	14	1
	Driver Inattention	53	3
	Failed to Yield Right of Way	40	5
	Following Too Closely	17	0
	Pedestrian Error	1	0
	% Driver Inattention	*18%*	*21%*
	% Collision With Motor Vehicle	*14%*	*7%*
	% Failed to Yield Right of Way	*14%*	*36%*
	% Collision with Person/ Pedestrian Error	*1%*	*0%*

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Use Plan

As proposed, the site will be developed with an approximately 2,490 square-foot Dunkin and an approximately 6,000 square-foot strip retail plaza. A total of 14 parking spaces will serve the proposed Dunkin and a total of 20 parking spaces will serve the proposed retail building. The proposed Dunkin will be served with a drive-through that will provide stacking for up to 16 vehicles. It should be noted that the site plan has been modified from its original version to swap the locations of the proposed Dunkin and proposed strip retail building. This change was made to locate the Dunkin to the east, farther away from signalized intersection of Central Avenue with 98th Street, to ensure drive-through operations and queues do not impact the adjacent roadways, particularly 98th Street.

Access to the site will be provided via the following:

- A proposed access drive on Central Avenue, located approximately 350 feet east of 98th Street, which will provide one inbound lane and one outbound lane. Outbound movements should be under stop-sign control. Due to the existing barrier median located on Central Avenue within of the vicinity of this access drive, this access drive will be restricted to right-turn movements only.

- A proposed access drive on 98th Street located approximately 175 feet south of Central Avenue that will be in the location of the existing access drive on 98th Street serving the site. This access drive will provide one inbound lane and one outbound lane. Outbound movements should be under stop-sign control. Due to the existing barrier median located on 98th Avenue in the vicinity of this access drive, turning movements at this access drive will be restricted to right-turn movements only.

Overall, the provision of two access drives (one on 98th Street and one on Central Avenue will be beneficial as it will reduce the traffic load at a single access point, will reduce the number of site-generated vehicles traversing the signalized intersection of Central Avenue with 98th Street, and will reduce the need for U-turn maneuvers at the existing median breaks along Central Avenue.

It should be noted that the proposed access system will maintain the existing access system serving the site on 98th Street and will provide a single dedicated access drive on Central Avenue. Currently, the site frontage on Central Avenue does not provide any curb so vehicles can enter and exit the site at any location. Therefore, the provision of a single access point on Central Avenue will improve the flow of traffic along the site frontage and will regulate turning movements to/from Central Avenue.

A copy of the updated site plan is included in the Appendix.

Directional Distribution of Site Traffic

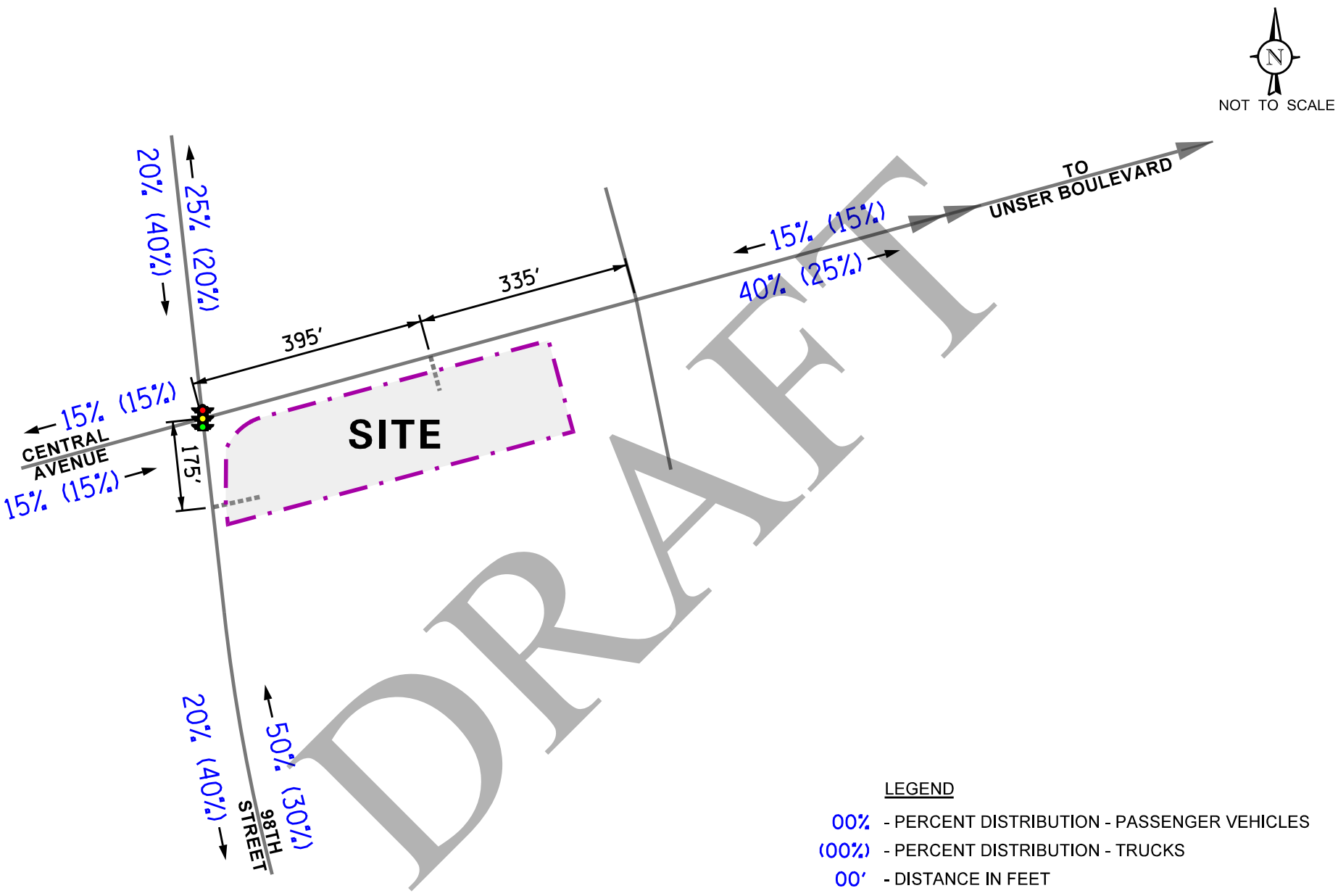
The directional distribution of how traffic will approach and depart the site was estimated based on the general travel patterns through the study area derived from the peak hour traffic volumes and based on the directional distribution as utilized in the May 2022 traffic impact study. Furthermore, the directional distribution takes into consideration the access limitations of two right-in/right-out access drives and the ability of vehicles to access eastbound I-40 via Unser Boulevard, approximately one mile east of the site. **Figure 5** shows the established directional distribution for the proposed development and illustrates the distance in feet between the access drives and the existing roadways.

Proposed Site Traffic Generation

The estimate of vehicle traffic to be generated by the proposed development is based upon the proposed land use types and sizes. The vehicle trip generation was calculated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. Land-Use Code 937 (Coffee/Donut Shop with Drive-Through Window) was utilized for the proposed coffee shop and Land-Use Code 822 (Strip Retail Plaza <40k) was utilized for the retail plaza. The ITE trip generation sheets are included in the Appendix. It is important to note that surveys conducted by ITE have shown that a percentage of trips made to coffee/donut shops with drive-through lanes and retail plazas are diverted from the existing traffic on the roadway system. This is particularly true during the weekday morning and weekday evening peak hours when traffic is diverted from work-to-lunch and work-to-home trips. Such diverted trips are referred to as "pass-by" trips. Based on information published by ITE for coffee/donut shops, approximately 85 to 95 percent of trips made to coffee/donut shops and 20 to 40 percent of trips made to retail plazas are pass-by trips. However, in order to provide a conservative analysis, only a 70 percent pass-by reduction was applied to the trips estimated to be generated by Dunkin and no pass- by reduction was applied to the trips generated by the retail plaza. **Table 2** shows the estimated vehicle trip generation for the weekday morning peak hour, weekday evening peak hour, and daily trips.

Table 2
ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
937	Coffee/Donut Shop with Drive-Through (2,490 s.f.)	109	105	214	49	48	97	665	665	1,330
70% Pass-By Reduction		*-75*	*-75*	*-150*	*-34*	*-34*	*-68*	*-465*	*-465*	*-930*
822	Strip Retail Plaza (<40k) (6,000 s.f.)	12	9	21	27	27	54	242	242	484
Total New Trips		**46**	**39**	**85**	**42**	**41**	**83**	**442**	**442**	**884**



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Directional Distribution

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Figure: 5

4. Projected Traffic Conditions

The total projected traffic volumes include the base traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed development.

Development Traffic Assignment

The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of the new passenger vehicle trips and **Figure 7** illustrates the traffic assignment of the pass-by vehicle trips.

Ambient Traffic Growth

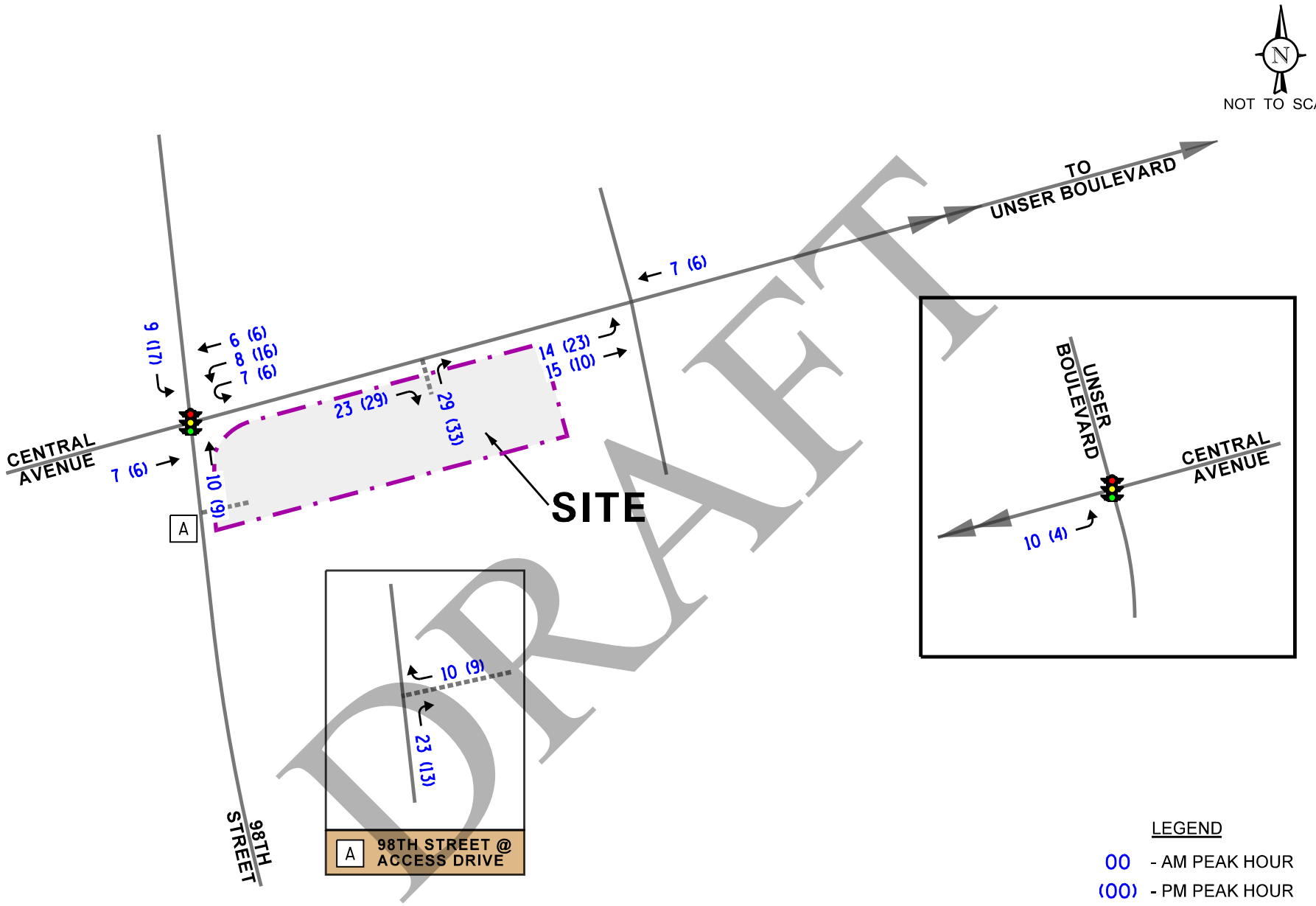
The existing traffic volumes were increased by an annually compounded ambient growth factor of 4.0 percent per year for one year (buildout) and 10 years (horizon year) to represent Year 2024 and Year 2034 no-build conditions, respectively. This background growth was determined from travel demand models provided by the Mid-Region Council of Governments (MRCOG) for Central Avenue, 98th Street, 99th Street, 86th Street, and 87th Street as determined as part of the traffic impact study previously prepared for the site by Lee Engineering. Furthermore, the peak hour trips anticipated to be generated by the proposed Westpointe development and the 98th & Bluewater development, which are both located to the north of the site, were included in the Year 2024 and Year 2034 no-build conditions. **Figure 8** shows the Year 2024 no-build traffic volumes. **Figure 9** shows the Year 2034 no-build traffic volumes.

Year 2024 Total Projected Traffic Volumes

The new and pass-by development-generated traffic (Figures 6 and 7) was added to the Year 2024 no-build traffic volumes (Figure 8) to determine the Year 2024 total projected traffic volumes. These volumes are illustrated in **Figure 10**.

Year 2034 Total Projected Traffic Volumes

The new and pass-by development-generated traffic (Figures 6 and 7) was added to the Year 2034 no-build traffic volumes (Figure 9) to determine the Year 2034 total projected traffic volumes. These volumes are illustrated in **Figure 11**.



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New Site Traffic Volumes

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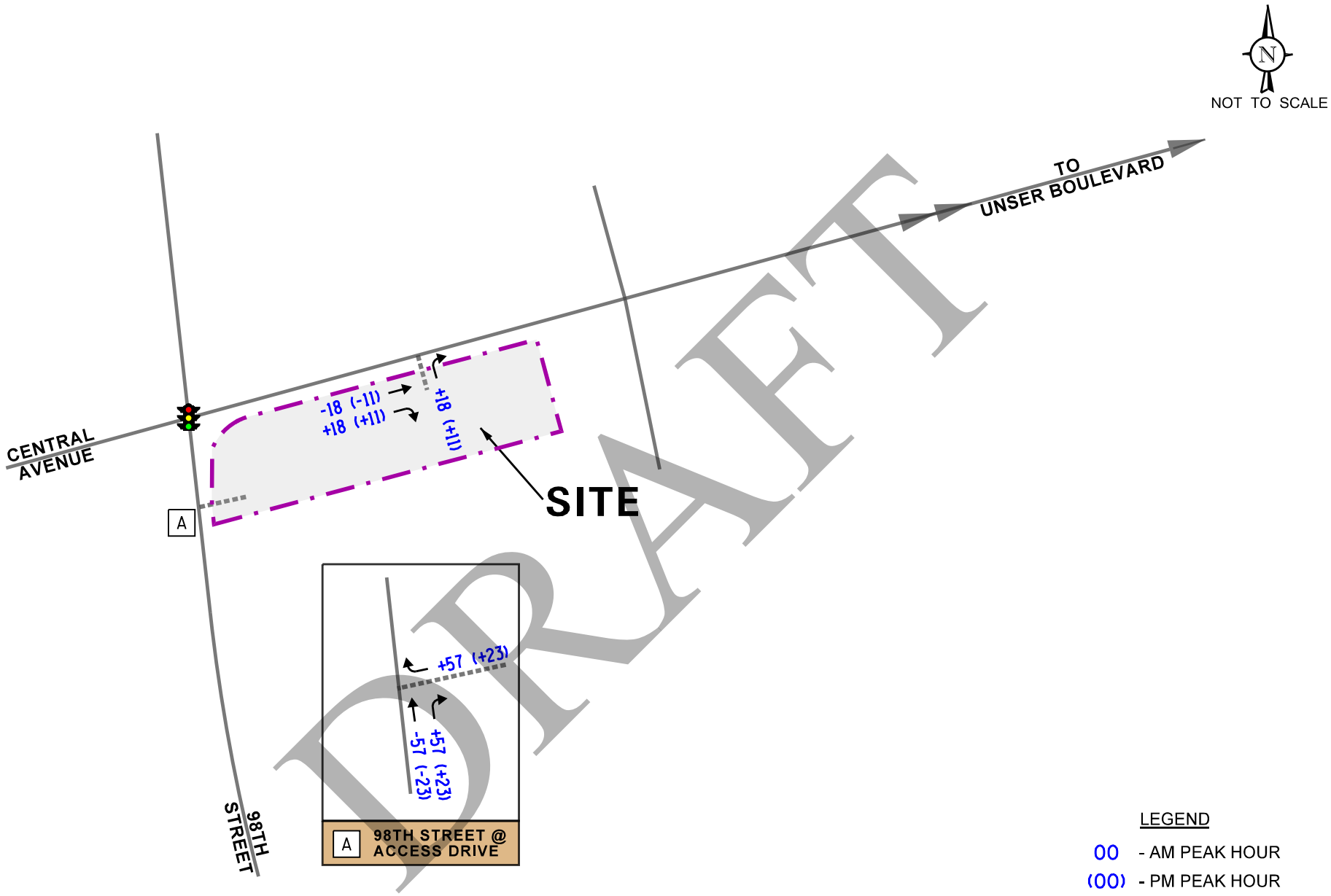

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Pass-By Traffic Volumes

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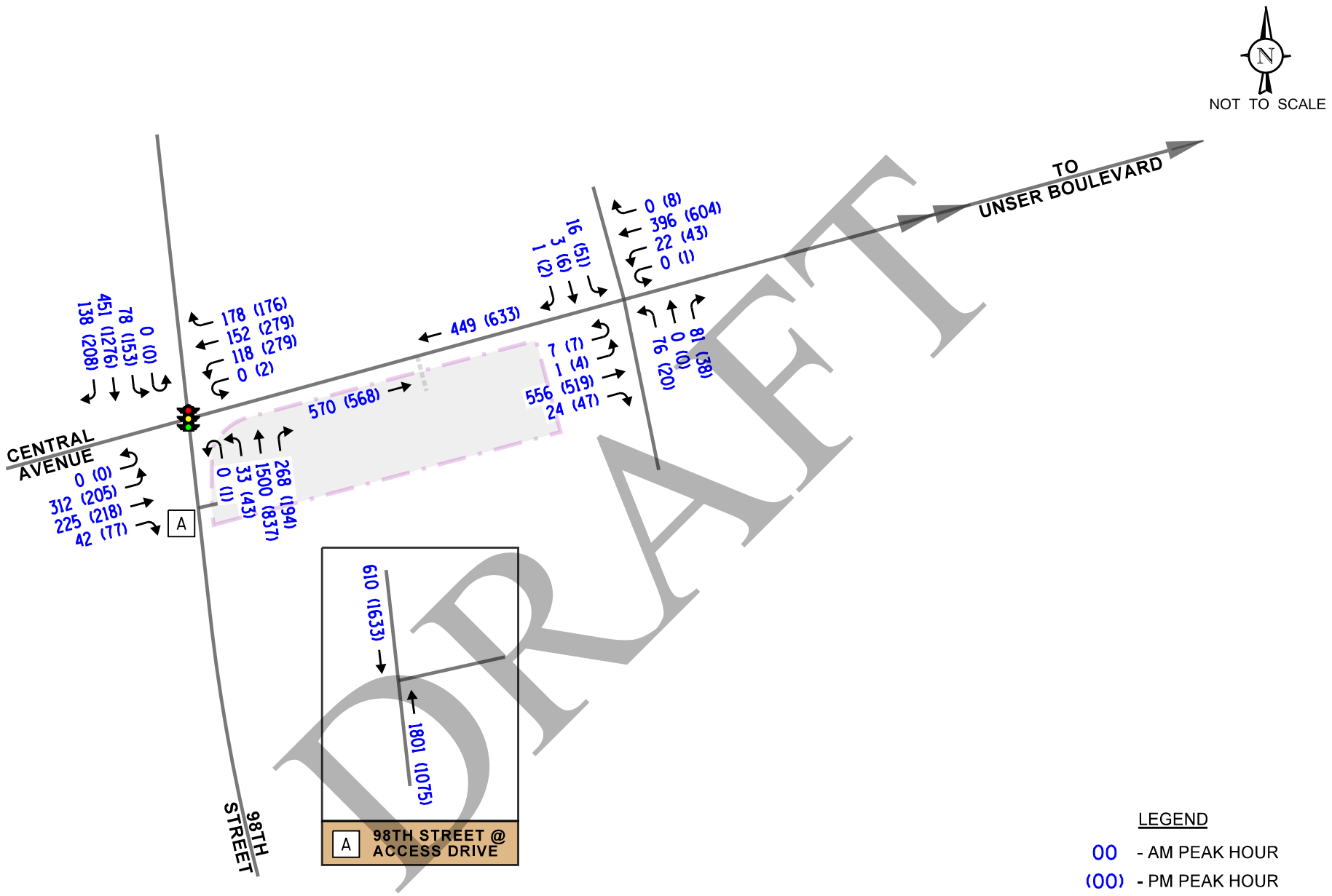

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Year 2024 No-Build Traffic Volumes

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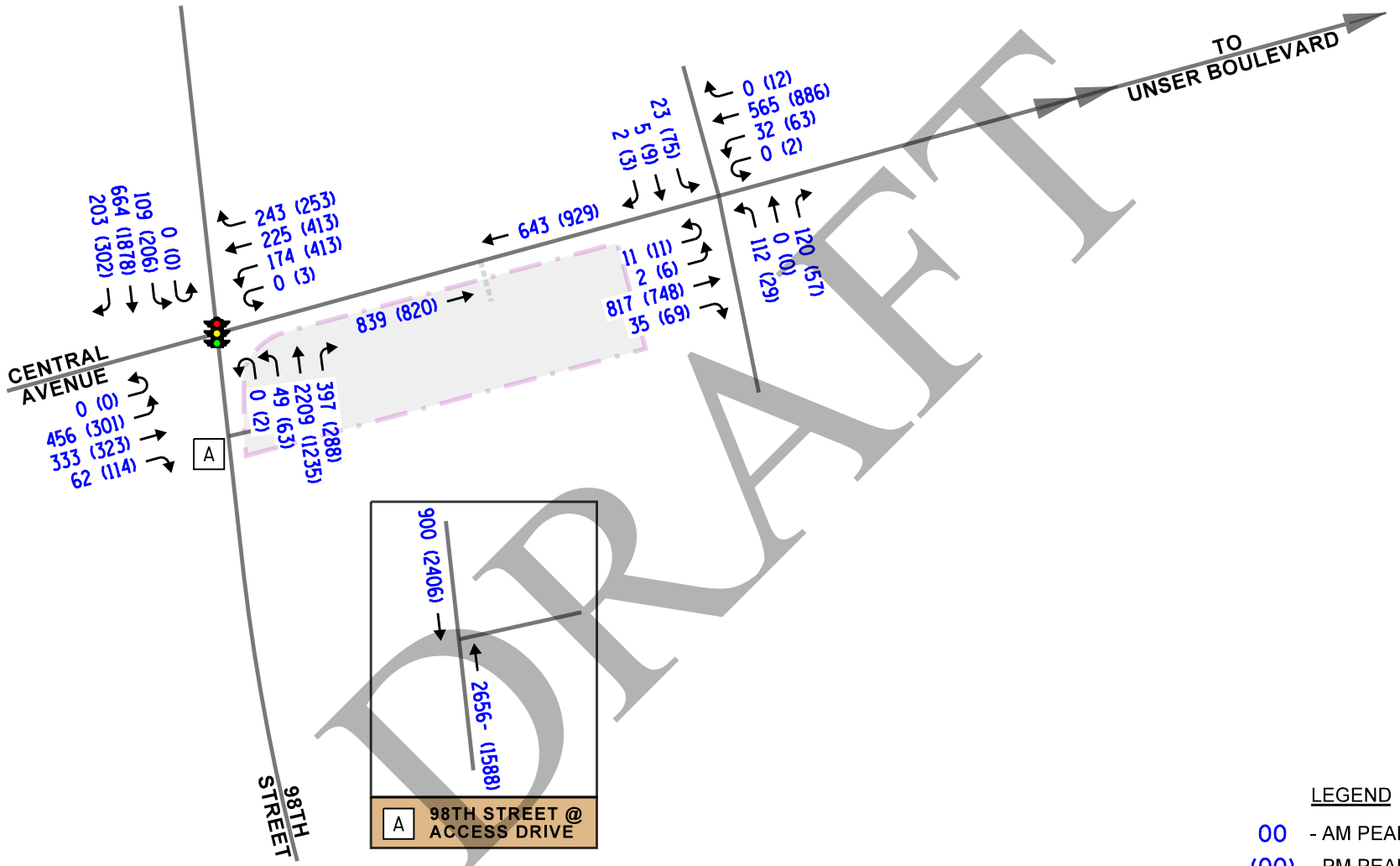

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Year 2034 No-Build Traffic Volumes

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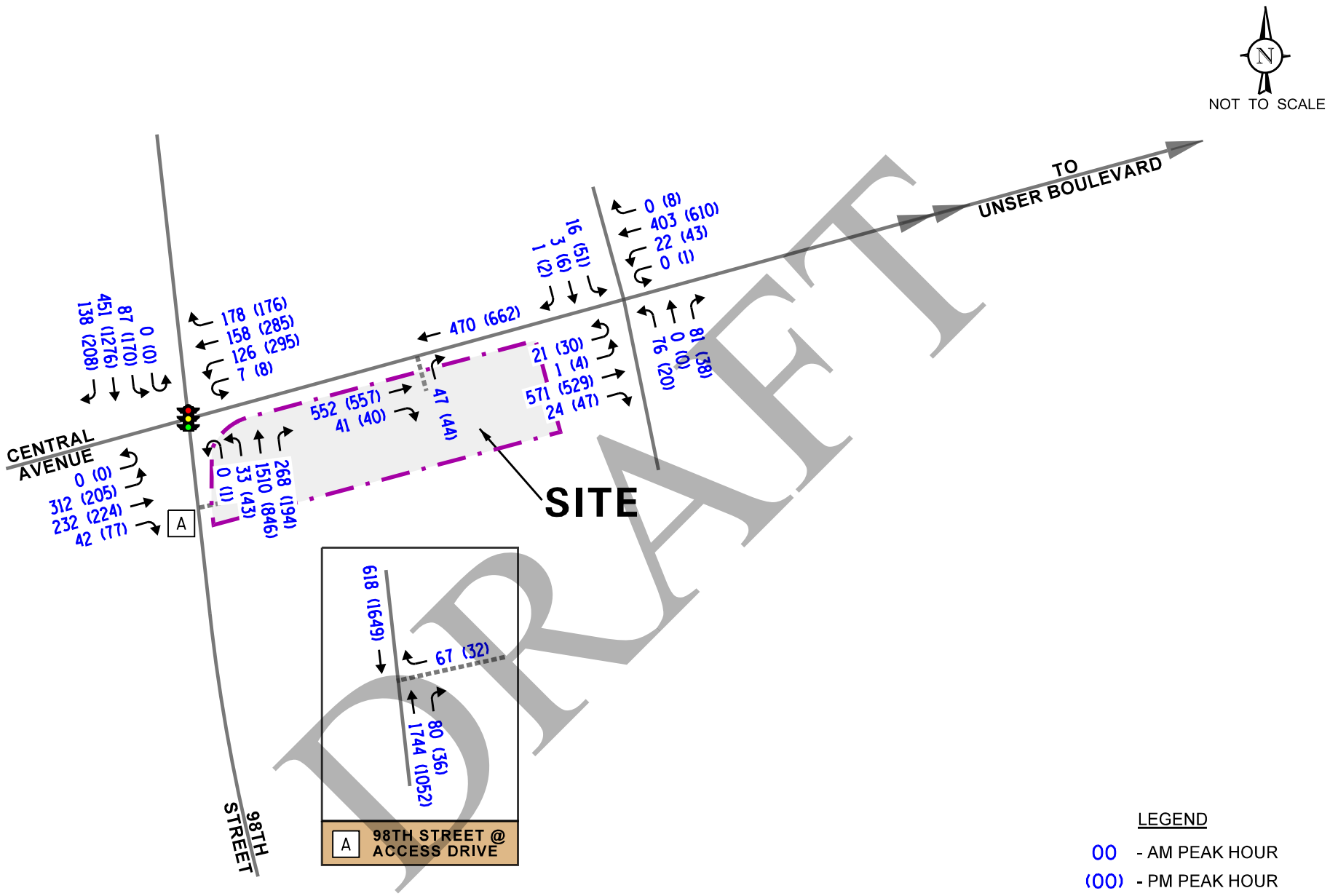

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Year 2024 Total Traffic Volumes

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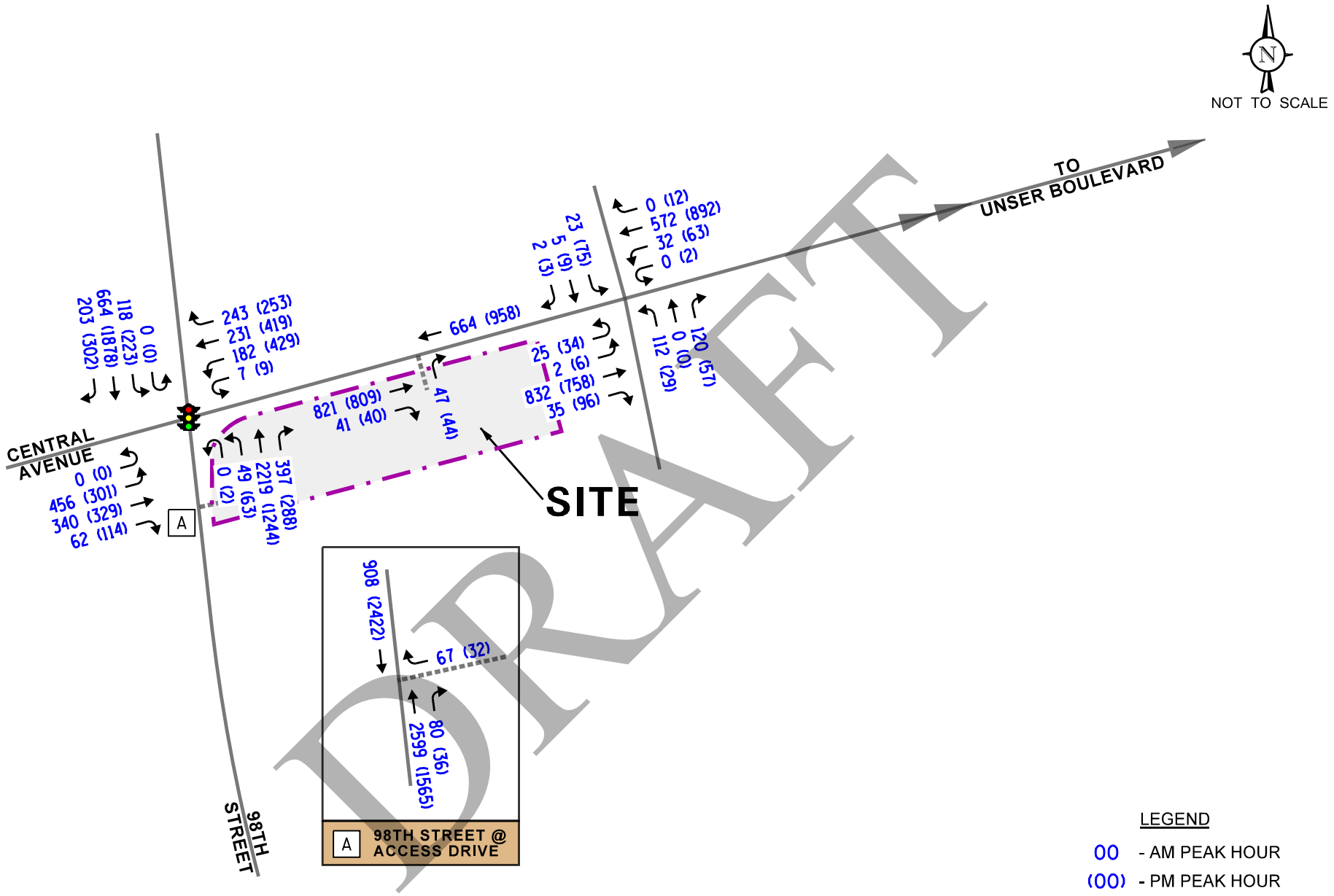

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Year 2034 Total Traffic Volumes

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5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, no-build, and total projected traffic volumes for Year 2024 (buildout) and Year 2034 (horizon) years.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the signalized intersections of Central Avenue with 98th Avenue and Unser Boulevard were accomplished utilizing actual cycle lengths and phasings.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service, overall intersection delay (measured in seconds), volume-to-capacity ratios, and 95th percentile queues for the existing, no-build, and total projected conditions are presented in **Tables 3** through **14**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3a
CAPACITY ANALYSIS RESULTS – SIGNALIZED – CENTRAL AVENUE WITH 98th STREET

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning	E 65.7	D 36.9		D 64.0	C 25.7		B 14.9	D 40.1	A 0.2	C 27.7	C 22.3	A 0.1	C – 34.2
		D – 52.1			D – 36.9			C – 33.6			B – 18.2			
	Weekday Evening	D 52.1	C 29.2		D 53.4	C 26.5		C 20.5	C 33.5	A 0.2	C 21.7	D 42.0	A 0.2	C – 33.7
		D – 38.5			D – 37.0			C – 26.9			D – 35.3			
Year 2024 No-Build Conditions	Weekday Morning	E 67.4	D 37.2		E 64.1	C 30.5		B 14.9	D 44.8	A 0.3	C 34.4	C 22.6	A 0.1	D – 37.1
		D – 53.5			D – 39.4			D – 37.6			B – 19.6			
	Weekday Evening	D 52.0	C 29.6		D 53.9	C 26.2		C 20.7	C 34.6	A 0.2	C 30.0	E 59.1	A 0.2	D – 39.7
		D – 38.8			D – 36.8			C – 27.8			D – 48.9			
Year 2034 No-Build Conditions	Weekday Morning	F 99+	D 41.2		E 69.4	D 40.9		B 15.7	F 99+	A 0.4	E 55.5	C 26.0	A 0.2	F – 99+
		E – 76.3			D – 48.6			F – 99+			C – 24.0			
	Weekday Evening	D 54.8	C 34.9		E 67.4	D 36.3		C 23.4	E 63.9	A 0.3	F 99.3	F 99+	A 0.3	F – 99+
		D – 43.0			D – 48.2			D – 50.7			F – 99+			

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 3b
CAPACITY ANALYSIS RESULTS – SIGNALIZED – CENTRAL AVENUE WITH 98th STREET

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Year 2024 Projected Conditions	Weekday Morning	E 67.4	D 37.8		E 65.8	C 30.6		B 14.9	D 52.2	A 0.3	D 40.1	C 22.6	A 0.1	D – 40.5
		D – 53.5			D – 40.6			D – 43.8			C – 20.2			
	Weekday Evening	D 52.0	C 30.3		E 55.0	C 27.0		C 20.6	C 35.0	A 0.2	D 35.3	E 59.1	A 0.2	D – 40.2
		D – 39.1			D – 38.1			C – 28.2			D – 49.3			
Year 2034 Projected Conditions	Weekday Morning	F 99+	D 41.6		E 72.1	D 41.2		B 15.7	F 99+	A 0.4	E 65.1	C 26.0	A 0.2	F – 99+
		E – 76.2			D – 50.0			F – 99+			C – 25.4			
	Weekday Evening	D 54.8	D 35.3		E 73.6	D 37.1		C 23.4	E 65.6	A 0.3	F 99+	F 99+	A 0.3	F – 99+
		D – 43.2			D – 51.5			D – 52.1			F – 99+			

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 4a
CAPACITY ANALYSIS RESULTS – CENTRAL AVENUE WITH 98th STREET V/C RATIO (95TH PERCENTILE QUEUE)

	Peak Hour	Eastbound			Westbound			Northbound			Southbound		
		L	T	R	L	T	R	L	T	R	L	T	R
Existing Conditions	Weekday Morning	0.73 (175)	0.29 (130)		0.48 (81)	0.36 (104)		0.07 (30)	0.87 (723)	0.17 (0)	0.46 (57)	0.27 (166)	0.09 (0)
	Weekday Evening	0.54 (103)	0.32 (114)		0.65 (138)	0.43 (153)		0.27 (37)	0.64 (322)	0.12 (0)	0.41 (75)	0.89 (621)	0.13 (0)
Year 2024 No-Build Conditions	Weekday Morning	0.76 (189)	0.30 (135)		0.49 (84)	0.44 (135)		0.07 (30)	0.93 (833)	0.18 (0)	0.56 (76)	0.28 (176)	0.09 (0)
	Weekday Evening	0.56 (108)	0.33 (119)		0.67 (143)	0.46 (162)		0.28 (38)	0.68 (342)	0.13 (0)	0.63 (107)	0.99 (680)	0.14 (0)
Year 2034 No-Build Conditions	Weekday Morning	1.04 (332)	0.46 (202)		0.66 (117)	0.65 (216)		0.15 (41)	1.42 (1505)	0.27 (0)	0.77 (148)	0.43 (268)	0.14 (0)
	Weekday Evening	0.70 (153)	0.52 (182)		0.88 (238)	0.72 (267)		0.39 (51)	1.01 (626)	0.19 (0)	1.03 (263)	1.47 (1157)	0.20 (0)
Year 2024 Projected Conditions	Weekday Morning	0.76 (189)	0.32 (140)		0.53 (93)	0.45 (135)		0.07 (30)	0.97 (842)	0.18 (0)	0.62 (101)	0.28 (176)	0.09 (0)
	Weekday Evening	0.56 (108)	0.35 (123)		0.70 (155)	0.47 (165)		0.28 (38)	0.69 (346)	0.13 (0)	0.71 (137)	0.99 (680)	0.14 (0)
Year 2034 Projected Conditions	Weekday Morning	1.04 (332)	0.48 (205		0.70 (126)	0.66 (218)		0.15 (41)	1.43 (1514)	0.27 (0)	0.83 (169)	0.43 (268)	0.14 (0)
	Weekday Evening	0.70 (153)	0.53 (185)		0.93 (257)	0.73 (271)		0.39 (51)	1.01 (633)	0.19 (0)	1.12 (296)	1.47 (1157)	0.20 (0)

Note: 95th percentile queue measured in feet

Table 5
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Central Avenue with Westland Road				
• Northbound Left Turn	B	14.8	B	14.6
• Northbound Through	A	0.0	A	0.0
• Northbound Right Turn	A	9.5	A	9.1
• Southbound Approach	B	14.2	C	18.8
• Eastbound Left Turn	A	9.1	B	10.2
• Westbound Left Turn	A	8.0	A	7.9

LOS = Level of Service Note: All intersections under two-way stop sign control
Delay is measured in seconds.

Table 6
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS
V/C RATIO (95TH PERCENTILE QUEUE)

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	v/c	Queue	v/c	Queue
Central Avenue with Westland Road				
• Northbound Left Turn	0.179	25.0	0.051	25.0
• Northbound Through	0.000	0.0	0.000	0.0
• Northbound Right Turn	0.097	25.0	0.043	25.0
• Southbound Approach	0.051	25.0	0.187	25.0
• Eastbound Left Turn	0.001	25.0	0.006	25.0
• Westbound Left Turn	0.019	25.0	0.034	25.0

Note: 95th percentile queues measured in feet

Table 7
CAPACITY ANALYSIS RESULTS – YEAR 2024 NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Central Avenue with Westland Road				
• Northbound Left Turn	C	15.4	C	15.2
• Northbound Through	A	0.0	A	0.0
• Northbound Right Turn	A	9.7	A	9.3
• Southbound Approach	C	15.1	C	20.2
• Eastbound Left Turn	A	9.5	B	10.5
• Westbound Left Turn	A	8.0	A	7.9

LOS = Level of Service Note: All intersections under two-way stop sign control
Delay is measured in seconds.

Table 8
CAPACITY ANALYSIS RESULTS – YEAR 2024 NO-BUILD CONDITIONS
V/C RATIO (95TH PERCENTILE QUEUE)

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	v/c	Queue	v/c	Queue
Central Avenue with Westland Road				
• Northbound Left Turn	0.195	25.0	0.056	25.0
• Northbound Through	0.000	0.0	0.000	0.0
• Northbound Right Turn	0.103	25.0	0.045	25.0
• Southbound Approach	0.058	25.0	0.208	25.0
• Eastbound Left Turn	0.001	25.0	0.006	25.0
• Westbound Left Turn	0.020	25.0	0.036	25.0

Note: 95th percentile queues measured in feet

Table 9
CAPACITY ANALYSIS RESULTS – YEAR 2034 NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Central Avenue with Westland Road				
• Northbound Left Turn	C	22.8	C	21.2
• Northbound Through	A	0.0	A	0.0
• Northbound Right Turn	B	10.9	A	9.8
• Southbound Approach	C	21.0	E	46.6
• Eastbound Left Turn	B	10.9	B	13.5
• Westbound Left Turn	A	8.4	A	8.5

LOS = Level of Service Note: All intersections under two-way stop sign control
Delay is measured in seconds.

Table 10
CAPACITY ANALYSIS RESULTS – YEAR 2034 NO-BUILD CONDITIONS
V/C RATIO (95TH PERCENTILE QUEUE)

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	v/c	Queue	v/c	Queue
Central Avenue with Westland Road				
• Northbound Left Turn	0.380	43.0	0.121	25.0
• Northbound Through	0.000	0.0	0.000	0.0
• Northbound Right Turn	0.177	25.0	0.075	25.0
• Southbound Approach	0.128	25.0	0.526	25.0
• Eastbound Left Turn	0.004	25.0	0.014	25.0
• Westbound Left Turn	0.032	25.0	0.062	68.0

Note: 95th percentile queues measured in feet

Table 11
CAPACITY ANALYSIS RESULTS – YEAR 2024 PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Central Avenue with Westland Road				
• Northbound Left Turn	C	16.5	C	16.5
• Northbound Through	A	0.0	A	0.0
• Northbound Right Turn	A	9.7	A	9.3
• Southbound Approach	C	15.8	C	22.2
• Eastbound Left Turn	A	9.8	B	11.5
• Westbound Left Turn	A	8.0	A	8.0
Central Avenue with Access Drive				
• Northbound Approach	B	10.6	B	10.6
98th Street with Access Drive				
• Westbound Approach	C	23.8	B	13.3

LOS = Level of Service Note: All intersections under two-way stop sign control
Delay is measured in seconds.

Table 12
CAPACITY ANALYSIS RESULTS – YEAR 2024 PROJECTED CONDITIONS
V/C RATIO (95TH PERCENTILE QUEUE)

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	v/c	Queue	v/c	Queue
Central Avenue with Westland Road				
• Northbound Left Turn	0.211	25.0	0.063	25.0
• Northbound Through	0.000	0.0	0.000	0.0
• Northbound Right Turn	0.103	25.0	0.045	25.0
• Southbound Approach	0.062	25.0	0.229	25.0
• Eastbound Left Turn	0.001	25.0	0.007	25.0
• Westbound Left Turn	0.020	25.0	0.037	25.0
Central Avenue with Access Drive				
• Northbound Approach	0.072	25.0	0.067	25.0
98th Street with Access Drive				
• Westbound Approach	0.270	28.0	0.072	25.0

Note: 95th percentile queues measured in feet

Table 13
CAPACITY ANALYSIS RESULTS – YEAR 2034 PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Central Avenue with Westland Road				
• Northbound Left Turn	D	25.8	C	24.4
• Northbound Through	--	--	--	--
• Northbound Right Turn	B	10.9	A	9.8
• Southbound Approach	C	22.5	F	63.2
• Eastbound Left Turn	B	11.3	C	15.4
• Westbound Left Turn	A	8.5	A	8.5
Central Avenue with Access Drive				
• Northbound Approach	B	12.1	B	12.0
98th Street with Access Drive				
• Westbound Approach	F	61.5	C	18.0

LOS = Level of Service Note: All intersections under two-way stop sign control
Delay is measured in seconds.

Table 14
CAPACITY ANALYSIS RESULTS – YEAR 2034 PROJECTED CONDITIONS
V/C RATIO (95TH PERCENTILE QUEUE)

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	v/c	Queue	v/c	Queue
Central Avenue with Westland Road				
• Northbound Left Turn	0.419	50.0	0.141	25.0
• Northbound Through	--	--	--	--
• Northbound Right Turn	0.177	25.0	0.075	25.0
• Southbound Approach	0.139	25.0	0.623	82.5
• Eastbound Left Turn	0.004	0.00	0.016	0.00
• Westbound Left Turn	0.033	25.0	0.063	25.0
Central Avenue with Access Drive				
• Northbound Approach	0.089	25.0	0.082	25.0
98th Street with Access Drive				
• Westbound Approach	0.543	65.0	0.108	25.0

Note: 95th percentile queues measured in feet

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the site-generated traffic.

Central Avenue with 98th Avenue

The results of the capacity analysis indicate that overall this intersection currently operates at Level of Service (LOS) C during the weekday morning and weekday evening peak hours. Furthermore, all of the movements currently operate at LOS D or better during the peak hours except for the eastbound left-turn movement, which currently operates at LOS E.

Under Year 2024 no-build conditions, this intersection overall is projected to operate at LOS D during the weekday morning and weekday evening peak hours with increases in delay of three seconds and six seconds, respectively. All of the approaches are projected to continue operating at existing levels of service except for the northbound approach during the weekday morning peak hour, which is projected to operate at LOS D with increases in delay of four seconds over existing conditions.

Under Year 2024 total projected conditions, the intersection overall and all of the approaches are projected to operate at no-build levels of service except for the southbound approach during the weekday morning peak hour, which is projected to operate at LOS C during the weekday evening peak hour with an increase in delay of less than one second over no-build conditions.

Under Year 2034 no-build and total projected conditions, the intersection overall is projected operate at LOS F during both peak hours. This level of service is primarily the result of the existing northbound and southbound traffic volumes increased by a 54 percent regional growth factor.

Overall, the proposed development is only projected to increase the volume of traffic traversing this intersection by less than two percent during the peak hours under Year 2024 conditions. Under Year 2034 conditions, the proposed development is projected to increase the volume of traffic traversing this intersection by approximately one percent.

As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development under buildout conditions. While this intersection, particularly the northbound and southbound through movements, is projected to operate over capacity under Year 2034 conditions, the resulting level of service is primarily the result of the existing traffic volumes increased by the 54 percent regional growth factor.

Central Avenue with Westland Avenue

The results of the capacity analysis indicate that all of the critical movements at this intersection currently operate at LOS C or better during the weekday morning and weekday evening peak hours. Under Year 2024 no-build and total projected conditions, all of the critical movements at this intersection are projected to operate at LOS C or better during the peak hours.

Under Year 2034 no-build and total projected conditions, all of the critical movements are projected to operate at LOS C or better during the peak hours except for the southbound approach, which is projected to operate at LOS E during the weekday evening peak hour under no-build conditions and at LOS F during the weekday evening peak hour under total projected conditions.

However, the volume-to-capacity ratio for the southbound approach is projected to be less than one, indicating the approach has sufficient capacity to accommodate the projected traffic volumes, and the 95th percentile queues are projected to be three vehicles.

Proposed Access Evaluation

The results of the capacity analysis indicate that under Year 2024 buildout year conditions, outbound movements from the proposed access drives are projected to operate at LOS C or better during the weekday morning and weekday evening peak hours with 95th percentile queues of one to two vehicles.

Under Year 2034 horizon year conditions, outbound movements from the access drives are projected to continue operating at LOS C or better during the peak except for the 98th Street access drive during the weekday morning peak hour, which is projected to operate at LOS F. However, similar to the intersection of Central Avenue with 98th Street, the results of the capacity analyses are primarily the result of the existing traffic volumes on 98th Street increased by an estimated 54 percent regional growth factor.

Overall, the provision of a right-in/right-out access drive on Central Avenue and 98th Street will be adequate and beneficial for the site based on the following:

- The site is currently served by an existing access drive off 98th Street that allows both right-in and right-out movements.
- Traffic generated by drive-through coffee shops are primarily diverted from existing traffic on the adjacent roadway system. Providing convenient access to and from 98th Street is paramount to the success and viability of these establishments.
- Given that the northbound traffic on 98th Street, especially in the morning peak hour, is significantly higher than the two-way traffic on Central Avenue, a direct access to 98th Street will provide convenient entry/exit to the site without the traffic having to travel onto Central Avenue.
- This will in turn reduce the traffic load at the intersection of 98th Street with Central Avenue by eliminating the additional right-turn movements that will occur (northbound and westbound right turns).
- Having all right turns enter off Central Avenue will significantly increase the amount of traffic entering the site from the west. This will have the potential to back up traffic onto Central Avenue and create undue on-site circulation and congestion.

- A northbound right-turn lane currently exists on 98th Street, which can also serve as a deceleration lane for the proposed access drive. This right-turn lane currently operates under yield control at Central Avenue.

- An eastbound right-turn lane should be provided on Central Avenue in order to accommodate the traffic projected to enter the site.

- The provision of right-turn movements out onto 98th Street will significantly reduce the need for vehicles to perform U-turn maneuvers at Westland Road. Therefore, providing an eastbound left-turn lane on Central Avenue at Westland Road as requested by the City is not necessary for the following reasons:

    - Left-turn movements are currently occurring at this location.

    - The majority of traffic exiting to travel northbound on 98th Street will utilize the access drive off 98th Street.

    - Given the location of the site to the southwest of downtown Albuquerque, it is anticipated that the majority of northbound traffic in the weekday morning peak hour is traffic desiring to travel east on I-40. In lieu of performing a U-turn at Westland Road, these vehicles have the ability to access I-40 via the Unser Boulevard SW interchange.

    - Traffic desiring to travel west on Central Avenue will be the primary contributors to vehicles that need to make the U-turn at this intersection. This amounts to 15 percent (six vehicles) in the weekday morning and weekday evening peak hours.

    - While southbound 98th Street traffic may also be contributing to U-turn maneuvers at this intersection (20 percent in the weekday morning peak hour and 40 percent during the weekday evening peak hour), there are other alternative routes for drivers who may be traveling south on 98th Street to access the residential neighborhood to the east of 98th Street to utilize, including 94th Street, 90th Street, and 86th Street.

    - As can be seen from Figure 10, upon buildout there are projected to be 22 left-turns/U-turns during the weekday morning peak hour and 34 left-turns/U-turns during the weekday evening peak hour. This amount of traffic translates to approximately one vehicle every two to three minutes, which can be accommodated by the median opening that currently exists. This median can accommodate up to two vehicles without blocking eastbound traffic and is consistent with the median breaks provided at 94th Street and 90th Street.

    - It is recommended that the median "nose" be modified similar to the intersections of Central Avenue with 94th Street and 90th Street, where the median opening accommodates left-turn movements/U-turns without left-turn lanes.

Central Avenue with Unser Boulevard

As previously indicated, due to the location of the site to the southwest of downtown Albuquerque, it is anticipated that the majority of northbound traffic in the weekday morning peak hour is traffic desiring to travel east on I-40. In lieu of existing onto 98th Street or performing an eastbound U-turn at Westland Road, vehicles have the ability to access I-40 via the Unser Boulevard SW interchange.

A review of historic traffic data for the intersection of Central Avenue with Unser Boulevard indicates that the most recent available data is from 2008. Since 2008, this intersection has experienced significant capacity improvements including dual left-turn lanes on all four approaches, exclusive right-turn lanes on the westbound, northbound, and southbound approaches, and three northbound through lanes with the ability to provide a third southbound through lane via restriping.

With the proposed access configuration, it is anticipated that the proposed development will only add approximately 10 eastbound left-turn movements during the weekday morning peak hour and four eastbound left-turn movements during the weekday evening peak hour. With the existing capacity provided at this intersection, it is anticipated that this nominal increase in traffic will have a limited impact on the operations of this intersection.

On-Site Circulation and Drive-Through Stacking

Based on a review of the site plan, vehicles will enter the drive-through lanes on the northeast corner of the site then travel east and south along the site and make a right turn towards the pick-up window located on the north side of the building. Vehicles will then exit the drive-through just west of the building and will be able to proceed either west to the access drive on 98th Street or east to the access drive on Central Avenue.

A stop sign should be provided for outbound movements from the drive-through onto the main circulation drive aisle and a "Do Not Enter" sign should be provided at the drive-through exit facing west.

Based on the site plan, the drive-through facility will provide stacking for approximately 16 vehicles. Observations conducted by KLOA, Inc. at existing coffee shops in the Chicagoland area indicated the following:

- During the weekday morning peak period (6:30 A.M. to 9:00 A.M.), an average queue of seven vehicles and a maximum queue of 12 vehicles was observed.

- During the weekday evening peak period (4:00 P.M. to 6:30 P.M.), an average queue of one vehicle and a maximum queue of two vehicles was observed.

As such, the proposed stacking for 16 vehicles will be adequate in accommodating the average and peak drive-through stacking anticipated for the coffee shop.

7. Conclusion

Based on the proceeding analyses and recommendations, the following conclusions have been made:

- The proposed Dunkin and retail building will be located at 9700 Central Avenue SW. The buildings will be 2,490 and 6,000 square feet, respectively, and will share a 34-space parking lot. The Dunkin will provide a drive-through that will accommodate 16 vehicles.

- Access to the site will be provided via the two right-in/right-out access drives with one located off 98th Street and the second access located off Central Avenue.

- The volume of traffic estimated to be generated by Dunkin will be reduced due to the volume of pass-by trips anticipated to be diverted from the existing traffic on the roadways, primarily in the northbound direction on 98th Street and eastbound direction on Central Avenue.

- The access drives are projected to be adequate in accommodating the traffic estimated to be generated by the development and will provide flexible and efficient access to the site.

- The provision of a right-in/right-out access drive on 98th Street will be beneficial based on the following:

    - Given that the northbound traffic on 98th Street, especially in the morning peak hour, is significantly higher than the two-way traffic on Central Avenue, a direct access to 98th Street will provide convenient entry/exit to the site without the traffic having to travel onto Central Avenue.

    - This will in turn reduce the traffic load at the intersection of 98th Street with Central Avenue by eliminating the additional right-turn movements that will occur (northbound and westbound right turns).

    - A northbound right-turn lane currently exists on 98th Street, which can also serve as a deceleration lane for the proposed access drive. This right-turn lane currently operates under yield control at Central Avenue

    - The provision of right-turn movements out onto 98th Street will significantly reduce the need for vehicles to perform U-turn maneuvers at Westland Road.

- Given the location of the site to the southwest of downtown Albuquerque, it is anticipated that the majority of northbound traffic in the weekday morning peak hour is traffic desiring to travel east on I-40. In lieu of performing a U-turn at Westland Road, these vehicles have the ability to access 98th Street directly or I-40 via the Unser Boulevard SW interchange.

- It is recommended that the median "nose" be modified similar to the intersections of Central Avenue with 94th Street and 90th Street, where the median opening accommodates left-turn movements/U-turns without left-turn lanes.

- As part of the proposed development, stop signs should be provided for outbound traffic from both access drives.

- The drive-through stacking of 12 vehicles will be adequate in accommodating the peak drive-through activity for the coffee shop. The final site traffic layout and queueing acceptance is dependent on the Traffic Circulation Layout (TCL) approval by the City.

- Clear intersection sight distance should be provided at each driveway as per COA DPM 7-4(I)(5)(iii) Intersection Sight Distance.

Appendix

Scope of Traffic Impact Study
Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Summary Sheets
Level of Service Criteria
Capacity Analysis Summary Sheets

Scope of Traffic Impact Study

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Agenda for 98th Central TIA
December 21, 2022
-Meeting Notes in Red-

Attendees:
Matt Grush – City of Albuquerque
Jonathon Kruse – Lee Engineering
Jeff Wooten – Wooten Engineering

1. Introductions
2. Review of Site Plan
    a. Site Plan & land Uses
3. Discussion of Scope for TIS
    a. Study Intersections
        i. 98th & Central
        ii. Site Driveways
    b. Data Collection
    c. Trip Generation, Pass By, & Internal Capture
        i. Trip Generation Manual (11th Edition) Land Use – See attachments for details.
        ii. Pass-by trips
        iii. No Internal Capture
        iv. Trips distributed based on existing traffic patterns
    d. Known Developments or Pending Improvements in Area:
        i. Westpoint
        ii. DutchBros/Wataburger (Check what is built)
    e. Build-out Year and Growth Rate
        i. Build-Out Year (2023)
            1. Will look at MRCOG Model Projections and calculate growth rate (if any), otherwise will assume 1% growth per year.
    f. Analysis scenarios
        i. Existing Conditions Background (No Build)
        ii. Opening Year Background (No Build)
        iii. Opening Year Buildout (Full Build)
        iv. Opening Year Buildout Optimized (if required)
            1. All scenarios with existing signal timings except opening year buildout optimized.
        v. Horizon Year +10
    g. Required Analysis & Methodology
        i. LOS Capacity analysis based on HCM 6th Edition (HCS)
        ii. 95th Percentile Queue demands (HCS)

8220 SAN PEDRO DR NE
SUITE 150
ALBUQUERQUE, NM 87113
505/338-0988
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1. Capacity & Queueing for network peak rather than individual intersection peaks

iii. Auxiliary Lane Analysis
iv. Sight Distance Analysis at Proposed Driveways
v. Crash Summary 5 years
vi. Weaving at west driveway
vii. Internal Queueing forgoe for additional cars on site plan.

1. Mention active queue management and discussion.

4. Agency Input (Comments & Issues)
5. Meeting Notes (distributed by Lee Engineering)

Traffic Count Summary Sheets

Lee Engineering, LLC
Phoenix, Arizona - Dallas, Texas
Oklahoma City, Oklahoma - San Antonio, Texas
Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Data

Start Time	Central Ave Eastbound							Central Ave Westbound							98th St Northbound							98th St Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
6:00 AM	0	42	21	2	3	0	68	0	6	23	6	5	2	40	0	7	204	20	7	0	238	0	4	25	22	7	0	58	404
6:15 AM	0	45	26	4	0	0	75	0	10	25	6	9	0	50	0	6	282	24	2	0	314	0	7	41	9	3	1	60	499
6:30 AM	0	49	35	4	6	0	94	0	12	36	12	8	0	68	0	9	320	25	11	0	365	0	11	43	16	16	0	86	613
6:45 AM	0	56	56	2	5	0	119	0	10	27	12	9	0	58	0	11	322	32	18	0	383	0	9	70	14	15	0	108	668
Hourly Total	0	192	138	12	14	0	356	0	38	111	36	31	2	216	0	33	1128	101	38	0	1300	0	31	179	61	41	1	312	2184
7:00 AM	0	78	53	10	3	3	144	0	15	30	15	12	1	72	0	8	359	26	28	3	421	0	16	75	17	10	0	118	755
7:15 AM	0	74	49	3	7	1	133	0	38	43	19	12	2	112	0	13	360	36	31	0	440	0	13	115	14	20	0	162	847
7:30 AM	0	68	66	3	7	0	144	0	28	45	25	17	0	115	0	5	360	29	38	0	432	0	19	109	15	19	0	162	853
7:45 AM	0	68	48	1	6	0	123	0	32	28	17	12	1	89	0	6	340	33	37	0	416	0	15	127	15	19	1	176	804
Hourly Total	0	288	216	17	23	4	544	0	113	146	76	53	4	388	0	32	1419	124	134	3	1709	0	63	426	61	68	1	618	3259
8:00 AM	0	50	41	4	3	1	98	0	24	27	16	11	0	78	0	4	262	38	17	0	321	0	9	115	17	27	0	168	665
8:15 AM	0	49	32	3	2	0	86	0	23	32	15	28	0	98	1	11	283	26	22	0	343	0	10	95	11	14	0	130	657
8:30 AM	0	56	30	1	3	0	90	0	26	30	13	12	0	81	0	6	274	31	18	0	329	0	17	99	23	27	0	166	666
8:45 AM	0	45	34	3	2	0	84	0	37	22	12	8	0	79	0	11	209	31	14	0	265	0	21	109	7	13	0	150	578
Hourly Total	0	200	137	11	10	1	358	0	110	111	56	59	0	336	1	32	1028	126	71	0	1258	0	57	418	58	81	0	614	2566
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	37	33	3	3	1	76	1	36	34	12	16	0	99	0	1	137	18	15	0	171	0	23	85	18	12	0	138	484
11:15 AM	0	27	32	5	3	0	67	2	47	32	7	14	0	102	1	4	161	17	11	0	194	0	11	118	14	8	0	151	514
11:30 AM	0	32	32	6	3	1	73	2	53	26	18	21	0	120	0	5	148	24	8	0	185	0	24	106	15	10	0	155	533
11:45 AM	0	45	39	3	2	0	89	0	44	25	14	13	1	96	0	6	136	25	15	0	182	0	23	106	18	14	0	161	528
Hourly Total	0	141	136	17	11	2	305	5	180	117	51	64	1	417	1	16	582	84	49	0	732	0	81	415	65	44	0	605	2059
12:00 PM	1	30	33	3	3	0	70	0	42	34	14	18	1	108	0	2	144	17	15	1	178	0	27	134	18	15	1	194	550
12:15 PM	0	33	23	3	5	0	64	1	48	46	15	14	1	124	0	6	150	23	13	0	192	1	25	128	21	16	1	191	571
12:30 PM	0	40	30	2	2	0	74	0	38	43	27	19	0	127	0	7	151	26	11	0	195	0	30	159	25	19	0	233	629
12:45 PM	0	32	30	1	7	1	70	0	39	39	14	19	0	111	0	8	167	26	21	0	222	1	29	140	21	15	0	206	609
Hourly Total	1	135	116	9	17	1	278	1	167	162	70	70	2	470	0	23	612	92	60	1	787	2	111	561	85	65	2	824	2359
1:00 PM	0	39	34	2	7	2	82	0	50	37	14	17	0	118	0	7	141	22	20	0	190	0	28	153	21	17	0	219	609
1:15 PM	0	36	42	3	5	3	86	1	53	45	16	15	0	130	0	9	161	32	15	2	217	0	36	149	12	15	0	212	645
1:30 PM	0	42	51	2	2	0	97	0	44	40	17	17	0	118	0	10	176	22	13	0	221	0	21	141	17	18	0	197	633
1:45 PM	0	30	44	8	4	0	86	0	45	40	11	15	4	111	0	8	174	23	11	0	216	0	20	166	17	10	0	213	626
Hourly Total	0	147	171	15	18	5	351	1	192	162	58	64	4	477	0	34	652	99	59	2	844	0	105	609	67	60	0	841	2513
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	49	43	15	11	0	118	0	69	54	11	22	2	156	0	9	163	43	18	0	233	0	24	231	30	16	0	301	808
3:15 PM	0	54	46	1	6	1	107	0	59	49	18	21	0	147	1	13	211	31	12	1	268	0	29	276	32	20	1	357	879
3:30 PM	0	56	48	6	5	3	115	0	64	61	25	11	1	161	0	12	236	20	14	3	282	0	21	262	49	20	0	352	910

3:45 PM	0	48	42	5	10	0	105	1	60	42	21	18	0	142	0	14	186	27	8	0	235	0	20	281	39	9	0	349	831
Hourly Total	0	207	179	27	32	4	445	1	252	206	75	72	3	606	1	48	796	121	52	4	1018	0	94	1050	150	65	1	1359	3428
4:00 PM	0	46	56	16	14	0	132	0	85	52	23	14	0	174	0	6	193	23	12	0	234	0	24	275	29	9	0	337	877
4:15 PM	0	43	66	11	9	0	129	0	71	64	14	14	0	163	0	12	224	28	21	0	285	0	26	265	32	18	0	341	918
4:30 PM	0	52	48	7	12	0	119	0	80	82	22	17	0	201	1	13	197	32	20	0	263	0	28	294	22	20	0	364	947
4:45 PM	0	45	45	5	13	1	108	1	61	60	14	27	0	163	0	9	199	33	11	0	252	0	23	322	34	13	1	392	915
Hourly Total	0	186	215	39	48	1	488	1	297	258	73	72	0	701	1	40	813	116	64	0	1034	0	101	1156	117	60	1	1434	3657
5:00 PM	0	53	51	11	6	0	121	1	56	62	25	21	0	165	0	7	177	24	18	0	226	0	28	323	40	9	0	400	912
5:15 PM	0	53	43	7	4	0	107	1	75	64	18	13	0	171	2	12	200	31	10	0	255	0	28	290	31	14	1	363	896
5:30 PM	0	55	63	16	9	1	143	1	65	77	21	19	0	183	0	14	192	32	9	0	247	1	22	270	34	6	0	333	906
5:45 PM	0	44	40	4	6	0	94	2	64	74	18	17	0	175	1	14	174	38	9	0	236	1	17	284	40	15	0	357	862
Hourly Total	0	205	197	38	25	1	465	5	260	277	82	70	0	694	3	47	743	125	46	0	964	2	95	1167	145	44	1	1453	3576
Grand Total	1	1701	1505	185	198	19	3590	14	1609	1550	577	555	16	4305	7	305	7773	988	573	10	9646	4	738	5981	809	528	7	8060	25601
Approach %	0.0	47.4	41.9	5.2	5.5	-	-	0.3	37.4	36.0	13.4	12.9	-	-	0.1	3.2	80.6	10.2	5.9	-	-	0.0	9.2	74.2	10.0	6.6	-	-	-
Total %	0.0	6.6	5.9	0.7	0.8	-	14.0	0.1	6.3	6.1	2.3	2.2	-	16.8	0.0	1.2	30.4	3.9	2.2	-	37.7	0.0	2.9	23.4	3.2	2.1	-	31.5	-
Lights	1	1602	1413	176	189	-	3381	14	1564	1463	536	538	-	4115	7	282	7692	956	557	-	9494	4	698	5898	768	483	-	7851	24841
% Lights	100.0	94.2	93.9	95.1	95.5	-	94.2	100.0	97.2	94.4	92.9	96.9	-	95.6	100.0	92.5	99.0	96.8	97.2	-	98.4	100.0	94.6	98.6	94.9	91.5	-	97.4	97.0
Buses	0	55	29	4	7	-	95	0	34	22	4	2	-	62	0	11	22	23	13	-	69	0	4	24	26	25	-	79	305
% Buses	0.0	3.2	1.9	2.2	3.5	-	2.6	0.0	2.1	1.4	0.7	0.4	-	1.4	0.0	3.6	0.3	2.3	2.3	-	0.7	0.0	0.5	0.4	3.2	4.7	-	1.0	1.2
Trucks	0	38	59	5	2	-	104	0	11	65	37	15	-	128	0	12	59	9	3	-	83	0	35	58	15	20	-	128	443
% Trucks	0.0	2.2	3.9	2.7	1.0	-	2.9	0.0	0.7	4.2	6.4	2.7	-	3.0	0.0	3.9	0.8	0.9	0.5	-	0.9	0.0	4.7	1.0	1.9	3.8	-	1.6	1.7
Bicycles on Road	0	6	4	0	0	-	10	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	1	1	0	0	-	2	12
% Bicycles on Road	0.0	0.4	0.3	0.0	0.0	-	0.3	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.1	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	-	5.3	-	-	-	-	-	-	18.8	-	-	-	-	-	-	0.0	-	-	-	-	-	-	28.6	-	-
Pedestrians	-	-	-	-	-	18	-	-	-	-	-	-	13	-	-	-	-	-	-	10	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	94.7	-	-	-	-	-	-	81.3	-	-	-	-	-	-	100.0	-	-	-	-	-	-	71.4	-	-

Lee Engineering, LLC
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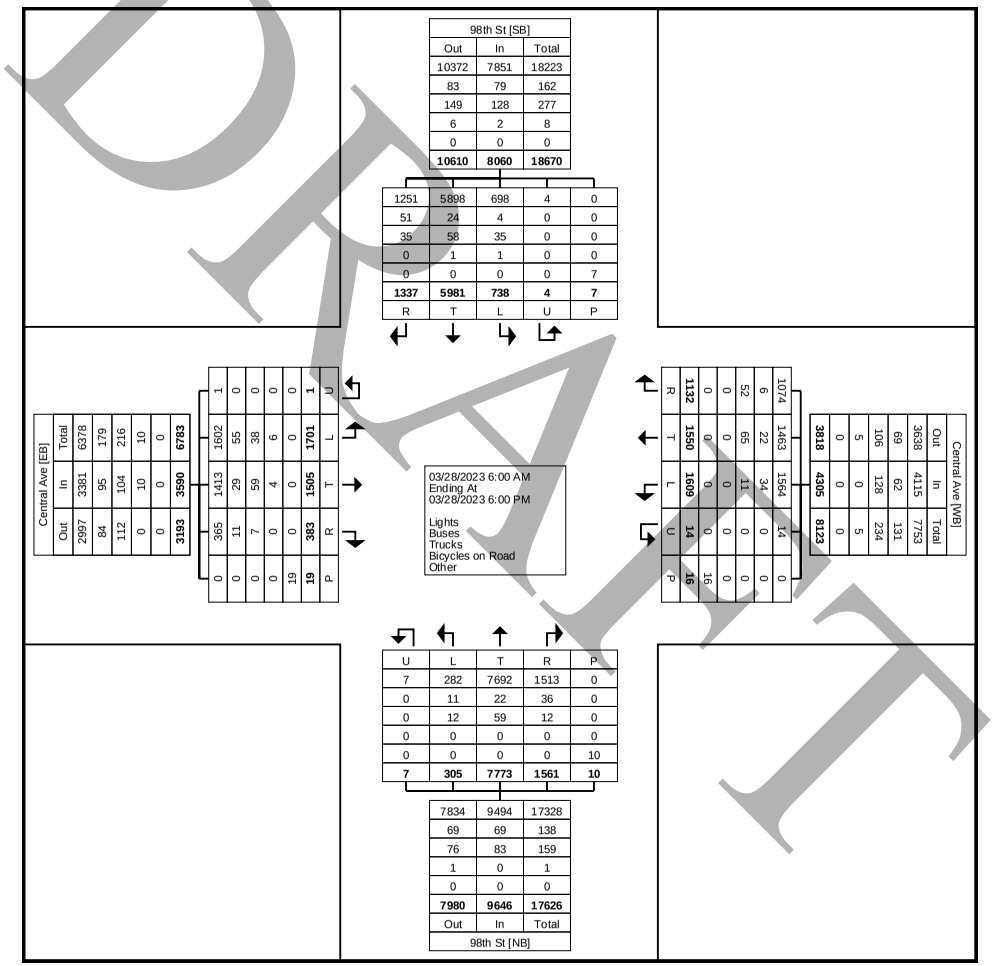
Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023
Page No: 3



Turning Movement Data Plot

Lee Engineering, LLC
Phoenix, Arizona - Dallas, Texas
Oklahoma City, Oklahoma - San Antonio, Texas
Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Central Ave Eastbound							Central Ave Westbound							98th St Northbound							98th St Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
7:00 AM	0	78	53	10	3	3	144	0	15	30	15	12	1	72	0	8	359	26	28	3	421	0	16	75	17	10	0	118	755
7:15 AM	0	74	49	3	7	1	133	0	38	43	19	12	2	112	0	13	360	36	31	0	440	0	13	115	14	20	0	162	847
7:30 AM	0	68	66	3	7	0	144	0	28	45	25	17	0	115	0	5	360	29	38	0	432	0	19	109	15	19	0	162	853
7:45 AM	0	68	48	1	6	0	123	0	32	28	17	12	1	89	0	6	340	33	37	0	416	0	15	127	15	19	1	176	804
Total	0	288	216	17	23	4	544	0	113	146	76	53	4	388	0	32	1419	124	134	3	1709	0	63	426	61	68	1	618	3259
Approach %	0.0	52.9	39.7	3.1	4.2	-	-	0.0	29.1	37.6	19.6	13.7	-	-	0.0	1.9	83.0	7.3	7.8	-	-	0.0	10.2	68.9	9.9	11.0	-	-	-
Total %	0.0	8.8	6.6	0.5	0.7	-	16.7	0.0	3.5	4.5	2.3	1.6	-	11.9	0.0	1.0	43.5	3.8	4.1	-	52.4	0.0	1.9	13.1	1.9	2.1	-	19.0	-
PHF	0.000	0.923	0.818	0.425	0.821	-	0.944	0.000	0.743	0.811	0.760	0.779	-	0.843	0.000	0.615	0.985	0.861	0.882	-	0.971	0.000	0.829	0.839	0.897	0.850	-	0.878	0.955
Lights	0	279	208	17	22	-	526	0	106	138	69	51	-	364	0	30	1412	119	129	-	1690	0	57	416	59	62	-	594	3174
% Lights	-	96.9	96.3	100.0	95.7	-	96.7	-	93.8	94.5	90.8	96.2	-	93.8	-	93.8	99.5	96.0	96.3	-	98.9	-	90.5	97.7	96.7	91.2	-	96.1	97.4
Buses	0	5	5	0	1	-	11	0	5	2	1	0	-	8	0	1	1	3	5	-	10	0	1	6	2	4	-	13	42
% Buses	-	1.7	2.3	0.0	4.3	-	2.0	-	4.4	1.4	1.3	0.0	-	2.1	-	3.1	0.1	2.4	3.7	-	0.6	-	1.6	1.4	3.3	5.9	-	2.1	1.3
Trucks	0	3	3	0	0	-	6	0	2	6	6	2	-	16	0	1	6	2	0	-	9	0	5	4	0	2	-	11	42
% Trucks	-	1.0	1.4	0.0	0.0	-	1.1	-	1.8	4.1	7.9	3.8	-	4.1	-	3.1	0.4	1.6	0.0	-	0.5	-	7.9	0.9	0.0	2.9	-	1.8	1.3
Bicycles on Road	0	1	0	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.3	0.0	0.0	0.0	-	0.2	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	25.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	-	3	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	75.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

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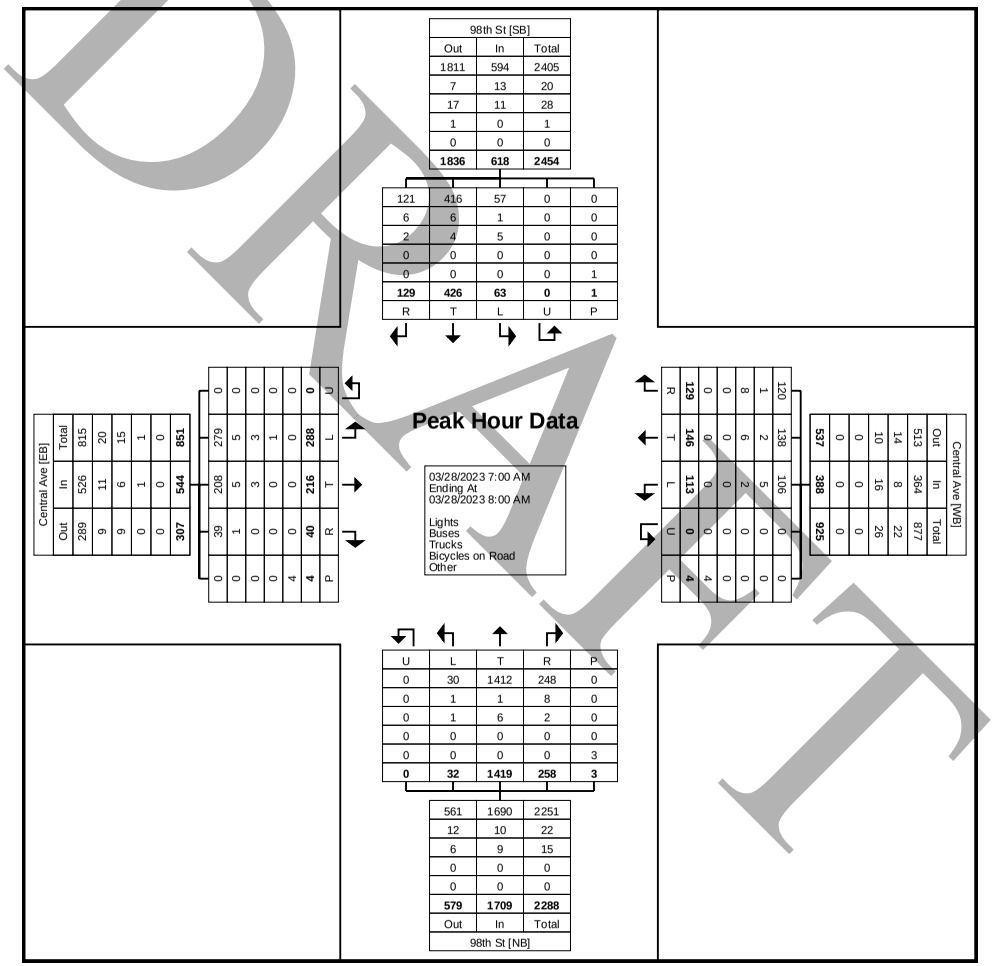
Count Name: NM309.04 Central 98th Fast Food
TIS
Site Code:
Start Date: 03/28/2023
Page No: 5



98th St [SB]		
Out	In	Total
1811	594	2405
7	13	20
17	11	28
1	0	1
0	0	0
1836	**618**	**2454**

121	416	57	0	0
6	6	1	0	0
2	4	5	0	0
0	0	0	0	0
0	0	0	0	1
129	**426**	**63**	**0**	**1**
R	T	L	U	P

Central Ave [EB]							
	Total	815	20	15	1	0	**851**
In	526	11	6	1	0	**544**	
Out	289	9	9	0	0	**307**	

0	0	0	0	0	0	**0**	U
279	5	3	1	0	**288**	L	
208	5	3	0	0	**216**	T	
69	1	0	0	0	**40**	R	
0	0	0	0	4	**4**	P	

R	**129**	0	0	8	1	120	
T	**146**	0	0	6	2	138	
L	**113**	0	0	2	5	106	
U	**0**	0	0	0	0	0	
P	**4**	4	0	0	0	0	

Central Ave [WB]							
Out	513	14	10	16	26	22	877
In	364	8	16	0	0	0	**388**
Total	877	22	26	0	0	0	**925**

537	0	0	0	0

U	L	T	R	P
0	30	1412	248	0
0	1	1	8	0
0	1	6	2	0
0	0	0	0	0
0	0	0	0	3
0	**32**	**1419**	**258**	**3**

561	1690	2251
12	10	22
6	9	15
0	0	0
0	0	0
579	**1709**	**2288**
Out	In	Total
98th St [NB]		

Turning Movement Peak Hour Data Plot (7:00 AM)

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Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Central Ave Eastbound							Central Ave Westbound							98th St Northbound							98th St Southbound							
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	Int. Total
11:00 AM	0	37	33	3	3	1	76	1	36	34	12	16	0	99	0	1	137	18	15	0	171	0	23	85	18	12	0	138	484
11:15 AM	0	27	32	5	3	0	67	2	47	32	7	14	0	102	1	4	161	17	11	0	194	0	11	118	14	8	0	151	514
11:30 AM	0	32	32	6	3	1	73	2	53	26	18	21	0	120	0	5	148	24	8	0	185	0	24	106	15	10	0	155	533
11:45 AM	0	45	39	3	2	0	89	0	44	25	14	13	1	96	0	6	136	25	15	0	182	0	23	106	18	14	0	161	528
Total	0	141	136	17	11	2	305	5	180	117	51	64	1	417	1	16	582	84	49	0	732	0	81	415	65	44	0	605	2059
Approach %	0.0	46.2	44.6	5.6	3.6	-	-	1.2	43.2	28.1	12.2	15.3	-	-	0.1	2.2	79.5	11.5	6.7	-	-	0.0	13.4	68.6	10.7	7.3	-	-	-
Total %	0.0	6.8	6.6	0.8	0.5	-	14.8	0.2	8.7	5.7	2.5	3.1	-	20.3	0.0	0.8	28.3	4.1	2.4	-	35.6	0.0	3.9	20.2	3.2	2.1	-	29.4	-
PHF	0.000	0.783	0.872	0.708	0.917	-	0.857	0.625	0.849	0.860	0.708	0.762	-	0.869	0.250	0.667	0.904	0.840	0.817	-	0.943	0.000	0.844	0.879	0.903	0.786	-	0.939	0.966
Lights	0	124	125	16	10	-	275	5	176	113	45	62	-	401	1	15	572	80	48	-	716	0	73	408	62	42	-	585	1977
% Lights	-	87.9	91.9	94.1	90.9	-	90.2	100.0	97.8	96.6	88.2	96.9	-	96.2	100.0	93.8	98.3	95.2	98.0	-	97.8	-	90.1	98.3	95.4	95.5	-	96.7	96.0
Buses	0	8	2	0	0	-	10	0	1	1	0	1	-	3	0	0	2	4	1	-	7	0	1	0	1	1	-	3	23
% Buses	-	5.7	1.5	0.0	0.0	-	3.3	0.0	0.6	0.9	0.0	1.6	-	0.7	0.0	0.0	0.3	4.8	2.0	-	1.0	-	1.2	0.0	1.5	2.3	-	0.5	1.1
Trucks	0	4	9	1	1	-	15	0	3	3	6	1	-	13	0	1	8	0	0	-	9	0	6	7	2	1	-	16	53
% Trucks	-	2.8	6.6	5.9	9.1	-	4.9	0.0	1.7	2.6	11.8	1.6	-	3.1	0.0	6.3	1.4	0.0	0.0	-	1.2	-	7.4	1.7	3.1	2.3	-	2.6	2.6
Bicycles on Road	0	5	0	0	0	-	5	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	1	0	0	0	-	1	6
% Bicycles on Road	-	3.5	0.0	0.0	0.0	-	1.6	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-	1.2	0.0	0.0	0.0	-	0.2	0.3
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023
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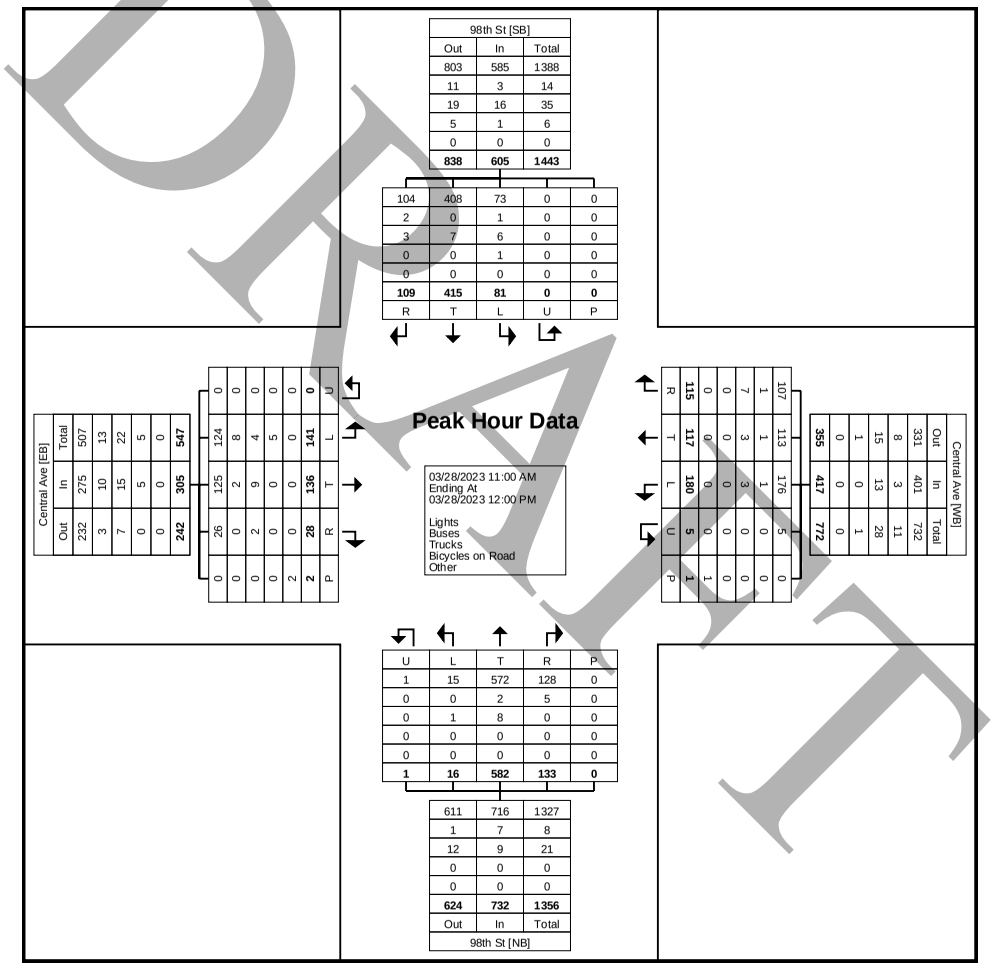

Turning Movement Peak Hour Data Plot (11:00 AM)

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Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Central Ave Eastbound							Central Ave Westbound							98th St Northbound							98th St Southbound							
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	Int. Total
1:00 PM	0	39	34	2	7	2	82	0	50	37	14	17	0	118	0	7	141	22	20	0	190	0	28	153	21	17	0	219	609
1:15 PM	0	36	42	3	5	3	86	1	53	45	16	15	0	130	0	9	161	32	15	2	217	0	36	149	12	15	0	212	645
1:30 PM	0	42	51	2	2	0	97	0	44	40	17	17	0	118	0	10	176	22	13	0	221	0	21	141	17	18	0	197	633
1:45 PM	0	30	44	8	4	0	86	0	45	40	11	15	4	111	0	8	174	23	11	0	216	0	20	166	17	10	0	213	626
Total	0	147	171	15	18	5	351	1	192	162	58	64	4	477	0	34	652	99	59	2	844	0	105	609	67	60	0	841	2513
Approach %	0.0	41.9	48.7	4.3	5.1	-	-	0.2	40.3	34.0	12.2	13.4	-	-	0.0	4.0	77.3	11.7	7.0	-	-	0.0	12.5	72.4	8.0	7.1	-	-	-
Total %	0.0	5.8	6.8	0.6	0.7	-	14.0	0.0	7.6	6.4	2.3	2.5	-	19.0	0.0	1.4	25.9	3.9	2.3	-	33.6	0.0	4.2	24.2	2.7	2.4	-	33.5	-
PHF	0.000	0.875	0.838	0.469	0.643	-	0.905	0.250	0.906	0.900	0.853	0.941	-	0.917	0.000	0.850	0.926	0.773	0.738	-	0.955	0.000	0.729	0.917	0.798	0.833	-	0.960	0.974
Lights	0	129	152	15	18	-	314	1	185	151	54	63	-	454	0	30	643	94	57	-	824	0	95	597	66	56	-	814	2406
% Lights	-	87.8	88.9	100.0	100.0	-	89.5	100.0	96.4	93.2	93.1	98.4	-	95.2	-	88.2	98.6	94.9	96.6	-	97.6	-	90.5	98.0	98.5	93.3	-	96.8	95.7
Buses	0	10	2	0	0	-	12	0	4	1	0	0	-	5	0	1	0	2	1	-	4	0	0	0	0	1	-	1	22
% Buses	-	6.8	1.2	0.0	0.0	-	3.4	0.0	2.1	0.6	0.0	0.0	-	1.0	-	2.9	0.0	2.0	1.7	-	0.5	-	0.0	0.0	0.0	1.7	-	0.1	0.9
Trucks	0	8	13	0	0	-	21	0	3	10	4	1	-	18	0	3	9	3	1	-	16	0	10	12	1	3	-	26	81
% Trucks	-	5.4	7.6	0.0	0.0	-	6.0	0.0	1.6	6.2	6.9	1.6	-	3.8	-	8.8	1.4	3.0	1.7	-	1.9	-	9.5	2.0	1.5	5.0	-	3.1	3.2
Bicycles on Road	0	0	4	0	0	-	4	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	4
% Bicycles on Road	-	0.0	2.3	0.0	0.0	-	1.1	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	25.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	5	-	-	-	-	-	-	3	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	75.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-

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Count Name: NM309.04 Central 98th Fast Food
TIS
Site Code:
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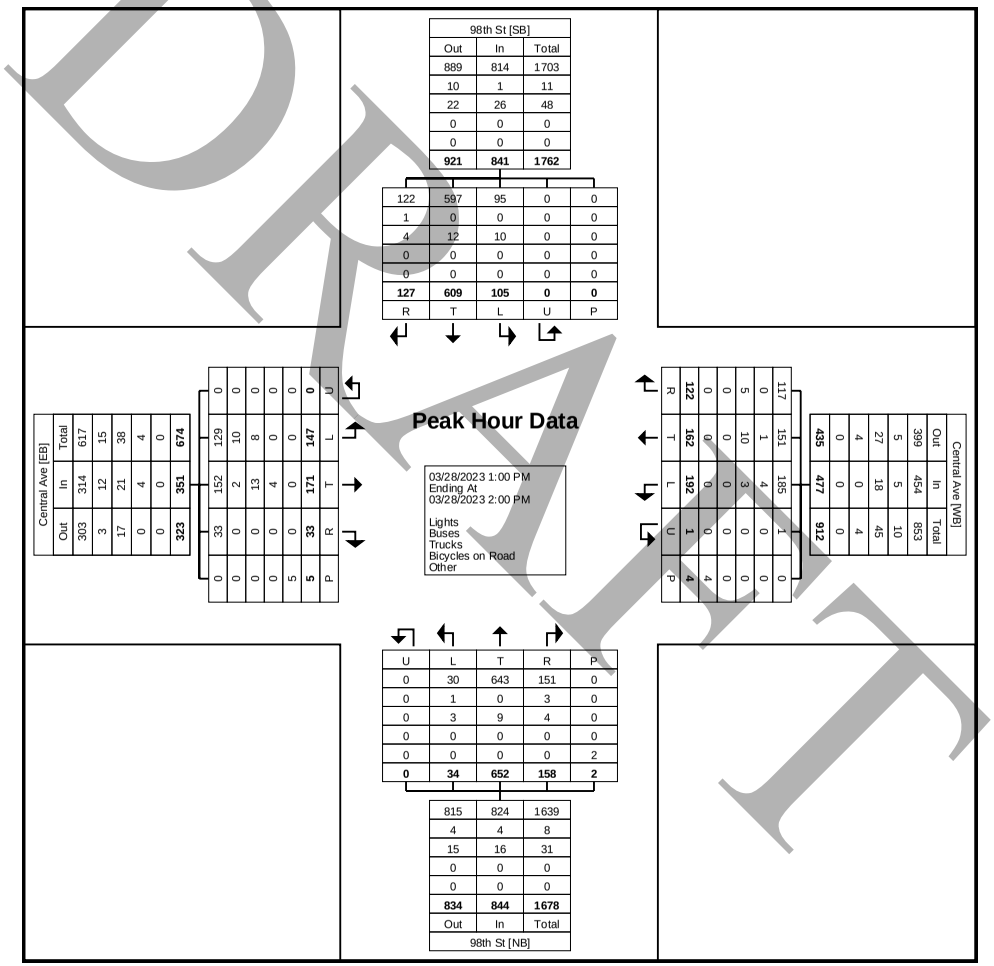

Turning Movement Peak Hour Data Plot (1:00 PM)

Lee Engineering, LLC
Phoenix, Arizona - Dallas, Texas
Oklahoma City, Oklahoma - San Antonio, Texas
Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Turning Movement Peak Hour Data (4:15 PM)

Start Time	Central Ave Eastbound							Central Ave Westbound							98th St Northbound							98th St Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
4:15 PM	0	43	66	11	9	0	129	0	71	64	14	14	0	163	0	12	224	28	21	0	285	0	26	265	32	18	0	341	918
4:30 PM	0	52	48	7	12	0	119	0	80	82	22	17	0	201	1	13	197	32	20	0	263	0	28	294	22	20	0	364	947
4:45 PM	0	45	45	5	13	1	108	1	61	60	14	27	0	163	0	9	199	33	11	0	252	0	23	322	34	13	1	392	915
5:00 PM	0	53	51	11	6	0	121	1	56	62	25	21	0	165	0	7	177	24	18	0	226	0	28	323	40	9	0	400	912
Total	0	193	210	34	40	1	477	2	268	268	75	79	0	692	1	41	797	117	70	0	1026	0	105	1204	128	60	1	1497	3692
Approach %	0.0	40.5	44.0	7.1	8.4	-	-	0.3	38.7	38.7	10.8	11.4	-	-	0.1	4.0	77.7	11.4	6.8	-	-	0.0	7.0	80.4	8.6	4.0	-	-	-
Total %	0.0	5.2	5.7	0.9	1.1	-	12.9	0.1	7.3	7.3	2.0	2.1	-	18.7	0.0	1.1	21.6	3.2	1.9	-	27.8	0.0	2.8	32.6	3.5	1.6	-	40.5	-
PHF	0.000	0.910	0.795	0.773	0.769	-	0.924	0.500	0.838	0.817	0.750	0.731	-	0.861	0.250	0.788	0.890	0.886	0.833	-	0.900	0.000	0.938	0.932	0.800	0.750	-	0.936	0.975
Lights	0	190	202	32	39	-	463	2	264	259	72	79	-	676	1	35	783	115	68	-	1002	0	103	1197	121	55	-	1476	3617
% Lights	-	98.4	96.2	94.1	97.5	-	97.1	100.0	98.5	96.6	96.0	100.0	-	97.7	100.0	85.4	98.2	98.3	97.1	-	97.7	-	98.1	99.4	94.5	91.7	-	98.6	98.0
Buses	0	3	3	1	1	-	8	0	4	6	1	0	-	11	0	5	7	2	2	-	16	0	0	2	4	4	-	10	45
% Buses	-	1.6	1.4	2.9	2.5	-	1.7	0.0	1.5	2.2	1.3	0.0	-	1.6	0.0	12.2	0.9	1.7	2.9	-	1.6	-	0.0	0.2	3.1	6.7	-	0.7	1.2
Trucks	0	0	5	1	0	-	6	0	0	3	2	0	-	5	0	1	7	0	0	-	8	0	2	5	3	1	-	11	30
% Trucks	-	0.0	2.4	2.9	0.0	-	1.3	0.0	0.0	1.1	2.7	0.0	-	0.7	0.0	2.4	0.9	0.0	0.0	-	0.8	-	1.9	0.4	2.3	1.7	-	0.7	0.8
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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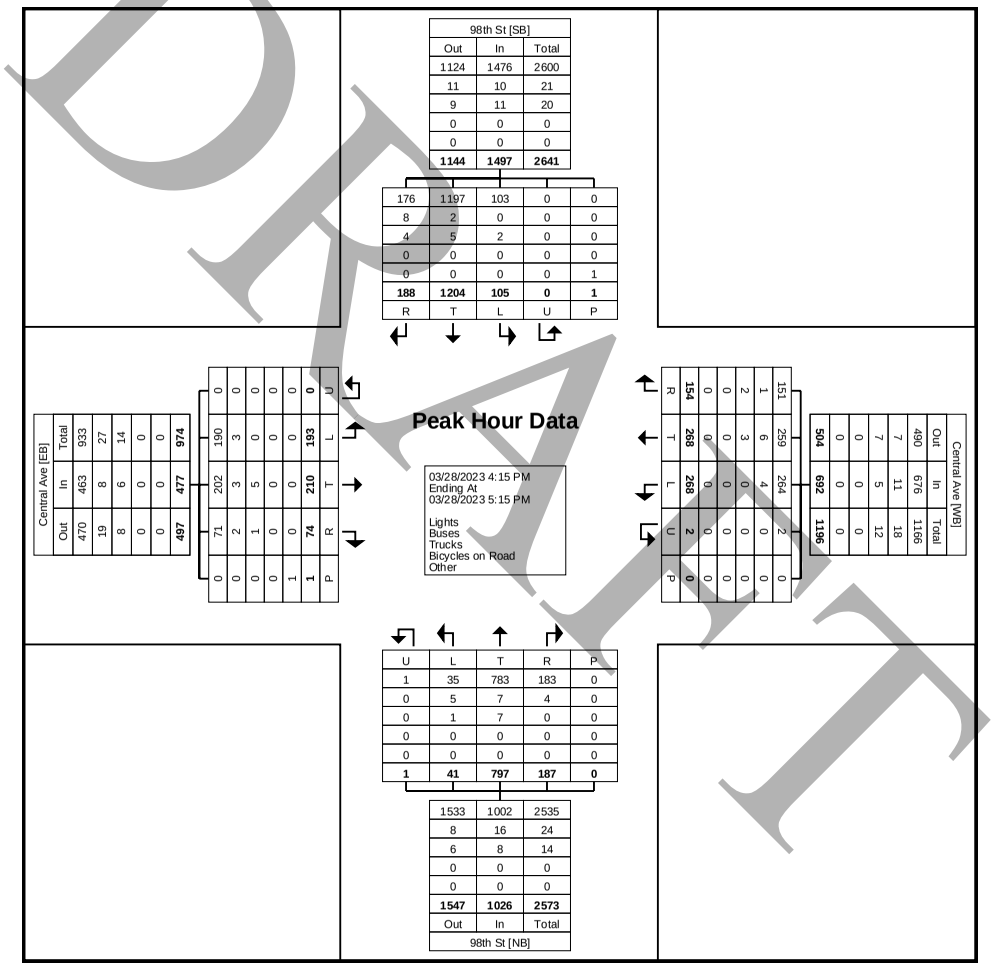
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023



Turning Movement Peak Hour Data Plot (4:15 PM)

Lee Engineering, LLC
Phoenix, Arizona - Dallas, Texas
Oklahoma City, Oklahoma - San Antonio, Texas
Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Data

Start Time	Central Ave Eastbound						Central Ave Westbound						Westland Rd Northbound						Westland Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 AM	0	0	55	2	0	57	0	1	38	0	0	39	0	6	0	6	0	12	0	1	0	0	0	1	109
6:15 AM	0	0	54	0	0	54	1	2	37	0	0	40	0	7	0	7	0	14	0	3	0	0	0	3	111
6:30 AM	1	1	77	1	0	80	0	2	57	2	0	61	0	8	0	17	0	25	0	1	0	0	0	1	167
6:45 AM	3	2	114	5	0	124	0	3	52	0	0	55	0	8	0	8	1	16	0	4	1	0	0	5	200
Hourly Total	4	3	300	8	0	315	1	8	184	2	0	195	0	29	0	38	1	67	0	9	1	0	0	10	587
7:00 AM	0	0	121	3	0	124	0	2	64	0	0	66	0	9	0	16	0	25	0	2	2	0	2	4	219
7:15 AM	2	0	124	5	1	131	0	2	98	0	0	100	0	10	0	29	1	39	0	1	0	1	0	2	272
7:30 AM	3	0	139	8	0	150	0	9	94	0	0	103	0	15	0	13	0	28	0	7	1	0	0	8	289
7:45 AM	2	1	139	7	0	149	0	8	82	0	0	90	0	9	0	20	0	29	0	5	0	0	0	5	273
Hourly Total	7	1	523	23	1	554	0	21	338	0	0	359	0	43	0	78	1	121	0	15	3	1	2	19	1053
8:00 AM	2	2	99	2	0	105	0	5	68	0	0	73	0	6	0	14	0	20	0	3	0	1	0	4	202
8:15 AM	1	1	84	3	0	89	0	8	93	2	0	103	0	5	0	11	0	16	0	2	0	0	0	2	210
8:30 AM	0	0	87	4	0	91	0	5	81	1	0	87	0	3	0	4	0	7	0	4	1	1	0	6	191
8:45 AM	1	1	100	4	0	106	2	7	61	1	0	71	0	8	0	11	0	19	0	6	0	1	1	7	203
Hourly Total	4	4	370	13	0	391	2	25	303	4	0	334	0	22	0	40	0	62	0	15	1	3	1	19	806
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	2	93	5	0	100	1	4	87	1	0	93	0	2	0	3	0	5	0	8	2	1	0	11	209
11:15 AM	2	2	60	3	1	67	0	5	84	4	0	93	0	5	0	8	0	13	2	8	1	0	0	11	184
11:30 AM	0	3	83	1	0	87	0	5	114	0	0	119	0	3	0	5	0	8	0	8	4	2	0	14	228
11:45 AM	3	3	99	2	0	107	2	1	77	0	0	80	0	4	1	2	0	7	0	11	0	3	0	14	208
Hourly Total	5	10	335	11	1	361	3	15	362	5	0	385	0	14	1	18	0	33	2	35	7	6	0	50	829
12:00 PM	4	0	83	6	0	93	1	2	97	1	0	101	0	1	0	4	2	5	0	11	0	0	1	11	210
12:15 PM	1	1	79	3	1	84	0	6	95	1	0	102	0	6	0	2	0	8	0	8	0	1	0	9	203
12:30 PM	3	1	90	5	0	99	0	7	124	1	0	132	0	6	0	3	1	9	0	10	0	2	0	12	252
12:45 PM	3	4	89	10	0	106	0	4	107	2	0	113	0	5	0	11	0	16	0	14	1	1	0	16	251
Hourly Total	11	6	341	24	1	382	1	19	423	5	0	448	0	18	0	20	3	38	0	43	1	4	1	48	916
1:00 PM	1	2	95	10	0	108	0	4	107	4	0	115	0	2	0	6	1	8	0	6	1	1	0	8	239
1:15 PM	0	0	112	5	0	117	0	2	108	2	0	112	0	3	1	6	0	10	0	9	0	2	0	11	250
1:30 PM	1	5	114	2	0	122	0	7	106	1	2	114	0	7	0	7	2	14	0	11	1	2	0	14	264
1:45 PM	0	4	86	6	1	96	1	5	98	2	0	106	0	6	0	10	0	16	0	11	0	1	0	12	230
Hourly Total	2	11	407	23	1	443	1	18	419	9	2	447	0	18	1	29	3	48	0	37	2	6	0	45	983
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	2	5	113	8	0	128	1	9	140	0	0	150	1	6	0	9	1	16	0	10	4	3	0	17	311
3:15 PM	3	3	111	5	0	122	0	11	126	2	0	139	0	6	0	5	0	11	0	18	5	0	1	23	295
3:30 PM	0	1	92	8	0	101	0	9	135	0	0	144	0	7	0	11	1	18	0	8	1	1	0	10	273

3:45 PM	0	1	98	5	0	104	0	12	138	1	0	151	0	5	1	9	0	15	0	11	4	0	0	15	285
Hourly Total	5	10	414	26	0	455	1	41	539	3	0	584	1	24	1	34	2	60	0	47	14	4	1	65	1164
4:00 PM	5	0	102	10	0	117	0	10	143	2	0	155	0	2	0	9	0	11	0	12	2	3	0	17	300
4:15 PM	2	3	121	11	0	137	0	11	131	3	0	145	0	2	0	13	0	15	0	16	0	1	0	17	314
4:30 PM	1	0	117	10	0	128	0	12	159	0	0	171	0	5	0	7	1	12	0	11	4	1	0	16	327
4:45 PM	1	1	109	11	0	122	1	8	133	2	0	144	0	7	0	8	0	15	0	9	0	0	0	9	290
Hourly Total	9	4	449	42	0	504	1	41	566	7	0	615	0	16	0	37	1	53	0	48	6	5	0	59	1231
5:00 PM	3	0	110	13	0	126	0	10	142	3	0	155	0	5	0	9	0	14	0	13	2	0	1	15	310
5:15 PM	4	3	89	12	0	108	0	13	130	0	0	143	0	7	0	11	0	18	0	15	2	2	0	19	288
5:30 PM	3	1	115	10	1	129	0	11	149	0	0	160	0	5	0	6	0	11	0	19	2	1	1	22	322
5:45 PM	0	0	92	5	0	97	0	7	153	1	0	161	0	7	0	16	0	23	0	14	5	0	1	19	300
Hourly Total	10	4	406	40	1	460	0	41	574	4	0	619	0	24	0	42	0	66	0	61	11	3	3	75	1220
Grand Total	57	53	3545	210	5	3865	10	229	3708	39	2	3986	1	208	3	336	11	548	2	310	46	32	8	390	8789
Approach %	1.5	1.4	91.7	5.4	-	-	0.3	5.7	93.0	1.0	-	-	0.2	38.0	0.5	61.3	-	-	0.5	79.5	11.8	8.2	-	-	-
Total %	0.6	0.6	40.3	2.4	-	44.0	0.1	2.6	42.2	0.4	-	45.4	0.0	2.4	0.0	3.8	-	6.2	0.0	3.5	0.5	0.4	-	4.4	-
Lights	56	47	3371	206	-	3680	9	228	3533	37	-	3807	1	205	3	332	-	541	2	304	46	29	-	381	8409
% Lights	98.2	88.7	95.1	98.1	-	95.2	90.0	99.6	95.3	94.9	-	95.5	100.0	98.6	100.0	98.8	-	98.7	100.0	98.1	100.0	90.6	-	97.7	95.7
Buses	0	0	65	2	-	67	0	0	62	0	-	62	0	1	0	2	-	3	0	1	0	0	-	1	133
% Buses	0.0	0.0	1.8	1.0	-	1.7	0.0	0.0	1.7	0.0	-	1.6	0.0	0.5	0.0	0.6	-	0.5	0.0	0.3	0.0	0.0	-	0.3	1.5
Trucks	1	5	103	2	-	111	1	1	113	2	-	117	0	2	0	2	-	4	0	5	0	2	-	7	239
% Trucks	1.8	9.4	2.9	1.0	-	2.9	10.0	0.4	3.0	5.1	-	2.9	0.0	1.0	0.0	0.6	-	0.7	0.0	1.6	0.0	6.3	-	1.8	2.7
Bicycles on Road	0	1	6	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	8
% Bicycles on Road	0.0	1.9	0.2	0.0	-	0.2	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	3.1	-	0.3	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	12.5	-	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	2	-	-	-	-	-	11	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	87.5	-	-

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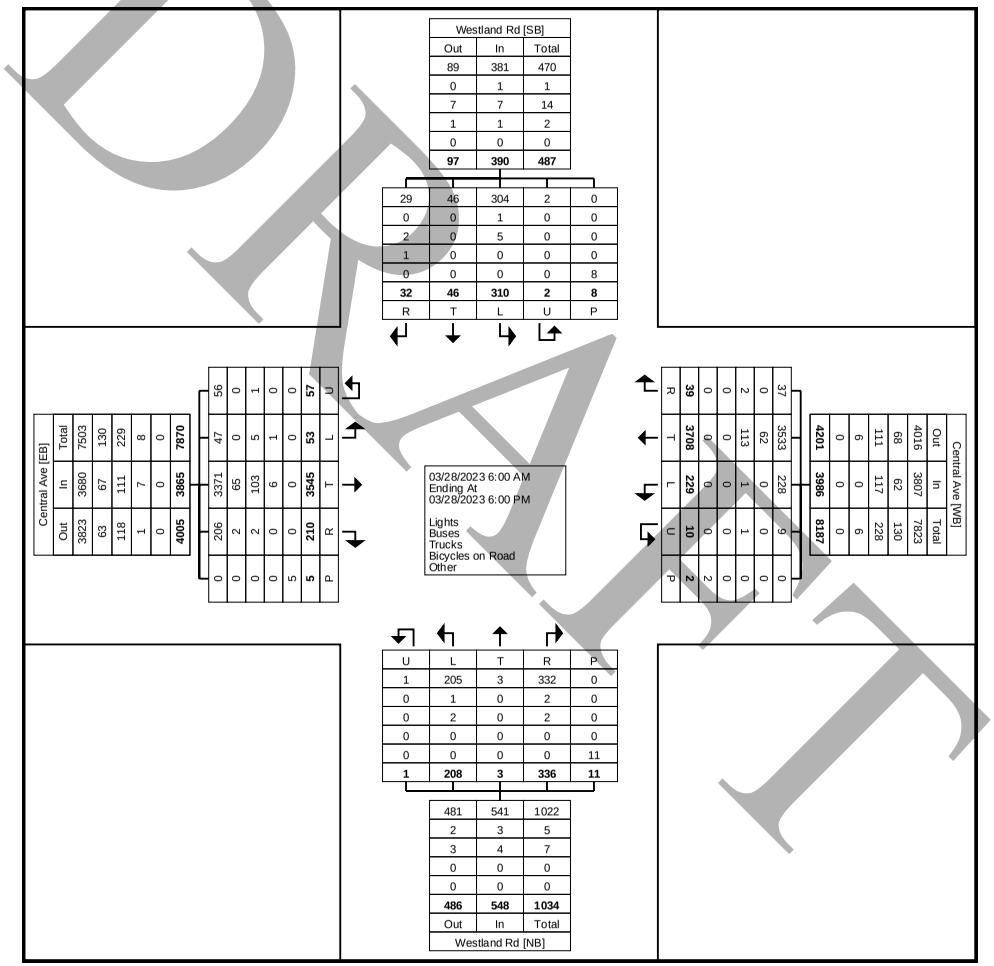
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023



Turning Movement Data Plot

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Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Central Ave Eastbound						Central Ave Westbound						Westland Rd Northbound						Westland Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	121	3	0	124	0	2	64	0	0	66	0	9	0	16	0	25	0	2	2	0	2	4	219
7:15 AM	2	0	124	5	1	131	0	2	98	0	0	100	0	10	0	29	1	39	0	1	0	1	0	2	272
7:30 AM	3	0	139	8	0	150	0	9	94	0	0	103	0	15	0	13	0	28	0	7	1	0	0	8	289
7:45 AM	2	1	139	7	0	149	0	8	82	0	0	90	0	9	0	20	0	29	0	5	0	0	0	5	273
Total	7	1	523	23	1	554	0	21	338	0	0	359	0	43	0	78	1	121	0	15	3	1	2	19	1053
Approach %	1.3	0.2	94.4	4.2	-	-	0.0	5.8	94.2	0.0	-	-	0.0	35.5	0.0	64.5	-	-	0.0	78.9	15.8	5.3	-	-	-
Total %	0.7	0.1	49.7	2.2	-	52.6	0.0	2.0	32.1	0.0	-	34.1	0.0	4.1	0.0	7.4	-	11.5	0.0	1.4	0.3	0.1	-	1.8	-
PHF	0.583	0.250	0.941	0.719	-	0.923	0.000	0.583	0.862	0.000	-	0.871	0.000	0.717	0.000	0.672	-	0.776	0.000	0.536	0.375	0.250	-	0.594	0.911
Lights	7	1	500	22	-	530	0	20	315	0	-	335	0	42	0	75	-	117	0	14	3	1	-	18	1000
% Lights	100.0	100.0	95.6	95.7	-	95.7	-	95.2	93.2	-	-	93.3	-	97.7	-	96.2	-	96.7	-	93.3	100.0	100.0	-	94.7	95.0
Buses	0	0	13	1	-	14	0	0	6	0	-	6	0	0	0	1	-	1	0	0	0	0	-	0	21
% Buses	0.0	0.0	2.5	4.3	-	2.5	-	0.0	1.8	-	-	1.7	-	0.0	-	1.3	-	0.8	-	0.0	0.0	0.0	-	0.0	2.0
Trucks	0	0	9	0	-	9	0	1	17	0	-	18	0	1	0	2	-	3	0	1	0	0	-	1	31
% Trucks	0.0	0.0	1.7	0.0	-	1.6	-	4.8	5.0	-	-	5.0	-	2.3	-	2.6	-	2.5	-	6.7	0.0	0.0	-	5.3	2.9
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.2	0.0	-	0.2	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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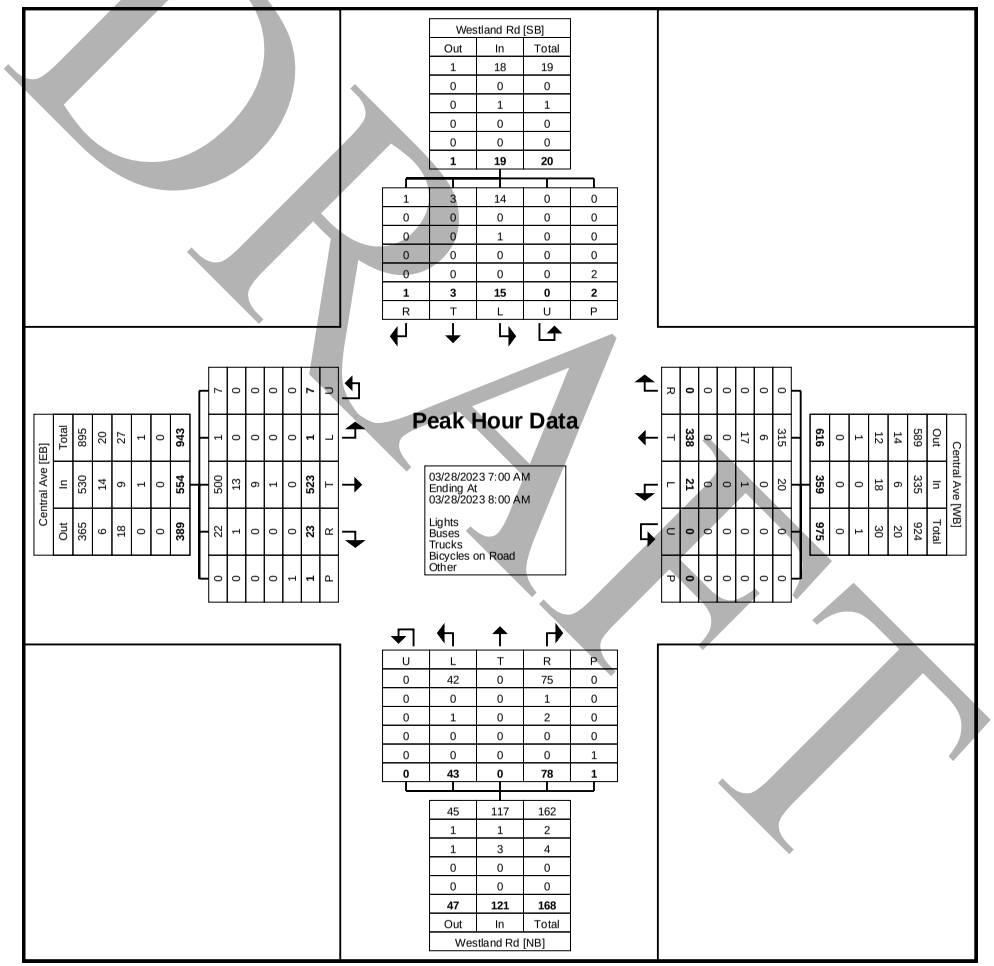
Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023



Turning Movement Peak Hour Data Plot (7:00 AM)

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Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Central Ave Eastbound						Central Ave Westbound						Westland Rd Northbound						Westland Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
11:00 AM	0	2	93	5	0	100	1	4	87	1	0	93	0	2	0	3	0	5	0	8	2	1	0	11	209
11:15 AM	2	2	60	3	1	67	0	5	84	4	0	93	0	5	0	8	0	13	2	8	1	0	0	11	184
11:30 AM	0	3	83	1	0	87	0	5	114	0	0	119	0	3	0	5	0	8	0	8	4	2	0	14	228
11:45 AM	3	3	99	2	0	107	2	1	77	0	0	80	0	4	1	2	0	7	0	11	0	3	0	14	208
Total	5	10	335	11	1	361	3	15	362	5	0	385	0	14	1	18	0	33	2	35	7	6	0	50	829
Approach %	1.4	2.8	92.8	3.0	-	-	0.8	3.9	94.0	1.3	-	-	0.0	42.4	3.0	54.5	-	-	4.0	70.0	14.0	12.0	-	-	-
Total %	0.6	1.2	40.4	1.3	-	43.5	0.4	1.8	43.7	0.6	-	46.4	0.0	1.7	0.1	2.2	-	4.0	0.2	4.2	0.8	0.7	-	6.0	-
PHF	0.417	0.833	0.846	0.550	-	0.843	0.375	0.750	0.794	0.313	-	0.809	0.000	0.700	0.250	0.563	-	0.635	0.250	0.795	0.438	0.500	-	0.893	0.909
Lights	5	8	315	11	-	339	2	15	350	5	-	372	0	14	1	17	-	32	2	35	7	5	-	49	792
% Lights	100.0	80.0	94.0	100.0	-	93.9	66.7	100.0	96.7	100.0	-	96.6	-	100.0	100.0	94.4	-	97.0	100.0	100.0	100.0	83.3	-	98.0	95.5
Buses	0	0	8	0	-	8	0	0	2	0	-	2	0	0	0	1	-	1	0	0	0	0	-	0	11
% Buses	0.0	0.0	2.4	0.0	-	2.2	0.0	0.0	0.6	0.0	-	0.5	-	0.0	0.0	5.6	-	3.0	0.0	0.0	0.0	0.0	-	0.0	1.3
Trucks	0	2	12	0	-	14	1	0	10	0	-	11	0	0	0	0	-	0	0	0	0	1	-	1	26
% Trucks	0.0	20.0	3.6	0.0	-	3.9	33.3	0.0	2.8	0.0	-	2.9	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	16.7	-	2.0	3.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023
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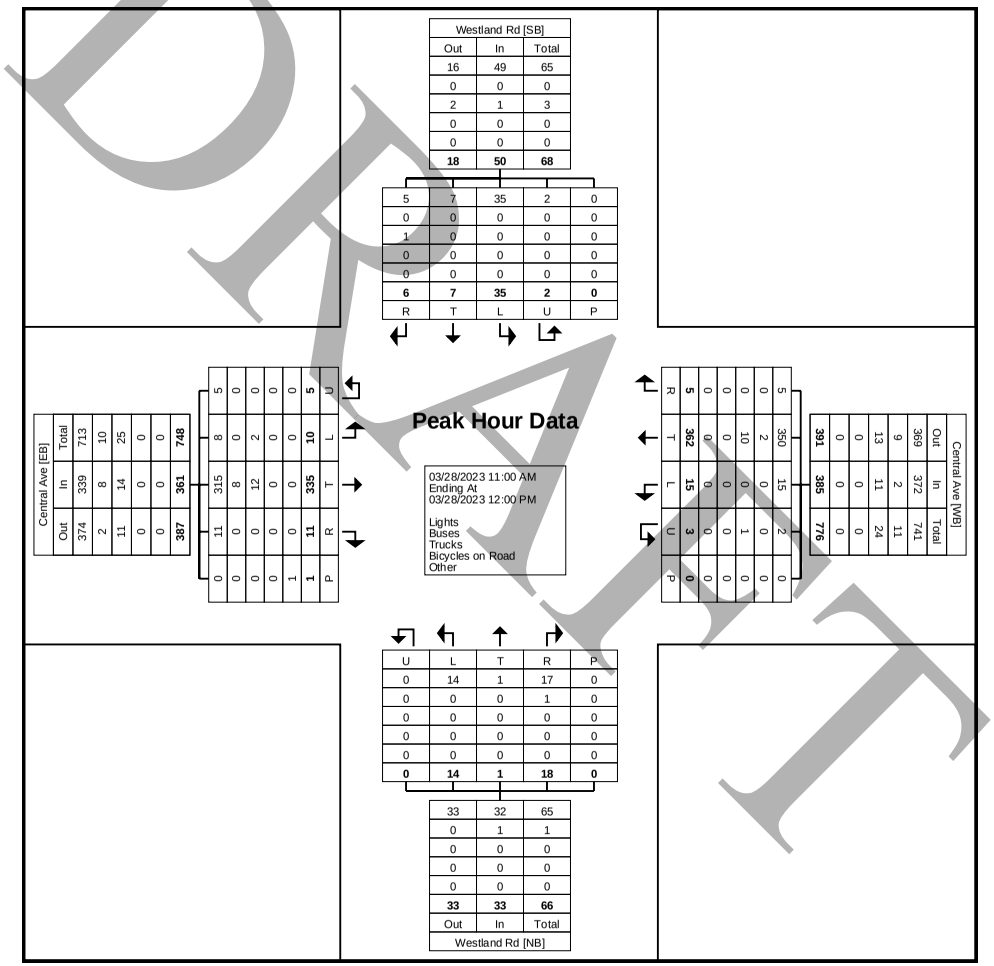

Turning Movement Peak Hour Data Plot (11:00 AM)

Lee Engineering, LLC
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Oklahoma City, Oklahoma - San Antonio, Texas
Albuquerque, New Mexico, United States 87113
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Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Central Ave Eastbound						Central Ave Westbound						Westland Rd Northbound						Westland Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	3	4	89	10	0	106	0	4	107	2	0	113	0	5	0	11	0	16	0	14	1	1	0	16	251
1:00 PM	1	2	95	10	0	108	0	4	107	4	0	115	0	2	0	6	1	8	0	6	1	1	0	8	239
1:15 PM	0	0	112	5	0	117	0	2	108	2	0	112	0	3	1	6	0	10	0	9	0	2	0	11	250
1:30 PM	1	5	114	2	0	122	0	7	106	1	2	114	0	7	0	7	2	14	0	11	1	2	0	14	264
Total	5	11	410	27	0	453	0	17	428	9	2	454	0	17	1	30	3	48	0	40	3	6	0	49	1004
Approach %	1.1	2.4	90.5	6.0	-	-	0.0	3.7	94.3	2.0	-	-	0.0	35.4	2.1	62.5	-	-	0.0	81.6	6.1	12.2	-	-	-
Total %	0.5	1.1	40.8	2.7	-	45.1	0.0	1.7	42.6	0.9	-	45.2	0.0	1.7	0.1	3.0	-	4.8	0.0	4.0	0.3	0.6	-	4.9	-
PHF	0.417	0.550	0.899	0.675	-	0.928	0.000	0.607	0.991	0.563	-	0.987	0.000	0.607	0.250	0.682	-	0.750	0.000	0.714	0.750	0.750	-	0.766	0.951
Lights	5	9	376	26	-	416	0	17	408	8	-	433	0	16	1	30	-	47	0	39	3	5	-	47	943
% Lights	100.0	81.8	91.7	96.3	-	91.8	-	100.0	95.3	88.9	-	95.4	-	94.1	100.0	100.0	-	97.9	-	97.5	100.0	83.3	-	95.9	93.9
Buses	0	0	4	0	-	4	0	0	4	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	8
% Buses	0.0	0.0	1.0	0.0	-	0.9	-	0.0	0.9	0.0	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.8
Trucks	0	1	26	1	-	28	0	0	16	1	-	17	0	1	0	0	-	1	0	1	0	1	-	2	48
% Trucks	0.0	9.1	6.3	3.7	-	6.2	-	0.0	3.7	11.1	-	3.7	-	5.9	0.0	0.0	-	2.1	-	2.5	0.0	16.7	-	4.1	4.8
Bicycles on Road	0	1	4	0	-	5	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	5
% Bicycles on Road	0.0	9.1	1.0	0.0	-	1.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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Count Name: NM309.04 Central 98th Fast Food
TIS
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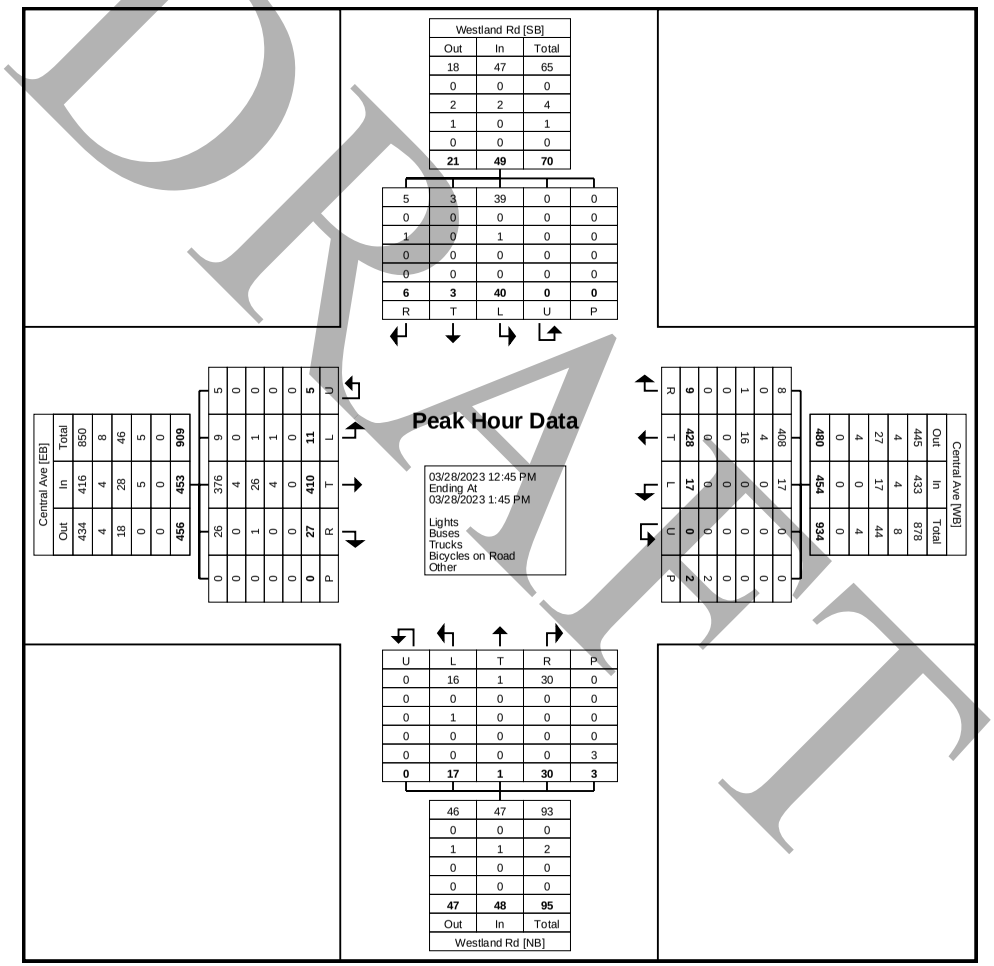

Turning Movement Peak Hour Data Plot (12:45 PM)

Lee Engineering, LLC
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Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

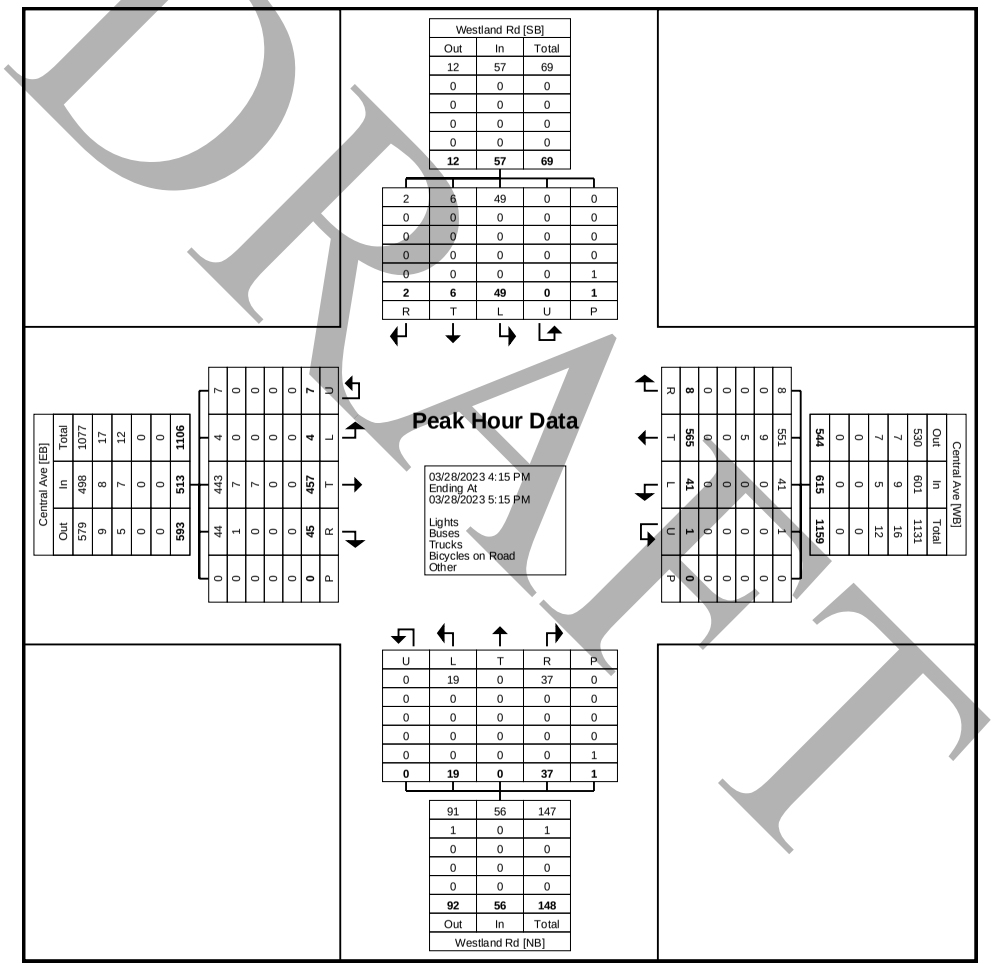
Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023

Turning Movement Peak Hour Data (4:15 PM)

Start Time	Central Ave Eastbound						Central Ave Westbound						Westland Rd Northbound						Westland Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:15 PM	2	3	121	11	0	137	0	11	131	3	0	145	0	2	0	13	0	15	0	16	0	1	0	17	314
4:30 PM	1	0	117	10	0	128	0	12	159	0	0	171	0	5	0	7	1	12	0	11	4	1	0	16	327
4:45 PM	1	1	109	11	0	122	1	8	133	2	0	144	0	7	0	8	0	15	0	9	0	0	0	9	290
5:00 PM	3	0	110	13	0	126	0	10	142	3	0	155	0	5	0	9	0	14	0	13	2	0	1	15	310
Total	7	4	457	45	0	513	1	41	565	8	0	615	0	19	0	37	1	56	0	49	6	2	1	57	1241
Approach %	1.4	0.8	89.1	8.8	-	-	0.2	6.7	91.9	1.3	-	-	0.0	33.9	0.0	66.1	-	-	0.0	86.0	10.5	3.5	-	-	-
Total %	0.6	0.3	36.8	3.6	-	41.3	0.1	3.3	45.5	0.6	-	49.6	0.0	1.5	0.0	3.0	-	4.5	0.0	3.9	0.5	0.2	-	4.6	-
PHF	0.583	0.333	0.944	0.865	-	0.936	0.250	0.854	0.888	0.667	-	0.899	0.000	0.679	0.000	0.712	-	0.933	0.000	0.766	0.375	0.500	-	0.838	0.949
Lights	7	4	443	44	-	498	1	41	551	8	-	601	0	19	0	37	-	56	0	49	6	2	-	57	1212
% Lights	100.0	100.0	96.9	97.8	-	97.1	100.0	100.0	97.5	100.0	-	97.7	-	100.0	-	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	97.7
Buses	0	0	7	1	-	8	0	0	9	0	-	9	0	0	0	0	-	0	0	0	0	0	-	0	17
% Buses	0.0	0.0	1.5	2.2	-	1.6	0.0	0.0	1.6	0.0	-	1.5	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	1.4
Trucks	0	0	7	0	-	7	0	0	5	0	-	5	0	0	0	0	-	0	0	0	0	0	-	0	12
% Trucks	0.0	0.0	1.5	0.0	-	1.4	0.0	0.0	0.9	0.0	-	0.8	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	1.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

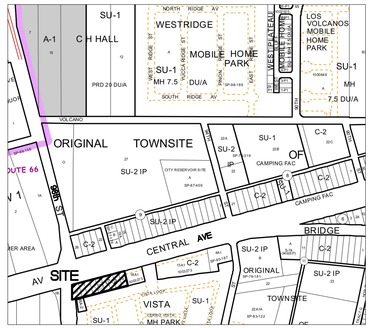
Lee Engineering, LLC
Phoenix, Arizona - Dallas, Texas
Oklahoma City, Oklahoma - San Antonio, Texas
Albuquerque, New Mexico, United States 87113
5053380988 zbaiamonte@lee-eng.com

Count Name: NM309.04 Central 98th Fast Food TIS
Site Code:
Start Date: 03/28/2023



Turning Movement Peak Hour Data Plot (4:15 PM)

Site Plan



VICINITY MAP - Zone Map K-9-Z

Legal Description:

The Remaining Portions of Lots 19 through 27 in Block 10 of the original Townsite of Westland, within the Town of Atrisco Grant, Bernalillo County, NM.

PARKING CALCULATIONS		
BUILDING AREA:	AREA (SQUARE FEET)	
RESTAURANT	+/- 2,490 SF	
RETAIL	+/- 6,000 SF	
PARKING REQUIREMENTS:	REQUIRED	PROVIDED
RESTAURANT (5/1,000 SF)	12 spaces	14 spaces
RETAIL (2.5/1,000 SF)	15 spaces	24 spaces
TOTAL	27 spaces	38 spaces
	REQUIRED	PROVIDED
HANDICAP PARKING	3 spaces	3 spaces
MOTORCYCLE PARKING	1 spaces	2 spaces
BICYCLE PARKING	3 spaces	3 spaces
DRIVE-THRU QUEUEING	12 spaces	16 spaces

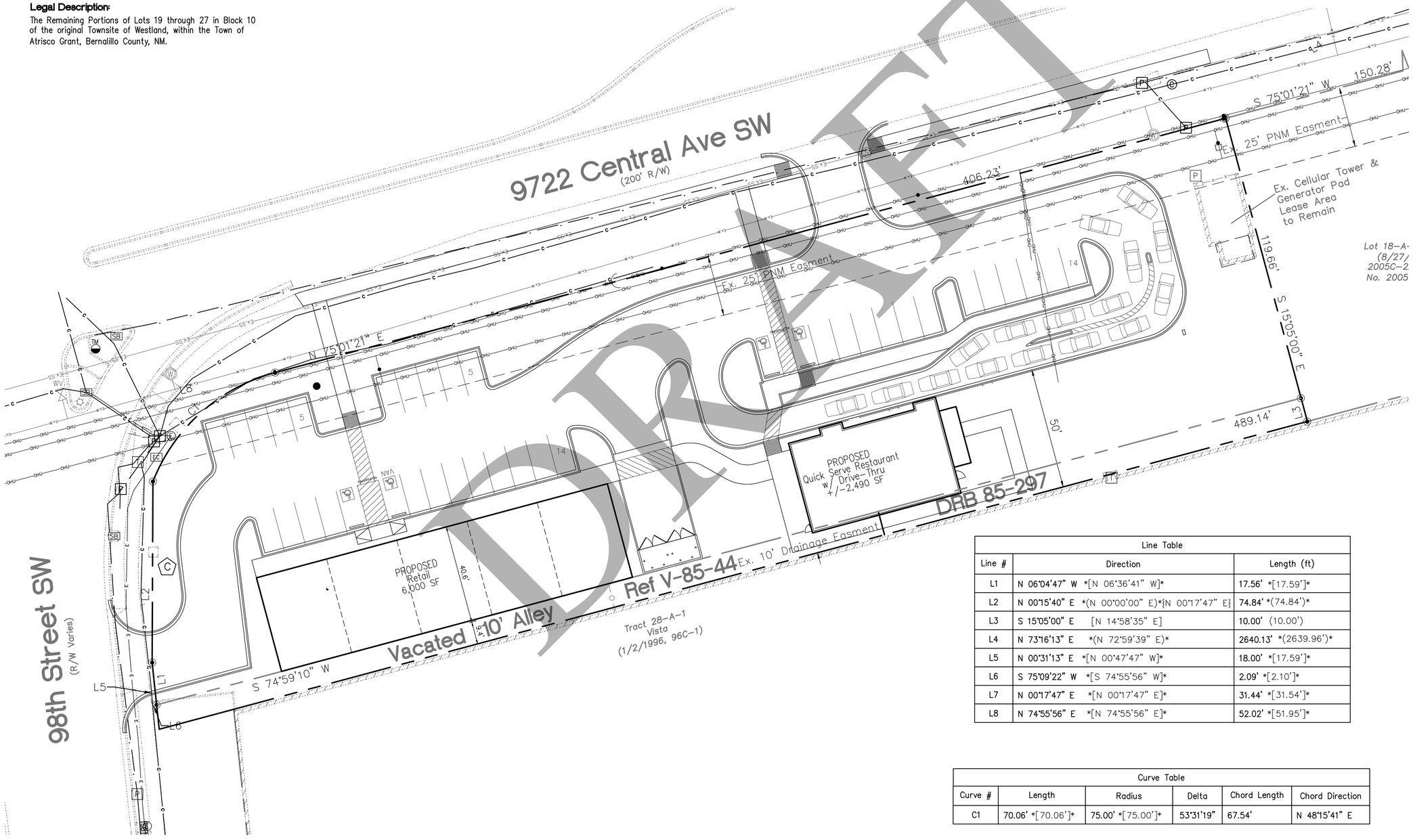
N
W E
S

20' 10' 0 20'

SCALE: 1"=20'

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL NEW MEXICO ONE CALL (811) AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



Line Table		
Line #	Direction	Length (ft)
L1	N 06°04'47" W *[N 06°36'41" W]*	17.56' *[17.59']*
L2	N 00°15'40" E *(N 00°00'00" E)*{N 00°17'47" E}	74.84' *(74.84')*
L3	S 15°05'00" E [N 14°58'35" E]	10.00' (10.00')
L4	N 73°16'13" E *(N 72°59'39" E)*	2640.13' *(2639.96')*
L5	N 00°31'13" E *[N 00°47'47" W]*	18.00' *[17.59']*
L6	S 75°09'22" W *[S 74°55'56" W]*	2.09' *[2.10']*
L7	N 00°17'47" E *[N 00°17'47" E]*	31.44' *[31.54']*
L8	N 74°55'56" E *[N 74°55'56" E]*	52.02' *[51.95']*

Curve Table					
Curve #	Length	Radius	Delta	Chord Length	Chord Direction
C1	70.06' *[70.06']*	75.00' *[75.00']*	53°31'19"	67.54'	N 48°15'41" E

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGN

DESIGNED BY: JW — DATE: Nov 2022

DRAWN BY: RG — DATE: Nov 2022

JOB NO.: 2021004

CHECKED BY: JW — DATE: Nov 2022

Wooten Engineering
PO Box 15814
Rio Rancho, N.M. 87174
Phone: (505) 980-3560

Retail Development
9700 Central Ave SW
Albuquerque, NM 87121

Conceptual Site plan

C1.0

ITE Trip Generation Summary Sheets

Coffee/Donut Shop with Drive-Through Window (937)

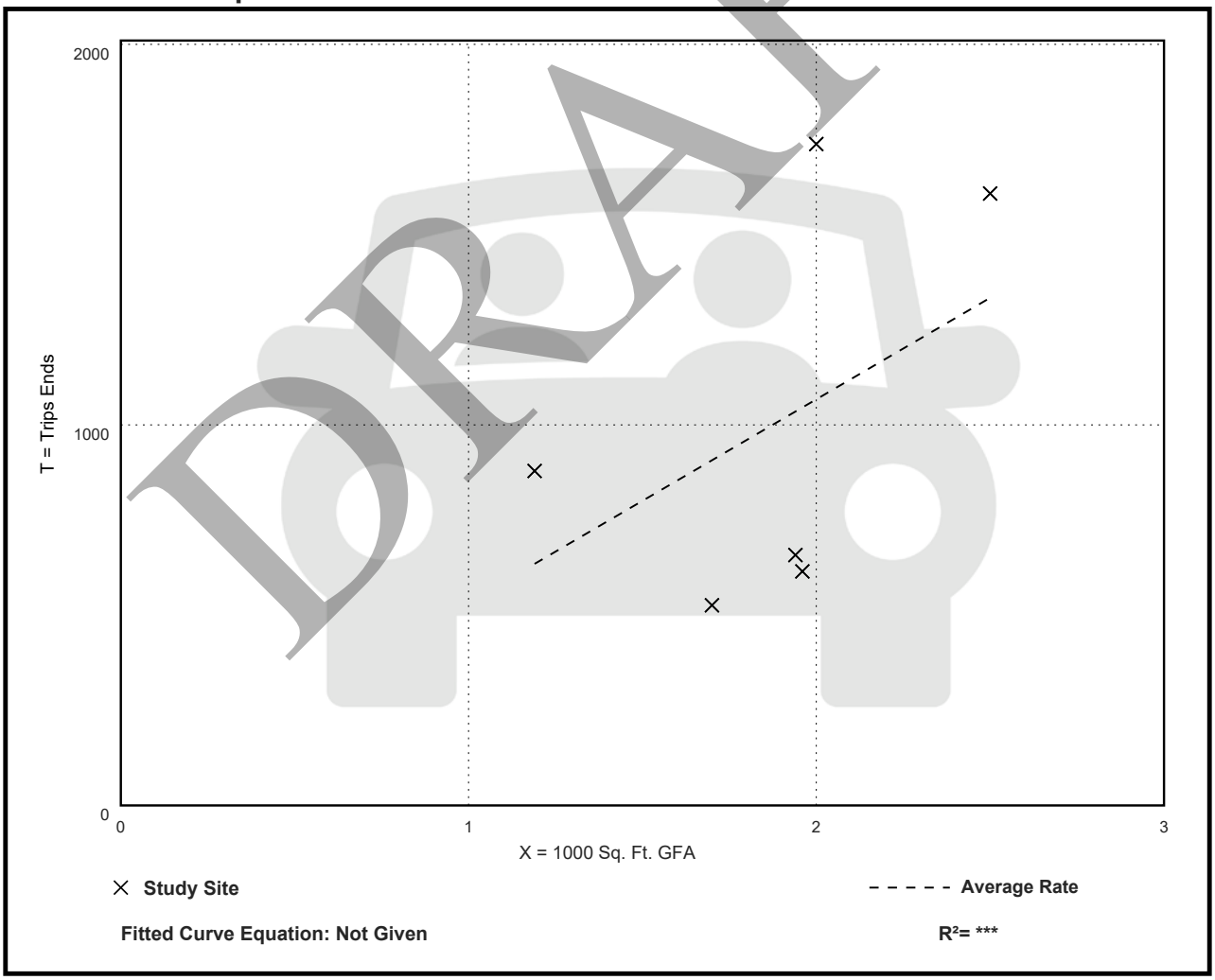
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
533.57	309.41 - 869.00	243.65

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

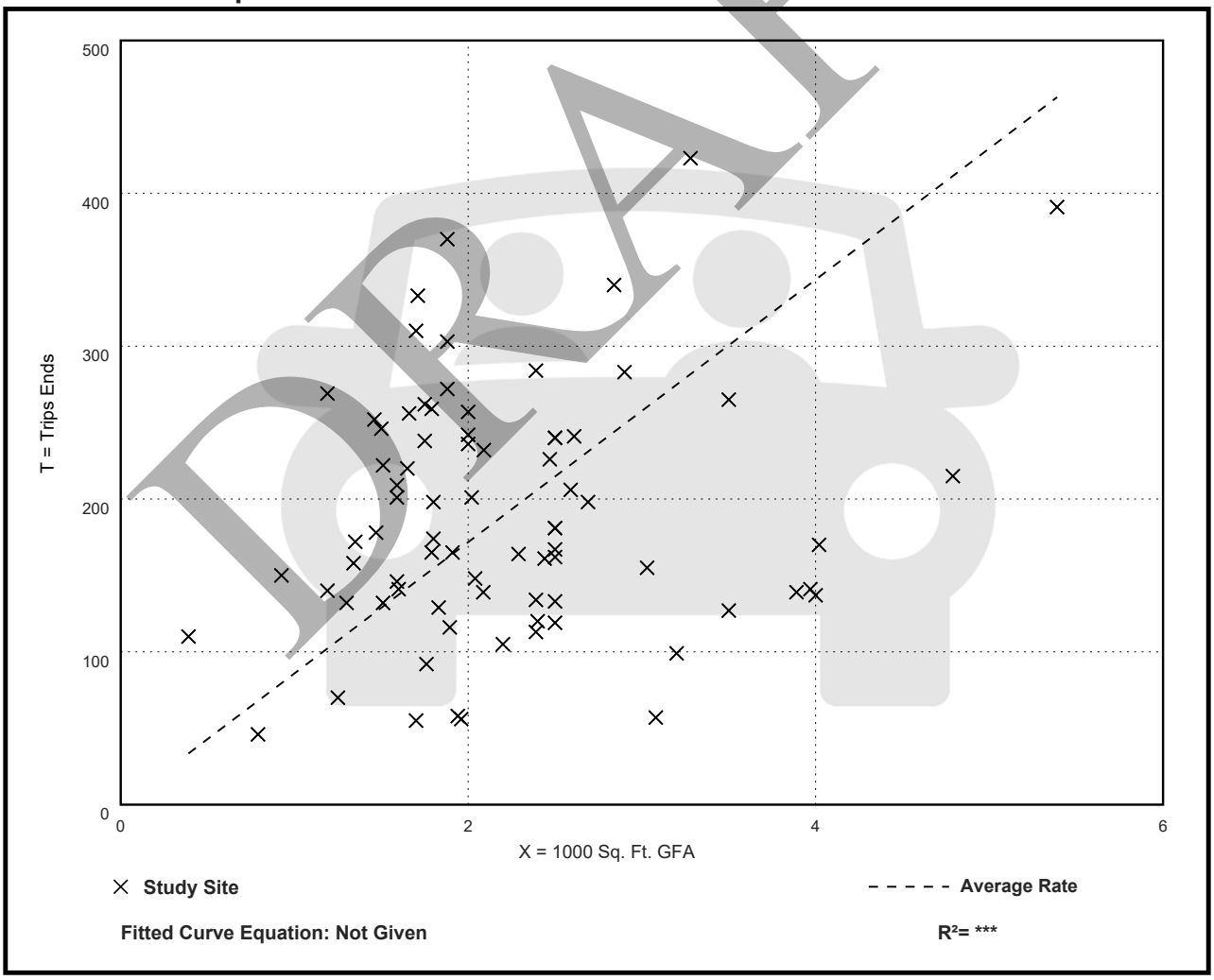
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 78
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
85.88	18.51 - 282.05	44.92

Data Plot and Equation



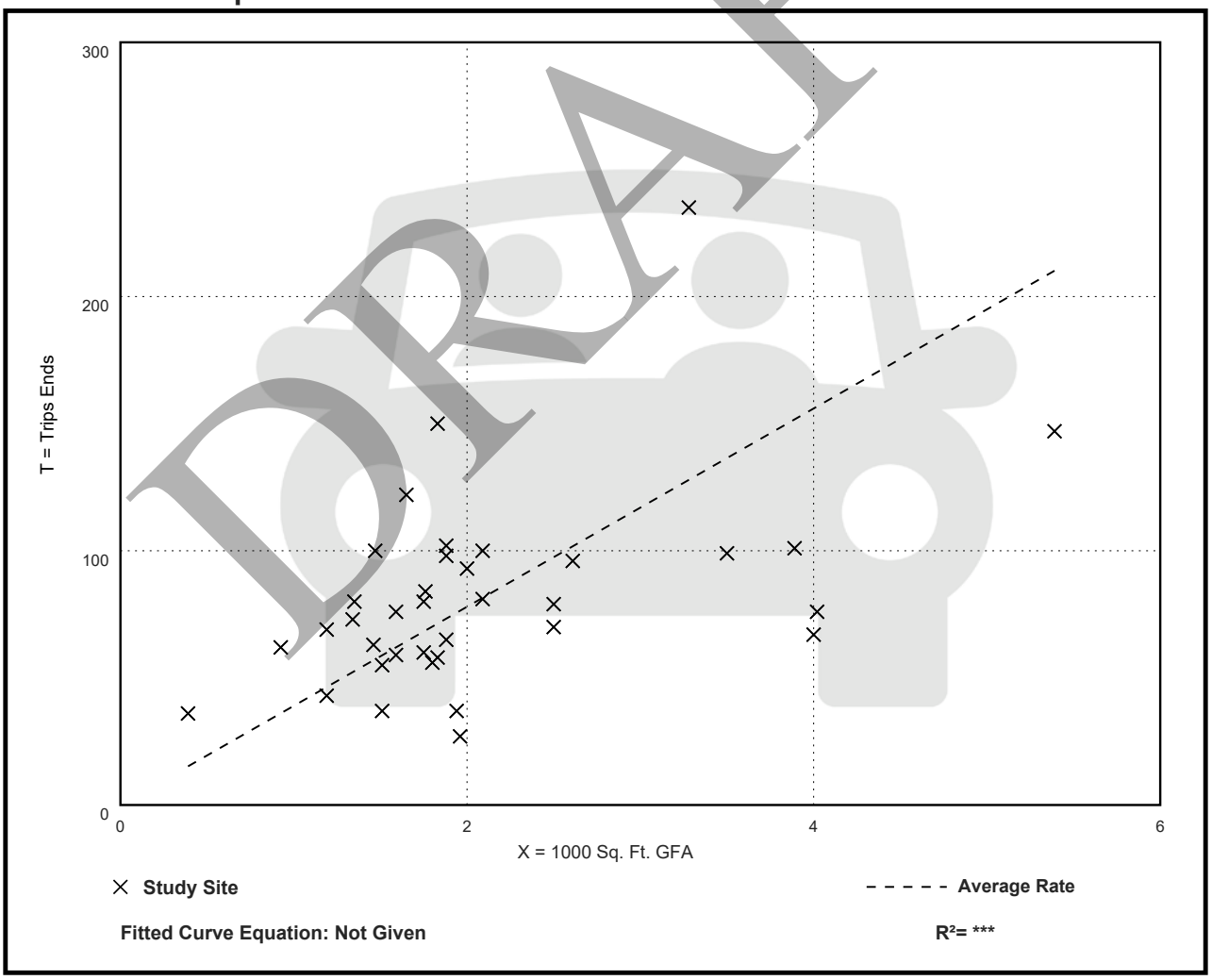
Coffee/Donut Shop with Drive-Through Window (937)

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: 36
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
38.99	13.78 - 92.31	17.79

Data Plot and Equation



Strip Retail Plaza (<40k)
(822)

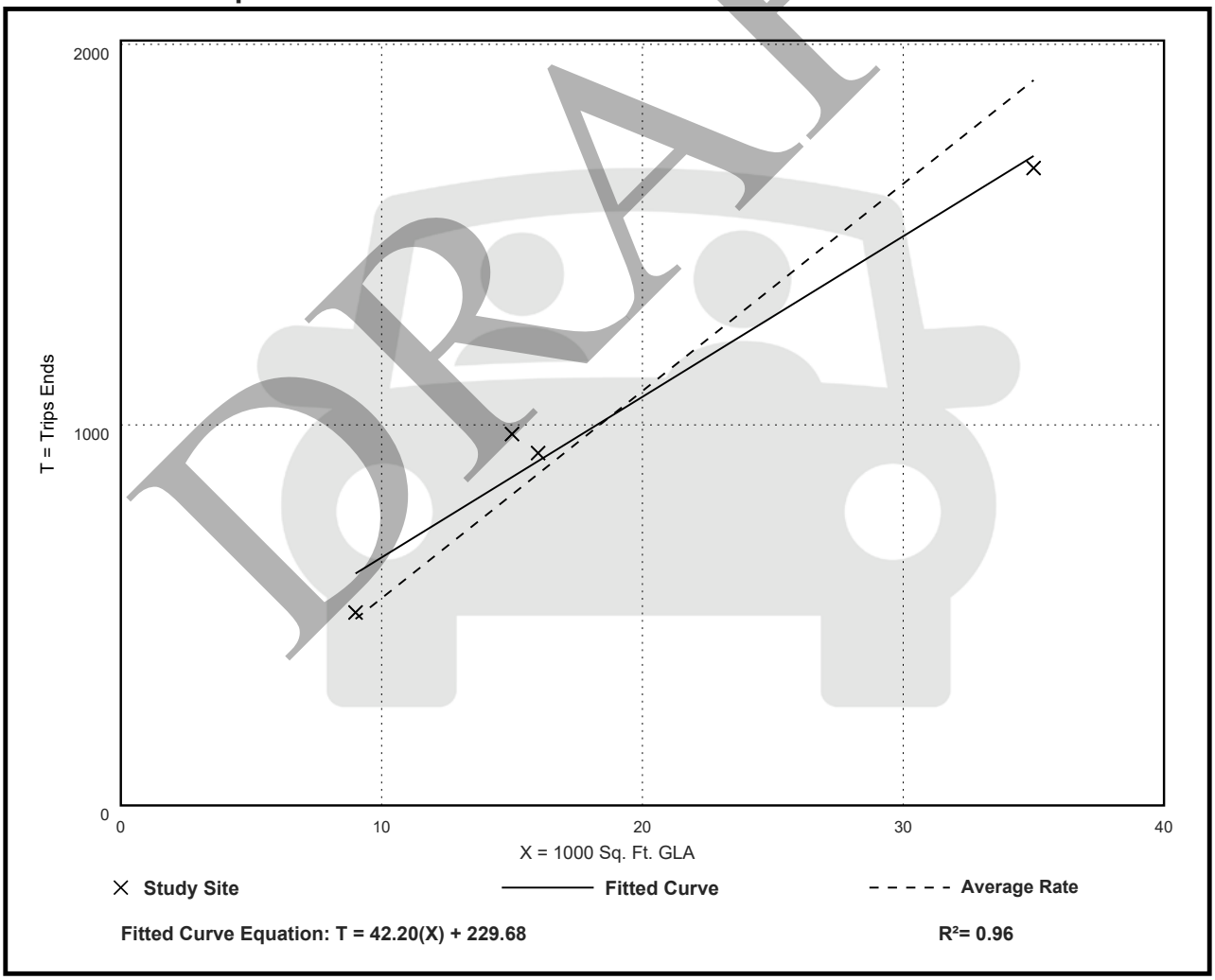
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation



Fitted Curve Equation: T = 42.20(X) + 229.68

R^2= 0.96

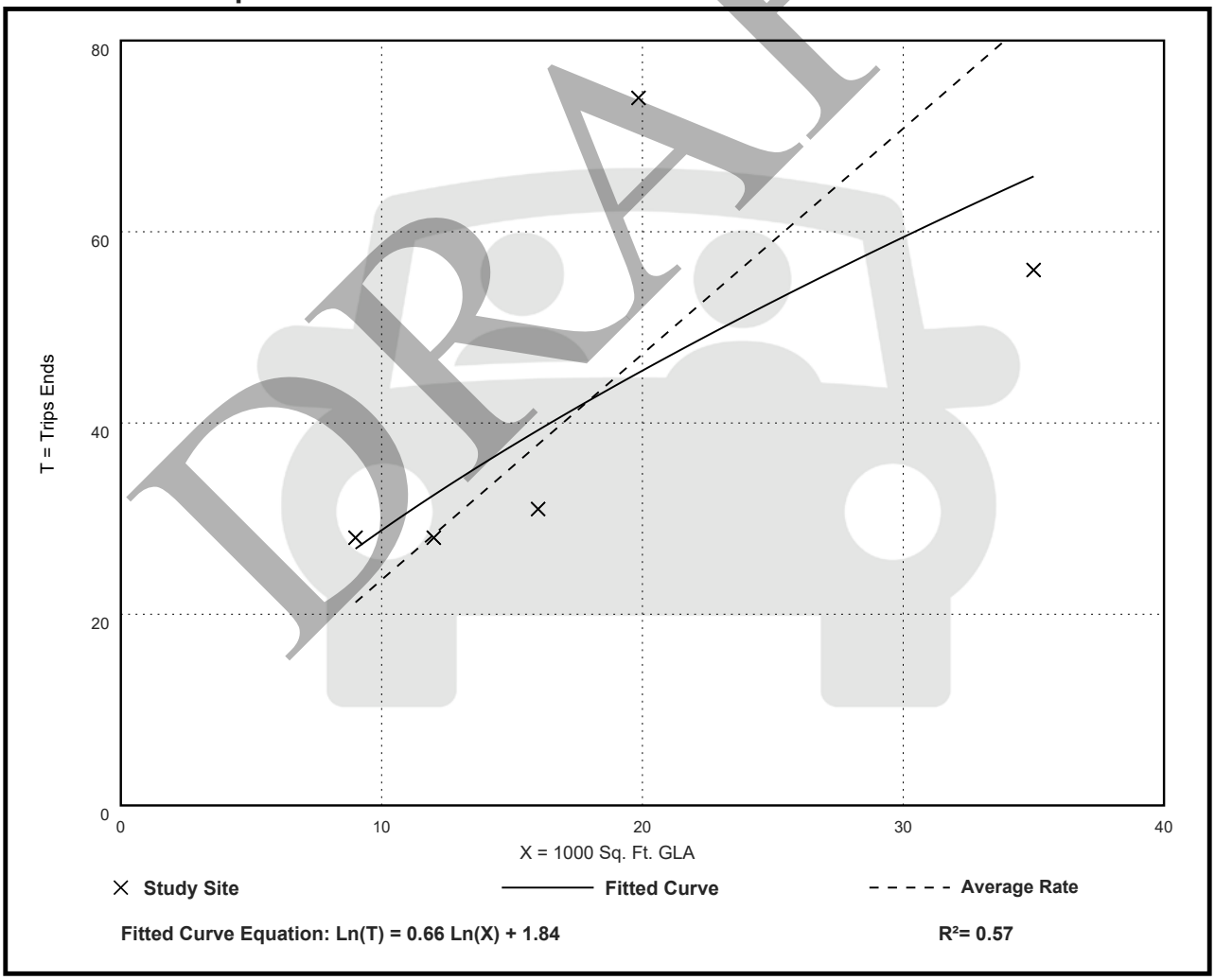
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 18
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.66 Ln(X) + 1.84

R^2= 0.57

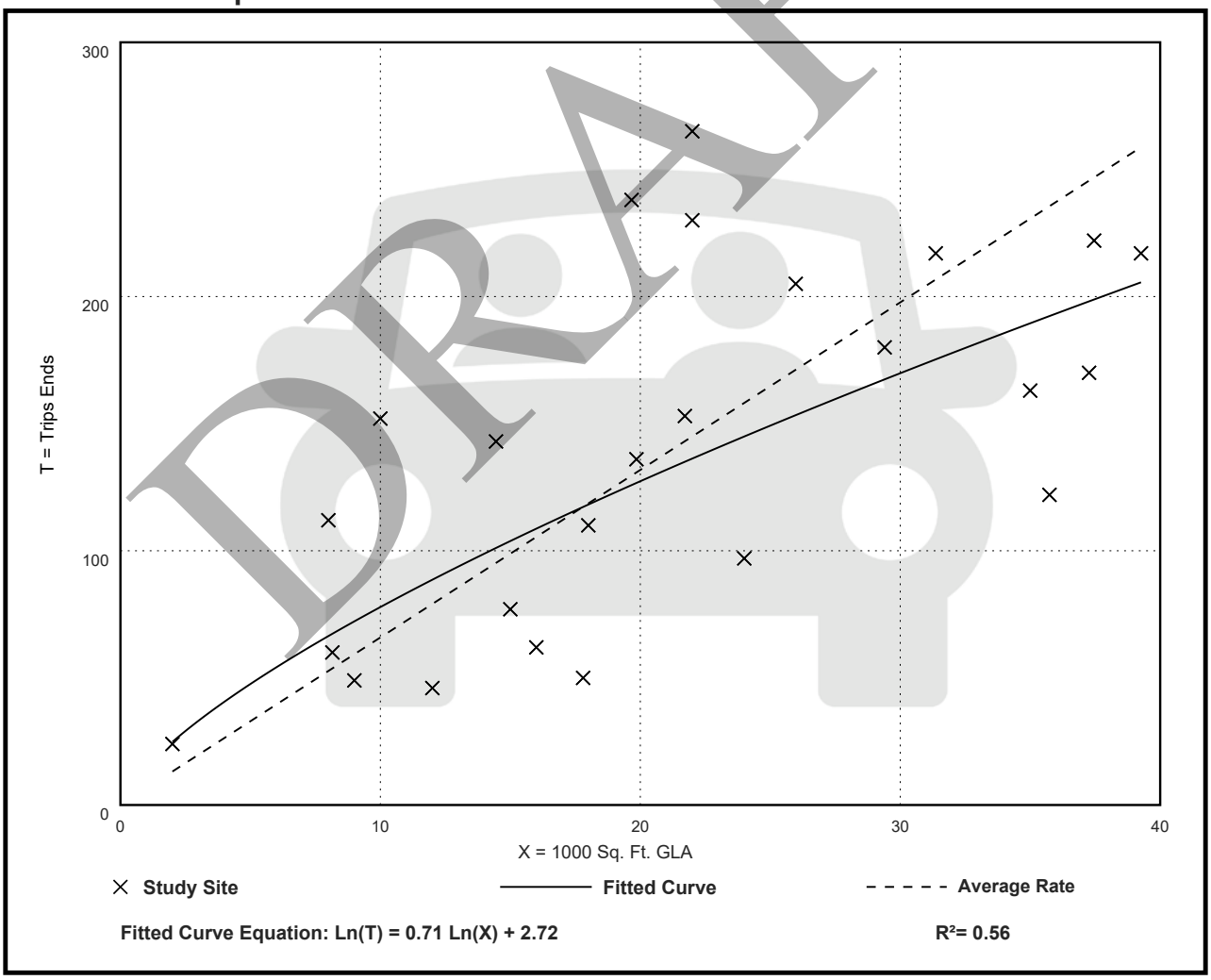
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
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: 25
Avg. 1000 Sq. Ft. GLA: 21
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.71 Ln(X) + 2.72

R^2= 0.56

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

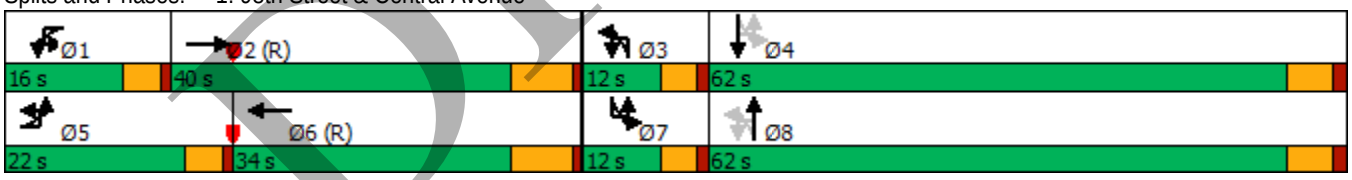
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	288	216	40	113	146	129	32	1419	258	63	426	129
Future Volume (vph)	288	216	40	113	146	129	32	1419	258	63	426	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		0	165		0	220		215	85		75
Storage Lanes	2		0	2		0	1		1	1		1
Taper Length (ft)	125			135			180			185		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.976			0.930				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3388	0	3303	3212	0	1703	3762	1553	1656	3539	1524
Flt Permitted	0.950			0.950			0.472			0.066		
Satd. Flow (perm)	3400	3388	0	3303	3212	0	846	3762	1553	115	3539	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			123				197			197
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		965			340			559			964	
Travel Time (s)		14.6			5.2			8.5			14.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	6%	5%	4%	6%	1%	4%	9%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	300	267	0	118	286	0	33	1478	269	66	444	134
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8		Free	4		Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	9.5	25.0		9.5	25.0		9.5	24.0		9.5	25.0	
Total Split (s)	22.0	40.0		16.0	34.0		12.0	62.0		12.0	62.0	
Total Split (%)	16.9%	30.8%		12.3%	26.2%		9.2%	47.7%		9.2%	47.7%	
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	7.0		4.5	7.0		4.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Act Effct Green (s)	15.8	34.8		9.7	28.7		65.5	58.5	130.0	67.0	61.0	130.0
Actuated g/C Ratio	0.12	0.27		0.07	0.22		0.50	0.45	1.00	0.52	0.47	1.00

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.73	0.29		0.48	0.36		0.07	0.87	0.17	0.46	0.27	0.09
Control Delay	65.7	36.9		64.0	25.7		14.9	40.1	0.2	27.7	22.3	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.7	36.9		64.0	25.7		14.9	40.1	0.2	27.7	22.3	0.1
LOS	E	D		E	C		B	D	A	C	C	A
Approach Delay		52.1			36.9			33.6			18.2	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)	126	88		50	60		13	605	0	26	124	0
Queue Length 95th (ft)	175	130		81	104		30	#723	0	57	166	0
Internal Link Dist (ft)		885			260			479			884	
Turn Bay Length (ft)	165			165			220		215	85		75
Base Capacity (vph)	457	918		292	805		478	1692	1553	148	1661	1524
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.29		0.40	0.36		0.07	0.87	0.17	0.45	0.27	0.09

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 79.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue



Intersection	
Int Delay, s/veh	2.2

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	7	1	523	23	21	338	0	73	0	78	15	3	1
Future Vol, veh/h	7	1	523	23	21	338	0	73	0	78	15	3	1
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	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	5	7	0	2	0	4	7	0	0
Mvmt Flow	8	1	575	25	23	371	0	80	0	86	16	3	1

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	371	371	0	0	600	0	0	839	1023	300	723	1035	186
Stage 1	-	-	-	-	-	-	-	606	606	-	417	417	-
Stage 2	-	-	-	-	-	-	-	233	417	-	306	618	-
Critical Hdwy	6.4	4.1	-	-	4.2	-	-	7.54	6.5	6.98	7.64	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.25	-	-	3.52	4	3.34	3.57	4	3.3
Pot Cap-1 Maneuver	845	1199	-	-	1228	-	-	259	238	*884	*305	234	831
Stage 1	-	-	-	-	-	-	-	749	679	-	*571	595	-
Stage 2	-	-	-	-	-	-	-	749	595	-	*827	670	-
Platoon blocked, %			-	-	1	-	-			1			
Mov Cap-1 Maneuver	876	876	-	-	1228	-	-	250	230	*884	*268	226	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	447	386	-	*406	381	-
Stage 1	-	-	-	-	-	-	-	738	669	-	*562	584	-
Stage 2	-	-	-	-	-	-	-	730	584	-	*736	660	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	12.1	14.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	447	-	884	876	-	-	1228	-	-	413
HCM Lane V/C Ratio	0.179	-	0.097	0.001	-	-	0.019	-	-	0.051
HCM Control Delay (s)	14.8	0	9.5	9.1	0.1	-	8	-	-	14.2
HCM Lane LOS	B	A	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	-	0.3	0	-	-	0.1	-	-	0.2

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

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	193	210	74	2	268	268	154	1	41	797	187	105
Future Volume (vph)	193	210	74	2	268	268	154	1	41	797	187	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	165		0		165		0		220		215	85
Storage Lanes	2		0		2		0		1		1	1
Taper Length (ft)	125				135				180			185
Lane Util. Factor	0.97	0.95	0.95	0.95	0.97	0.95	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor												
Frt		0.961				0.945					0.850	
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	3433	3327	0	0	3434	3312	0	0	1574	3725	1568	1770
Flt Permitted	0.950				0.950				0.102			0.188
Satd. Flow (perm)	3433	3327	0	0	3434	3312	0	0	169	3725	1568	350
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		43				99					188	
Link Speed (mph)		45				45				45		
Link Distance (ft)		965				340				559		
Travel Time (s)		14.6				5.2				8.5		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	5%	0%	2%	3%	3%	0%	15%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	197	290	0	0	275	430	0	0	43	813	191	107
Turn Type	Prot	NA		Prot	Prot	NA		pm+pt	pm+pt	NA	Free	pm+pt
Protected Phases	5	2		1	1	6		3	3	8		7
Permitted Phases								8	8		Free	4
Detector Phase	5	2		1	1	6		3	3	8		7
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	3.0	15.0		3.0	3.0	15.0		3.0
Minimum Split (s)	9.5	25.0		9.5	9.5	25.0		9.5	9.5	24.0		9.5
Total Split (s)	20.0	34.0		20.0	20.0	34.0		13.0	13.0	43.0		13.0
Total Split (%)	18.2%	30.9%		18.2%	18.2%	30.9%		11.8%	11.8%	39.1%		11.8%
Yellow Time (s)	3.5	6.0		3.5	3.5	6.0		3.5	3.5	4.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.5		1.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Lost Time (s)	4.5	7.0			4.5	7.0			4.5	6.0		4.5
Lead/Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		Yes
Recall Mode	None	C-Max		None	None	C-Max		None	None	Max		None
Act Effct Green (s)	11.6	29.0			13.5	30.9			46.0	37.5	110.0	49.2
Actuated g/C Ratio	0.11	0.26			0.12	0.28			0.42	0.34	1.00	0.45

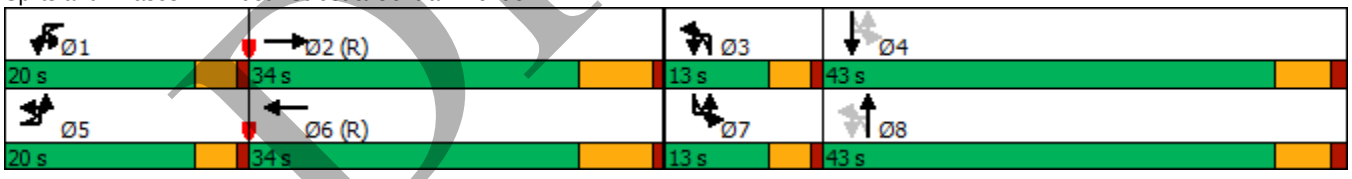
Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1204	188
Future Volume (vph)	1204	188
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		75
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3574	1524
Flt Permitted		
Satd. Flow (perm)	3574	1524
Right Turn on Red		Yes
Satd. Flow (RTOR)		188
Link Speed (mph)	45	
Link Distance (ft)	964	
Travel Time (s)	14.6	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.98	0.98
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	6%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1229	192
Turn Type	NA	Free
Protected Phases	4	
Permitted Phases		Free
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	25.0	
Total Split (s)	43.0	
Total Split (%)	39.1%	
Yellow Time (s)	4.5	
All-Red Time (s)	1.5	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	Max	
Act Effct Green (s)	42.6	110.0
Actuated g/C Ratio	0.39	1.00

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
v/c Ratio	0.54	0.32			0.65	0.43			0.27	0.64	0.12	0.41
Control Delay	52.1	29.2			53.4	26.5			20.5	33.5	0.2	21.7
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0	0.0	0.0
Total Delay	52.1	29.2			53.4	26.5			20.5	33.5	0.2	21.7
LOS	D	C			D	C			C	C	A	C
Approach Delay		38.5				37.0				26.9		
Approach LOS		D				D				C		
Queue Length 50th (ft)	69	73			96	98			16	254	0	42
Queue Length 95th (ft)	103	114			138	153			37	322	0	75
Internal Link Dist (ft)		885				260				479		
Turn Bay Length (ft)	165				165				220		215	85
Base Capacity (vph)	483	907			483	1001			181	1268	1568	266
Starvation Cap Reductn	0	0			0	0			0	0	0	0
Spillback Cap Reductn	0	0			0	0			0	0	0	0
Storage Cap Reductn	0	0			0	0			0	0	0	0
Reduced v/c Ratio	0.41	0.32			0.57	0.43			0.24	0.64	0.12	0.40

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 33.7 Intersection LOS: C
Intersection Capacity Utilization 76.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue



Lane Group	SBT	SBR
v/c Ratio	0.89	0.13
Control Delay	42.0	0.2
Queue Delay	0.0	0.0
Total Delay	42.0	0.2
LOS	D	A
Approach Delay	35.3	
Approach LOS	D	
Queue Length 50th (ft)	449	0
Queue Length 95th (ft)	#621	0
Internal Link Dist (ft)	884	
Turn Bay Length (ft)		75
Base Capacity (vph)	1384	1524
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.89	0.13

Intersection Summary

Intersection	
Int Delay, s/veh	1.8

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	7	4	457	45	1	41	565	8	19	0	37	49	6	2
Future Vol, veh/h	7	4	457	45	1	41	565	8	19	0	37	49	6	2
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	-	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	7	4	481	47	1	43	595	8	20	0	39	52	6	2

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	603	603	0	0	528	528	0	0	916	1218	264	950	1237	302
Stage 1	-	-	-	-	-	-	-	-	527	527	-	687	687	-
Stage 2	-	-	-	-	-	-	-	-	389	691	-	263	550	-
Critical Hdwy	6.4	4.1	-	-	6.4	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.5	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	603	984	-	-	1112	1309	-	-	230	182	*915	*218	177	700
Stage 1	-	-	-	-	-	-	-	-	800	715	-	*408	450	-
Stage 2	-	-	-	-	-	-	-	-	612	449	-	*863	696	-
Platoon blocked, %			-	-	1	1	-	-			1			
Mov Cap-1 Maneuver	700	700	-	-	1302	1302	-	-	216	172	*915	*200	167	700
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	395	312	-	*316	308	-
Stage 1	-	-	-	-	-	-	-	-	781	697	-	*398	435	-
Stage 2	-	-	-	-	-	-	-	-	581	434	-	*807	679	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.5	11	18.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	395	-	915	700	-	-	1302	-	-	321
HCM Lane V/C Ratio	0.051	-	0.043	0.006	-	-	0.034	-	-	0.187
HCM Control Delay (s)	14.6	0	9.1	10.2	0.2	-	7.9	-	-	18.8
HCM Lane LOS	B	A	A	B	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	0.1	0	-	-	0.1	-	-	0.7

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

Capacity Analysis Summary Sheets

Year 2024 No-Build Weekday Morning Peak Hour

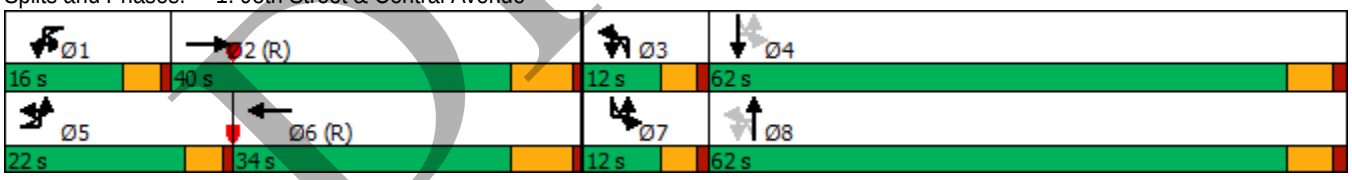
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	312	225	42	118	152	178	33	1500	268	78	451	129
Future Volume (vph)	312	225	42	118	152	178	33	1500	268	78	451	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		0	165		0	220		215	85		75
Storage Lanes	2		0	2		0	1		1	1		1
Taper Length (ft)	125			135			180			185		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.976			0.919				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3388	0	3303	3176	0	1703	3762	1553	1656	3539	1524
Flt Permitted	0.950			0.950			0.456			0.066		
Satd. Flow (perm)	3400	3388	0	3303	3176	0	817	3762	1553	115	3539	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			119				197			197
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		965			340			559			964	
Travel Time (s)		14.6			5.2			8.5			14.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	6%	5%	4%	6%	1%	4%	9%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	325	278	0	123	343	0	34	1563	279	81	470	134
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8		Free	4		Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	9.5	25.0		9.5	25.0		9.5	24.0		9.5	25.0	
Total Split (s)	22.0	40.0		16.0	34.0		12.0	62.0		12.0	62.0	
Total Split (%)	16.9%	30.8%		12.3%	26.2%		9.2%	47.7%		9.2%	47.7%	
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	7.0		4.5	7.0		4.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Act Effct Green (s)	16.3	34.6		9.9	28.2		65.4	58.4	130.0	67.0	61.0	130.0
Actuated g/C Ratio	0.13	0.27		0.08	0.22		0.50	0.45	1.00	0.52	0.47	1.00

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.76	0.30		0.49	0.44		0.07	0.93	0.18	0.56	0.28	0.09
Control Delay	67.4	37.2		64.1	30.5		14.9	44.8	0.3	34.4	22.6	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	37.2		64.1	30.5		14.9	44.8	0.3	34.4	22.6	0.1
LOS	E	D		E	C		B	D	A	C	C	A
Approach Delay		53.5			39.4			37.6			19.6	
Approach LOS		D			D			D			B	
Queue Length 50th (ft)	137	93		52	86		13	664	0	32	133	0
Queue Length 95th (ft)	189	135		84	135		30	#833	0	76	176	0
Internal Link Dist (ft)		885			260			479			884	
Turn Bay Length (ft)	165			165			220		215	85		75
Base Capacity (vph)	457	913		292	782		465	1689	1553	148	1660	1524
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.30		0.42	0.44		0.07	0.93	0.18	0.55	0.28	0.09

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 37.1 Intersection LOS: D
Intersection Capacity Utilization 83.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue



Intersection	
Int Delay, s/veh	2.2

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	7	1	556	24	22	396	0	76	0	81	16	3	1
Future Vol, veh/h	7	1	556	24	22	396	0	76	0	81	16	3	1
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	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	5	7	0	2	0	4	7	0	0
Mvmt Flow	8	1	611	26	24	435	0	84	0	89	18	3	1

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	435	435	0	0	637	0	0	909	1125	319	807	1138	218
Stage 1	-	-	-	-	-	-	-	642	642	-	483	483	-
Stage 2	-	-	-	-	-	-	-	267	483	-	324	655	-
Critical Hdwy	6.4	4.1	-	-	4.2	-	-	7.54	6.5	6.98	7.64	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.25	-	-	3.52	4	3.34	3.57	4	3.3
Pot Cap-1 Maneuver	770	1135	-	-	1231	-	-	230	207	*861	*264	203	792
Stage 1	-	-	-	-	-	-	-	763	684	-	*521	556	-
Stage 2	-	-	-	-	-	-	-	715	556	-	*805	673	-
Platoon blocked, %			-	-	1	-	-			1			
Mov Cap-1 Maneuver	801	801	-	-	1231	-	-	222	200	*861	*230	196	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	428	362	-	*369	357	-
Stage 1	-	-	-	-	-	-	-	750	672	-	*512	545	-
Stage 2	-	-	-	-	-	-	-	696	545	-	*710	662	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	12.5	15.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	428	-	861	801	-	-	1231	-	-	377
HCM Lane V/C Ratio	0.195	-	0.103	0.001	-	-	0.02	-	-	0.058
HCM Control Delay (s)	15.4	0	9.7	9.5	0.2	-	8	-	-	15.1
HCM Lane LOS	C	A	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.7	-	0.3	0	-	-	0.1	-	-	0.2

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

Capacity Analysis Summary Sheets

Year 2024 No-Build Weekday Evening Peak Hour

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	205	218	77	2	279	279	176	1	43	837	194	153
Future Volume (vph)	205	218	77	2	279	279	176	1	43	837	194	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	165		0		165		0		220		215	85
Storage Lanes	2		0		2		0		1		1	1
Taper Length (ft)	125				135				180			185
Lane Util. Factor	0.97	0.95	0.95	0.95	0.97	0.95	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor												
Frt		0.961				0.942					0.850	
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	3433	3327	0	0	3434	3302	0	0	1574	3725	1568	1770
Flt Permitted	0.950				0.950				0.105			0.165
Satd. Flow (perm)	3433	3327	0	0	3434	3302	0	0	174	3725	1568	307
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		43				120					188	
Link Speed (mph)		45				45				45		
Link Distance (ft)		965				340				559		
Travel Time (s)		14.6				5.2				8.5		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	5%	0%	2%	3%	3%	0%	15%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	209	301	0	0	287	465	0	0	45	854	198	156
Turn Type	Prot	NA		Prot	Prot	NA		pm+pt	pm+pt	NA	Free	pm+pt
Protected Phases	5	2		1	1	6		3	3	8		7
Permitted Phases								8	8		Free	4
Detector Phase	5	2		1	1	6		3	3	8		7
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	3.0	15.0		3.0	3.0	15.0		3.0
Minimum Split (s)	9.5	25.0		9.5	9.5	25.0		9.5	9.5	24.0		9.5
Total Split (s)	20.0	34.0		20.0	20.0	34.0		13.0	13.0	43.0		13.0
Total Split (%)	18.2%	30.9%		18.2%	18.2%	30.9%		11.8%	11.8%	39.1%		11.8%
Yellow Time (s)	3.5	6.0		3.5	3.5	6.0		3.5	3.5	4.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.5		1.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Lost Time (s)	4.5	7.0			4.5	7.0			4.5	6.0		4.5
Lead/Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		Yes
Recall Mode	None	C-Max		None	None	C-Max		None	None	Max		None
Act Effct Green (s)	12.0	28.8			13.7	30.5			45.8	37.2	110.0	48.7
Actuated g/C Ratio	0.11	0.26			0.12	0.28			0.42	0.34	1.00	0.44

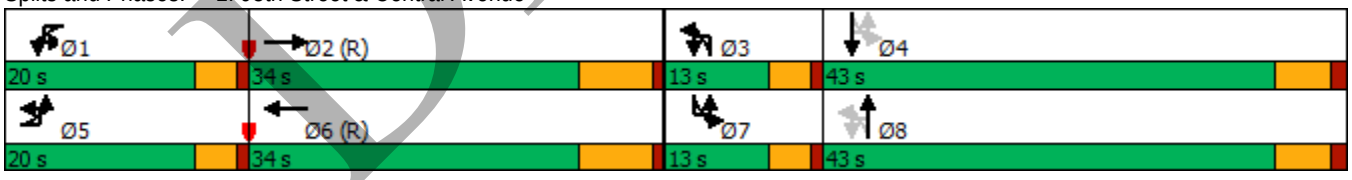
Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1276	208
Future Volume (vph)	1276	208
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		75
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3574	1524
Flt Permitted		
Satd. Flow (perm)	3574	1524
Right Turn on Red		Yes
Satd. Flow (RTOR)		188
Link Speed (mph)	45	
Link Distance (ft)	964	
Travel Time (s)	14.6	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.98	0.98
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	6%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1302	212
Turn Type	NA	Free
Protected Phases	4	
Permitted Phases		Free
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	25.0	
Total Split (s)	43.0	
Total Split (%)	39.1%	
Yellow Time (s)	4.5	
All-Red Time (s)	1.5	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	Max	
Act Effct Green (s)	40.4	110.0
Actuated g/C Ratio	0.37	1.00

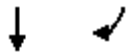
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
v/c Ratio	0.56	0.33			0.67	0.46			0.28	0.68	0.13	0.63
Control Delay	52.0	29.6			53.9	26.2			20.7	34.6	0.2	30.0
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0	0.0	0.0
Total Delay	52.0	29.6			53.9	26.2			20.7	34.6	0.2	30.0
LOS	D	C			D	C			C	C	A	C
Approach Delay		38.8				36.8				27.8		
Approach LOS		D				D				C		
Queue Length 50th (ft)	73	77			100	104			17	271	0	62
Queue Length 95th (ft)	108	119			143	162			38	342	0	#107
Internal Link Dist (ft)		885				260				479		
Turn Bay Length (ft)	165				165				220		215	85
Base Capacity (vph)	483	901			483	1002			182	1258	1568	248
Starvation Cap Reductn	0	0			0	0			0	0	0	0
Spillback Cap Reductn	0	0			0	0			0	0	0	0
Storage Cap Reductn	0	0			0	0			0	0	0	0
Reduced v/c Ratio	0.43	0.33			0.59	0.46			0.25	0.68	0.13	0.63

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 39.7 Intersection LOS: D
Intersection Capacity Utilization 78.3% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue





Lane Group	SBT	SBR
v/c Ratio	0.99	0.14
Control Delay	59.1	0.2
Queue Delay	0.0	0.0
Total Delay	59.1	0.2
LOS	E	A
Approach Delay	48.9	
Approach LOS	D	
Queue Length 50th (ft)	~526	0
Queue Length 95th (ft)	#680	0
Internal Link Dist (ft)	884	
Turn Bay Length (ft)		75
Base Capacity (vph)	1312	1524
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.99	0.14

Intersection Summary

Intersection	
Int Delay, s/veh	1.8

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	7	4	519	47	1	43	604	8	20	0	38	51	6	2
Future Vol, veh/h	7	4	519	47	1	43	604	8	20	0	38	51	6	2
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	-	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	7	4	546	49	1	45	636	8	21	0	40	54	6	2

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	644	644	0	0	596	595	0	0	1006	1329	298	1027	1349	322
Stage 1	-	-	-	-	-	-	-	-	593	593	-	732	732	-
Stage 2	-	-	-	-	-	-	-	-	413	736	-	295	617	-
Critical Hdwy	6.4	4.1	-	-	6.4	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.5	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	568	951	-	-	1092	1280	-	-	198	156	*887	*191	152	680
Stage 1	-	-	-	-	-	-	-	-	788	701	-	*383	430	-
Stage 2	-	-	-	-	-	-	-	-	592	428	-	*837	681	-
Platoon blocked, %			-	-	1	1	-	-			1			
Mov Cap-1 Maneuver	664	664	-	-	1273	1273	-	-	185	146	*887	*174	143	680
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	373	291	-	*293	288	-
Stage 1	-	-	-	-	-	-	-	-	767	682	-	*373	415	-
Stage 2	-	-	-	-	-	-	-	-	560	413	-	*778	663	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.5	11.3	20.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	-	887	664	-	-	1273	-	-	298
HCM Lane V/C Ratio	0.056	-	0.045	0.006	-	-	0.036	-	-	0.208
HCM Control Delay (s)	15.2	0	9.3	10.5	0.3	-	7.9	-	-	20.2
HCM Lane LOS	C	A	A	B	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	0.1	0	-	-	0.1	-	-	0.8

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

Capacity Analysis Summary Sheets

Year 2034 No-Build Weekday Morning Peak Hour

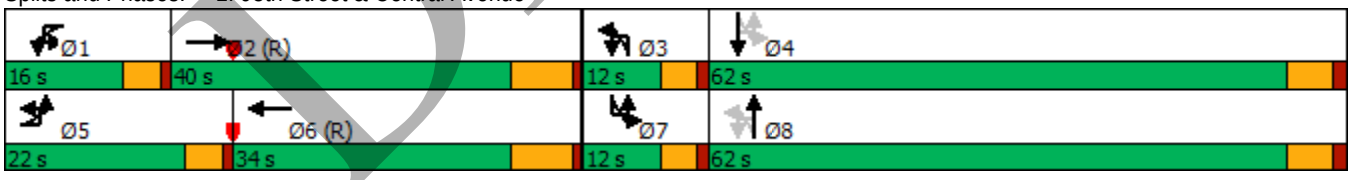
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	456	333	62	174	225	243	49	2209	397	109	664	203
Future Volume (vph)	456	333	62	174	225	243	49	2209	397	109	664	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		0	165		0	220		215	85		75
Storage Lanes	2		0	2		0	1		1	1		1
Taper Length (ft)	125			135			180			185		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.976			0.922				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3388	0	3303	3186	0	1703	3762	1553	1656	3539	1524
Flt Permitted	0.950			0.950			0.317			0.068		
Satd. Flow (perm)	3400	3388	0	3303	3186	0	568	3762	1553	119	3539	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			109				197			197
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		965			340			559			964	
Travel Time (s)		14.6			5.2			8.5			14.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	6%	5%	4%	6%	1%	4%	9%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	475	412	0	181	487	0	51	2301	414	114	692	211
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Free	pm+pt	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8		Free	4		Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	9.5	25.0		9.5	25.0		9.5	24.0		9.5	25.0	
Total Split (s)	22.0	40.0		16.0	34.0		12.0	62.0		12.0	62.0	
Total Split (%)	16.9%	30.8%		12.3%	26.2%		9.2%	47.7%		9.2%	47.7%	
Yellow Time (s)	3.5	6.0		3.5	6.0		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.5		1.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	7.0		4.5	7.0		4.5	6.0		4.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Act Effct Green (s)	17.5	33.6		10.9	27.0		64.4	56.0	130.0	66.1	58.6	130.0
Actuated g/C Ratio	0.13	0.26		0.08	0.21		0.50	0.43	1.00	0.51	0.45	1.00

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.04	0.46		0.66	0.65		0.15	1.42	0.27	0.77	0.43	0.14
Control Delay	106.7	41.2		69.4	40.9		15.7	223.7	0.4	55.5	26.0	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.7	41.2		69.4	40.9		15.7	223.7	0.4	55.5	26.0	0.2
LOS	F	D		E	D		B	F	A	E	C	A
Approach Delay		76.3			48.6			186.4			24.0	
Approach LOS		E			D			F			C	
Queue Length 50th (ft)	~222	149		77	155		20	~1373	0	48	213	0
Queue Length 95th (ft)	#332	202		117	216		41	#1505	0	#148	268	0
Internal Link Dist (ft)		885			260			479			884	
Turn Bay Length (ft)	165			165			220		215	85		75
Base Capacity (vph)	457	887		292	748		349	1620	1553	149	1595	1524
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.46		0.62	0.65		0.15	1.42	0.27	0.77	0.43	0.14

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.42
Intersection Signal Delay: 119.9 Intersection LOS: F
Intersection Capacity Utilization 109.4% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue



Intersection	
Int Delay, s/veh	3.1

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	11	2	817	35	32	565	0	112	0	120	23	5	2
Future Vol, veh/h	11	2	817	35	32	565	0	112	0	120	23	5	2
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	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	5	7	0	2	0	4	7	0	0
Mvmt Flow	12	2	898	38	35	621	0	123	0	132	25	5	2

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	621	621	0	0	936	0	0	1328	1636	468	1168	1655	311
Stage 1	-	-	-	-	-	-	-	945	945	-	691	691	-
Stage 2	-	-	-	-	-	-	-	383	691	-	477	964	-
Critical Hdwy	6.4	4.1	-	-	4.2	-	-	7.54	6.5	6.98	7.64	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.25	-	-	3.52	4	3.34	3.57	4	3.3
Pot Cap-1 Maneuver	588	969	-	-	1093	-	-	~ 113	102	*744	*143	99	691
Stage 1	-	-	-	-	-	-	-	682	606	-	*389	449	-
Stage 2	-	-	-	-	-	-	-	611	449	-	*696	590	-
Platoon blocked, %			-	-	1	-	-			1			
Mov Cap-1 Maneuver	624	624	-	-	1093	-	-	~ 104	94	*744	*111	91	691
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	324	264	-	*245	259	-
Stage 1	-	-	-	-	-	-	-	650	578	-	*371	435	-
Stage 2	-	-	-	-	-	-	-	582	435	-	*546	562	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.5	16.6	21
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	324	-	744	624	-	-	1093	-	-	258
HCM Lane V/C Ratio	0.38	-	0.177	0.004	-	-	0.032	-	-	0.128
HCM Control Delay (s)	22.8	0	10.9	10.9	0.5	-	8.4	-	-	21
HCM Lane LOS	C	A	B	B	A	-	A	-	-	C
HCM 95th %tile Q(veh)	1.7	-	0.6	0	-	-	0.1	-	-	0.4

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

Capacity Analysis Summary Sheets

Year 2034 No-Build Weekday Evening Peak Hour

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	301	323	114	3	413	413	253	2	63	1235	288	206
Future Volume (vph)	301	323	114	3	413	413	253	2	63	1235	288	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	165		0		165		0		220		215	85
Storage Lanes	2		0		2		0		1		1	1
Taper Length (ft)	125				135				180			185
Lane Util. Factor	0.97	0.95	0.95	0.95	0.97	0.95	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor												
Frt		0.961				0.943					0.850	
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	3433	3327	0	0	3434	3305	0	0	1576	3725	1568	1770
Flt Permitted	0.950				0.950				0.106			0.100
Satd. Flow (perm)	3433	3327	0	0	3434	3305	0	0	176	3725	1568	186
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		42				113					188	
Link Speed (mph)		45				45				45		
Link Distance (ft)		965				340				559		
Travel Time (s)		14.6				5.2				8.5		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	5%	0%	2%	3%	3%	0%	15%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	307	446	0	0	424	679	0	0	66	1260	294	210
Turn Type	Prot	NA		Prot	Prot	NA		pm+pt	pm+pt	NA	Free	pm+pt
Protected Phases	5	2		1	1	6		3	3	8		7
Permitted Phases								8	8		Free	4
Detector Phase	5	2		1	1	6		3	3	8		7
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	3.0	15.0		3.0	3.0	15.0		3.0
Minimum Split (s)	9.5	25.0		9.5	9.5	25.0		9.5	9.5	24.0		9.5
Total Split (s)	20.0	34.0		20.0	20.0	34.0		13.0	13.0	43.0		13.0
Total Split (%)	18.2%	30.9%		18.2%	18.2%	30.9%		11.8%	11.8%	39.1%		11.8%
Yellow Time (s)	3.5	6.0		3.5	3.5	6.0		3.5	3.5	4.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.5		1.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Lost Time (s)	4.5	7.0			4.5	7.0			4.5	6.0		4.5
Lead/Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		Yes
Recall Mode	None	C-Max		None	None	C-Max		None	None	Max		None
Act Effct Green (s)	14.1	27.1			15.4	28.4			46.1	37.0	110.0	48.3
Actuated g/C Ratio	0.13	0.25			0.14	0.26			0.42	0.34	1.00	0.44

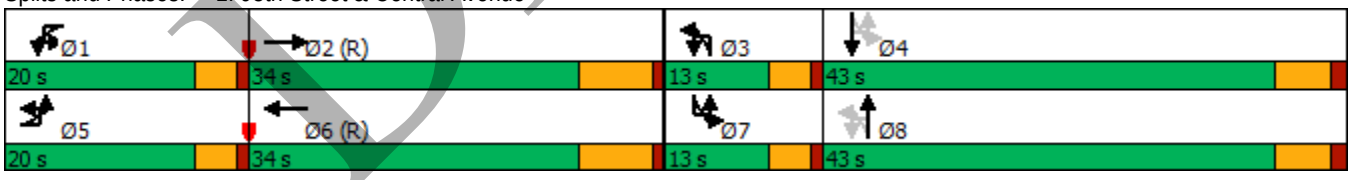
Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1878	302
Future Volume (vph)	1878	302
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		75
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3574	1524
Flt Permitted		
Satd. Flow (perm)	3574	1524
Right Turn on Red		Yes
Satd. Flow (RTOR)		188
Link Speed (mph)	45	
Link Distance (ft)	964	
Travel Time (s)	14.6	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.98	0.98
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	6%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1916	308
Turn Type	NA	Free
Protected Phases	4	
Permitted Phases		Free
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	25.0	
Total Split (s)	43.0	
Total Split (%)	39.1%	
Yellow Time (s)	4.5	
All-Red Time (s)	1.5	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	Max	
Act Effct Green (s)	40.0	110.0
Actuated g/C Ratio	0.36	1.00

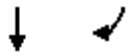
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
v/c Ratio	0.70	0.52			0.88	0.72			0.39	1.01	0.19	1.03
Control Delay	54.8	34.9			67.4	36.3			23.4	63.9	0.3	99.3
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0	0.0	0.0
Total Delay	54.8	34.9			67.4	36.3			23.4	63.9	0.3	99.3
LOS	D	C			E	D			C	E	A	F
Approach Delay		43.0				48.2				50.7		
Approach LOS		D				D				D		
Queue Length 50th (ft)	107	130			153	196			25	~470	0	~110
Queue Length 95th (ft)	153	182			#238	267			51	#626	0	#263
Internal Link Dist (ft)		885				260				479		
Turn Bay Length (ft)	165				165				220		215	85
Base Capacity (vph)	483	851			483	937			183	1252	1568	203
Starvation Cap Reductn	0	0			0	0			0	0	0	0
Spillback Cap Reductn	0	0			0	0			0	0	0	0
Storage Cap Reductn	0	0			0	0			0	0	0	0
Reduced v/c Ratio	0.64	0.52			0.88	0.72			0.36	1.01	0.19	1.03

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.47
Intersection Signal Delay: 112.1 Intersection LOS: F
Intersection Capacity Utilization 102.0% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue





Lane Group	SBT	SBR
v/c Ratio	1.47	0.20
Control Delay	247.2	0.3
Queue Delay	0.0	0.0
Total Delay	247.2	0.3
LOS	F	A
Approach Delay	203.2	
Approach LOS	F	
Queue Length 50th (ft)	~1013	0
Queue Length 95th (ft)	#1157	0
Internal Link Dist (ft)	884	
Turn Bay Length (ft)		75
Base Capacity (vph)	1299	1524
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.47	0.20

Intersection Summary

Intersection	
Int Delay, s/veh	3.5

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	11	6	748	69	2	63	886	12	29	0	57	75	9	3
Future Vol, veh/h	11	6	748	69	2	63	886	12	29	0	57	75	9	3
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	-	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	12	6	787	73	2	66	933	13	31	0	60	79	9	3

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	945	946	0	0	860	860	0	0	1467	1942	430	1506	1972	473
Stage 1	-	-	-	-	-	-	-	-	860	860	-	1076	1076	-
Stage 2	-	-	-	-	-	-	-	-	607	1082	-	430	896	-
Critical Hdwy	6.4	4.1	-	-	6.4	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.5	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	366	734	-	-	921	1111	-	-	91	66	*803	*85	63	543
Stage 1	-	-	-	-	-	-	-	-	665	603	-	*238	298	-
Stage 2	-	-	-	-	-	-	-	-	455	296	-	*758	574	-
Platoon blocked, %			-	-	1	1	-	-			1			
Mov Cap-1 Maneuver	443	443	-	-	1101	1101	-	-	78	57	*803	*~ 70	54	543
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	252	184	-	*169	182	-
Stage 1	-	-	-	-	-	-	-	-	613	555	-	*219	280	-
Stage 2	-	-	-	-	-	-	-	-	410	278	-	*646	529	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.6	13.6	46.6
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	252	-	803	443	-	-	1101	-	-	174
HCM Lane V/C Ratio	0.121	-	0.075	0.014	-	-	0.062	-	-	0.526
HCM Control Delay (s)	21.2	0	9.8	13.5	1	-	8.5	-	-	46.6
HCM Lane LOS	C	A	A	B	A	-	A	-	-	E
HCM 95th %tile Q(veh)	0.4	-	0.2	0	-	-	0.2	-	-	2.7

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

Capacity Analysis Summary Sheets

Year 2024 Total Projected Weekday Morning Peak Hour

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	312	232	42	7	126	158	178	33	1510	268	87	451
Future Volume (vph)	312	232	42	7	126	158	178	33	1510	268	87	451
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	165		0		165		0	220		215	85	
Storage Lanes	2		0		2		0	1		1	1	
Taper Length (ft)	125				135			180			185	
Lane Util. Factor	0.97	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor												
Frt		0.977				0.921				0.850		
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	3400	3391	0	0	3313	3183	0	1703	3762	1553	1656	3539
Flt Permitted	0.950				0.950			0.466			0.066	
Satd. Flow (perm)	3400	3391	0	0	3313	3183	0	835	3762	1553	115	3539
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		15				119				197		
Link Speed (mph)		45				45			45			45
Link Distance (ft)		965				340			559			964
Travel Time (s)		14.6				5.2			8.5			14.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	0%	6%	5%	4%	6%	1%	4%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	325	286	0	0	138	350	0	34	1573	279	91	470
Turn Type	Prot	NA		Prot	Prot	NA		pm+pt	NA	Free	pm+pt	NA
Protected Phases	5	2		1	1	6		3	8		7	4
Permitted Phases								8		Free	4	
Detector Phase	5	2		1	1	6		3	8		7	4
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	3.0	15.0		3.0	15.0		3.0	15.0
Minimum Split (s)	9.5	25.0		9.5	9.5	25.0		9.5	24.0		9.5	25.0
Total Split (s)	22.0	40.0		16.0	16.0	34.0		12.0	62.0		12.0	62.0
Total Split (%)	16.9%	30.8%		12.3%	12.3%	26.2%		9.2%	47.7%		9.2%	47.7%
Yellow Time (s)	3.5	6.0		3.5	3.5	6.0		3.5	4.5		3.5	4.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.5		1.0	1.5
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	7.0			4.5	7.0		4.5	6.0		4.5	6.0
Lead/Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	C-Max		None	None	C-Max		None	Max		None	Max
Act Effct Green (s)	16.3	34.3			10.2	28.2		64.3	56.2	130.0	67.0	61.0
Actuated g/C Ratio	0.13	0.26			0.08	0.22		0.49	0.43	1.00	0.52	0.47

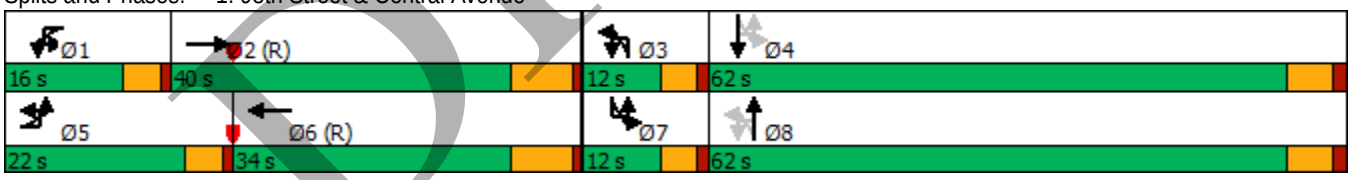
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	138
Future Volume (vph)	138
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	75
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1524
Flt Permitted	
Satd. Flow (perm)	1524
Right Turn on Red	Yes
Satd. Flow (RTOR)	197
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.96
Growth Factor	100%
Heavy Vehicles (%)	6%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	144
Turn Type	Free
Protected Phases	
Permitted Phases	Free
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Act Effct Green (s)	130.0
Actuated g/C Ratio	1.00

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
v/c Ratio	0.76	0.32			0.53	0.45		0.07	0.97	0.18	0.62	0.28
Control Delay	67.4	37.8			65.8	30.6		14.9	52.2	0.3	40.1	22.6
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	37.8			65.8	30.6		14.9	52.2	0.3	40.1	22.6
LOS	E	D			E	C		B	D	A	D	C
Approach Delay		53.5				40.6			43.8			20.2
Approach LOS		D				D			D			C
Queue Length 50th (ft)	137	97			58	87		13	672	0	37	133
Queue Length 95th (ft)	189	140			93	135		30	#842	0	#101	176
Internal Link Dist (ft)		885				260			479			884
Turn Bay Length (ft)	165				165			220		215	85	
Base Capacity (vph)	457	905			293	784		468	1625	1553	148	1660
Starvation Cap Reductn	0	0			0	0		0	0	0	0	0
Spillback Cap Reductn	0	0			0	0		0	0	0	0	0
Storage Cap Reductn	0	0			0	0		0	0	0	0	0
Reduced v/c Ratio	0.71	0.32			0.47	0.45		0.07	0.97	0.18	0.61	0.28

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 40.5 Intersection LOS: D
Intersection Capacity Utilization 84.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue



Lane Group	SBR
v/c Ratio	0.09
Control Delay	0.1
Queue Delay	0.0
Total Delay	0.1
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	
Turn Bay Length (ft)	75
Base Capacity (vph)	1524
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.09

Intersection Summary

Intersection	
Int Delay, s/veh	2.5

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	21	1	571	24	22	403	0	76	0	81	16	3	1
Future Vol, veh/h	21	1	571	24	22	403	0	76	0	81	16	3	1
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	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	5	7	0	2	0	4	7	0	0
Mvmt Flow	23	1	627	26	24	443	0	84	0	89	18	3	1

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	443	443	0	0	653	0	0	959	1179	327	853	1192	222
Stage 1	-	-	-	-	-	-	-	688	688	-	491	491	-
Stage 2	-	-	-	-	-	-	-	271	491	-	362	701	-
Critical Hdwy	6.4	4.1	-	-	4.2	-	-	7.54	6.5	6.98	7.64	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.25	-	-	3.52	4	3.34	3.57	4	3.3
Pot Cap-1 Maneuver	761	1128	-	-	1209	-	-	211	192	*861	*244	189	788
Stage 1	-	-	-	-	-	-	-	707	647	-	*515	552	-
Stage 2	-	-	-	-	-	-	-	712	552	-	*805	637	-
Platoon blocked, %			-	-	1	-	-			1			
Mov Cap-1 Maneuver	771	771	-	-	1209	-	-	198	179	*861	*207	176	788
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	396	337	-	*348	336	-
Stage 1	-	-	-	-	-	-	-	672	615	-	*490	541	-
Stage 2	-	-	-	-	-	-	-	693	541	-	*687	606	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.4	13	15.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	396	-	861	771	-	-	1209	-	-	356
HCM Lane V/C Ratio	0.211	-	0.103	0.001	-	-	0.02	-	-	0.062
HCM Control Delay (s)	16.5	0	9.7	9.8	0.5	-	8	-	-	15.8
HCM Lane LOS	C	A	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.8	-	0.3	0	-	-	0.1	-	-	0.2

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	552	41	0	470	0	47
Future Vol, veh/h	552	41	0	470	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	0	0	7	0	0
Mvmt Flow	581	43	0	495	0	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	312
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	690
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	690
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	690	-	-	-
HCM Lane V/C Ratio	0.072	-	-	-
HCM Control Delay (s)	10.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	67	1744	80	0	618
Future Vol, veh/h	0	67	1744	80	0	618
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	71	1836	84	0	651

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	960	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	261	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	261	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	261	-
HCM Lane V/C Ratio	-	-	0.27	-
HCM Control Delay (s)	-	-	23.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.1	-

Capacity Analysis Summary Sheets

Year 2024 Total Projected Weekday Evening Peak Hour

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	205	224	77	8	295	285	176	1	43	846	194	170
Future Volume (vph)	205	224	77	8	295	285	176	1	43	846	194	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	165		0		165		0		220		215	85
Storage Lanes	2		0		2		0		1		1	1
Taper Length (ft)	125				135				180			185
Lane Util. Factor	0.97	0.95	0.95	0.95	0.97	0.95	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor												
Frt		0.962				0.943					0.850	
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	3433	3331	0	0	3435	3305	0	0	1574	3725	1568	1770
Flt Permitted	0.950				0.950				0.106			0.159
Satd. Flow (perm)	3433	3331	0	0	3435	3305	0	0	176	3725	1568	296
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		41				115					188	
Link Speed (mph)		45				45				45		
Link Distance (ft)		965				340				559		
Travel Time (s)		14.6				5.2				8.5		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	5%	0%	2%	3%	3%	0%	15%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	209	308	0	0	309	471	0	0	45	863	198	173
Turn Type	Prot	NA		Prot	Prot	NA		pm+pt	pm+pt	NA	Free	pm+pt
Protected Phases	5	2		1	1	6		3	3	8		7
Permitted Phases								8	8		Free	4
Detector Phase	5	2		1	1	6		3	3	8		7
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	3.0	15.0		3.0	3.0	15.0		3.0
Minimum Split (s)	9.5	25.0		9.5	9.5	25.0		9.5	9.5	24.0		9.5
Total Split (s)	20.0	34.0		20.0	20.0	34.0		13.0	13.0	43.0		13.0
Total Split (%)	18.2%	30.9%		18.2%	18.2%	30.9%		11.8%	11.8%	39.1%		11.8%
Yellow Time (s)	3.5	6.0		3.5	3.5	6.0		3.5	3.5	4.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.5		1.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Lost Time (s)	4.5	7.0			4.5	7.0			4.5	6.0		4.5
Lead/Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		Yes
Recall Mode	None	C-Max		None	None	C-Max		None	None	Max		None
Act Effct Green (s)	12.0	28.4			14.1	30.5			45.6	37.0	110.0	48.7
Actuated g/C Ratio	0.11	0.26			0.13	0.28			0.41	0.34	1.00	0.44

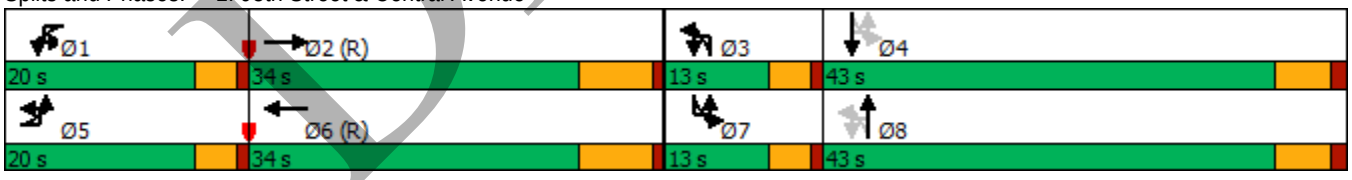
Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1276	208
Future Volume (vph)	1276	208
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		75
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3574	1524
Flt Permitted		
Satd. Flow (perm)	3574	1524
Right Turn on Red		Yes
Satd. Flow (RTOR)		188
Link Speed (mph)	45	
Link Distance (ft)	964	
Travel Time (s)	14.6	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.98	0.98
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	6%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1302	212
Turn Type	NA	Free
Protected Phases	4	
Permitted Phases		Free
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	25.0	
Total Split (s)	43.0	
Total Split (%)	39.1%	
Yellow Time (s)	4.5	
All-Red Time (s)	1.5	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	Max	
Act Effct Green (s)	40.4	110.0
Actuated g/C Ratio	0.37	1.00

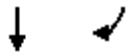
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
v/c Ratio	0.56	0.35			0.70	0.47			0.28	0.69	0.13	0.71
Control Delay	52.0	30.3			55.0	27.0			20.6	35.0	0.2	35.3
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0	0.0	0.0
Total Delay	52.0	30.3			55.0	27.0			20.6	35.0	0.2	35.3
LOS	D	C			E	C			C	C	A	D
Approach Delay		39.1				38.1				28.2		
Approach LOS		D				D				C		
Queue Length 50th (ft)	73	81			108	108			17	275	0	70
Queue Length 95th (ft)	108	123			155	165			38	346	0	#137
Internal Link Dist (ft)		885				260				479		
Turn Bay Length (ft)	165				165				220		215	85
Base Capacity (vph)	483	889			484	1000			183	1252	1568	244
Starvation Cap Reductn	0	0			0	0			0	0	0	0
Spillback Cap Reductn	0	0			0	0			0	0	0	0
Storage Cap Reductn	0	0			0	0			0	0	0	0
Reduced v/c Ratio	0.43	0.35			0.64	0.47			0.25	0.69	0.13	0.71

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 40.2 Intersection LOS: D
Intersection Capacity Utilization 78.9% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue





Lane Group	SBT	SBR
v/c Ratio	0.99	0.14
Control Delay	59.1	0.2
Queue Delay	0.0	0.0
Total Delay	59.1	0.2
LOS	E	A
Approach Delay	49.3	
Approach LOS	D	
Queue Length 50th (ft)	~526	0
Queue Length 95th (ft)	#680	0
Internal Link Dist (ft)	884	
Turn Bay Length (ft)		75
Base Capacity (vph)	1312	1524
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.99	0.14

Intersection Summary

Intersection	
Int Delay, s/veh	2.4

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	30	4	529	47	1	43	610	8	20	0	38	51	6	2
Future Vol, veh/h	30	4	529	47	1	43	610	8	20	0	38	51	6	2
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	-	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	32	4	557	49	1	45	642	8	21	0	40	54	6	2

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	651	650	0	0	606	606	0	0	1070	1396	303	1089	1416	325
Stage 1	-	-	-	-	-	-	-	-	654	654	-	738	738	-
Stage 2	-	-	-	-	-	-	-	-	416	742	-	351	678	-
Critical Hdwy	6.4	4.1	-	-	6.4	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.5	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	563	946	-	-	1073	1266	-	-	178	142	*887	*172	139	677
Stage 1	-	-	-	-	-	-	-	-	714	651	-	*380	427	-
Stage 2	-	-	-	-	-	-	-	-	590	425	-	*837	632	-
Platoon blocked, %			-	-	1	1	-	-			1			
Mov Cap-1 Maneuver	589	589	-	-	1259	1259	-	-	157	124	*887	*148	121	677
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	334	261	-	*266	265	-
Stage 1	-	-	-	-	-	-	-	-	647	591	-	*345	411	-
Stage 2	-	-	-	-	-	-	-	-	558	409	-	*725	574	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0.5	11.8	22.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	334	-	887	589	-	-	1259	-	-	271
HCM Lane V/C Ratio	0.063	-	0.045	0.007	-	-	0.037	-	-	0.229
HCM Control Delay (s)	16.5	0	9.3	11.5	1.1	-	8	-	-	22.2
HCM Lane LOS	C	A	A	B	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	0.1	0	-	-	0.1	-	-	0.9

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	557	40	0	662	0	44
Future Vol, veh/h	557	40	0	662	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	586	42	0	697	0	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	314
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	688
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	688
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	688	-	-	-
HCM Lane V/C Ratio	0.067	-	-	-
HCM Control Delay (s)	10.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	32	1052	36	0	1649
Future Vol, veh/h	0	32	1052	36	0	1649
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	34	1107	38	0	1736

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	573	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	468	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	468	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	468	-
HCM Lane V/C Ratio	-	-	0.072	-
HCM Control Delay (s)	-	-	13.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Capacity Analysis Summary Sheets

Year 2034 Total Projected Weekday Morning Peak Hour

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	456	340	62	7	182	231	243	49	2219	397	118	664
Future Volume (vph)	456	340	62	7	182	231	243	49	2219	397	118	664
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	165		0		165		0	220		215	85	
Storage Lanes	2		0		2		0	1		1	1	
Taper Length (ft)	125				135			180			185	
Lane Util. Factor	0.97	0.95	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor												
Frt		0.977				0.923				0.850		
Flt Protected	0.950				0.950			0.950			0.950	
Satd. Flow (prot)	3400	3391	0	0	3310	3189	0	1703	3762	1553	1656	3539
Flt Permitted	0.950				0.950			0.317			0.068	
Satd. Flow (perm)	3400	3391	0	0	3310	3189	0	568	3762	1553	119	3539
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		15				109				197		
Link Speed (mph)		45				45			45			45
Link Distance (ft)		965				340			559			964
Travel Time (s)		14.6				5.2			8.5			14.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	0%	6%	5%	4%	6%	1%	4%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	475	419	0	0	197	494	0	51	2311	414	123	692
Turn Type	Prot	NA		Prot	Prot	NA		pm+pt	NA	Free	pm+pt	NA
Protected Phases	5	2		1	1	6		3	8		7	4
Permitted Phases								8		Free	4	
Detector Phase	5	2		1	1	6		3	8		7	4
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	3.0	15.0		3.0	15.0		3.0	15.0
Minimum Split (s)	9.5	25.0		9.5	9.5	25.0		9.5	24.0		9.5	25.0
Total Split (s)	22.0	40.0		16.0	16.0	34.0		12.0	62.0		12.0	62.0
Total Split (%)	16.9%	30.8%		12.3%	12.3%	26.2%		9.2%	47.7%		9.2%	47.7%
Yellow Time (s)	3.5	6.0		3.5	3.5	6.0		3.5	4.5		3.5	4.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.5		1.0	1.5
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	7.0			4.5	7.0		4.5	6.0		4.5	6.0
Lead/Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes
Recall Mode	None	C-Max		None	None	C-Max		None	Max		None	Max
Act Effct Green (s)	17.5	33.4			11.1	27.0		64.4	56.0	130.0	66.1	58.6
Actuated g/C Ratio	0.13	0.26			0.09	0.21		0.50	0.43	1.00	0.51	0.45

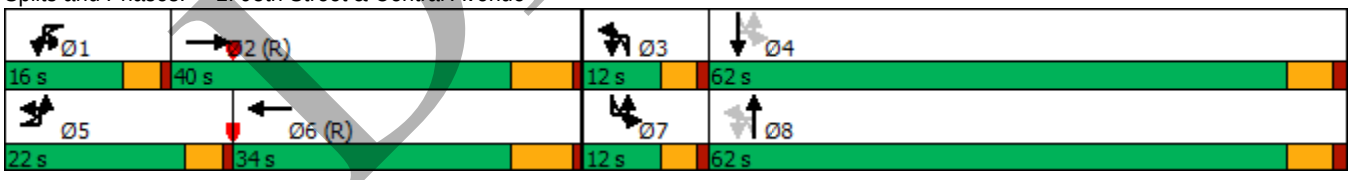
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	203
Future Volume (vph)	203
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	75
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1524
Flt Permitted	
Satd. Flow (perm)	1524
Right Turn on Red	Yes
Satd. Flow (RTOR)	197
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.96
Growth Factor	100%
Heavy Vehicles (%)	6%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	211
Turn Type	Free
Protected Phases	
Permitted Phases	Free
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Act Effct Green (s)	130.0
Actuated g/C Ratio	1.00

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
v/c Ratio	1.04	0.48			0.70	0.66		0.15	1.43	0.27	0.83	0.43
Control Delay	106.7	41.6			72.1	41.2		15.7	226.3	0.4	65.1	26.0
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	106.7	41.6			72.1	41.2		15.7	226.3	0.4	65.1	26.0
LOS	F	D			E	D		B	F	A	E	C
Approach Delay		76.2				50.0			188.8			25.4
Approach LOS		E				D			F			C
Queue Length 50th (ft)	~222	153			84	156		20	~1382	0	56	213
Queue Length 95th (ft)	#332	205			126	218		41	#1514	0	#169	268
Internal Link Dist (ft)		885				260			479			884
Turn Bay Length (ft)	165				165			220		215	85	
Base Capacity (vph)	457	882			292	748		349	1620	1553	149	1595
Starvation Cap Reductn	0	0			0	0		0	0	0	0	0
Spillback Cap Reductn	0	0			0	0		0	0	0	0	0
Storage Cap Reductn	0	0			0	0		0	0	0	0	0
Reduced v/c Ratio	1.04	0.48			0.67	0.66		0.15	1.43	0.27	0.83	0.43

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.43
Intersection Signal Delay: 121.2 Intersection LOS: F
Intersection Capacity Utilization 110.3% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue



Lane Group	SBR
v/c Ratio	0.14
Control Delay	0.2
Queue Delay	0.0
Total Delay	0.2
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	
Turn Bay Length (ft)	75
Base Capacity (vph)	1524
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.14

Intersection Summary

Intersection	
Int Delay, s/veh	3.7

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	25	2	832	35	32	572	0	112	0	120	23	5	2
Future Vol, veh/h	25	2	832	35	32	572	0	112	0	120	23	5	2
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	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	5	7	0	2	0	4	7	0	0
Mvmt Flow	27	2	914	38	35	629	0	123	0	132	25	5	2

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	629	629	0	0	952	0	0	1378	1690	476	1214	1709	315
Stage 1	-	-	-	-	-	-	-	991	991	-	699	699	-
Stage 2	-	-	-	-	-	-	-	387	699	-	515	1010	-
Critical Hdwy	6.4	4.1	-	-	4.2	-	-	7.54	6.5	6.98	7.64	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.5	-	6.64	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.25	-	-	3.52	4	3.34	3.57	4	3.3
Pot Cap-1 Maneuver	581	963	-	-	1072	-	-	~ 104	94	*744	*132	92	687
Stage 1	-	-	-	-	-	-	-	625	568	-	*385	445	-
Stage 2	-	-	-	-	-	-	-	608	445	-	*696	553	-
Platoon blocked, %			-	-	1	-	-			1			
Mov Cap-1 Maneuver	597	597	-	-	1072	-	-	~ 91	81	*744	*97	79	687
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	294	240	-	*225	238	-
Stage 1	-	-	-	-	-	-	-	557	507	-	*343	430	-
Stage 2	-	-	-	-	-	-	-	579	430	-	*511	493	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.4	18.1	22.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	294	-	744	597	-	-	1072	-	-	238
HCM Lane V/C Ratio	0.419	-	0.177	0.004	-	-	0.033	-	-	0.139
HCM Control Delay (s)	25.8	0	10.9	11.3	1.2	-	8.5	-	-	22.5
HCM Lane LOS	D	A	B	B	A	-	A	-	-	C
HCM 95th %tile Q(veh)	2	-	0.6	0	-	-	0.1	-	-	0.5

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	821	41	0	664	0	47
Future Vol, veh/h	821	41	0	664	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	0	0	7	0	0
Mvmt Flow	864	43	0	699	0	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	454
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	559
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	559
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	559	-	-	-
HCM Lane V/C Ratio	0.089	-	-	-
HCM Control Delay (s)	12.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	67	2599	80	0	908
Future Vol, veh/h	0	67	2599	80	0	908
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	71	2736	84	0	956

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1410	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	130	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	130	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	61.5	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	130	-
HCM Lane V/C Ratio	-	-	0.543	-
HCM Control Delay (s)	-	-	61.5	-
HCM Lane LOS	-	-	F	-
HCM 95th %tile Q(veh)	-	-	2.6	-

Capacity Analysis Summary Sheets

Year 2034 Total Projected Weekday Evening Peak Hour

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	301	329	114	9	429	419	253	2	63	1244	288	223
Future Volume (vph)	301	329	114	9	429	419	253	2	63	1244	288	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	165		0		165		0		220		215	85
Storage Lanes	2		0		2		0		1		1	1
Taper Length (ft)	125				135				180			185
Lane Util. Factor	0.97	0.95	0.95	0.95	0.97	0.95	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor												
Frt		0.962				0.944					0.850	
Flt Protected	0.950				0.950				0.950			0.950
Satd. Flow (prot)	3433	3331	0	0	3434	3309	0	0	1576	3725	1568	1770
Flt Permitted	0.950				0.950				0.106			0.100
Satd. Flow (perm)	3433	3331	0	0	3434	3309	0	0	176	3725	1568	186
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		41				109					188	
Link Speed (mph)		45				45				45		
Link Distance (ft)		965				340				559		
Travel Time (s)		14.6				5.2				8.5		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	5%	0%	2%	3%	3%	0%	15%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	307	452	0	0	447	686	0	0	66	1269	294	228
Turn Type	Prot	NA		Prot	Prot	NA		pm+pt	pm+pt	NA	Free	pm+pt
Protected Phases	5	2		1	1	6		3	3	8		7
Permitted Phases								8	8		Free	4
Detector Phase	5	2		1	1	6		3	3	8		7
Switch Phase												
Minimum Initial (s)	3.0	16.0		3.0	3.0	15.0		3.0	3.0	15.0		3.0
Minimum Split (s)	9.5	25.0		9.5	9.5	25.0		9.5	9.5	24.0		9.5
Total Split (s)	20.0	34.0		20.0	20.0	34.0		13.0	13.0	43.0		13.0
Total Split (%)	18.2%	30.9%		18.2%	18.2%	30.9%		11.8%	11.8%	39.1%		11.8%
Yellow Time (s)	3.5	6.0		3.5	3.5	6.0		3.5	3.5	4.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.5		1.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Lost Time (s)	4.5	7.0			4.5	7.0			4.5	6.0		4.5
Lead/Lag	Lead	Lag		Lead	Lead	Lag		Lead	Lead	Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes		Yes
Recall Mode	None	C-Max		None	None	C-Max		None	None	Max		None
Act Effct Green (s)	14.1	27.0			15.5	28.4			46.1	37.0	110.0	48.3
Actuated g/C Ratio	0.13	0.25			0.14	0.26			0.42	0.34	1.00	0.44

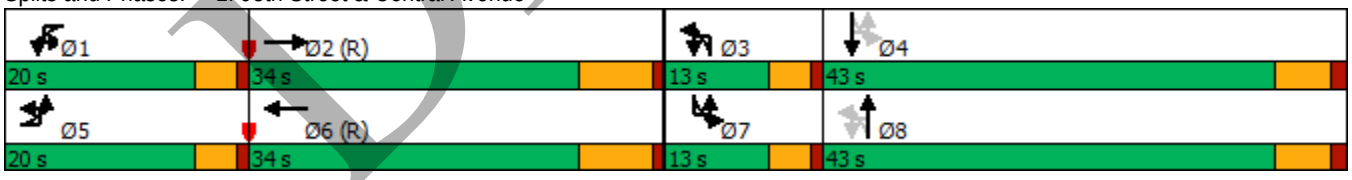
Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1878	302
Future Volume (vph)	1878	302
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		75
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3574	1524
Flt Permitted		
Satd. Flow (perm)	3574	1524
Right Turn on Red		Yes
Satd. Flow (RTOR)		188
Link Speed (mph)	45	
Link Distance (ft)	964	
Travel Time (s)	14.6	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.98	0.98
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	6%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1916	308
Turn Type	NA	Free
Protected Phases	4	
Permitted Phases		Free
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	25.0	
Total Split (s)	43.0	
Total Split (%)	39.1%	
Yellow Time (s)	4.5	
All-Red Time (s)	1.5	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Recall Mode	Max	
Act Effct Green (s)	40.0	110.0
Actuated g/C Ratio	0.36	1.00

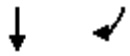
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
v/c Ratio	0.70	0.53			0.93	0.73			0.39	1.01	0.19	1.12
Control Delay	54.8	35.3			73.6	37.1			23.4	65.6	0.3	126.2
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0	0.0	0.0
Total Delay	54.8	35.3			73.6	37.1			23.4	65.6	0.3	126.2
LOS	D	D			E	D			C	E	A	F
Approach Delay		43.2				51.5				52.1		
Approach LOS		D				D				D		
Queue Length 50th (ft)	107	132			162	200			25	~480	0	~137
Queue Length 95th (ft)	153	185			#257	271			51	#633	0	#296
Internal Link Dist (ft)		885				260				479		
Turn Bay Length (ft)	165				165				220		215	85
Base Capacity (vph)	483	848			483	935			183	1252	1568	203
Starvation Cap Reductn	0	0			0	0			0	0	0	0
Spillback Cap Reductn	0	0			0	0			0	0	0	0
Storage Cap Reductn	0	0			0	0			0	0	0	0
Reduced v/c Ratio	0.64	0.53			0.93	0.73			0.36	1.01	0.19	1.12

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.47
Intersection Signal Delay: 113.6 Intersection LOS: F
Intersection Capacity Utilization 102.1% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: 98th Street & Central Avenue





Lane Group	SBT	SBR
v/c Ratio	1.47	0.20
Control Delay	247.2	0.3
Queue Delay	0.0	0.0
Total Delay	247.2	0.3
LOS	F	A
Approach Delay	204.9	
Approach LOS	F	
Queue Length 50th (ft)	~1013	0
Queue Length 95th (ft)	#1157	0
Internal Link Dist (ft)	884	
Turn Bay Length (ft)		75
Base Capacity (vph)	1299	1524
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.47	0.20

Intersection Summary

Intersection	
Int Delay, s/veh	5.2

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	34	6	758	69	2	63	892	12	29	0	57	75	9	3
Future Vol, veh/h	34	6	758	69	2	63	892	12	29	0	57	75	9	3
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	-	-	-	-	-	90	-	-	0	-	0	-	-	-
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	1	-	-	1	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	36	6	798	73	2	66	939	13	31	0	60	79	9	3

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	952	952	0	0	871	871	0	0	1529	2007	436	1565	2037	476
Stage 1	-	-	-	-	-	-	-	-	919	919	-	1082	1082	-
Stage 2	-	-	-	-	-	-	-	-	610	1088	-	483	955	-
Critical Hdwy	6.4	4.1	-	-	6.4	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.5	2.2	-	-	2.5	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	362	730	-	-	902	1097	-	-	82	60	*803	*~ 77	57	541
Stage 1	-	-	-	-	-	-	-	-	598	557	-	*236	296	-
Stage 2	-	-	-	-	-	-	-	-	453	294	-	*758	530	-
Platoon blocked, %			-	-	1	1	-	-			1			
Mov Cap-1 Maneuver	390	390	-	-	1087	1087	-	-	62	44	*803	*~ 57	42	541
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	216	157	-	*142	160	-
Stage 1	-	-	-	-	-	-	-	-	471	439	-	*186	277	-
Stage 2	-	-	-	-	-	-	-	-	408	275	-	*552	418	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.5	0.6	14.7	63.2
HCM LOS			B	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	216	-	803	390	-	-	1087	-	-	147
HCM Lane V/C Ratio	0.141	-	0.075	0.016	-	-	0.063	-	-	0.623
HCM Control Delay (s)	24.4	0	9.8	15.4	3.2	-	8.5	-	-	63.2
HCM Lane LOS	C	A	A	C	A	-	A	-	-	F
HCM 95th %tile Q(veh)	0.5	-	0.2	0	-	-	0.2	-	-	3.3

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

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	809	40	0	958	0	44
Future Vol, veh/h	809	40	0	958	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	852	42	0	1008	0	46

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	447
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	564
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	564
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	564	-	-	-
HCM Lane V/C Ratio	0.082	-	-	-
HCM Control Delay (s)	12	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	32	1565	36	0	2422
Future Vol, veh/h	0	32	1565	36	0	2422
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	34	1647	38	0	2549

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	843	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	311	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	311	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	311	-
HCM Lane V/C Ratio	-	-	0.108	-
HCM Control Delay (s)	-	-	18	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.4	-