Appendix D:

Transportation Supporting Information

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D.1 - Local Transportation Analysis

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LOCAL TRANSPORTATION ANALYSIS FOR

1000 Gibraltar Drive Delivery Center

DATE:
July 9, 2025

LOCATION:
1000 Gibraltar Drive
Milpitas, CA 95035

PREPARED FOR:
City of Milpitas

PREPARED BY:
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San Diego, CA 92128

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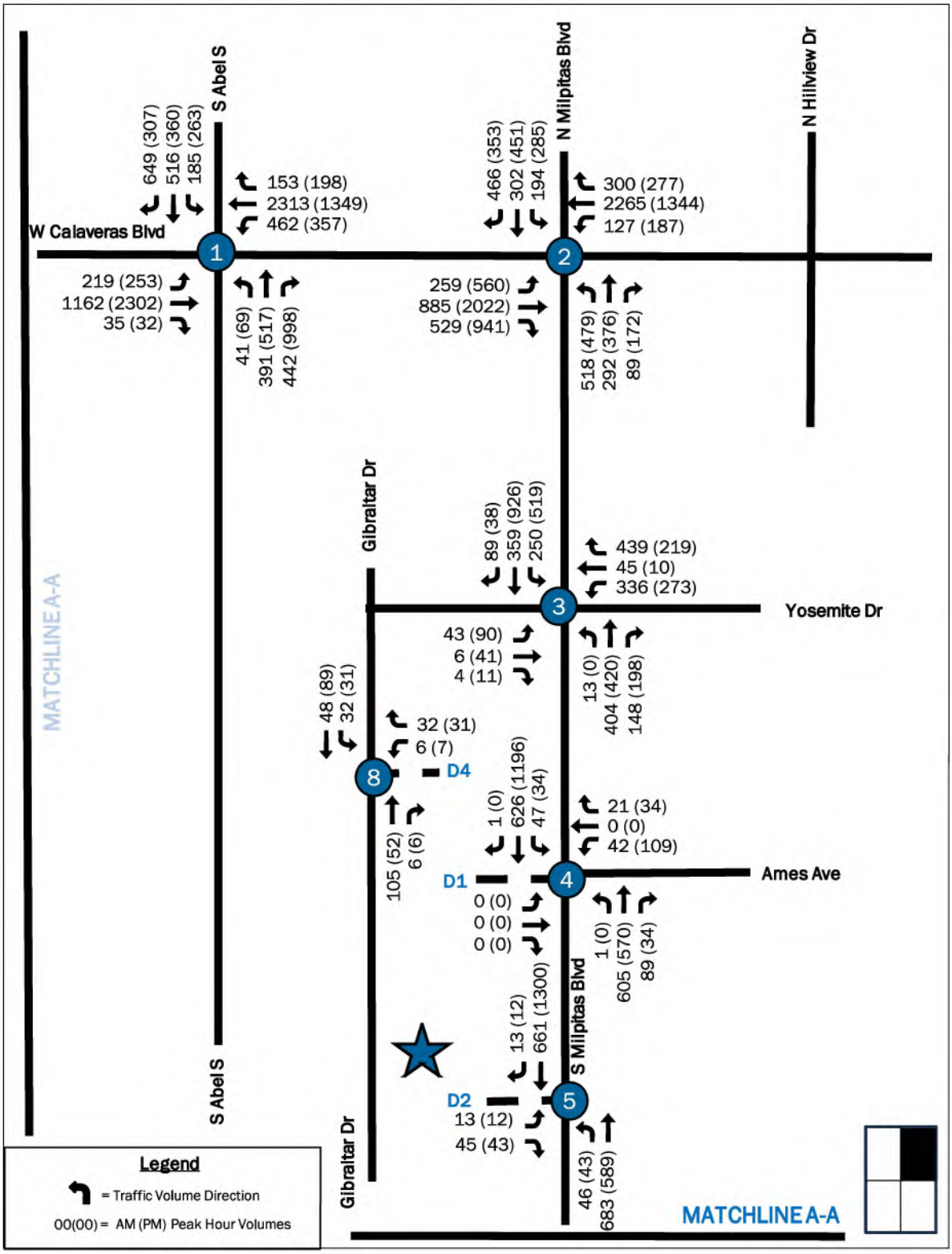


Executive Summary

A new distribution center will be built at 1000 Gibraltar Drive in Milpitas, California. The 487,564 square-foot (SF) building is intended to be used as a last-mile, e-commerce delivery center. The project is anticipated to generate approximately 3,812 net new daily trips, including 260 trips during the AM peak hour (131 inbound, 129 outbound) and 245 trips during the PM peak hour (122 inbound, 123 outbound).

Traffic operations at intersections outside of the Congestion Management Program (CMP) operate acceptably under Existing conditions. All non-CMP intersections are anticipated to operate at LOS B or better under both the 2026 and 2040 scenarios, with the exception of the South Milpitas Boulevard & Yosemite Drive intersection, which is projected to operate at LOS E under both 2040 No-Build and Build PM conditions. However, since there is no change in critical delay or volume-to-capacity (V/C) ratio between scenarios, the project does not result in an adverse effect at this location, and no mitigation is warranted per City of Milpitas guidelines.

No additional improvements are recommended as part of this analysis. The results indicate that the surrounding transportation network can adequately accommodate the traffic generated by the proposed delivery center.

A. Introduction

This Local Transportation Analysis (LTA) has been performed to identify the transportation impacts associated with the operation of a delivery center. The site is located at 1000 Gibraltar Drive in Milpitas, CA. Figure 1 shows the location of the project site.

NV5 was retained to prepare this Local Traffic Assessment (LTA) to evaluate the potential traffic impacts of the proposed development on the surrounding roadway network and to identify any improvements that may be necessary to mitigate those impacts. To conduct this assessment, NV5 performed the following tasks:

- Collected data on existing traffic conditions by conducting turning movement counts at key intersections in the vicinity of the proposed project during the weekday morning and evening peak hours.
- Calculated site generated traffic by using the provided trip generation from the site. These trips were then assigned to the surrounding roadway network based on existing travel patterns and the nature of the proposed use.
- Performed capacity analyses for Existing (2024), No-Build (2026), Build (2026), Future No-Build (2040), Future Build (2040), and Future Build Conditions with Mitigation (2040) scenarios within the study area.

This report summarizes NV5's findings and recommendations regarding the anticipated traffic impacts of the proposed development. A detailed project scoping memorandum is included in Appendix E.

A.1. Relevant Regulatory Agencies and Plans

This section outlines the key transportation regulatory agencies and relevant planning documents that guide land use and transportation decisions for the Project. These agencies operate at the regional and local levels, with authority or influence over planning initiatives affecting the City of Milpitas, which is located within Santa Clara County and the broader San Francisco Bay Area.

The plans summarized below provide important policy direction and regulatory context relevant to transportation infrastructure, congestion management, and sustainable land use development within Milpitas and its surrounding region.

Plan Bay Area 2040

Plan Bay Area 2040 is a long-range regional transportation and land use strategy jointly developed and administered by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). It fulfills the requirements of California Senate Bill 375, serving as the region's Sustainable Communities Strategy (SCS) and the Regional Transportation Plan (RTP).

Originally adopted in July 2013 and updated in July 2017, Plan Bay Area 2040 promotes coordinated growth to reduce greenhouse gas emissions by encouraging transit-oriented development in Priority Development Areas (PDAs). These areas are typically located near public transit to support higher-density housing, reduce auto dependency, and accommodate future population growth. Major transportation initiatives in the Plan include:

- BART extension to San José and Santa Clara,
- Caltrain electrification,
- Upgrades to the Amtrak Capitol Corridor, and
- Enhanced local and express bus service.

These projects are aligned with state goals for reducing vehicle miles traveled (VMT) and promoting multimodal transportation.

Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP)

As the designated Congestion Management Agency for Santa Clara County, the Santa Clara Valley Transportation Authority (VTA) administers the Congestion Management Program (CMP). The CMP is a collaborative planning framework aimed at improving mobility, supporting sustainable land use decisions, and addressing air quality through coordinated transportation investments.

Key elements of the CMP include:

- Technical guidelines for evaluating land development impacts,
- A Complete Streets policy promoting multimodal access,
- Bicycle and pedestrian planning components, and
- Regional travel demand modeling and level of service (LOS) standards.

The CMP ensures consistency across jurisdictions in managing congestion and aligning development with transportation capacity.

Valley Transportation Plan (VTP) 2040

The Valley Transportation Plan (VTP) 2040 is Santa Clara County's long-range transportation plan, also developed by VTA. It serves as the county's input to the regional Plan Bay Area and outlines a vision for multimodal transportation investments through 2040. Adopted by the VTA Board in September 2014, VTP 2040 addresses:

- Roadway and highway system improvements,
- Public transit expansion and modernization,
- Intelligent Transportation Systems (ITS) and system operations,
- Bicycle and pedestrian facility planning, and

- Integration of land use and transportation strategies.

VTP 2040 identifies priority transportation projects and funding strategies that support the county's economic vitality, environmental sustainability, and equitable access to mobility.

A.2. Relevant City Plans

The City of Milpitas has primary jurisdiction over its local transportation infrastructure, including the city street network, traffic signals under municipal control, and policies governing land use and zoning. In support of its planning and development goals, the City has adopted a range of plans that provide strategic guidance for managing and enhancing its transportation systems. The following documents are particularly relevant to the Project:

City of Milpitas General Plan

The Milpitas General Plan is the City's foundational policy document, outlining a long-term vision for growth, development, and quality of life. It includes goals, policies, and implementation strategies intended to guide decision-making across a broad range of topics, including land use, housing, mobility, and environmental stewardship.

The Circulation Element of the General Plan establishes a framework for developing a safe, efficient, and accessible multimodal transportation system that serves the needs of residents, employees, and visitors. It emphasizes the integration of transportation demand management (TDM) strategies, encourages the use of public transit and non-motorized travel modes (e.g., walking and bicycling), and supports regional coordination with agencies such as VTA and MTC.

Key objectives include:

- Reducing reliance on single-occupancy vehicles,
- Promoting active transportation,
- Ensuring connectivity between land uses and mobility options, and
- Aligning local actions with regional sustainability initiatives.

The last comprehensive update to the General Plan occurred in 1994. A major update process is currently underway to modernize the Plan and align it with current environmental, equity, and mobility goals.

Milpitas Transit Area Specific Plan

The Milpitas Transit Area Specific Plan (TASP) was adopted in June 2008 and amended in December 2011. It establishes a detailed land use and transportation strategy for a 437-acre redevelopment area in the southern portion of the City, centered around the Milpitas BART station and VTA Light Rail.

The Plan envisions the area as a compact, mixed-use, transit-oriented community that reduces vehicle dependence and supports sustainable growth.

The current land use program under the Plan includes:

- 7,109 residential dwelling units,
- Approximately 994,000 square feet of office space
- 340 hotel rooms, and
- Roughly 287,000 square feet of commercial retail space.

The Specific Plan includes street design standards, pedestrian and bicycle infrastructure requirements, and policies aimed at enhancing connectivity and urban design. Although the Project site itself lies outside the TASP boundaries, some study intersections fall within its area of influence. Therefore, the applicable level of service (LOS) standards and transportation performance metrics established in the TASP are used in this Project's analysis.

City of Milpitas Bikeway Master Plan

The Bikeway Master Plan, originally adopted on December 8, 2003, and updated in 2009, outlines the City's strategy for creating a comprehensive and connected bicycle transportation network. The plan is currently undergoing another update to reflect new regional and state policies, emerging mobility trends, and community feedback.

The Plan identifies:

- The City's existing and planned bikeway infrastructure,
- Gaps and opportunities for connectivity,
- Design guidelines for bikeway types (Class I, II, and III),
- Safety and wayfinding improvements, and
- Implementation strategies to increase bicycle ridership as a viable transportation mode.

The Plan supports the City's goals for active transportation, environmental sustainability, and health by promoting bicycle use as an alternative to automobile travel, particularly for short trips and first/last mile connections to transit.

A.3. Project Overview

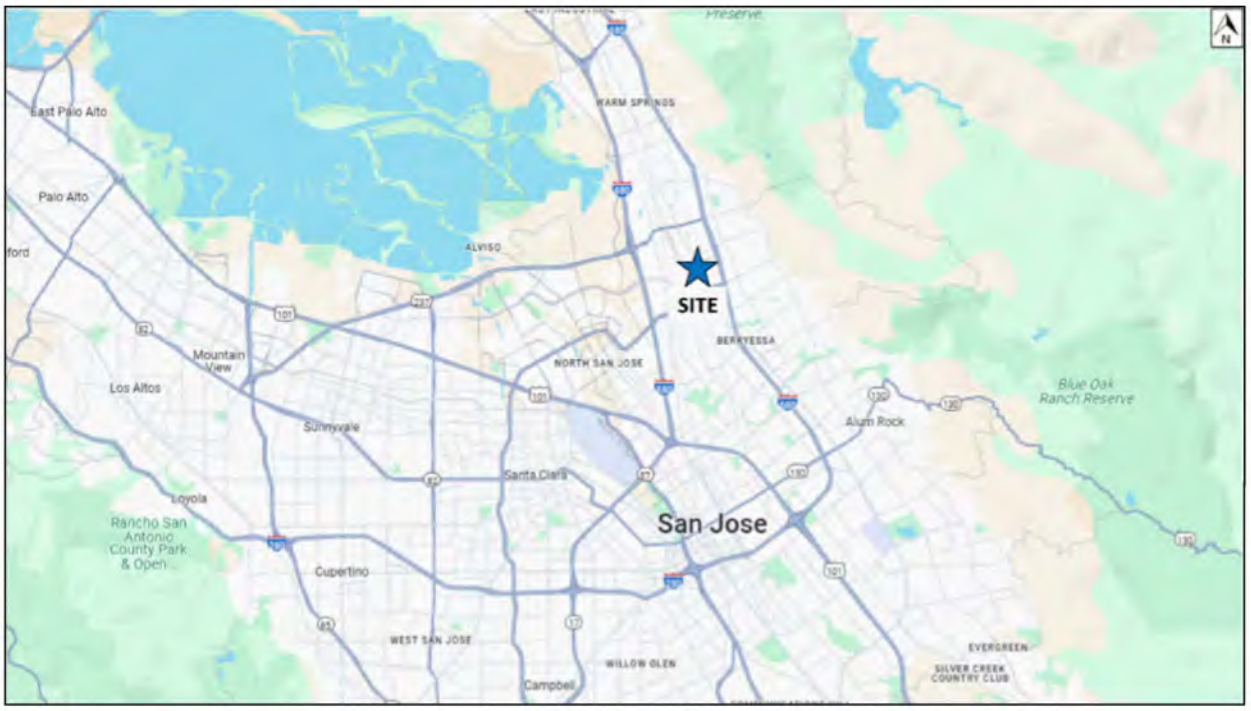
The project includes the demolition of all existing on-site structures and the construction of a modern, 487,564-square-foot distribution center. The parcel is currently occupied by a vacant LifeScan facility, formerly operated by Johnson & Johnson. The planned facility will serve as a hub for the delivery of eCommerce goods. The target build date is 2026.

The Local Transportation Analysis (LTA) is prepared in accordance with the City of Milpitas' requirements and the scoping document, see Attachment E. This LTA is intended to replace the previously approved Local Transportation Analysis Report (2020). The LTA assesses the potential impacts of the proposed project on the key intersections in the project vicinity during the typical weekday AM (7-9 AM) and PM (4-6 PM) commute periods. This study includes performance measures such as intersection delay, Level of Service (LOS) and queuing, and provide a high-level evaluation of impacts to transit, bike, and pedestrian circulations.

A.4. Site Location & Study Area

The project site is in the south-central portion of the City of Milpitas, situated along Gibraltar Drive—a short local roadway that fully encircles the proposed development. Gibraltar Drive intersects Milpitas Boulevard at two points, forming the west leg of each intersection. Milpitas Boulevard serves as a primary north-south corridor, providing access to both the Montague Expressway and State Route (SR) 237. SR 237 and the Montague Expressway connect to Interstate 680 (I-680) and Interstate 880 (I-880). The surrounding area is characterized primarily by light industrial and commercial land uses. The site's location is shown in Figure 1.

Figure 1: Vicinity Map



The study includes analysis of the Existing and Future Conditions of the following intersections:

1. West Calaveras Boulevard & Abel Street
2. E Calaveras Boulevard & Milpitas Boulevard
3. South Milpitas Boulevard & Yosemite Drive
4. South Milpitas Boulevard & Ames Avenue / Driveway 1
5. South Milpitas Boulevard & Driveway 2
6. South Milpitas Boulevard & Gibraltar Drive
7. Gibraltar Drive & Driveway 3
8. Gibraltar Drive & Driveway 4
9. Montague Expressway & South Milpitas Drive
10. Great Mall Parkway / East Capitol Avenue & Montague Expressway
11. Montague Expressway & McCandless Drive / Trade Center Boulevard
12. Montague Expressway & South Main Street / Oakland Road

The study area includes both CMP-designated and non-CMP intersections. The following study locations are designated CMP intersections:

- West Calaveras Boulevard & South Abel Street
- East Calaveras Boulevard & Milpitas Boulevard
- South Milpitas Drive & Montague Expressway
- Great Mall Parkway/East Capitol Avenue & Montague Expressway
- Montague Expressway & McCandless Drive/Trade Center Boulevard
- Montague Expressway & South Main Street/Oakland Road

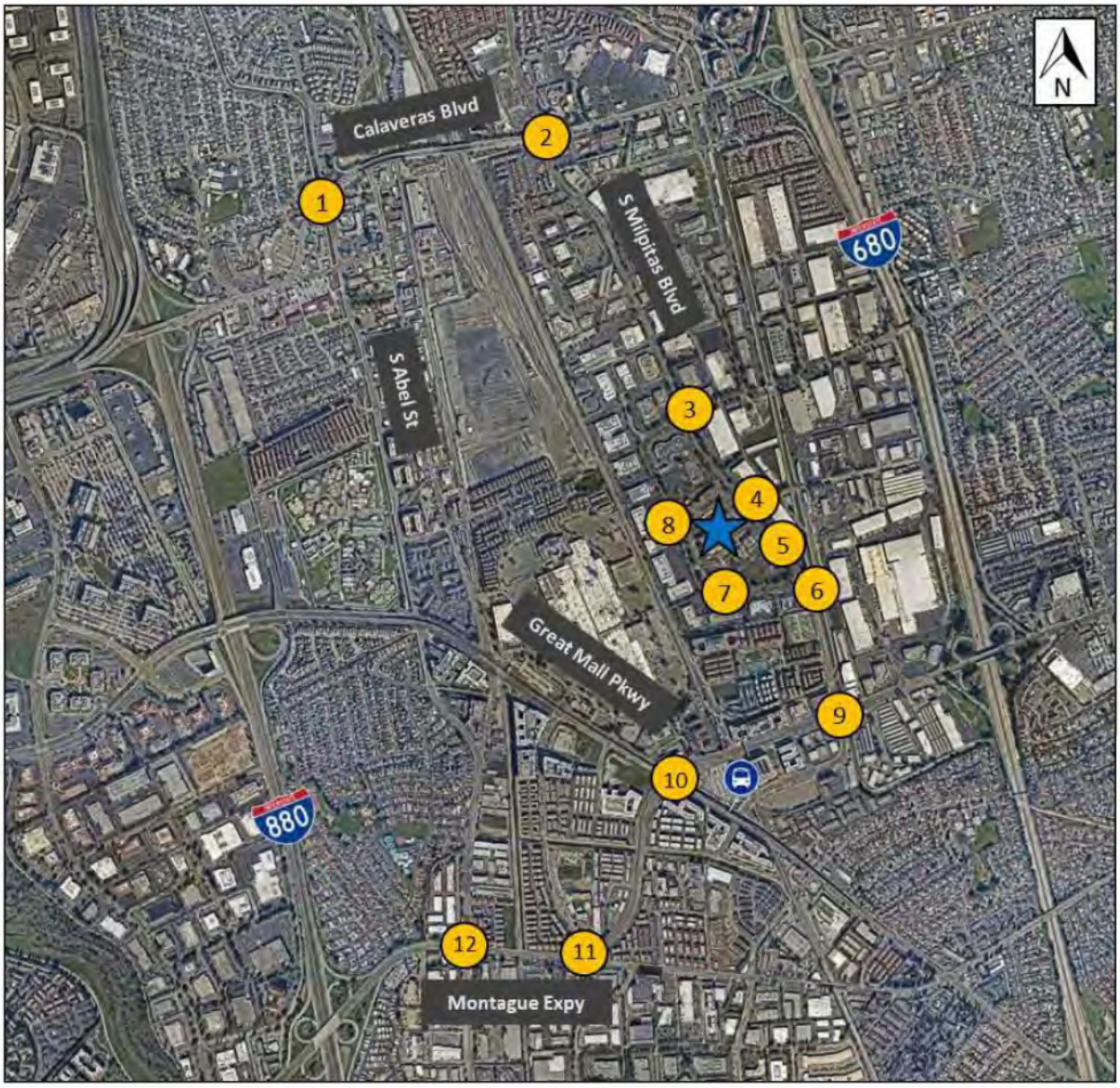
These intersections were included in the study area to reflect realistic traffic conditions. However, consistent with CMP guidelines, no project-specific mitigations were applied at these locations, regardless of queuing or capacity analysis findings.

The following study locations are not part of the CMP network:

- South Milpitas Boulevard & Yosemite Drive
- South Milpitas Boulevard & Ames Avenue/Driveway 1
- South Milpitas Boulevard & Driveway 2
- South Milpitas Boulevard & Gibraltar Drive
- Gibraltar Drive & Driveway 3
- Gibraltar Drive & Driveway 4

Figure 2 illustrates the previously listed study intersections superimposed on existing aerial imagery.

Figure 2: Site Location Aerial



A.5. Development Site Description

Site access will be provided via four (4) driveways located along South Milpitas Boulevard and Gibraltar Drive. Two existing driveways will accommodate truck ingress and egress, while two new driveways will be constructed for passenger vehicle access. A total of 785 parking stalls will be provided, including 408 for associates, 18 accessible stalls, 24 compact stalls, 90 EV-ready spaces, 23 electric vehicle charging stations (EVCS), and 335 flex stalls. The distribution center will be served by D1 and D2 along Milpitas Boulevard and D3 and D4 along Gibraltar Drive. Figure 3 below shows a schematic of the site with driveways accentuation. A site plan is attached in Appendix A.

Figure 3: Site Plan

All line-haul truck traffic will enter the site via Driveway 1 (D1) on Milpitas Boulevard and exit via Driveway 4 (D4) on Gibraltar Drive. Driveways 2 (D2) and 3 (D3), located on Milpitas Boulevard and Gibraltar Drive respectively, will serve passenger vehicles only and provide access to the parking area on the west side of the site. Separating truck and passenger vehicle access enhances site circulation by minimizing vehicle conflicts, optimizing on-site queuing, and ensuring adequate parking accommodations.

B. Existing Conditions

B.1. Existing Transportation Network

Abel Street is a four-lane principle arterial with a 35 MPH posted speed limit with a turn lane throughout the corridor. Traversing the central portion of the City of Milpitas, it provides direct access to key civic and commercial destinations, including the Milpitas Library, City Hall, and the Great Mall. The corridor is characterized by a mix of residential and commercial land uses and is well-served by local public transit. It lies within walking distance of the Milpitas Transit Center, a regional transportation hub offering connections to BART, VTA bus routes, and light rail services.

Ames Avenue is an east–west local roadway that provides direct access to the project site as well as to nearby commercial, office, and light industrial uses located east of the site. The roadway consists of a single travel lane in each direction and has a posted speed limit of 35 miles per hour. On-street parking is permitted east of the Union Pacific Railroad tracks. Pedestrian facilities are limited, with discontinuous sidewalks present on both sides of the street. There are no dedicated bicycle facilities along Ames Avenue, limiting multimodal connectivity in this portion of the study area.

Calaveras Boulevard is a six-lane, median-divided roadway with a posted speed limit of 40 miles per hour in the vicinity of the study area. Functioning as an east–west principal arterial, it provides regional connectivity between I- 880 and I- 680 and forms part of SR 237. Sidewalks are provided on both sides of the street, except between Milpitas Boulevard and Abel Street where a sidewalk is provided only on the north side. Bicycle facilities are not provided.

Gibraltar Drive is a local roadway that primarily runs north–south but includes an east–west segment near the project site. The roadway provides direct access to the project site and serves adjacent industrial and office developments located to the west. Gibraltar Drive consists of one travel lane in each direction. Along the east–west segment, a two-way left-turn lane is provided to facilitate access to driveways and cross streets. The posted speed limit is 30 MPH. On-street parking is prohibited throughout the corridor. Sidewalks are present on both sides of the roadway, offering pedestrian connectivity; however, no dedicated bicycle facilities are provided, and limiting bicycle access along this corridor.

Great Mall Parkway–Capitol Avenue is a major northwest-southeast oriented arterial roadway that serves as a key corridor for regional mobility in the southwestern portion of the city. It provides access to a mix of surrounding land uses, including residential neighborhoods, commercial centers, and office developments. The roadway consists of three travel lanes in each direction, separated by the Valley Transportation Authority (VTA) light rail tracks, which run within a raised median. The posted speed limit is 40 miles per hour. On-street parking is prohibited, and the corridor is designed to support multimodal travel with sidewalks and striped bicycle lanes provided along both sides of the roadway.

South Milpitas Boulevard is a four-lane, median-divided arterial with a posted speed limit of 40 miles per hour. It extends north from the southern city limits near the Montague Expressway. The corridor is also planned for infrastructure improvement projects, including a proposed bridge crossing over the Penitencia East Channel.

Yosemite Drive is an east–west oriented local roadway located northeast of the project site. It functions as a connector within the local street network, providing direct access to surrounding offices, and industrial, and commercial land uses in the study area. The roadway is divided, with two travel lanes in each direction, and has a posted speed limit of 40 miles per hour. On-street parking is prohibited along the corridor. Pedestrian and bicycle infrastructure includes sidewalks and striped bike lanes on both sides of the street, supporting multimodal travel in the area.

Montague Expressway is an east-west oriented expressway located south of the Project site and serves as a major regional arterial in the area. The roadway is divided by a raised center median and is designed to accommodate high traffic volumes with limited access. Between Montague Court and Great Mall Parkway, the expressway provides three general-purpose lanes and one eastbound high-occupancy vehicle (HOV) lane, which operates on weekdays from 6:00 AM to 9:00 AM. West of Great Mall Parkway, the facility transitions to three general-purpose lanes in each direction. The posted speed limit is 45 miles per hour. On-street parking is prohibited. Pedestrian infrastructure is limited, with discontinuous sidewalks along both sides of the corridor, and dedicated bicycle facilities are not present, limiting non-motorized travel options along this segment.

South Milpitas Boulevard is a north-south collector roadway that provides direct vehicular access to the Project site and serves as a key connector for surrounding office, industrial, and commercial developments. The roadway features two travel lanes in each direction. Between Los Coches Street and Gibraltar Drive, a continuous two-way left-turn lane facilitates access to driveways serving adjacent land uses. Outside of this segment, a raised center median is present. The posted speed limit is 40 MPH. On-street parking is not permitted. Sidewalks are provided on both sides of the roadway; however, pedestrian continuity is occasionally interrupted by landscaped building frontages that lack defined pathways. Designated striped bicycle lanes are present on both sides of the street, supporting multimodal travel.

Trade Zone Boulevard is a collector roadway that consists of two travel lanes in each direction and is divided by a raised center median. The posted speed limit is 35 MPH. On-street parking is prohibited along the entire corridor. Sidewalks and designated bicycle facilities are provided on both sides of the roadway, supporting pedestrian and cyclist mobility in the area. The corridor transitions in orientation at Montague Expressway: Trade Zone Boulevard, located south of Montague Expressway, runs east-west, while McCandless Drive, located north of the expressway, runs north-south.

B.2. Existing Bicycle Facilities

Bicycle infrastructure exists in the immediate vicinity of the project site. Bicycle facilities are categorized according to the California Department of Transportation (Caltrans) classification system, which defines the following four facility types:

Class I – Shared-Use Path (Bike Path): A completely separated facility for the exclusive use of bicycles and pedestrians, located off-street within its own right-of-way. Existing Class I bike facilities are not present within the vicinity of the site.

Class II – Bike Lane: A designated on-street lane for bicycle use, typically marked by striping and signage, located adjacent to vehicle travel lanes on priority corridors. Within the Project vicinity, existing Class II Bikeways are provided on:

- Abel-Main Street south of Calaveras Boulevard
- Great Mall Parkway
- Capitol Avenue
- South Milpitas Boulevard
- Trade Zone Boulevard-McCandless Drive
- Yosemite Drive

Class III – Bike Route: A shared roadway facility identified by signage and/or pavement markings, where bicyclists and motor vehicles operate within the same travel lane. Bikeway facilities of this class are limited to the project area. Within the Project vicinity, Class III Bikeways are provided on:

- Calaveras Boulevard
- Abel Street north of Corning Avenue

Class IV – Separated Bikeway (Protected Bike Lane or Cycle Track): An on-street bicycle facility physically separated from motor vehicle traffic by curbs, parked cars, posts, or other physical barriers. Existing Class IV bike facilities are not present within the vicinity of the site.

B.3. Existing Pedestrian Facilities

Pedestrian infrastructure within the Project vicinity includes a comprehensive network of sidewalks, crosswalks, curb ramps, and pedestrian signals. Sidewalks are generally present on at least one side of all surface streets within the study area, supporting pedestrian connectivity throughout the corridor.

At all signalized intersections within the study area, pedestrian accommodation includes marked crosswalks, accessible curb ramps, and pedestrian signal heads with pushbutton actuators to facilitate safe crossing movements. Crosswalks are also present at select unsignalized intersections, enhancing pedestrian access across lower-volume streets.

Curb ramps compliant with Americans with Disabilities Act (ADA) standards are provided at all study intersections, supporting accessibility for all users, including individuals with mobility impairments. The availability of these pedestrian amenities contributes to a walkable environment that supports multimodal access to surrounding land uses.

B.4. Existing Transit Facilities

The study area is served by a robust network of public transit options provided by the Santa Clara Valley Transportation Authority (VTA), Alameda-Contra Costa Transit District (AC Transit), and Bay Area Rapid Transit (BART). These agencies offer a range of services that include local and regional bus routes, light rail transit (LRT), and intercity rail service.

The Project site is directly served by AC Transit Route 217, which provides east-west service between the Fremont BART Station and the Great Mall/Main Transit Center in Milpitas. Bus stops for Route 217 are located along South Milpitas Boulevard, with one stop situated just south of Ames Avenue (west side) and another just north of Ames Avenue (east side), offering convenient access to the Project site. VTA operates multiple transit services in the area, including:

- Local bus routes: 44, 47, and 71;
- Frequent service routes (higher frequency during peak periods): 60, 66, 70, and 77;
- Express route: 104, which offers limited-stop service for commuters.
- Light Rail Transit (LRT): The Orange Line, providing a service from Mountain View to Alum Rock, traverses the study area and connects with the Milpitas Transit Center.

BART service was extended to the City of Milpitas with the opening of the Milpitas BART Station on June 13, 2020. The station provides regional connectivity to destinations throughout the Bay Area, including San Francisco, Oakland, and the East Bay, and is co-located with VTA's Milpitas Transit Center, creating a multimodal hub.

B.5. Traffic Counts

Studies of comparable developments across North America indicate that traffic generation is typically correlated with a measurable unit of site activity (e.g., number of fueling positions, gross floor area, or number of service bays). Given the variability of site traffic throughout the day and year, it is essential to identify an appropriate peak hourly volume to inform the design of the external roadway network and site access points. For this analysis, a common AM and PM peak hour was determined by evaluating the peak hours at each study intersection and selecting the time periods most consistently represented across the study area.

Intersection turning movement counts (TMCs) at the twelve study intersections were collected on Monday, November 19, 2024, while schools were in session. A comprehensive analysis of the study network was conducted to identify consistent peak hours across all intersections. Most intersections

exhibited a common AM peak between 7:45 AM and 8:45 AM, and a common PM peak between 5:00 PM and 6:00 PM. To ensure consistency in the analysis, these time periods were selected as the representative AM and PM peak hours. Supporting intersection traffic data is provided in Appendix C.

B.6. Existing Traffic Analysis

The capacity analysis and queuing analysis in each of the scenarios were performed using the traffic analysis software Synchro® 12. Average vehicular delays are calculated and reported as Levels of Service (LOS) as defined by the Highway Capacity Manual, 7th Edition (HCM 7), where LOS A is best, and LOS F is worst. LOS A through LOS D is considered acceptable LOS and LOS E and LOS F are considered unacceptable LOS and may require mitigation. Site driveways are not shown in Existing and No-Build Conditions as they are currently not in use. Due to the operational limitations of the LOS methodology in the HCM, U-turn movements were included with left-turn volumes in the analysis. This adjustment reflects the fact that U-turning vehicles utilize the same lane as left-turning vehicles and contribute to overall delay experienced in the left-turn lane and the overall intersection capacity. In addition to LOS, queue lengths were evaluated. Movements where queue lengths exceed available storage space are identified below each table. When this condition occurs, it indicates that vehicle queues may extend beyond the designated turn lane, potentially interfering with adjacent movements and degrading overall intersection performance. Capacity worksheets are included in Appendix D. The results of Existing capacity analyses are shown in Table 1 and include analysis of the volumes shown in Figures 4 - 6.

Figure 4: Existing Traffic Volumes 1

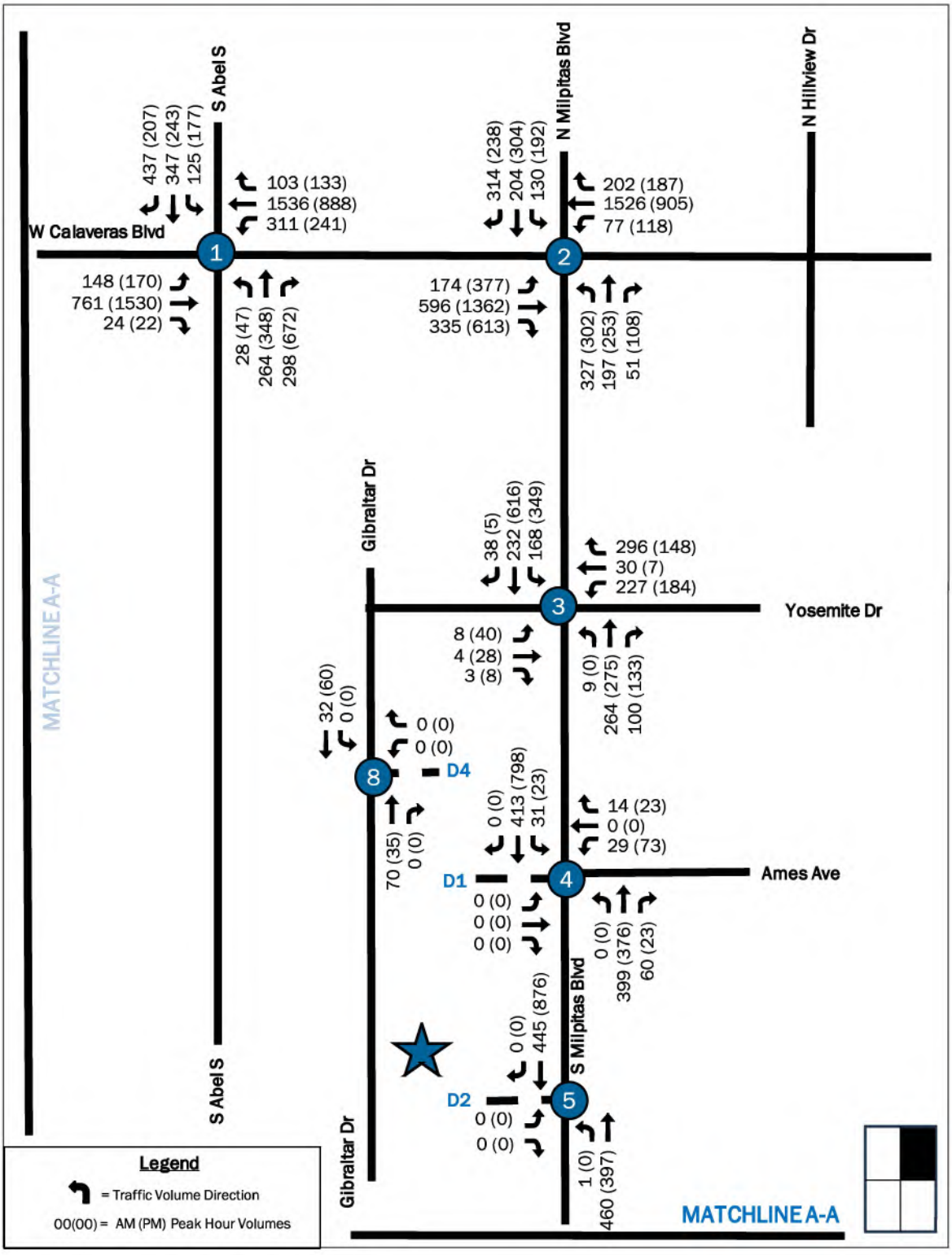


Figure 5: Existing Traffic Volumes 2

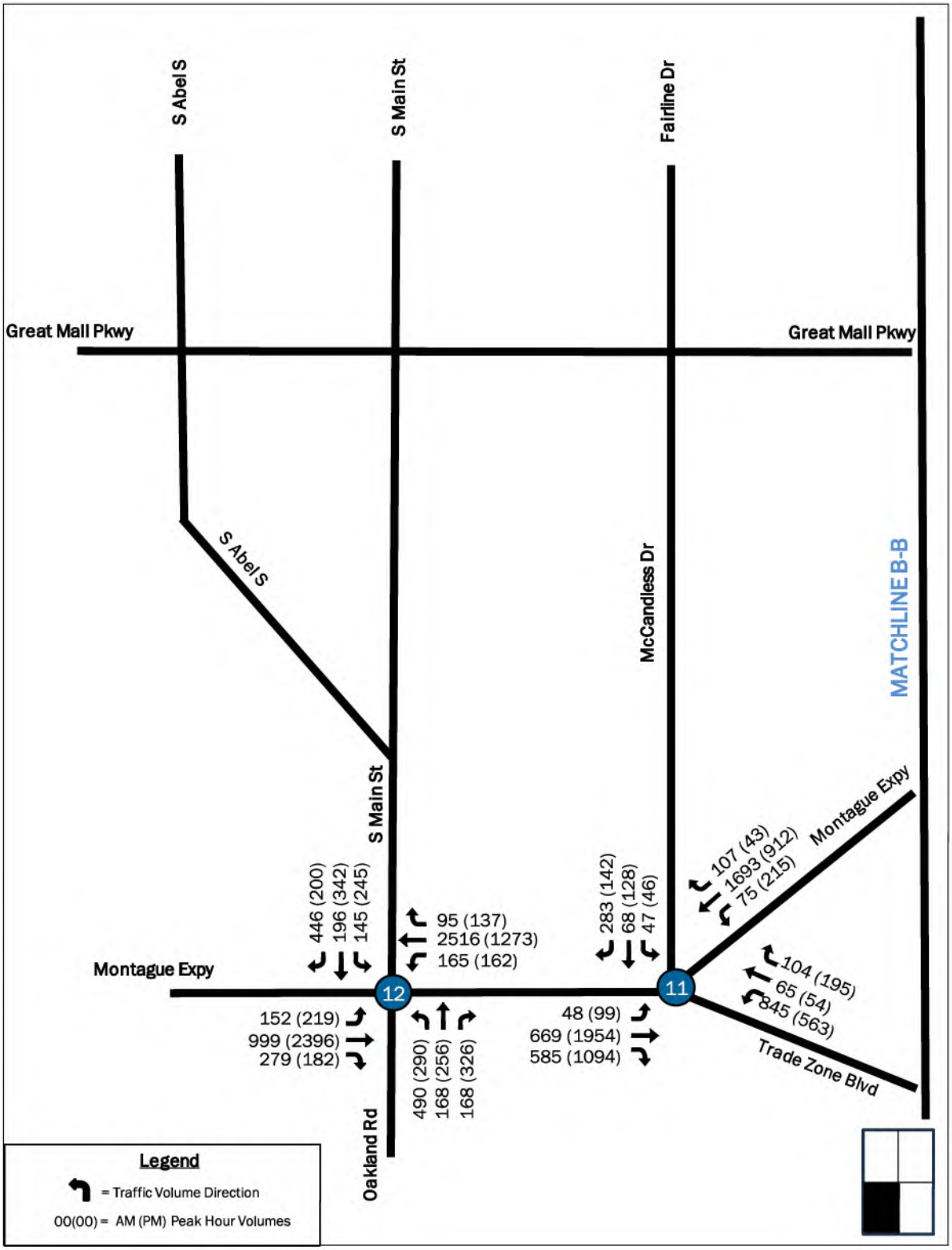


Figure 6: Figure 5: Existing Traffic Volumes 3

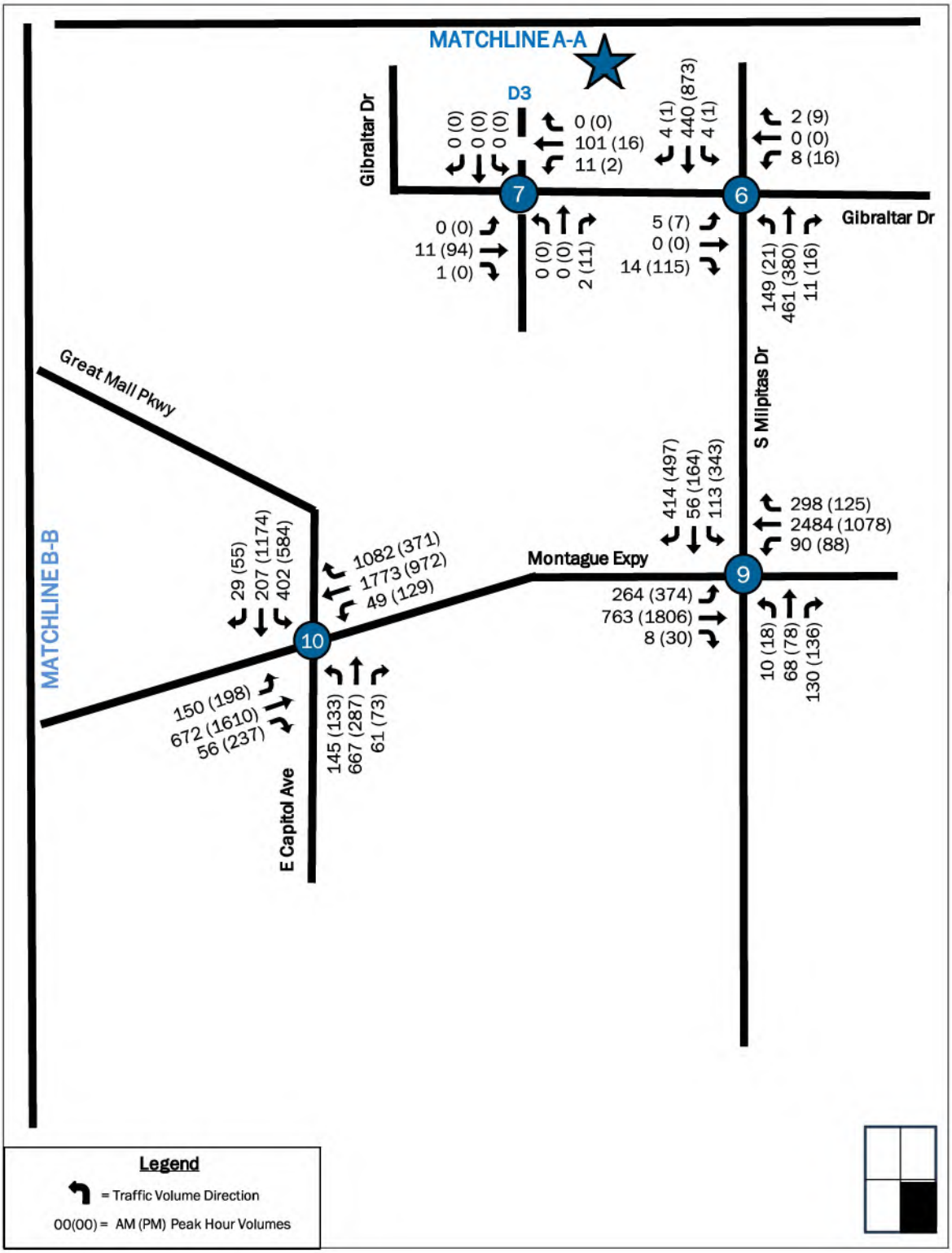


Table 1: Existing (2024) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	West Calaveras Boulevard & South Abel Street	Signal	**Overall**	**D**	**49.3**	**F**	**108.9**
			EB	D	37.5	D	39.1
			WB	D	39.2	C	34.2
			NB	E	61.0	F	324.6
			SB	E	73.9	E	65.8
2	East Calaveras Boulevard & Milpitas Boulevard	Signal	**Overall**	**D**	**37.6**	**D**	**39.3**
			EB	C	31.9	D	38.8
			WB	D	38.7	D	37.7
			NB	D	40.6	D	40.7
			SB	D	40.4	D	42.3
3	South Milpitas Boulevard & Yosemite Drive	Signal	**Overall**	**C**	**33.1**	**C**	**30.8**
			EB	C	35.0	D	43.4
			WB	D	46.9	D	48.3
			NB	B	19.6	B	18.2
			SB	C	27.2	C	28.9
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	**Overall**	**A**	**5.7**	**A**	**6.6**
			WB	D	45.0	D	42.4
			NB	A	2.8	A	3.7
			SB	A	4.9	A	3.8
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	A	8.4	A	0.0
			EB	A	0.0	A	0.0
6	South Milpitas Boulevard & Gibraltar Drive	Signal	**Overall**	**B**	**14.8**	**A**	**7.0**
			WB	F	113.1	F	110.1
			NB	B	18.6	A	6.6
			SB	A	7.2	A	4.2
7	Gibraltar Drive & Driveway 3	Stop-Control	NB	A	8.4	A	8.9
			WBL	A	7.3	A	7.5
9	South Milpitas Drive & Montague Expressway	Signal	**Overall**	**E**	**79.5**	**E**	**79.7**
			EB	E	56.1	E	56.6
			WB	E	77.8	E	55.9
			NB	E	66.8	E	67.4
			SB	F	134.5	F	164.1
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	**Overall**	**F**	**92.3**	**E**	**72.3**
			EB	D	44.1	D	45.9
			WB	F	93.1	D	45.3
			NB	F	122.1	F	118.0
			SB	F	112.8	F	111.0

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	**Overall**	**D**	**49.4**	**E**	**71.3**
			EB	B	16.6	F	86.8
			WB	B	16.1	C	26.1
			NB	F	160.8	E	75.6
			SB	E	68.5	E	67.3
12	Montague Expressway & South Main Street/Oakland Road	Signal	**Overall**	**E**	**67.5**	**D**	**49.4**
			EB	D	35.9	D	42.0
			WB	E	56.4	C	34.0
			NB	F	160.4	F	87.1
			SB	F	83.1	F	85.4

Based on the 2024 analysis results, the following intersections exhibit an overall LOS E or worse during the AM and/or PM peak hours.

- West Calaveras Boulevard and South Abel Street (CMP)
- South Milpitas Drive and Montague Expressway (CMP)
- Great Mall Parkway/East Capitol Avenue and Montague Expressway (CMP)
- Montague Expressway and McCandless Drive/Trade Center Boulevard (CMP)
- Montague Expressway and South Main Street/Oakland Road (CMP)

Additionally, South Milpitas Boulevard and Gibraltar Drive exhibits an LOS F on the westbound approach during both the AM and PM peak hour. Additionally, the westbound approach at the South Milpitas Boulevard and Gibraltar Drive intersection operates at LOS F during both the AM and PM peak hours.

Table 2: Existing (2024) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
1	West Calaveras Boulevard & South Abel Street	Signal	EBL	245	184	195
			EBT	-	239	559
			EBR	-	0	0
			WBL	250	391	265
			WBT	-	552	256
			WBR	-	24	43
			NBL	230	53	74
			NBT	-	144	170
			NBR	285	75	506
			SBL	285	215	303
			SBT	-	184	122
			SBR	285	95	62
2	East Calaveras Boulevard & Milpitas Boulevard	Signal	EBL	460	102	187
			EBT	-	167	483
			EBR	200	65	288
			WBL	215	105	144
			WBT	-	549	288
			WBR	270	80	57
			NBL	215	163	150
			NBT	-	104	128
			NBR	185	0	34
			SBL	215	73	101
			SBT	-	110	156
			SBR	-	80	68
3	South Milpitas Boulevard & Yosemite Drive	Signal	EBL	-	16	49
			EBT	-	15	48
			WBL	-	253	214
			WBT	-	105	63
			NBL	170	24	0
			NBT	-	121	131
			SBL	250	174	302
			SBT	-	73	104
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	WBT	-	17	60
			NBT	-	68	68
			SBL	140	46	37
			SBT	-	28	81

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	-	0	0
			NBT	-	0	0
			EBL	-	0	0
			SBT	-	0	0
6	South Milpitas Boulevard & Gibraltar Drive	Signal	EBL	100	19	22
			EBR	-	0	61
			WBT	-	0	0
			NBL	130	203	48
			NBT	-	101	92
			SBL	75	17	7
			SBT	-	343	741
			SBR	-	0	0
7	Gibraltar Drive & Driveway 3	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	0	0
			WBT	-	0	0
			NBL	-	0	0
			SBL	-	0	0
			SBT	-	0	0
8	South Milpitas Drive & Montague Expressway	Stop-Control	WBL	-	0	0
			NBT	-	0	0
			SBL	-	0	0
			SBL	-	0	0
9	South Milpitas Drive & Montague Expressway	Signal	EBL	600	269	359
			EBT	-	254	676
			WBL	300	110	107
			WBT	-	1323	410
			WBR	200	343	86
			NBL	185	21	28
			NBT	-	83	89
			SBL	215	128	395
			SBT	-	60	145
			SBR	215	179	325

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	EBL	680	191	237
			EBT	-	227	656
			EBR	385	6	123
			WBL	400	78	167
			WBT	-	759	379
			WBR	240	2234	236
			NBL	350	187	170
			NBT	-	490	208
			NBR	385	0	4
			SBL	365	444	626
			SBT	-	138	775
			SBR	-	0	9
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	EBL	190	86	148
			EBT	-	187	786
			EBR	230	76	1212
			WBL	250	120	270
			WBT	-	560	233
			WBR	-	42	0
			NBL	175	313	225
			NBT	-	369	270
			NBR	-	49	71
			SBL	170	56	62
			SBT	-	88	164
			SBR	165	81	63
12	Montague Expressway & South Main Street/Oakland Road	Signal	EBL	190	144	186
			EBT	-	347	1110
			EBR	230	53	120
			WBL	250	155	146
			WBT	-	1400	449
			WBR	-	46	61
			NBL	175	534	240
			NBT	-	145	210
			NBR	-	76	265
			SBL	170	141	205
			SBT	-	173	276
			SBR	165	716	83

Queuing at the following intersections, highlighted in red in Table 2, has exceeded the storage length provided. The non-CMP intersections are bolded for reference.

- West Calaveras Boulevard & South Abel Street: The westbound left, northbound right, and southbound left have exceeded the storage length provided during the AM and/or PM peak hour.
- E Calaveras Boulevard & Milpitas Boulevard: The eastbound right has exceeded the storage length provided during the PM peak hour.
- **S Milpitas Boulevard & Yosemite Drive**: The southbound left has exceeded the storage length provided during the PM peak hour.
- **South Milpitas Boulevard & Gibraltar Drive**: The northbound left has exceeded the storage length provided during the AM peak hour.
- South Milpitas Drive & Montague Expressway: The westbound right and southbound left have exceeded the storage length provided during the AM and/or PM peak hour.
- Montague Expressway & McCandless Drive/Trade Center Boulevard: The eastbound right, westbound left, and northbound left have exceeded the storage length provided during the AM and/or PM peak hour.
- Montague Expressway & South Main Street/Oakland Road: The northbound left, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.

C. Development Site Traffic

C.1. Trip Generation

The delivery center is a specialized warehouse that stores a wide range of everyday consumer goods, enabling same-day delivery. They serve as the critical last-mile link between a tenant's delivery operations and their customers. Packages are dispatched to residential developments within a four-hour delivery window, using private carrier vehicles. Deliveries begin as early as 3:00 AM and continue throughout the day, with intentional pauses during peak AM and PM Peak traffic hours to minimize impacts to local roadways and avoid congestion.

At the proposed delivery center, up to 15 line-haul trucks are expected to deliver packages to the delivery center each day. The line-haul trucks will arrive at the site between the hours of 10:00 PM and 8:00 AM. Trucks enter the site via South Milpitas Boulevard on the east side of the building and exit the site on Gibraltar Drive. Once trucks are unloaded, the trucks continue to the next center and do not return to the site. The customer shipments are sorted by address groupings, assigned to the delivery routes, placed onto movable racks, and staged for dispatch. Table 3 summarizes the types of trips.

Table 3: Project Trip Generation - Traffic Volume by Vehicle Type

Traffic	Number of Vehicles	Daily Trips
Auto - Employees	1,891	3,782
Line-Haul Trucks	15	30
Total	**1,906**	**3,812**

The 2026 Build Traffic Scenario accounts for the addition of the project site as a delivery center with a building footprint of 487,564 square feet. To estimate site-generated traffic volumes, CESO utilized trip generation data provided by the prospective tenant. These estimates were developed using inputs such as building size, land use, and site design, drawing from multiple sources including national operational data, industry standards, and professional engineering judgment.

The resulting trip generation, summarized in Table 4, reflects a more conservative estimate than that derived from ITE Land Use Code 150 (Warehousing) as published in the Institute of Transportation Engineers' Trip Generation Manual, 11th Edition. Trip volumes are categorized by vehicle type to reflect operational characteristics of the proposed facility.

Table 4: Project Trip Generation – Peak Hour Traffic Volume (User Specified Land Use Code)

Land Use		Total	Inbound	Outbound
Delivery Center (Vehicle Trips)	Daily	3,782	1,891	1,891
	AM	258	129	129
	PM	244	122	122
Delivery Center (Truck Trips)	Daily	30	15	15
	AM	2	2	0
	PM	1	0	1
Delivery Center (Total Net Trips)	Daily	3,812	1,906	1,906
	AM	260	131	129
	PM	245	122	123

C.2. Adjustments to Trip Generation Rates

Due to the nature of the development, no adjustments for pass-by or internal capture were considered for trips generated by the Project.

C.3. Trip Generation and Assignment

The proposed distribution center at 1000 Gibraltar Drive will receive merchandise from regional delivery and sortation centers located in Oakland and Tracy for last-mile delivery to customers within the Milpitas metropolitan area. Vehicle trip distribution for the site varies by mode, with passenger vehicles and delivery trucks following distinct travel patterns based on the anticipated trip schedules and designated routing.

As illustrated in Figures 7-14 general trip distribution percentages were derived from the previously approved 2020 Draft Local Transportation Analysis (LTA) for the 1000 Gibraltar Industrial Project and refined to reflect updated driveway usage and delivery destinations. According to Figure 7, delivery trucks will access the site exclusively via Intersection 4 (Project Driveway 1) and exit through Intersection 8 (Project Driveway 4), utilizing South Milpitas Boulevard for both ingress and egress.

Truck trip distribution is projected as follows:

- 50% via the south along S. Milpitas Boulevard to I-680
- 20% via the north along S. Milpitas Boulevard and Calaveras Boulevard
- 30% via the west along Montague Expressway toward I-880

Passenger vehicles will enter and exit through Intersections 5 (Driveway 2), 7 (Driveway 3), and 8 (Driveway 4). Car trip distribution is anticipated as follows:

- 30% from the south along S. Milpitas Boulevard toward I-680

- 30% from the north via S. Milpitas Boulevard and Calaveras Boulevard
- 40% from the west via Montague Expressway toward I-880

The net project development trips from the new trips expected from the anticipated trip distribution is depicted in Figures 15 – 23.

Figure 7: Trip Distribution Map (Trucks)

Figure 8: Trip Distribution Map (Cars)

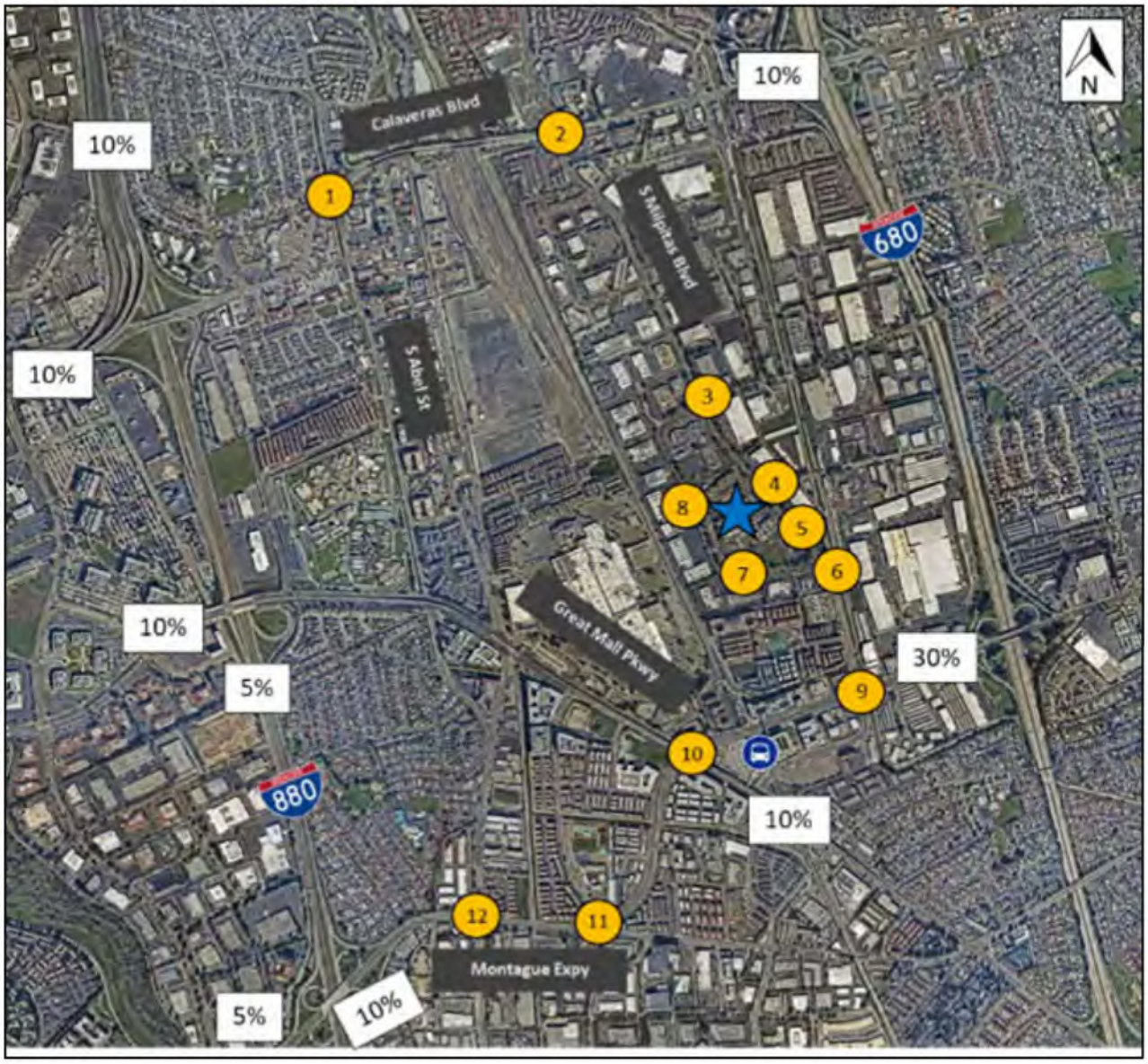


Figure 9: Trip Distribution Cars 1

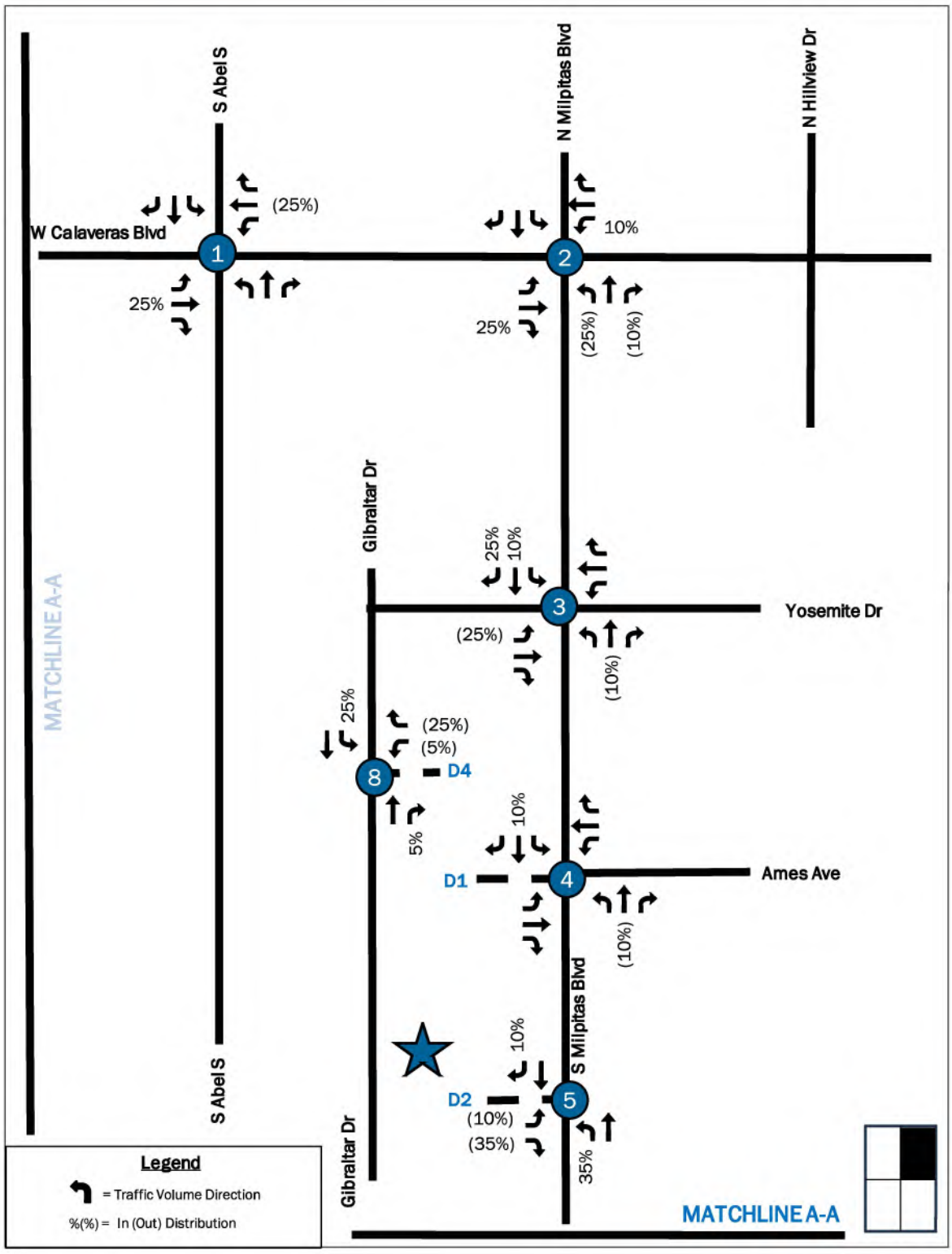


Figure 10: Trip Distribution Cars 2

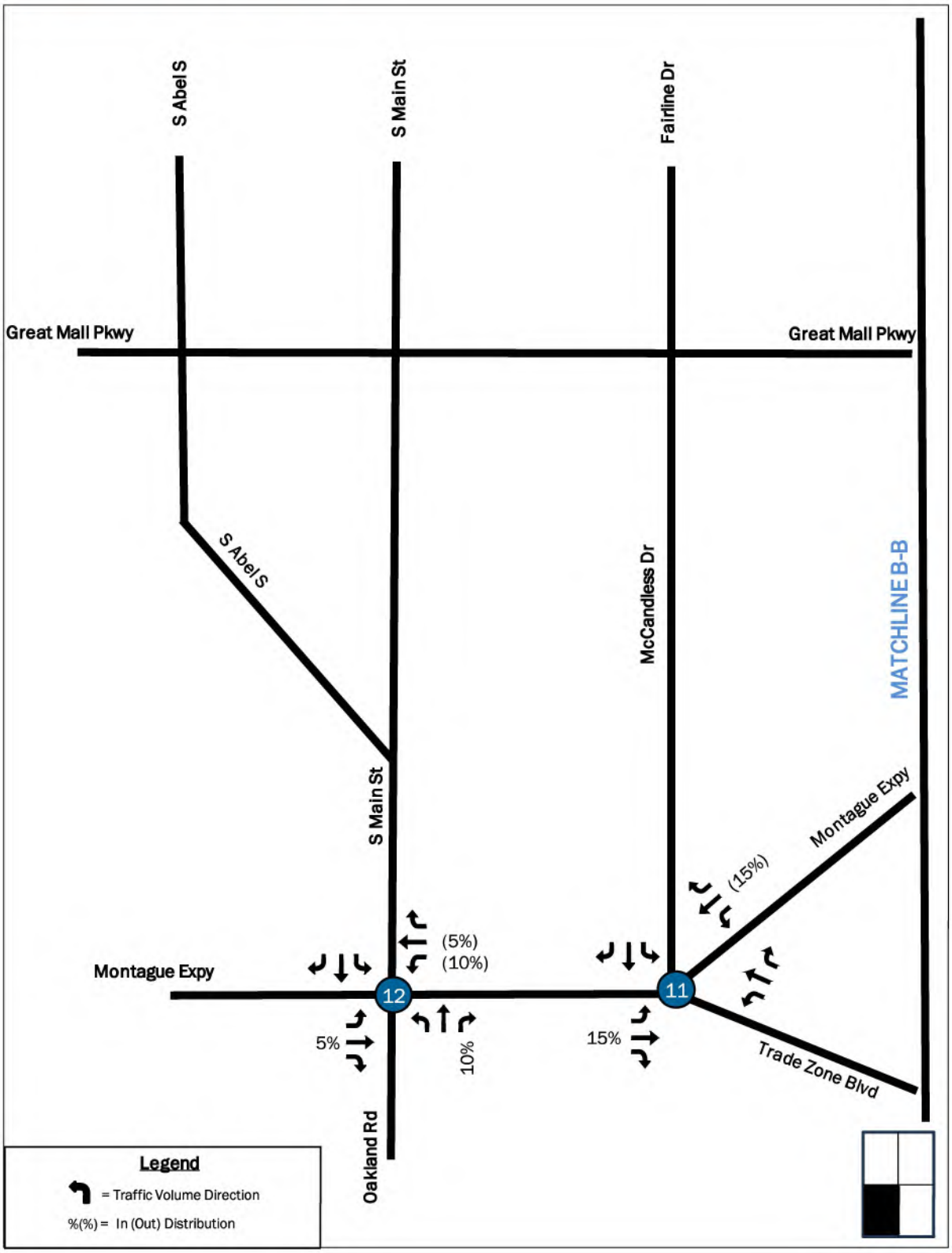


Figure 11: Trip Distribution Cars 3

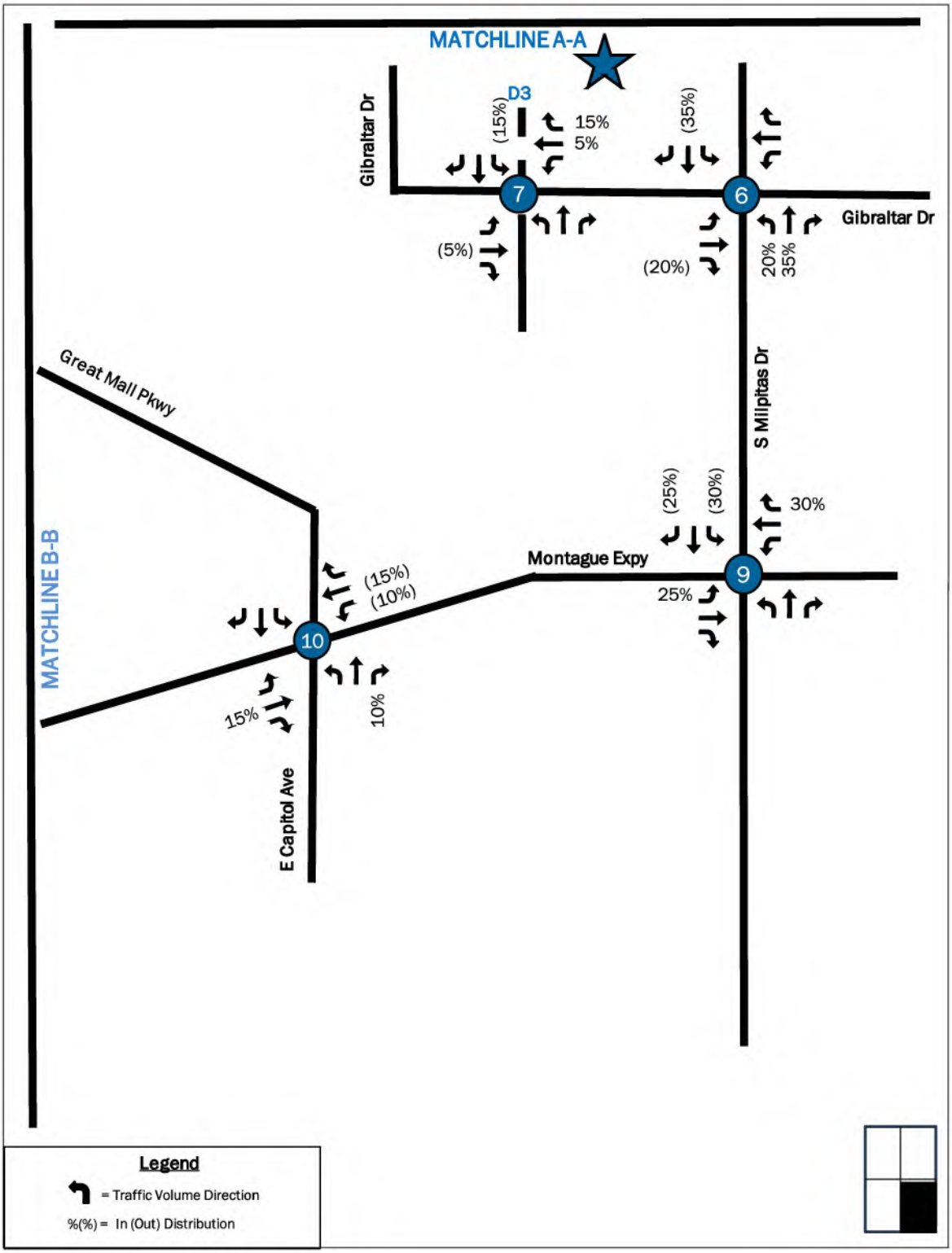


Figure 12: Trip Distribution Trucks 1

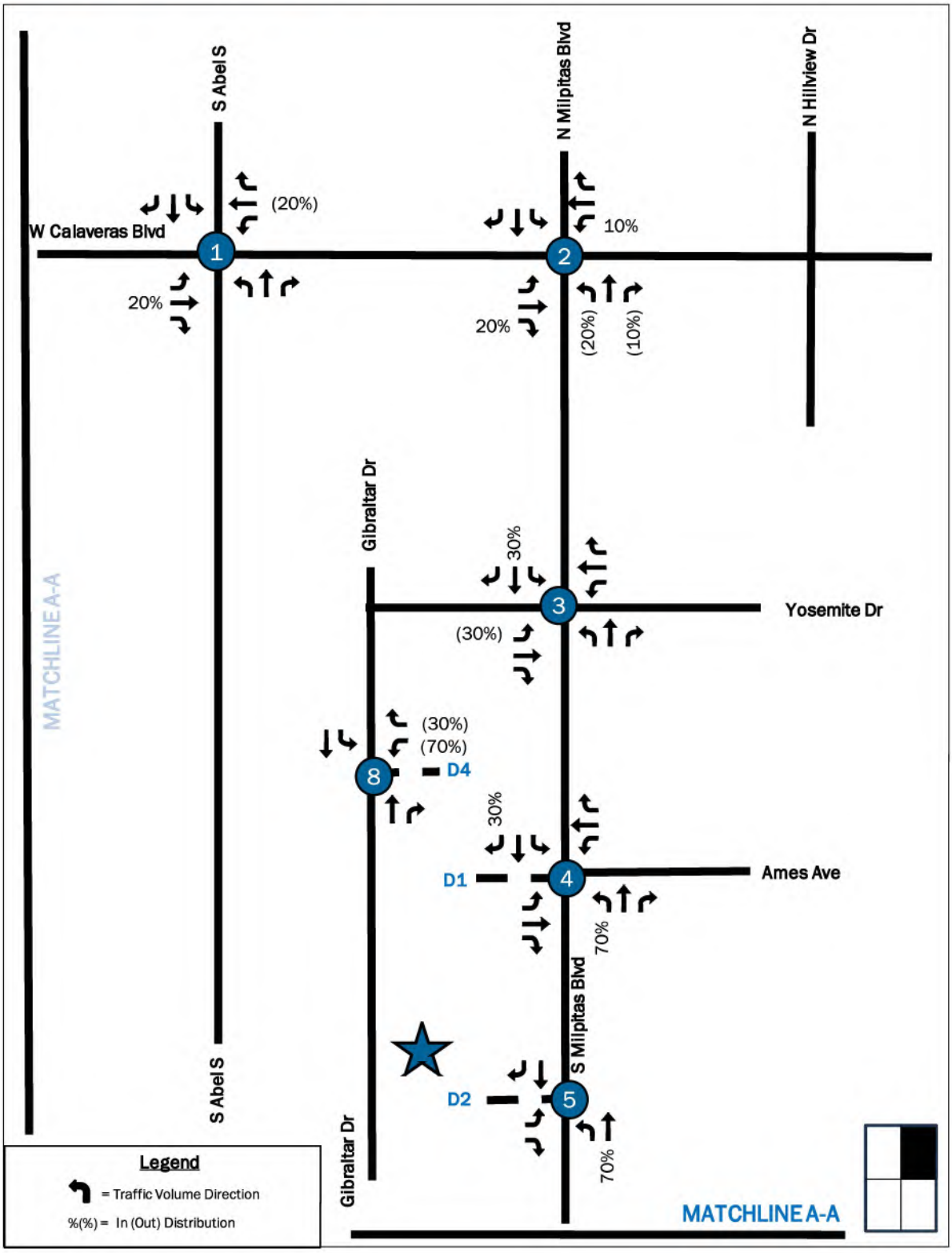


Figure 13: Trip Distribution Trucks 2

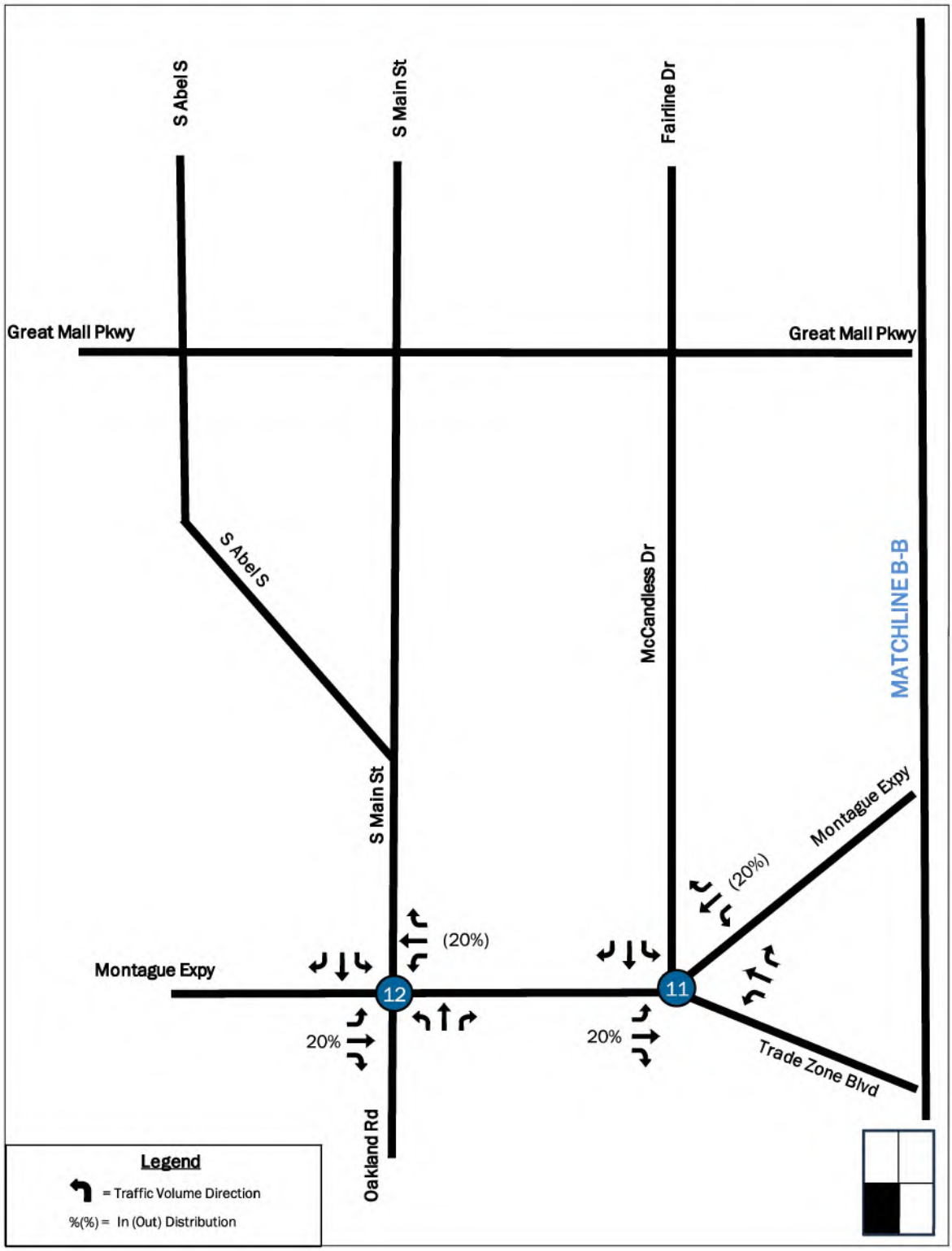


Figure 14: Trip Distribution Trucks 3

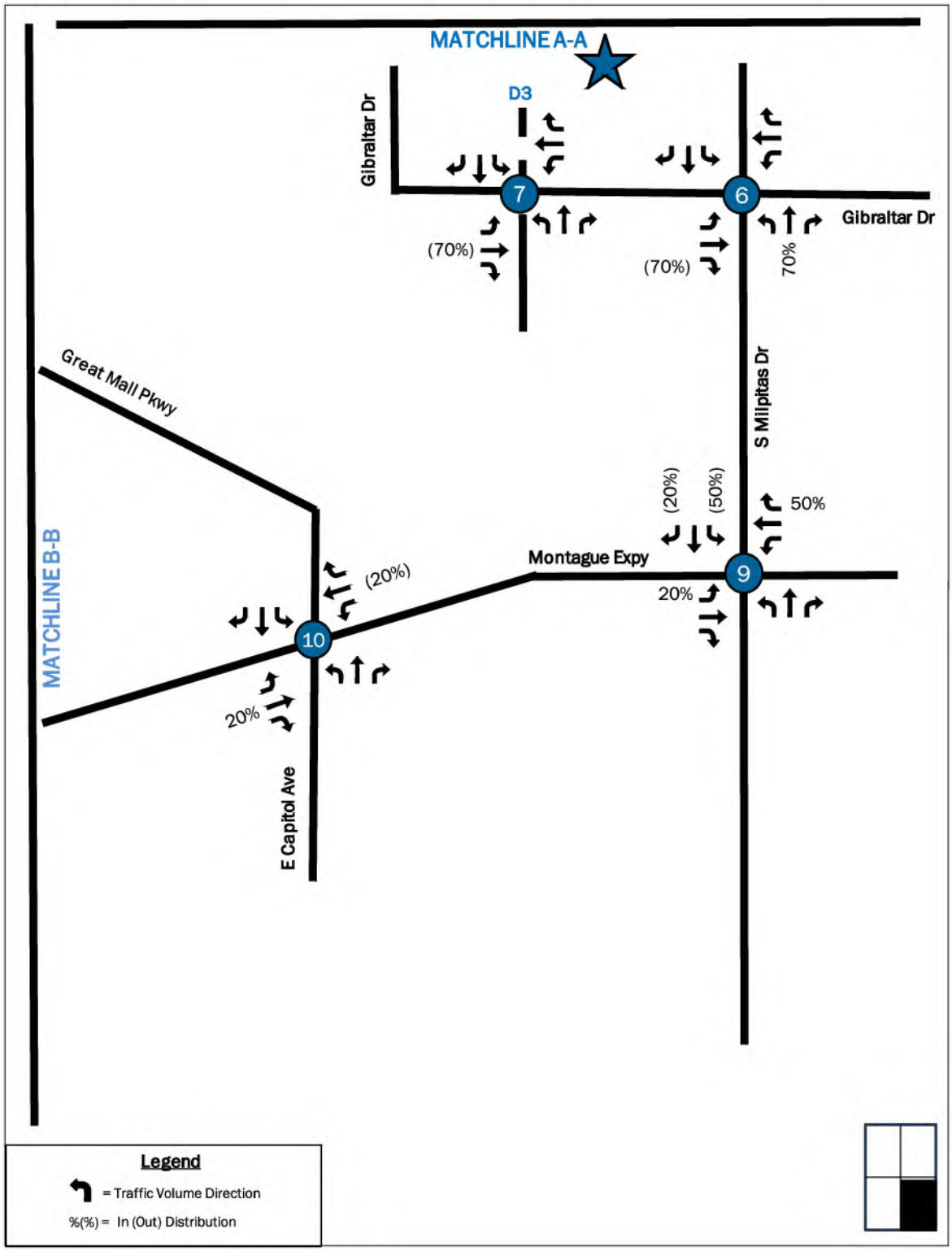


Figure 15: Project Site Trips (Cars) 1

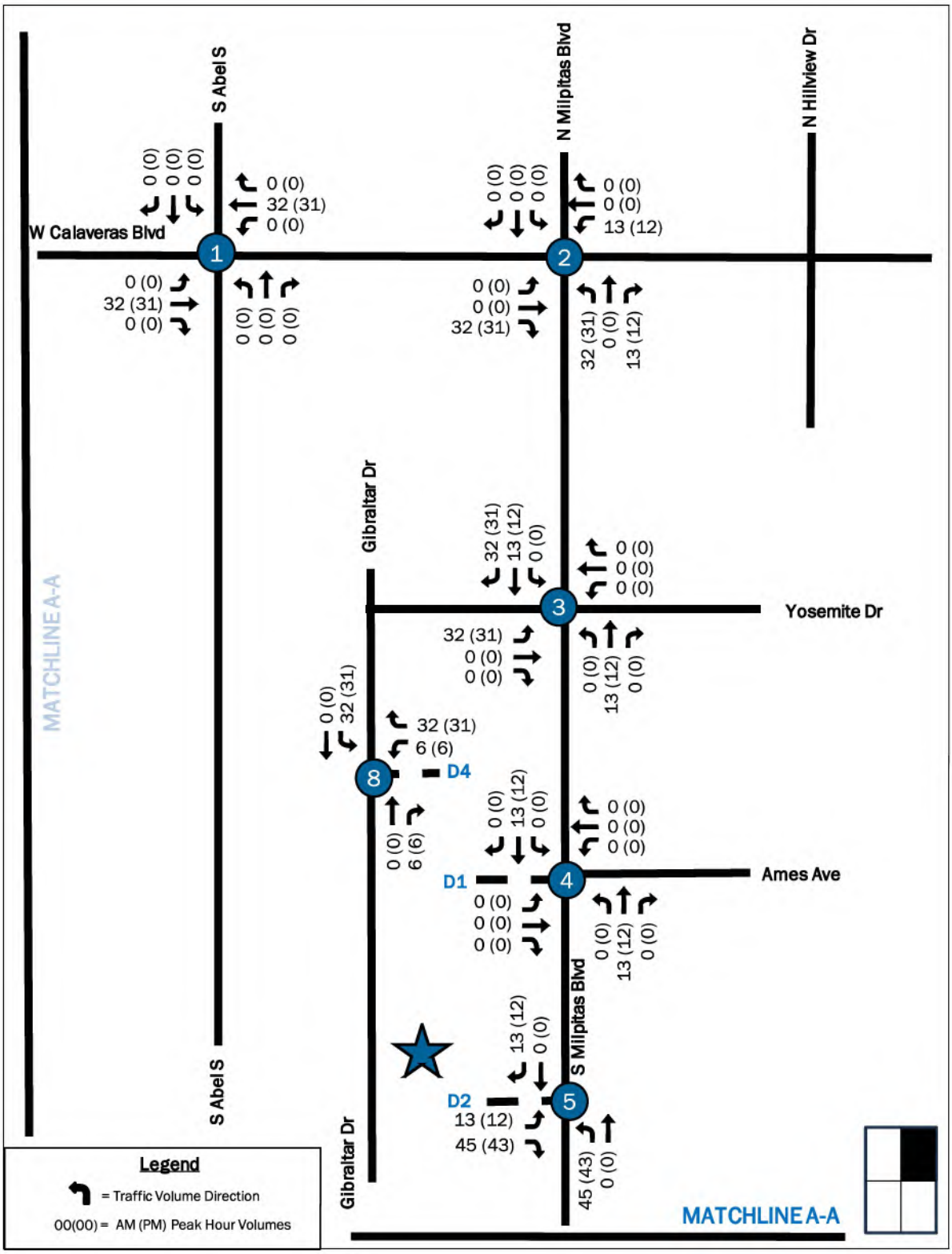


Figure 16: Project Site Trips (Cars) 2

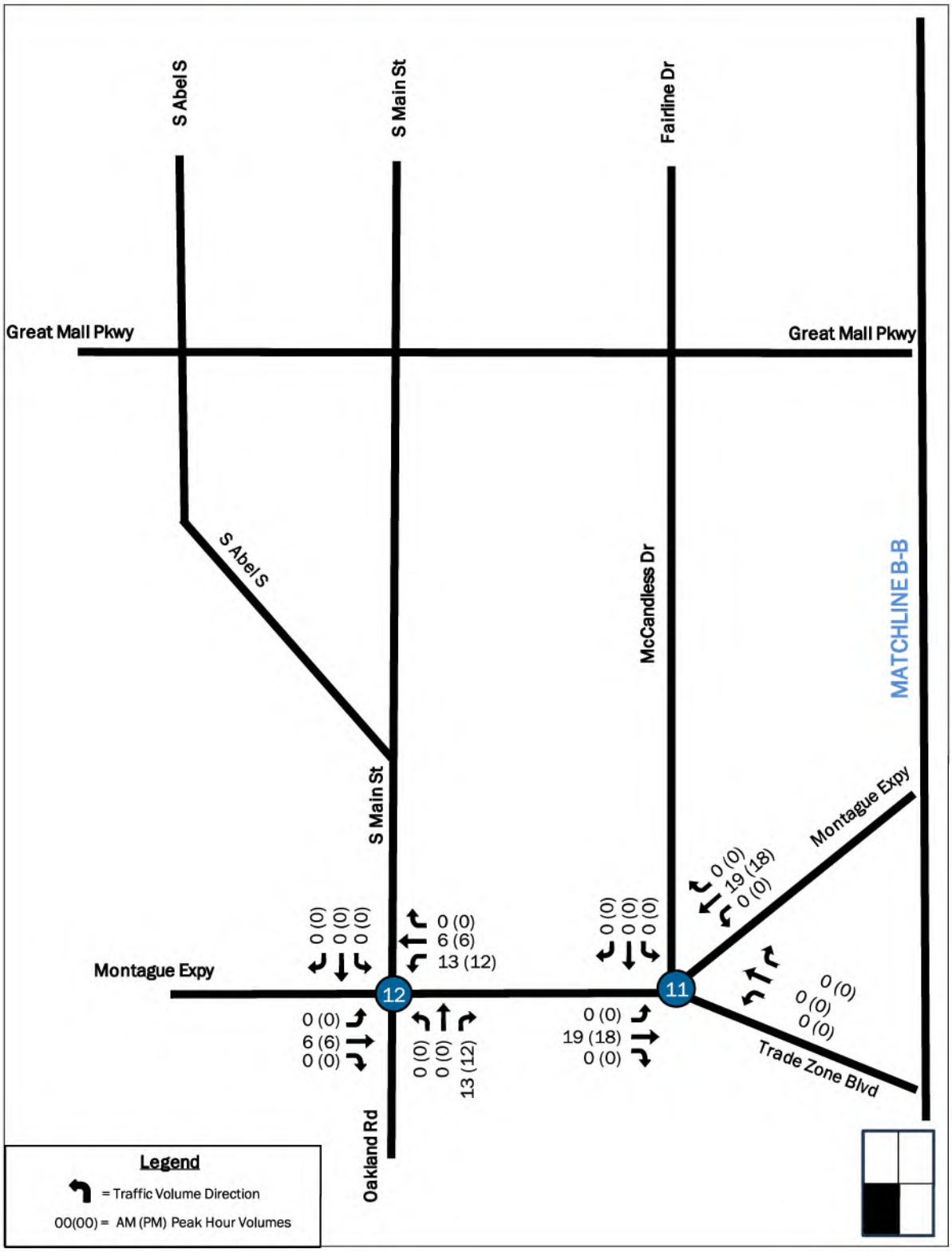


Figure 17: Project Site Trips (Cars) 3

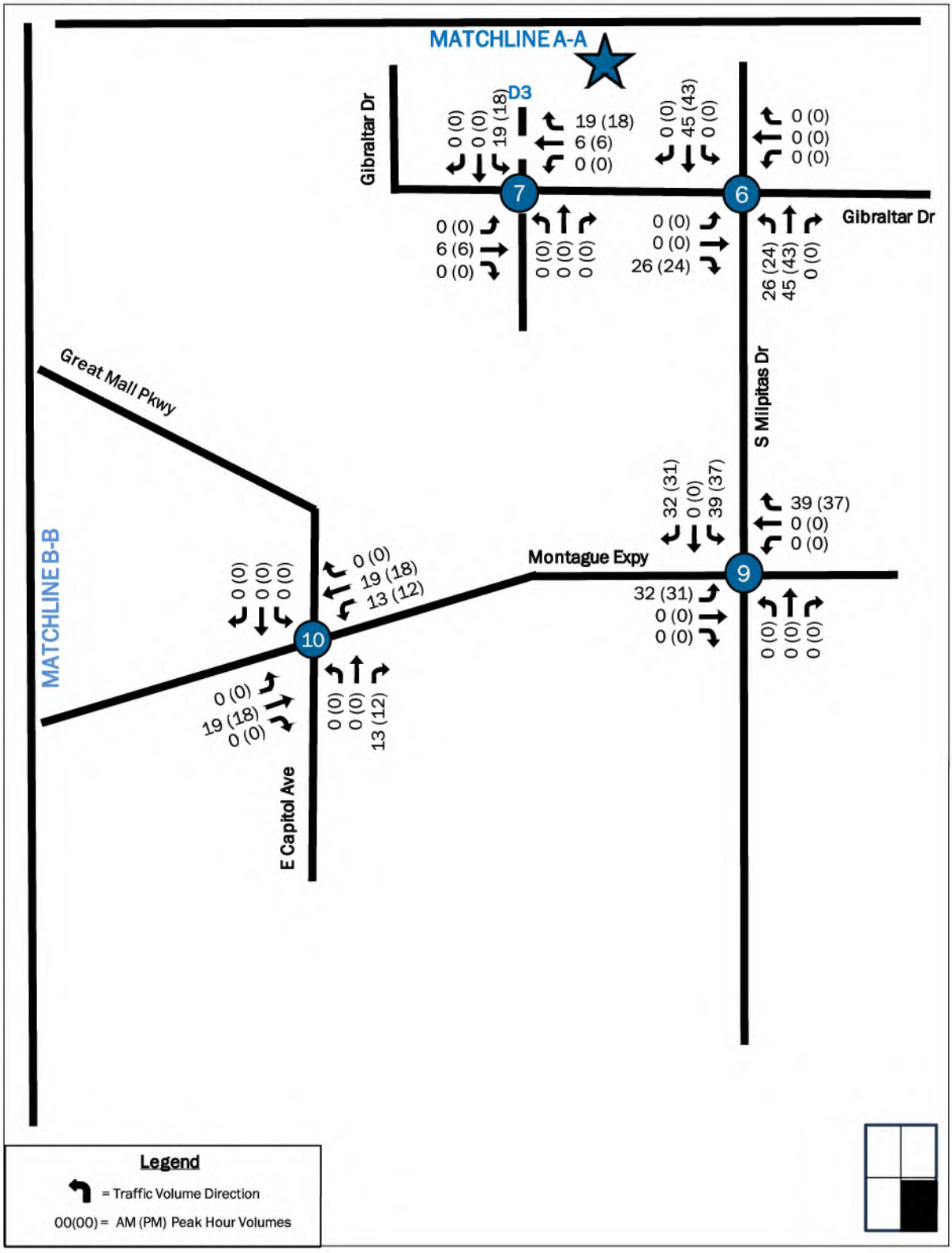


Figure 18: Project Site Trips (Trucks) 1

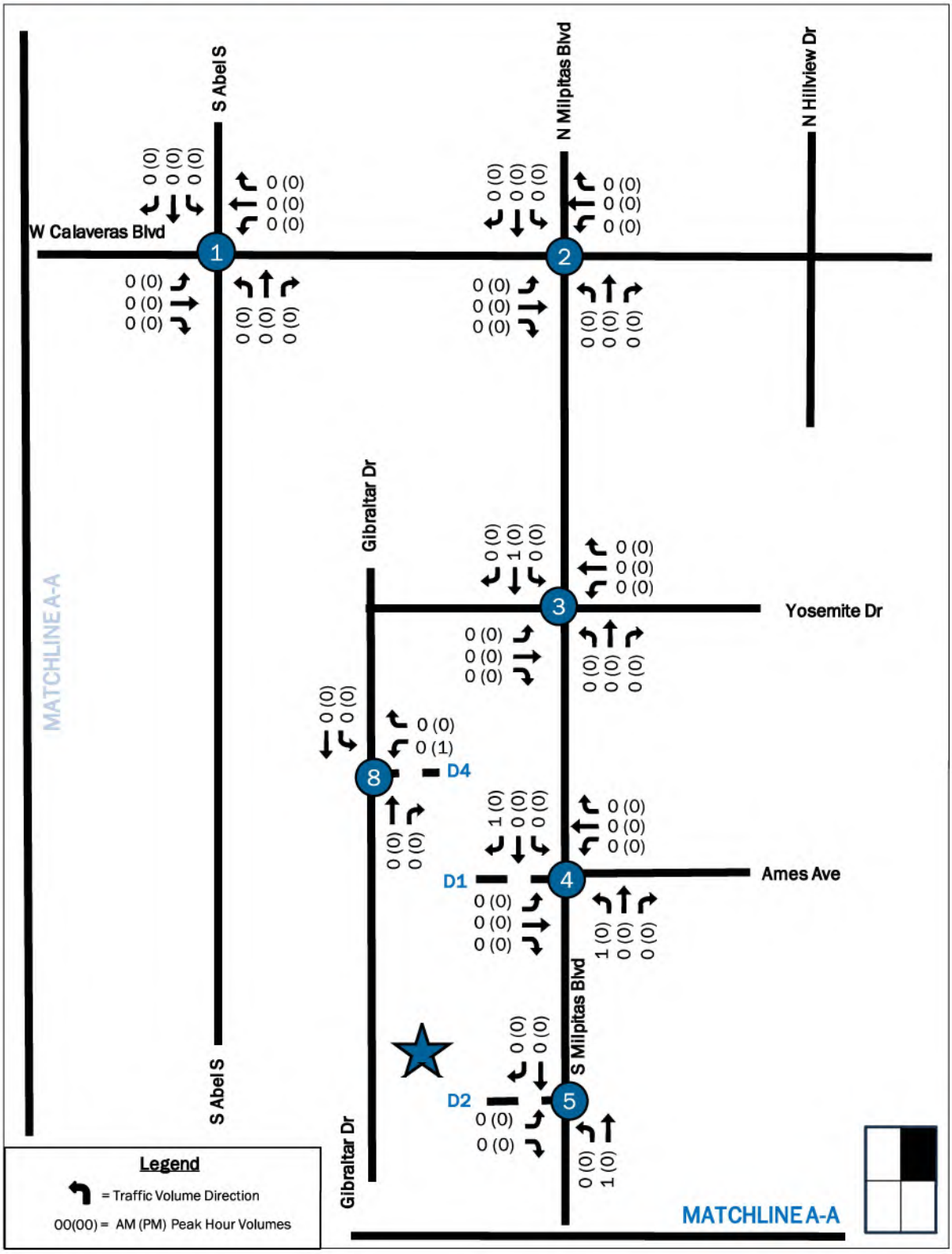


Figure 19: Project Site Trips (Trucks) 2

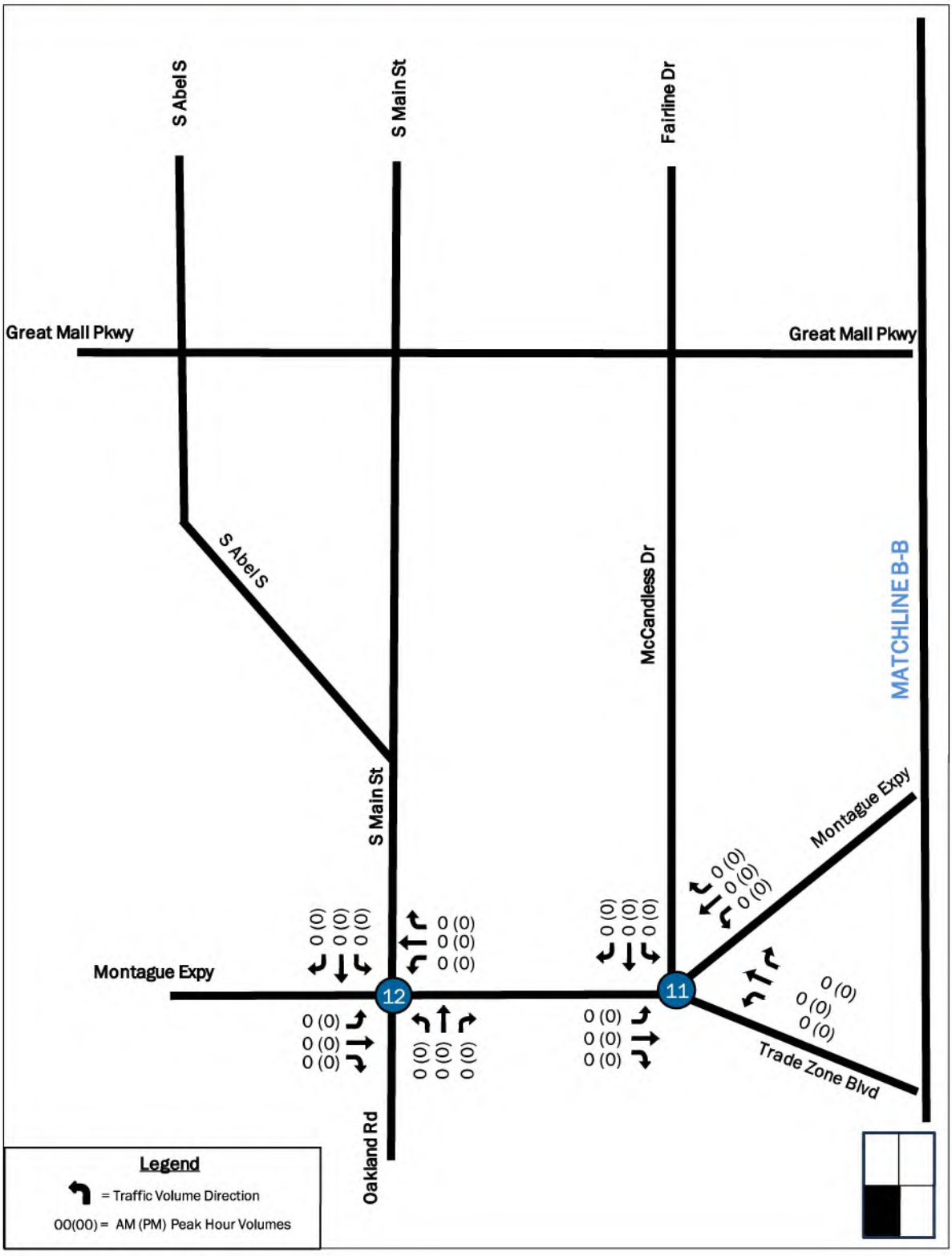


Figure 20: Project Site Trips (Trucks) 3

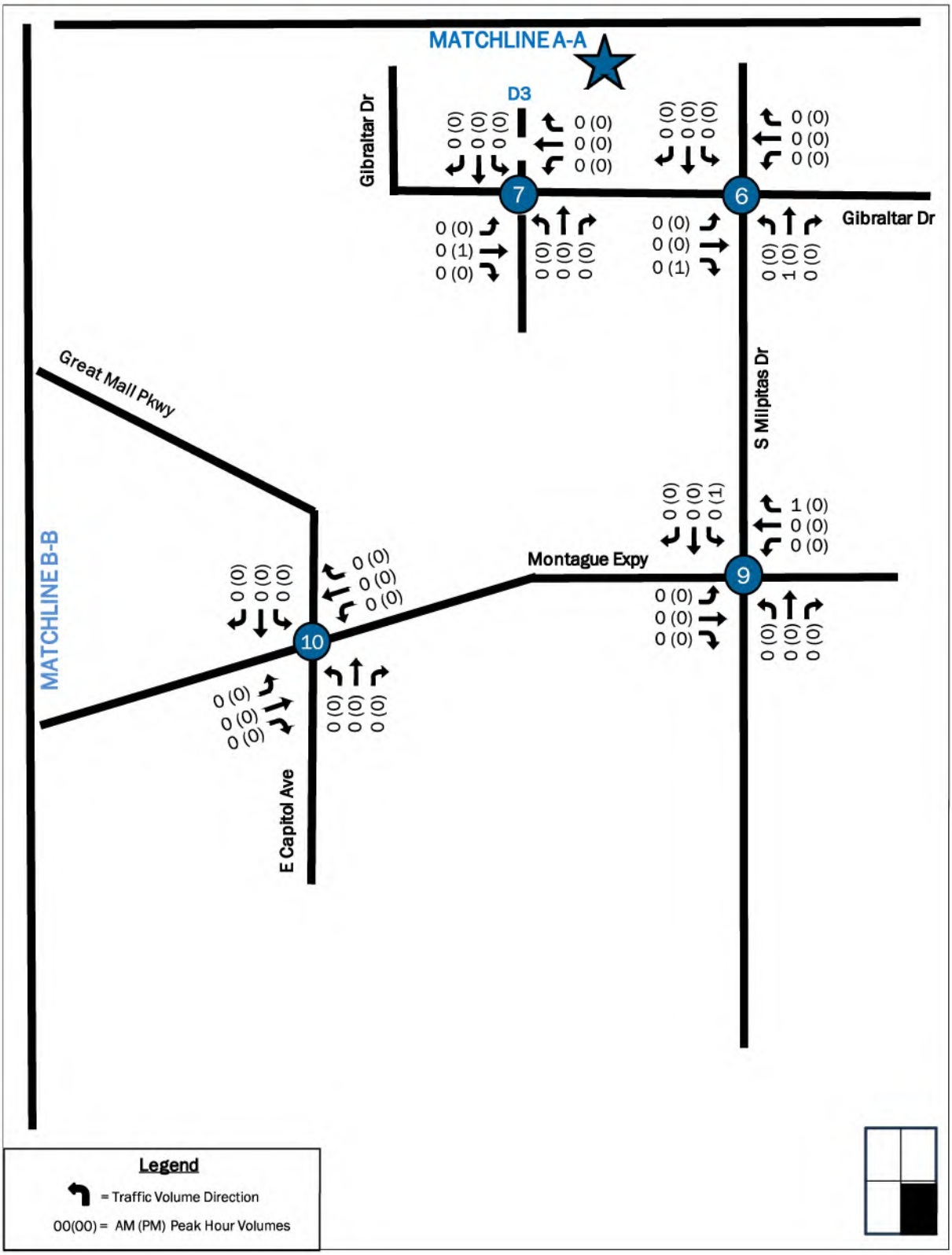


Figure 21: Project Site Trips (Cars & Trucks) 1

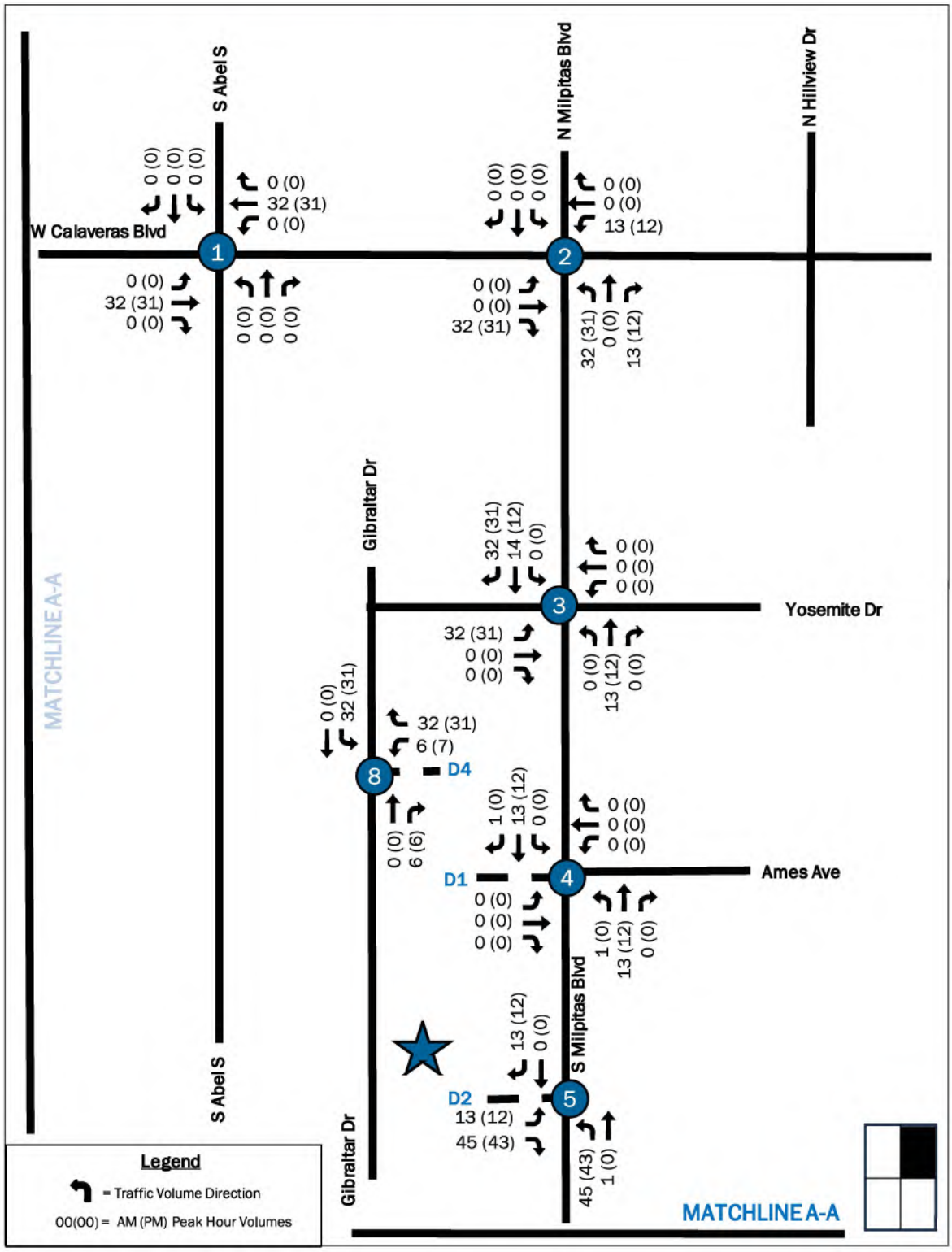


Figure 22: Project Site Trips (Cars & Trucks) 2

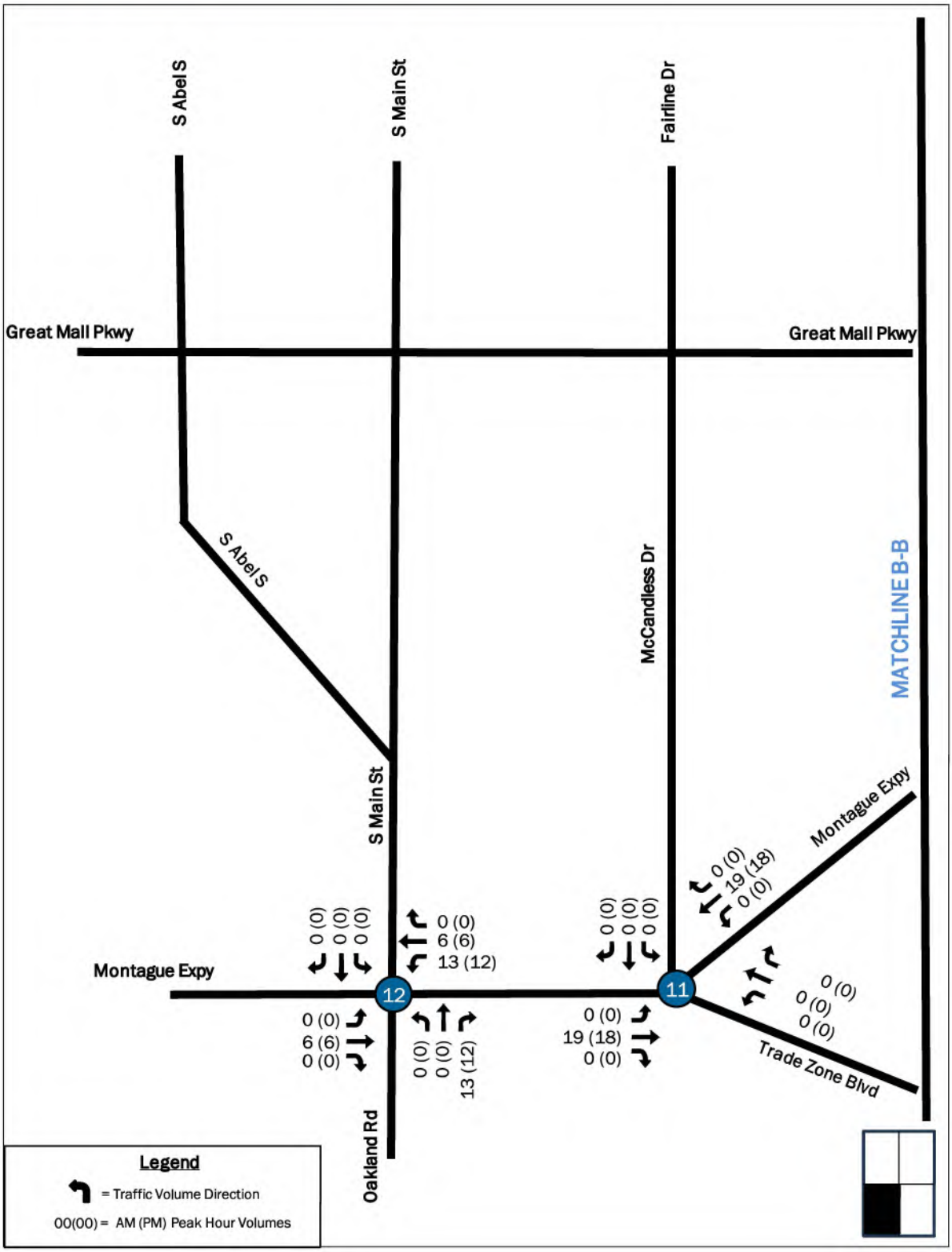
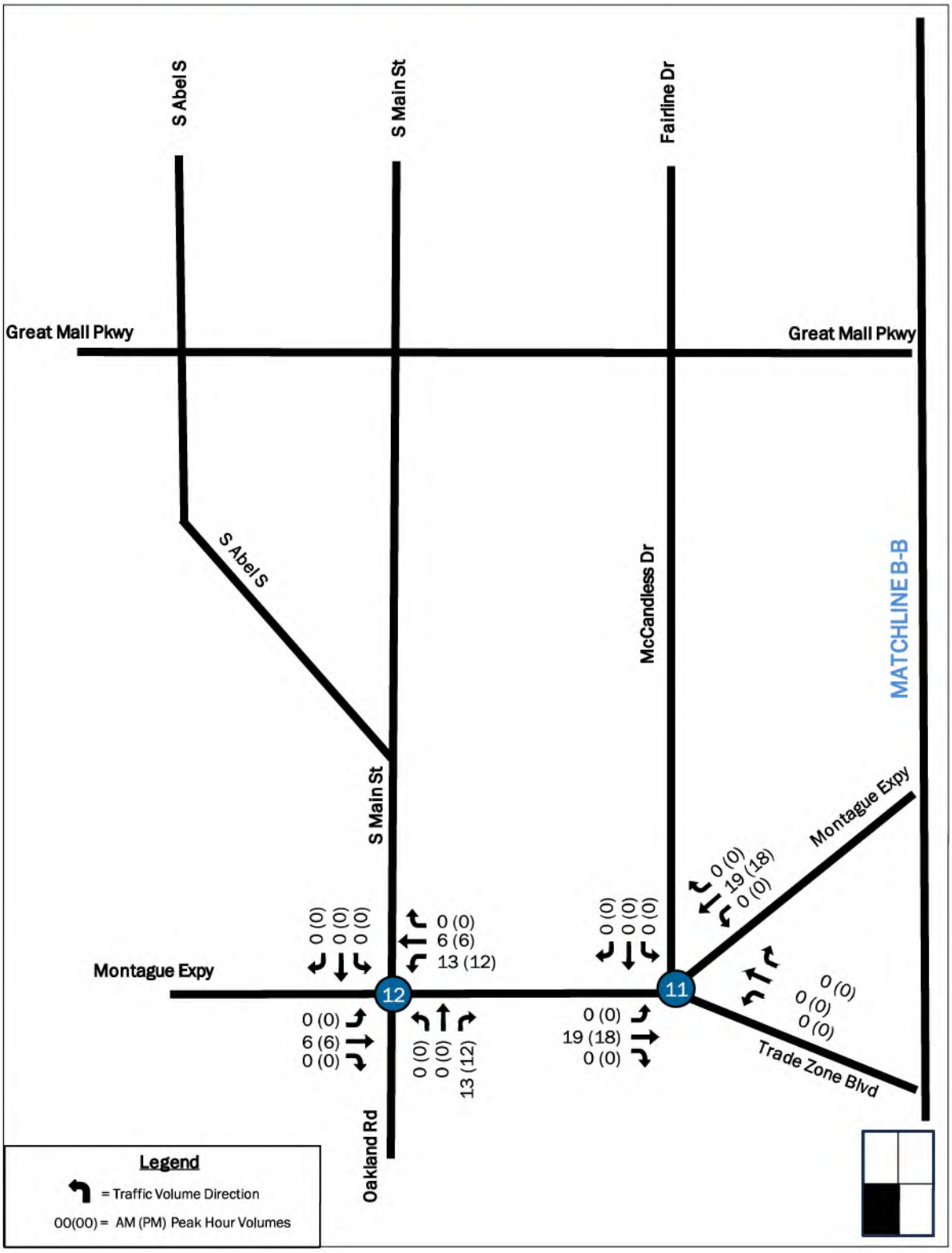


Figure 23: Project Site Trips (Cars & Trucks) 3



D. Future Traffic Conditions

D.1. Background Growth

Analysis of the area's historic development pattern, changes in nearby traffic volumes, and the anticipated completion of the Project was used to determine a growth rate for the study area's traffic. Project build-out is anticipated no later than 2026. The study uses a growth rate of 3.0% per year from Existing Year 2024 to the Horizon Year 2040. The growth rate was derived from a Project scoping memorandum based on the traffic growth patterns for the Project vicinity area. Growth rate calculations are included in Appendix B.

D.2. No Build Traffic Analysis Results

The results of the 2026 No-Build traffic capacity analysis are shown in Table 5 and represent volumes as shown in Figures 18 - 20. Future No-Build traffic volumes are demonstrated before any trips generated by the Project have been added. The City of Santa Milpitas considers LOS D as the performance standard for intersections (maintain LOS D or better). LOS E is coded as orange, and LOS F is coded as red in the Tables provided.

Figure 24: No Build (2026) Volumes 1

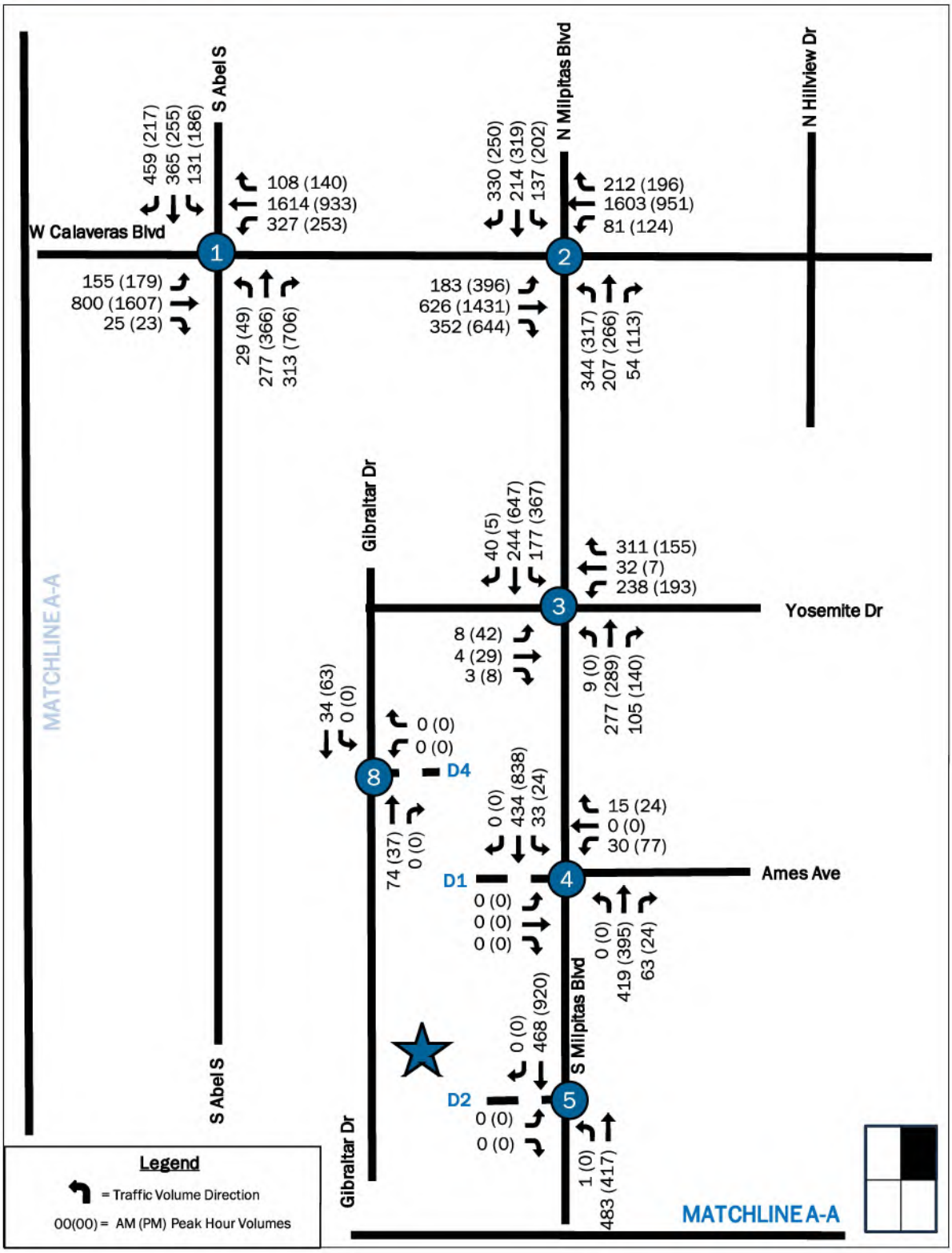


Figure 25: No Build (2026) Volumes 2

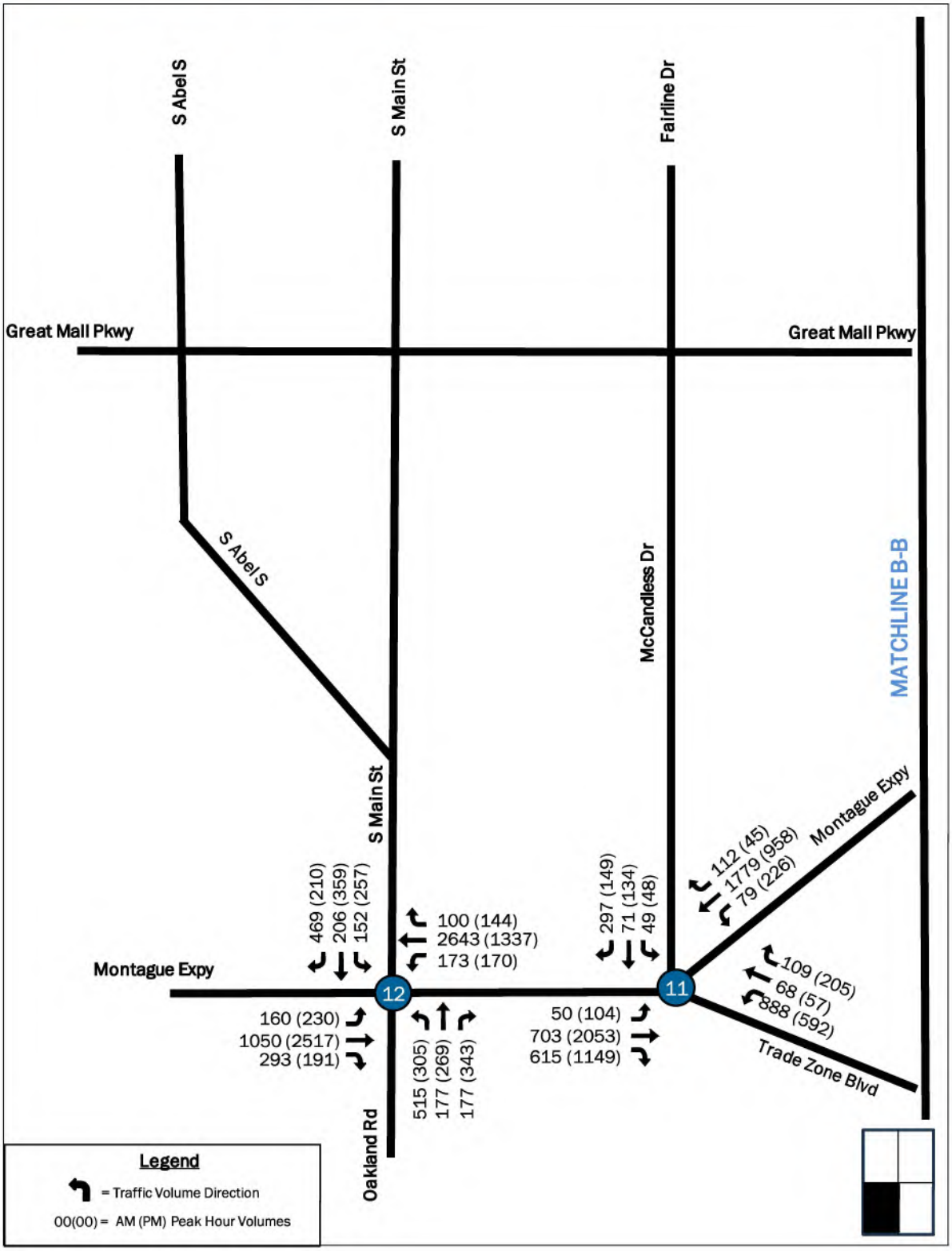


Figure 26: No Build (2026) Volumes 3

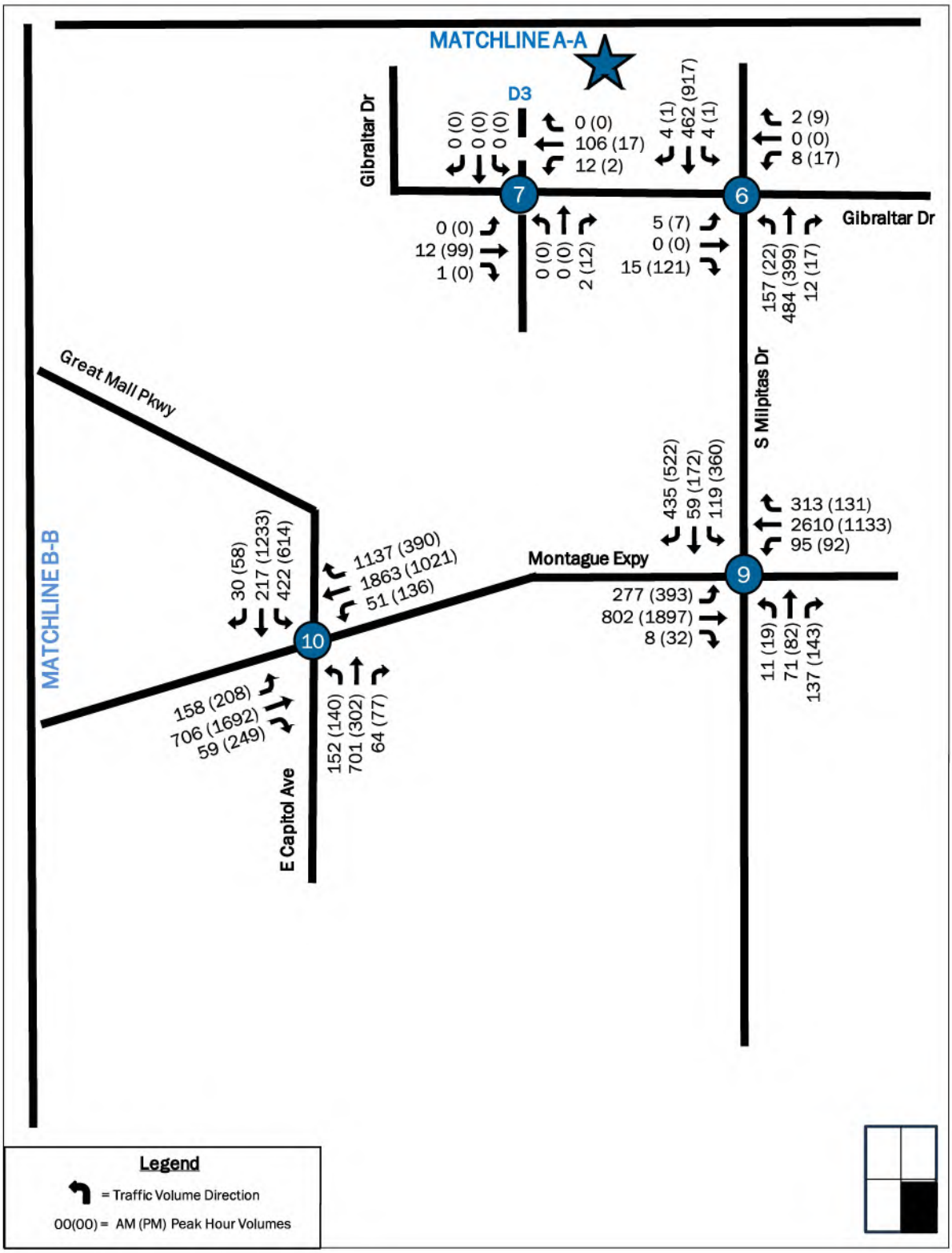


Table 5: No Build (2026) Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	West Calaveras Boulevard & South Abel Street	Signal	**Overall**	**D**	**52.8**	**F**	**117.3**
			EB	D	38.9	D	41.8
			WB	D	41.7	D	35.1
			NB	E	66.4	F	351.8
			SB	F	80.3	E	70.8
2	E Calaveras Boulevard & Milpitas Boulevard	Signal	**Overall**	**D**	**39.3**	**D**	**40.4**
			EB	C	32.1	D	40.5
			WB	D	42.0	D	38.8
			NB	D	40.9	D	41.0
			SB	D	40.6	D	42.6
3	S Milpitas Boulevard & Yosemite Drive	Signal	**Overall**	**C**	**33.7**	**C**	**33.3**
			EB	C	34.2	D	42.9
			WB	D	41.5	D	48.4
			NB	C	20.7	B	18.8
			SB	C	27.4	C	33.3
4	S Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	**Overall**	**A**	**5.8**	**A**	**6.7**
			WB	D	44.9	D	42.2
			NB	A	2.9	A	3.9
			SB	A	4.9	A	3.9
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	A	8.5	A	0.0
			EB	A	0.0	A	0.0
6	South Milpitas Boulevard & Gibraltar Drive	Signal	**Overall**	**B**	**15.0**	**A**	**7.1**
			WB	F	113.1	F	108.1
			NB	B	18.8	A	6.6
			SB	A	7.6	A	4.6
7	Gibraltar Drive & Driveway 3	Stop-Control	NB	A	8.4	A	9.0
			WBL	A	7.3	A	7.5
9	South Milpitas Drive & Montague Expressway	Signal	**Overall**	**F**	**90.6**	**F**	**84.2**
			EB	D	56.6	E	57.7
			WB	F	92.9	E	57.3
			NB	E	67.2	E	67.8
			SB	F	148.1	F	180.9
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	**Overall**	**F**	**103.6**	**E**	**73.8**
			EB	D	46.3	D	48.6
			WB	F	112.9	D	48.0
			NB	F	122.2	F	117.3
			SB	F	112.2	F	111.0

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	**Overall**	**D**	**55.2**	**F**	**83.2**
			EB	B	17.3	F	103.9
			WB	B	16.3	C	26.9
			NB	F	185.3	F	85.0
			SB	E	68.2	E	67.0
12	Montague Expressway & South Main Street/Oakland Road	Signal	**Overall**	**E**	**78.0**	**D**	**51.9**
			EB	C	36.4	D	46
			WB	E	70.2	D	35.2
			NB	F	179.4	F	87.8
			SB	F	83.2	F	85.9

Based on the 2026 No Build analysis results; the following intersections exhibit an overall LOS of E or worse during the AM and/or PM peak hours:

- West Calaveras Boulevard & South Abel Street (CMP)
- South Milpitas Drive & Montague Expressway (CMP)
- Great Mall Parkway/East Capitol Avenue & Montague Expressway (CMP)
- Montague Expressway & McCandless Drive/Trade Center Boulevard (CMP)
- Montague Expressway & South Main Street/Oakland Road (CMP)

Additionally South Milpitas Boulevard and Gibraltar Drive displayed an LOS F for the westbound approach to the intersection.

Table 6 summarizes the projected queue lengths for each movement within the study area under 2026 No-Build Conditions. Queueing conditions remain consistent with existing conditions in terms of available storage and impacts on adjacent movements, with one exception: the eastbound left-turn movement at Montague Expressway & South Main Street/Oakland Road during the PM peak is projected to slightly exceed the available turn lane storage.

Table 6: No Build (2026) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
1	West Calaveras Boulevard & South Abel Street	Signal	EBL	245	191	203
			EBT	-	252	606
			EBR	-	0	0
			WBL	250	441	279
			WBT	-	630	273
			WBR	-	29	46
			NBL	230	56	77
			NBT	-	147	178
			NBR	285	78	568
			SBL	285	227	321
			SBT	-	190	128
			SBR	285	96	63
2	East Calaveras Boulevard & Milpitas Boulevard	Signal	EBL	460	106	195
			EBT	-	177	530
			EBR	200	68	387
			WBL	215	108	150
			WBT	-	600	307
			WBR	270	89	59
			NBL	215	171	157
			NBT	-	108	135
			NBR	185	0	38
			SBL	215	76	106
			SBT	-	115	164
			SBR	-	83	71
3	South Milpitas Boulevard & Yosemite Drive	Signal	EBL	-	16	51
			EBT	-	15	49
			WBL	-	272	229
			WBT	-	109	64
			NBL	170	24	0
			NBT	-	130	142
			SBL	250	180	317
			SBT	-	78	111
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	WBT	-	19	63
			NBT	-	72	72
			SBL	140	47	38
			SBT	-	30	89

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	-	0	0
			NBT	-	0	0
			EBL	-	0	0
			SBT	-	0	0
6	South Milpitas Boulevard & Gibraltar Drive	Signal	EBL	100	19	22
			EBR	-	0	62
			WBT	-	0	0
			NBL	130	210	50
			NBT	-	106	97
			SBL	75	17	7
			SBT	-	371	825
			SBR	-	0	0
7	Gibraltar Drive & Driveway 3	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	0	0
			WBT	-	0	0
			NBL	-	0	3
			SBL	-	0	0
			SBT	-	0	0
8	South Milpitas Drive & Montague Expressway	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	0	0
			SBL	-	0	0
9	South Milpitas Drive & Montague Expressway	Signal	EBL	600	280	377
			EBT	-	270	725
			WBL	300	116	110
			WBT	-	1451	433
			WBR	200	370	93
			NBL	185	22	29
			NBT	-	86	93
			SBL	215	134	424
			SBT	-	63	152
			SBR	215	223	390

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	EBL	680	200	247
			EBT	-	247	725
			EBR	385	9	146
			WBL	400	80	173
			WBT	-	839	415
			WBR	240	2465	279
			NBL	350	194	178
			NBT	-	511	214
			NBR	385	0	13
			SBL	365	462	683
			SBT	-	141	807
			SBR	-	0	14
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	EBL	190	90	153
			EBT	-	199	887
			EBR	230	79	1352
			WBL	250	124	282
			WBT	-	605	290
			WBR	-	46	0
			NBL	175	331	234
			NBT	-	390	280
			NBR	-	50	71
			SBL	170	61	64
			SBT	-	91	168
			SBR	165	82	64
12	Montague Expressway & South Main Street/Oakland Road	Signal	EBL	190	150	195
			EBT	-	371	1277
			EBR	230	63	129
			WBL	250	161	152
			WBT	-	1530	482
			WBR	-	51	68
			NBL	175	571	252
			NBT	-	151	221
			NBR	-	76	321
			SBL	170	144	213
			SBT	-	180	290
			SBR	165	784	83

Queuing at the following intersections, highlighted in red in Table 6 above, have exceeded the storage length provided during the AM and/or PM peak hour. The non-CMP intersections are bolded for reference.

- West Calaveras Boulevard & South Abel Street: The westbound left, northbound right, and southbound left movements exceeded the storage length provided during the AM and/or PM peak hours.
- East Calaveras Boulevard & Milpitas Boulevard: The eastbound right movement has exceeded the storage length provided during the PM peak hour.
- **South Milpitas Boulevard & Yosemite Drive**: The southbound left has exceeded the storage length provided during the PM peak hour.
- **South Milpitas Boulevard & Gibraltar Drive**: The northbound left has exceeded the storage length provided during the AM peak hour.
- South Milpitas Drive & Montague Expressway: The westbound right, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.
- Great Mall Parkway/East Capitol Avenue & Montague Expressway: The westbound right and southbound left have exceeded the storage during both the AM and PM peak hour.
- Montague Expressway & McCandless Drive/Trade Center Boulevard: The eastbound left, eastbound right, westbound left, and northbound left have exceeded the storage length provided during the AM and/or PM peak hour.
- Montague Expressway & South Main Street/Oakland Road: The eastbound left, northbound left, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.

D.3. Future Traffic with Proposed Development

Peak hour site traffic volumes were distributed to study area roadways based on the trip distribution percentages discussed in Section C.3. These volumes were added to No-Build (2026) volumes to determine operating conditions in the Build scenario.

D.4. Build 2026 Traffic Analysis Results

The results of the Build (2026) traffic capacity are shown in Table 7. Figure 21 – 23 illustrates the Build traffic volumes. All the intersections continue to operate at the same LOS. With the addition of site traffic, intersections in the study area are anticipated to operate similarly to the No-Build condition, without significant impacts on traffic operations during peak hours except for the two intersections listed above. Intersections with inadequate LOS show some increase in delay with increased volume.

Table 7: Build (2026) Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	West Calaveras Boulevard & South Abel Street	Signal	**Overall**	**D**	**52.9**	F	**116.5**
			EB	D	39.1	D	42.6
			WB	D	42.2	D	35.1
			NB	E	66.4	F	351.8
			SB	F	80.3	E	70.9
2	East Calaveras Boulevard & Milpitas Boulevard	Signal	**Overall**	**D**	**39.7**	**D**	**41.0**
			EB	C	32.6	D	41.4
			WB	D	42.1	D	39.0
			NB	D	41.6	D	41.6
			SB	D	40.6	D	42.6
3	South Milpitas Boulevard & Yosemite Drive	Signal	**Overall**	**C**	**33.4**	**C**	**32.9**
			EB	C	32.4	D	41.0
			WB	D	46.5	D	47.1
			NB	C	22.5	B	20.0
			SB	C	27.1	C	32.7
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	**Overall**	**A**	**6.2**	A	**6.7**
			WB	D	44.9	D	42.2
			NB	A	3.2	A	3.9
			SB	A	5.7	A	3.9
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	A	8.7	B	10.4
			EB	B	11.5	B	14.8
6	South Milpitas Boulevard & Gibraltar Drive	Signal	**Overall**	**B**	**16.1**	**A**	**8.7**
			WB	F	118.7	F	108.1
			NB	B	19.7	A	9.2
			SB	A	9.0	A	5.9
7	Gibraltar Drive & Driveway 3	Stop-Control	NB	A	8.5	A	9.0
			WBL	A	7.3	A	7.5
			SB	B	10.0	A	9.8
8	Gibraltar Drive & Driveway 4	Stop-Control	WB	A	9.0	A	9.1
			SBL	A	7.5	A	7.4
9	South Milpitas Drive & Montague Expressway	Signal	**Overall**	**F**	**99.7**	**F**	**92.1**
			EB	E	58.1	E	58.7
			WB	F	101.6	E	58.6
			NB	E	67.2	E	67.8
			SB	E	169.2	F	208.9

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	**Overall**	F	**103.3**	E	**74.1**
			EB	D	46.4	D	49.8
			WB	F	112.6	D	48.5
			NB	F	122.2	F	117.3
			SB	F	112.2	F	111.0
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	**Overall**	D	**54.9**	F	**82.8**
			EB	B	17.3	F	103.5
			WB	B	16.8	C	26.8
			NB	F	185.3	F	85.0
			SB	E	68.2	E	67.0
12	Montague Expressway & South Main Street/Oakland Road	Signal	**Overall**	E	**78.4**	D	**52.5**
			EB	D	36.8	D	46.9
			WB	E	70.9	D	35.6
			NB	F	179.4	F	87.6
			SB	F	83.2	F	85.9

Based on the 2026 Build analysis results, the following intersections exhibit on overall LOS of E or worse during the AM and/or PM peak hours:

- West Calaveras Boulevard & South Abel Street (CMP)
- South Milpitas Drive & Montague Expressway (CMP)
- Great Mall Parkway/East Capitol Avenue & Montague Expressway (CMP)
- Montague Expressway & McCandless Drive/Trade Center Boulevard (CMP)
- Montague Expressway & South Main Street/Oakland Road (CMP)

Additionally, South Milpitas Boulevard and Gibraltar Drive exhibits an LOS F on the westbound approach during both the AM and PM peak hour.

Table 8 summarizes the corresponding queue lengths for every movement in the study area for 2026 Build Conditions. All queues remain consistent with 2026 No-Build conditions on whether there is sufficient space without impacting neighboring movements.

Table 8: Build (2026) Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
1	West Calaveras Boulevard & South Abel Street	Signal	EBL	245	191	203
			EBT	-	264	624
			EBR	-	0	0
			WBL	250	441	279
			WBT	-	651	283
			WBR	-	29	46
			NBL	230	56	77
			NBT	-	147	178
			NBR	285	78	568
			SBL	285	227	321
			SBT	-	190	128
			SBR	285	96	63
2	East Calaveras Boulevard & Milpitas Boulevard	Signal	EBL	460	106	195
			EBT	-	180	542
			EBR	200	72	418
			WBL	215	122	161
			WBT	-	600	307
			WBR	270	89	59
			NBL	215	187	171
			NBT	-	108	135
			NBR	185	0	48
			SBL	215	76	106
			SBT	-	115	164
			SBR	-	83	71
3	South Milpitas Boulevard & Yosemite Drive	Signal	EBL	-	46	77
			EBT	-	15	49
			WBL	-	270	178
			WBT	-	109	64
			NBL	170	24	0
			NBT	-	137	147
			SBL	250	180	317
			SBT	-	87	118
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	WBT	-	19	63
			NBT	-	75	75
			SBL	140	47	38
			SBT	-	59	91

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	-	3	5
			NBT	-	0	0
			EBL	-	8	13
			SBT	-	0	0
6	South Milpitas Boulevard & Gibraltar Drive	Signal	EBL	100	20	22
			EBR	-	0	67
			WBT	-	0	0
			NBL	130	249	82
			NBT	-	116	110
			SBL	75	17	1
			SBT	-	450	1074
			SBR	-	0	0
7	Gibraltar Drive & Driveway 3	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	0	0
			WBT	-	0	0
			NBL	-	0	3
			SBL	-	3	3
			SBT	-	0	0
8	South Milpitas Drive & Montague Expressway	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	5	5
			SBL	-	3	3
9	South Milpitas Drive & Montague Expressway	Signal	EBL	600	307	418
			EBT	-	270	725
			WBL	300	116	110
			WBT	-	1482	433
			WBR	200	443	125
			NBL	185	22	29
			NBT	-	86	93
			SBL	215	172	489
			SBT	-	63	152
			SBR	215	294	465

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	EBL	680	200	247
			EBT	-	256	740
			EBR	385	9	149
			WBL	400	95	186
			WBT	-	850	423
			WBR	240	2474	287
			NBL	350	194	178
			NBT	-	511	214
			NBR	385	16	34
			SBL	365	462	683
			SBT	-	141	807
			SBR	-	0	14
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	EBL	190	90	153
			EBT	-	205	899
			EBR	230	79	1352
			WBL	250	124	282
			WBT	-	615	260
			WBR	-	46	0
			NBL	175	331	234
			NBT	-	390	280
			NBR	-	50	71
			SBL	170	61	64
			SBT	-	91	168
			SBR	165	82	64
12	Montague Expressway & South Main Street/Oakland Road	Signal	EBL	190	150	195
			EBT	-	378	1292
			EBR	230	65	131
			WBL	250	171	160
			WBT	-	1534	485
			WBR	-	51	69
			NBL	175	571	252
			NBT	-	151	221
			NBR	-	80	360
			SBL	170	144	213
			SBT	-	180	290
			SBR	165	784	83

Queuing at the following intersections, highlighted in red in Table 8 above, have exceeded the storage length provided during the AM and/or PM peak hour. Non-CMP intersections are shown in bold for reference.

- West Calaveras Boulevard & South Abel Street: The westbound left, northbound right, and southbound left have exceeded the storage length provided during the AM and/or PM peak hour. Eastbound left and southbound right movements have surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- East Calaveras Boulevard & Milpitas Boulevard: The eastbound right has exceeded the storage length provided during the PM peak hour. The northbound right movement has surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- **South Milpitas Boulevard & Yosemite Drive**: The southbound left has exceeded the storage length provided during the PM peak hour.
- **South Milpitas Boulevard & Gibraltar Drive**: The northbound left has exceeded the storage length provided during the AM peak hour.
- South Milpitas Drive & Montague Expressway: The westbound right, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour. The eastbound left movement has surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- Great Mall Parkway/East Capitol Avenue & Montague Expressway: The westbound right and the southbound left have exceeded the storage length provided during the AM and PM peak hour.
- Montague Expressway & McCandless Drive/Trade Center Boulevard: The eastbound right, westbound left, and northbound left have exceeded the storage length provided during the AM and/or PM peak hour. The southbound right movement has surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- Montague Expressway & South Main Street/Oakland Road: The northbound left, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.

Figure 27: Build (2026) Traffic Volumes 1

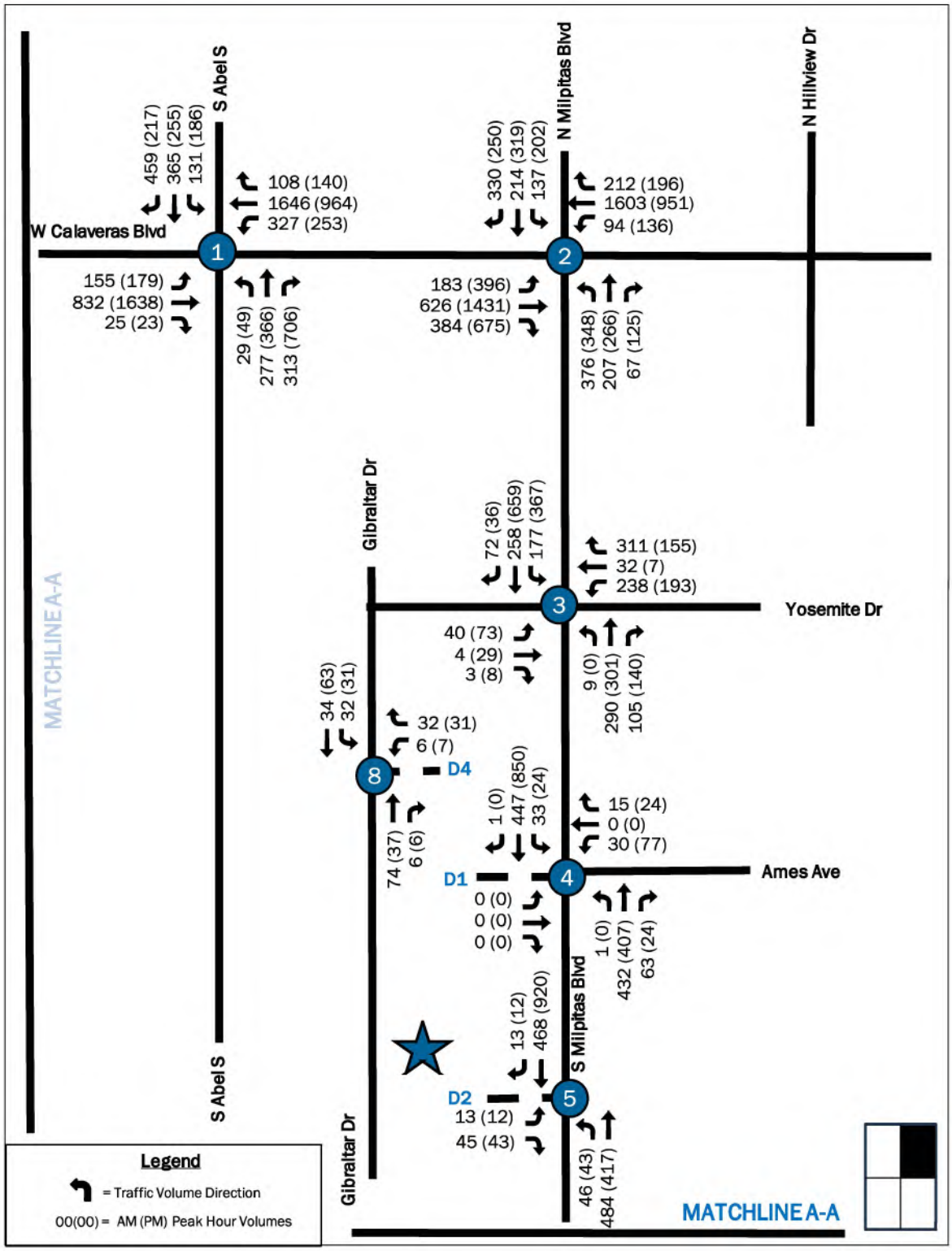


Figure 28: Build (2026) Traffic Volumes 2

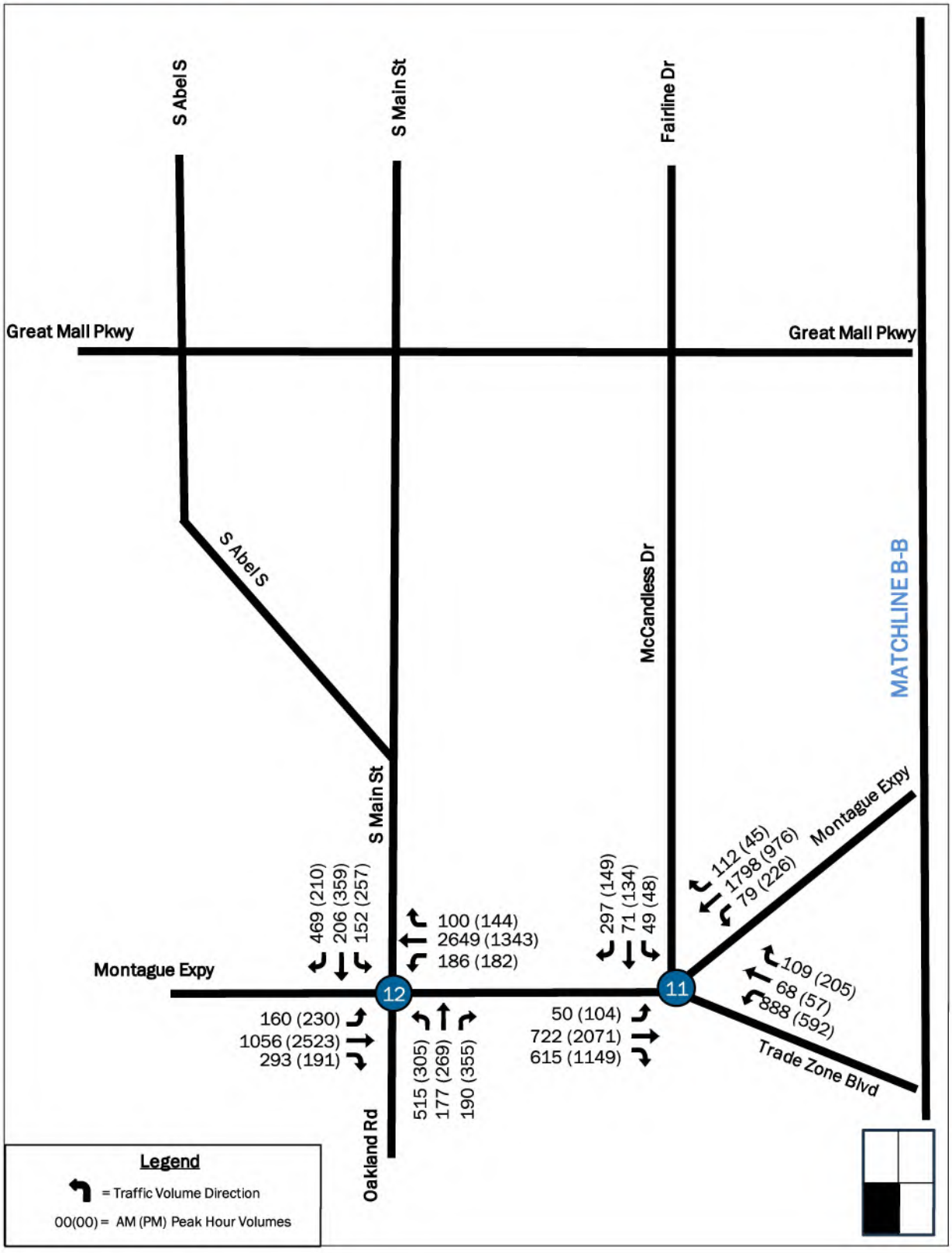
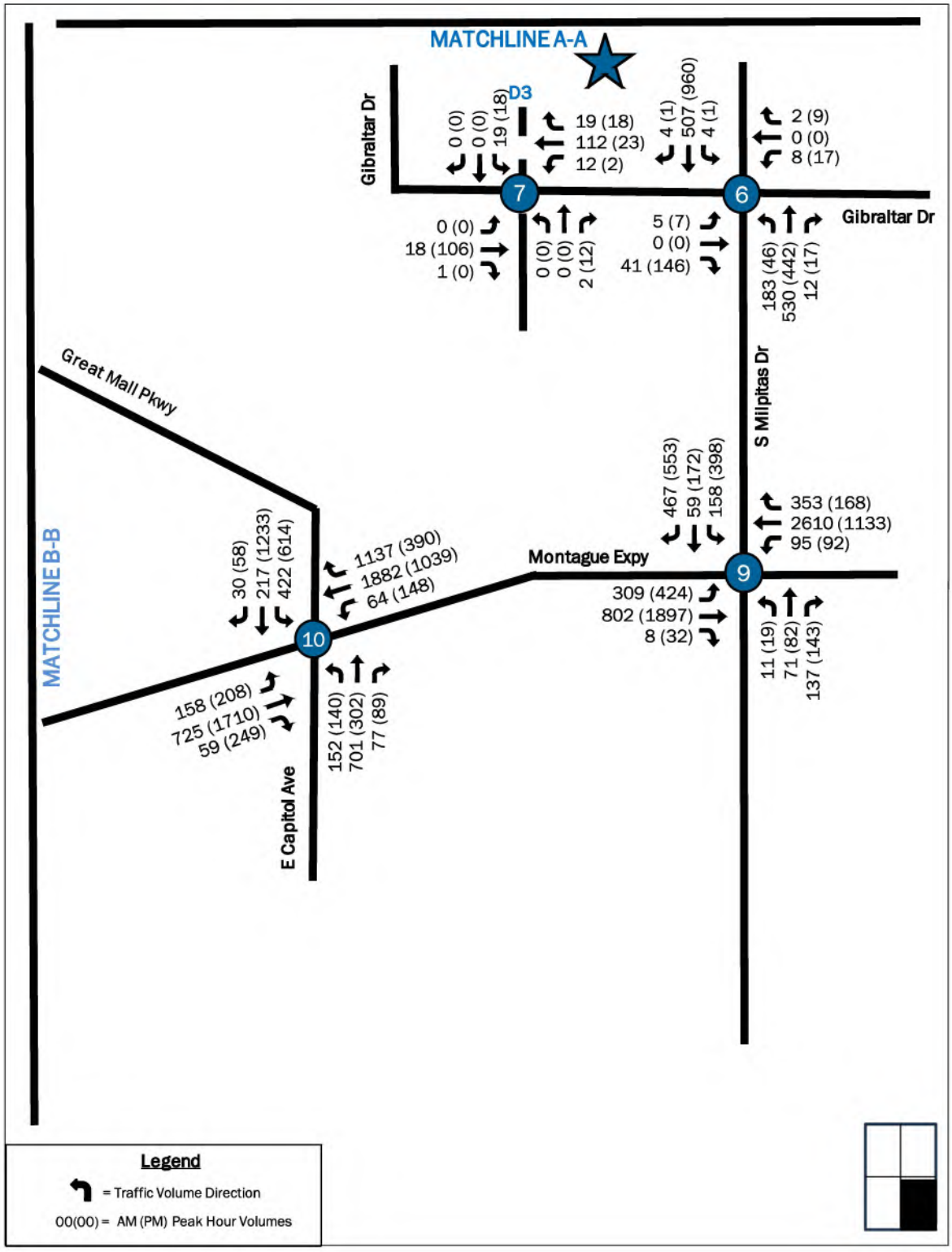


Figure 29: Build (2026) Traffic Volumes 3



D.5. Horizon Year (2040) Capacity Analysis

The results of 2040 existing plus background traffic capacity analyses are shown in Table 6 and include the analysis of the volumes shown in Figure 24 – 26.

D.6. Horizon Year (2040) No-Build Traffic Analysis Results

As shown in Table 9, most study intersections are projected to experience increased delay per approach and a decline in overall Level of Service (LOS) by the Horizon Year (2040) No-Build scenario, relative to the 2026 No-Build capacity conditions. The intersection of East Calaveras and Milpitas Boulevard operations degraded from LOS D to LOS E between the 2026 and 2040 No-Build conditions. South Milpitas Boulevard at Yosemite Drive degraded from LOS D to LOS E between scenarios.

Table 9: Horizon Year (2040) No-Build Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	West Calaveras Boulevard & South Abel Street	Signal	**Overall**	**F**	**146.0**	**F**	**248.3**
			EB	D	43.1	F	212.4
			WB	F	175.2	D	43.9
			NB	F	141.7	F	592.9
			SB	F	192.3	F	127.1
2	East Calaveras Boulevard & Milpitas Boulevard	Signal	**Overall**	**F**	**115.8**	**F**	**96.0**
			EB	C	34.8	F	136.6
			WB	F	195.6	F	84.2
			NB	D	44.8	D	44.5
			SB	D	42.4	D	46.5
3	South Milpitas Boulevard & Yosemite Drive	Signal	**Overall**	**D**	**50.1**	**E**	**65.4**
			EB	C	31.5	D	38.7
			WB	E	77.8	D	50.0
			NB	C	30.3	C	24.7
			SB	C	32.8	F	89.9
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	**Overall**	**A**	**6.6**	**A**	**8.1**
			WB	D	44.0	D	40.6
			NB	A	4.0	A	5.5
			SB	A	5.6	A	5.5
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	A	9.1	A	0.0
			EB	A	0.0	A	0.0

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
6	South Milpitas Boulevard & Gibraltar Drive	Signal	**Overall**	**B**	**18.2**	**B**	**12.1**
			WB	F	112.9	F	93.2
			NB	C	20.6	A	6.6
			SB	B	12.9	B	12.4
7	Gibraltar Drive & Driveway 3	Stop-Control	NB	A	8.5	A	9.3
			WBL	A	7.3	A	7.6
9	South Milpitas Drive & Montague Expressway	Signal	**Overall**	**F**	**241.5**	**F**	**132.1**
			EB	E	60.7	E	77.6
			WB	F	309.6	E	66.4
			NB	E	70.5	E	71.0
			SB	F	288.3	F	351.3
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	**Overall**	**F**	**223.3**	**F**	**93.1**
			EB	E	58.4	E	68.2
			WB	F	316.3	E	66.8
			NB	F	142.7	F	101.3
			SB	F	110.1	F	149.4
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	**Overall**	**F**	**111.5**	**F**	**263.0**
			EB	C	31.3	F	368.9
			WB	C	23.3	C	33.3
			NB	F	409.5	F	201.6
			SB	F	66.2	E	64.3
12	Montague Expressway & South Main Street/Oakland Road	Signal	**Overall**	**F**	**213.8**	**F**	**139.6**
			EB	D	42.4	F	206.3
			WB	F	270.4	D	47.2
			NB	F	349.4	F	104.4
			SB	F	84.7	F	100.7

Based on the 2040 No Build analysis results; the following intersections exhibit on overall LOS of E or worse during the AM and/or PM peak hours:

- West Calaveras Boulevard & South Abel Street (CMP)
- East Calaveras Boulevard & Milpitas Boulevard (CMP)
- South Milpitas Boulevard & Yosemite Drive (non-CMP)
- South Milpitas Drive & Montague Expressway (CMP)
- Great Mall Parkway/East Capitol Avenue & Montague Expressway (CMP)
- Montague Expressway & McCandless Drive/Trade Center Boulevard (CMP)
- Montague Expressway & South Main Street/Oakland Road (CMP)

Additionally, South Milpitas Boulevard and Gibraltar Drive exhibits an LOS F on the westbound approach during both the AM and PM peak hour.

Table 10 summarizes the corresponding queue lengths for every movement in the study area for 2040 No-Build Conditions. Most queues remain consistent with 2026 No-Build conditions on whether there is sufficient space without impacting neighboring movements. Additional movements that experience insufficient queuing space are noted.

Table 10: Horizon Year (2040) No-Build Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
1	West Calaveras Boulevard & South Abel Street	Signal	EBL	245	249	266
			EBT	-	378	1003
			EBR	-	0	0
			WBL	250	715	467
			WBT	-	1140	488
			WBR	-	70	72
			NBL	230	72	99
			NBT	-	204	254
			NBR	285	153	1086
			SBL	285	343	467
			SBT	-	272	180
			SBR	285	399	75
2	E Calaveras Boulevard & Milpitas Boulevard	Signal	EBL	460	138	273
			EBT	-	68	903
			EBR	200	87	851
			WBL	215	140	199
			WBT	-	1032	568
			WBR	270	179	89
			NBL	215	243	220
			NBT	-	149	188
			NBR	185	7	57
			SBL	215	102	145
			SBT	-	157	231
			SBR	-	289	97
3	S Milpitas Boulevard & Yosemite Drive	Signal	EBL	-	17	64
			EBT	-	17	61
			WBL	-	433	346
			WBT	-	132	76
			NBL	170	29	0
			NBT	-	225	236
			SBL	250	241	488

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
			SBT	-	127	180
4	S Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	WBT	-	35	94
			NBT	-	122	122
			SBL	140	61	47
			SBT	-	51	178
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	-	0	0
			NBT	-	0	0
			EBL	-	0	0
			SBT	-	0	0
6	South Milpitas Boulevard & Gibraltar Drive	Signal	EBL	100	23	30
			EBR	-	0	73
			WBT	-	0	0
			NBL	130	275	63
			NBT	-	161	148
			SBL	75	21	7
			SBT	-	699	1725
			SBR	-	0	0
7	Gibraltar Drive & Driveway 3	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	0	0
			WBT	-	0	0
			NBL	-	0	3
			SBL	-	0	0
			SBT	-	0	0
8	Gibraltar Drive & Driveway 4	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	0	0
			SBL	-	0	0
9	South Milpitas Drive & Montague Expressway	Signal	EBL	600	390	643
			EBT	-	408	1298
			WBL	300	152	147
			WBT	-	2471	656
			WBR	200	623	167
			NBL	185	28	39
			NBT	-	112	131
			SBL	215	182	678
			SBT	-	83	207
			SBR	215	763	1127

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	EBL	680	269	332
			EBT	-	381	1209
			EBR	385	41	322
			WBL	400	105	232
			WBT	-	1595	654
			WBR	240	4322	660
			NBL	350	266	240
			NBT	-	812	282
			NBR	385	40	65
			SBL	365	686	402
			SBT	-	190	1399
			SBR	-	0	53
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	EBL	190	115	200
			EBT	-	306	1571
			EBR	230	615	2483
			WBL	250	163	448
			WBT	-	1155	459
			WBR	-	84	12
			NBL	175	655	308
			NBT	-	778	370
			NBR	-	93	78
			SBL	170	77	75
			SBT	-	121	210
			SBR	165	173	68
12	Montague Expressway & South Main Street/Oakland Road	Signal	EBL	190	199	260
			EBT	-	606	2287
			EBR	230	212	221
			WBL	250	216	201
			WBT	-	2636	832
			WBR	-	94	134
			NBL	175	880	411
			NBT	-	214	334
			NBR	-	142	784
			SBL	170	191	290
			SBT	-	249	452
			SBR	165	1342	245

Queuing at the following intersections, highlighted in red in Table 10 above, have exceeded the storage length provided during the AM and/or PM peak hour. Non-CMP intersections are shown in bold for reference.

- West Calaveras Boulevard & South Abel Street: The eastbound left, westbound left, northbound right, and southbound left have exceeded the storage length provided during the AM and/or PM peak hour. Eastbound left and southbound right movements have surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- E Calaveras Boulevard & Milpitas Boulevard: The eastbound right and northbound left have exceeded the storage length provided during the AM and/or PM peak hour. The northbound right movement has surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- **South Milpitas Boulevard & Yosemite Drive**: The southbound left has exceeded the storage length provided during the PM peak hour.
- **South Milpitas Boulevard & Gibraltar Drive**: The northbound left has exceeded the storage length provided during the AM peak hour.
- South Milpitas Drive & Montague Expressway: The eastbound left, westbound right, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour. The eastbound left movement has surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- Great Mall Parkway/East Capitol Avenue & Montague Expressway: The westbound right and the southbound left have exceeded the storage length provided during the AM and PM peak hour.
- Montague Expressway & McCandless Drive/Trade Center Boulevard: The eastbound right, westbound left, northbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour. The southbound right movement has surpassed available queuing space in this scenario when compared to 2026 No-Build conditions.
- Montague Expressway & South Main Street/Oakland Road: The eastbound left, northbound left, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.

Figure 30: Horizon (2040) No-Build Traffic Volumes 1

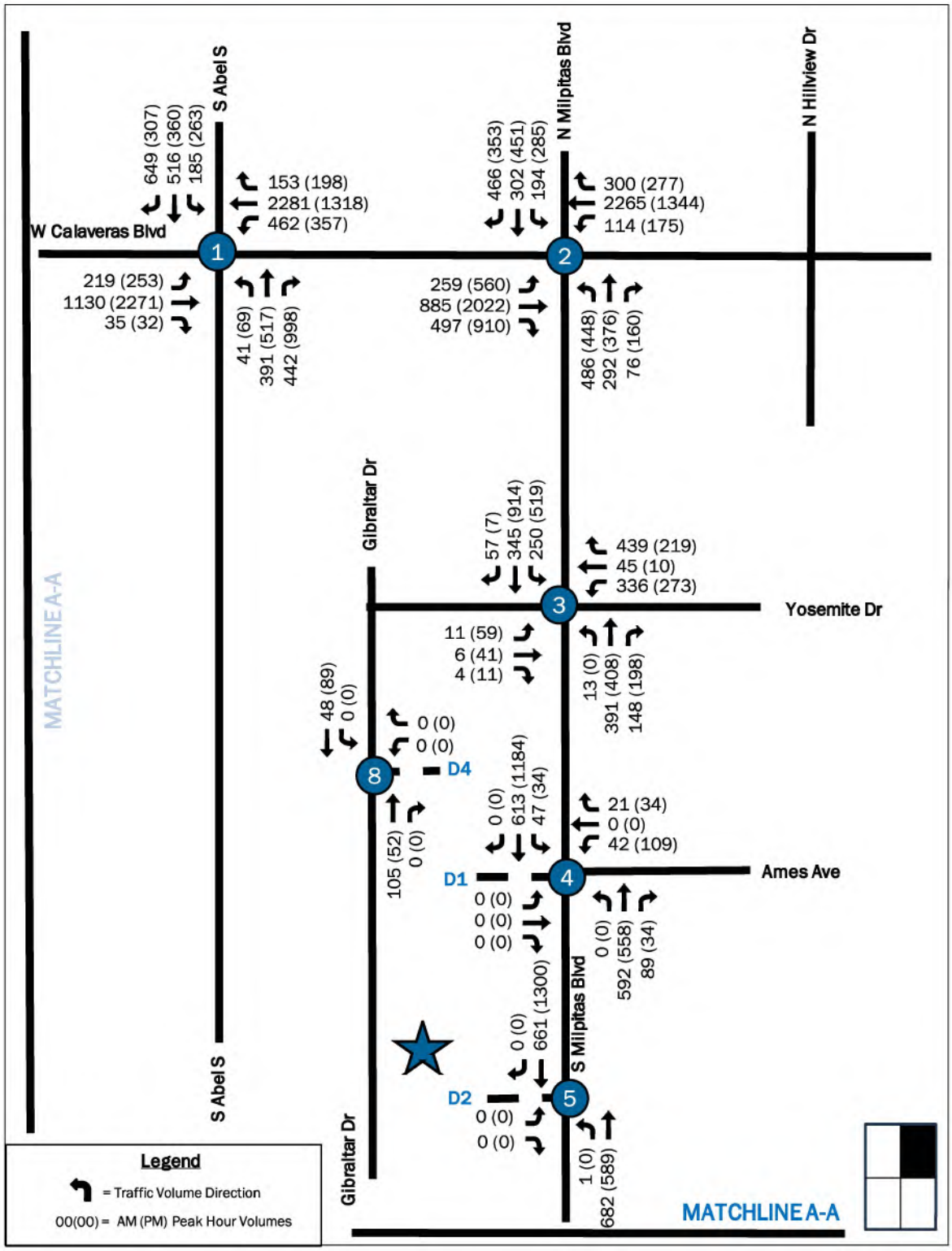


Figure 31: Horizon (2040) No-Build Traffic Volumes 2

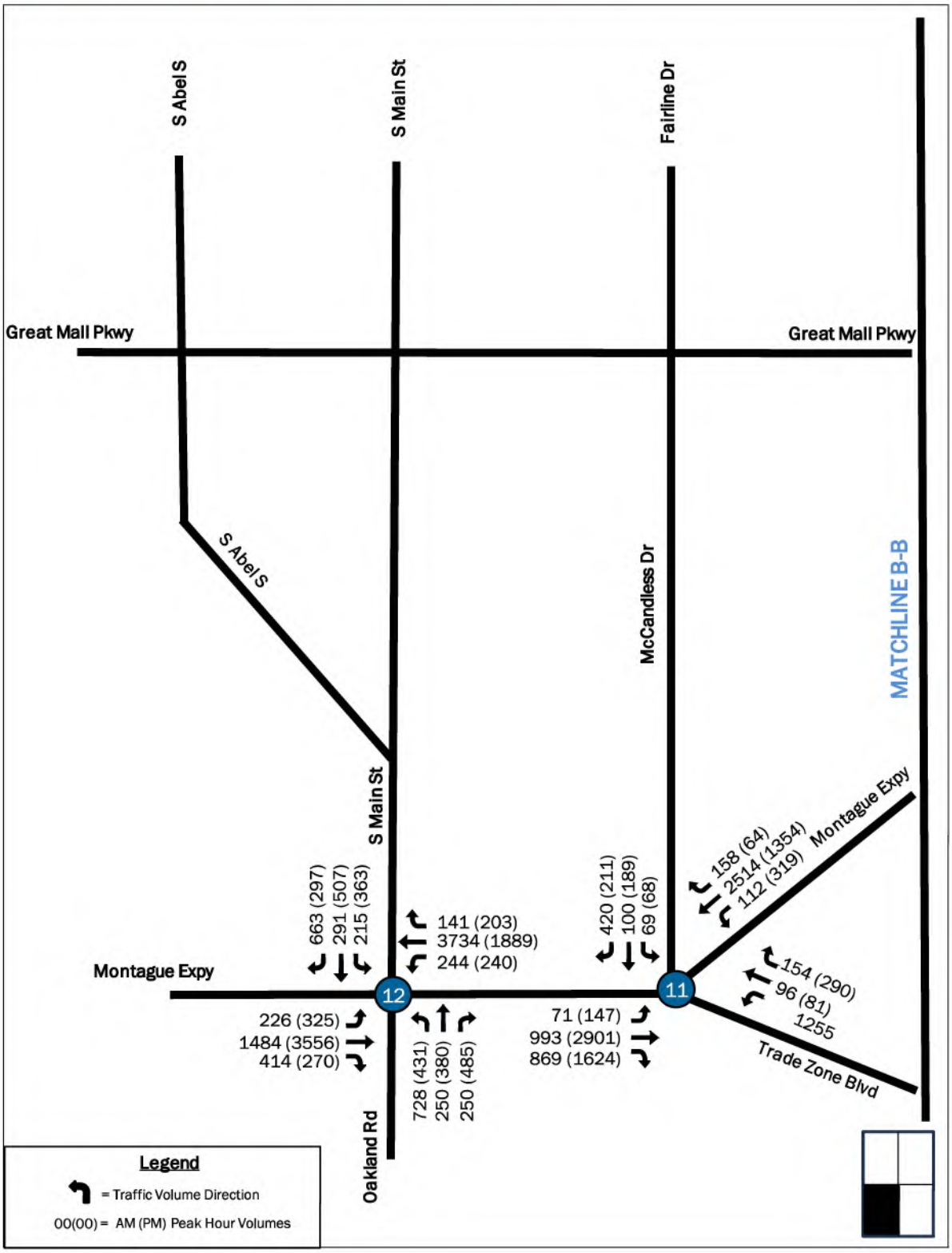
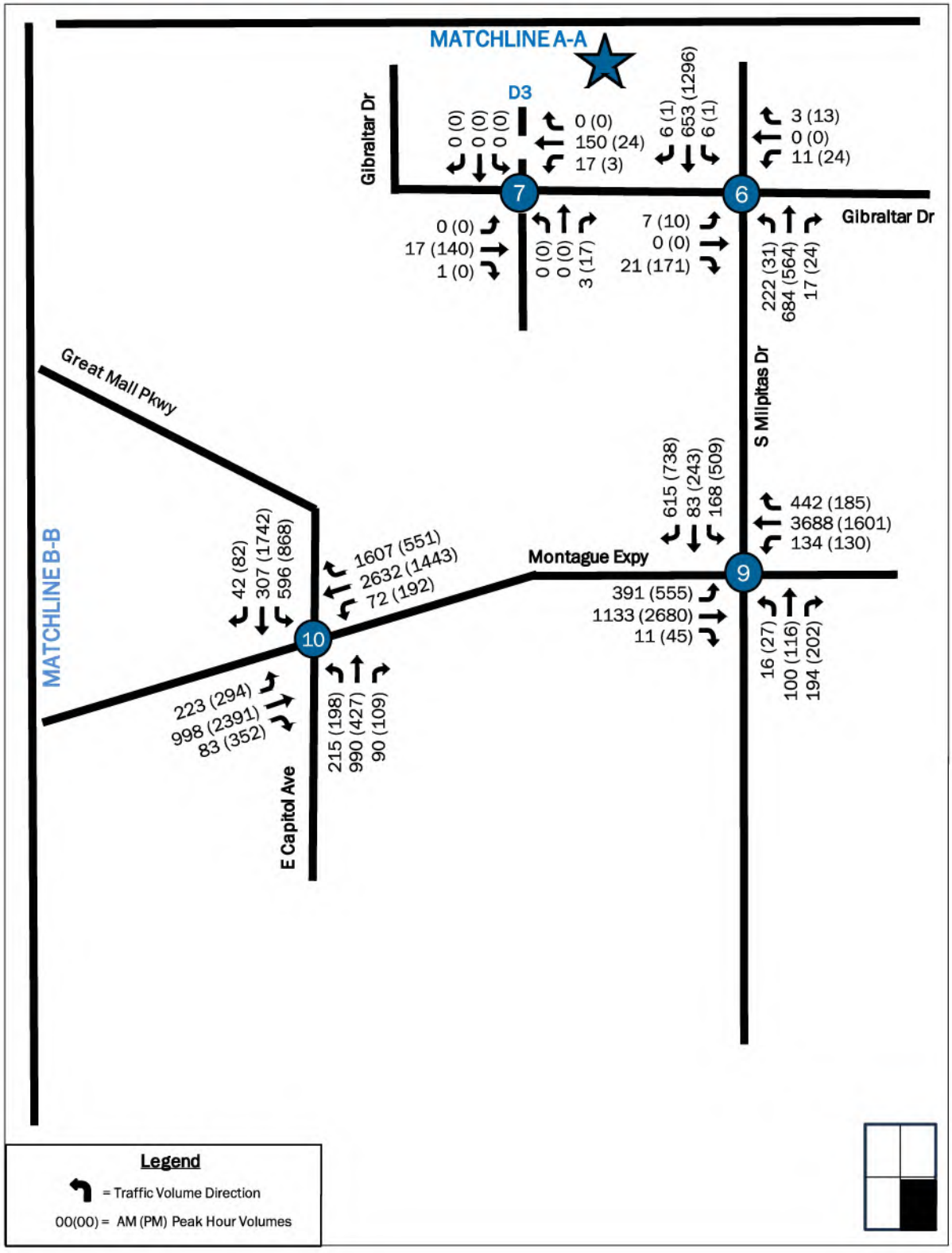


Figure 32: Horizon (2040) No-Build Traffic Volumes 3



D.7. Horizon Year 2040 Traffic Volumes with Proposed Development

The results of the 2035 capacity analyses for existing conditions with background and site-generated traffic are summarized in Table 11 and include an analysis of the traffic volumes shown in Figure 27 – 29.

D.8. Horizon Year (2040) Build Capacity Analysis Results

As shown in Table 11, most study intersections are projected to experience increased delay per approach and a decline in overall Level of Service (LOS) by the Horizon Year (2040) Build scenario, relative to the 2026 Build capacity conditions.

Table 11: Horizon Year (2040) Build Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	West Calaveras Boulevard & South Abel Street	Signal	**Overall**	**F**	**148.6**	F	**250.3**
			EB	D	43.6	F	220.4
			WB	F	181.8	D	44.1
			NB	F	141.7	F	592.9
			SB	F	192.3	F	127.1
2	E Calaveras Boulevard & Milpitas Boulevard	Signal	**Overall**	**F**	**115.4**	**F**	**100.1**
			EB	D	35.4	F	146.5
			WB	F	194.8	F	84.2
			NB	D	46.0	D	45.4
			SB	D	42.4	D	46.5
3	S Milpitas Boulevard & Yosemite Drive	Signal	**Overall**	**D**	**49.6**	**E**	**64.2**
			EB	C	30.8	D	36.7
			WB	E	76.6	D	47.0
			NB	C	32.9	C	26.5
			SB	C	32.8	F	88.4
4	S Milpitas Boulevard & Ames Avenue/Driveway 1	Stop-Control	**Overall**	**A**	**7.1**	**A**	**8.1**
			WB	D	44.0	D	40.6
			NB	A	4.2	A	5.6
			SB	A	6.6	A	5.5
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	A	9.4	B	12.9
			EB	B	13.2	C	20.5
6	South Milpitas Boulevard & Gibraltar Drive	Signal	**Overall**	**C**	**22.2**	**B**	**15.9**
			WB	E	72.9	F	93.2
			NB	C	22.9	A	8.4
			SB	B	19.3	B	17.6

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
7	Gibraltar Drive & Driveway 3	Stop-Control	NB	A	8.5	A	9.3
			WBL	A	7.3	A	7.6
			SB	B	10.6	B	10.4
8	Gibraltar Drive & Driveway 4	Stop-Control	WB	A	9.2	A	9.3
			SBL	A	7.6	A	7.5
9	South Milpitas Drive & Montague Expressway	Signal	**Overall**	F	**253.4**	F	**143.4**
			EB	E	62.9	F	82.1
			WB	F	323.6	E	66.3
			NB	E	70.5	E	71.0
			SB	F	309.9	F	386.2
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	**Overall**	F	**222.8**	F	**109.5**
			EB	E	58.7	E	69.1
			WB	F	315.3	E	67.2
			NB	F	142.7	F	113.9
			SB	F	110.1	F	186.1
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	**Overall**	F	**111.0**	F	**263.9**
			EB	C	30.9	F	370.7
			WB	C	23.4	C	33.3
			NB	F	409.5	F	201.6
			SB	E	66.2	E	64.3
12	Montague Expressway & South Main Street/Oakland Road	Signal	**Overall**	F	**214.2**	F	**142.3**
			EB	D	42.9	F	211.8
			WB	F	270.9	D	47.6
			NB	F	349.4	F	104.4
			SB	F	84.7	F	100.7

Based on the 2040 No Build analysis results; the following intersections exhibit on overall LOS of E or worse during the AM and/or PM peak hours.

- West Calaveras Boulevard & South Abel Street (CMP)
- East Calaveras Boulevard & Milpitas Boulevard (CMP)
- South Milpitas Boulevard & Yosemite Drive (non-CMP)
- South Milpitas Drive & Montague Expressway (CMP)
- Great Mall Parkway/East Capitol Avenue & Montague Expressway (CMP)
- Montague Expressway & McCandless Drive/Trade Center Boulevard (CMP)
- Montague Expressway & South Main Street/Oakland Road (CMP)

Table 12 summarizes the corresponding queue lengths for every movement in the study area for 2040 Build Conditions. All queues remain consistent with 2040 No-Build conditions on whether there is sufficient space without impacting neighboring movements.

Table 12: Horizon Year (2040) Build Queuing Analysis

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
1	West Calaveras Boulevard & South Abel Street	Signal	EBL	245	249	266
			EBT	-	391	1021
			EBR	-	0	0
			WBL	250	715	467
			WBT	-	1160	507
			WBR	-	70	75
			NBL	230	72	99
			NBT	-	204	254
			NBR	285	153	1086
			SBL	285	343	467
			SBT	-	272	180
			SBR	285	399	75
2	East Calaveras Boulevard & Milpitas Boulevard	Signal	EBL	460	138	273
			EBT	-	272	903
			EBR	200	110	913
			WBL	215	153	213
			WBT	-	1032	568
			WBR	270	179	89
			NBL	215	260	236
			NBT	-	149	188
			NBR	185	18	58
			SBL	215	102	145
			SBT	-	157	231
			SBR	-	293	99
3	South Milpitas Boulevard & Yosemite Drive	Signal	EBL	-	44	90
			EBT	-	17	61
			WBL	-	432	345
			WBT	-	132	76
			NBL	170	29	0
			NBT	-	233	244
			SBL	250	242	488
			SBT	-	141	191
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	Signal	WBT	-	35	94
			NBT	-	125	125
			SBL	140	61	47
			SBT	-	93	180

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
5	South Milpitas Boulevard & Driveway 2	Stop-Control	NBL	-	5	8
			NBT	-	0	0
			EBL	-	10	18
			SBT	-	0	0
6	South Milpitas Boulevard & Gibraltar Drive	Signal	EBL	100	23	30
			EBR	-	10	75
			WBT	-	0	0
			NBL	130	302	94
			NBT	-	182	163
			SBL	75	21	7
			SBT	-	883	1853
			SBR	-	0	0
7	Gibraltar Drive & Driveway 3	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	0	0
			WBT	-	0	0
			NBL	-	0	3
			SBL	-	3	3
			SBT	-	0	0
8	Gibraltar Drive & Driveway 4	Stop-Control	EBL	-	0	0
			EBT	-	0	0
			WBL	-	5	5
			SBL	-	3	3
9	South Milpitas Drive & Montague Expressway	Signal	EBL	600	447	695
			EBT	-	408	1298
			WBL	300	152	147
			WBT	-	2471	656
			WBR	200	707	212
			NBL	185	28	39
			NBT	-	112	131
			SBL	215	221	744
			SBT	-	83	207
			SBR	215	871	1226

ID	Intersection	Control	Movement	Storage Length	95th % Queue Length (FT)	
					AM	PM
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	Signal	EBL	680	269	332
			EBT	-	392	1223
			EBR	385	41	325
			WBL	400	121	245
			WBT	-	1615	664
			WBR	240	4322	666
			NBL	350	266	240
			NBT	-	812	298
			NBR	385	63	73
			SBL	365	686	1176
			SBT	-	190	1399
			SBR	-	0	53
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	Signal	EBL	190	115	200
			EBT	-	313	1583
			EBR	230	615	2483
			WBL	250	163	448
			WBT	-	1167	467
			WBR	-	84	12
			NBL	175	655	308
			NBT	-	778	370
			NBR	-	93	78
			SBL	170	77	75
			SBT	-	121	210
			SBR	165	173	68
12	Montague Expressway & South Main Street/Oakland Road	Signal	EBL	190	199	260
			EBT	-	609	2301
			EBR	230	213	222
			WBL	250	227	210
			WBT	-	2643	835
			WBR	-	94	135
			NBL	175	880	411
			NBT	-	214	334
			NBR	-	165	815
			SBL	170	191	290
			SBT	-	249	452
			SBR	165	1342	245

Queuing at the following intersections, highlighted in red in Table 12 above, have exceeded the storage length provided during the AM and/or PM peak hour. The non-CMP intersections are bolded for reference

- West Calaveras Boulevard & South Abel Street: The eastbound left, westbound left, northbound right, and southbound left have exceeded the storage length provided during the AM and/or PM peak hour.
- East Calaveras Boulevard & Milpitas Boulevard: The eastbound right and northbound left have exceeded the storage length provided during the AM and/or PM peak hour.
- **South Milpitas Boulevard & Yosemite Drive**: The southbound left has exceeded the storage length provided during the PM peak hour.
- **South Milpitas Boulevard & Gibraltar Drive**: The northbound left has exceeded the storage length provided during the AM peak hour.
- South Milpitas Drive & Montague Expressway: The eastbound left, westbound right, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.
- Great Mall Parkway/East Capitol Avenue & Montague Expressway: The westbound right and southbound left have exceeded the storage length provided during the AM and PM peak hour.
- Montague Expressway & McCandless Drive/Trade Center Boulevard: The northbound left and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.
- Montague Expressway & South Main Street/Oakland Road: The eastbound left, northbound left, southbound left, and southbound right have exceeded the storage length provided during the AM and/or PM peak hour.

Figure 33: Horizon (2040) Build Traffic Volumes 1

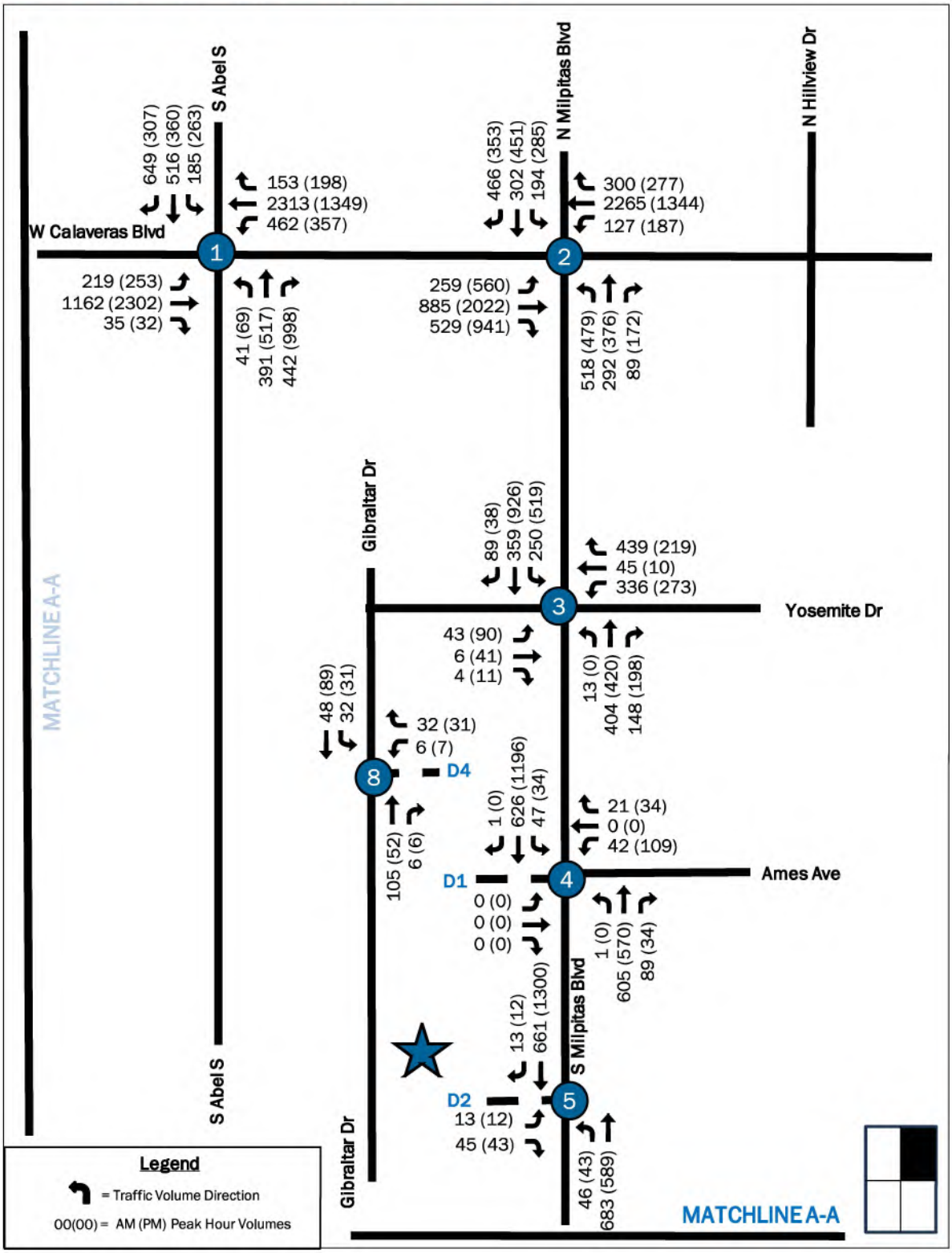


Figure 34: Horizon (2040) Build Traffic Volumes 2

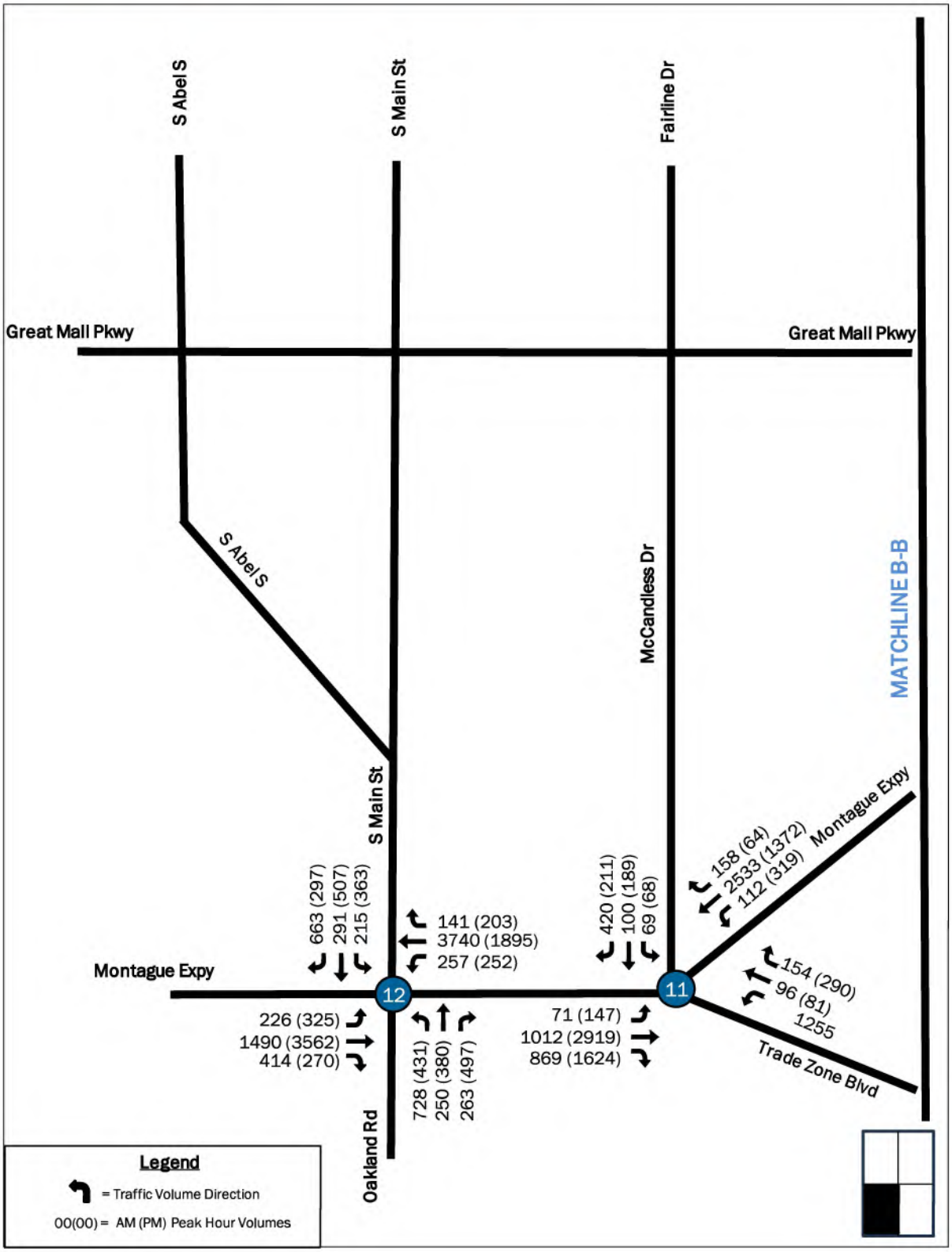
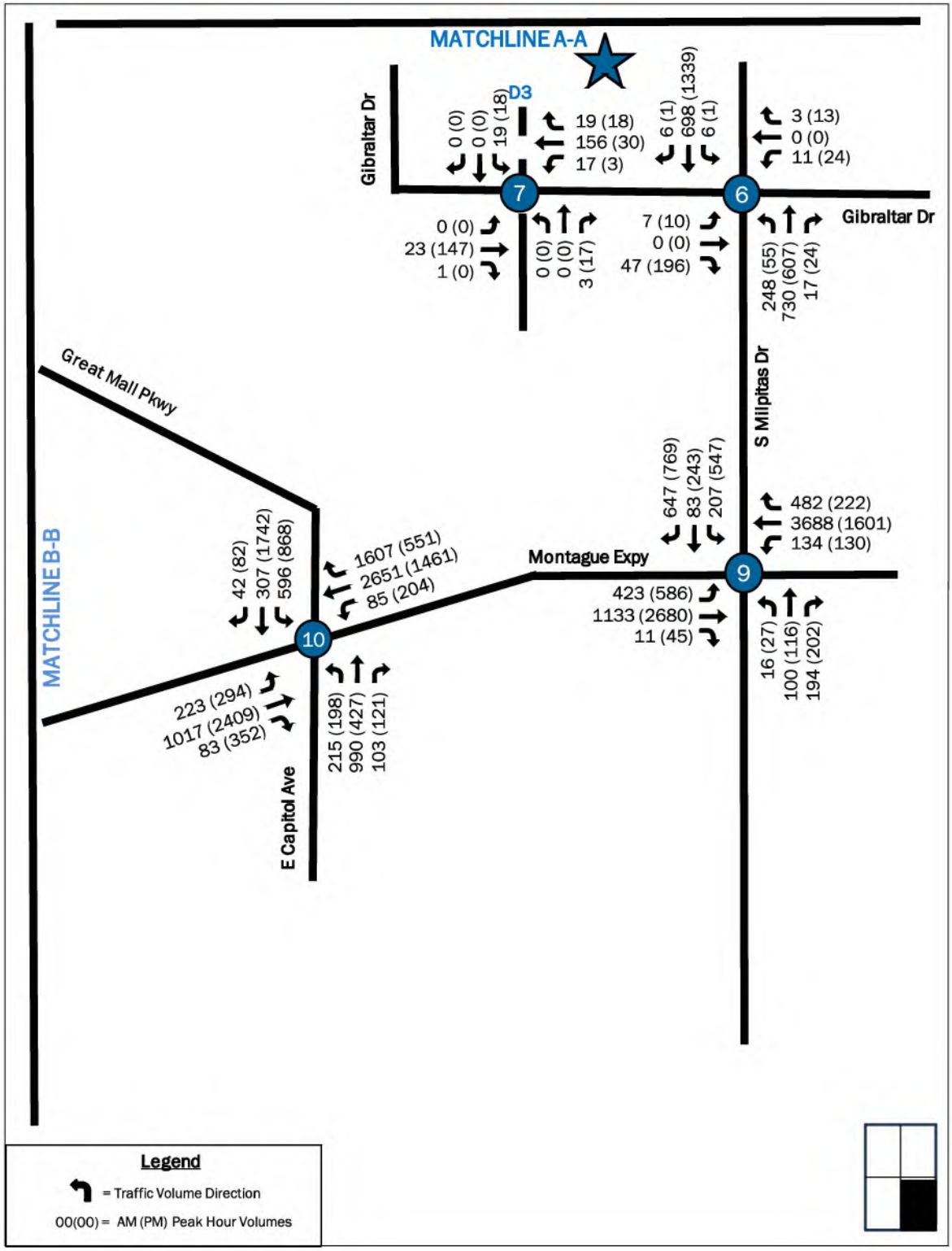


Figure 35: Horizon (2040) Build Traffic Volumes 3



D.9. Horizon Year (2040) Build with Mitigation Capacity Analysis

Mitigation measures may be considered at these non-CMP intersections. Under 2040 Horizon Year Build conditions, the intersection of South Milpitas Boulevard and Yosemite Drive is projected to operate at an overall unacceptable LOS E during the PM peak hour. However, the volume-to-capacity (v/c) ratio remained below 1.0, indicating that the unacceptable LOS is not due to a capacity constraint, but rather to the existing signal timing parameters. To address this, the signal timing was optimized by implementing a 90-second cycle length with adjusted phase splits. As a result, the intersection's LOS improved from LOS E to LOS C during the PM peak hour.

At South Milpitas Boulevard and Gibraltar Drive, the westbound approach is projected to operate at LOS E in the AM and LOS F in the PM peak hour during the 2040 Horizon year. However, since the intersection's overall LOS remains acceptable, no signal timing modifications are recommended at this time.

E. Conclusion

A new delivery center is planned for development along Gibraltar Drive in Milpitas, California. The proposed industrial building will encompass approximately 487,564 square feet and is designed to function as a last-mile distribution center. The site is expected to generate a net total of 3,812 daily trips with 260 occurring during the AM peak hour (131 inbound, 129 outbound) and 245 occurring during the PM peak hour (122 inbound, 123 outbound).

The study area includes both CMP-designated and non-CMP intersections. The following study locations are designated CMP intersections:

- West Calaveras Boulevard & South Abel Street
- East Calaveras Boulevard & Milpitas Boulevard
- South Milpitas Drive & Montague Expressway
- Great Mall Parkway/East Capitol Avenue & Montague Expressway
- Montague Expressway & McCandless Drive/Trade Center Boulevard
- Montague Expressway & South Main Street/Oakland Road

These intersections were included in the study area to reflect realistic traffic conditions. However, consistent with CMP guidelines, no project-specific mitigations were applied at these locations, regardless of queuing or capacity analysis findings.

The following study locations are not part of the CMP network:

- South Milpitas Boulevard & Yosemite Drive
- South Milpitas Boulevard & Ames Avenue/Driveway 1
- South Milpitas Boulevard & Driveway 2
- South Milpitas Boulevard & Gibraltar Drive
- Gibraltar Drive & Driveway 3
- Gibraltar Drive & Driveway 4

Adverse Effect Criteria

Per the City of Milpitas Transportation Analysis Guidelines, an adverse effect on intersection operations is identified when the addition of project-related traffic causes the operating standard to fall below LOS D, comparing baseline (No Build) to Build conditions.

For intersections already operating at LOS E or F under baseline conditions, an adverse effect is defined as either of the following:

- An increase in average critical delay of 4.0 seconds or more and an increase in the critical volume-to-capacity (V/C) ratio of 0.010 or more, or

- A decrease in average critical delay and an increase in the critical V/C ratio of 0.010 or more.

Intersections meeting either criterion are considered to experience adverse effects and should be evaluated for mitigation.

Intersection Analysis Results

A comparison of 2026 No Build to 2026 Build conditions indicates that the following CMP intersections are projected to operate at LOS E or F, with an increase in critical delay of at least 4.0 seconds and an increase in V/C ratio of 0.010 or more during the AM and/or PM peak periods:

- South Milpitas Drive & Montague Expressway
- Montague Expressway & South Main Street / Oakland Road

Under 2040 No Build vs. 2040 Build conditions, the following CMP intersections meet the same adverse effect criteria:

- East Calaveras Boulevard & Milpitas Boulevard
- South Milpitas Drive & Montague Expressway
- Montague Expressway & McCandless Drive / Trade Center Boulevard
- Montague Expressway & South Main Street / Oakland Road

Although mitigation for CMP intersections is not within the scope of this analysis, it is recommended that the City consider evaluating these locations further due to the identified operational impacts.

Non-CMP Intersections

All non-CMP intersections are projected to operate at LOS B or better under both 2026 and 2040 scenarios, with one exception. The intersection of South Milpitas Boulevard & Yosemite Drive is projected to operate at LOS E in both the 2040 No-Build and Build conditions. However, the critical delay and V/C ratio remained unchanged, and thus, no adverse effect is identified. Accordingly, no mitigation is recommended.

Summary of Findings and Recommendations

Based on the findings, the surrounding transportation network is expected to accommodate the project-generated traffic under both near-term and long-range conditions. No mitigation measures are required for non-CMP intersections, and while CMP intersections exhibit adverse effects, any potential improvements should be considered by the City in coordination with the appropriate CMP agency. A detailed capacity comparison of both the 2026 and 2040 No-Build and Build conditions is shown in Table 13 and Table 14.

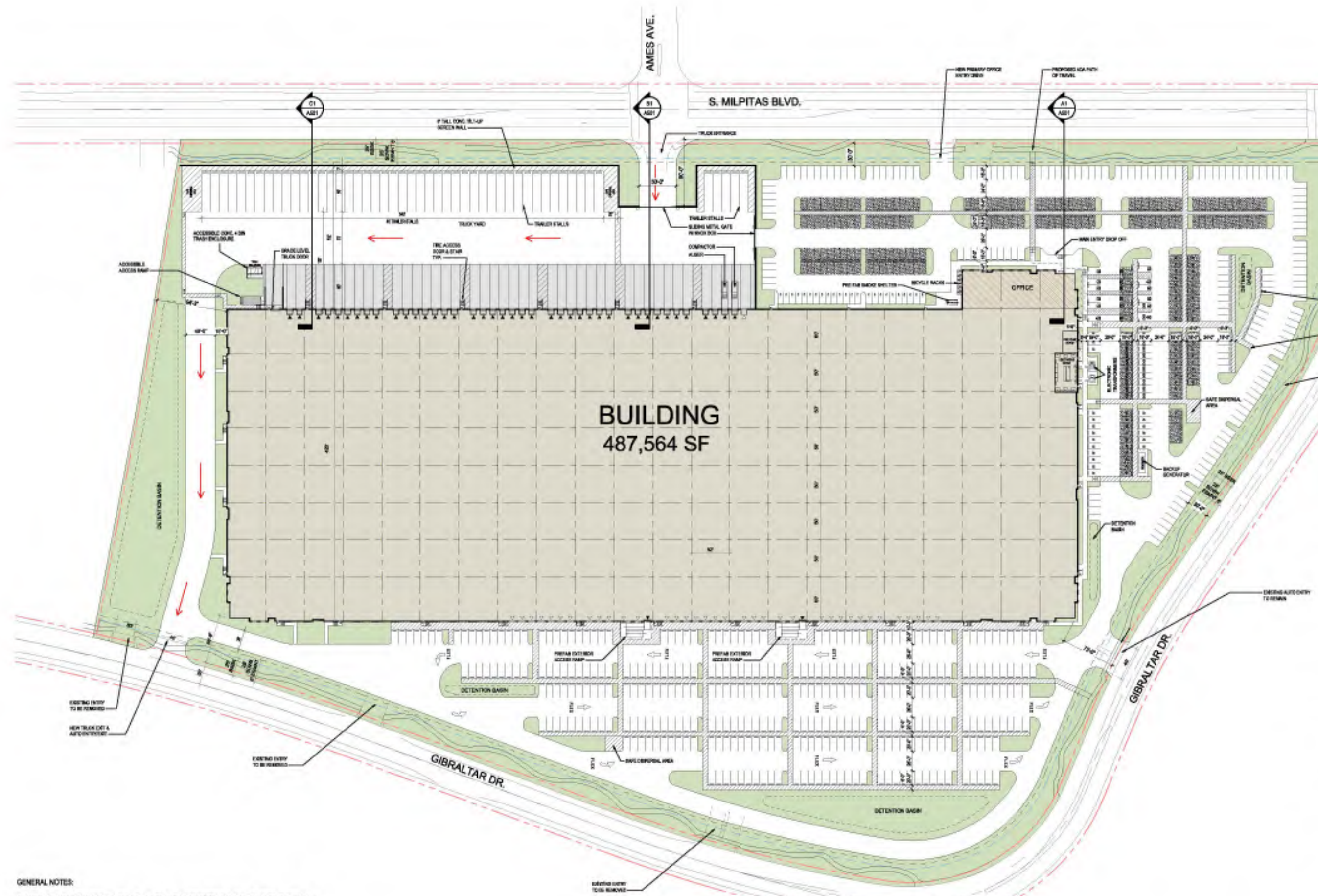
Table 13: 2026 No-Build vs Build Capacity Comparison

ID	Intersection	Peak	2026 No-Build			2026 Build			Δ 2026 Delay	Δ 2026 v/c
			Overall LOS	Critical Delay	Critical v/c	Overall LOS	Critical Delay	Critical v/c		
1	West Calaveras Boulevard & South Abel Street	AM	D	89.0	1.10	D	115.3	1.10	26.3	0.00
		PM	F	532.0	2.06	F	532.0	1.12	0.0	-0.94
2	East Calaveras Boulevard & Milpitas Boulevard	AM	D	60.6	0.90	D	60.4	0.90	-0.2	0.00
		PM	D	59.6	0.83	D	59.3	0.83	-0.3	0.00
3	South Milpitas Boulevard & Yosemite Drive	AM	C	66.0	0.91	C	66.0	0.91	0.0	0.00
		PM	C	81.8	0.98	C	81.8	0.98	0.0	0.00
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	AM	A	44.9	0.84	A	134.4	0.63	89.5	-0.21
		PM	A	52.9	0.80	A	52.9	0.54	0.0	-0.26
5	South Milpitas Boulevard & Driveway 2	AM	A	8.5	0.00	B	11.5	0.10	3.0	0.10
		PM	A	0.0	-	B	14.8	0.14	14.8	N/A
6	South Milpitas Boulevard & Gibraltar Drive	AM	B	73.8	0.87	B	136.2	0.88	62.4	0.01
		PM	A	235.6	0.79	A	235.6	0.76	0.0	-0.03
7	Gibraltar Drive & Driveway 3	AM	A	8.4	0.01	B	10.0	0.03	1.6	0.02
		PM	A	9.0	0.02	A	9.8	0.02	0.8	0.00
8	Gibraltar Drive & Driveway 4	AM	A	0.0	-	A	9.5	0.05	9.5	N/A
		PM	A	0.0	-	A	9.1	0.07	9.1	N/A
9	South Milpitas Drive & Montague Expressway	AM	F	173.0	1.14	F	205.3	1.22	32.3	0.08
		PM	F	238.1	1.30	F	270.1	1.38	32.0	0.08
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	AM	F	232.4	1.38	F	232.4	1.38	0.0	0.00
		PM	E	137.5	0.96	E	135.2	0.96	-2.3	0.00
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	AM	E	185.3	1.26	D	185.3	1.26	0.0	0.00
		PM	F	240.3	1.45	F	240.1	1.45	-0.2	0.00
12	Montague Expressway & South Main Street/Oakland Road	AM	E	219.8	1.27	E	219.8	1.27	0.0	0.01
		PM	D	100.1	0.88	D	100.1	0.90	0.0	0.02

Table 14: 2040 No-Build vs Build Capacity Comparison

ID	Intersection	Peak	2040 No-Build			2040 Build			Δ 2040 Delay	Δ 2040 v/c
			Overall LOS	Critical Delay	Critical v/c	Overall LOS	Critical Delay	Critical v/c		
1	West Calaveras Boulevard & South Abel Street	AM	F	316.8	1.580	F	316.8	1.580	0.0	0.000
		PM	F	912.9	2.910	F	912.9	2.910	0.0	0.000
2	East Calaveras Boulevard & Milpitas Boulevard	AM	F	202.3	1.360	F	202.3	1.360	0.0	0.000
		PM	F	159.2	1.260	F	171.8	1.290	12.6	0.030
3	South Milpitas Boulevard & Yosemite Drive	AM	D	63.3	1.100	D	107.5	1.099	44.2	0.000
		PM	E	232.8	1.393	E	232.8	1.390	0.0	0.000
4	South Milpitas Boulevard & Ames Avenue/Driveway 1	AM	A	56.6	0.730	A	134.4	0.730	77.8	0.000
		PM	A	52.8	0.610	A	52.8	0.610	0.0	0.000
5	South Milpitas Boulevard & Driveway 2	AM	A	9.1	-	B	13.2	0.122	4.1	N/A
		PM	A	0.0	-	C	20.5	0.198	20.5	N/A
6	South Milpitas Boulevard & Gibraltar Drive	AM	B	120.6	0.910	C	120.6	0.920	0.0	0.010
		PM	B	235.6	0.860	B	235.6	0.910	0.0	0.050
7	Gibraltar Drive & Driveway 3	AM	A	8.5	0.013	B	10.6	0.035	2.1	0.022
		PM	A	9.3	0.025	B	10.4	0.033	1.1	0.008
8	Gibraltar Drive & Driveway 4	AM	A	0.0	-	A	9.2	0.052	9.2	N/A
		PM	A	0.0	-	A	9.3	0.070	9.3	N/A
9	South Milpitas Drive & Montague Expressway	AM	F	369.4	1.610	F	406.5	1.690	37.1	0.080
		PM	F	472.5	1.840	F	507.2	1.920	34.7	0.080
10	Great Mall Parkway/East Capitol Avenue & Montague Expressway	AM	F	717.7	2.430	F	717.7	2.430	0.0	0.000
		PM	F	154.0	1.120	F	250.6	1.290	96.6	0.170
11	Montague Expressway & McCandless Drive/Trade Center Boulevard	AM	F	409.5	0.970	F	409.5	1.770	0.0	0.800
		PM	F	694.1	2.450	F	694.1	2.450	0.0	0.000
12	Montague Expressway & South Main Street/Oakland Road	AM	F	446.5	1.790	F	446.5	1.787	0.0	-0.003
		PM	F	216.5	1.370	F	222.5	1.390	6.0	0.020

Appendix A
Site Plan



PROJECT INFORMATION		
Legal Description	Refer to Civil	
APN:	086-42-033	
Land Use / Zoning Analysis		
General Plan:	MFG - Manufacturing	
Zoning:	M-2 Heavy Industrial District	
Land Use:	Industrial	
Bldg. Setbacks:		
Front:	35' from face of curb	
Street Side:	35' from face of curb	
Interior Side:	None	
Rear:	None	
Height:	None	
Code Analysis		
2022 CBC Code:	Warehouse	
Building Occupancy:		
B - Business Group	7,844	
H - High-Hazard Group	12,300	
S - Storage Group	467,420	
Total Building Area	487,564	
Construction Type:	II-B	
Building Area Calculations		
CBC 507.4 Sprinklered, one-story buildings		
All yards over 60'	Unlimited Area	
Fire Sprinklers (Automatic):	Yes	
Stories:	1	
Building Height:	46'-7" A.F.F.	

SITE AREA	S.F.	ACRES
Gross Site Area	**1,261,301**	**28.96**
Sidewalk Easement	96,860	2.22
APN: 086-42-033		
BUILDING AREA		S.F.
Ground Floor Office		7,844
Warehouse		479,720
Total Building Footprint		487,564
Mezzanine		0
TOTAL BUILDING AREA		**487,564**
COVERAGE		38.7%
Gross FAR (40% Max)		38.7%
PARKING REQUIRED		
Office	1/350	23
Warehouse/Distribution	1/1500	320
TOTAL PARKING REQUIRED		**343**
PARKING PROVIDED		
Associate Parking (9'x18')	52%	408
Accessible Parking (9'x18')	2%	18
Compact Stalls (7.5'x15')	3%	24
EV Ready Stalls (20% of total)	90	-
EVCS (25% of EV)	23	-
Flex Parking (10'x20')	43%	335
TOTAL PARKING PROVIDED	**100%**	**785**
PARKING RATIO		**1.61/1000**
Dock Doors (9'x10')		41
Knock Out Panels (9'x10')		34
Grade Level Doors (12'x14')		1
Trailer Stalls (12'x55')		58
Bicycle Stalls Short Term	2.5%	12
Bicycle Stalls Long Term	2.5%	12

LANDSCAPE Required front yard area and street side yard areas shall be landscaped

GENERAL NOTES:

1. GUARDS SHALL BE LOCATED ALONG OPEN SIDE OF WALKING SURFACES, STAIRS, RAMPS AND LANDINGS THAT ARE LOCATED MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. GUARDS ARE NOT REQUIRED ON THE LOADING SIDE OF LOADING DOCKS (CBC 1013.2)
2. THE RUNNING SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:20 (5%). THE CROSS SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:48 (2.083%).
3. THE CLEAR WIDTH FOR SIDEWALKS AND WALKSSHALL BE 48 INCHES MINIMUM.
4. THE WASTE STORAGE AREA SHALL BE GRADED SO THAT STORAGE CONTAINERS REMAIN AT REST WITHOUT AUXILIARY RESTRAINING DEVICES.

LEGEND

DOCK DOORS 9' x 10'
KNOCK-OUT PANELS
PROPERTY LINE
BUILDING SETBACK
SIDEWALK EASEMENT
PEDESTRIAN CIRCULATION
PERMEABLE PAVEMENT
TRUCK TRAFFIC FLOW
ACCESSIBLE PATH OF TRAVEL
REFER TO SHEET A102 FOR FIRE ACCESS PLAN

PROJECT NORTH — TRUE NORTH

A1 / A101 **SITE PLAN** 1" = 60'-0"

Stantec

Stantec Architecture Inc.
801 South Figueroa Street Suite 300
Los Angeles, CA 90017-3007
Tel. (213) 955-9775 • www.stantec.com

Consultant

Permit/Seal

Revision Remarks

HEA2 ABE3

Tenant
SSD - SSJ1 MILPITAS
1000 Gibraltar Dr
Milpitas, CA 95035

Project No.: 2014333000

Title
SITE PLAN

Scale: 1" = 60'-0"
Revision:
Drawing No. **A101**

Appendix B
Growth Rate Data

P_{2040} Projected volume

P_{2024}= Current Volume

e= Constant

r= Growth Rate=

t= Time=16yrs

$P_{2040}=P_{2024}e^{rt}$

Average AM and PM Peak = USE 2.5% Growth

												Average AM Peak
r= Growth Rate=	1.14%	1.43%	1.83%	2.38%	3.01%	4.64%	4.82%	1.91%	1.99%	2.29%	3.16%	**2.60%**
t= Time=16yrs	16	16	16	16	16	16	16	16	16	16	16	

	1	2	3	4	5	6	7	8	9	10	11	
	I-880 SB Ramp/Calaveras Blvd	I-880 NB Ramp/Calaveras Blvd	Abel St/Calaveras Blvd	Milpitas Blvd/Calaveras Blvd	Hillview Dr/Calaveras Blvd	Milpitas Blvd/Yosemite Dr	Milpitas Blvd/Ames Ave	Main St/Montague Expy	Trade Zone Blvd/Montague Expy	Great Mall Pkwy/Montague Expy	Milpitas Blvd/Montague Expy	
2040	4,860	5,390	5,930	6,200	5,810	2,950	2,070	7,900	6,310	7,640	7,780	vpd
2024	4,049	4,288	4,422	4,237	3,592	1,405	958	5,819	4,589	5,293	4,689	vpd

Approach

1	330	1150	660	630	140	220	80	220	270	30	420
2	190	450	770	250	270	810	960	300	90	940	430
3	1100	440	170	190	580	170	30	160	60	440	340
4	3240	3350	80	220	590	550	120	120	20	1090	220
5			2130	2200	2350	70	20	3710	2570	2130	3940
6			780	140	240	70	50	170	170	310	470
7			580	70	100	110	120	230	110	130	300
8			330	400	200	600	560	350	40	960	550
9			30	480	40	20	20	710	1210	420	160
10			90	590	70	70	50	360	940	190	180
11			110	850	1140	70	30	1380	790	800	690
12			200	180	90	190	30	190	40	200	80

Average AM and PM Peak = USE 2.5% Growth

P_{2040} Projected volume
P_{2024}= Current Volume
e= Constant
r= Growth Rate=
t= Time=16yrs

$P_{2040}=P_{2024}e^{rt}$

												Average PM Peak
r=	1.04%	0.96%	3.33%	2.81%	2.20%	3.20%	4.49%	1.80%	0.77%	2.42%	2.51%	**2.32%**
t=	16	16	16	16	16	16	16	16	16	16	16	

	1	2	3	4	5	6	7	8	9	10	11	
	I-880 SB Ramp/Calaveras Blvd	I-880 NB Ramp/Calaveras Blvd	Abel St/Calaveras Blvd	Milpitas Blvd/Calaveras Blvd	Hillview Dr/Calaveras Blvd	Milpitas Blvd/Yosemite Dr	Milpitas Blvd/Ames Ave	Main St/Montague Expy	Trade Zone Blvd/Montague Expy	Great Mall Pkwy/Montague Expy	Milpitas Blvd/Montague Expy	
2040	5,140	5,720	8,000	7,780	5,600	2,990	2,700	8,120	6,160	8,570	7,100	vpd
2024	4,350	4,906	4,693	4,963	3,937	1,793	1,316	6,087	5,445	5,823	4,748	vpd

Approach

1	190	2670	220	370	120	120	20	300	110	80	190
2	450	860	290	470	210	490	1040	910	190	1550	730
3	2840	450	180	390	320	460	120	250	60	760	200
4	1660	1740	190	260	310	200	70	180	90	470	20
5			1320	1410	1560	70	40	1220	900	1240	1590
6			490	210	270	310	140	290	250	380	190
7			1130	230	300	150	100	310	200	200	310
8			840	520	330	600	1070	360	90	680	360
9			90	700	40	20	20	250	640	310	40
10			70	790	100	310	30	590	1470	400	50
11			2660	1940	1860	70	30	3120	2060	2290	3270
12			520	490	180	190	20	340	100	210	150

Appendix C
Traffic Counts

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Abel St/S Abel St & SR 237/W Calaveras Blvd/Calaveras Blvd/Carlo St
City: Milpitas
Control: Signalized

Project ID: 24-080364-003
Date: 11/19/2024

Data - Total

NS/EW Streets:	N Abel St/S Abel St				N Abel St/S Abel St				SR 237/W Calaveras Blvd/Calaveras Blvd/Carlo St				SR 237/W Calaveras Blvd/Calaveras Blvd/Carlo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	1	1	0	1	2.5	0.5	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	8	20	0	14	22	56	0	22	132	4	1	24	404	8	0	715
7:15 AM	2	31	36	0	25	26	101	0	25	139	7	3	19	471	16	0	901
7:30 AM	2	59	60	0	28	52	108	0	39	216	5	0	33	413	14	0	1029
7:45 AM	9	64	100	0	20	73	108	0	39	177	5	3	65	334	11	0	1008
8:00 AM	2	97	78	0	28	72	118	0	30	182	6	2	86	422	19	0	1142
8:15 AM	5	82	70	0	37	108	108	0	38	222	7	2	73	410	45	0	1207
8:30 AM	12	21	50	0	40	94	103	0	32	180	6	2	87	370	28	0	1025
8:45 AM	4	29	87	0	58	82	110	0	33	204	5	3	94	310	29	0	1048
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	36	391	501	0	250	529	812	0	258	1452	45	16	481	3134	170	0	8075
APPROACH %'s :	3.88%	42.13%	53.99%	0.00%	15.71%	33.25%	51.04%	0.00%	14.57%	81.99%	2.54%	0.90%	12.71%	82.80%	4.49%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	23	229	285	0	163	356	439	0	133	788	24	9	340	1512	121	0	4422
PEAK HR FACTOR :	0.479	0.590	0.819	0.000	0.703	0.824	0.930	0.000	0.875	0.887	0.857	0.750	0.904	0.896	0.672	0.000	0.916
	0.758				0.947				0.887				0.934				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	1	1	0	1	2.5	0.5	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	12	55	130	0	40	44	64	1	51	368	4	0	58	208	22	0	1057
4:15 PM	19	46	122	0	36	38	58	0	48	422	9	0	62	243	23	0	1126
4:30 PM	8	53	134	0	38	68	56	0	43	417	7	2	58	247	22	0	1153
4:45 PM	13	75	156	0	42	46	56	0	34	433	6	1	53	212	31	0	1158
5:00 PM	7	93	192	0	48	46	47	0	50	336	8	0	60	224	35	0	1146
5:15 PM	10	92	185	0	55	60	43	0	43	344	1	0	72	249	40	0	1194
5:30 PM	16	89	155	0	42	73	59	0	39	442	5	0	51	192	32	0	1195
5:45 PM	14	74	140	0	32	64	58	0	38	408	8	0	58	223	26	0	1143
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	99	577	1214	0	333	439	441	1	346	3170	48	3	472	1798	231	0	9172
APPROACH %'s :	5.24%	30.53%	64.23%	0.00%	27.43%	36.16%	36.33%	0.08%	9.70%	88.87%	1.35%	0.08%	18.87%	71.89%	9.24%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	46	349	688	0	187	225	205	0	166	1555	20	1	236	877	138	0	4693
PEAK HR FACTOR :	0.719	0.938	0.896	0.000	0.850	0.771	0.869	0.000	0.830	0.880	0.625	0.250	0.819	0.881	0.863	0.000	0.982
	0.927				0.886				0.896				0.866				

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Milpitas Blvd/S Milpitas Blvd & SR 237/E Calaveras Blvd/Calaveras Blvd
City: Milpitas
Control: Signalized

Project ID: 24-080364-004
Date: 11/19/2024

Data - Total

NS/EW Streets:	N Milpitas Blvd/S Milpitas Blvd				N Milpitas Blvd/S Milpitas Blvd				SR 237/E Calaveras Blvd/Calaveras Blvd				SR 237/E Calaveras Blvd/Calaveras Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	64	17	9	0	9	19	43	0	22	83	54	1	6	355	20	2	704
7:15 AM	55	18	10	0	8	18	68	0	22	100	53	1	12	430	29	4	828
7:30 AM	44	21	12	0	15	29	70	0	30	182	76	0	12	347	28	2	868
7:45 AM	66	32	9	0	22	40	47	0	38	142	94	0	12	382	38	7	929
8:00 AM	99	51	10	1	35	54	77	0	39	149	75	0	16	360	63	7	1036
8:15 AM	86	70	12	0	37	52	88	0	53	159	110	1	8	396	51	10	1133
8:30 AM	75	44	20	0	35	58	102	1	43	146	56	0	13	388	50	4	1035
8:45 AM	83	27	30	1	34	43	75	0	43	197	97	0	20	331	48	4	1033
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	572	280	112	2	195	313	570	1	290	1158	615	3	99	2989	327	40	7566
APPROACH %'s :	59.21%	28.99%	11.59%	0.21%	18.07%	29.01%	52.83%	0.09%	14.04%	56.05%	29.77%	0.15%	2.87%	86.51%	9.46%	1.16%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	343	192	72	2	141	207	342	1	178	651	338	1	57	1475	212	25	4237
PEAK HR FACTOR :	0.866	0.686	0.600	0.500	0.953	0.892	0.838	0.250	0.840	0.826	0.768	0.250	0.713	0.931	0.841	0.625	0.935
	0.906				0.881				0.866				0.951				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	87	59	23	1	55	60	68	1	101	327	110	2	20	201	45	9	1169
4:15 PM	72	42	18	0	33	54	70	3	99	366	121	4	14	234	39	6	1175
4:30 PM	112	52	31	0	37	57	64	2	94	359	126	1	25	198	39	4	1201
4:45 PM	85	65	28	0	34	56	66	0	77	387	139	0	22	193	47	5	1204
5:00 PM	90	66	38	0	53	61	73	1	96	332	160	2	28	221	42	2	1265
5:15 PM	87	61	30	0	35	69	56	2	80	334	139	0	24	236	38	2	1193
5:30 PM	73	72	18	1	44	98	53	0	96	382	150	3	36	214	60	1	1301
5:45 PM	51	54	22	0	56	76	56	1	98	314	164	2	23	234	47	2	1200
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	657	471	208	2	347	531	506	10	741	2801	1109	14	192	1731	357	31	9708
APPROACH %'s :	49.10%	35.20%	15.55%	0.15%	24.89%	38.09%	36.30%	0.72%	15.88%	60.04%	23.77%	0.30%	8.31%	74.90%	15.45%	1.34%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	335	264	114	1	166	284	248	3	349	1435	588	5	110	864	187	10	4963
PEAK HR FACTOR :	0.931	0.917	0.750	0.250	0.783	0.724	0.849	0.375	0.909	0.927	0.919	0.417	0.764	0.915	0.779	0.500	0.954
	0.920				0.899				0.942				0.941				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Milpitas Blvd & Yosemite Dr
City: Milpitas
Control: Signalized

Project ID: 24-080364-006
Date: 11/19/2024

Data - Total

NS/EW Streets:	S Milpitas Blvd				S Milpitas Blvd				Yosemite Dr				Yosemite Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	49	14	0	22	40	5	0	1	1	0	0	36	4	33	0	207
7:15 AM	0	39	8	0	16	44	10	0	2	0	0	0	37	5	27	0	188
7:30 AM	1	42	16	0	33	63	7	0	1	1	0	0	48	6	37	0	255
7:45 AM	3	58	26	0	34	56	8	0	1	0	2	0	61	3	57	0	309
8:00 AM	0	72	28	0	49	47	6	0	4	2	0	0	61	9	97	0	375
8:15 AM	3	71	23	0	59	62	13	0	1	0	0	0	58	8	77	0	375
8:30 AM	3	63	23	0	26	67	11	0	2	2	1	0	47	10	65	0	320
8:45 AM	1	84	23	0	36	64	13	0	2	2	2	0	39	6	63	0	335
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	478	161	0	275	443	73	0	14	8	5	0	387	51	456	0	2364
APPROACH %'s :	1.99%	73.31%	24.69%	0.00%	34.77%	56.01%	9.23%	0.00%	51.85%	29.63%	18.52%	0.00%	43.29%	5.70%	51.01%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	7	290	97	0	170	240	43	0	9	6	3	0	205	33	302	0	1405
PEAK HR FACTOR :	0.583	0.863	0.866	0.000	0.720	0.896	0.827	0.000	0.563	0.750	0.375	0.000	0.840	0.825	0.778	0.000	0.937
		0.912				0.845				0.750				0.808			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	68	22	0	81	108	4	0	13	3	3	0	37	1	35	0	375
4:15 PM	0	47	27	0	76	109	1	0	6	1	1	0	36	0	39	0	343
4:30 PM	1	90	29	0	75	105	5	0	18	11	7	0	32	0	34	0	407
4:45 PM	1	86	29	0	77	109	2	0	10	11	2	0	37	3	44	0	411
5:00 PM	0	55	29	0	85	156	2	0	12	10	3	0	40	5	44	0	441
5:15 PM	0	95	44	0	82	139	1	0	10	7	2	0	40	0	36	0	456
5:30 PM	0	65	29	0	84	163	1	0	9	5	2	0	51	1	33	0	443
5:45 PM	0	60	31	0	98	158	1	0	9	6	1	0	52	1	35	1	453
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	566	240	0	658	1047	17	0	87	54	21	0	325	11	300	1	3329
APPROACH %'s :	0.25%	70.05%	29.70%	0.00%	38.21%	60.80%	0.99%	0.00%	53.70%	33.33%	12.96%	0.00%	51.02%	1.73%	47.10%	0.16%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	275	133	0	349	616	5	0	40	28	8	0	183	7	148	1	1793
PEAK HR FACTOR :	0.000	0.724	0.756	0.000	0.890	0.945	0.625	0.000	0.833	0.700	0.667	0.000	0.880	0.350	0.841	0.250	0.983
		0.734				0.944				0.760				0.952			

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Milpitas Blvd & Gibraltar Dr/ABC Printing Dwy
City: Milpitas
Control: Signalized

Project ID: 24-080364-010
Date: 11/19/2024

Data - Total

NS/EW Streets:	S Milpitas Blvd				S Milpitas Blvd				Gibraltar Dr/ABC Printing Dwy				Gibraltar Dr/ABC Printing Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	0	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	35	76	4	8	2	67	0	0	1	0	6	0	2	0	3	0	204
7:15 AM	27	67	3	9	1	76	7	0	0	0	4	0	8	0	2	0	204
7:30 AM	39	69	0	15	0	109	2	0	0	0	4	0	0	0	4	0	242
7:45 AM	49	112	0	2	0	126	1	0	2	0	3	0	0	0	0	0	295
8:00 AM	28	125	0	3	0	104	0	0	1	0	2	0	0	0	0	0	263
8:15 AM	32	117	10	0	3	110	1	0	1	0	2	0	8	0	1	0	285
8:30 AM	35	107	1	0	1	100	2	0	1	0	7	0	0	0	1	0	255
8:45 AM	29	131	0	1	0	90	2	0	1	0	4	0	0	0	0	0	258
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	274	804	18	38	7	782	15	0	7	0	32	0	18	0	11	0	2006
APPROACH %'s :	24.16%	70.90%	1.59%	3.35%	0.87%	97.26%	1.87%	0.00%	17.95%	0.00%	82.05%	0.00%	62.07%	0.00%	37.93%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	144	461	11	5	4	440	4	0	5	0	14	0	8	0	2	0	1098
PEAK HR FACTOR :	0.735	0.922	0.275	0.417	0.333	0.873	0.500	0.000	0.625	0.000	0.500	0.000	0.250	0.000	0.500	0.000	0.931
	0.952				0.882				0.594				0.278				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	0	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	87	3	1	3	159	1	0	1	0	21	0	0	0	1	0	280
4:15 PM	3	77	10	0	10	159	0	0	0	0	17	0	2	0	0	0	278
4:30 PM	5	96	1	0	0	170	1	0	8	0	60	0	1	0	2	0	344
4:45 PM	10	113	1	0	1	175	0	0	5	0	31	0	1	0	1	0	338
5:00 PM	8	87	2	0	0	215	1	0	3	0	34	0	0	0	1	0	351
5:15 PM	4	123	3	0	0	210	0	0	1	0	32	0	0	0	2	0	375
5:30 PM	4	85	8	1	1	230	0	0	2	0	34	0	10	0	5	0	380
5:45 PM	3	85	3	1	0	218	0	0	1	0	15	0	6	0	1	0	333
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	40	753	31	3	15	1536	3	0	21	0	244	0	20	0	13	0	2679
APPROACH %'s :	4.84%	91.05%	3.75%	0.36%	0.97%	98.84%	0.19%	0.00%	7.92%	0.00%	92.08%	0.00%	60.61%	0.00%	39.39%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	26	408	14	1	2	830	1	0	11	0	131	0	11	0	9	0	1444
PEAK HR FACTOR :	0.650	0.829	0.438	0.250	0.500	0.902	0.250	0.000	0.550	0.000	0.963	0.000	0.275	0.000	0.450	0.000	0.950
	0.863				0.902				0.959				0.333				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Milpitas Blvd & CR G4/Montague Expy
City: Milpitas
Control: Signalized

Project ID: 24-080364-013
Date: 11/19/2024

Data - Total

NS/EW Streets:	S Milpitas Blvd				S Milpitas Blvd				CR G4/Montague Expy				CR G4/Montague Expy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	2	1	1	0	2	3.5	0.5	0	2	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	6	12	0	16	9	61	0	34	96	0	4	5	460	65	3	773
7:15 AM	1	14	21	0	25	6	62	0	43	96	2	3	7	538	48	3	869
7:30 AM	4	8	18	0	23	10	95	0	38	130	0	0	9	717	66	3	1121
7:45 AM	2	19	34	0	25	19	103	0	57	182	3	9	21	684	81	2	1241
8:00 AM	2	19	27	0	34	12	93	0	67	229	2	5	18	599	65	6	1178
8:15 AM	3	22	42	0	26	15	116	0	50	171	1	3	13	590	70	3	1125
8:30 AM	3	8	27	0	28	10	102	0	64	181	2	9	22	611	82	5	1154
8:45 AM	5	24	21	0	34	12	61	0	71	178	1	14	15	489	90	12	1027
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	22	120	202	0	211	93	693	0	424	1263	11	47	110	4688	567	37	8488
APPROACH %'s :	6.40%	34.88%	58.72%	0.00%	21.16%	9.33%	69.51%	0.00%	24.30%	72.38%	0.63%	2.69%	2.04%	86.78%	10.50%	0.68%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	10	68	130	0	113	56	414	0	238	763	8	26	74	2484	298	16	4698
PEAK HR FACTOR :	0.833	0.773	0.774	0.000	0.831	0.737	0.892	0.000	0.888	0.833	0.667	0.722	0.841	0.908	0.909	0.667	0.946
		0.776				0.928				0.854				0.911			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	2	1	1	0	2	3.5	0.5	0	2	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	12	26	0	58	17	104	0	58	407	3	11	25	245	27	2	996
4:15 PM	1	13	24	0	71	24	95	0	65	394	5	15	20	284	25	2	1038
4:30 PM	2	22	31	0	98	23	137	0	78	443	2	21	22	288	33	2	1202
4:45 PM	7	22	36	0	67	27	105	0	60	458	6	11	22	307	33	0	1161
5:00 PM	1	20	32	0	114	31	118	0	65	454	6	22	13	270	29	2	1177
5:15 PM	5	23	40	0	85	54	112	0	84	464	12	32	15	240	40	2	1208
5:30 PM	10	19	35	0	67	24	141	0	77	462	7	30	24	274	23	4	1197
5:45 PM	2	16	29	0	77	55	126	0	50	426	5	14	26	294	33	2	1155
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	29	147	253	0	637	255	938	0	537	3508	46	156	167	2202	243	16	9134
APPROACH %'s :	6.76%	34.27%	58.97%	0.00%	34.81%	13.93%	51.26%	0.00%	12.64%	82.60%	1.08%	3.67%	6.35%	83.79%	9.25%	0.61%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	15	87	139	0	364	135	472	0	287	1819	26	86	72	1105	135	6	4748
PEAK HR FACTOR :	0.536	0.946	0.869	0.000	0.798	0.625	0.861	0.000	0.854	0.980	0.542	0.672	0.818	0.900	0.844	0.750	0.983
		0.886				0.923				0.937				0.910			

National Data & Surveying Services

Intersection Turning Movement Count

Location: E Capitol Ave/Great Mall Pkwy & CR G4/Montague Expy
City: Milpitas
Control: Signalized

Project ID: 24-080364-014
Date: 11/19/2024

Data - Total

NS/EW Streets:	E Capitol Ave/Great Mall Pkwy				E Capitol Ave/Great Mall Pkwy				CR G4/Montague Expy				CR G4/Montague Expy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	2	3	1	0	2	4	1	0	2	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	51	58	11	1	33	19	6	0	5	109	8	5	2	394	91	3	796
7:15 AM	48	74	13	0	49	27	4	0	17	110	21	14	2	473	176	2	1030
7:30 AM	35	133	13	0	71	24	10	1	21	114	12	8	3	529	255	6	1235
7:45 AM	44	150	14	0	99	38	5	0	31	169	12	9	4	446	270	4	1295
8:00 AM	44	178	10	0	107	72	9	0	28	191	11	5	2	448	270	2	1377
8:15 AM	38	155	20	0	102	50	9	1	27	165	21	10	6	451	275	13	1343
8:30 AM	19	184	17	0	93	47	6	0	26	147	12	14	14	428	267	4	1278
8:45 AM	33	152	22	1	98	58	7	0	26	142	16	11	16	281	224	5	1092
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	312	1084	120	2	652	335	56	2	181	1147	113	76	49	3450	1828	39	9446
APPROACH %'s :	20.55%	71.41%	7.91%	0.13%	62.39%	32.06%	5.36%	0.19%	11.93%	75.61%	7.45%	5.01%	0.91%	64.29%	34.07%	0.73%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	145	667	61	0	401	207	29	1	112	672	56	38	26	1773	1082	23	5293
PEAK HR FACTOR :	0.824	0.906	0.763	0.000	0.937	0.719	0.806	0.250	0.903	0.880	0.667	0.679	0.464	0.983	0.984	0.442	0.961
		0.941				0.848				0.934				0.974			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	2	3	1	0	2	4	1	0	2	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	32	84	15	1	146	220	15	0	34	330	57	9	17	218	75	3	1256
4:15 PM	26	66	21	0	150	290	9	0	35	316	69	11	28	206	87	4	1318
4:30 PM	32	66	19	1	141	260	22	0	33	390	72	10	32	259	104	4	1445
4:45 PM	29	85	22	0	143	291	19	0	41	421	66	8	14	223	104	3	1469
5:00 PM	26	77	17	1	151	298	17	0	36	362	45	16	36	227	88	5	1402
5:15 PM	45	62	21	1	143	266	14	0	47	443	69	9	20	253	88	6	1487
5:30 PM	29	81	13	1	138	296	10	0	32	399	73	12	31	243	90	6	1454
5:45 PM	30	67	22	0	151	314	14	1	28	406	50	18	19	249	105	6	1480
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	249	588	150	5	1163	2235	120	1	286	3067	501	93	197	1878	741	37	11311
APPROACH %'s :	25.10%	59.27%	15.12%	0.50%	33.05%	63.51%	3.41%	0.03%	7.25%	77.70%	12.69%	2.36%	6.91%	65.83%	25.97%	1.30%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	130	287	73	3	583	1174	55	1	143	1610	237	55	106	972	371	23	5823
PEAK HR FACTOR :	0.722	0.886	0.830	0.750	0.965	0.935	0.809	0.250	0.761	0.909	0.812	0.764	0.736	0.960	0.883	0.958	0.979
		0.955				0.944				0.900				0.971			

National Data & Surveying Services

Intersection Turning Movement Count

Location: McCandless Dr/Trade Zone Blvd & CR G4/Montague Expy
City: Milpitas
Control: Signalized

Project ID: 24-080364-015
Date: 11/19/2024

Data - Total

NS/EW Streets:	McCandless Dr/Trade Zone Blvd				McCandless Dr/Trade Zone Blvd				CR G4/Montague Expy				CR G4/Montague Expy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2.5	0.5	1	0	1.5	0.5	1	0	1	3	1	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	160	2	15	0	3	3	28	0	8	110	109	0	13	478	4	2	935
7:15 AM	128	4	15	0	3	7	37	0	6	141	120	1	11	484	9	0	966
7:30 AM	205	5	17	0	5	8	42	0	4	122	150	0	21	487	10	4	1080
7:45 AM	218	9	37	0	6	13	52	0	11	158	170	0	17	452	6	3	1152
8:00 AM	199	12	26	0	8	21	65	0	10	200	170	0	14	446	12	5	1188
8:15 AM	185	14	21	0	11	19	83	0	13	177	112	1	14	416	33	2	1101
8:30 AM	243	30	20	0	22	15	83	0	13	134	133	0	17	379	56	3	1148
8:45 AM	215	6	19	0	17	27	109	0	6	117	149	1	18	367	12	6	1069
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1553	82	170	0	75	113	499	0	71	1159	1113	3	125	3509	142	25	8639
APPROACH %'s :	86.04%	4.54%	9.42%	0.00%	10.92%	16.45%	72.63%	0.00%	3.03%	49.40%	47.44%	0.13%	3.29%	92.32%	3.74%	0.66%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	845	65	104	0	47	68	283	0	47	669	585	1	62	1693	107	13	4589
PEAK HR FACTOR :	0.869	0.542	0.703	0.000	0.534	0.810	0.852	0.000	0.904	0.836	0.860	0.250	0.912	0.936	0.478	0.650	0.966
	0.865				0.829				0.857				0.981				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2.5	0.5	1	0	1.5	0.5	1	0	1	3	1	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	105	10	41	0	8	31	41	0	25	414	293	5	45	246	5	12	1281
4:15 PM	121	16	45	0	6	27	28	0	25	432	296	2	37	208	6	5	1254
4:30 PM	163	18	40	0	9	27	25	0	28	401	286	3	39	255	13	13	1320
4:45 PM	113	23	49	0	5	30	28	0	36	495	309	0	45	192	7	4	1336
5:00 PM	138	18	49	0	12	28	43	0	22	539	248	1	40	227	8	5	1378
5:15 PM	150	13	59	0	13	33	33	0	15	478	259	0	53	238	15	3	1362
5:30 PM	145	10	40	0	11	39	33	0	24	455	278	1	53	214	7	5	1315
5:45 PM	130	13	47	0	10	28	33	0	33	482	309	3	53	233	13	3	1390
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1065	121	370	0	74	243	264	0	208	3696	2278	15	365	1813	74	50	10636
APPROACH %'s :	68.44%	7.78%	23.78%	0.00%	12.74%	41.82%	45.44%	0.00%	3.36%	59.64%	36.76%	0.24%	15.86%	78.76%	3.21%	2.17%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	563	54	195	0	46	128	142	0	94	1954	1094	5	199	912	43	16	5445
PEAK HR FACTOR :	0.938	0.750	0.826	0.000	0.885	0.821	0.826	0.000	0.712	0.906	0.885	0.417	0.939	0.958	0.717	0.800	0.979
	0.914				0.952				0.951				0.947				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Main St/Oakland Rd & CR G4/Montague Expy
City: Milpitas
Control: Signalized

Project ID: 24-080364-016
Date: 11/19/2024

Data - Total

NS/EW Streets:	S Main St/Oakland Rd				S Main St/Oakland Rd				CR G4/Montague Expy				CR G4/Montague Expy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	68	33	25	0	26	19	62	2	13	172	47	10	29	593	12	2	1113
7:15 AM	78	12	17	0	15	18	62	0	18	233	62	11	32	607	17	3	1185
7:30 AM	100	33	25	0	25	25	90	1	15	229	52	12	36	647	11	2	1303
7:45 AM	130	38	49	0	39	44	112	1	25	246	67	13	45	627	14	2	1452
8:00 AM	129	45	49	0	40	37	103	2	28	295	72	9	31	682	21	1	1544
8:15 AM	109	55	41	0	26	56	125	2	26	230	62	12	33	636	24	4	1441
8:30 AM	122	30	29	0	34	59	106	1	29	228	78	10	42	571	36	7	1382
8:45 AM	123	40	29	0	42	66	141	3	23	180	101	7	56	613	19	3	1446
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	859	286	264	0	247	324	801	12	177	1813	541	84	304	4976	154	24	10866
APPROACH %'s :	60.97%	20.30%	18.74%	0.00%	17.85%	23.41%	57.88%	0.87%	6.77%	69.33%	20.69%	3.21%	5.57%	91.17%	2.82%	0.44%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	490	168	168	0	139	196	446	6	108	999	279	44	151	2516	95	14	5819
PEAK HR FACTOR :	0.942	0.764	0.857	0.000	0.869	0.831	0.892	0.750	0.931	0.847	0.894	0.846	0.839	0.922	0.660	0.500	0.942
	0.926				0.941				0.885				0.944				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	78	46	64	0	62	44	64	2	40	598	49	7	25	298	21	0	1398
4:15 PM	67	63	53	0	40	77	60	2	53	629	70	11	45	332	39	0	1541
4:30 PM	81	56	73	0	53	76	45	1	56	602	43	14	43	296	45	2	1486
4:45 PM	80	53	61	0	62	87	67	1	42	644	54	10	32	304	27	0	1524
5:00 PM	82	52	91	0	64	63	49	1	43	601	36	8	39	375	30	2	1536
5:15 PM	70	67	71	0	45	90	48	4	54	627	54	8	45	305	38	1	1527
5:30 PM	66	72	83	0	63	94	52	2	49	580	38	6	37	282	32	0	1456
5:45 PM	72	65	81	0	66	95	51	0	43	588	54	8	36	311	37	2	1509
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	596	474	577	0	455	626	436	13	380	4869	398	72	302	2503	269	7	11977
APPROACH %'s :	36.19%	28.78%	35.03%	0.00%	29.74%	40.92%	28.50%	0.85%	6.64%	85.14%	6.96%	1.26%	9.80%	81.24%	8.73%	0.23%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	310	224	278	0	219	303	221	5	194	2476	203	43	159	1307	141	4	6087
PEAK HR FACTOR :	0.945	0.889	0.764	0.000	0.855	0.871	0.825	0.625	0.866	0.961	0.725	0.768	0.883	0.871	0.783	0.500	0.988
	0.902				0.862				0.955				0.903				

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Milpitas Blvd & Ames Ave/East Project Center Dwy
City: Milpitas
Control: Signalized

Project ID: 24-080364-008
Date: 11/19/2024

Data - Total

NS/EW Streets:	S Milpitas Blvd				S Milpitas Blvd				Ames Ave/East Project Center Dwy				Ames Ave/East Project Center Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	73	12	0	10	57	0	0	0	0	0	0	12	0	6	0	170
7:15 AM	0	49	17	0	9	76	0	0	0	0	0	0	10	0	9	0	170
7:30 AM	0	55	19	0	7	104	0	0	0	0	0	0	11	0	4	0	200
7:45 AM	0	97	16	0	4	112	0	0	0	0	0	0	10	0	4	0	243
8:00 AM	0	105	11	0	7	100	0	0	0	0	0	0	4	0	5	0	232
8:15 AM	0	106	18	0	11	104	0	0	0	0	0	0	10	0	3	0	252
8:30 AM	0	91	15	0	9	97	0	0	0	0	0	0	5	0	2	0	219
8:45 AM	0	115	18	0	18	87	0	0	0	0	0	0	7	0	10	0	255
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	691	126	0	75	737	0	0	0	0	0	0	69	0	43	0	1741
APPROACH %'s :	0.00%	84.58%	15.42%	0.00%	9.24%	90.76%	0.00%	0.00%					61.61%	0.00%	38.39%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	417	62	0	45	388	0	0	0	0	0	0	26	0	20	0	958
PEAK HR FACTOR :	0.000	0.907	0.861	0.000	0.625	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.650	0.000	0.500	0.000	0.939
		0.900				0.941								0.676			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	75	15	0	10	133	0	0	0	0	0	0	28	0	10	0	271
4:15 PM	0	62	9	0	11	139	0	0	0	0	0	0	30	0	8	0	259
4:30 PM	0	103	11	0	6	152	0	0	0	0	0	0	20	0	11	0	303
4:45 PM	0	111	4	0	7	154	0	0	0	0	0	0	25	0	3	0	304
5:00 PM	0	92	3	0	9	183	0	0	0	0	0	0	29	0	8	0	324
5:15 PM	0	107	11	0	5	192	0	0	0	0	0	0	17	0	9	0	341
5:30 PM	0	88	4	0	6	215	0	0	0	0	0	0	21	0	3	0	337
5:45 PM	0	89	5	0	3	208	0	0	0	0	0	0	6	0	3	0	314
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	727	62	0	57	1376	0	0	0	0	0	0	176	0	55	0	2453
APPROACH %'s :	0.00%	92.14%	7.86%	0.00%	3.98%	96.02%	0.00%	0.00%					76.19%	0.00%	23.81%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	376	23	0	23	798	0	0	0	0	0	0	73	0	23	0	1316
PEAK HR FACTOR :	0.000	0.879	0.523	0.000	0.639	0.928	0.000	0.000	0.000	0.000	0.000	0.000	0.629	0.000	0.639	0.000	0.965
		0.845				0.929								0.649			

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Milpitas Blvd & Ames Ave/Eco Office Dwy/East Project S Dwy
City: Milpitas
Control: No Control

Project ID: 24-080364-009
Date: 11/19/2024

Data - Total

NS/EW Streets:	S Milpitas Blvd				S Milpitas Blvd				Ames Ave/Eco Office Dwy/East Project S Dwy				Ames Ave/Eco Office Dwy/East Project S Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	79	1	0	0	68	0	0	0	0	0	0	0	0	0	0	148
7:15 AM	0	66	3	0	0	87	0	0	0	0	0	0	0	0	0	0	156
7:30 AM	0	72	0	0	0	111	0	0	0	0	1	0	0	0	2	0	186
7:45 AM	0	113	2	0	0	125	0	0	0	0	0	0	0	0	0	0	240
8:00 AM	1	119	3	0	0	104	0	0	0	0	0	0	0	0	0	0	227
8:15 AM	0	121	1	0	0	115	0	0	0	0	0	0	0	0	1	0	238
8:30 AM	0	107	1	0	1	101	0	0	0	0	0	0	0	0	0	0	210
8:45 AM	0	131	2	0	0	91	0	0	0	0	0	0	0	0	0	0	224
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	808	13	0	1	802	0	0	0	0	1	0	0	0	3	0	1629
APPROACH %'s :	0.12%	98.30%	1.58%	0.00%	0.12%	99.88%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	1	460	7	0	1	445	0	0	0	0	0	0	0	0	1	0	915
PEAK HR FACTOR :	0.250	0.950	0.583	0.000	0.250	0.890	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.953
		0.951				0.892								0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	90	1	0	0	159	0	1	0	0	0	0	3	0	2	0	256
4:15 PM	0	70	0	0	0	169	0	0	0	0	0	0	0	0	0	0	239
4:30 PM	0	113	0	0	0	172	0	0	0	0	0	0	0	0	0	0	285
4:45 PM	0	116	0	0	0	175	0	0	0	0	0	0	0	0	0	0	291
5:00 PM	0	93	0	0	0	217	0	0	0	0	0	0	0	0	0	0	310
5:15 PM	0	124	0	0	0	209	0	0	0	0	0	0	0	0	0	0	333
5:30 PM	0	89	1	0	0	235	0	0	0	0	0	0	0	0	0	0	325
5:45 PM	0	91	0	0	0	215	0	0	0	0	0	0	0	0	0	0	306
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	786	2	0	0	1551	0	1	0	0	0	0	3	0	2	0	2345
APPROACH %'s :	0.00%	99.75%	0.25%	0.00%	0.00%	99.94%	0.00%	0.06%					60.00%	0.00%	40.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	397	1	0	0	876	0	0	0	0	0	0	0	0	0	0	1274
PEAK HR FACTOR :	0.000	0.800	0.250	0.000	0.000	0.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.956
		0.802				0.932											

National Data & Surveying Services

Intersection Turning Movement Count

Location: Milpitas Town Center Dwy/1000 Gibraltar Dr Dwy/South Project Dwy & Gibraltar Dr
City: Milpitas
Control: 1-Way Stop(NB)

Project ID: 24-080364-011
Date: 11/19/2024

Data - Total

NS/EW Streets:	Milpitas Town Center Dwy/1000 Gibraltar Dr Dwy/South Project Dwy				Milpitas Town Center Dwy/1000 Gibraltar Dr Dwy/South Project Dwy				Gibraltar Dr				Gibraltar Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	4	0	0	0	0	0	0	4	1	0	11	16	0	0	36
7:15 AM	0	0	0	0	0	0	0	0	0	5	2	0	1	13	0	0	21
7:30 AM	0	0	1	0	0	0	0	0	0	4	0	0	3	16	0	0	24
7:45 AM	0	0	1	0	0	0	0	0	0	2	0	0	5	30	0	0	38
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	3	20	0	0	25
8:15 AM	0	0	1	0	0	0	0	0	0	1	1	0	2	24	0	0	29
8:30 AM	0	0	0	0	0	0	0	0	0	6	0	0	1	27	0	0	34
8:45 AM	0	0	1	0	0	0	0	0	0	4	0	0	1	24	0	0	30
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	8	0	0	0	0	0	0	28	4	0	27	170	0	0	237
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					0.00%	87.50%	12.50%	0.00%	13.71%	86.29%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	11	1	0	11	101	0	0	126
PEAK HR FACTOR :	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.458	0.250	0.000	0.550	0.842	0.000	0.000	0.829
	0.500								0.500				0.800				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	4	0	0	0	0	0	0	16	0	0	0	5	0	0	25
4:15 PM	0	0	2	0	0	0	0	0	0	12	0	0	1	2	0	0	17
4:30 PM	0	0	4	0	0	0	0	0	0	40	0	0	0	5	0	0	49
4:45 PM	0	0	2	0	0	0	0	0	0	25	0	0	2	8	0	0	37
5:00 PM	0	0	6	0	0	0	0	0	0	22	0	0	1	7	0	0	36
5:15 PM	0	0	1	0	0	0	0	0	0	28	0	0	1	2	0	0	32
5:30 PM	0	0	2	0	0	0	0	0	0	29	0	0	0	4	0	0	35
5:45 PM	0	0	2	0	0	0	0	0	0	15	0	0	0	3	0	0	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	23	0	0	0	0	0	0	187	0	0	5	36	0	0	251
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					0.00%	100.00%	0.00%	0.00%	12.20%	87.80%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	13	0	0	0	0	0	0	115	0	0	4	22	0	0	154
PEAK HR FACTOR :	0.000	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.000	0.719	0.000	0.000	0.500	0.688	0.000	0.000	0.786
	0.542								0.719				0.650				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Gibraltar Dr & 909 Bldg 4 Dwy/West Project North Dwy
City: Milpitas
Control: No Control

Project ID: 24-080364-012
Date: 11/21/2024

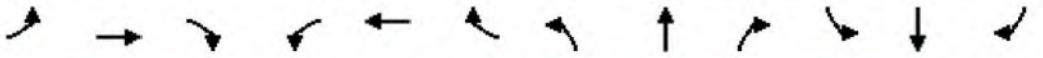
Data - Total

NS/EW Streets:	Gibraltar Dr				Gibraltar Dr				909 Bldg 4 Dwy/West Project North Dwy				909 Bldg 4 Dwy/West Project North Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	10	0	0	0	5	0	0	0	0	0	0	0	0	0	0	15
7:15 AM	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0	0	13
7:30 AM	0	12	0	0	0	5	0	0	0	0	0	0	0	0	0	0	17
7:45 AM	0	22	0	0	0	10	0	0	0	0	0	0	0	0	0	0	32
8:00 AM	0	13	0	0	0	7	0	0	0	0	0	0	0	0	0	0	20
8:15 AM	0	17	0	0	0	7	0	0	0	0	0	0	0	0	0	0	24
8:30 AM	0	18	0	0	0	8	0	0	0	0	0	0	0	0	0	0	26
8:45 AM	0	16	0	0	0	9	0	0	0	0	0	0	0	0	0	0	25
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	114	0	0	0	58	0	0	0	0	0	0	0	0	0	0	172
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	70	0	0	0	32	0	0	0	0	0	0	0	0	0	0	102
PEAK HR FACTOR :	0.000	0.795	0.000	0.000	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.797
		0.795				0.800											

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	5	0	0	0	12	0	0	0	0	0	0	0	0	0	0	17
4:15 PM	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	12
4:30 PM	0	14	0	0	0	38	0	0	0	0	0	0	0	0	0	0	52
4:45 PM	0	8	0	0	0	14	0	0	0	0	0	0	0	0	0	0	22
5:00 PM	0	10	0	0	0	14	0	0	0	0	0	0	0	0	0	0	24
5:15 PM	0	7	0	0	0	20	0	0	0	0	0	0	0	0	0	0	27
5:30 PM	0	13	0	0	0	23	0	0	0	0	0	0	0	0	0	0	36
5:45 PM	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	67	0	0	0	131	0	0	0	0	0	0	0	0	0	0	198
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	39	0	0	0	86	0	0	0	0	0	0	0	0	0	0	125
PEAK HR FACTOR :	0.000	0.696	0.000	0.000	0.000	0.566	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.601
		0.696				0.566											

Appendix D
Synchro Reports

D1 – Existing Conditions 2024



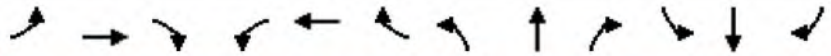
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	761	24	311	1536	103	28	264	298	125	347	437
Future Volume (veh/h)	148	761	24	311	1536	103	28	264	298	125	347	437
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	827	0	338	1670	0	30	287	324	136	377	475
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1706		364	2177		47	775	346	162	1005	448
Arrive On Green	0.11	0.33	0.00	0.20	0.43	0.00	0.03	0.22	0.22	0.09	0.28	0.28
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	161	827	0	338	1670	0	30	287	324	136	377	475
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.6	15.4	0.0	22.4	33.5	0.0	2.0	8.2	24.1	9.0	10.2	33.9
Cycle Q Clear(g_c), s	10.6	15.4	0.0	22.4	33.5	0.0	2.0	8.2	24.1	9.0	10.2	33.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	1706		364	2177		47	775	346	162	1005	448
V/C Ratio(X)	0.84	0.48		0.93	0.77		0.64	0.37	0.94	0.84	0.38	1.06
Avail Cap(c_a), veh/h	465	1706		383	2177		197	779	347	168	1005	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	31.7	0.0	46.9	29.3	0.0	57.9	39.9	46.1	53.7	34.5	43.0
Incr Delay (d2), s/veh	9.2	1.0	0.0	28.0	2.7	0.0	13.6	0.3	32.4	29.2	0.2	59.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	6.4	0.0	12.5	13.6	0.0	1.1	3.6	12.5	5.3	4.4	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.7	32.7	0.0	74.9	32.0	0.0	71.4	40.2	78.5	82.9	34.8	102.4
LnGrp LOS	E	C		E	C		E	D	E	F	C	F
Approach Vol, veh/h		988			2008			641			988	
Approach Delay, s/veh		37.5			39.2			61.0			73.9	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.7	44.8	7.9	38.6	17.7	55.9	15.6	30.9
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	24.4	17.4	4.0	35.9	12.6	35.5	11.0	26.1
Green Ext Time (p_c), s	0.2	5.4	0.0	0.0	0.4	0.0	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	49.3
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



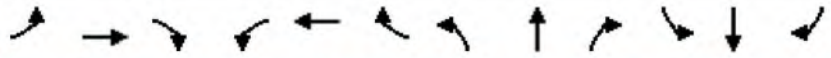
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	596	335	77	1526	202	327	197	51	130	204	314
Future Volume (veh/h)	174	596	335	77	1526	202	327	197	51	130	204	314
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	634	0	82	1623	0	348	210	54	138	217	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	1967		114	1913		721	742	331	661	680	
Arrive On Green	0.07	0.39	0.00	0.06	0.37	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	185	634	0	82	1623	0	348	210	54	138	217	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.0	9.9	0.0	5.1	33.2	0.0	10.1	5.7	3.2	3.8	6.0	0.0
Cycle Q Clear(g_c), s	6.0	9.9	0.0	5.1	33.2	0.0	10.1	5.7	3.2	3.8	6.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	1967		114	1913		721	742	331	661	680	
V/C Ratio(X)	0.72	0.32		0.72	0.85		0.48	0.28	0.16	0.21	0.32	
Avail Cap(c_a), veh/h	782	1967		325	1913		721	742	331	661	680	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.6	24.6	0.0	52.4	32.7	0.0	39.7	37.9	36.9	38.8	39.7	0.0
Incr Delay (d2), s/veh	3.8	0.4	0.0	8.3	4.9	0.0	2.3	1.0	1.1	0.7	1.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.0	0.0	2.5	13.9	0.0	4.4	2.5	1.3	1.7	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.4	25.0	0.0	60.7	37.6	0.0	42.0	38.9	38.0	39.6	40.9	0.0
LnGrp LOS	E	C		E	D		D	D	D	D	D	
Approach Vol, veh/h		819			1705			612			355	
Approach Delay, s/veh		31.9			38.7			40.6			40.4	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	48.5	28.0	26.0	12.7	47.3	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	7.7	11.9	12.1	8.0	8.0	35.2	5.8	7.7
Green Ext Time (p_c), s	0.1	3.9	0.9	1.0	0.5	0.0	0.3	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	37.6
HCM 7th LOS	D

Notes

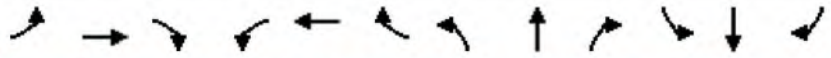
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	4	3	227	30	296	9	264	100	168	232	38
Future Volume (veh/h)	8	4	3	227	30	296	9	264	100	168	232	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	9	4	3	241	32	315	10	281	106	179	247	40
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	120	177	133	444	35	349	21	1125	415	213	1689	270
Arrive On Green	0.01	0.18	0.18	0.07	0.24	0.24	0.01	0.45	0.45	0.12	0.56	0.56
Sat Flow, veh/h	1753	977	732	1753	146	1436	1753	2501	922	1753	3020	482
Grp Volume(v), veh/h	9	0	7	241	0	347	10	194	193	179	142	145
Grp Sat Flow(s),veh/h/ln	1753	0	1709	1753	0	1582	1753	1749	1675	1753	1749	1754
Q Serve(g_s), s	0.4	0.0	0.3	7.5	0.0	21.9	0.6	7.1	7.4	10.3	4.0	4.1
Cycle Q Clear(g_c), s	0.4	0.0	0.3	7.5	0.0	21.9	0.6	7.1	7.4	10.3	4.0	4.1
Prop In Lane	1.00		0.43	1.00		0.91	1.00		0.55	1.00		0.28
Lane Grp Cap(c), veh/h	120	0	310	444	0	384	21	786	753	213	978	981
V/C Ratio(X)	0.07	0.00	0.02	0.54	0.00	0.90	0.47	0.25	0.26	0.84	0.14	0.15
Avail Cap(c_a), veh/h	228	0	506	444	0	469	272	786	753	374	978	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	34.7	32.5	0.0	37.8	50.6	17.5	17.6	44.3	10.9	10.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.4	0.0	18.2	15.4	0.8	0.8	8.5	0.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	1.6	0.0	10.1	0.3	2.9	2.9	4.9	1.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.2	0.0	34.7	33.9	0.0	56.0	66.0	18.3	18.4	52.8	11.2	11.2
LnGrp LOS	D		C	C		E	E	B	B	D	B	B
Approach Vol, veh/h		16			588			397			466	
Approach Delay, s/veh		35.0			46.9			19.6			27.2	
Approach LOS		C			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	51.3	12.0	23.2	5.2	62.6	5.6	29.5
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	12.5	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	11.3	9.4	9.5	2.3	2.6	6.1	2.4	23.9
Green Ext Time (p_c), s	0.3	1.9	0.0	0.0	0.0	1.5	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	33.1
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	29	0	14	0	399	60	31	413	0
Future Volume (veh/h)	0	0	0	29	0	14	0	399	60	31	413	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	0	0	31	0	15	0	424	64	33	439	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	69	0	104	0	18	2	2342	351	54	2946	0
Arrive On Green	0.00	0.00	0.00	0.04	0.00	0.04	0.00	0.78	0.78	0.03	0.86	0.00
Sat Flow, veh/h	0	1811	0	958	0	464	1725	3001	450	1725	3532	0
Grp Volume(v), veh/h	0	0	0	46	0	0	0	242	246	33	439	0
Grp Sat Flow(s),veh/h/ln	0	1811	0	1422	0	0	1725	1721	1730	1725	1721	0
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	3.2	3.3	1.7	1.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	3.2	3.3	1.7	1.9	0.0
Prop In Lane	0.00		0.00	0.67		0.33	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	69	0	121	0	0	2	1343	1350	54	2946	0
V/C Ratio(X)	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.18	0.18	0.61	0.15	0.00
Avail Cap(c_a), veh/h	0	322	0	470	0	0	307	1343	1350	307	2946	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.0	0.0	0.0	0.0	2.5	2.5	43.1	1.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.3	0.3	10.8	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.7	0.7	0.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	45.0	0.0	0.0	0.0	2.8	2.8	53.8	1.2	0.0
LnGrp LOS				D				A	A	D	A	
Approach Vol, veh/h		0			46			488			472	
Approach Delay, s/veh		0.0			45.0			2.8			4.9	
Approach LOS					D			A			A	

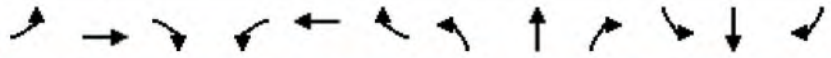
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	75.2		7.9	0.0	82.1		7.9
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	3.7	5.3		0.0	0.0	3.9		4.9
Green Ext Time (p_c), s	0.0	2.9		0.0	0.0	2.9		0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	5.7
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	14	8	0	2	149	461	11	4	440	4
Future Volume (veh/h)	5	0	14	8	0	2	149	461	11	4	440	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	0	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	6	0	17	10	0	2	180	555	13	5	530	5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	0	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	0	0	15	0	3	209	3029	71	9	1386	1175
Arrive On Green	0.00	0.00	0.00	0.01	0.00	0.01	0.12	0.88	0.88	0.01	0.77	0.77
Sat Flow, veh/h		0		1408	0	282	1725	3437	80	1725	1811	1535
Grp Volume(v), veh/h		0.0		12	0	0	180	278	290	5	530	5
Grp Sat Flow(s),veh/h/ln				1690	0	0	1725	1721	1797	1725	1811	1535
Q Serve(g_s), s				1.0	0.0	0.0	13.9	3.1	3.1	0.4	13.2	0.1
Cycle Q Clear(g_c), s				1.0	0.0	0.0	13.9	3.1	3.1	0.4	13.2	0.1
Prop In Lane				0.83		0.17	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h				18	0	0	209	1516	1583	9	1386	1175
V/C Ratio(X)				0.66	0.00	0.00	0.86	0.18	0.18	0.57	0.38	0.00
Avail Cap(c_a), veh/h				342	0	0	349	1516	1583	349	1386	1175
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				67.0	0.0	0.0	58.6	1.1	1.1	67.5	5.3	3.8
Incr Delay (d2), s/veh				46.1	0.0	0.0	14.4	0.3	0.3	63.8	0.8	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.6	0.0	0.0	6.8	0.5	0.5	0.3	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				113.1	0.0	0.0	73.1	1.4	1.4	131.4	6.1	3.8
LnGrp LOS				F			E	A	A	F	A	A
Approach Vol, veh/h					12			748			540	
Approach Delay, s/veh					113.1			18.6			7.2	
Approach LOS					F			B			A	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.2	124.9		6.0	21.0	109.1
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	2.4	5.1		3.0	15.9	15.2
Green Ext Time (p_c), s	0.0	8.7		0.0	0.6	7.3

Intersection Summary		
HCM 7th Control Delay, s/veh		14.8
HCM 7th LOS		B

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	11	1	11	101	0	0	0	2	0	0	0
Future Vol, veh/h	0	11	1	11	101	0	0	0	2	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	0	13	1	13	122	0	0	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	14	0	0	162	162	14	161	163	122
Stage 1	-	-	-	-	-	-	14	14	-	148	148	-
Stage 2	-	-	-	-	-	-	148	148	-	13	14	-
Critical Hdwy	4.17	-	-	4.17	-	-	7.17	6.57	6.27	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Follow-up Hdwy	2.263	-	-	2.263	-	-	3.563	4.063	3.363	3.563	4.063	3.363
Pot Cap-1 Maneuver	1435	-	-	1572	-	-	792	721	1052	793	721	916
Stage 1	-	-	-	-	-	-	993	874	-	843	765	-
Stage 2	-	-	-	-	-	-	843	765	-	994	874	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1435	-	-	1572	-	-	785	715	1052	784	714	916
Mov Cap-2 Maneuver	-	-	-	-	-	-	785	715	-	784	714	-
Stage 1	-	-	-	-	-	-	993	874	-	835	758	-
Stage 2	-	-	-	-	-	-	835	758	-	992	874	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.72	8.43	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1052	1435	-	-	1572	-	-	-
HCM Lane V/C Ratio	0.002	-	-	-	0.008	-	-	-
HCM Ctrl Dly (s/v)	8.4	0	-	-	7.3	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	70	0	0	32
Future Vol, veh/h	0	0	70	0	0	32
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	80	80	80	80	80	80
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	88	0	0	40

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	128	44	0	0	88	0
Stage 1	88	-	-	-	-	-
Stage 2	40	-	-	-	-	-
Critical Hdwy	6.69	6.99	-	-	4.19	-
Critical Hdwy Stg 1	5.89	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.557	3.357	-	-	2.257	-
Pot Cap-1 Maneuver	850	1005	-	-	1480	-
Stage 1	916	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	850	1005	-	-	1480	-
Mov Cap-2 Maneuver	850	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	971	-	-	-	-	-

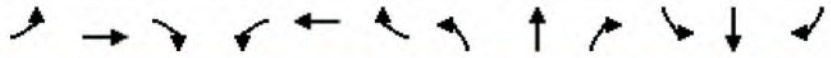
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1480	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	763	8	90	2484	298	10	68	130	113	56	414
Future Volume (veh/h)	264	763	8	90	2484	298	10	68	130	113	56	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1914	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	278	803	8	95	2615	314	11	72	137	119	59	436
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	315	3105	31	127	2662	682	432	490	437	358	903	403
Arrive On Green	0.09	0.48	0.48	0.04	0.42	0.42	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3401	6513	65	3401	6332	1622	3401	1749	1560	3401	3497	1560
Grp Volume(v), veh/h	278	585	226	95	2615	314	11	72	137	119	59	436
Grp Sat Flow(s),veh/h/ln	1700	1583	1829	1700	1583	1622	1700	1749	1560	1700	1749	1560
Q Serve(g_s), s	18.6	16.9	17.0	6.4	93.8	32.0	0.7	7.1	15.9	7.5	2.9	59.4
Cycle Q Clear(g_c), s	18.6	16.9	17.0	6.4	93.8	32.0	0.7	7.1	15.9	7.5	2.9	59.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	2264	872	127	2662	682	432	490	437	358	903	403
V/C Ratio(X)	0.88	0.26	0.26	0.75	0.98	0.46	0.03	0.15	0.31	0.33	0.07	1.08
Avail Cap(c_a), veh/h	500	2264	872	355	2662	682	432	490	437	358	903	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	103.1	35.9	35.9	109.7	65.8	47.9	87.9	62.2	65.4	95.4	64.4	85.3
Incr Delay (d2), s/veh	9.9	0.2	0.6	8.6	13.8	2.2	0.1	0.6	1.9	2.5	0.1	68.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	6.7	7.8	3.0	39.8	13.5	0.3	3.3	6.6	3.4	1.3	31.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	112.9	36.2	36.6	118.2	79.6	50.1	88.0	62.8	67.2	97.9	64.5	154.0
LnGrp LOS	F	D	D	F	E	D	F	E	E	F	E	F
Approach Vol, veh/h		1089			3024			220			614	
Approach Delay, s/veh		55.9			77.8			66.8			134.5	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.5	102.5	35.0	65.0	14.6	115.4	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	20.6	95.8	2.7	61.4	8.4	19.0	9.5	17.9
Green Ext Time (p_c), s	0.7	0.0	0.0	0.0	0.2	5.7	0.3	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	79.5
HCM 7th LOS	E



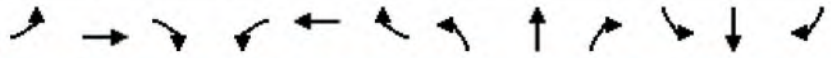
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	672	56	49	1773	1082	145	667	61	402	207	29
Future Volume (veh/h)	150	672	56	49	1773	1082	145	667	61	402	207	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	156	700	0	51	1847	1127	151	695	0	419	216	0
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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	186	3791		75	3582	883	178	792		456	1198	
Arrive On Green	0.05	0.60	0.00	0.02	0.57	0.57	0.05	0.16	0.00	0.13	0.24	0.00
Sat Flow, veh/h	3401	6332	1560	3401	6332	1560	3401	5025	1560	3401	5025	1560
Grp Volume(v), veh/h	156	700	0	51	1847	1127	151	695	0	419	216	0
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1560	1700	1675	1560	1700	1675	1560
Q Serve(g_s), s	12.3	13.5	0.0	4.0	48.3	152.8	11.9	36.5	0.0	32.8	9.2	0.0
Cycle Q Clear(g_c), s	12.3	13.5	0.0	4.0	48.3	152.8	11.9	36.5	0.0	32.8	9.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	3791		75	3582	883	178	792		456	1198	
V/C Ratio(X)	0.84	0.18		0.68	0.52	1.28	0.85	0.88		0.92	0.18	
Avail Cap(c_a), veh/h	684	3791		307	3582	883	293	1011		674	1569	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	0.18	0.18	0.18	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	126.4	24.4	0.0	131.1	35.9	58.6	126.8	111.2	0.0	115.4	81.8	0.0
Incr Delay (d2), s/veh	9.4	0.1	0.0	1.9	0.1	126.3	11.4	7.4	0.0	13.3	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	5.2	0.0	1.8	18.9	90.4	5.6	16.6	0.0	15.6	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.8	24.5	0.0	133.0	36.0	184.9	138.2	118.5	0.0	128.7	81.9	0.0
LnGrp LOS	F	C		F	D	F	F	F		F	F	
Approach Vol, veh/h		856			3025			846			635	
Approach Delay, s/veh		44.8			93.1			122.1			112.8	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	158.6	42.7	48.2	11.6	167.5	20.9	70.1
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	14.8	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	14.3	154.8	34.8	38.5	6.0	15.5	13.9	11.2
Green Ext Time (p_c), s	0.5	0.0	1.4	4.0	0.1	5.1	0.3	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	92.3
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	669	585	75	1693	107	845	65	104	47	68	283
Future Volume (veh/h)	48	669	585	75	1693	107	845	65	104	47	68	283
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	49	690	603	77	1745	0	919	0	0	48	70	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	64	3192	991	98	3279		765	0		196	98	
Arrive On Green	0.04	0.64	0.64	0.06	0.65	0.00	0.10	0.00	0.00	0.04	0.05	0.00
Sat Flow, veh/h	1753	5025	1560	1753	5025	1560	5259	0	1560	1753	1841	1560
Grp Volume(v), veh/h	49	690	603	77	1745	0	919	0	0	48	70	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1560	1753	1675	1560	1753	0	1560	1753	1841	1560
Q Serve(g_s), s	3.9	8.1	32.2	6.1	25.9	0.0	14.6	0.0	0.0	3.6	5.2	0.0
Cycle Q Clear(g_c), s	3.9	8.1	32.2	6.1	25.9	0.0	14.6	0.0	0.0	3.6	5.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	3192	991	98	3279		765	0		196	98	
V/C Ratio(X)	0.77	0.22	0.61	0.79	0.53		1.20	0.00		0.24	0.71	
Avail Cap(c_a), veh/h	377	3192	991	381	3279		765	0		310	390	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.82	0.82	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	66.9	10.8	15.2	65.3	12.9	0.0	57.9	0.0	0.0	59.2	65.2	0.0
Incr Delay (d2), s/veh	16.2	0.1	2.5	10.8	0.5	0.0	102.9	0.0	0.0	0.6	9.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.9	12.0	3.0	9.0	0.0	9.3	0.0	0.0	1.6	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.0	10.9	17.7	76.1	13.5	0.0	160.8	0.0	0.0	59.8	74.4	0.0
LnGrp LOS	F	B	B	E	B		F			E	E	
Approach Vol, veh/h		1342			1822			919			118	
Approach Delay, s/veh		16.6			16.1			160.8			68.5	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	97.2	10.9	21.9	12.4	94.7	20.0	12.9
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.1	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	5.9	27.9	5.6	0.0	8.1	34.2	16.6	7.2
Green Ext Time (p_c), s	0.1	10.5	0.0	0.0	0.2	4.7	0.0	0.3

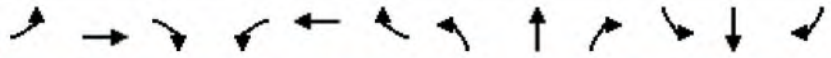
Intersection Summary	
HCM 7th Control Delay, s/veh	49.4
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	999	279	165	2516	95	490	168	168	145	196	446
Future Volume (veh/h)	152	999	279	165	2516	95	490	168	168	145	196	446
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	162	1063	0	176	2677	0	521	179	0	154	209	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	204	2692		217	2722		433	788		196	547	
Arrive On Green	0.06	0.53	0.00	0.06	0.54	0.00	0.13	0.22	0.00	0.06	0.16	0.00
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	3428	3526	1572	3428	3526	1572
Grp Volume(v), veh/h	162	1063	0	176	2677	0	521	179	0	154	209	0
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1714	1763	1572	1714	1763	1572
Q Serve(g_s), s	8.9	23.6	0.0	9.6	98.5	0.0	24.0	7.9	0.0	8.4	10.1	0.0
Cycle Q Clear(g_c), s	8.9	23.6	0.0	9.6	98.5	0.0	24.0	7.9	0.0	8.4	10.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	2692		217	2722		433	788		196	547	
V/C Ratio(X)	0.79	0.39		0.81	0.98		1.20	0.23		0.79	0.38	
Avail Cap(c_a), veh/h	530	2692		433	2722		433	788		520	547	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.68	0.68	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	88.2	26.4	0.0	87.9	43.1	0.0	83.0	60.4	0.0	88.4	72.1	0.0
Incr Delay (d2), s/veh	6.9	0.4	0.0	4.9	10.9	0.0	111.6	0.7	0.0	6.8	2.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	9.6	0.0	4.4	42.2	0.0	17.4	3.6	0.0	3.9	4.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	95.1	26.8	0.0	92.8	54.0	0.0	194.6	61.0	0.0	95.3	74.1	0.0
LnGrp LOS	F	C		F	D		F	E		F	E	
Approach Vol, veh/h		1225			2853			700			363	
Approach Delay, s/veh		35.9			56.4			160.4			83.1	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	107.9	17.0	48.2	18.0	106.8	30.0	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	29.4	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	10.9	100.5	10.4	9.9	11.6	25.6	26.0	12.1
Green Ext Time (p_c), s	0.4	0.0	0.4	0.8	0.4	8.7	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	67.5
HCM 7th LOS	E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

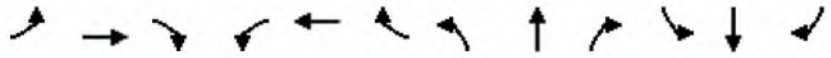
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1530	22	241	888	133	47	348	672	177	243	207
Future Volume (veh/h)	170	1530	22	241	888	133	47	348	672	177	243	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	173	1561	0	246	906	0	48	355	686	181	248	211
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	205	1955		277	2140		62	785	350	169	998	445
Arrive On Green	0.11	0.38	0.00	0.15	0.42	0.00	0.03	0.22	0.22	0.09	0.28	0.28
Sat Flow, veh/h	1795	5147	1598	1795	5147	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	173	1561	0	246	906	0	48	355	686	181	248	211
Grp Sat Flow(s),veh/h/ln	1795	1716	1598	1795	1716	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	11.3	32.4	0.0	16.1	15.0	0.0	3.2	10.3	26.3	11.3	6.4	13.2
Cycle Q Clear(g_c), s	11.3	32.4	0.0	16.1	15.0	0.0	3.2	10.3	26.3	11.3	6.4	13.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	1955		277	2140		62	785	350	169	998	445
V/C Ratio(X)	0.84	0.80		0.89	0.42		0.77	0.45	1.96	1.07	0.25	0.47
Avail Cap(c_a), veh/h	468	1955		386	2140		199	785	350	169	998	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	33.1	0.0	49.7	24.9	0.0	57.4	40.6	46.8	54.3	33.5	36.0
Incr Delay (d2), s/veh	9.1	3.5	0.0	16.7	0.6	0.0	17.8	0.4	441.9	89.2	0.1	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.4	19.8	0.0	13.1	10.1	0.0	3.1	8.1	83.8	14.6	5.1	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.2	36.6	0.0	66.4	25.5	0.0	75.2	41.0	488.7	143.6	33.7	36.8
LnGrp LOS	E	D		E	C		E	D	F	F	C	D
Approach Vol, veh/h		1734			1152			1089			640	
Approach Delay, s/veh		39.1			34.2			324.6			65.8	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.7	50.3	8.9	38.1	18.4	54.6	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	18.1	34.4	5.2	15.2	13.3	17.0	13.3	28.3
Green Ext Time (p_c), s	0.4	1.6	0.0	1.7	0.4	4.9	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	108.9
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



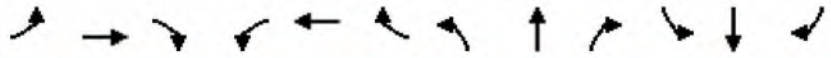
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	377	1362	613	118	905	187	302	253	108	192	304	238
Future Volume (veh/h)	377	1362	613	118	905	187	302	253	108	192	304	238
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	397	1434	0	124	953	0	318	266	114	202	320	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	480	1863		156	1602		727	748	334	666	685	
Arrive On Green	0.14	0.36	0.00	0.09	0.31	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3483	5147	1598	1795	5147	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	397	1434	0	124	953	0	318	266	114	202	320	0
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1795	1716	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	12.6	28.1	0.0	7.7	17.8	0.0	9.1	7.2	6.9	5.7	9.0	0.0
Cycle Q Clear(g_c), s	12.6	28.1	0.0	7.7	17.8	0.0	9.1	7.2	6.9	5.7	9.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	480	1863		156	1602		727	748	334	666	685	
V/C Ratio(X)	0.83	0.77		0.79	0.59		0.44	0.36	0.34	0.30	0.47	
Avail Cap(c_a), veh/h	788	1863		328	1602		727	748	334	666	685	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.8	32.2	0.0	51.0	33.2	0.0	39.3	38.5	38.4	39.6	40.9	0.0
Incr Delay (d2), s/veh	3.8	3.1	0.0	8.7	1.6	0.0	1.9	1.3	2.8	1.2	2.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	17.3	0.0	6.8	11.9	0.0	7.2	5.9	0.5	4.5	7.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.6	35.3	0.0	59.8	34.8	0.0	41.2	39.9	41.2	40.8	43.2	0.0
LnGrp LOS	D	D		E	C		D	D	D	D	D	
Approach Vol, veh/h		1831			1077			698			522	
Approach Delay, s/veh		38.8			37.7			40.7			42.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	45.9	28.0	26.0	19.9	40.1	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	9.7	30.1	11.1	11.0	14.6	19.8	7.7	9.2
Green Ext Time (p_c), s	0.2	0.3	0.9	1.3	1.1	2.8	0.5	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	39.3
HCM 7th LOS	D

Notes

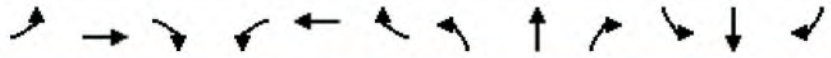
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	28	8	184	7	148	0	275	133	349	616	5
Future Volume (veh/h)	40	28	8	184	7	148	0	275	133	349	616	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	29	8	188	7	151	0	281	136	356	629	5
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	118	33	288	9	188	2	1066	503	380	2556	20
Arrive On Green	0.03	0.08	0.08	0.07	0.12	0.12	0.00	0.45	0.45	0.21	0.71	0.71
Sat Flow, veh/h	1781	1411	389	1781	71	1525	1781	2344	1105	1781	3613	29
Grp Volume(v), veh/h	41	0	37	188	0	158	0	211	206	356	309	325
Grp Sat Flow(s),veh/h/ln	1781	0	1800	1781	0	1596	1781	1777	1672	1781	1777	1865
Q Serve(g_s), s	2.1	0.0	2.0	7.5	0.0	9.9	0.0	7.6	7.9	20.2	6.4	6.4
Cycle Q Clear(g_c), s	2.1	0.0	2.0	7.5	0.0	9.9	0.0	7.6	7.9	20.2	6.4	6.4
Prop In Lane	1.00		0.22	1.00		0.96	1.00		0.66	1.00		0.02
Lane Grp Cap(c), veh/h	163	0	151	288	0	197	2	808	760	380	1257	1319
V/C Ratio(X)	0.25	0.00	0.24	0.65	0.00	0.80	0.00	0.26	0.27	0.94	0.25	0.25
Avail Cap(c_a), veh/h	233	0	533	288	0	473	277	808	760	380	1257	1319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	0.0	44.1	40.5	0.0	43.9	0.0	17.4	17.4	39.8	5.3	5.3
Incr Delay (d2), s/veh	0.8	0.0	0.8	5.2	0.0	7.5	0.0	0.8	0.9	30.3	0.5	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	1.6	8.6	0.0	7.6	0.0	5.6	5.5	17.3	3.7	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.0	0.0	45.0	45.7	0.0	51.4	0.0	18.1	18.3	70.1	5.8	5.8
LnGrp LOS	D		D	D		D		B	B	E	A	A
Approach Vol, veh/h		78			346			417			990	
Approach Delay, s/veh		43.4			48.3			18.2			28.9	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	51.9	12.0	13.1	0.0	77.9	8.0	17.2
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.0	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	22.2	9.9	9.5	4.0	0.0	8.4	4.1	11.9
Green Ext Time (p_c), s	0.0	2.0	0.0	0.1	0.0	3.6	0.0	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	30.8
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	73	0	23	0	376	23	23	798	0
Future Volume (veh/h)	0	0	0	73	0	23	0	376	23	23	798	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	75	0	24	0	388	24	24	823	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	159	0	162	2	30	2	2515	155	45	2876	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.74	0.74	0.03	0.81	0.00
Sat Flow, veh/h	0	1870	0	1083	24	354	1781	3400	210	1781	3647	0
Grp Volume(v), veh/h	0	0	0	99	0	0	0	202	210	24	823	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1461	0	0	1781	1777	1833	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	5.8	0.0	0.0	0.0	3.0	3.0	1.2	5.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	3.0	3.0	1.2	5.2	0.0
Prop In Lane	0.00		0.00	0.76		0.24	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	159	0	195	0	0	2	1315	1356	45	2876	0
V/C Ratio(X)	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.15	0.15	0.54	0.29	0.00
Avail Cap(c_a), veh/h	0	333	0	483	0	0	317	1315	1356	317	2876	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	40.4	0.0	0.0	0.0	3.4	3.4	43.4	2.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.2	0.2	9.7	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	4.0	0.0	0.0	0.0	1.5	1.5	1.1	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	42.4	0.0	0.0	0.0	3.7	3.7	53.0	2.4	0.0
LnGrp LOS				D				A	A	D	A	
Approach Vol, veh/h		0			99			412			847	
Approach Delay, s/veh		0.0			42.4			3.7			3.8	
Approach LOS					D			A			A	

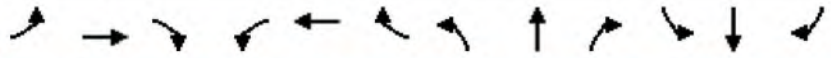
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	71.6		12.2	0.0	77.8		12.2
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	3.2	5.0		0.0	0.0	7.2		8.0
Green Ext Time (p_c), s	0.0	2.3		0.0	0.0	5.9		0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	6.6
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	115	16	0	9	21	380	16	1	873	1
Future Volume (veh/h)	7	0	115	16	0	9	21	380	16	1	873	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	7	0	121	17	0	9	22	400	17	1	919	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	0	0	0	21	0	11	30	3070	130	2	1624	1376
Arrive On Green	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.88	0.88	0.00	0.86	0.86
Sat Flow, veh/h		0		1126	0	596	1795	3501	148	1795	1885	1598
Grp Volume(v), veh/h		0.0		26	0	0	22	204	213	1	919	1
Grp Sat Flow(s),veh/h/ln				1722	0	0	1795	1791	1858	1795	1885	1598
Q Serve(g_s), s				2.0	0.0	0.0	1.7	2.2	2.2	0.1	17.9	0.0
Cycle Q Clear(g_c), s				2.0	0.0	0.0	1.7	2.2	2.2	0.1	17.9	0.0
Prop In Lane				0.65		0.35	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h				33	0	0	30	1570	1630	2	1624	1376
V/C Ratio(X)				0.79	0.00	0.00	0.74	0.13	0.13	0.51	0.57	0.00
Avail Cap(c_a), veh/h				348	0	0	363	1570	1630	363	1624	1376
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				66.4	0.0	0.0	66.6	1.2	1.2	67.9	2.5	1.3
Incr Delay (d2), s/veh				43.7	0.0	0.0	39.3	0.2	0.2	167.8	1.4	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				2.3	0.0	0.0	1.9	0.7	0.7	0.2	7.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				110.1	0.0	0.0	105.9	1.3	1.3	235.6	4.0	1.3
LnGrp LOS				F			F	A	A	F	A	A
Approach Vol, veh/h					26			439			921	
Approach Delay, s/veh					110.1			6.6			4.2	
Approach LOS					F			A			A	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	4.6	124.3		7.1	6.8	122.1
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	12.1	4.2		4.0	3.7	19.9
Green Ext Time (p_c), s	0.0	6.2		0.1	0.0	10.8

Intersection Summary		
HCM 7th Control Delay, s/veh		7.0
HCM 7th LOS		A

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	94	0	2	16	0	0	0	11	0	0	0
Future Vol, veh/h	0	94	0	2	16	0	0	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	119	0	3	20	0	0	0	14	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	20	0	0	119	0	0	144	144	119	144	144	20
Stage 1	-	-	-	-	-	-	119	119	-	25	25	-
Stage 2	-	-	-	-	-	-	25	25	-	119	119	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1596	-	-	1469	-	-	825	747	933	825	747	1057
Stage 1	-	-	-	-	-	-	885	797	-	992	874	-
Stage 2	-	-	-	-	-	-	992	874	-	885	797	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1596	-	-	1469	-	-	823	746	933	811	746	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-	823	746	-	811	746	-
Stage 1	-	-	-	-	-	-	885	797	-	991	873	-
Stage 2	-	-	-	-	-	-	991	873	-	872	797	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.83	8.92	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	933	1596	-	-	1469	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	0.002	-	-	-
HCM Ctrl Dly (s/v)	8.9	0	-	-	7.5	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	35	0	0	60
Future Vol, veh/h	0	0	35	0	0	60
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	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	58	0	0	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	158	29	0	0	58	0
Stage 1	58	-	-	-	-	-
Stage 2	100	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	825	1039	-	-	1545	-
Stage 1	958	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	825	1039	-	-	1545	-
Mov Cap-2 Maneuver	825	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	923	-	-	-	-	-

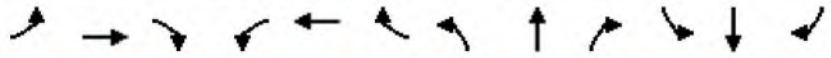
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1545	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	1806	30	88	1078	125	18	78	136	343	164	497
Future Volume (veh/h)	374	1806	30	88	1078	125	18	78	136	343	164	497
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	382	1843	31	90	1100	128	18	80	139	350	167	507
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	419	3142	53	122	2521	646	439	498	444	364	918	409
Arrive On Green	0.12	0.48	0.48	0.04	0.39	0.39	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3456	6566	110	3456	6434	1648	3456	1777	1585	3456	3554	1585
Grp Volume(v), veh/h	382	1355	519	90	1100	128	18	80	139	350	167	507
Grp Sat Flow(s),veh/h/ln	1728	1609	1850	1728	1609	1648	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	25.1	46.8	46.8	5.9	28.8	11.8	1.1	7.8	15.9	23.2	8.4	59.4
Cycle Q Clear(g_c), s	25.1	46.8	46.8	5.9	28.8	11.8	1.1	7.8	15.9	23.2	8.4	59.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	2309	886	122	2521	646	439	498	444	364	918	409
V/C Ratio(X)	0.91	0.59	0.59	0.74	0.44	0.20	0.04	0.16	0.31	0.96	0.18	1.24
Avail Cap(c_a), veh/h	508	2309	886	361	2521	646	439	498	444	364	918	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.9	43.5	43.5	109.9	51.3	46.1	88.1	62.4	65.3	102.4	66.4	85.3
Incr Delay (d2), s/veh	15.2	0.8	2.2	8.4	0.6	0.7	0.2	0.7	1.8	38.6	0.4	126.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.2	25.1	28.8	5.1	17.4	8.7	0.9	6.6	11.0	18.2	7.0	55.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	115.0	44.3	45.7	118.2	51.9	46.8	88.3	63.1	67.2	141.1	66.8	212.0
LnGrp LOS	F	D	D	F	D	D	F	E	E	F	E	F
Approach Vol, veh/h		2256			1318			237			1024	
Approach Delay, s/veh		56.6			55.9			67.4			164.1	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.1	95.9	35.0	65.0	14.1	115.9	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	27.1	30.8	3.1	61.4	7.9	48.8	25.2	17.9
Green Ext Time (p_c), s	0.8	9.7	0.0	0.0	0.2	18.4	0.0	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	79.7
HCM 7th LOS	E



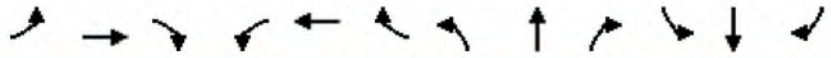
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	1610	237	129	972	371	133	287	73	584	1174	55
Future Volume (veh/h)	198	1610	237	129	972	371	133	287	73	584	1174	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	202	1643	0	132	992	379	136	293	0	596	1198	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	3564		160	3424	843	164	665		629	1349	
Arrive On Green	0.07	0.55	0.00	0.05	0.53	0.53	0.05	0.13	0.00	0.18	0.26	0.00
Sat Flow, veh/h	3456	6434	1585	3456	6434	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	202	1643	0	132	992	379	136	293	0	596	1198	0
Grp Sat Flow(s),veh/h/ln	1728	1609	1585	1728	1609	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	15.6	41.3	0.0	10.2	23.0	39.7	10.5	14.3	0.0	46.0	60.9	0.0
Cycle Q Clear(g_c), s	15.6	41.3	0.0	10.2	23.0	39.7	10.5	14.3	0.0	46.0	60.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	3564		160	3424	843	164	665		629	1349	
V/C Ratio(X)	0.86	0.46		0.83	0.29	0.45	0.83	0.44		0.95	0.89	
Avail Cap(c_a), veh/h	695	3564		312	3424	843	298	1027		685	1594	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.00	0.83	0.83	0.83	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	124.6	36.1	0.0	127.7	34.9	38.8	127.5	108.4	0.0	109.1	95.5	0.0
Incr Delay (d2), s/veh	5.6	0.3	0.0	8.6	0.2	1.4	10.2	0.5	0.0	21.4	5.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.7	21.7	0.0	8.1	13.8	22.2	8.7	10.6	0.0	30.6	36.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	130.2	36.3	0.0	136.3	35.1	40.3	137.7	108.8	0.0	130.5	101.3	0.0
LnGrp LOS	F	D		F	D	D	F	F		F	F	
Approach Vol, veh/h		1845			1503			429			1794	
Approach Delay, s/veh		46.6			45.3			118.0			111.0	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	149.5	55.7	40.9	18.1	155.4	19.5	77.0
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	54.3	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	17.6	41.7	48.0	16.3	12.2	43.3	12.5	62.9
Green Ext Time (p_c), s	0.7	9.8	1.2	2.0	0.3	18.1	0.3	8.4

Intersection Summary	
HCM 7th Control Delay, s/veh	72.5
HCM 7th LOS	E

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1954	1094	215	912	43	563	54	195	46	128	142
Future Volume (veh/h)	99	1954	1094	215	912	43	563	54	195	46	128	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	1994	1116	219	931	0	497	163	0	47	131	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	2649	822	246	2985		521	288		209	163	
Arrive On Green	0.07	0.52	0.52	0.14	0.58	0.00	0.10	0.15	0.00	0.04	0.09	0.00
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3563	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	101	1994	1116	219	931	0	497	163	0	47	131	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	7.8	43.2	72.6	16.9	13.0	0.0	14.6	11.3	0.0	3.3	9.6	0.0
Cycle Q Clear(g_c), s	7.8	43.2	72.6	16.9	13.0	0.0	14.6	11.3	0.0	3.3	9.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	2649	822	246	2985		521	288		209	163	
V/C Ratio(X)	0.81	0.75	1.36	0.89	0.31		0.95	0.57		0.22	0.80	
Avail Cap(c_a), veh/h	383	2649	822	387	2985		521	395		328	397	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	0.95	0.95	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	64.1	26.6	33.7	59.3	14.8	0.0	53.8	54.9	0.0	55.0	62.7	0.0
Incr Delay (d2), s/veh	4.5	0.7	163.7	14.0	0.3	0.0	28.1	1.7	0.0	0.5	8.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.5	20.7	90.7	13.1	8.4	0.0	6.7	9.3	0.0	2.8	8.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.6	27.3	197.4	73.3	15.0	0.0	81.8	56.6	0.0	55.5	71.5	0.0
LnGrp LOS	E	C	F	E	B		F	E		E	E	
Approach Vol, veh/h		3211			1150			660			178	
Approach Delay, s/veh		87.7			26.1			75.6			67.3	
Approach LOS		F			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	87.6	10.7	27.0	23.9	78.4	20.0	17.6
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.1	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	9.8	15.0	5.3	13.3	18.9	74.6	16.6	11.6
Green Ext Time (p_c), s	0.2	6.7	0.0	0.7	0.4	0.0	0.0	0.6

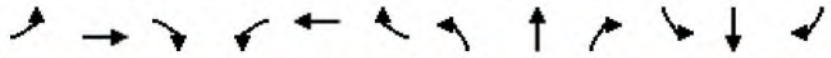
Intersection Summary	
HCM 7th Control Delay, s/veh	71.9
HCM 7th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	2396	182	162	1273	137	290	256	326	245	342	200
Future Volume (veh/h)	219	2396	182	162	1273	137	290	256	326	245	342	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	2420	0	164	1286	0	293	259	0	247	345	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	2884		205	2806		335	592		292	552	
Arrive On Green	0.08	0.56	0.00	0.06	0.55	0.00	0.10	0.17	0.00	0.08	0.16	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	221	2420	0	164	1286	0	293	259	0	247	345	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.0	74.5	0.0	8.9	28.8	0.0	15.9	12.4	0.0	13.4	17.3	0.0
Cycle Q Clear(g_c), s	12.0	74.5	0.0	8.9	28.8	0.0	15.9	12.4	0.0	13.4	17.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	2884		205	2806		335	592		292	552	
V/C Ratio(X)	0.83	0.84		0.80	0.46		0.87	0.44		0.85	0.63	
Avail Cap(c_a), veh/h	535	2884		437	2806		437	592		524	552	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.89	0.89	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	86.5	34.2	0.0	88.2	25.8	0.0	84.7	71.2	0.0	85.8	75.1	0.0
Incr Delay (d2), s/veh	6.7	3.1	0.0	6.3	0.5	0.0	14.5	2.3	0.0	6.7	5.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	39.7	0.0	7.3	17.0	0.0	12.4	9.9	0.0	10.4	13.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.2	37.3	0.0	94.5	26.3	0.0	99.1	73.5	0.0	92.4	80.4	0.0
LnGrp LOS	F	D		F	C		F	E		F	F	
Approach Vol, veh/h		2641			1450			552			592	
Approach Delay, s/veh		42.0			34.0			87.1			85.4	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.2	110.2	22.3	37.4	17.3	113.1	24.4	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	24.6	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	14.0	30.8	15.4	14.4	10.9	76.5	17.9	19.3
Green Ext Time (p_c), s	0.6	11.5	0.7	1.0	0.4	11.0	0.5	1.5

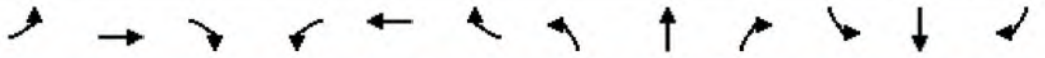
Intersection Summary	
HCM 7th Control Delay, s/veh	49.4
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

D2 – No-Build Conditions 2026



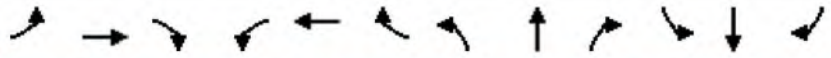
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	800	25	327	1614	108	29	277	313	131	365	459
Future Volume (veh/h)	155	800	25	327	1614	108	29	277	313	131	365	459
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	870	0	355	1754	0	32	301	340	142	397	499
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	1640		379	2134		49	779	347	168	1016	453
Arrive On Green	0.11	0.32	0.00	0.21	0.42	0.00	0.03	0.22	0.22	0.09	0.29	0.29
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	168	870	0	355	1754	0	32	301	340	142	397	499
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.1	16.7	0.0	23.5	36.5	0.0	2.1	8.7	25.6	9.4	10.8	34.3
Cycle Q Clear(g_c), s	11.1	16.7	0.0	23.5	36.5	0.0	2.1	8.7	25.6	9.4	10.8	34.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	1640		379	2134		49	779	347	168	1016	453
V/C Ratio(X)	0.84	0.53		0.94	0.82		0.66	0.39	0.98	0.85	0.39	1.10
Avail Cap(c_a), veh/h	465	1640		383	2134		197	779	347	168	1016	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	33.3	0.0	46.4	31.0	0.0	57.8	40.0	46.6	53.5	34.4	42.8
Incr Delay (d2), s/veh	9.2	1.2	0.0	30.1	3.7	0.0	14.0	0.3	42.4	31.0	0.2	72.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	11.4	0.0	19.3	21.4	0.0	2.1	6.8	20.1	9.5	8.2	31.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.4	34.5	0.0	76.5	34.7	0.0	71.9	40.3	89.0	84.5	34.7	115.3
LnGrp LOS	E	C		E	C		E	D	F	F	C	F
Approach Vol, veh/h		1038			2109			673			1038	
Approach Delay, s/veh		38.9			41.7			66.4			80.3	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.7	43.3	8.0	39.0	18.1	54.9	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	25.5	18.7	4.1	36.3	13.1	38.5	11.4	27.6
Green Ext Time (p_c), s	0.0	5.6	0.0	0.0	0.4	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	52.8
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



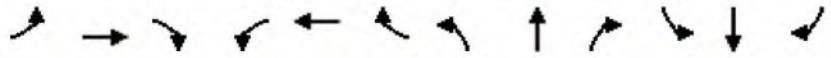
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	626	352	80	1603	212	344	207	54	137	214	330
Future Volume (veh/h)	183	626	352	80	1603	212	344	207	54	137	214	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	195	666	0	85	1705	0	366	220	57	146	228	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	1959		117	1897		721	742	331	661	680	
Arrive On Green	0.08	0.38	0.00	0.07	0.37	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	195	666	0	85	1705	0	366	220	57	146	228	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.3	10.5	0.0	5.3	35.9	0.0	10.7	6.0	3.4	4.1	6.3	0.0
Cycle Q Clear(g_c), s	6.3	10.5	0.0	5.3	35.9	0.0	10.7	6.0	3.4	4.1	6.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	1959		117	1897		721	742	331	661	680	
V/C Ratio(X)	0.73	0.34		0.73	0.90		0.51	0.30	0.17	0.22	0.34	
Avail Cap(c_a), veh/h	782	1959		325	1897		721	742	331	661	680	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.4	24.9	0.0	52.3	33.8	0.0	39.9	38.0	37.0	38.9	39.8	0.0
Incr Delay (d2), s/veh	3.8	0.5	0.0	8.3	7.3	0.0	2.5	1.0	1.1	0.8	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	7.6	0.0	4.7	21.9	0.0	8.3	4.8	2.5	3.2	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	25.4	0.0	60.6	41.0	0.0	42.5	39.1	38.1	39.7	41.2	0.0
LnGrp LOS	E	C		E	D		D	D	D	D	D	
Approach Vol, veh/h		861			1790			643			374	
Approach Delay, s/veh		32.1			42.0			40.9			40.6	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	48.3	28.0	26.0	13.0	47.0	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	7.3	12.5	12.7	8.3	8.3	37.9	6.1	8.0
Green Ext Time (p_c), s	0.1	4.0	1.0	1.0	0.5	0.0	0.4	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	39.3
HCM 7th LOS	D

Notes

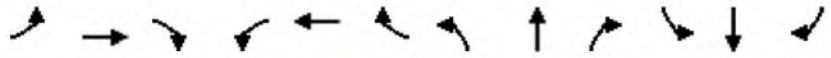
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	4	3	238	32	311	9	277	105	177	244	40
Future Volume (veh/h)	8	4	3	238	32	311	9	277	105	177	244	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	9	4	3	253	34	331	10	295	112	188	260	43
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	119	187	140	458	37	364	21	1083	402	222	1652	270
Arrive On Green	0.01	0.19	0.19	0.07	0.25	0.25	0.01	0.43	0.43	0.13	0.55	0.55
Sat Flow, veh/h	1753	977	732	1753	147	1435	1753	2495	927	1753	3010	491
Grp Volume(v), veh/h	9	0	7	253	0	365	10	205	202	188	150	153
Grp Sat Flow(s),veh/h/ln	1753	0	1709	1753	0	1582	1753	1749	1674	1753	1749	1752
Q Serve(g_s), s	0.4	0.0	0.3	7.5	0.0	23.1	0.6	7.7	8.0	10.8	4.3	4.5
Cycle Q Clear(g_c), s	0.4	0.0	0.3	7.5	0.0	23.1	0.6	7.7	8.0	10.8	4.3	4.5
Prop In Lane	1.00		0.43	1.00		0.91	1.00		0.55	1.00		0.28
Lane Grp Cap(c), veh/h	119	0	327	458	0	401	21	759	727	222	960	962
V/C Ratio(X)	0.08	0.00	0.02	0.55	0.00	0.91	0.47	0.27	0.28	0.85	0.16	0.16
Avail Cap(c_a), veh/h	227	0	506	458	0	469	272	759	727	374	960	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	33.8	31.9	0.0	37.3	50.6	18.7	18.8	44.0	11.5	11.5
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.4	0.0	20.0	15.4	0.9	1.0	8.6	0.3	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.3	3.4	0.0	16.2	0.6	5.7	5.7	8.8	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.6	0.0	33.8	33.4	0.0	57.3	66.0	19.6	19.7	52.6	11.8	11.8
LnGrp LOS	C		C	C		E	E	B	B	D	B	B
Approach Vol, veh/h		16			618			417			491	
Approach Delay, s/veh		34.2			47.5			20.7			27.4	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	49.7	12.0	24.2	5.2	61.5	5.6	30.6
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.0	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	12.8	10.0	9.5	2.3	2.6	6.5	2.4	25.1
Green Ext Time (p_c), s	0.3	1.9	0.0	0.0	0.0	1.6	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	33.7
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	30	0	15	0	419	63	33	434	0
Future Volume (veh/h)	0	0	0	30	0	15	0	419	63	33	434	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	0	0	32	0	16	0	446	67	35	462	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	73	0	105	0	19	2	2334	349	56	2940	0
Arrive On Green	0.00	0.00	0.00	0.04	0.00	0.04	0.00	0.78	0.78	0.03	0.85	0.00
Sat Flow, veh/h	0	1811	0	948	0	474	1725	3002	448	1725	3532	0
Grp Volume(v), veh/h	0	0	0	48	0	0	0	254	259	35	462	0
Grp Sat Flow(s),veh/h/ln	0	1811	0	1423	0	0	1725	1721	1730	1725	1721	0
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.5	3.5	1.8	2.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.5	3.5	1.8	2.0	0.0
Prop In Lane	0.00		0.00	0.67		0.33	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	73	0	124	0	0	2	1338	1345	56	2940	0
V/C Ratio(X)	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.19	0.19	0.63	0.16	0.00
Avail Cap(c_a), veh/h	0	322	0	470	0	0	307	1338	1345	307	2940	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.9	0.0	0.0	0.0	2.6	2.6	43.0	1.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.3	0.3	11.0	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.4	1.4	1.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	44.9	0.0	0.0	0.0	2.9	2.9	54.0	1.2	0.0
LnGrp LOS				D				A	A	D	A	
Approach Vol, veh/h		0			48			513			497	
Approach Delay, s/veh		0.0			44.9			2.9			4.9	
Approach LOS					D			A			A	

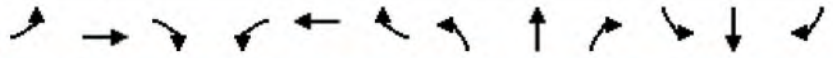
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	75.0		8.1	0.0	81.9		8.1
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	3.8	5.5		0.0	0.0	4.0		5.0
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	3.1		0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	5.8
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	15	8	0	2	156	484	12	4	462	4
Future Volume (veh/h)	5	0	15	8	0	2	156	484	12	4	462	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	0	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	6	0	18	10	0	2	188	583	14	5	557	5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	0	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	0	0	15	0	3	217	3027	73	9	1377	1167
Arrive On Green	0.00	0.00	0.00	0.01	0.00	0.01	0.13	0.88	0.88	0.01	0.76	0.76
Sat Flow, veh/h		0		1408	0	282	1725	3434	82	1725	1811	1535
Grp Volume(v), veh/h		0.0		12	0	0	188	292	305	5	557	5
Grp Sat Flow(s),veh/h/ln				1690	0	0	1725	1721	1796	1725	1811	1535
Q Serve(g_s), s				1.0	0.0	0.0	14.5	3.3	3.3	0.4	14.5	0.1
Cycle Q Clear(g_c), s				1.0	0.0	0.0	14.5	3.3	3.3	0.4	14.5	0.1
Prop In Lane				0.83		0.17	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h				18	0	0	217	1516	1583	9	1377	1167
V/C Ratio(X)				0.66	0.00	0.00	0.87	0.19	0.19	0.57	0.40	0.00
Avail Cap(c_a), veh/h				342	0	0	349	1516	1583	349	1377	1167
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				67.0	0.0	0.0	58.3	1.2	1.2	67.5	5.6	3.9
Incr Delay (d2), s/veh				46.1	0.0	0.0	15.5	0.3	0.3	63.8	0.9	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				1.2	0.0	0.0	11.6	0.9	1.0	0.6	8.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				113.1	0.0	0.0	73.8	1.4	1.4	131.4	6.5	3.9
LnGrp LOS				F			E	A	A	F	A	A
Approach Vol, veh/h					12			785			567	
Approach Delay, s/veh					113.1			18.8			7.6	
Approach LOS					F			B			A	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.2	124.9		6.0	21.6	108.4
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	2.4	5.3		3.0	16.5	16.5
Green Ext Time (p_c), s	0.0	9.2		0.0	0.6	7.4

Intersection Summary		
HCM 7th Control Delay, s/veh		15.0
HCM 7th LOS		B

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	12	1	12	106	0	0	0	2	0	0	0
Future Vol, veh/h	0	12	1	12	106	0	0	0	2	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	0	14	1	14	128	0	0	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	128	0	0	16	0	0	172	172	15	171	172	128
Stage 1	-	-	-	-	-	-	15	15	-	157	157	-
Stage 2	-	-	-	-	-	-	157	157	-	14	16	-
Critical Hdwy	4.17	-	-	4.17	-	-	7.17	6.57	6.27	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Follow-up Hdwy	2.263	-	-	2.263	-	-	3.563	4.063	3.363	3.563	4.063	3.363
Pot Cap-1 Maneuver	1428	-	-	1570	-	-	780	712	1050	781	712	909
Stage 1	-	-	-	-	-	-	992	873	-	834	759	-
Stage 2	-	-	-	-	-	-	834	759	-	993	872	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1428	-	-	1570	-	-	773	705	1050	772	705	909
Mov Cap-2 Maneuver	-	-	-	-	-	-	773	705	-	772	705	-
Stage 1	-	-	-	-	-	-	992	873	-	826	751	-
Stage 2	-	-	-	-	-	-	826	751	-	990	872	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.74	8.44	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1050	1428	-	-	1570	-	-	-
HCM Lane V/C Ratio	0.002	-	-	-	0.009	-	-	-
HCM Ctrl Dly (s/v)	8.4	0	-	-	7.3	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	74	0	0	34
Future Vol, veh/h	0	0	74	0	0	34
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	80	80	80	80	80	80
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	93	0	0	43

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	135	46	0	0	93	0
Stage 1	93	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.69	6.99	-	-	4.19	-
Critical Hdwy Stg 1	5.89	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.557	3.357	-	-	2.257	-
Pot Cap-1 Maneuver	841	1002	-	-	1474	-
Stage 1	910	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	841	1002	-	-	1474	-
Mov Cap-2 Maneuver	841	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	969	-	-	-	-	-

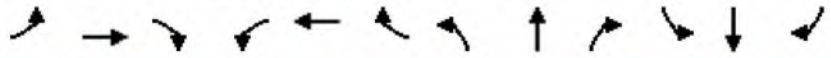
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1474	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	802	8	95	2610	313	11	71	137	119	59	435
Future Volume (veh/h)	277	802	8	95	2610	313	11	71	137	119	59	435
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1914	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	292	844	8	100	2747	329	12	75	144	125	62	458
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	329	3097	29	132	2635	675	432	490	437	358	903	403
Arrive On Green	0.10	0.48	0.48	0.04	0.42	0.42	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3401	6517	62	3401	6332	1622	3401	1749	1560	3401	3497	1560
Grp Volume(v), veh/h	292	615	237	100	2747	329	12	75	144	125	62	458
Grp Sat Flow(s),veh/h/ln	1700	1583	1830	1700	1583	1622	1700	1749	1560	1700	1749	1560
Q Serve(g_s), s	19.5	17.9	18.0	6.7	95.7	34.2	0.7	7.4	16.8	7.9	3.1	59.4
Cycle Q Clear(g_c), s	19.5	17.9	18.0	6.7	95.7	34.2	0.7	7.4	16.8	7.9	3.1	59.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	2257	869	132	2635	675	432	490	437	358	903	403
V/C Ratio(X)	0.89	0.27	0.27	0.76	1.04	0.49	0.03	0.15	0.33	0.35	0.07	1.14
Avail Cap(c_a), veh/h	500	2257	869	355	2635	675	432	490	437	358	903	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	102.6	36.4	36.4	109.5	67.1	49.2	88.0	62.3	65.7	95.6	64.4	85.3
Incr Delay (d2), s/veh	11.0	0.3	0.7	8.6	29.8	2.5	0.1	0.7	2.0	2.7	0.1	87.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.9	11.3	12.8	5.6	56.1	20.7	0.6	6.2	11.4	6.5	2.5	46.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	113.6	36.7	37.1	118.1	96.9	51.7	88.1	63.0	67.7	98.3	64.6	173.0
LnGrp LOS	F	D	D	F	F	D	F	E	E	F	E	F
Approach Vol, veh/h		1144			3176			231			645	
Approach Delay, s/veh		56.4			92.9			67.2			148.1	
Approach LOS		E			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.5	101.5	35.0	65.0	14.9	115.1	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	21.5	97.7	2.7	61.4	8.7	20.0	9.9	18.8
Green Ext Time (p_c), s	0.8	0.0	0.0	0.0	0.2	6.0	0.3	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	90.6
HCM 7th LOS	F



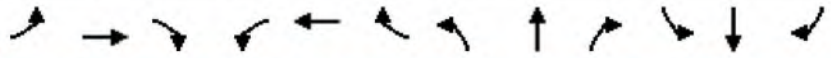
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	706	59	51	1863	1137	152	701	64	422	217	30
Future Volume (veh/h)	158	706	59	51	1863	1137	152	701	64	422	217	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	165	735	0	53	1941	1184	158	730	0	440	226	0
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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	195	3705		78	3483	858	186	826		477	1253	
Arrive On Green	0.06	0.59	0.00	0.02	0.55	0.55	0.05	0.16	0.00	0.14	0.25	0.00
Sat Flow, veh/h	3401	6332	1560	3401	6332	1560	3401	5025	1560	3401	5025	1560
Grp Volume(v), veh/h	165	735	0	53	1941	1184	158	730	0	440	226	0
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1560	1700	1675	1560	1700	1675	1560
Q Serve(g_s), s	13.0	14.7	0.0	4.2	53.7	148.5	12.4	38.3	0.0	34.5	9.5	0.0
Cycle Q Clear(g_c), s	13.0	14.7	0.0	4.2	53.7	148.5	12.4	38.3	0.0	34.5	9.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	3705		78	3483	858	186	826		477	1253	
V/C Ratio(X)	0.84	0.20		0.68	0.56	1.38	0.85	0.88		0.92	0.18	
Avail Cap(c_a), veh/h	684	3705		307	3483	858	293	1011		674	1569	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	126.0	26.3	0.0	131.0	39.4	60.7	126.6	110.3	0.0	114.6	79.6	0.0
Incr Delay (d2), s/veh	9.2	0.1	0.0	1.0	0.1	171.6	12.9	8.1	0.0	14.3	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	9.6	0.0	2.6	23.4	133.0	9.9	24.4	0.0	23.0	7.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.3	26.4	0.0	131.9	39.5	232.4	139.5	118.4	0.0	128.9	79.7	0.0
LnGrp LOS	F	C		F	D	F	F	F		F	E	
Approach Vol, veh/h		900			3178			888			666	
Approach Delay, s/veh		46.4			112.9			122.2			112.2	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	154.3	44.4	50.1	11.8	163.8	21.4	73.0
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	5.3	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	15.0	150.5	36.5	40.3	6.2	16.7	14.4	11.5
Green Ext Time (p_c), s	0.5	0.0	1.4	4.0	0.1	5.4	0.3	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	103.6
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	703	615	79	1779	112	888	68	109	49	71	297
Future Volume (veh/h)	50	703	615	79	1779	112	888	68	109	49	71	297
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	52	725	634	81	1834	0	965	0	0	51	73	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	67	3170	984	102	3259		766	0		201	101	
Arrive On Green	0.04	0.63	0.63	0.06	0.65	0.00	0.10	0.00	0.00	0.04	0.06	0.00
Sat Flow, veh/h	1753	5025	1560	1753	5025	1560	5259	0	1560	1753	1841	1560
Grp Volume(v), veh/h	52	725	634	81	1834	0	965	0	0	51	73	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1560	1753	1675	1560	1753	0	1560	1753	1841	1560
Q Serve(g_s), s	4.1	8.7	35.4	6.4	28.3	0.0	14.6	0.0	0.0	3.8	5.5	0.0
Cycle Q Clear(g_c), s	4.1	8.7	35.4	6.4	28.3	0.0	14.6	0.0	0.0	3.8	5.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	3170	984	102	3259		766	0		201	101	
V/C Ratio(X)	0.77	0.23	0.64	0.79	0.56		1.26	0.00		0.25	0.72	
Avail Cap(c_a), veh/h	377	3170	984	381	3259		766	0		312	390	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.77	0.77	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	66.7	11.2	16.1	65.1	13.6	0.0	57.7	0.0	0.0	58.8	65.1	0.0
Incr Delay (d2), s/veh	15.1	0.1	2.9	10.0	0.5	0.0	127.6	0.0	0.0	0.7	9.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	5.6	18.9	5.6	14.4	0.0	18.0	0.0	0.0	3.1	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.8	11.3	19.0	75.0	14.2	0.0	185.3	0.0	0.0	59.5	74.3	0.0
LnGrp LOS	F	B	B	E	B		F			E	E	
Approach Vol, veh/h		1411			1915			965			124	
Approach Delay, s/veh		17.3			16.7			185.3			68.2	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	96.6	11.1	22.0	12.8	94.1	20.0	13.1
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.1	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	16.1	30.3	5.8	0.0	8.4	37.4	16.6	7.5
Green Ext Time (p_c), s	0.1	9.8	0.0	0.0	0.2	3.8	0.0	0.3

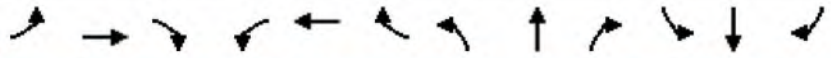
Intersection Summary	
HCM 7th Control Delay, s/veh	55.2
HCM 7th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1050	293	174	2643	100	515	177	177	152	206	469
Future Volume (veh/h)	159	1050	293	174	2643	100	515	177	177	152	206	469
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	169	1117	0	185	2812	0	548	188	0	162	219	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	211	2678		226	2711		433	779		204	547	
Arrive On Green	0.06	0.53	0.00	0.07	0.54	0.00	0.13	0.22	0.00	0.06	0.16	0.00
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	3428	3526	1572	3428	3526	1572
Grp Volume(v), veh/h	169	1117	0	185	2812	0	548	188	0	162	219	0
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1714	1763	1572	1714	1763	1572
Q Serve(g_s), s	9.2	25.3	0.0	10.1	101.7	0.0	24.0	8.3	0.0	8.9	10.6	0.0
Cycle Q Clear(g_c), s	9.2	25.3	0.0	10.1	101.7	0.0	24.0	8.3	0.0	8.9	10.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	2678		226	2711		433	779		204	547	
V/C Ratio(X)	0.80	0.42		0.82	1.04		1.27	0.24		0.79	0.40	
Avail Cap(c_a), veh/h	530	2678		433	2711		433	779		520	547	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.63	0.63	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	88.0	27.1	0.0	87.6	44.2	0.0	83.0	60.9	0.0	88.2	72.3	0.0
Incr Delay (d2), s/veh	6.9	0.5	0.0	4.6	24.6	0.0	136.8	0.7	0.0	6.8	2.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.7	15.6	0.0	7.4	57.7	0.0	28.7	6.9	0.0	7.5	8.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.9	27.5	0.0	92.2	68.8	0.0	219.8	61.6	0.0	95.0	74.5	0.0
LnGrp LOS	F	C		F	F		F	E		F	E	
Approach Vol, veh/h		1286			2997			736			381	
Approach Delay, s/veh		36.4			70.2			179.4			83.2	
Approach LOS		D			E			F			F	

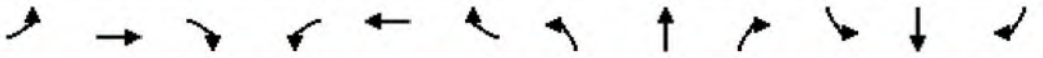
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	107.5	17.5	47.7	18.5	106.3	30.0	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	29.4	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	11.2	103.7	10.9	10.3	12.1	27.3	26.0	12.6
Green Ext Time (p_c), s	0.5	0.0	0.4	0.8	0.4	9.4	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	78.0
HCM 7th LOS	E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



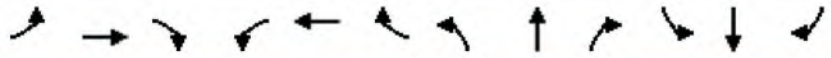
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1607	23	253	933	140	49	366	706	186	255	217
Future Volume (veh/h)	179	1607	23	253	933	140	49	366	706	186	255	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	183	1640	0	258	952	0	50	373	720	190	260	221
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	215	1921		289	2111		65	785	350	169	993	443
Arrive On Green	0.12	0.37	0.00	0.16	0.41	0.00	0.04	0.22	0.22	0.09	0.28	0.28
Sat Flow, veh/h	1795	5147	1598	1795	5147	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	183	1640	0	258	952	0	50	373	720	190	260	221
Grp Sat Flow(s),veh/h/ln	1795	1716	1598	1795	1716	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	12.0	35.2	0.0	16.9	16.1	0.0	3.3	10.9	26.3	11.3	6.8	13.9
Cycle Q Clear(g_c), s	12.0	35.2	0.0	16.9	16.1	0.0	3.3	10.9	26.3	11.3	6.8	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	1921		289	2111		65	785	350	169	993	443
V/C Ratio(X)	0.85	0.85		0.89	0.45		0.77	0.48	2.06	1.12	0.26	0.50
Avail Cap(c_a), veh/h	468	1921		386	2111		199	785	350	169	993	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	34.6	0.0	49.3	25.6	0.0	57.3	40.8	46.8	54.3	33.8	36.4
Incr Delay (d2), s/veh	9.0	5.1	0.0	18.2	0.7	0.0	17.1	0.4	485.1	106.3	0.1	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	21.6	0.0	13.8	10.7	0.0	3.2	8.4	90.6	15.9	5.3	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.8	39.7	0.0	67.5	26.3	0.0	74.5	41.3	532.0	160.7	33.9	37.3
LnGrp LOS	E	D		E	C		E	D	F	F	C	D
Approach Vol, veh/h		1823			1210			1143			671	
Approach Delay, s/veh		41.8			35.1			351.8			70.9	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.5	49.5	9.0	38.0	19.1	53.9	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	18.9	37.2	5.3	15.9	14.0	18.1	13.3	28.3
Green Ext Time (p_c), s	0.4	0.0	0.0	1.7	0.4	4.9	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	117.3
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



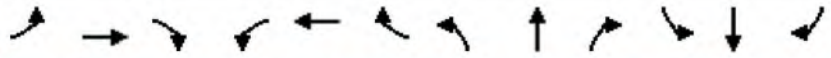
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	1431	644	124	951	196	317	266	113	202	319	250
Future Volume (veh/h)	396	1431	644	124	951	196	317	266	113	202	319	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	417	1506	0	131	1001	0	334	280	119	213	336	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	500	1843		163	1572		727	748	334	666	685	
Arrive On Green	0.14	0.36	0.00	0.09	0.31	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3483	5147	1598	1795	5147	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	417	1506	0	131	1001	0	334	280	119	213	336	0
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1795	1716	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	13.3	30.3	0.0	8.2	19.1	0.0	9.6	7.6	7.3	6.0	9.5	0.0
Cycle Q Clear(g_c), s	13.3	30.3	0.0	8.2	19.1	0.0	9.6	7.6	7.3	6.0	9.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	500	1843		163	1572		727	748	334	666	685	
V/C Ratio(X)	0.83	0.82		0.80	0.64		0.46	0.37	0.36	0.32	0.49	
Avail Cap(c_a), veh/h	788	1843		328	1572		727	748	334	666	685	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.5	33.2	0.0	50.8	34.1	0.0	39.5	38.7	38.6	39.7	41.1	0.0
Incr Delay (d2), s/veh	4.4	4.2	0.0	8.8	2.0	0.0	2.1	1.4	3.0	1.3	2.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	18.6	0.0	7.2	12.7	0.0	7.6	6.2	5.5	4.8	7.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.9	37.3	0.0	59.6	36.1	0.0	41.6	40.1	41.5	41.0	43.6	0.0
LnGrp LOS	D	D		E	D		D	D	D	D	D	
Approach Vol, veh/h		1923			1132			733			549	
Approach Delay, s/veh		40.5			38.8			41.0			42.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	45.4	28.0	26.0	20.6	39.4	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	10.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	10.2	32.3	11.6	11.5	15.3	21.1	8.0	9.6
Green Ext Time (p_c), s	0.2	0.0	0.9	1.4	1.1	2.4	0.6	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	40.4
HCM 7th LOS	D

Notes

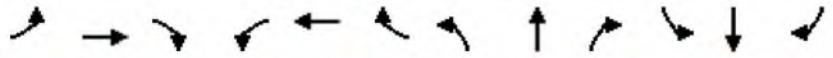
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	29	8	193	7	155	0	289	140	367	647	5
Future Volume (veh/h)	42	29	8	193	7	155	0	289	140	367	647	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	30	8	197	7	158	0	295	143	374	660	5
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	127	34	295	9	195	2	1052	498	380	2537	19
Arrive On Green	0.03	0.09	0.09	0.07	0.13	0.13	0.00	0.45	0.45	0.21	0.70	0.70
Sat Flow, veh/h	1781	1423	379	1781	68	1528	1781	2341	1107	1781	3615	27
Grp Volume(v), veh/h	43	0	38	197	0	165	0	222	216	374	324	341
Grp Sat Flow(s),veh/h/ln	1781	0	1802	1781	0	1595	1781	1777	1671	1781	1777	1865
Q Serve(g_s), s	2.2	0.0	2.0	7.5	0.0	10.4	0.0	8.1	8.4	21.5	6.9	6.9
Cycle Q Clear(g_c), s	2.2	0.0	2.0	7.5	0.0	10.4	0.0	8.1	8.4	21.5	6.9	6.9
Prop In Lane	1.00		0.21	1.00		0.96	1.00		0.66	1.00		0.01
Lane Grp Cap(c), veh/h	164	0	161	295	0	204	2	799	751	380	1247	1309
V/C Ratio(X)	0.26	0.00	0.24	0.67	0.00	0.81	0.00	0.28	0.29	0.98	0.26	0.26
Avail Cap(c_a), veh/h	233	0	534	295	0	472	277	799	751	380	1247	1309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	0.0	43.6	40.4	0.0	43.7	0.0	17.8	17.9	40.3	5.6	5.6
Incr Delay (d2), s/veh	0.8	0.0	0.7	5.7	0.0	7.5	0.0	0.9	1.0	41.5	0.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	1.6	2.7	0.0	7.8	0.0	6.0	5.9	19.5	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.6	0.0	44.4	46.1	0.0	51.2	0.0	18.7	18.9	81.8	6.1	6.1
LnGrp LOS	D		D	D		D		B	B	F	A	A
Approach Vol, veh/h		81			362			438			1039	
Approach Delay, s/veh		42.9			48.4			18.8			33.3	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	51.3	12.0	13.7	0.0	77.3	8.0	17.7
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.0	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	23.5	10.4	9.5	4.0	0.0	8.9	4.2	12.4
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	3.8	0.0	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	33.3
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	77	0	24	0	395	24	24	838	0
Future Volume (veh/h)	0	0	0	77	0	24	0	395	24	24	838	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	79	0	25	0	407	25	25	864	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	167	0	167	2	31	2	2500	153	46	2861	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.73	0.73	0.03	0.81	0.00
Sat Flow, veh/h	0	1870	0	1085	25	351	1781	3401	208	1781	3647	0
Grp Volume(v), veh/h	0	0	0	104	0	0	0	212	220	25	864	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1461	0	0	1781	1777	1833	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	0.0	0.0	3.2	3.3	1.2	5.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.3	0.0	0.0	0.0	3.2	3.3	1.2	5.6	0.0
Prop In Lane	0.00		0.00	0.76		0.24	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	167	0	201	0	0	2	1306	1347	46	2861	0
V/C Ratio(X)	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.16	0.16	0.54	0.30	0.00
Avail Cap(c_a), veh/h	0	333	0	483	0	0	317	1306	1347	317	2861	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	40.2	0.0	0.0	0.0	3.6	3.6	43.3	2.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.3	0.3	9.6	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	4.2	0.0	0.0	0.0	1.6	1.6	1.2	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	42.2	0.0	0.0	0.0	3.9	3.9	52.9	2.5	0.0
LnGrp LOS				D				A	A	D	A	
Approach Vol, veh/h		0			104			432			889	
Approach Delay, s/veh		0.0			42.2			3.9			3.9	
Approach LOS					D			A			A	

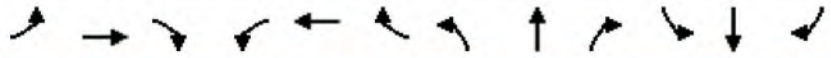
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	71.1		12.5	0.0	77.5		12.5
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	3.2	5.3		0.0	0.0	7.6		8.3
Green Ext Time (p_c), s	0.0	2.4		0.0	0.0	6.3		0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	6.7
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	121	17	0	9	22	399	17	1	917	1
Future Volume (veh/h)	7	0	121	17	0	9	22	399	17	1	917	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	7	0	127	18	0	9	23	420	18	1	965	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	0	0	0	23	0	11	31	3066	131	2	1621	1374
Arrive On Green	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.88	0.88	0.00	0.86	0.86
Sat Flow, veh/h		0		1149	0	575	1795	3500	150	1795	1885	1598
Grp Volume(v), veh/h		0.0		27	0	0	23	214	224	1	965	1
Grp Sat Flow(s),veh/h/ln				1724	0	0	1795	1791	1858	1795	1885	1598
Q Serve(g_s), s				2.1	0.0	0.0	1.7	2.3	2.3	0.1	20.0	0.0
Cycle Q Clear(g_c), s				2.1	0.0	0.0	1.7	2.3	2.3	0.1	20.0	0.0
Prop In Lane				0.67		0.33	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h				34	0	0	31	1569	1628	2	1621	1374
V/C Ratio(X)				0.79	0.00	0.00	0.75	0.14	0.14	0.51	0.60	0.00
Avail Cap(c_a), veh/h				349	0	0	363	1569	1628	363	1621	1374
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				66.4	0.0	0.0	66.6	1.2	1.2	67.9	2.7	1.3
Incr Delay (d2), s/veh				41.7	0.0	0.0	40.0	0.2	0.2	167.8	1.6	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				2.4	0.0	0.0	2.0	0.7	0.8	0.2	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				108.1	0.0	0.0	106.6	1.4	1.4	235.6	4.3	1.3
LnGrp LOS				F			F	A	A	F	A	A
Approach Vol, veh/h					27			461			967	
Approach Delay, s/veh					108.1			6.6			4.6	
Approach LOS					F			A			A	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	4.6	124.1		7.2	6.8	122.0
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	12.1	4.3		4.1	3.7	22.0
Green Ext Time (p_c), s	0.0	6.5		0.1	0.0	10.0

Intersection Summary	
HCM 7th Control Delay, s/veh	7.1
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	99	0	2	17	0	0	0	12	0	0	0
Future Vol, veh/h	0	99	0	2	17	0	0	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	125	0	3	22	0	0	0	15	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	125	0	0	152	152	125	152	152	22
Stage 1	-	-	-	-	-	-	125	125	-	27	27	-
Stage 2	-	-	-	-	-	-	27	27	-	125	125	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1594	-	-	1461	-	-	815	740	925	815	740	1056
Stage 1	-	-	-	-	-	-	879	792	-	991	873	-
Stage 2	-	-	-	-	-	-	991	873	-	879	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1594	-	-	1461	-	-	814	738	925	801	738	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	814	738	-	801	738	-
Stage 1	-	-	-	-	-	-	879	792	-	989	871	-
Stage 2	-	-	-	-	-	-	989	871	-	864	792	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.79	8.96	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	925	1594	-	-	1461	-	-	-
HCM Lane V/C Ratio	0.016	-	-	-	0.002	-	-	-
HCM Ctrl Dly (s/v)	9	0	-	-	7.5	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	37	0	0	63
Future Vol, veh/h	0	0	37	0	0	63
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	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	62	0	0	105

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	167	31	0	0	62	0
Stage 1	62	-	-	-	-	-
Stage 2	105	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	816	1037	-	-	1540	-
Stage 1	954	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	816	1037	-	-	1540	-
Mov Cap-2 Maneuver	816	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	919	-	-	-	-	-

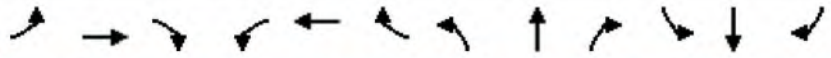
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1540	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	393	1897	32	93	1133	131	19	82	143	360	172	522
Future Volume (veh/h)	393	1897	32	93	1133	131	19	82	143	360	172	522
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	401	1936	33	95	1156	134	19	84	146	367	176	533
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	437	3132	53	127	2488	637	439	498	444	364	918	409
Arrive On Green	0.13	0.48	0.48	0.04	0.39	0.39	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3456	6564	112	3456	6434	1648	3456	1777	1585	3456	3554	1585
Grp Volume(v), veh/h	401	1423	546	95	1156	134	19	84	146	367	176	533
Grp Sat Flow(s),veh/h/ln	1728	1609	1850	1728	1609	1648	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	26.4	50.3	50.3	6.3	30.9	12.5	1.1	8.2	16.8	24.2	8.9	59.4
Cycle Q Clear(g_c), s	26.4	50.3	50.3	6.3	30.9	12.5	1.1	8.2	16.8	24.2	8.9	59.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	2302	883	127	2488	637	439	498	444	364	918	409
V/C Ratio(X)	0.92	0.62	0.62	0.75	0.46	0.21	0.04	0.17	0.33	1.01	0.19	1.30
Avail Cap(c_a), veh/h	508	2302	883	361	2488	637	439	498	444	364	918	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.3	44.6	44.6	109.7	52.7	47.1	88.1	62.6	65.7	102.9	66.6	85.3
Incr Delay (d2), s/veh	16.0	0.9	2.4	8.4	0.6	0.8	0.2	0.7	2.0	49.6	0.5	152.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.9	26.6	30.6	5.4	18.5	9.2	0.9	6.9	11.5	19.5	7.4	60.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	115.2	45.5	47.0	118.1	53.4	47.8	88.3	63.3	67.6	152.5	67.0	238.1
LnGrp LOS	F	D	D	F	D	D	F	E	E	F	E	F
Approach Vol, veh/h		2370			1385			249			1076	
Approach Delay, s/veh		57.7			57.3			67.8			180.9	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.3	94.7	35.0	65.0	14.5	115.5	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	28.4	32.9	3.1	61.4	8.3	52.3	26.2	18.8
Green Ext Time (p_c), s	0.7	10.4	0.0	0.0	0.2	19.3	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	84.2
HCM 7th LOS	F



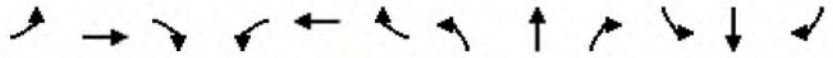
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	1692	249	135	1021	390	140	302	77	614	1233	58
Future Volume (veh/h)	208	1692	249	135	1021	390	140	302	77	614	1233	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	1727	0	138	1042	398	143	308	0	627	1258	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	3470		166	3322	818	171	691		656	1404	
Arrive On Green	0.07	0.54	0.00	0.05	0.52	0.52	0.05	0.14	0.00	0.19	0.27	0.00
Sat Flow, veh/h	3456	6434	1585	3456	6434	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	212	1727	0	138	1042	398	143	308	0	627	1258	0
Grp Sat Flow(s),veh/h/ln	1728	1609	1585	1728	1609	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	16.4	45.6	0.0	10.7	25.2	43.8	11.1	15.0	0.0	48.5	64.0	0.0
Cycle Q Clear(g_c), s	16.4	45.6	0.0	10.7	25.2	43.8	11.1	15.0	0.0	48.5	64.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	3470		166	3322	818	171	691		656	1404	
V/C Ratio(X)	0.87	0.50		0.83	0.31	0.49	0.84	0.45		0.96	0.90	
Avail Cap(c_a), veh/h	695	3470		312	3322	818	298	1027		685	1594	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.00	0.81	0.81	0.81	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	124.2	39.2	0.0	127.4	37.7	42.2	127.2	107.4	0.0	108.2	94.2	0.0
Incr Delay (d2), s/veh	4.8	0.3	0.0	8.4	0.2	1.7	10.2	0.5	0.0	23.5	6.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	23.3	0.0	8.4	14.9	24.1	9.1	11.0	0.0	32.2	38.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	129.0	39.4	0.0	135.8	37.9	43.9	137.5	107.9	0.0	131.8	100.7	0.0
LnGrp LOS	F	D		F	D	D	F	F		F	F	
Approach Vol, veh/h		1939			1578			451			1885	
Approach Delay, s/veh		49.2			48.0			117.3			111.0	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.8	145.2	57.8	42.2	18.6	151.4	20.1	79.9
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	54.3	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	18.4	45.8	50.5	17.0	12.7	47.6	13.1	66.0
Green Ext Time (p_c), s	0.7	10.3	0.8	2.1	0.3	19.7	0.3	8.2

Intersection Summary	
HCM 7th Control Delay, s/veh	74.0
HCM 7th LOS	E

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	2053	1149	226	958	45	592	57	205	48	134	149
Future Volume (veh/h)	104	2053	1149	226	958	45	592	57	205	48	134	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	2095	1172	231	978	0	523	172	0	49	137	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	2598	806	258	2952		521	293		207	170	
Arrive On Green	0.07	0.51	0.51	0.14	0.58	0.00	0.10	0.16	0.00	0.04	0.09	0.00
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3563	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	106	2095	1172	231	978	0	523	172	0	49	137	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	8.2	47.9	71.2	17.8	14.0	0.0	14.6	12.0	0.0	3.4	10.1	0.0
Cycle Q Clear(g_c), s	8.2	47.9	71.2	17.8	14.0	0.0	14.6	12.0	0.0	3.4	10.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	2598	806	258	2952		521	293		207	170	
V/C Ratio(X)	0.81	0.81	1.45	0.90	0.33		1.00	0.59		0.24	0.81	
Avail Cap(c_a), veh/h	383	2598	806	387	2952		521	395		325	397	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.26	0.26	0.26	0.94	0.94	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.9	28.6	34.4	58.8	15.4	0.0	54.2	54.9	0.0	54.5	62.5	0.0
Incr Delay (d2), s/veh	3.2	0.7	205.9	15.5	0.3	0.0	40.1	1.9	0.0	0.6	8.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	22.2	103.8	13.8	8.9	0.0	8.7	9.7	0.0	2.9	9.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	67.1	29.4	240.3	74.3	15.7	0.0	94.3	56.7	0.0	55.1	71.2	0.0
LnGrp LOS	E	C	F	E	B		F	E		E	E	
Approach Vol, veh/h		3373			1209			695			186	
Approach Delay, s/veh		103.9			26.9			85.0			67.0	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	86.7	10.8	27.3	24.9	77.0	20.0	18.1
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.3	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	10.2	16.0	5.4	14.0	19.8	73.2	16.6	12.1
Green Ext Time (p_c), s	0.2	7.0	0.0	0.7	0.4	0.0	0.0	0.6

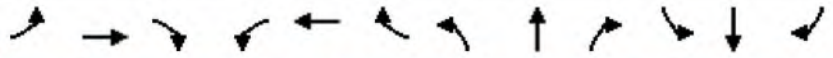
Intersection Summary	
HCM 7th Control Delay, s/veh	83.2
HCM 7th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	2517	191	170	1337	144	305	269	343	257	359	210
Future Volume (veh/h)	231	2517	191	170	1337	144	305	269	343	257	359	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	233	2542	0	172	1351	0	308	272	0	260	363	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	2850		213	2766		349	593		305	552	
Arrive On Green	0.08	0.56	0.00	0.06	0.54	0.00	0.10	0.17	0.00	0.09	0.16	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	233	2542	0	172	1351	0	308	272	0	260	363	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.6	83.2	0.0	9.3	31.3	0.0	16.7	13.1	0.0	14.1	18.3	0.0
Cycle Q Clear(g_c), s	12.6	83.2	0.0	9.3	31.3	0.0	16.7	13.1	0.0	14.1	18.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	2850		213	2766		349	593		305	552	
V/C Ratio(X)	0.84	0.89		0.81	0.49		0.88	0.46		0.85	0.66	
Avail Cap(c_a), veh/h	535	2850		437	2766		437	593		524	552	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.88	0.88	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	86.2	36.9	0.0	88.0	27.1	0.0	84.3	71.4	0.0	85.4	75.5	0.0
Incr Delay (d2), s/veh	6.7	4.7	0.0	6.2	0.5	0.0	15.9	2.5	0.0	6.7	6.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	44.2	0.0	7.5	18.3	0.0	13.0	10.3	0.0	10.8	13.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	92.9	41.7	0.0	94.2	27.7	0.0	100.1	73.9	0.0	92.0	81.5	0.0
LnGrp LOS	F	D		F	C		F	E		F	F	
Approach Vol, veh/h		2775			1523			580			623	
Approach Delay, s/veh		46.0			35.2			87.8			85.9	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	108.7	23.0	37.4	17.7	111.9	25.2	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	29.4	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	14.6	33.3	16.1	15.1	11.3	85.2	18.7	20.3
Green Ext Time (p_c), s	0.6	12.3	0.7	1.0	0.4	3.7	0.5	1.5

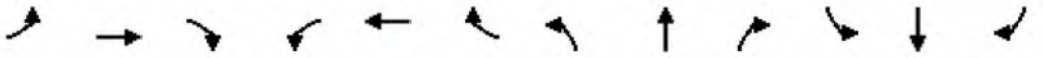
Intersection Summary	
HCM 7th Control Delay, s/veh	51.9
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

D3 – Build Conditions 2026



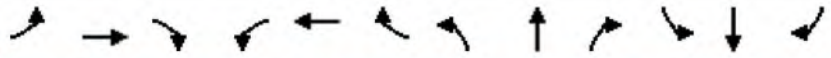
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	832	25	327	1646	108	29	277	313	131	365	459
Future Volume (veh/h)	155	832	25	327	1646	108	29	277	313	131	365	459
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	904	0	355	1789	0	32	301	340	142	397	499
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	1640		379	2134		49	779	347	168	1016	453
Arrive On Green	0.11	0.32	0.00	0.21	0.42	0.00	0.03	0.22	0.22	0.09	0.29	0.29
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	168	904	0	355	1789	0	32	301	340	142	397	499
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.1	17.5	0.0	23.5	37.7	0.0	2.1	8.7	25.6	9.4	10.8	34.3
Cycle Q Clear(g_c), s	11.1	17.5	0.0	23.5	37.7	0.0	2.1	8.7	25.6	9.4	10.8	34.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	1640		379	2134		49	779	347	168	1016	453
V/C Ratio(X)	0.84	0.55		0.94	0.84		0.66	0.39	0.98	0.85	0.39	1.10
Avail Cap(c_a), veh/h	465	1640		383	2134		197	779	347	168	1016	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	33.6	0.0	46.4	31.3	0.0	57.8	40.0	46.6	53.5	34.4	42.8
Incr Delay (d2), s/veh	9.2	1.3	0.0	30.1	4.1	0.0	14.0	0.3	42.4	31.0	0.2	72.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	11.8	0.0	19.3	22.0	0.0	2.1	6.8	20.1	9.5	8.2	31.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.4	34.9	0.0	76.5	35.4	0.0	71.9	40.3	89.0	84.5	34.7	115.3
LnGrp LOS	E	C		E	D		E	D	F	F	C	F
Approach Vol, veh/h		1072			2144			673			1038	
Approach Delay, s/veh		39.1			42.2			66.4			80.3	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.7	43.3	8.0	39.0	18.1	54.9	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	25.5	19.5	4.1	36.3	13.1	39.7	11.4	27.6
Green Ext Time (p_c), s	0.0	5.7	0.0	0.0	0.4	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	52.9
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



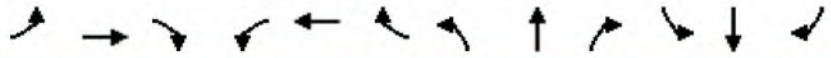
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	626	384	93	1603	212	376	207	67	137	214	330
Future Volume (veh/h)	183	626	384	93	1603	212	376	207	67	137	214	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	195	666	0	99	1705	0	400	220	71	146	228	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	1918		131	1897		721	742	331	661	680	
Arrive On Green	0.08	0.38	0.00	0.07	0.37	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	195	666	0	99	1705	0	400	220	71	146	228	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.3	10.7	0.0	6.2	35.9	0.0	11.8	6.0	4.2	4.1	6.3	0.0
Cycle Q Clear(g_c), s	6.3	10.7	0.0	6.2	35.9	0.0	11.8	6.0	4.2	4.1	6.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	1918		131	1897		721	742	331	661	680	
V/C Ratio(X)	0.73	0.35		0.76	0.90		0.55	0.30	0.21	0.22	0.34	
Avail Cap(c_a), veh/h	782	1918		325	1897		721	742	331	661	680	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.4	25.6	0.0	51.8	33.8	0.0	40.4	38.0	37.4	38.9	39.8	0.0
Incr Delay (d2), s/veh	3.8	0.5	0.0	8.6	7.3	0.0	3.1	1.0	1.5	0.8	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	7.7	0.0	5.5	21.9	0.0	9.0	4.8	3.1	3.2	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	26.1	0.0	60.4	41.0	0.0	43.4	39.1	38.8	39.7	41.2	0.0
LnGrp LOS	E	C		E	D		D	D	D	D	D	
Approach Vol, veh/h		861			1804			691			374	
Approach Delay, s/veh		32.6			42.1			41.6			40.6	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	47.4	28.0	26.0	13.0	47.0	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	8.2	12.7	13.8	8.3	8.3	37.9	6.1	8.0
Green Ext Time (p_c), s	0.2	4.0	1.0	1.0	0.5	0.0	0.4	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	39.7
HCM 7th LOS	D

Notes

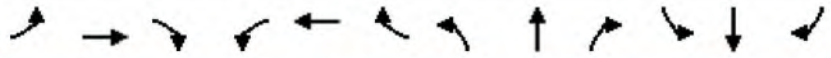
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	4	3	238	32	311	9	290	105	177	258	72
Future Volume (veh/h)	40	4	3	238	32	311	9	290	105	177	258	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	43	4	3	253	34	331	10	309	112	188	274	77
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	160	210	157	491	37	364	21	1039	369	222	1423	392
Arrive On Green	0.03	0.21	0.21	0.07	0.25	0.25	0.01	0.41	0.41	0.13	0.53	0.53
Sat Flow, veh/h	1753	977	732	1753	147	1435	1753	2529	899	1753	2709	747
Grp Volume(v), veh/h	43	0	7	253	0	365	10	212	209	188	175	176
Grp Sat Flow(s),veh/h/ln	1753	0	1709	1753	0	1582	1753	1749	1679	1753	1749	1706
Q Serve(g_s), s	1.9	0.0	0.3	7.5	0.0	23.1	0.6	8.4	8.6	10.8	5.4	5.6
Cycle Q Clear(g_c), s	1.9	0.0	0.3	7.5	0.0	23.1	0.6	8.4	8.6	10.8	5.4	5.6
Prop In Lane	1.00		0.43	1.00		0.91	1.00		0.54	1.00		0.44
Lane Grp Cap(c), veh/h	160	0	367	491	0	401	21	718	690	222	919	897
V/C Ratio(X)	0.27	0.00	0.02	0.52	0.00	0.91	0.47	0.29	0.30	0.85	0.19	0.20
Avail Cap(c_a), veh/h	227	0	506	491	0	469	272	718	690	374	919	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	31.9	30.1	0.0	37.3	50.6	20.3	20.4	44.0	12.9	12.9
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.9	0.0	20.0	15.4	1.0	1.1	8.6	0.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.2	9.0	0.0	16.2	0.6	6.2	6.2	8.8	3.8	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.5	0.0	31.9	31.1	0.0	57.3	66.0	21.4	21.6	52.6	13.3	13.4
LnGrp LOS	C		C	C		E	E	C	C	D	B	B
Approach Vol, veh/h		50			618			431			539	
Approach Delay, s/veh		32.4			46.5			22.5			27.1	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	47.3	12.0	26.6	5.2	59.1	8.0	30.6
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.6	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	12.8	10.6	9.5	2.3	2.6	7.6	3.9	25.1
Green Ext Time (p_c), s	0.3	2.0	0.0	0.0	0.0	1.9	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	33.4
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	30	0	15	1	432	63	33	447	1
Future Volume (veh/h)	0	0	0	30	0	15	1	432	63	33	447	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	0	0	32	0	16	1	460	67	35	476	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	73	0	105	0	19	2	2345	340	56	2848	6
Arrive On Green	0.00	0.00	0.00	0.04	0.00	0.04	0.00	0.78	0.78	0.03	0.81	0.81
Sat Flow, veh/h	0	1811	0	948	0	474	1725	3016	437	1725	3523	7
Grp Volume(v), veh/h	0	0	0	48	0	0	1	261	266	35	232	245
Grp Sat Flow(s),veh/h/ln	0	1811	0	1423	0	0	1725	1721	1732	1725	1721	1810
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	0.1	3.6	3.6	1.8	2.7	2.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.0	0.0	0.0	0.1	3.6	3.6	1.8	2.7	2.7
Prop In Lane	0.00		0.00	0.67		0.33	1.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	0	73	0	124	0	0	2	1338	1347	56	1391	1463
V/C Ratio(X)	0.00	0.00	0.00	0.39	0.00	0.00	0.42	0.20	0.20	0.63	0.17	0.17
Avail Cap(c_a), veh/h	0	322	0	470	0	0	307	1338	1347	307	1391	1463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.9	0.0	0.0	44.9	2.6	2.6	43.0	1.9	1.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.0	0.0	0.0	89.5	0.3	0.3	11.0	0.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	2.0	0.0	0.0	0.1	1.5	1.5	1.6	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	44.9	0.0	0.0	134.4	3.0	3.0	54.0	2.2	2.2
LnGrp LOS				D			F	A	A	D	A	A
Approach Vol, veh/h		0			48			528			512	
Approach Delay, s/veh		0.0			44.9			3.2			5.7	
Approach LOS					D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	75.0		8.1	4.1	77.8		8.1
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	3.8	5.6		0.0	2.1	4.7		5.0
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	2.7		0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	6.2
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

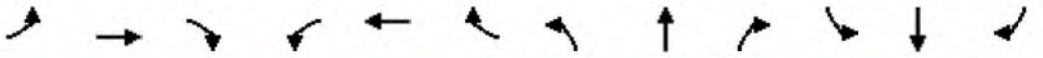
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	45	46	484	468	13
Future Vol, veh/h	13	45	46	484	468	13
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, %	6	6	6	6	6	6
Mvmt Flow	14	47	48	509	493	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	851	253	506	0	-	0
Stage 1	499	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Critical Hdwy	6.92	7.02	4.22	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	2.26	-	-	-
Pot Cap-1 Maneuver	291	734	1027	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	275	734	1027	-	-	-
Mov Cap-2 Maneuver	394	-	-	-	-	-
Stage 1	533	-	-	-	-	-
Stage 2	672	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.5	1.12	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	312	-	615	-	-
HCM Lane V/C Ratio	0.047	-	0.099	-	-
HCM Ctrl Dly (s/v)	8.7	0.4	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	41	8	0	2	182	530	12	4	507	4
Future Volume (veh/h)	5	0	41	8	0	2	182	530	12	4	507	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	0	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	6	0	49	10	0	2	219	639	14	5	611	5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	0	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	0	0	15	0	3	249	3054	67	9	1355	1148
Arrive On Green	0.00	0.00	0.00	0.01	0.00	0.01	0.14	0.89	0.89	0.01	0.75	0.75
Sat Flow, veh/h		0		1408	0	282	1725	3443	75	1725	1811	1535
Grp Volume(v), veh/h		0.0		12	0	0	219	319	334	5	611	5
Grp Sat Flow(s),veh/h/ln				1690	0	0	1725	1721	1798	1725	1811	1535
Q Serve(g_s), s				1.0	0.0	0.0	17.9	3.7	3.7	0.4	18.5	0.1
Cycle Q Clear(g_c), s				1.0	0.0	0.0	17.9	3.7	3.7	0.4	18.5	0.1
Prop In Lane				0.83		0.17	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h				18	0	0	249	1526	1595	9	1355	1148
V/C Ratio(X)				0.67	0.00	0.00	0.88	0.21	0.21	0.58	0.45	0.00
Avail Cap(c_a), veh/h				323	0	0	425	1526	1595	329	1355	1148
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				71.0	0.0	0.0	60.4	1.1	1.1	71.5	6.9	4.6
Incr Delay (d2), s/veh				47.7	0.0	0.0	13.9	0.3	0.3	64.7	1.1	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				1.2	0.0	0.0	13.6	1.1	1.1	0.6	10.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				118.7	0.0	0.0	74.3	1.4	1.4	136.2	8.0	4.6
LnGrp LOS				F			E	A	A	F	A	A
Approach Vol, veh/h					12			872			621	
Approach Delay, s/veh					118.7			19.7			9.0	
Approach LOS					F			B			A	

Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	5.2	132.8		6.0	25.3	112.7						
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0						
Max Green Setting (Gmax), s	27.5	35.0		27.5	35.5	35.0						
Max Q Clear Time (g_c+I1), s	2.4	5.7		3.0	19.9	20.5						
Green Ext Time (p_c), s	0.0	10.2		0.0	0.8	7.0						

Intersection Summary		
HCM 7th Control Delay, s/veh	16.1	
HCM 7th LOS	B	

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	18	1	12	112	19	0	0	2	19	0	0
Future Vol, veh/h	0	18	1	12	112	19	0	0	2	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	0	22	1	14	135	23	0	0	2	23	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	158	0	0	23	0	0	186	209	22	197	198	146
Stage 1	-	-	-	-	-	-	22	22	-	175	175	-
Stage 2	-	-	-	-	-	-	164	187	-	22	23	-
Critical Hdwy	4.17	-	-	4.17	-	-	7.17	6.57	6.27	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Follow-up Hdwy	2.263	-	-	2.263	-	-	3.563	4.063	3.363	3.563	4.063	3.363
Pot Cap-1 Maneuver	1392	-	-	1560	-	-	764	679	1040	751	689	888
Stage 1	-	-	-	-	-	-	983	867	-	815	745	-
Stage 2	-	-	-	-	-	-	827	736	-	984	866	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1392	-	-	1560	-	-	756	672	1040	742	682	888
Mov Cap-2 Maneuver	-	-	-	-	-	-	756	672	-	742	682	-
Stage 1	-	-	-	-	-	-	983	867	-	807	737	-
Stage 2	-	-	-	-	-	-	818	729	-	982	866	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.61	8.47	10.01
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1040	1392	-	-	1560	-	-	742
HCM Lane V/C Ratio	0.002	-	-	-	0.009	-	-	0.031
HCM Ctrl Dly (s/v)	8.5	0	-	-	7.3	-	-	10
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	32	74	6	32	34
Future Vol, veh/h	6	32	74	6	32	34
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	80	80	80	80	80	80
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	8	40	93	8	40	43

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	219	50	0	0	100	0
Stage 1	96	-	-	-	-	-
Stage 2	123	-	-	-	-	-
Critical Hdwy	6.69	6.99	-	-	4.19	-
Critical Hdwy Stg 1	5.89	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.557	3.357	-	-	2.257	-
Pot Cap-1 Maneuver	749	996	-	-	1465	-
Stage 1	906	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	729	996	-	-	1465	-
Mov Cap-2 Maneuver	729	-	-	-	-	-
Stage 1	906	-	-	-	-	-
Stage 2	867	-	-	-	-	-

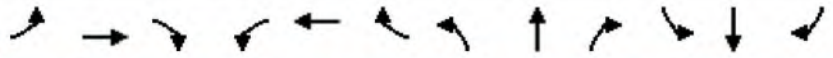
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.03	0	3.65
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	941	873	-
HCM Lane V/C Ratio	-	-	0.05	0.027	-
HCM Ctrl Dly (s/v)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	802	8	95	2610	353	11	71	137	158	59	467
Future Volume (veh/h)	309	802	8	95	2610	353	11	71	137	158	59	467
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1914	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	325	844	8	100	2747	372	12	75	144	166	62	492
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	362	3097	29	132	2574	660	432	490	437	358	903	403
Arrive On Green	0.11	0.48	0.48	0.04	0.41	0.41	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3401	6517	62	3401	6332	1622	3401	1749	1560	3401	3497	1560
Grp Volume(v), veh/h	325	615	237	100	2747	372	12	75	144	166	62	492
Grp Sat Flow(s),veh/h/ln	1700	1583	1830	1700	1583	1622	1700	1749	1560	1700	1749	1560
Q Serve(g_s), s	21.7	17.9	18.0	6.7	93.5	40.6	0.7	7.4	16.8	10.6	3.1	59.4
Cycle Q Clear(g_c), s	21.7	17.9	18.0	6.7	93.5	40.6	0.7	7.4	16.8	10.6	3.1	59.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	2257	869	132	2574	660	432	490	437	358	903	403
V/C Ratio(X)	0.90	0.27	0.27	0.76	1.07	0.56	0.03	0.15	0.33	0.46	0.07	1.22
Avail Cap(c_a), veh/h	500	2257	869	355	2574	660	432	490	437	358	903	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	101.5	36.4	36.4	109.5	68.3	52.6	88.0	62.3	65.7	96.8	64.4	85.3
Incr Delay (d2), s/veh	13.6	0.3	0.7	8.6	38.9	3.5	0.1	0.7	2.0	4.3	0.1	120.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.3	11.3	12.8	5.6	57.9	24.2	0.6	6.2	11.4	8.5	2.5	53.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	115.1	36.7	37.1	118.1	107.1	56.0	88.1	63.0	67.7	101.1	64.6	205.3
LnGrp LOS	F	D	D	F	F	E	F	E	E	F	E	F
Approach Vol, veh/h		1177			3219			231			720	
Approach Delay, s/veh		58.4			101.6			67.2			169.2	
Approach LOS		E			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.7	99.3	35.0	65.0	14.9	115.1	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	23.7	95.5	2.7	61.4	8.7	20.0	12.6	18.8
Green Ext Time (p_c), s	0.8	0.0	0.0	0.0	0.2	6.0	0.4	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	99.7
HCM 7th LOS	F



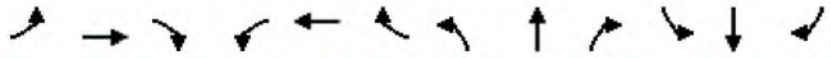
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	725	59	64	1882	1137	152	701	77	422	217	30
Future Volume (veh/h)	158	725	59	64	1882	1137	152	701	77	422	217	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	165	755	0	67	1960	1184	158	730	0	440	226	0
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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	195	3677		93	3483	858	186	826		477	1253	
Arrive On Green	0.06	0.58	0.00	0.03	0.55	0.55	0.05	0.16	0.00	0.14	0.25	0.00
Sat Flow, veh/h	3401	6332	1560	3401	6332	1560	3401	5025	1560	3401	5025	1560
Grp Volume(v), veh/h	165	755	0	67	1960	1184	158	730	0	440	226	0
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1560	1700	1675	1560	1700	1675	1560
Q Serve(g_s), s	13.0	15.3	0.0	5.3	54.5	148.5	12.4	38.3	0.0	34.5	9.5	0.0
Cycle Q Clear(g_c), s	13.0	15.3	0.0	5.3	54.5	148.5	12.4	38.3	0.0	34.5	9.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	3677		93	3483	858	186	826		477	1253	
V/C Ratio(X)	0.84	0.21		0.72	0.56	1.38	0.85	0.88		0.92	0.18	
Avail Cap(c_a), veh/h	684	3677		307	3483	858	293	1011		674	1569	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	126.0	27.0	0.0	130.3	39.6	60.7	126.6	110.3	0.0	114.6	79.6	0.0
Incr Delay (d2), s/veh	9.2	0.1	0.0	1.0	0.1	171.6	12.9	8.1	0.0	14.3	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	10.0	0.0	3.1	23.7	133.0	9.9	24.4	0.0	23.0	7.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.3	27.1	0.0	131.3	39.6	232.4	139.5	118.4	0.0	128.9	79.7	0.0
LnGrp LOS	F	C		F	D	F	F	F		F	E	
Approach Vol, veh/h		920			3211			888			666	
Approach Delay, s/veh		46.5			112.6			122.2			112.2	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	154.3	44.4	50.1	13.0	162.6	21.4	73.0
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	54.3	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	15.0	150.5	36.5	40.3	7.3	17.3	14.4	11.5
Green Ext Time (p_c), s	0.5	0.0	1.4	4.0	0.1	5.6	0.3	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	103.4
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	722	615	79	1798	112	888	68	109	49	71	297
Future Volume (veh/h)	50	722	615	79	1798	112	888	68	109	49	71	297
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	52	744	634	81	1854	0	965	0	0	51	73	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	67	3170	984	102	3259		766	0		201	101	
Arrive On Green	0.04	0.63	0.63	0.06	0.65	0.00	0.10	0.00	0.00	0.04	0.06	0.00
Sat Flow, veh/h	1753	5025	1560	1753	5025	1560	5259	0	1560	1753	1841	1560
Grp Volume(v), veh/h	52	744	634	81	1854	0	965	0	0	51	73	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1560	1753	1675	1560	1753	0	1560	1753	1841	1560
Q Serve(g_s), s	4.1	9.0	35.4	6.4	28.8	0.0	14.6	0.0	0.0	3.8	5.5	0.0
Cycle Q Clear(g_c), s	4.1	9.0	35.4	6.4	28.8	0.0	14.6	0.0	0.0	3.8	5.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	3170	984	102	3259		766	0		201	101	
V/C Ratio(X)	0.77	0.23	0.64	0.79	0.57		1.26	0.00		0.25	0.72	
Avail Cap(c_a), veh/h	377	3170	984	381	3259		766	0		312	390	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.77	0.77	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	66.7	11.2	16.1	65.1	13.7	0.0	57.7	0.0	0.0	58.8	65.1	0.0
Incr Delay (d2), s/veh	15.1	0.2	2.9	10.0	0.6	0.0	127.6	0.0	0.0	0.7	9.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	5.7	18.9	5.6	14.6	0.0	18.0	0.0	0.0	3.1	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.8	11.4	19.0	75.0	14.3	0.0	185.3	0.0	0.0	59.5	74.3	0.0
LnGrp LOS	F	B	B	E	B		F			E	E	
Approach Vol, veh/h		1430			1935			965			124	
Approach Delay, s/veh		17.3			16.8			185.3			68.2	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	96.6	11.1	22.0	12.8	94.1	20.0	13.1
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.0	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	6.1	30.8	5.8	0.0	8.4	37.4	16.6	7.5
Green Ext Time (p_c), s	0.1	9.6	0.0	0.0	0.2	3.9	0.0	0.3

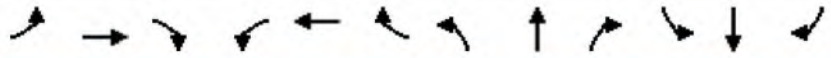
Intersection Summary	
HCM 7th Control Delay, s/veh	54.9
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1056	293	187	2649	100	515	177	190	152	206	469
Future Volume (veh/h)	159	1056	293	187	2649	100	515	177	190	152	206	469
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	169	1123	0	199	2818	0	548	188	0	162	219	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	211	2657		241	2711		433	779		204	547	
Arrive On Green	0.06	0.52	0.00	0.07	0.54	0.00	0.13	0.22	0.00	0.06	0.16	0.00
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	3428	3526	1572	3428	3526	1572
Grp Volume(v), veh/h	169	1123	0	199	2818	0	548	188	0	162	219	0
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1714	1763	1572	1714	1763	1572
Q Serve(g_s), s	9.2	25.7	0.0	10.9	101.7	0.0	24.0	8.3	0.0	8.9	10.6	0.0
Cycle Q Clear(g_c), s	9.2	25.7	0.0	10.9	101.7	0.0	24.0	8.3	0.0	8.9	10.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	2657		241	2711		433	779		204	547	
V/C Ratio(X)	0.80	0.42		0.83	1.04		1.27	0.24		0.79	0.40	
Avail Cap(c_a), veh/h	530	2657		433	2711		433	779		520	547	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.62	0.62	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	88.0	27.6	0.0	87.2	44.2	0.0	83.0	60.9	0.0	88.2	72.3	0.0
Incr Delay (d2), s/veh	6.9	0.5	0.0	4.5	25.3	0.0	136.8	0.7	0.0	6.8	2.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.7	15.8	0.0	7.8	58.0	0.0	28.7	6.9	0.0	7.5	8.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.9	28.1	0.0	91.7	69.5	0.0	219.8	61.6	0.0	95.0	74.5	0.0
LnGrp LOS	F	C		F	F		F	E		F	E	
Approach Vol, veh/h		1292			3017			736			381	
Approach Delay, s/veh		36.8			70.9			179.4			83.2	
Approach LOS		D			E			F			F	

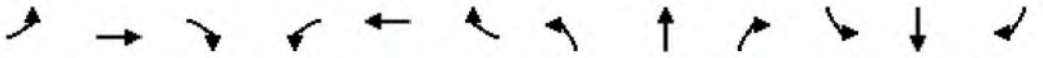
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	107.5	17.5	47.7	19.3	105.5	30.0	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	29.4	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	11.2	103.7	10.9	10.3	12.9	27.7	26.0	12.6
Green Ext Time (p_c), s	0.5	0.0	0.4	0.8	0.4	9.4	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	78.4
HCM 7th LOS	E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



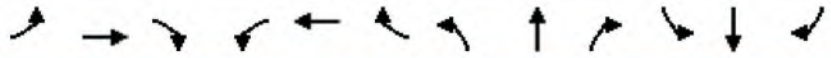
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1638	23	253	964	140	49	366	706	186	255	217
Future Volume (veh/h)	179	1638	23	253	964	140	49	366	706	186	255	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	183	1671	0	258	984	0	50	373	720	190	260	221
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	215	1921		289	2111		65	785	350	169	993	443
Arrive On Green	0.12	0.37	0.00	0.16	0.41	0.00	0.04	0.22	0.22	0.09	0.28	0.28
Sat Flow, veh/h	1795	5147	1598	1795	5147	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	183	1671	0	258	984	0	50	373	720	190	260	221
Grp Sat Flow(s),veh/h/ln	1795	1716	1598	1795	1716	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	12.0	36.2	0.0	16.9	16.7	0.0	3.3	10.9	26.3	11.3	6.8	13.9
Cycle Q Clear(g_c), s	12.0	36.2	0.0	16.9	16.7	0.0	3.3	10.9	26.3	11.3	6.8	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	1921		289	2111		65	785	350	169	993	443
V/C Ratio(X)	0.85	0.87		0.89	0.47		0.77	0.48	2.06	1.12	0.26	0.50
Avail Cap(c_a), veh/h	468	1921		386	2111		199	785	350	169	993	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	34.9	0.0	49.3	25.8	0.0	57.3	40.8	46.8	54.3	33.8	36.4
Incr Delay (d2), s/veh	9.0	5.7	0.0	18.2	0.7	0.0	17.1	0.4	485.1	106.3	0.1	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	22.2	0.0	13.8	11.0	0.0	3.2	8.4	90.6	15.9	5.3	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.8	40.6	0.0	67.5	26.6	0.0	74.5	41.3	532.0	160.7	33.9	37.3
LnGrp LOS	E	D		E	C		E	D	F	F	C	D
Approach Vol, veh/h		1854			1242			1143			671	
Approach Delay, s/veh		42.6			35.1			351.8			70.9	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.5	49.5	9.0	38.0	19.1	53.9	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	18.9	38.2	5.3	15.9	14.0	18.7	13.3	28.3
Green Ext Time (p_c), s	0.4	0.0	0.0	1.7	0.4	4.9	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	116.5
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



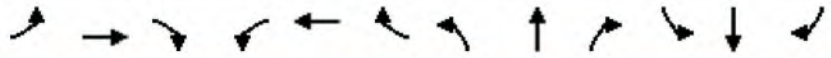
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	1431	675	136	951	196	348	266	125	202	319	250
Future Volume (veh/h)	396	1431	675	136	951	196	348	266	125	202	319	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	417	1506	0	143	1001	0	366	280	132	213	336	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	500	1809		175	1572		727	748	334	666	685	
Arrive On Green	0.14	0.35	0.00	0.10	0.31	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3483	5147	1598	1795	5147	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	417	1506	0	143	1001	0	366	280	132	213	336	0
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1795	1716	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	13.3	30.6	0.0	8.9	19.1	0.0	10.6	7.6	8.1	6.0	9.5	0.0
Cycle Q Clear(g_c), s	13.3	30.6	0.0	8.9	19.1	0.0	10.6	7.6	8.1	6.0	9.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	500	1809		175	1572		727	748	334	666	685	
V/C Ratio(X)	0.83	0.83		0.82	0.64		0.50	0.37	0.40	0.32	0.49	
Avail Cap(c_a), veh/h	788	1809		328	1572		727	748	334	666	685	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.5	33.9	0.0	50.4	34.1	0.0	39.9	38.7	38.9	39.7	41.1	0.0
Incr Delay (d2), s/veh	4.4	4.7	0.0	8.9	2.0	0.0	2.5	1.4	3.5	1.3	2.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	18.9	0.0	7.8	12.7	0.0	8.2	6.2	6.2	4.8	7.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.9	38.5	0.0	59.3	36.1	0.0	42.4	40.1	42.4	41.0	43.6	0.0
LnGrp LOS	D	D		E	D		D	D	D	D	D	
Approach Vol, veh/h		1923			1144			778			549	
Approach Delay, s/veh		41.4			39.0			41.6			42.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	44.7	28.0	26.0	20.6	39.4	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	10.9	32.6	12.6	11.5	15.3	21.1	8.0	10.1
Green Ext Time (p_c), s	0.2	0.0	1.0	1.4	1.1	2.4	0.6	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	41.0
HCM 7th LOS	D

Notes

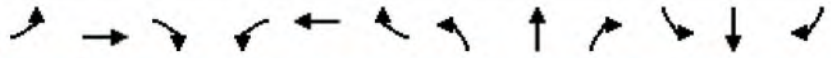
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	29	8	193	7	155	0	301	140	367	659	36
Future Volume (veh/h)	73	29	8	193	7	155	0	301	140	367	659	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	30	8	197	7	158	0	307	143	374	672	37
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	149	40	316	9	195	2	1031	469	380	2352	129
Arrive On Green	0.05	0.10	0.10	0.07	0.13	0.13	0.00	0.43	0.43	0.21	0.69	0.69
Sat Flow, veh/h	1781	1423	379	1781	68	1528	1781	2373	1080	1781	3425	188
Grp Volume(v), veh/h	74	0	38	197	0	165	0	228	222	374	348	361
Grp Sat Flow(s),veh/h/ln	1781	0	1802	1781	0	1595	1781	1777	1676	1781	1777	1836
Q Serve(g_s), s	3.8	0.0	2.0	7.5	0.0	10.4	0.0	8.6	8.9	21.5	7.9	7.9
Cycle Q Clear(g_c), s	3.8	0.0	2.0	7.5	0.0	10.4	0.0	8.6	8.9	21.5	7.9	7.9
Prop In Lane	1.00		0.21	1.00		0.96	1.00		0.64	1.00		0.10
Lane Grp Cap(c), veh/h	191	0	188	316	0	204	2	772	728	380	1220	1261
V/C Ratio(X)	0.39	0.00	0.20	0.62	0.00	0.81	0.00	0.30	0.30	0.98	0.29	0.29
Avail Cap(c_a), veh/h	233	0	534	316	0	472	277	772	728	380	1220	1261
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	0.0	42.2	39.9	0.0	43.7	0.0	18.9	19.0	40.3	6.3	6.3
Incr Delay (d2), s/veh	1.3	0.0	0.5	3.8	0.0	7.5	0.0	1.0	1.1	41.5	0.6	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	0.0	1.6	8.6	0.0	7.8	0.0	6.4	6.3	19.5	4.7	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.1	0.0	42.7	43.7	0.0	51.2	0.0	19.9	20.1	81.8	6.9	6.9
LnGrp LOS	D		D	D		D		B	C	F	A	A
Approach Vol, veh/h		112			362			450			1083	
Approach Delay, s/veh		41.0			47.1			20.0			32.7	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	49.7	12.0	15.3	0.0	75.7	9.6	17.7
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.0	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	23.5	10.9	9.5	4.0	0.0	9.9	5.8	12.4
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	4.1	0.0	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	32.9
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	77	0	24	0	407	24	24	850	0
Future Volume (veh/h)	0	0	0	77	0	24	0	407	24	24	850	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	79	0	25	0	420	25	25	876	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	167	0	167	2	31	2	2505	149	46	2861	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.73	0.73	0.03	0.81	0.00
Sat Flow, veh/h	0	1870	0	1085	25	351	1781	3409	202	1781	3647	0
Grp Volume(v), veh/h	0	0	0	104	0	0	0	218	227	25	876	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1461	0	0	1781	1777	1834	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	0.0	0.0	3.3	3.4	1.2	5.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.3	0.0	0.0	0.0	3.3	3.4	1.2	5.7	0.0
Prop In Lane	0.00		0.00	0.76		0.24	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	167	0	201	0	0	2	1306	1348	46	2861	0
V/C Ratio(X)	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.17	0.17	0.54	0.31	0.00
Avail Cap(c_a), veh/h	0	333	0	483	0	0	317	1306	1348	317	2861	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	40.2	0.0	0.0	0.0	3.6	3.6	43.3	2.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.3	0.3	9.6	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	4.2	0.0	0.0	0.0	1.6	1.7	1.2	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	42.2	0.0	0.0	0.0	3.9	3.9	52.9	2.5	0.0
LnGrp LOS				D				A	A	D	A	
Approach Vol, veh/h		0			104			445			901	
Approach Delay, s/veh		0.0			42.2			3.9			3.9	
Approach LOS					D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	71.1		12.5	0.0	77.5		12.5
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	3.2	5.4		0.0	0.0	7.7		8.3
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	6.4		0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	6.7
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

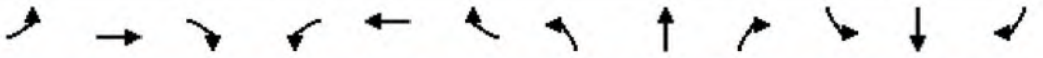
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	43	43	417	920	12
Future Vol, veh/h	12	43	43	417	920	12
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	45	45	434	958	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1271	485	971	0	-	0
Stage 1	965	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	160	528	706	-	-	-
Stage 1	330	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	148	528	706	-	-	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	307	-	-	-	-	-
Stage 2	720	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.82	1.54	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	337	-	424	-	-
HCM Lane V/C Ratio	0.063	-	0.135	-	-
HCM Ctrl Dly (s/v)	10.4	0.6	14.8	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	146	17	0	9	46	442	17	1	960	1
Future Volume (veh/h)	7	0	146	17	0	9	46	442	17	1	960	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	7	0	154	18	0	9	48	465	18	1	1011	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	0	0	0	23	0	11	63	3080	119	2	1587	1345
Arrive On Green	0.00	0.00	0.00	0.02	0.00	0.02	0.04	0.88	0.88	0.00	0.84	0.84
Sat Flow, veh/h		0		1149	0	575	1795	3516	136	1795	1885	1598
Grp Volume(v), veh/h		0.0		27	0	0	48	236	247	1	1011	1
Grp Sat Flow(s),veh/h/ln				1724	0	0	1795	1791	1861	1795	1885	1598
Q Serve(g_s), s				2.1	0.0	0.0	3.6	2.6	2.6	0.1	24.9	0.0
Cycle Q Clear(g_c), s				2.1	0.0	0.0	3.6	2.6	2.6	0.1	24.9	0.0
Prop In Lane				0.67		0.33	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h				34	0	0	63	1569	1630	2	1587	1345
V/C Ratio(X)				0.79	0.00	0.00	0.76	0.15	0.15	0.51	0.64	0.00
Avail Cap(c_a), veh/h				349	0	0	363	1569	1630	363	1587	1345
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				66.4	0.0	0.0	65.0	1.2	1.2	67.9	3.7	1.7
Incr Delay (d2), s/veh				41.7	0.0	0.0	22.6	0.2	0.2	167.8	2.0	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				2.4	0.0	0.0	3.7	0.8	0.8	0.2	10.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				108.1	0.0	0.0	87.6	1.4	1.4	235.6	5.6	1.7
LnGrp LOS				F			F	A	A	F	A	A
Approach Vol, veh/h					27			531			1013	
Approach Delay, s/veh					108.1			9.2			5.9	
Approach LOS					F			A			A	

Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	4.6	124.1		7.2	9.3	119.5						
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0						
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0						
Max Q Clear Time (g_c+I1), s	2.1	4.6		4.1	5.6	26.9						
Green Ext Time (p_c), s	0.0	7.3		0.1	0.1	6.8						

Intersection Summary												
HCM 7th Control Delay, s/veh			8.7									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	106	0	2	23	18	0	0	12	18	0	0
Future Vol, veh/h	0	106	0	2	23	18	0	0	12	18	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	134	0	3	29	23	0	0	15	23	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	52	0	0	134	0	0	168	191	134	180	180	41
Stage 1	-	-	-	-	-	-	134	134	-	46	46	-
Stage 2	-	-	-	-	-	-	34	57	-	134	134	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1554	-	-	1450	-	-	795	704	915	782	714	1031
Stage 1	-	-	-	-	-	-	869	785	-	968	857	-
Stage 2	-	-	-	-	-	-	982	847	-	869	785	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1554	-	-	1450	-	-	794	703	915	768	713	1031
Mov Cap-2 Maneuver	-	-	-	-	-	-	794	703	-	768	713	-
Stage 1	-	-	-	-	-	-	869	785	-	967	855	-
Stage 2	-	-	-	-	-	-	980	846	-	855	785	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.35	9	9.83
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	915	1554	-	-	1450	-	-	768
HCM Lane V/C Ratio	0.017	-	-	-	0.002	-	-	0.03
HCM Ctrl Dly (s/v)	9	0	-	-	7.5	-	-	9.8
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	31	37	6	31	63
Future Vol, veh/h	7	31	37	6	31	63
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	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	52	62	10	52	105

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	275	36	0	0	72	0
Stage 1	67	-	-	-	-	-
Stage 2	208	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	703	1029	-	-	1528	-
Stage 1	949	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	678	1029	-	-	1528	-
Mov Cap-2 Maneuver	678	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	796	-	-	-	-	-

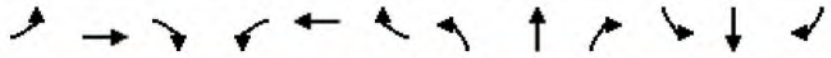
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.11	0	2.45
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	939	594	-
HCM Lane V/C Ratio	-	-	0.067	0.034	-
HCM Ctrl Dly (s/v)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	424	1897	32	93	1133	168	19	82	143	398	172	553
Future Volume (veh/h)	424	1897	32	93	1133	168	19	82	143	398	172	553
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	433	1936	33	95	1156	171	19	84	146	406	176	564
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	3132	53	127	2433	623	439	498	444	364	918	409
Arrive On Green	0.13	0.48	0.48	0.04	0.38	0.38	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3456	6564	112	3456	6434	1648	3456	1777	1585	3456	3554	1585
Grp Volume(v), veh/h	433	1423	546	95	1156	171	19	84	146	406	176	564
Grp Sat Flow(s),veh/h/ln	1728	1609	1850	1728	1609	1648	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	28.5	50.3	50.3	6.3	31.3	16.6	1.1	8.2	16.8	24.2	8.9	59.4
Cycle Q Clear(g_c), s	28.5	50.3	50.3	6.3	31.3	16.6	1.1	8.2	16.8	24.2	8.9	59.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	466	2302	883	127	2433	623	439	498	444	364	918	409
V/C Ratio(X)	0.93	0.62	0.62	0.75	0.48	0.27	0.04	0.17	0.33	1.12	0.19	1.38
Avail Cap(c_a), veh/h	508	2302	883	361	2433	623	439	498	444	364	918	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	98.4	44.6	44.6	109.7	54.2	49.6	88.1	62.6	65.7	102.9	66.6	85.3
Incr Delay (d2), s/veh	18.1	0.9	2.4	8.4	0.7	1.1	0.2	0.7	2.0	82.6	0.5	184.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.2	26.6	30.5	5.4	18.7	11.5	0.9	6.9	11.5	22.5	7.4	66.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	116.5	45.5	47.0	118.1	54.9	50.7	88.3	63.3	67.6	185.5	67.0	270.1
LnGrp LOS	F	D	D	F	D	D	F	E	E	F	E	F
Approach Vol, veh/h		2402			1422			249			1146	
Approach Delay, s/veh		58.6			58.6			67.8			208.9	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.2	92.8	35.0	65.0	14.5	115.5	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	30.5	33.3	3.1	61.4	8.3	52.3	26.2	18.8
Green Ext Time (p_c), s	0.5	10.7	0.0	0.0	0.2	19.3	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	92.1
HCM 7th LOS	F



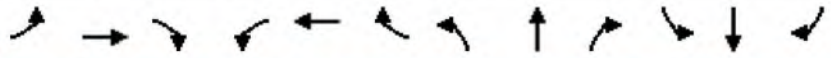
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	1710	249	147	1039	390	140	302	89	614	1233	58
Future Volume (veh/h)	208	1710	249	147	1039	390	140	302	89	614	1233	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	1745	0	150	1060	398	143	308	0	627	1258	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	3448		178	3322	818	171	691		656	1404	
Arrive On Green	0.07	0.54	0.00	0.05	0.52	0.52	0.05	0.14	0.00	0.19	0.27	0.00
Sat Flow, veh/h	3456	6434	1585	3456	6434	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	212	1745	0	150	1060	398	143	308	0	627	1258	0
Grp Sat Flow(s),veh/h/ln	1728	1609	1585	1728	1609	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	16.4	46.6	0.0	11.6	25.8	43.8	11.1	15.0	0.0	48.5	64.0	0.0
Cycle Q Clear(g_c), s	16.4	46.6	0.0	11.6	25.8	43.8	11.1	15.0	0.0	48.5	64.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	3448		178	3322	818	171	691		656	1404	
V/C Ratio(X)	0.87	0.51		0.84	0.32	0.49	0.84	0.45		0.96	0.90	
Avail Cap(c_a), veh/h	695	3448		312	3322	818	298	1027		685	1594	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.00	0.79	0.79	0.79	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	124.2	39.9	0.0	126.9	37.8	42.2	127.2	107.4	0.0	108.2	94.2	0.0
Incr Delay (d2), s/veh	4.7	0.3	0.0	8.2	0.2	1.6	10.2	0.5	0.0	23.5	6.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	23.7	0.0	8.9	15.1	24.0	9.1	11.0	0.0	32.2	38.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	128.9	40.2	0.0	135.2	38.0	43.8	137.5	107.9	0.0	131.8	100.7	0.0
LnGrp LOS	F	D		F	D	D	F	F		F	F	
Approach Vol, veh/h		1957			1608			451			1885	
Approach Delay, s/veh		49.8			48.5			117.3			111.0	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.8	145.2	57.8	42.2	19.5	150.5	20.1	79.9
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	54.3	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	18.4	45.8	50.5	17.0	13.6	48.6	13.1	66.0
Green Ext Time (p_c), s	0.7	10.5	0.8	2.1	0.3	20.1	0.3	8.2

Intersection Summary	
HCM 7th Control Delay, s/veh	74.1
HCM 7th LOS	E

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	2071	1149	226	976	45	592	57	205	48	134	149
Future Volume (veh/h)	104	2071	1149	226	976	45	592	57	205	48	134	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	2113	1172	231	996	0	523	172	0	49	137	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	2598	806	258	2952		521	293		207	170	
Arrive On Green	0.07	0.51	0.51	0.14	0.58	0.00	0.10	0.16	0.00	0.04	0.09	0.00
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3563	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	106	2113	1172	231	996	0	523	172	0	49	137	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	8.2	48.6	71.2	17.8	14.3	0.0	14.6	12.0	0.0	3.4	10.1	0.0
Cycle Q Clear(g_c), s	8.2	48.6	71.2	17.8	14.3	0.0	14.6	12.0	0.0	3.4	10.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	2598	806	258	2952		521	293		207	170	
V/C Ratio(X)	0.81	0.81	1.45	0.90	0.34		1.00	0.59		0.24	0.81	
Avail Cap(c_a), veh/h	383	2598	806	387	2952		521	395		325	397	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.24	0.24	0.24	0.94	0.94	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	63.9	28.8	34.4	58.8	15.5	0.0	54.2	54.9	0.0	54.5	62.5	0.0
Incr Delay (d2), s/veh	3.0	0.7	205.8	15.5	0.3	0.0	40.1	1.9	0.0	0.6	8.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	22.3	103.5	13.8	9.1	0.0	8.7	9.7	0.0	2.9	9.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.9	29.5	240.1	74.3	15.8	0.0	94.3	56.7	0.0	55.1	71.2	0.0
LnGrp LOS	E	C	F	E	B		F	E		E	E	
Approach Vol, veh/h		3391			1227			695			186	
Approach Delay, s/veh		103.5			26.8			85.0			67.0	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	86.7	10.8	27.3	24.9	77.0	20.0	18.1
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.0	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	10.2	16.3	5.4	14.0	19.8	73.2	16.6	12.1
Green Ext Time (p_c), s	0.2	7.1	0.0	0.7	0.4	0.0	0.0	0.6

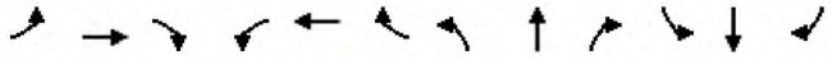
Intersection Summary	
HCM 7th Control Delay, s/veh	82.8
HCM 7th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	2523	191	182	1343	144	305	269	355	257	359	210
Future Volume (veh/h)	231	2523	191	182	1343	144	305	269	355	257	359	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	233	2548	0	184	1357	0	308	272	0	260	363	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	2832		226	2766		349	593		305	552	
Arrive On Green	0.08	0.55	0.00	0.07	0.54	0.00	0.10	0.17	0.00	0.09	0.16	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	233	2548	0	184	1357	0	308	272	0	260	363	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.6	84.3	0.0	10.0	31.5	0.0	16.7	13.1	0.0	14.1	18.3	0.0
Cycle Q Clear(g_c), s	12.6	84.3	0.0	10.0	31.5	0.0	16.7	13.1	0.0	14.1	18.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	2832		226	2766		349	593		305	552	
V/C Ratio(X)	0.84	0.90		0.82	0.49		0.88	0.46		0.85	0.66	
Avail Cap(c_a), veh/h	535	2832		437	2766		437	593		524	552	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.88	0.88	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	86.2	37.6	0.0	87.7	27.2	0.0	84.3	71.4	0.0	85.4	75.5	0.0
Incr Delay (d2), s/veh	6.7	5.1	0.0	6.2	0.6	0.0	15.9	2.5	0.0	6.7	6.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	44.9	0.0	8.0	18.4	0.0	13.0	10.3	0.0	10.8	13.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	92.9	42.7	0.0	93.9	27.7	0.0	100.1	73.9	0.0	92.0	81.5	0.0
LnGrp LOS	F	D		F	C		F	E		F	F	
Approach Vol, veh/h		2781			1541			580			623	
Approach Delay, s/veh		46.9			35.6			87.8			85.9	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.9	108.7	23.0	37.4	18.4	111.2	25.2	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	29.4	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	14.6	33.5	16.1	15.1	12.0	86.3	18.7	20.3
Green Ext Time (p_c), s	0.6	12.4	0.7	1.0	0.4	2.8	0.5	1.5

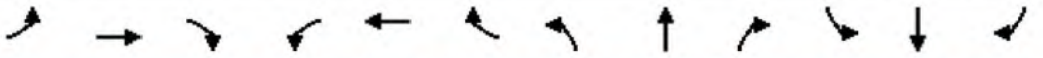
Intersection Summary	
HCM 7th Control Delay, s/veh	52.5
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

D4 – Horizon No-Build Conditions 2040



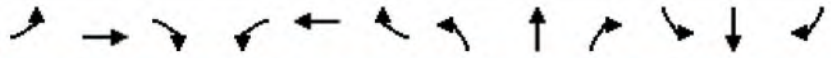
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1130	35	462	2281	153	41	391	442	185	516	649
Future Volume (veh/h)	219	1130	35	462	2281	153	41	391	442	185	516	649
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	238	1228	0	502	2479	0	45	425	480	201	561	705
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	1630		383	1930		58	779	347	168	997	445
Arrive On Green	0.15	0.32	0.00	0.21	0.38	0.00	0.03	0.22	0.22	0.09	0.28	0.28
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	238	1228	0	502	2479	0	45	425	480	201	561	705
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.7	25.9	0.0	25.8	45.4	0.0	3.0	12.7	26.3	11.3	16.2	33.7
Cycle Q Clear(g_c), s	15.7	25.9	0.0	25.8	45.4	0.0	3.0	12.7	26.3	11.3	16.2	33.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	1630		383	1930		58	779	347	168	997	445
V/C Ratio(X)	0.88	0.75		1.31	1.28		0.77	0.55	1.38	1.20	0.56	1.58
Avail Cap(c_a), veh/h	465	1630		383	1930		197	779	347	168	997	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	36.6	0.0	47.1	37.3	0.0	57.6	41.6	46.8	54.4	36.9	43.2
Incr Delay (d2), s/veh	9.7	3.3	0.0	157.5	132.0	0.0	19.2	0.8	188.8	132.8	0.7	273.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	16.5	0.0	41.8	61.0	0.0	3.0	9.5	43.4	17.8	11.4	72.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.5	39.9	0.0	204.6	169.3	0.0	76.8	42.3	235.7	187.2	37.6	316.8
LnGrp LOS	E	D		F	F		E	D	F	F	D	F
Approach Vol, veh/h		1466			2981			950			1467	
Approach Delay, s/veh		43.1			175.2			141.7			192.3	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	43.0	8.6	38.4	22.9	50.1	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	27.8	27.9	5.0	35.7	17.7	47.4	13.3	28.3
Green Ext Time (p_c), s	0.0	5.0	0.0	0.0	0.5	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	146.0
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



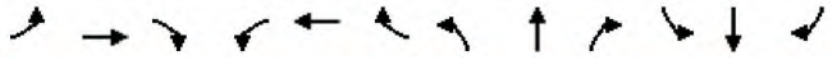
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	885	497	113	2265	300	486	292	76	193	302	466
Future Volume (veh/h)	258	885	497	113	2265	300	486	292	76	193	302	466
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	274	941	0	120	2410	0	517	311	81	205	321	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	1858		152	1774		721	742	331	661	680	
Arrive On Green	0.10	0.36	0.00	0.09	0.35	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	274	941	0	120	2410	0	517	311	81	205	321	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	8.8	16.4	0.0	7.5	39.6	0.0	15.9	8.7	4.9	5.8	9.2	0.0
Cycle Q Clear(g_c), s	8.8	16.4	0.0	7.5	39.6	0.0	15.9	8.7	4.9	5.8	9.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	1858		152	1774		721	742	331	661	680	
V/C Ratio(X)	0.78	0.51		0.79	1.36		0.72	0.42	0.24	0.31	0.47	
Avail Cap(c_a), veh/h	782	1858		325	1774		721	742	331	661	680	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.0	28.3	0.0	51.1	37.2	0.0	42.0	39.1	37.6	39.6	41.0	0.0
Incr Delay (d2), s/veh	3.8	1.0	0.0	8.8	165.1	0.0	6.0	1.7	1.8	1.2	2.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	10.8	0.0	6.6	64.0	0.0	11.6	7.0	3.6	4.6	7.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.7	29.3	0.0	59.9	202.3	0.0	48.0	40.8	39.4	40.9	43.3	0.0
LnGrp LOS	D	C		E	F		D	D	D	D	D	
Approach Vol, veh/h		1215			2530			909			526	
Approach Delay, s/veh		34.8			195.6			44.8			42.4	
Approach LOS		C			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	46.1	28.0	26.0	15.8	44.2	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	19.5	18.4	17.9	11.2	10.8	41.6	7.8	10.7
Green Ext Time (p_c), s	0.2	4.8	1.0	1.3	0.8	0.0	0.5	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	115.8
HCM 7th LOS	F

Notes

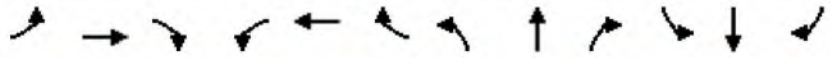
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	6	4	336	45	439	13	391	148	250	345	57
Future Volume (veh/h)	11	6	4	336	45	439	13	391	148	250	345	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	12	6	4	357	48	467	14	416	157	266	367	61
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	95	245	163	520	44	425	28	858	320	299	1500	247
Arrive On Green	0.01	0.24	0.24	0.07	0.30	0.30	0.02	0.34	0.34	0.17	0.50	0.50
Sat Flow, veh/h	1753	1030	687	1753	147	1435	1753	2492	930	1753	3005	495
Grp Volume(v), veh/h	12	0	10	357	0	515	14	291	282	266	212	216
Grp Sat Flow(s),veh/h/ln	1753	0	1717	1753	0	1582	1753	1749	1673	1753	1749	1752
Q Serve(g_s), s	0.5	0.0	0.5	7.5	0.0	30.5	0.8	13.5	13.7	15.3	7.1	7.3
Cycle Q Clear(g_c), s	0.5	0.0	0.5	7.5	0.0	30.5	0.8	13.5	13.7	15.3	7.1	7.3
Prop In Lane	1.00		0.40	1.00		0.91	1.00		0.56	1.00		0.28
Lane Grp Cap(c), veh/h	95	0	408	520	0	469	28	602	576	299	873	874
V/C Ratio(X)	0.13	0.00	0.02	0.69	0.00	1.10	0.50	0.48	0.49	0.89	0.24	0.25
Avail Cap(c_a), veh/h	198	0	508	520	0	469	272	602	576	374	873	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	30.1	31.1	0.0	36.3	50.3	26.6	26.6	41.7	14.7	14.7
Incr Delay (d2), s/veh	0.6	0.0	0.0	3.8	0.0	71.2	13.0	2.8	3.0	18.9	0.7	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.3	8.1	0.0	29.5	0.8	9.8	9.6	12.6	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.5	0.0	30.2	34.9	0.0	107.5	63.3	29.3	29.6	60.7	15.4	15.4
LnGrp LOS	C		C	C		F	E	C	C	E	B	B
Approach Vol, veh/h		22			872			587			694	
Approach Delay, s/veh		31.5			77.8			30.3			32.8	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	40.5	12.0	29.0	5.7	56.4	6.0	35.0
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.6	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	7.3	15.7	9.5	2.5	2.8	9.3	2.5	32.5
Green Ext Time (p_c), s	0.3	2.3	0.0	0.0	0.0	2.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	50.1
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	42	0	21	0	592	89	47	613	0
Future Volume (veh/h)	0	0	0	42	0	21	0	592	89	47	613	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	0	0	45	0	22	0	630	95	50	652	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	105	0	122	1	27	2	2256	340	68	2878	0
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.75	0.75	0.04	0.84	0.00
Sat Flow, veh/h	0	1811	0	943	15	468	1725	2999	451	1725	3532	0
Grp Volume(v), veh/h	0	0	0	67	0	0	0	361	364	50	652	0
Grp Sat Flow(s),veh/h/ln	0	1811	0	1426	0	0	1725	1721	1730	1725	1721	0
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	0.0	5.9	5.9	2.6	3.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.2	0.0	0.0	0.0	5.9	5.9	2.6	3.4	0.0
Prop In Lane	0.00		0.00	0.67		0.33	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	105	0	150	0	0	2	1295	1302	68	2878	0
V/C Ratio(X)	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.28	0.28	0.73	0.23	0.00
Avail Cap(c_a), veh/h	0	322	0	470	0	0	307	1295	1302	307	2878	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	41.9	0.0	0.0	0.0	3.5	3.5	42.7	1.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.5	0.5	13.9	0.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7	2.7	2.4	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	44.0	0.0	0.0	0.0	4.0	4.0	56.6	1.7	0.0
LnGrp LOS				D				A	A	E	A	
Approach Vol, veh/h		0			67			725			702	
Approach Delay, s/veh		0.0			44.0			4.0			5.6	
Approach LOS					D			A			A	

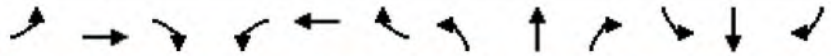
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	72.7		9.7	0.0	80.3		9.7
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	14.6	7.9		0.0	0.0	5.4		6.2
Green Ext Time (p_c), s	0.1	4.5		0.0	0.0	4.5		0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	6.6
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	21	11	0	3	220	684	17	6	653	6
Future Volume (veh/h)	7	0	21	11	0	3	220	684	17	6	653	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	0	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	8	0	25	13	0	4	265	824	20	7	787	7
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	0	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	0	0	18	0	5	292	3009	73	12	1293	1096
Arrive On Green	0.00	0.00	0.00	0.01	0.00	0.01	0.17	0.88	0.88	0.01	0.71	0.71
Sat Flow, veh/h		0		1282	0	394	1725	3433	83	1725	1811	1535
Grp Volume(v), veh/h		0.0		17	0	0	265	413	431	7	787	7
Grp Sat Flow(s),veh/h/ln				1676	0	0	1725	1721	1796	1725	1811	1535
Q Serve(g_s), s				1.4	0.0	0.0	20.5	5.3	5.3	0.6	29.9	0.2
Cycle Q Clear(g_c), s				1.4	0.0	0.0	20.5	5.3	5.3	0.6	29.9	0.2
Prop In Lane				0.76		0.24	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h				23	0	0	292	1508	1574	12	1293	1096
V/C Ratio(X)				0.73	0.00	0.00	0.91	0.27	0.27	0.59	0.61	0.01
Avail Cap(c_a), veh/h				339	0	0	349	1508	1574	349	1293	1096
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				66.8	0.0	0.0	55.4	1.4	1.4	67.3	9.9	5.6
Incr Delay (d2), s/veh				46.1	0.0	0.0	25.1	0.4	0.4	53.2	2.1	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				1.6	0.0	0.0	16.2	1.7	1.7	0.7	16.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				112.9	0.0	0.0	80.6	1.8	1.8	120.6	12.0	5.6
LnGrp LOS				F			F	A	A	F	B	A
Approach Vol, veh/h					17			1109			801	
Approach Delay, s/veh					112.9			20.6			12.9	
Approach LOS					F			C			B	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.4	124.2		6.4	27.5	102.1
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	2.6	7.3		3.4	22.5	31.9
Green Ext Time (p_c), s	0.0	13.2		0.1	0.5	2.3

Intersection Summary		
HCM 7th Control Delay, s/veh		18.2
HCM 7th LOS		B

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	17	1	17	150	0	0	0	3	0	0	0
Future Vol, veh/h	0	17	1	17	150	0	0	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	0	20	1	20	181	0	0	0	4	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	181	0	0	22	0	0	243	243	21	242	243	181
Stage 1	-	-	-	-	-	-	21	21	-	222	222	-
Stage 2	-	-	-	-	-	-	222	222	-	20	22	-
Critical Hdwy	4.17	-	-	4.17	-	-	7.17	6.57	6.27	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Follow-up Hdwy	2.263	-	-	2.263	-	-	3.563	4.063	3.363	3.563	4.063	3.363
Pot Cap-1 Maneuver	1365	-	-	1562	-	-	701	650	1042	701	650	849
Stage 1	-	-	-	-	-	-	985	868	-	770	711	-
Stage 2	-	-	-	-	-	-	770	711	-	985	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1365	-	-	1562	-	-	691	641	1042	689	640	849
Mov Cap-2 Maneuver	-	-	-	-	-	-	691	641	-	689	640	-
Stage 1	-	-	-	-	-	-	985	868	-	758	700	-
Stage 2	-	-	-	-	-	-	758	700	-	982	867	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.75	8.47	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1042	1365	-	-	1562	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-	0.013	-	-	-
HCM Ctrl Dly (s/v)	8.5	0	-	-	7.3	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	105	0	0	48
Future Vol, veh/h	0	0	105	0	0	48
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	80	80	80	80	80	80
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	0	0	131	0	0	60

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	191	66	0	0	131	0
Stage 1	131	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.69	6.99	-	-	4.19	-
Critical Hdwy Stg 1	5.89	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.557	3.357	-	-	2.257	-
Pot Cap-1 Maneuver	778	973	-	-	1426	-
Stage 1	871	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	778	973	-	-	1426	-
Mov Cap-2 Maneuver	778	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	951	-	-	-	-	-

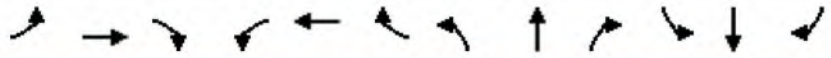
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1426	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	391	1133	11	134	3688	442	16	100	194	168	83	615
Future Volume (veh/h)	391	1133	11	134	3688	442	16	100	194	168	83	615
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1914	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	412	1193	12	141	3882	465	17	105	204	177	87	647
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	446	3014	30	174	2418	620	432	490	437	358	903	403
Arrive On Green	0.13	0.46	0.46	0.05	0.38	0.38	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3401	6513	65	3401	6332	1622	3401	1749	1560	3401	3497	1560
Grp Volume(v), veh/h	412	870	335	141	3882	465	17	105	204	177	87	647
Grp Sat Flow(s),veh/h/ln	1700	1583	1829	1700	1583	1622	1700	1749	1560	1700	1749	1560
Q Serve(g_s), s	27.5	27.7	27.7	9.4	87.8	57.1	1.0	10.6	24.9	11.3	4.4	59.4
Cycle Q Clear(g_c), s	27.5	27.7	27.7	9.4	87.8	57.1	1.0	10.6	24.9	11.3	4.4	59.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	446	2198	847	174	2418	620	432	490	437	358	903	403
V/C Ratio(X)	0.92	0.40	0.40	0.81	1.61	0.75	0.04	0.21	0.47	0.49	0.10	1.61
Avail Cap(c_a), veh/h	500	2198	847	355	2418	620	432	490	437	358	903	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	98.8	40.6	40.6	108.0	71.1	61.6	88.1	63.4	68.6	97.1	64.9	85.3
Incr Delay (d2), s/veh	18.6	0.4	1.1	8.8	274.3	8.1	0.2	1.0	3.6	4.8	0.2	284.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	15.9	18.2	7.9	124.0	33.1	0.8	8.5	15.7	9.0	3.6	84.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	117.4	41.1	41.8	116.8	345.3	69.7	88.3	64.4	72.1	101.9	65.1	369.4
LnGrp LOS	F	D	D	F	F	E	F	E	E	F	E	F
Approach Vol, veh/h		1617			4488			326			911	
Approach Delay, s/veh		60.7			309.6			70.5			288.3	
Approach LOS		E			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.4	93.6	35.0	65.0	17.7	112.3	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	29.5	89.8	3.0	61.4	11.4	29.7	13.3	26.9
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.3	9.6	0.4	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	241.5
HCM 7th LOS	F



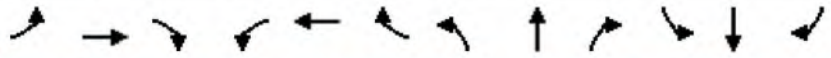
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	998	83	72	2632	1607	215	990	90	596	307	42
Future Volume (veh/h)	224	998	83	72	2632	1607	215	990	90	596	307	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	233	1040	0	75	2742	1674	224	1031	0	621	320	0
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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	266	3109		101	2800	690	250	1011		649	1596	
Arrive On Green	0.08	0.49	0.00	0.03	0.44	0.44	0.07	0.20	0.00	0.19	0.32	0.00
Sat Flow, veh/h	3401	6332	1560	3401	6332	1560	3401	5025	1560	3401	5025	1560
Grp Volume(v), veh/h	233	1040	0	75	2742	1674	224	1031	0	621	320	0
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1560	1700	1675	1560	1700	1675	1560
Q Serve(g_s), s	18.3	27.0	0.0	5.9	115.0	119.4	17.6	54.3	0.0	48.8	12.5	0.0
Cycle Q Clear(g_c), s	18.3	27.0	0.0	5.9	115.0	119.4	17.6	54.3	0.0	48.8	12.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	3109		101	2800	690	250	1011		649	1596	
V/C Ratio(X)	0.88	0.33		0.74	0.98	2.43	0.89	1.02		0.96	0.20	
Avail Cap(c_a), veh/h	684	3109		307	2800	690	293	1011		674	1596	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.00	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	123.2	41.9	0.0	130.0	74.1	75.3	124.0	107.8	0.0	108.1	67.2	0.0
Incr Delay (d2), s/veh	8.1	0.3	0.0	1.0	2.2	642.4	25.1	33.5	0.0	24.1	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	15.9	0.0	3.5	50.1	260.1	13.7	35.9	0.0	32.0	9.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	131.3	42.1	0.0	130.9	76.3	717.7	149.1	141.3	0.0	132.3	67.2	0.0
LnGrp LOS	F	D		F	E	F	F	F		F	E	
Approach Vol, veh/h		1273			4491			1255			941	
Approach Delay, s/veh		58.4			316.3			142.7			110.1	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.8	125.2	58.0	60.0	13.6	138.4	26.6	91.4
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	21.1	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	20.3	121.4	50.8	56.3	7.9	29.0	19.6	14.5
Green Ext Time (p_c), s	0.8	0.0	0.7	0.0	0.2	8.5	0.2	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	223.3
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	993	869	112	2514	158	1255	96	154	69	100	420
Future Volume (veh/h)	70	993	869	112	2514	158	1255	96	154	69	100	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	72	1024	896	115	2592	0	1365	0	0	71	103	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	92	2975	924	140	3101		770	0		243	133	
Arrive On Green	0.05	0.59	0.59	0.08	0.62	0.00	0.10	0.00	0.00	0.05	0.07	0.00
Sat Flow, veh/h	1753	5025	1560	1753	5025	1560	5259	0	1560	1753	1841	1560
Grp Volume(v), veh/h	72	1024	896	115	2592	0	1365	0	0	71	103	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1560	1753	1675	1560	1753	0	1560	1753	1841	1560
Q Serve(g_s), s	5.7	14.6	77.1	9.0	57.1	0.0	14.6	0.0	0.0	5.2	7.7	0.0
Cycle Q Clear(g_c), s	5.7	14.6	77.1	9.0	57.1	0.0	14.6	0.0	0.0	5.2	7.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	2975	924	140	3101		770	0		243	133	
V/C Ratio(X)	0.78	0.34	0.97	0.82	0.84		1.77	0.00		0.29	0.77	
Avail Cap(c_a), veh/h	377	2975	924	381	3101		770	0		337	390	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	0.09	0.09	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.5	14.6	27.4	63.4	21.2	0.0	56.0	0.0	0.0	55.9	63.8	0.0
Incr Delay (d2), s/veh	10.1	0.2	19.1	1.1	0.3	0.0	353.4	0.0	0.0	0.7	9.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	8.6	40.7	5.0	22.5	0.0	42.7	0.0	0.0	4.3	7.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.6	14.9	46.5	64.6	21.5	0.0	409.5	0.0	0.0	56.6	72.8	0.0
LnGrp LOS	E	B	D	E	C		F			E	E	
Approach Vol, veh/h		1992			2707			1365			174	
Approach Delay, s/veh		31.3			23.3			409.5			66.2	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	92.2	12.5	23.0	15.8	88.7	20.0	15.6
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.1	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	7.7	59.1	7.2	0.0	11.0	79.1	16.6	9.7
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.2	0.0	0.0	0.5

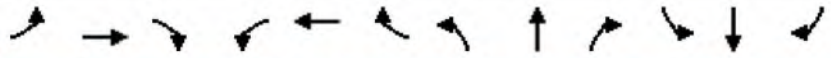
Intersection Summary	
HCM 7th Control Delay, s/veh	111.5
HCM 7th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1484	414	246	3734	141	728	250	250	214	291	663
Future Volume (veh/h)	225	1484	414	246	3734	141	728	250	250	214	291	663
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	239	1579	0	262	3972	0	774	266	0	228	310	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	283	2564		304	2605		433	709		272	547	
Arrive On Green	0.08	0.51	0.00	0.09	0.51	0.00	0.13	0.20	0.00	0.08	0.16	0.00
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	3428	3526	1572	3428	3526	1572
Grp Volume(v), veh/h	239	1579	0	262	3972	0	774	266	0	228	310	0
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1714	1763	1572	1714	1763	1572
Q Serve(g_s), s	13.1	42.5	0.0	14.3	97.7	0.0	24.0	12.4	0.0	12.5	15.5	0.0
Cycle Q Clear(g_c), s	13.1	42.5	0.0	14.3	97.7	0.0	24.0	12.4	0.0	12.5	15.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	2564		304	2605		433	709		272	547	
V/C Ratio(X)	0.84	0.62		0.86	1.52		1.79	0.38		0.84	0.57	
Avail Cap(c_a), veh/h	530	2564		433	2605		433	709		520	547	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	85.9	33.7	0.0	85.4	46.1	0.0	83.0	65.6	0.0	86.3	74.3	0.0
Incr Delay (d2), s/veh	6.8	1.1	0.0	1.2	236.4	0.0	363.5	1.5	0.0	6.8	4.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	24.3	0.0	7.6	135.3	0.0	50.7	9.7	0.0	9.8	11.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	92.7	34.8	0.0	86.7	282.5	0.0	446.5	67.1	0.0	93.0	78.5	0.0
LnGrp LOS	F	C		F	F		F	E		F	E	
Approach Vol, veh/h		1818			4234			1040			538	
Approach Delay, s/veh		42.4			270.4			349.4			84.7	
Approach LOS		D			F			F			F	

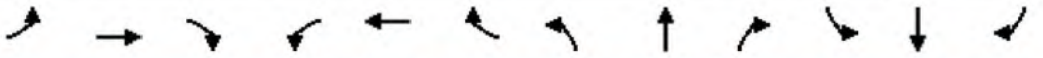
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	103.5	21.3	43.9	22.8	102.0	30.0	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	29.4	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	15.1	99.7	14.5	14.4	16.3	44.5	26.0	17.5
Green Ext Time (p_c), s	0.6	0.0	0.6	1.1	0.5	15.4	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	213.8
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



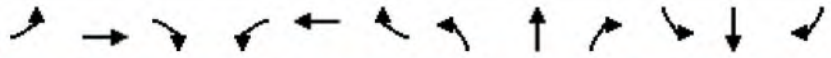
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	2271	32	357	1318	198	69	517	998	263	360	307
Future Volume (veh/h)	253	2271	32	357	1318	198	69	517	998	263	360	307
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	258	2317	0	364	1345	0	70	528	1018	268	367	313
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	291	1643		386	1893		90	785	350	169	942	420
Arrive On Green	0.16	0.32	0.00	0.21	0.37	0.00	0.05	0.22	0.22	0.09	0.26	0.26
Sat Flow, veh/h	1795	5147	1598	1795	5147	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	258	2317	0	364	1345	0	70	528	1018	268	367	313
Grp Sat Flow(s),veh/h/ln	1795	1716	1598	1795	1716	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	16.9	38.3	0.0	24.0	26.8	0.0	4.6	16.2	26.3	11.3	10.1	21.5
Cycle Q Clear(g_c), s	16.9	38.3	0.0	24.0	26.8	0.0	4.6	16.2	26.3	11.3	10.1	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	1643		386	1893		90	785	350	169	942	420
V/C Ratio(X)	0.89	1.41		0.94	0.71		0.78	0.67	2.91	1.59	0.39	0.74
Avail Cap(c_a), veh/h	468	1643		386	1893		199	785	350	169	942	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	40.8	0.0	46.4	32.5	0.0	56.3	42.9	46.8	54.3	36.3	40.5
Incr Delay (d2), s/veh	11.6	188.4	0.0	31.5	2.3	0.0	13.1	2.3	866.1	289.6	0.3	7.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.2	66.9	0.0	19.9	16.7	0.0	4.3	11.8	148.3	29.7	7.9	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.8	229.3	0.0	77.9	34.7	0.0	69.4	45.2	912.9	343.9	36.6	47.6
LnGrp LOS	E	F		E	C		E	D	F	F	D	D
Approach Vol, veh/h		2575			1709			1616			948	
Approach Delay, s/veh		212.4			43.9			592.9			127.1	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	43.0	10.7	36.3	24.2	48.8	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	26.0	40.3	6.6	23.5	18.9	28.8	13.3	28.3
Green Ext Time (p_c), s	0.0	0.0	0.1	1.0	0.6	1.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	248.3
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



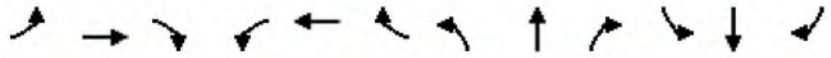
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	560	2022	910	175	1344	277	447	376	160	286	451	353
Future Volume (veh/h)	560	2022	910	175	1344	277	447	376	160	286	451	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	589	2128	0	184	1415	0	471	396	168	301	475	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	667	1692		216	1326		727	748	334	666	685	
Arrive On Green	0.19	0.33	0.00	0.12	0.26	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3483	5147	1598	1795	5147	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	589	2128	0	184	1415	0	471	396	168	301	475	0
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1795	1716	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	18.8	37.5	0.0	11.5	29.4	0.0	14.1	11.2	10.6	8.7	14.1	0.0
Cycle Q Clear(g_c), s	18.8	37.5	0.0	11.5	29.4	0.0	14.1	11.2	10.6	8.7	14.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	667	1692		216	1326		727	748	334	666	685	
V/C Ratio(X)	0.88	1.26		0.85	1.07		0.65	0.53	0.50	0.45	0.69	
Avail Cap(c_a), veh/h	788	1692		328	1326		727	748	334	666	685	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.8	38.3	0.0	49.1	42.3	0.0	41.3	40.1	39.9	40.8	43.0	0.0
Incr Delay (d2), s/veh	10.3	120.9	0.0	12.6	44.8	0.0	4.4	2.7	5.3	2.2	5.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	50.0	0.0	9.7	25.3	0.0	10.5	8.8	8.1	7.0	10.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.1	159.2	0.0	61.7	87.1	0.0	45.7	42.8	45.2	43.0	48.7	0.0
LnGrp LOS	E	F		E	F		D	D	D	D	D	
Approach Vol, veh/h		2717			1599			1035			776	
Approach Delay, s/veh		136.6			84.2			44.5			46.5	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	42.1	28.0	26.0	26.0	34.0	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	13.5	39.5	16.1	16.1	20.8	31.4	10.7	13.2
Green Ext Time (p_c), s	0.3	0.0	1.1	1.4	1.1	0.0	0.8	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	96.0
HCM 7th LOS	F

Notes

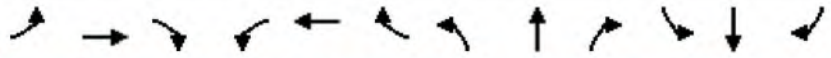
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	41	11	272	10	219	0	408	198	519	914	7
Future Volume (veh/h)	59	41	11	272	10	219	0	408	198	519	914	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	42	11	278	10	223	0	416	202	530	933	7
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	198	52	352	12	262	2	932	447	380	2360	18
Arrive On Green	0.04	0.14	0.14	0.07	0.17	0.17	0.00	0.40	0.40	0.21	0.65	0.65
Sat Flow, veh/h	1781	1429	374	1781	68	1527	1781	2328	1118	1781	3615	27
Grp Volume(v), veh/h	60	0	53	278	0	233	0	316	302	530	459	481
Grp Sat Flow(s),veh/h/ln	1781	0	1803	1781	0	1595	1781	1777	1669	1781	1777	1865
Q Serve(g_s), s	2.9	0.0	2.7	7.5	0.0	14.6	0.0	13.4	13.6	22.0	12.4	12.4
Cycle Q Clear(g_c), s	2.9	0.0	2.7	7.5	0.0	14.6	0.0	13.4	13.6	22.0	12.4	12.4
Prop In Lane	1.00		0.21	1.00		0.96	1.00		0.67	1.00		0.01
Lane Grp Cap(c), veh/h	175	0	250	352	0	274	2	711	668	380	1160	1218
V/C Ratio(X)	0.34	0.00	0.21	0.79	0.00	0.85	0.00	0.44	0.45	1.39	0.40	0.40
Avail Cap(c_a), veh/h	234	0	534	352	0	472	277	711	668	380	1160	1218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	0.0	39.4	39.5	0.0	41.4	0.0	22.5	22.6	40.5	8.4	8.4
Incr Delay (d2), s/veh	1.2	0.0	0.4	11.6	0.0	7.3	0.0	2.0	2.2	192.3	1.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	0.0	2.1	7.5	0.0	10.2	0.0	9.6	9.3	45.0	7.8	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.8	0.0	39.8	51.1	0.0	48.7	0.0	24.6	24.8	232.8	9.4	9.3
LnGrp LOS	D		D	D		D		C	C	F	A	A
Approach Vol, veh/h		113			511			618			1470	
Approach Delay, s/veh		38.7			50.0			24.7			89.9	
Approach LOS		D			D			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	46.2	12.0	18.8	0.0	72.2	8.6	22.2
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.0	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	24.0	15.6	9.5	4.7	0.0	14.4	4.9	16.6
Green Ext Time (p_c), s	0.0	2.5	0.0	0.2	0.0	5.2	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	65.4
HCM 7th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	109	0	34	0	558	34	34	1184	0
Future Volume (veh/h)	0	0	0	109	0	34	0	558	34	34	1184	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	112	0	35	0	575	35	35	1221	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	231	0	206	2	43	2	2362	144	58	2739	0
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.69	0.69	0.03	0.77	0.00
Sat Flow, veh/h	0	1870	0	1093	19	347	1781	3403	207	1781	3647	0
Grp Volume(v), veh/h	0	0	0	147	0	0	0	300	310	35	1221	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1459	0	0	1781	1777	1833	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	8.7	0.0	0.0	0.0	5.6	5.6	1.7	10.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.8	0.0	0.0	0.0	5.6	5.6	1.7	10.8	0.0
Prop In Lane	0.00		0.00	0.76		0.24	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	231	0	251	0	0	2	1233	1272	58	2739	0
V/C Ratio(X)	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.24	0.24	0.61	0.45	0.00
Avail Cap(c_a), veh/h	0	333	0	483	0	0	317	1233	1272	317	2739	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	38.4	0.0	0.0	0.0	5.1	5.1	43.0	3.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.5	0.5	9.8	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	5.8	0.0	0.0	0.0	3.1	3.2	1.6	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	40.6	0.0	0.0	0.0	5.5	5.5	52.8	4.1	0.0
LnGrp LOS				D				A	A	D	A	
Approach Vol, veh/h		0			147			610			1256	
Approach Delay, s/veh		0.0			40.6			5.5			5.5	
Approach LOS					D			A			A	

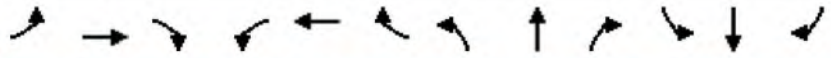
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	67.5		15.6	0.0	74.4		15.6
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	13.7	7.6		0.0	0.0	12.8		10.8
Green Ext Time (p_c), s	0.0	3.6		0.0	0.0	9.0		0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	8.1
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	171	24	0	13	31	564	24	1	1296	1
Future Volume (veh/h)	10	0	171	24	0	13	31	564	24	1	1296	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	11	0	180	25	0	14	33	594	25	1	1364	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	0	0	0	33	0	18	43	3034	128	2	1590	1347
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.03	0.02	0.87	0.87	0.00	0.84	0.84
Sat Flow, veh/h		0		1102	0	617	1795	3502	147	1795	1885	1598
Grp Volume(v), veh/h		0.0		39	0	0	33	303	316	1	1364	1
Grp Sat Flow(s),veh/h/ln				1719	0	0	1795	1791	1859	1795	1885	1598
Q Serve(g_s), s				3.1	0.0	0.0	2.5	3.7	3.7	0.1	55.7	0.0
Cycle Q Clear(g_c), s				3.1	0.0	0.0	2.5	3.7	3.7	0.1	55.7	0.0
Prop In Lane				0.64		0.36	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h				51	0	0	43	1551	1610	2	1590	1347
V/C Ratio(X)				0.76	0.00	0.00	0.77	0.20	0.20	0.51	0.86	0.00
Avail Cap(c_a), veh/h				348	0	0	363	1551	1610	363	1590	1347
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				65.5	0.0	0.0	66.0	1.5	1.5	67.9	6.0	1.7
Incr Delay (d2), s/veh				27.7	0.0	0.0	32.6	0.3	0.3	167.8	6.2	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				3.1	0.0	0.0	2.7	1.3	1.4	0.2	21.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				93.2	0.0	0.0	98.6	1.7	1.7	235.6	12.3	1.7
LnGrp LOS				F			F	A	A	F	B	A
Approach Vol, veh/h					39			652			1366	
Approach Delay, s/veh					93.2			6.6			12.4	
Approach LOS					F			A			B	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	4.6	122.8		8.5	7.8	119.7
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	2.1	5.7		5.1	4.5	57.7
Green Ext Time (p_c), s	0.0	9.5		0.2	0.1	0.0

Intersection Summary		
HCM 7th Control Delay, s/veh		12.1
HCM 7th LOS		B

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	140	0	3	24	0	0	0	17	0	0	0
Future Vol, veh/h	0	140	0	3	24	0	0	0	17	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	177	0	4	30	0	0	0	22	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	177	0	0	215	215	177	215	215	30
Stage 1	-	-	-	-	-	-	177	177	-	38	38	-
Stage 2	-	-	-	-	-	-	38	38	-	177	177	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1582	-	-	1399	-	-	741	683	866	741	683	1044
Stage 1	-	-	-	-	-	-	825	753	-	977	863	-
Stage 2	-	-	-	-	-	-	977	863	-	825	753	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1582	-	-	1399	-	-	739	681	866	721	681	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	739	681	-	721	681	-
Stage 1	-	-	-	-	-	-	825	753	-	975	861	-
Stage 2	-	-	-	-	-	-	975	861	-	804	753	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.84	9.26	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	866	1582	-	-	1399	-	-	-
HCM Lane V/C Ratio	0.025	-	-	-	0.003	-	-	-
HCM Ctrl Dly (s/v)	9.3	0	-	-	7.6	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	52	0	0	89
Future Vol, veh/h	0	0	52	0	0	89
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	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	87	0	0	148

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	235	43	0	0	87	0
Stage 1	87	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	743	1018	-	-	1508	-
Stage 1	927	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	743	1018	-	-	1508	-
Mov Cap-2 Maneuver	743	-	-	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	879	-	-	-	-	-

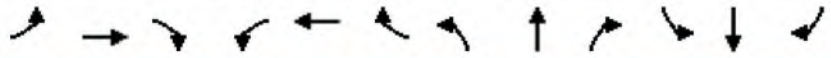
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1508	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	2680	45	132	1601	185	27	116	202	509	243	738
Future Volume (veh/h)	556	2680	45	132	1601	185	27	116	202	509	243	738
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	567	2735	46	135	1634	189	28	118	206	519	248	753
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	3055	51	168	2355	603	439	498	444	364	918	409
Arrive On Green	0.15	0.47	0.47	0.05	0.37	0.37	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3456	6566	110	3456	6434	1648	3456	1777	1585	3456	3554	1585
Grp Volume(v), veh/h	567	2009	772	135	1634	189	28	118	206	519	248	753
Grp Sat Flow(s),veh/h/ln	1728	1609	1851	1728	1609	1648	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	33.8	87.7	88.0	8.9	49.6	18.9	1.6	11.8	24.7	24.2	12.8	59.4
Cycle Q Clear(g_c), s	33.8	87.7	88.0	8.9	49.6	18.9	1.6	11.8	24.7	24.2	12.8	59.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	508	2245	861	168	2355	603	439	498	444	364	918	409
V/C Ratio(X)	1.12	0.89	0.90	0.80	0.69	0.31	0.06	0.24	0.46	1.43	0.27	1.84
Avail Cap(c_a), veh/h	508	2245	861	361	2355	603	439	498	444	364	918	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	98.1	56.3	56.4	108.3	61.9	52.2	88.4	63.9	68.5	102.9	68.0	85.3
Incr Delay (d2), s/veh	64.3	2.8	6.8	8.6	1.7	1.4	0.3	1.1	3.5	207.6	0.7	387.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	25.9	42.1	49.1	7.6	27.9	12.8	1.4	9.4	15.8	33.0	10.0	105.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	162.4	59.1	63.2	116.9	63.7	53.6	88.6	65.0	72.0	310.5	68.7	472.5
LnGrp LOS	F	E	E	F	E	D	F	E	E	F	E	F
Approach Vol, veh/h		3348			1958			352			1520	
Approach Delay, s/veh		77.6			66.4			71.0			351.3	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.0	90.0	35.0	65.0	17.2	112.8	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	35.8	51.6	3.6	61.4	10.9	90.0	26.2	26.7
Green Ext Time (p_c), s	0.0	15.5	0.0	0.0	0.3	3.9	0.0	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	132.1
HCM 7th LOS	F



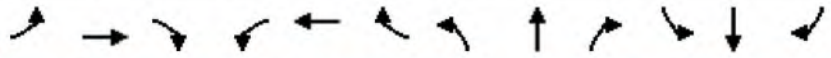
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	2391	352	191	1443	551	198	427	109	367	1742	82
Future Volume (veh/h)	294	2391	352	191	1443	551	198	427	109	367	1742	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	300	2440	0	195	1472	562	202	436	0	374	1778	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	3015		223	2804	691	230	1330		411	1594	
Arrive On Green	0.10	0.47	0.00	0.06	0.44	0.44	0.07	0.26	0.00	0.12	0.31	0.00
Sat Flow, veh/h	3456	6434	1585	3456	6434	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	300	2440	0	195	1472	562	202	436	0	374	1778	0
Grp Sat Flow(s),veh/h/ln	1728	1609	1585	1728	1609	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	23.2	87.7	0.0	15.1	45.2	83.7	15.6	18.6	0.0	28.9	84.3	0.0
Cycle Q Clear(g_c), s	23.2	87.7	0.0	15.1	45.2	83.7	15.6	18.6	0.0	28.9	84.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	3015		223	2804	691	230	1330		411	1594	
V/C Ratio(X)	0.90	0.81		0.87	0.52	0.81	0.88	0.33		0.91	1.12	
Avail Cap(c_a), veh/h	695	3015		312	2804	691	298	1330		685	1594	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.47	0.47	0.47	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	120.6	61.4	0.0	125.2	55.7	66.6	125.0	80.7	0.0	117.5	92.8	0.0
Incr Delay (d2), s/veh	0.9	0.2	0.0	9.3	0.3	5.0	20.5	0.1	0.0	10.2	61.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	38.7	0.0	10.2	23.4	41.5	12.4	13.0	0.0	19.8	61.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	121.4	61.6	0.0	134.5	56.0	71.6	145.5	80.9	0.0	127.7	154.0	0.0
LnGrp LOS	F	E		F	E	E	F	F		F	F	
Approach Vol, veh/h		2740			2229			638			2152	
Approach Delay, s/veh		68.2			66.8			101.3			149.4	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.9	123.5	38.6	76.0	23.0	132.3	24.6	90.0
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	54.3	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	25.2	85.7	30.9	20.6	17.1	89.7	17.6	86.3
Green Ext Time (p_c), s	1.0	0.0	1.3	3.0	0.3	19.4	0.3	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	93.1
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	2901	1624	319	1354	64	836	81	290	68	189	211
Future Volume (veh/h)	147	2901	1624	319	1354	64	836	81	290	68	189	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	2960	1657	326	1382	0	739	243	0	69	193	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	2177	676	350	2663		523	333		200	227	
Arrive On Green	0.10	0.43	0.43	0.20	0.52	0.00	0.10	0.18	0.00	0.05	0.12	0.00
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3563	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	150	2960	1657	326	1382	0	739	243	0	69	193	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	11.6	59.7	59.7	25.2	24.9	0.0	14.6	17.2	0.0	4.7	14.2	0.0
Cycle Q Clear(g_c), s	11.6	59.7	59.7	25.2	24.9	0.0	14.6	17.2	0.0	4.7	14.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	2177	676	350	2663		523	333		200	227	
V/C Ratio(X)	0.85	1.36	2.45	0.93	0.52		1.41	0.73		0.34	0.85	
Avail Cap(c_a), veh/h	383	2177	676	387	2663		523	395		302	397	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.80	0.80	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.0	40.2	40.2	55.3	22.0	0.0	51.2	54.3	0.0	50.5	60.2	0.0
Incr Delay (d2), s/veh	1.1	162.2	653.9	23.8	0.6	0.0	197.1	5.5	0.0	1.0	8.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3	74.9	222.1	18.7	14.2	0.0	26.1	13.4	0.0	3.9	11.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.1	202.4	694.1	79.1	22.6	0.0	248.2	59.8	0.0	51.5	68.8	0.0
LnGrp LOS	E	F	F	E	C		F	E		D	E	
Approach Vol, veh/h		4767			1708			982			262	
Approach Delay, s/veh		368.9			33.3			201.6			64.3	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.8	78.8	12.1	30.4	32.1	65.5	20.0	22.4
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.0	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	13.6	26.9	6.7	19.2	27.2	61.7	16.6	16.2
Green Ext Time (p_c), s	0.3	8.6	0.1	0.9	0.3	0.0	0.0	0.9

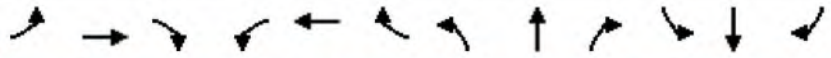
Intersection Summary	
HCM 7th Control Delay, s/veh	263.0
HCM 7th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	3556	270	240	1889	203	431	380	485	363	507	297
Future Volume (veh/h)	326	3556	270	240	1889	203	431	380	485	363	507	297
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	329	3592	0	242	1908	0	435	384	0	367	512	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	2617		284	2494		437	573		412	552	
Arrive On Green	0.11	0.51	0.00	0.08	0.49	0.00	0.13	0.16	0.00	0.12	0.16	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	329	3592	0	242	1908	0	435	384	0	367	512	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	17.8	97.4	0.0	13.1	58.0	0.0	23.9	19.3	0.0	19.9	27.0	0.0
Cycle Q Clear(g_c), s	17.8	97.4	0.0	13.1	58.0	0.0	23.9	19.3	0.0	19.9	27.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	375	2617		284	2494		437	573		412	552	
V/C Ratio(X)	0.88	1.37		0.85	0.77		1.00	0.67		0.89	0.93	
Avail Cap(c_a), veh/h	535	2617		437	2494		437	573		524	552	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.72	0.72	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	83.5	46.3	0.0	86.0	39.7	0.0	83.0	74.9	0.0	82.5	79.2	0.0
Incr Delay (d2), s/veh	11.4	170.2	0.0	7.1	1.7	0.0	42.1	6.1	0.0	14.6	24.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	118.7	0.0	9.6	31.0	0.0	19.2	14.4	0.0	14.9	20.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.8	216.5	0.0	93.1	41.4	0.0	125.1	81.0	0.0	97.1	103.3	0.0
LnGrp LOS	F	F		F	D		F	F		F	F	
Approach Vol, veh/h		3921			2150			819			879	
Approach Delay, s/veh		206.3			47.2			104.4			100.7	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.2	98.6	28.8	36.4	21.6	103.2	30.0	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	20.6	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	19.8	60.0	21.9	21.3	15.1	99.4	25.9	29.0
Green Ext Time (p_c), s	0.8	15.0	0.8	0.7	0.5	0.0	0.0	0.2

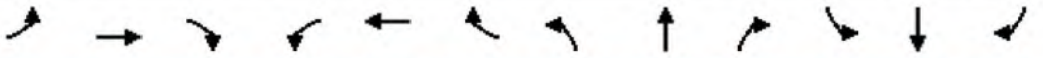
Intersection Summary	
HCM 7th Control Delay, s/veh	139.6
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

D5 – Horizon Build Conditions 2040



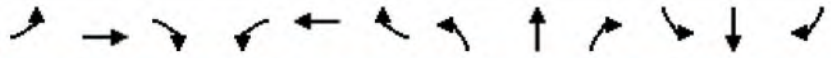
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1162	35	462	2313	153	41	391	442	185	516	649
Future Volume (veh/h)	219	1162	35	462	2313	153	41	391	442	185	516	649
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	238	1263	0	502	2514	0	45	425	480	201	561	705
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	1630		383	1930		58	779	347	168	997	445
Arrive On Green	0.15	0.32	0.00	0.21	0.38	0.00	0.03	0.22	0.22	0.09	0.28	0.28
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	238	1263	0	502	2514	0	45	425	480	201	561	705
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.7	26.9	0.0	25.8	45.4	0.0	3.0	12.7	26.3	11.3	16.2	33.7
Cycle Q Clear(g_c), s	15.7	26.9	0.0	25.8	45.4	0.0	3.0	12.7	26.3	11.3	16.2	33.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	1630		383	1930		58	779	347	168	997	445
V/C Ratio(X)	0.88	0.77		1.31	1.30		0.77	0.55	1.38	1.20	0.56	1.58
Avail Cap(c_a), veh/h	465	1630		383	1930		197	779	347	168	997	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	37.0	0.0	47.1	37.3	0.0	57.6	41.6	46.8	54.4	36.9	43.2
Incr Delay (d2), s/veh	9.7	3.7	0.0	157.5	140.0	0.0	19.2	0.8	188.8	132.8	0.7	273.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	17.1	0.0	41.8	63.3	0.0	3.0	9.5	43.4	17.8	11.4	72.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.5	40.6	0.0	204.6	177.3	0.0	76.8	42.3	235.7	187.2	37.6	316.8
LnGrp LOS	E	D		F	F		E	D	F	F	D	F
Approach Vol, veh/h		1501			3016			950			1467	
Approach Delay, s/veh		43.6			181.8			141.7			192.3	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	43.0	8.6	38.4	22.9	50.1	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	27.8	28.9	5.0	35.7	17.7	47.4	13.3	28.3
Green Ext Time (p_c), s	0.0	4.6	0.0	0.0	0.5	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	148.6
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



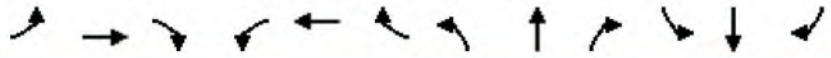
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	885	529	126	2265	300	518	292	89	193	302	466
Future Volume (veh/h)	258	885	529	126	2265	300	518	292	89	193	302	466
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	274	941	0	134	2410	0	551	311	95	205	321	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	1817		166	1774		721	742	331	661	680	
Arrive On Green	0.10	0.36	0.00	0.09	0.35	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	274	941	0	134	2410	0	551	311	95	205	321	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	8.8	16.6	0.0	8.4	39.6	0.0	17.1	8.7	5.8	5.8	9.2	0.0
Cycle Q Clear(g_c), s	8.8	16.6	0.0	8.4	39.6	0.0	17.1	8.7	5.8	5.8	9.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	1817		166	1774		721	742	331	661	680	
V/C Ratio(X)	0.78	0.52		0.81	1.36		0.76	0.42	0.29	0.31	0.47	
Avail Cap(c_a), veh/h	782	1817		325	1774		721	742	331	661	680	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.0	29.0	0.0	50.7	37.2	0.0	42.5	39.1	38.0	39.6	41.0	0.0
Incr Delay (d2), s/veh	3.8	1.1	0.0	8.9	165.1	0.0	7.5	1.7	2.2	1.2	2.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	11.0	0.0	7.4	64.0	0.0	12.5	7.0	4.3	4.6	7.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.7	30.0	0.0	59.6	202.3	0.0	50.0	40.8	40.1	40.9	43.3	0.0
LnGrp LOS	D	C		E	F		D	D	D	D	D	
Approach Vol, veh/h		1215			2544			957			526	
Approach Delay, s/veh		35.4			194.8			46.0			42.4	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	45.2	28.0	26.0	15.8	44.2	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	10.6	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	10.4	18.6	19.1	11.2	10.8	41.6	7.8	10.7
Green Ext Time (p_c), s	0.2	4.8	0.9	1.3	0.8	0.0	0.5	1.8

Intersection Summary		
HCM 7th Control Delay, s/veh	115.4	
HCM 7th LOS	F	

Notes

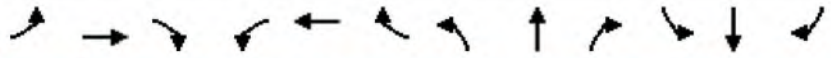
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	6	4	336	45	439	13	404	148	250	359	89
Future Volume (veh/h)	43	6	4	336	45	439	13	404	148	250	359	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	46	6	4	357	48	467	14	430	157	266	382	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	132	267	178	549	44	425	28	812	294	299	1329	327
Arrive On Green	0.04	0.26	0.26	0.07	0.30	0.30	0.02	0.32	0.32	0.17	0.48	0.48
Sat Flow, veh/h	1753	1030	687	1753	147	1435	1753	2516	910	1753	2782	684
Grp Volume(v), veh/h	46	0	10	357	0	515	14	298	289	266	239	238
Grp Sat Flow(s),veh/h/ln	1753	0	1717	1753	0	1582	1753	1749	1677	1753	1749	1718
Q Serve(g_s), s	2.0	0.0	0.4	7.5	0.0	30.5	0.8	14.3	14.5	15.3	8.5	8.7
Cycle Q Clear(g_c), s	2.0	0.0	0.4	7.5	0.0	30.5	0.8	14.3	14.5	15.3	8.5	8.7
Prop In Lane	1.00		0.40	1.00		0.91	1.00		0.54	1.00		0.40
Lane Grp Cap(c), veh/h	132	0	444	549	0	469	28	564	541	299	835	820
V/C Ratio(X)	0.35	0.00	0.02	0.65	0.00	1.10	0.50	0.53	0.53	0.89	0.29	0.29
Avail Cap(c_a), veh/h	198	0	508	549	0	469	272	564	541	374	835	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	28.5	29.3	0.0	36.3	50.3	28.5	28.5	41.7	16.3	16.3
Incr Delay (d2), s/veh	1.6	0.0	0.0	2.7	0.0	71.2	13.0	3.5	3.8	18.9	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.3	7.5	0.0	29.5	0.8	10.4	10.2	12.6	6.1	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.3	0.0	28.5	32.0	0.0	107.5	63.3	32.0	32.3	60.7	17.1	17.2
LnGrp LOS	C		C	C		F	E	C	C	E	B	B
Approach Vol, veh/h		56			872			601			743	
Approach Delay, s/veh		30.8			76.6			32.9			32.8	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	38.2	12.0	31.2	5.7	54.2	8.2	35.0
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.6	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	17.3	16.5	9.5	2.4	2.8	10.7	4.0	32.5
Green Ext Time (p_c), s	0.3	2.2	0.0	0.0	0.0	2.6	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	49.6
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	42	0	21	1	605	89	47	626	1
Future Volume (veh/h)	0	0	0	42	0	21	1	605	89	47	626	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	0	0	0	45	0	22	1	644	95	50	666	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	105	0	122	1	27	2	2264	333	68	2787	4
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.75	0.75	0.04	0.79	0.79
Sat Flow, veh/h	0	1811	0	943	15	468	1725	3009	443	1725	3525	5
Grp Volume(v), veh/h	0	0	0	67	0	0	1	368	371	50	325	342
Grp Sat Flow(s),veh/h/ln	0	1811	0	1426	0	0	1725	1721	1731	1725	1721	1810
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	0.1	6.1	6.1	2.6	4.4	4.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.2	0.0	0.0	0.1	6.1	6.1	2.6	4.4	4.4
Prop In Lane	0.00		0.00	0.67		0.33	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	105	0	150	0	0	2	1295	1303	68	1360	1431
V/C Ratio(X)	0.00	0.00	0.00	0.45	0.00	0.00	0.42	0.28	0.28	0.73	0.24	0.24
Avail Cap(c_a), veh/h	0	322	0	470	0	0	307	1295	1303	307	1360	1431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	41.9	0.0	0.0	44.9	3.5	3.5	42.7	2.4	2.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.0	89.5	0.6	0.5	13.9	0.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	2.7	0.0	0.0	0.1	2.7	2.8	2.4	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	44.0	0.0	0.0	134.4	4.1	4.1	56.6	2.8	2.8
LnGrp LOS				D			F	A	A	E	A	A
Approach Vol, veh/h		0			67			740			717	
Approach Delay, s/veh		0.0			44.0			4.2			6.6	
Approach LOS					D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	72.7		9.7	4.1	76.2		9.7
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	14.6	8.1		0.0	2.1	6.4		6.2
Green Ext Time (p_c), s	0.1	4.6		0.0	0.0	4.0		0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	7.1
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

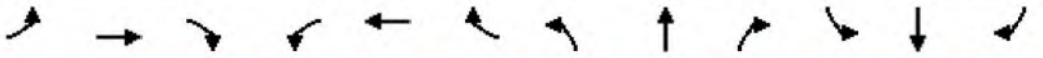
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	45	46	683	661	13
Future Vol, veh/h	13	45	46	683	661	13
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, %	6	6	6	6	6	6
Mvmt Flow	14	47	48	719	696	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1159	355	709	0	-	0
Stage 1	703	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Critical Hdwy	6.92	7.02	4.22	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.36	2.26	-	-	-
Pot Cap-1 Maneuver	183	630	859	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	170	630	859	-	-	-
Mov Cap-2 Maneuver	295	-	-	-	-	-
Stage 1	411	-	-	-	-	-
Stage 2	593	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.15	1.14	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	227	-	502	-	-
HCM Lane V/C Ratio	0.056	-	0.122	-	-
HCM Ctrl Dly (s/v)	9.4	0.6	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	47	11	0	3	246	730	17	6	698	6
Future Volume (veh/h)	7	0	47	11	0	3	246	730	17	6	698	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	0	1811	1811	1811	1811	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	8	0	57	13	0	4	296	880	20	7	841	7
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	0	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	13	0	0	47	0	0	321	2874	65	12	1189	1008
Arrive On Green	0.01	0.00	0.00	0.01	0.00	0.01	0.19	0.84	0.84	0.01	0.66	0.66
Sat Flow, veh/h	1725	8		0	0	0	1725	3439	78	1725	1811	1535
Grp Volume(v), veh/h	8	117.3		17	0	0	296	440	460	7	841	7
Grp Sat Flow(s),veh/h/ln	1725	F		0	0	0	1725	1721	1797	1725	1811	1535
Q Serve(g_s), s	0.6			0.0	0.0	0.0	22.9	7.7	7.7	0.6	40.5	0.2
Cycle Q Clear(g_c), s	0.6			0.1	0.0	0.0	22.9	7.7	7.7	0.6	40.5	0.2
Prop In Lane	1.00			0.76		0.24	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	13			47	0	0	321	1438	1501	12	1189	1008
V/C Ratio(X)	0.60			0.36	0.00	0.00	0.92	0.31	0.31	0.59	0.71	0.01
Avail Cap(c_a), veh/h	349			301	0	0	349	1438	1501	349	1189	1008
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3			66.2	0.0	0.0	54.4	2.5	2.5	67.3	15.0	8.1
Incr Delay (d2), s/veh	50.0			6.6	0.0	0.0	29.0	0.6	0.5	53.2	3.6	0.0
Initial Q Delay(d3), s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8			1.2	0.0	0.0	18.2	3.5	3.6	0.7	23.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	117.3			72.9	0.0	0.0	83.4	3.0	3.0	120.6	18.5	8.1
LnGrp LOS	F			E			F	A	A	F	B	A
Approach Vol, veh/h					17			1196			855	
Approach Delay, s/veh					72.9			22.9			19.3	
Approach LOS					E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6
Phs Duration (G+Y+Rc), s	5.4	118.6	5.5	6.4	29.8	94.3
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0	27.5	27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	2.6	9.7	2.6	2.1	24.9	42.5
Green Ext Time (p_c), s	0.0	13.5	0.0	0.1	0.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	22.2
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	23	1	17	156	19	0	0	3	19	0	0
Future Vol, veh/h	0	23	1	17	156	19	0	0	3	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	0	28	1	20	188	23	0	0	4	23	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	211	0	0	29	0	0	257	280	28	268	269	199
Stage 1	-	-	-	-	-	-	28	28	-	240	240	-
Stage 2	-	-	-	-	-	-	229	252	-	28	29	-
Critical Hdwy	4.17	-	-	4.17	-	-	7.17	6.57	6.27	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.17	5.57	-
Follow-up Hdwy	2.263	-	-	2.263	-	-	3.563	4.063	3.363	3.563	4.063	3.363
Pot Cap-1 Maneuver	1330	-	-	1552	-	-	686	620	1033	674	629	829
Stage 1	-	-	-	-	-	-	976	862	-	752	697	-
Stage 2	-	-	-	-	-	-	763	689	-	977	861	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1330	-	-	1552	-	-	675	611	1033	662	619	829
Mov Cap-2 Maneuver	-	-	-	-	-	-	675	611	-	662	619	-
Stage 1	-	-	-	-	-	-	976	862	-	741	687	-
Stage 2	-	-	-	-	-	-	751	679	-	973	861	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.65	8.5	10.63
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1033	1330	-	-	1552	-	-	662
HCM Lane V/C Ratio	0.004	-	-	-	0.013	-	-	0.035
HCM Ctrl Dly (s/v)	8.5	0	-	-	7.3	-	-	10.6
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	32	105	6	32	48
Future Vol, veh/h	6	32	105	6	32	48
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	80	80	80	80	80	80
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	8	40	131	8	40	60

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	275	69	0	0	139	0
Stage 1	135	-	-	-	-	-
Stage 2	140	-	-	-	-	-
Critical Hdwy	6.69	6.99	-	-	4.19	-
Critical Hdwy Stg 1	5.89	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.557	3.357	-	-	2.257	-
Pot Cap-1 Maneuver	693	968	-	-	1417	-
Stage 1	867	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	673	968	-	-	1417	-
Mov Cap-2 Maneuver	673	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	850	-	-	-	-	-

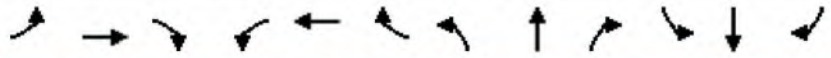
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.2	0	3.05
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	905	720	-
HCM Lane V/C Ratio	-	-	0.052	0.028	-
HCM Ctrl Dly (s/v)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	423	1133	11	134	3688	482	16	100	194	207	83	647
Future Volume (veh/h)	423	1133	11	134	3688	482	16	100	194	207	83	647
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1914	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	445	1193	12	141	3882	507	17	105	204	218	87	681
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	475	3014	30	174	2364	606	432	490	437	358	903	403
Arrive On Green	0.14	0.46	0.46	0.05	0.37	0.37	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3401	6513	65	3401	6332	1622	3401	1749	1560	3401	3497	1560
Grp Volume(v), veh/h	445	870	335	141	3882	507	17	105	204	218	87	681
Grp Sat Flow(s),veh/h/ln	1700	1583	1829	1700	1583	1622	1700	1749	1560	1700	1749	1560
Q Serve(g_s), s	29.8	27.7	27.7	9.4	85.9	65.5	1.0	10.6	24.9	14.1	4.4	59.4
Cycle Q Clear(g_c), s	29.8	27.7	27.7	9.4	85.9	65.5	1.0	10.6	24.9	14.1	4.4	59.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	475	2198	847	174	2364	606	432	490	437	358	903	403
V/C Ratio(X)	0.94	0.40	0.40	0.81	1.64	0.84	0.04	0.21	0.47	0.61	0.10	1.69
Avail Cap(c_a), veh/h	500	2198	847	355	2364	606	432	490	437	358	903	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	97.9	40.6	40.6	108.0	72.1	65.7	88.1	63.4	68.6	98.4	64.9	85.3
Incr Delay (d2), s/veh	21.4	0.4	1.1	8.8	291.0	13.0	0.2	1.0	3.6	7.5	0.2	321.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	20.2	15.9	18.2	7.9	126.0	38.1	0.8	8.5	15.7	10.9	3.6	91.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	119.3	41.1	41.8	116.8	363.1	78.7	88.3	64.4	72.1	105.9	65.1	406.5
LnGrp LOS	F	D	D	F	F	E	F	E	E	F	E	F
Approach Vol, veh/h		1650			4530			326			986	
Approach Delay, s/veh		62.3			323.6			70.5			309.9	
Approach LOS		E			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.3	91.7	35.0	65.0	17.7	112.3	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	31.8	87.9	3.0	61.4	11.4	29.7	16.1	26.9
Green Ext Time (p_c), s	0.4	0.0	0.0	0.0	0.3	9.6	0.4	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	253.2
HCM 7th LOS	F



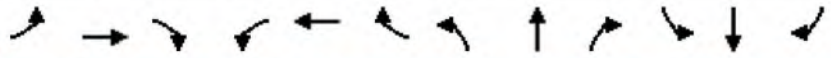
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1017	83	85	2651	1607	215	990	103	596	307	42
Future Volume (veh/h)	224	1017	83	85	2651	1607	215	990	103	596	307	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	233	1059	0	89	2761	1674	224	1031	0	621	320	0
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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	266	3082		116	2800	690	250	1011		649	1596	
Arrive On Green	0.08	0.49	0.00	0.03	0.44	0.44	0.07	0.20	0.00	0.19	0.32	0.00
Sat Flow, veh/h	3401	6332	1560	3401	6332	1560	3401	5025	1560	3401	5025	1560
Grp Volume(v), veh/h	233	1059	0	89	2761	1674	224	1031	0	621	320	0
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1560	1700	1675	1560	1700	1675	1560
Q Serve(g_s), s	18.3	27.8	0.0	7.0	116.4	119.4	17.6	54.3	0.0	48.8	12.5	0.0
Cycle Q Clear(g_c), s	18.3	27.8	0.0	7.0	116.4	119.4	17.6	54.3	0.0	48.8	12.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	3082		116	2800	690	250	1011		649	1596	
V/C Ratio(X)	0.88	0.34		0.77	0.99	2.43	0.89	1.02		0.96	0.20	
Avail Cap(c_a), veh/h	684	3082		307	2800	690	293	1011		674	1596	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.00	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	123.2	42.7	0.0	129.4	74.5	75.3	124.0	107.8	0.0	108.1	67.2	0.0
Incr Delay (d2), s/veh	8.1	0.3	0.0	1.0	2.8	642.4	25.1	33.5	0.0	24.1	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	16.3	0.0	4.0	50.8	260.1	13.7	35.9	0.0	32.0	9.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	131.3	43.0	0.0	130.4	77.3	717.7	149.1	141.3	0.0	132.3	67.2	0.0
LnGrp LOS	F	D		F	E	F	F	F		F	E	
Approach Vol, veh/h		1292			4524			1255			941	
Approach Delay, s/veh		58.9			315.3			142.7			110.1	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.8	125.2	58.0	60.0	14.8	137.2	26.6	91.4
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	21.1	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	20.3	121.4	50.8	56.3	9.0	29.8	19.6	14.5
Green Ext Time (p_c), s	0.8	0.0	0.7	0.0	0.2	8.7	0.2	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	222.8
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1012	869	112	2533	158	1255	96	154	69	100	420
Future Volume (veh/h)	70	1012	869	112	2533	158	1255	96	154	69	100	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	72	1043	896	115	2611	0	1365	0	0	71	103	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	92	2975	924	140	3101		770	0		243	133	
Arrive On Green	0.05	0.59	0.59	0.08	0.62	0.00	0.10	0.00	0.00	0.05	0.07	0.00
Sat Flow, veh/h	1753	5025	1560	1753	5025	1560	5259	0	1560	1753	1841	1560
Grp Volume(v), veh/h	72	1043	896	115	2611	0	1365	0	0	71	103	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1560	1753	1675	1560	1753	0	1560	1753	1841	1560
Q Serve(g_s), s	5.7	15.0	77.1	9.0	58.0	0.0	14.6	0.0	0.0	5.2	7.7	0.0
Cycle Q Clear(g_c), s	5.7	15.0	77.1	9.0	58.0	0.0	14.6	0.0	0.0	5.2	7.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	2975	924	140	3101		770	0		243	133	
V/C Ratio(X)	0.78	0.35	0.97	0.82	0.84		1.77	0.00		0.29	0.77	
Avail Cap(c_a), veh/h	377	2975	924	381	3101		770	0		337	390	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.09	0.09	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.5	14.7	27.4	63.4	21.4	0.0	56.0	0.0	0.0	55.9	63.8	0.0
Incr Delay (d2), s/veh	9.9	0.2	18.9	1.1	0.3	0.0	353.4	0.0	0.0	0.7	9.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	8.7	40.6	5.0	22.8	0.0	42.7	0.0	0.0	4.3	7.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.5	14.9	46.3	64.6	21.6	0.0	409.5	0.0	0.0	56.6	72.8	0.0
LnGrp LOS	E	B	D	E	C		F			E	E	
Approach Vol, veh/h		2011			2726			1365			174	
Approach Delay, s/veh		31.1			23.4			409.5			66.2	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	92.2	12.5	23.0	15.8	88.7	20.0	15.6
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.0	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	7.7	60.0	7.2	0.0	11.0	79.1	16.6	9.7
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.2	0.0	0.0	0.5

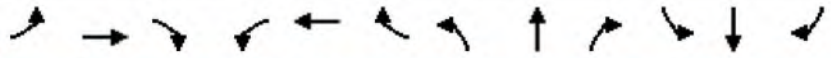
Intersection Summary	
HCM 7th Control Delay, s/veh	111.0
HCM 7th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1490	414	259	3740	141	728	250	263	214	291	663
Future Volume (veh/h)	225	1490	414	259	3740	141	728	250	263	214	291	663
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	239	1585	0	276	3979	0	774	266	0	228	310	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	283	2543		318	2605		433	709		272	547	
Arrive On Green	0.08	0.50	0.00	0.09	0.51	0.00	0.13	0.20	0.00	0.08	0.16	0.00
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	3428	3526	1572	3428	3526	1572
Grp Volume(v), veh/h	239	1585	0	276	3979	0	774	266	0	228	310	0
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1714	1763	1572	1714	1763	1572
Q Serve(g_s), s	13.1	43.1	0.0	15.1	97.7	0.0	24.0	12.4	0.0	12.5	15.5	0.0
Cycle Q Clear(g_c), s	13.1	43.1	0.0	15.1	97.7	0.0	24.0	12.4	0.0	12.5	15.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	2543		318	2605		433	709		272	547	
V/C Ratio(X)	0.84	0.62		0.87	1.53		1.79	0.38		0.84	0.57	
Avail Cap(c_a), veh/h	530	2543		433	2605		433	709		520	547	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	85.9	34.3	0.0	85.1	46.1	0.0	83.0	65.6	0.0	86.3	74.3	0.0
Incr Delay (d2), s/veh	6.8	1.2	0.0	1.4	237.6	0.0	363.5	1.5	0.0	6.8	4.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	24.6	0.0	8.0	135.8	0.0	50.7	9.7	0.0	9.8	11.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	92.7	35.4	0.0	86.5	283.7	0.0	446.5	67.1	0.0	93.0	78.5	0.0
LnGrp LOS	F	D		F	F		F	E		F	E	
Approach Vol, veh/h		1824			4255			1040			538	
Approach Delay, s/veh		42.9			270.9			349.4			84.7	
Approach LOS		D			F			F			F	

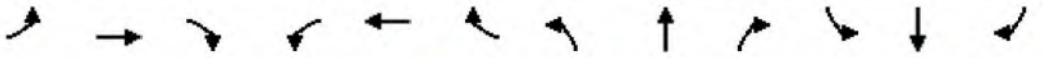
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	103.5	21.3	43.9	23.6	101.2	30.0	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	29.4	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	15.1	99.7	14.5	14.4	17.1	45.1	26.0	17.5
Green Ext Time (p_c), s	0.6	0.0	0.6	1.1	0.5	15.4	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	214.2
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



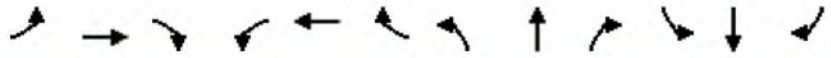
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	2302	32	357	1349	198	69	517	998	263	360	307
Future Volume (veh/h)	253	2302	32	357	1349	198	69	517	998	263	360	307
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	258	2349	0	364	1377	0	70	528	1018	268	367	313
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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	291	1643		386	1893		90	785	350	169	942	420
Arrive On Green	0.16	0.32	0.00	0.21	0.37	0.00	0.05	0.22	0.22	0.09	0.26	0.26
Sat Flow, veh/h	1795	5147	1598	1795	5147	1598	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	258	2349	0	364	1377	0	70	528	1018	268	367	313
Grp Sat Flow(s),veh/h/ln	1795	1716	1598	1795	1716	1598	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	16.9	38.3	0.0	24.0	27.7	0.0	4.6	16.2	26.3	11.3	10.1	21.5
Cycle Q Clear(g_c), s	16.9	38.3	0.0	24.0	27.7	0.0	4.6	16.2	26.3	11.3	10.1	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	1643		386	1893		90	785	350	169	942	420
V/C Ratio(X)	0.89	1.43		0.94	0.73		0.78	0.67	2.91	1.59	0.39	0.74
Avail Cap(c_a), veh/h	468	1643		386	1893		199	785	350	169	942	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	40.8	0.0	46.4	32.7	0.0	56.3	42.9	46.8	54.3	36.3	40.5
Incr Delay (d2), s/veh	11.6	197.1	0.0	31.5	2.5	0.0	13.1	2.3	866.1	289.6	0.3	7.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.2	69.0	0.0	19.9	17.1	0.0	4.3	11.8	148.3	29.7	7.9	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.8	237.9	0.0	77.9	35.2	0.0	69.4	45.2	912.9	343.9	36.6	47.6
LnGrp LOS	E	F		E	D		E	D	F	F	D	D
Approach Vol, veh/h		2607			1741			1616			948	
Approach Delay, s/veh		220.4			44.1			592.9			127.1	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	43.0	10.7	36.3	24.2	48.8	16.0	31.0
Change Period (Y+Rc), s	4.2	4.7	4.7	4.7	4.7	* 4.7	4.7	4.7
Max Green Setting (Gmax), s	25.8	36.3	13.3	26.3	31.3	* 30	11.3	26.3
Max Q Clear Time (g_c+I1), s	26.0	40.3	6.6	23.5	18.9	29.7	13.3	28.3
Green Ext Time (p_c), s	0.0	0.0	0.1	1.0	0.6	0.5	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	250.3
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.



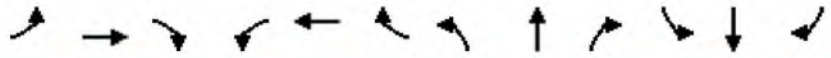
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	560	2022	941	187	1344	277	478	376	172	286	451	353
Future Volume (veh/h)	560	2022	941	187	1344	277	478	376	172	286	451	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	589	2128	0	197	1415	0	503	396	181	301	475	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	667	1655		229	1326		727	748	334	666	685	
Arrive On Green	0.19	0.32	0.00	0.13	0.26	0.00	0.21	0.21	0.21	0.19	0.19	0.00
Sat Flow, veh/h	3483	5147	1598	1795	5147	1598	3483	3582	1598	3483	3582	1598
Grp Volume(v), veh/h	589	2128	0	197	1415	0	503	396	181	301	475	0
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1795	1716	1598	1742	1791	1598	1742	1791	1598
Q Serve(g_s), s	18.8	36.7	0.0	12.3	29.4	0.0	15.2	11.2	11.5	8.7	14.1	0.0
Cycle Q Clear(g_c), s	18.8	36.7	0.0	12.3	29.4	0.0	15.2	11.2	11.5	8.7	14.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	667	1655		229	1326		727	748	334	666	685	
V/C Ratio(X)	0.88	1.29		0.86	1.07		0.69	0.53	0.54	0.45	0.69	
Avail Cap(c_a), veh/h	788	1655		328	1326		727	748	334	666	685	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.8	38.7	0.0	48.7	42.3	0.0	41.7	40.1	40.2	40.8	43.0	0.0
Incr Delay (d2), s/veh	10.3	133.2	0.0	14.8	44.8	0.0	5.3	2.7	6.2	2.2	5.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	52.0	0.0	10.4	25.3	0.0	11.2	8.8	8.7	7.0	10.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.1	171.8	0.0	63.5	87.1	0.0	47.1	42.8	46.5	43.0	48.7	0.0
LnGrp LOS	E	F		E	F		D	D	D	D	D	
Approach Vol, veh/h		2717			1612			1080			776	
Approach Delay, s/veh		146.5			84.2			45.4			46.5	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	41.3	28.0	26.0	26.0	34.0	26.0	28.0
Change Period (Y+Rc), s	4.2	4.6	4.2	4.2	4.2	4.6	4.2	4.2
Max Green Setting (Gmax), s	20.8	30.4	23.8	21.8	25.8	25.4	21.8	23.8
Max Q Clear Time (g_c+I1), s	14.3	38.7	17.2	16.1	20.8	31.4	10.7	13.5
Green Ext Time (p_c), s	0.3	0.0	1.1	1.4	1.1	0.0	0.8	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	100.1
HCM 7th LOS	F

Notes

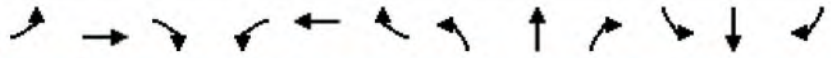
Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	41	11	272	10	219	0	420	198	519	926	38
Future Volume (veh/h)	90	41	11	272	10	219	0	420	198	519	926	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	42	11	278	10	223	0	429	202	530	945	39
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	224	59	377	12	262	2	899	419	380	2207	91
Arrive On Green	0.06	0.16	0.16	0.07	0.17	0.17	0.00	0.38	0.38	0.21	0.63	0.63
Sat Flow, veh/h	1781	1429	374	1781	68	1527	1781	2353	1097	1781	3478	144
Grp Volume(v), veh/h	92	0	53	278	0	233	0	323	308	530	483	501
Grp Sat Flow(s),veh/h/ln	1781	0	1803	1781	0	1595	1781	1777	1673	1781	1777	1845
Q Serve(g_s), s	4.4	0.0	2.6	7.5	0.0	14.6	0.0	14.1	14.4	22.0	14.0	14.0
Cycle Q Clear(g_c), s	4.4	0.0	2.6	7.5	0.0	14.6	0.0	14.1	14.4	22.0	14.0	14.0
Prop In Lane	1.00		0.21	1.00		0.96	1.00		0.66	1.00		0.08
Lane Grp Cap(c), veh/h	207	0	282	377	0	274	2	679	639	380	1128	1171
V/C Ratio(X)	0.44	0.00	0.19	0.74	0.00	0.85	0.00	0.48	0.48	1.39	0.43	0.43
Avail Cap(c_a), veh/h	234	0	534	377	0	472	277	679	639	380	1128	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	37.7	38.1	0.0	41.4	0.0	24.0	24.1	40.5	9.4	9.4
Incr Delay (d2), s/veh	1.5	0.0	0.3	7.4	0.0	7.3	0.0	2.4	2.6	192.3	1.2	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	0.0	2.1	6.6	0.0	10.2	0.0	10.2	9.9	45.0	8.8	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.9	0.0	38.1	45.5	0.0	48.7	0.0	26.4	26.7	232.8	10.6	10.6
LnGrp LOS	D		D	D		D		C	C	F	B	B
Approach Vol, veh/h		145			511			631			1514	
Approach Delay, s/veh		36.7			47.0			26.5			88.4	
Approach LOS		D			D			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	44.4	12.0	20.6	0.0	70.4	10.5	22.2
Change Period (Y+Rc), s	4.0	5.0	4.5	4.5	4.0	5.0	4.5	4.5
Max Green Setting (Gmax), s	22.0	25.0	7.5	30.5	16.0	31.0	7.5	30.5
Max Q Clear Time (g_c+I1), s	24.0	16.4	9.5	4.6	0.0	16.0	6.4	16.6
Green Ext Time (p_c), s	0.0	2.4	0.0	0.2	0.0	5.3	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	64.2
HCM 7th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	109	0	34	0	570	34	34	1196	0
Future Volume (veh/h)	0	0	0	109	0	34	0	570	34	34	1196	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	112	0	35	0	588	35	35	1233	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	231	0	206	2	43	2	2365	141	58	2739	0
Arrive On Green	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.69	0.69	0.03	0.77	0.00
Sat Flow, veh/h	0	1870	0	1093	19	347	1781	3408	203	1781	3647	0
Grp Volume(v), veh/h	0	0	0	147	0	0	0	306	317	35	1233	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1459	0	0	1781	1777	1834	1781	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	8.7	0.0	0.0	0.0	5.7	5.8	1.7	11.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.8	0.0	0.0	0.0	5.7	5.8	1.7	11.0	0.0
Prop In Lane	0.00		0.00	0.76		0.24	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	231	0	251	0	0	2	1233	1273	58	2739	0
V/C Ratio(X)	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.25	0.25	0.61	0.45	0.00
Avail Cap(c_a), veh/h	0	333	0	483	0	0	317	1233	1273	317	2739	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	38.4	0.0	0.0	0.0	5.1	5.1	43.0	3.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.5	0.5	9.8	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	5.8	0.0	0.0	0.0	3.2	3.3	1.6	4.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	0.0	40.6	0.0	0.0	0.0	5.6	5.6	52.8	4.2	0.0
LnGrp LOS				D				A	A	D	A	
Approach Vol, veh/h		0			147			623			1268	
Approach Delay, s/veh		0.0			40.6			5.6			5.5	
Approach LOS					D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.9	67.5		15.6	0.0	74.4		15.6
Change Period (Y+Rc), s	4.0	5.0		* 4.5	4.0	5.0		4.5
Max Green Setting (Gmax), s	16.0	35.0		* 16	16.0	35.0		25.5
Max Q Clear Time (g_c+I1), s	13.7	7.8		0.0	0.0	13.0		10.8
Green Ext Time (p_c), s	0.0	3.7		0.0	0.0	9.1		0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	8.1
HCM 7th LOS	A

Notes

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

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

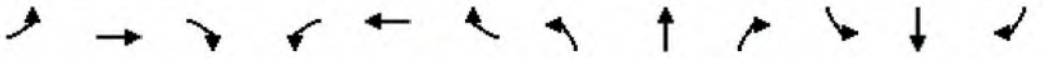
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	43	43	589	1300	12
Future Vol, veh/h	12	43	43	589	1300	12
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	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	45	45	614	1354	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1757	683	1367	0	-	0
Stage 1	1360	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	76	392	498	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	68	392	498	-	-	-
Mov Cap-2 Maneuver	149	-	-	-	-	-
Stage 1	181	-	-	-	-	-
Stage 2	649	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.54	2.02	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	245	-	289	-	-
HCM Lane V/C Ratio	0.09	-	0.198	-	-
HCM Ctrl Dly (s/v)	12.9	1.2	20.5	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.7	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	196	24	0	13	55	607	24	1	1339	1
Future Volume (veh/h)	10	0	196	24	0	13	55	607	24	1	1339	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	0	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	11	0	206	25	0	14	58	639	25	1	1409	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	0	0	0	33	0	18	76	3044	119	2	1555	1318
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.03	0.04	0.87	0.87	0.00	0.82	0.82
Sat Flow, veh/h		0		1102	0	617	1795	3514	137	1795	1885	1598
Grp Volume(v), veh/h		0.0		39	0	0	58	325	339	1	1409	1
Grp Sat Flow(s),veh/h/ln				1719	0	0	1795	1791	1860	1795	1885	1598
Q Serve(g_s), s				3.1	0.0	0.0	4.3	4.0	4.0	0.1	70.5	0.0
Cycle Q Clear(g_c), s				3.1	0.0	0.0	4.3	4.0	4.0	0.1	70.5	0.0
Prop In Lane				0.64		0.36	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h				51	0	0	76	1551	1612	2	1555	1318
V/C Ratio(X)				0.76	0.00	0.00	0.76	0.21	0.21	0.51	0.91	0.00
Avail Cap(c_a), veh/h				348	0	0	363	1551	1612	363	1555	1318
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				65.5	0.0	0.0	64.4	1.5	1.5	67.9	8.3	2.1
Incr Delay (d2), s/veh				27.7	0.0	0.0	19.4	0.3	0.3	167.8	9.2	0.0
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				3.1	0.0	0.0	4.3	1.5	1.5	0.2	30.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				93.2	0.0	0.0	83.8	1.8	1.8	235.6	17.5	2.1
LnGrp LOS				F			F	A	A	F	B	A
Approach Vol, veh/h					39			722			1411	
Approach Delay, s/veh					93.2			8.4			17.6	
Approach LOS					F			A			B	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	4.6	122.8		8.5	10.3	117.2
Change Period (Y+Rc), s	4.5	5.0		4.5	4.5	5.0
Max Green Setting (Gmax), s	27.5	35.0		27.5	27.5	35.0
Max Q Clear Time (g_c+I1), s	2.1	6.0		5.1	6.3	72.5
Green Ext Time (p_c), s	0.0	10.3		0.2	0.2	0.0

Intersection Summary		
HCM 7th Control Delay, s/veh		15.9
HCM 7th LOS		B

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	147	0	3	30	18	0	0	17	18	0	0
Future Vol, veh/h	0	147	0	3	30	18	0	0	17	18	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	186	0	4	38	23	0	0	22	23	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	186	0	0	232	254	186	243	243	49
Stage 1	-	-	-	-	-	-	186	186	-	57	57	-
Stage 2	-	-	-	-	-	-	46	68	-	186	186	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1543	-	-	1388	-	-	723	649	856	711	659	1019
Stage 1	-	-	-	-	-	-	816	746	-	955	847	-
Stage 2	-	-	-	-	-	-	968	838	-	816	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1543	-	-	1388	-	-	721	647	856	691	657	1019
Mov Cap-2 Maneuver	-	-	-	-	-	-	721	647	-	691	657	-
Stage 1	-	-	-	-	-	-	816	746	-	952	845	-
Stage 2	-	-	-	-	-	-	966	836	-	795	746	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.45	9.31	10.39
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	856	1543	-	-	1388	-	-	691
HCM Lane V/C Ratio	0.025	-	-	-	0.003	-	-	0.033
HCM Ctrl Dly (s/v)	9.3	0	-	-	7.6	-	-	10.4
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	31	52	6	31	89
Future Vol, veh/h	7	31	52	6	31	89
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	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	52	87	10	52	148

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	343	48	0	0	97	0
Stage 1	92	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	640	1010	-	-	1496	-
Stage 1	922	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	616	1010	-	-	1496	-
Mov Cap-2 Maneuver	616	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	760	-	-	-	-	-

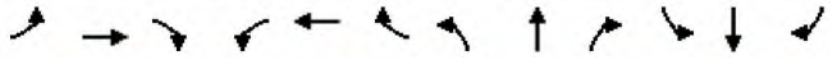
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.28	0	1.94
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	904	465	-
HCM Lane V/C Ratio	-	-	0.07	0.035	-
HCM Ctrl Dly (s/v)	-	-	9.3	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	2680	45	132	1601	222	27	116	202	547	243	769
Future Volume (veh/h)	587	2680	45	132	1601	222	27	116	202	547	243	769
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1945	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	599	2735	46	135	1634	227	28	118	206	558	248	785
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	3055	51	168	2355	603	439	498	444	364	918	409
Arrive On Green	0.15	0.47	0.47	0.05	0.37	0.37	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	3456	6566	110	3456	6434	1648	3456	1777	1585	3456	3554	1585
Grp Volume(v), veh/h	599	2009	772	135	1634	227	28	118	206	558	248	785
Grp Sat Flow(s),veh/h/ln	1728	1609	1851	1728	1609	1648	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	33.8	87.7	88.0	8.9	49.6	23.3	1.6	11.8	24.7	24.2	12.8	59.4
Cycle Q Clear(g_c), s	33.8	87.7	88.0	8.9	49.6	23.3	1.6	11.8	24.7	24.2	12.8	59.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	508	2245	861	168	2355	603	439	498	444	364	918	409
V/C Ratio(X)	1.18	0.89	0.90	0.80	0.69	0.38	0.06	0.24	0.46	1.53	0.27	1.92
Avail Cap(c_a), veh/h	508	2245	861	361	2355	603	439	498	444	364	918	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.17	0.17	0.17	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	98.1	56.3	56.4	108.3	61.9	53.6	88.4	63.9	68.5	102.9	68.0	85.3
Incr Delay (d2), s/veh	84.6	1.1	2.9	8.6	1.7	1.8	0.3	1.1	3.5	254.0	0.7	421.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	26.5	39.4	45.5	7.6	27.9	15.3	1.4	9.4	15.8	36.8	10.0	112.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	182.7	57.5	59.3	116.9	63.7	55.4	88.6	65.0	72.0	356.9	68.7	507.2
LnGrp LOS	F	E	E	F	E	E	F	E	E	F	E	F
Approach Vol, veh/h		3380			1996			352			1591	
Approach Delay, s/veh		80.1			66.3			71.0			386.2	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.0	90.0	35.0	65.0	17.2	112.8	30.0	70.0
Change Period (Y+Rc), s	6.2	5.8	5.8	5.6	6.0	5.8	5.8	5.6
Max Green Setting (Gmax), s	33.8	84.2	29.2	54.4	24.0	94.2	24.2	64.4
Max Q Clear Time (g_c+I1), s	35.8	51.6	3.6	61.4	10.9	90.0	26.2	26.7
Green Ext Time (p_c), s	0.0	15.8	0.0	0.0	0.3	3.9	0.0	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	142.4
HCM 7th LOS	F



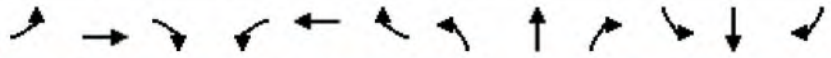
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	2409	352	203	1461	551	198	427	121	867	1742	82
Future Volume (veh/h)	294	2409	352	203	1461	551	198	427	121	867	1742	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	300	2458	0	207	1491	562	202	436	0	885	1778	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	2993		235	2804	691	230	926		685	1594	
Arrive On Green	0.10	0.47	0.00	0.07	0.44	0.44	0.07	0.18	0.00	0.20	0.31	0.00
Sat Flow, veh/h	3456	6434	1585	3456	6434	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	300	2458	0	207	1491	562	202	436	0	885	1778	0
Grp Sat Flow(s),veh/h/ln	1728	1609	1585	1728	1609	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	23.2	89.3	0.0	16.0	45.9	83.7	15.6	20.6	0.0	53.5	84.3	0.0
Cycle Q Clear(g_c), s	23.2	89.3	0.0	16.0	45.9	83.7	15.6	20.6	0.0	53.5	84.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	2993		235	2804	691	230	926		685	1594	
V/C Ratio(X)	0.90	0.82		0.88	0.53	0.81	0.88	0.47		1.29	1.12	
Avail Cap(c_a), veh/h	695	2993		312	2804	691	298	1027		685	1594	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.44	0.44	0.44	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	120.6	62.5	0.0	124.7	55.9	66.6	125.0	98.9	0.0	108.2	92.8	0.0
Incr Delay (d2), s/veh	0.9	0.2	0.0	9.9	0.3	4.7	20.5	0.4	0.0	142.3	61.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	39.4	0.0	10.6	23.6	41.3	12.4	14.2	0.0	54.5	61.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	121.4	62.7	0.0	134.6	56.2	71.3	145.5	99.3	0.0	250.6	154.0	0.0
LnGrp LOS	F	E		F	E	E	F	F		F	F	
Approach Vol, veh/h		2758			2260			638			2663	
Approach Delay, s/veh		69.1			67.2			113.9			186.1	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.9	123.5	60.0	54.6	24.0	131.4	24.6	90.0
Change Period (Y+Rc), s	5.7	5.8	6.5	5.7	5.6	5.8	6.7	5.7
Max Green Setting (Gmax), s	54.3	84.2	53.5	54.3	24.4	114.2	23.3	84.3
Max Q Clear Time (g_c+I1), s	25.2	85.7	55.5	22.6	18.0	91.3	17.6	86.3
Green Ext Time (p_c), s	1.0	0.0	0.0	2.9	0.3	18.5	0.3	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	109.5
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	2919	1624	319	1372	64	836	81	290	68	189	211
Future Volume (veh/h)	147	2919	1624	319	1372	64	836	81	290	68	189	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	2979	1657	326	1400	0	739	243	0	69	193	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	2177	676	350	2663		523	333		200	227	
Arrive On Green	0.10	0.43	0.43	0.20	0.52	0.00	0.10	0.18	0.00	0.05	0.12	0.00
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	3563	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	150	2979	1657	326	1400	0	739	243	0	69	193	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	11.6	59.7	59.7	25.2	25.3	0.0	14.6	17.2	0.0	4.7	14.2	0.0
Cycle Q Clear(g_c), s	11.6	59.7	59.7	25.2	25.3	0.0	14.6	17.2	0.0	4.7	14.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	2177	676	350	2663		523	333		200	227	
V/C Ratio(X)	0.85	1.37	2.45	0.93	0.53		1.41	0.73		0.34	0.85	
Avail Cap(c_a), veh/h	383	2177	676	387	2663		523	395		302	397	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.79	0.79	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.0	40.2	40.2	55.3	22.1	0.0	51.2	54.3	0.0	50.5	60.2	0.0
Incr Delay (d2), s/veh	1.1	166.1	653.9	23.5	0.6	0.0	197.1	5.5	0.0	1.0	8.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3	76.2	222.1	18.6	14.4	0.0	26.1	13.4	0.0	3.9	11.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.1	206.3	694.1	78.9	22.7	0.0	248.2	59.8	0.0	51.5	68.8	0.0
LnGrp LOS	E	F	F	E	C		F	E		D	E	
Approach Vol, veh/h		4786			1726			982			262	
Approach Delay, s/veh		370.7			33.3			201.6			64.3	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.8	78.8	12.1	30.4	32.1	65.5	20.0	22.4
Change Period (Y+Rc), s	4.9	5.8	5.3	5.4	4.6	5.8	5.4	* 5.4
Max Green Setting (Gmax), s	30.1	44.2	14.7	29.6	30.4	44.2	14.6	* 30
Max Q Clear Time (g_c+I1), s	13.6	27.3	6.7	19.2	27.2	61.7	16.6	16.2
Green Ext Time (p_c), s	0.3	8.6	0.1	0.9	0.3	0.0	0.0	0.9

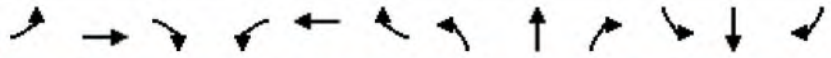
Intersection Summary	
HCM 7th Control Delay, s/veh	263.9
HCM 7th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	3562	270	252	1895	203	431	380	497	363	507	297
Future Volume (veh/h)	326	3562	270	252	1895	203	431	380	497	363	507	297
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	329	3598	0	255	1914	0	435	384	0	367	512	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	2597		297	2494		437	573		412	552	
Arrive On Green	0.11	0.51	0.00	0.09	0.49	0.00	0.13	0.16	0.00	0.12	0.16	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	329	3598	0	255	1914	0	435	384	0	367	512	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	17.8	96.7	0.0	13.8	58.3	0.0	23.9	19.3	0.0	19.9	27.0	0.0
Cycle Q Clear(g_c), s	17.8	96.7	0.0	13.8	58.3	0.0	23.9	19.3	0.0	19.9	27.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	375	2597		297	2494		437	573		412	552	
V/C Ratio(X)	0.88	1.39		0.86	0.77		1.00	0.67		0.89	0.93	
Avail Cap(c_a), veh/h	535	2597		437	2494		437	573		524	552	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.71	0.71	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	83.5	46.7	0.0	85.7	39.8	0.0	83.0	74.9	0.0	82.5	79.2	0.0
Incr Delay (d2), s/veh	11.4	175.8	0.0	8.0	1.7	0.0	42.1	6.1	0.0	14.6	24.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.3	120.2	0.0	10.0	31.1	0.0	19.2	14.4	0.0	14.9	20.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.8	222.5	0.0	93.7	41.4	0.0	125.1	81.0	0.0	97.1	103.3	0.0
LnGrp LOS	F	F		F	D		F	F		F	F	
Approach Vol, veh/h		3927			2169			819			879	
Approach Delay, s/veh		211.8			47.6			104.4			100.7	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.2	98.6	28.8	36.4	22.3	102.5	30.0	35.2
Change Period (Y+Rc), s	5.6	5.8	6.2	5.7	6.0	5.8	6.0	* 5.7
Max Green Setting (Gmax), s	20.6	84.2	28.8	24.3	24.0	89.2	24.0	* 30
Max Q Clear Time (g_c+I1), s	19.8	60.3	21.9	21.3	15.8	98.7	25.9	29.0
Green Ext Time (p_c), s	0.8	14.9	0.8	0.7	0.5	0.0	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	142.3
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Appendix E
Scoping Memo

TRAFFIC SCOPING DOCUMENT

To: Jessica Dai, P.E. (jdai@milpitas.gov)
Michael Fossati, AICP (mfossati@milpitas.gov)

From: Israa Khan, EIT (Israa.Khan@NV5.com)
Amanda Herrera, P.E. (Amanda.Herrera@NV5.com)
Bethany Judd, P. Eng (Bethany.Judd@NV5.com)

Date: May 23, 2025

Re: Memorandum of Traffic Scoping – 1000 Gibraltar Drive, City of Milpitas

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This memorandum conveys current information related to the Traffic Scoping (TS) for a proposed delivery facility development in Milpitas, CA. It outlines the study area, study intersections, the trip generation, background growth, and trip distribution for the proposed development.

Site Description

The Local Transportation Analysis (LTA) will comply with all the requirements of the City of Milpitas and Santa Clara Valley Transportation Authority, considering the proposed development's proximity to the roadway network. The proposed development is located along Gibraltar Drive, adjacent to the intersection of S Milpitas Boulevard and Gibraltar Drive. The project will include 487,564 SF of warehousing facility. The project is expected to be completed by 2026 with a Horizon Year of 2040.

Site Trip Generation

The proposed site is anticipated to generate 3,812 daily, 260 AM and 245 PM Peak Hour trips during the typical commuter peak hours (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m.) as shown in the table below. We recommend assessing the transportation network, capacity, and access driveways using the user data to best serve the community and potential user. A detailed trip schedule can be found in Appendix A.

Land Use	Source	Intensity	Daily	AM Peak Hour			PM Peak Hour		
				IN	OUT	TOTAL	IN	OUT	TOTAL
Delivery Facility	User Data[1]	487,564 SF	3,812	131	129	260	122	123	245

[1]*Delivery Facility - Proposed Traffic Schedule*

Figure 1. Site Plan

Study Intersections

The following intersections are proposed for analysis and existing data collection. An intersection map can be found below in Figure 2. Please note that Congestion Management Program (CMP) intersections are only included in the study area to replicate realistic traffic flow patterns to the development area. No mitigations, if any, will be applied to these intersections.

1. Abel St & E Calaveras Blvd (CMP Intersection)
2. Milpitas Blvd & E Calaveras Blvd (CMP Intersection)
3. S Milpitas Blvd & Yosemite Dr
4. S Milpitas Blvd & Ames Ave/Project Dwy 1
5. S Milpitas Blvd & Project Dwy 2
6. S Milpitas Blvd & Gibraltar Dr
7. Gibraltar Dr & Project Dwy 3
8. Gibraltar Dr & Project Dwy 4
9. S Milpitas Dr & Montague Expy (CMP Intersection)
10. Great Mall Pkwy/E Capitol Ave & Montague Expy (CMP Intersection)
11. McCandless Dr/Trade Zone Blvd & Montague Expy (CMP Intersection)
12. S Main St/Oakland Rd & Montague Expy (CMP Intersection)

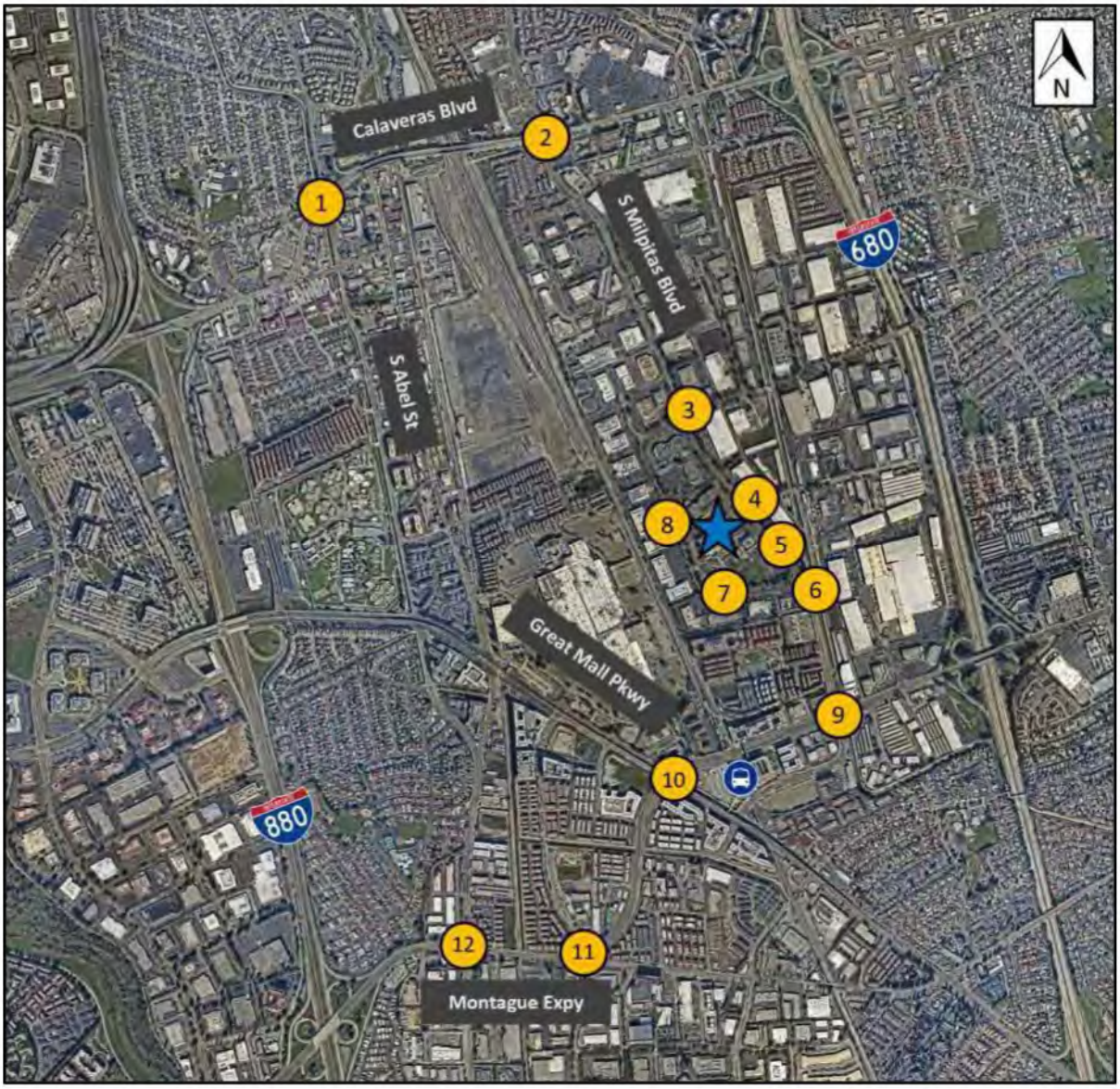
Data Collection

Existing data collection is proposed for the following:
New AM (**7-9am**) and PM (**4-6pm**) turning movement counts (TMCs) shall be conducted on Tuesday, Wednesday, or Thursday while schools are in session at the following locations:

1. Abel St & E Calaveras Blvd (CMP Intersection)
2. Milpitas Blvd & E Calaveras Blvd (CMP Intersection)
3. S Milpitas Blvd & Yosemite Dr
4. S Milpitas Blvd & Ames Ave/Project Dwy 1
5. S Milpitas Blvd & Project Dwy 2
6. S Milpitas Blvd & Gibraltar Dr
7. Gibraltar Dr & Project Dwy 3
8. Gibraltar Dr & Project Dwy 4
9. S Milpitas Dr & Montague Expy (CMP Intersection)
10. Great Mall Pkwy/E Capitol Ave & Montague Expy (CMP Intersection)
11. McCandless Dr/Trade Zone Blvd & Montague Expy (CMP Intersection)
12. S Main St/Oakland Rd & Montague Expy (CMP Intersection)

The TMC's shall include classification of vehicles as well as pedestrian/bicycle volumes.

Figure 2. Study Intersections Map



Trip Distribution

The new distribution center will receive merchandise from the regional fulfillment and sort centers located in Oakland and Tracy and deliver it to local customers of the Milpitas metropolitan area. NV5 developed a directional distribution plan to allocate site traffic to the local roadway network. Trip distribution for the 1000 Gibraltar Drive site varies by vehicle type, with cars and trucks following distinct patterns based on the on the proposed trip schedule and routes designated specific to this location. Figure 3a and 3b illustrate the general distribution patterns for both modes of travel.

The general distribution percentages were developed using the previously approved 1000 Gibraltar Industrial Project Draft LTA (2020) distribution and revised to include the possible delivery locations and specific use of each site driveway. Per Figure 1, delivery trucks are only able to enter the site through Intersection 4 (Project Dwy 1) and exit from Intersection 8 (Project Dwy 4). Based on the driveway configuration, 100% of truck traffic is expected to use S Milpitas Blvd for site entry and exit. Overall, 50% of truck traffic is anticipated to travel to and from the site from the south via I-680, 20% to the north via S Milpitas Blvd and Calaveras Blvd, and 30% to the west via Montague Expy towards I-880. A detailed trip distribution map and expected peak hour truck volumes can be found in Appendix B.

Cars are expected to enter and exit the facility via Intersection 5 (Project Dwy 2), Intersection 7 (Project Dwy 3), and Intersection 8 (Project Dwy 4). Overall, 30% of cars are anticipated to travel to and from the site from the south along S Milpitas Blvd towards I-680, 30% to the north via S Milpitas Blvd and Calaveras Blvd, and 40% to the west via Montague Expy towards I-880. A detailed trip distribution map and expected peak hour truck volumes can be found in Appendix C.

Figure 3a. Trip Distribution Map – Cars

Figure 4b. Trip Distribution Map – Trucks

Intersection Capacity Analysis

The analysis will be conducted using Synchro® 12 and time of day signal plans provided by the City on March 14, 2025. Per the City's direction, the 2040 future volumes will be utilized from the previously completed LTA (2020) for this site. This scope assumes that the LTA will not require the use of the VTA Travel Demand Model.

The following scenarios will be studied:

1. 2025 Existing Conditions
2. 2026 No-Build Conditions
3. 2026 Build Conditions
4. 2040 Future No-Build Conditions
5. 2040 Future Build Conditions
6. 2040 Future Build Conditions with Mitigations

Previous Developments in the Project Vicinity

1. Piper Drive Apartments
2. Centre Point Residential Apartments

Local Transportation Analysis

NV5 will conduct a Local Transportation Analysis (LTA) in accordance with the City's requirements. This LTA is intended to replace the previously approved *Appendix G Traffic Data: Local Transportation Analysis Report (2020)*. The LTA will assess the potential impacts of the proposed project on the key intersections in the project vicinity during the typical weekday AM (7-9 AM) and PM (4-6 PM) commute periods. This study will include performance measures such as intersection delay, Level of Service (LOS) and queuing, and provide a high-level evaluation of impacts to transit, bike, and pedestrian circulations.

VMT Study

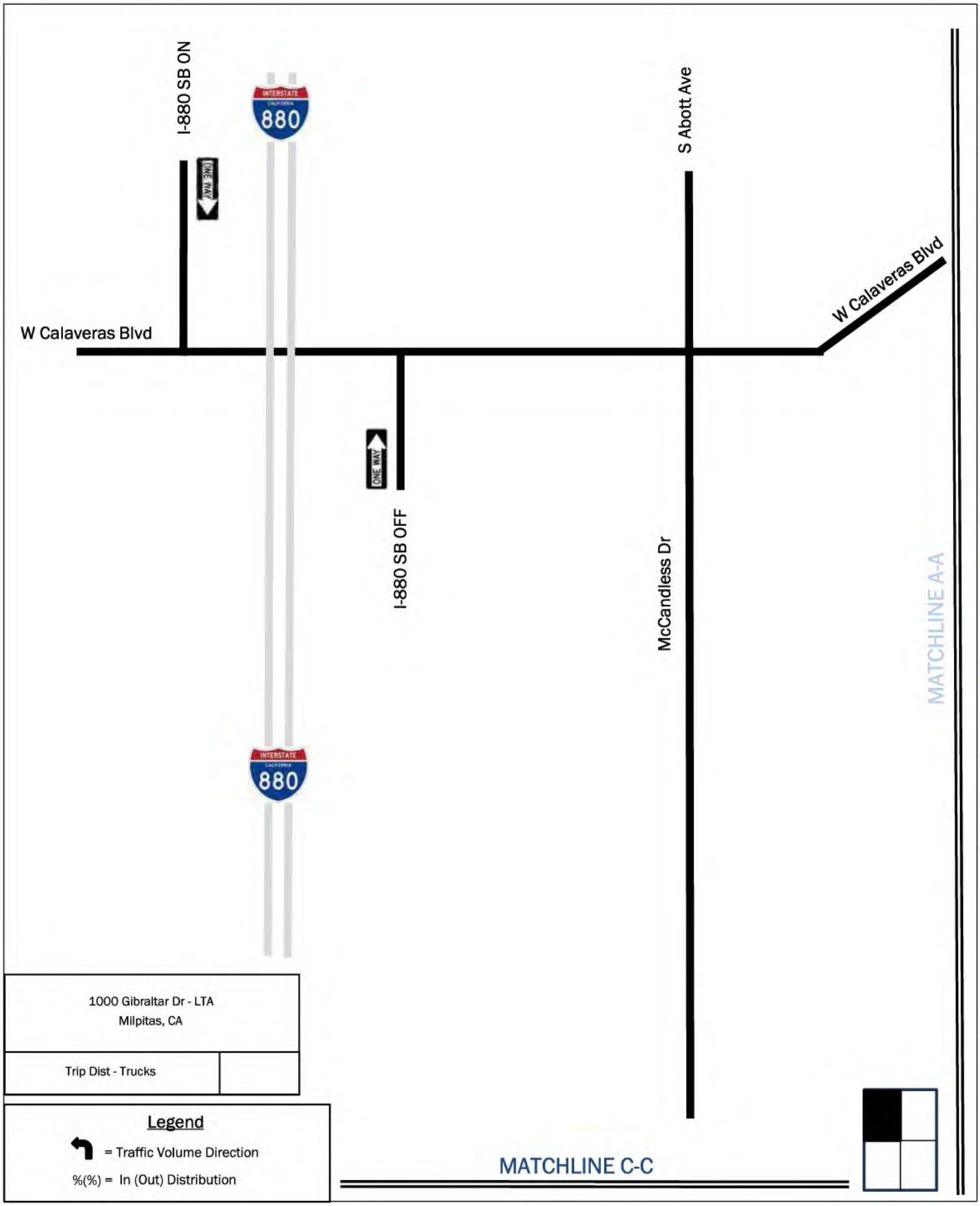
An Environmental Impact Report (EIR) was previously certified for the project site in March 2021 for a similar use—warehouse distribution. Although the proposed project is comparable in size and use, it differs slightly in operational characteristics. As such, the new VMT study is intended to replace the previous *IV Environmental Impact Analysis – E. Transportation* section. A detailed assessment of the project's Vehicle Miles Traveled (VMT) will be conducted using the Santa Clara County (SCC) VMT Evaluation Tool. The updated analysis will not require the use of VTA demand modeling. The VMT report will address the California Environmental Quality Act (CEQA) Guidelines, Appendix G, Section XVII – Transportation, items (a), (b), (c), and (d).

Appendix A – Trip Schedule

Total (Adj)			
Adjusted Avg Weekday			
	In	Out	Total
00:00	1	2	3
01:00	64	96	160
02:00	0	0	0
03:00	168	166	335
04:00	166	168	335
05:00	130	130	260
06:00	150	148	297
07:00	131	129	259
08:00	24	26	50
09:00	31	31	62
10:00	58	58	115
11:00	147	168	316
12:00	45	47	92
13:00	77	77	155
14:00	148	148	296
15:00	132	78	210
16:00	56	58	114
17:00	103	102	205
18:00	122	123	244
19:00	55	53	108
20:00	0	97	97
21:00	96	0	96
22:00	0	1	1
23:00	2	0	2
	1,906	1,906	3,812

Peak Hours

Appendix B – Truck Trip Distribution and Peak Hour Volumes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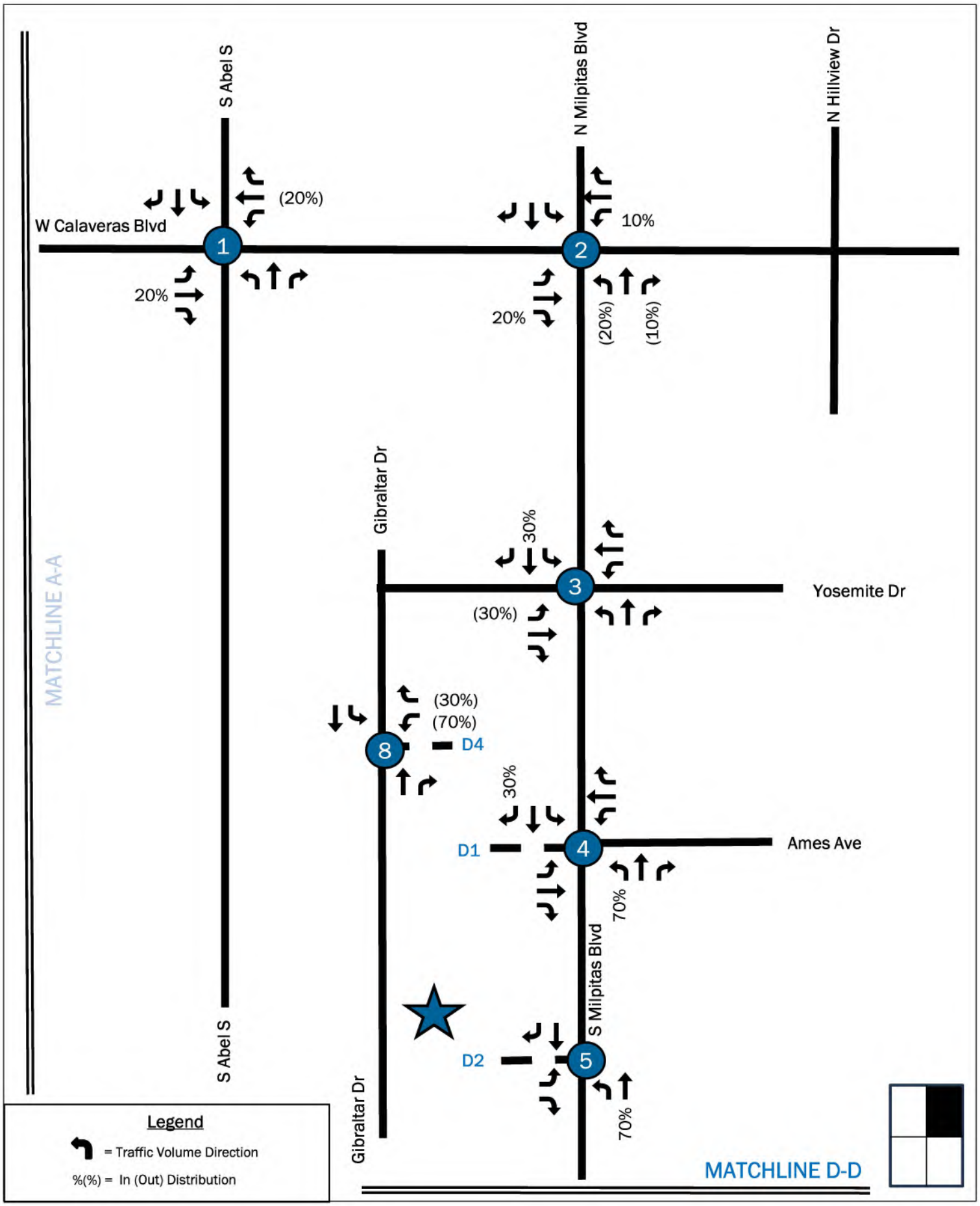
INTERSTATE
880
ONE WAY
S Abott Ave
W Calaveras Blvd
W Calaveras Blvd
ONE WAY
I-880 SB OFF
McCandless Dr
MATCHLINE A-A
INTERSTATE
880
1000 Gibraltar Dr - LTA
Milpitas, CA
Trip Dist - Trucks
Legend
= Traffic Volume Direction
%(%) = In (Out) Distribution
MATCHLINE C-C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10%
20%
20%
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2
Gibraltar Dr
30%
3
Yosemite Dr
(30%)
MATCHLINE A-A
(30%)
(70%)
8
D4
30%
D1
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Ames Ave
70%
S Milpitas Blvd
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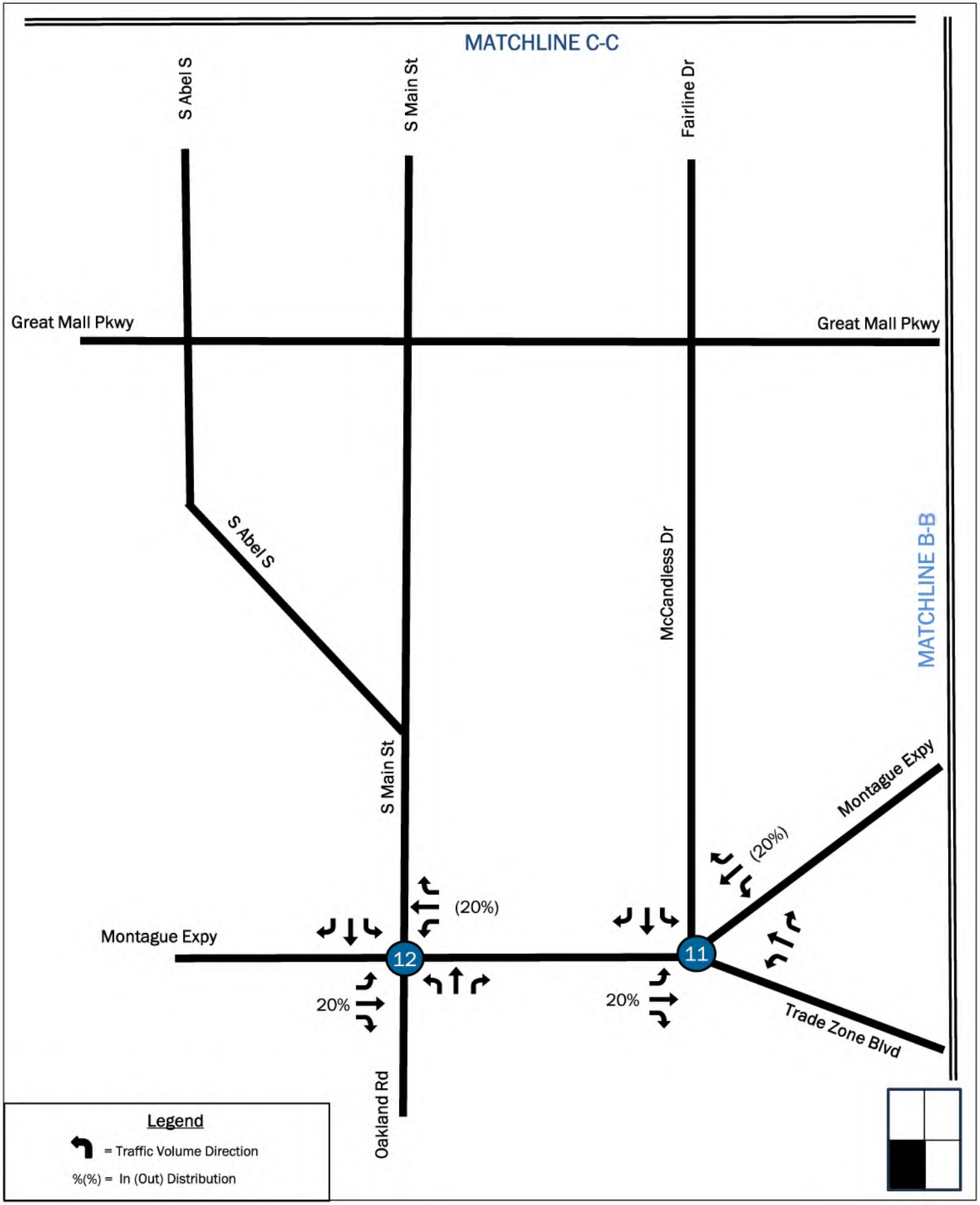
%(%) = In (Out) Distribution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Fairline Dr
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(20%)
(20%)
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Trade Zone Blvd
Oakland Rd
Legend
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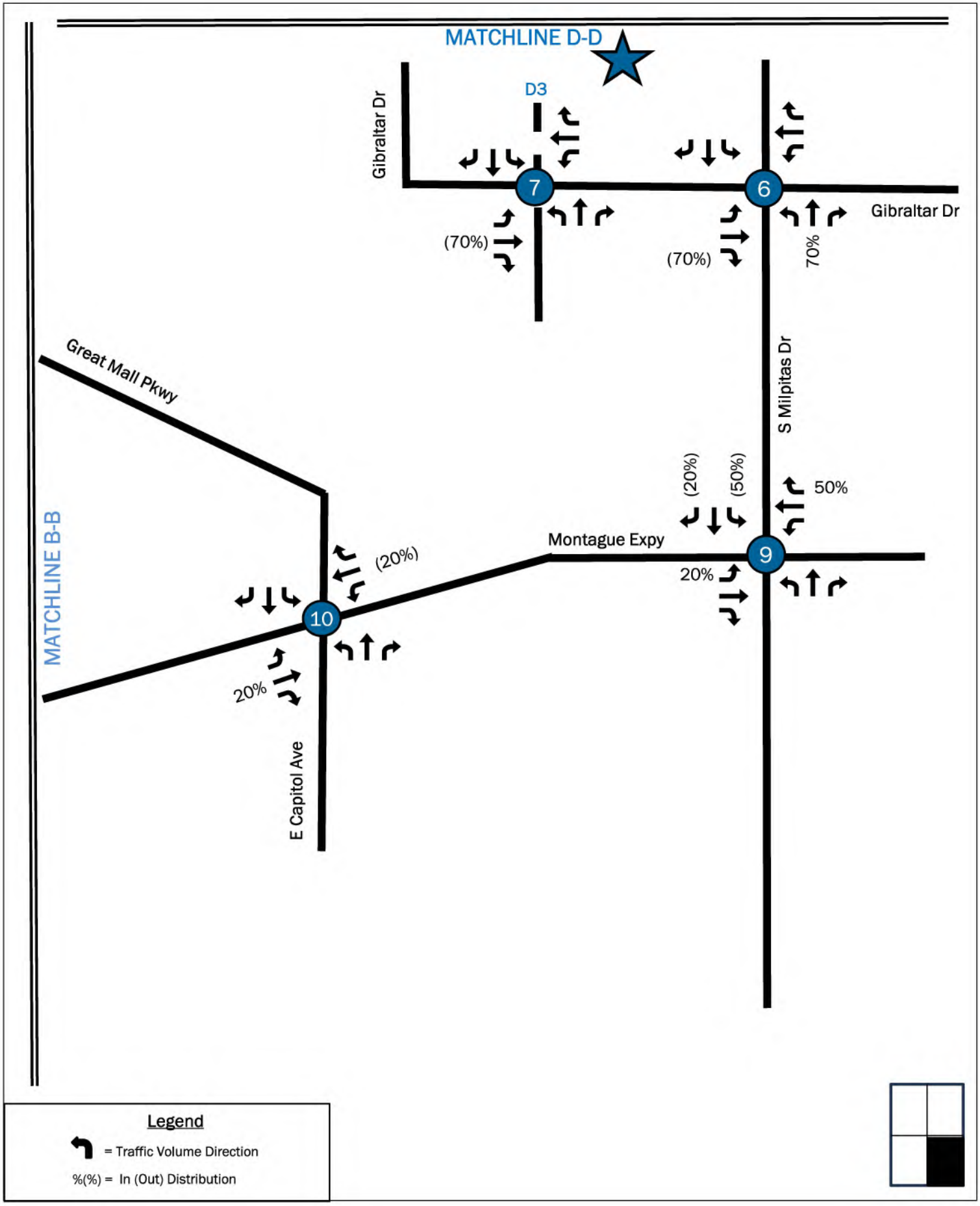
%(%) = In (Out) Distribution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(70%)
70%
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(20%)
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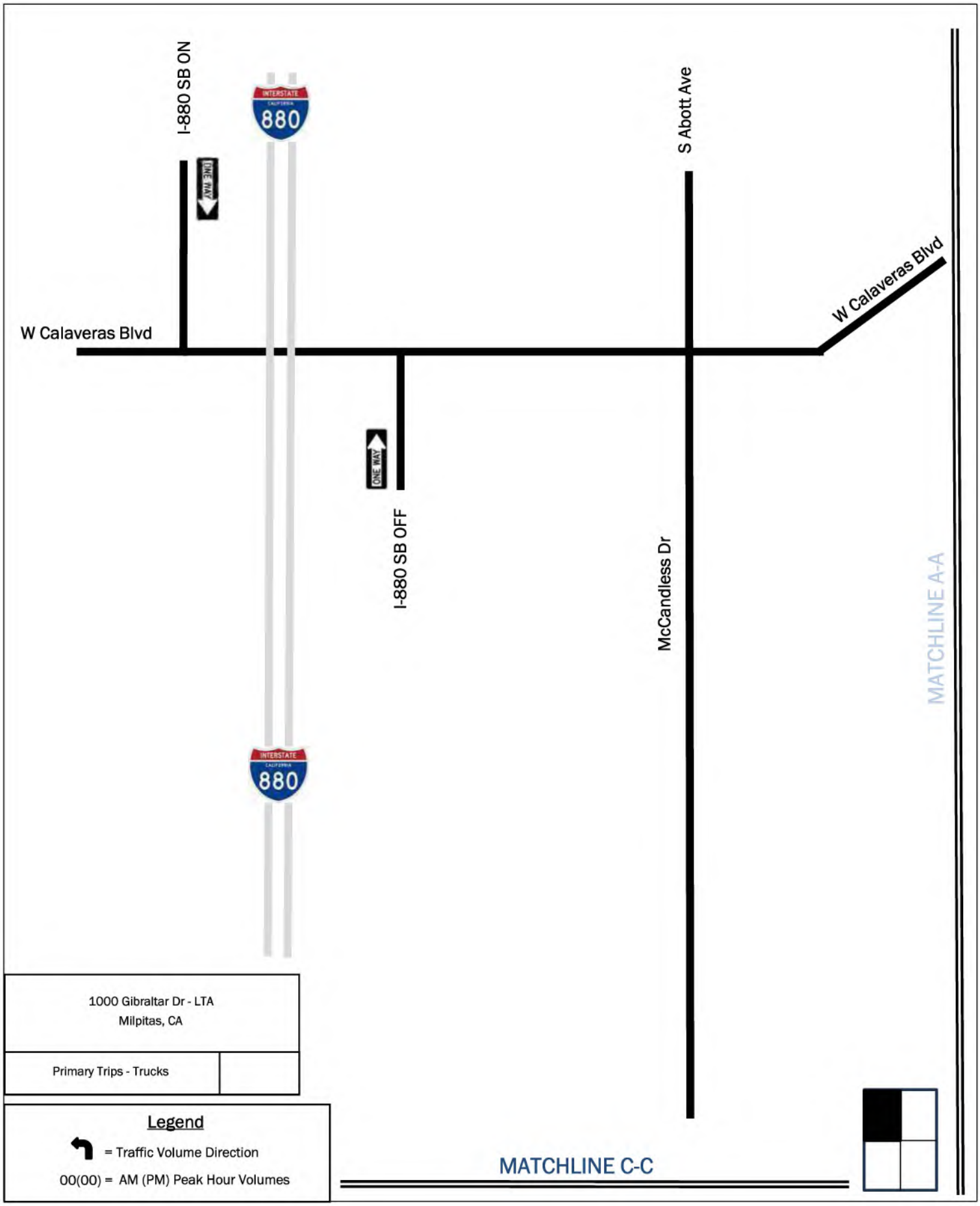
%(%) = In (Out) Distribution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MATCHLINE A-A
INTERSTATE
CALIFORNIA
880
1000 Gibraltar Dr - LTA
Milpitas, CA
Primary Trips - Trucks
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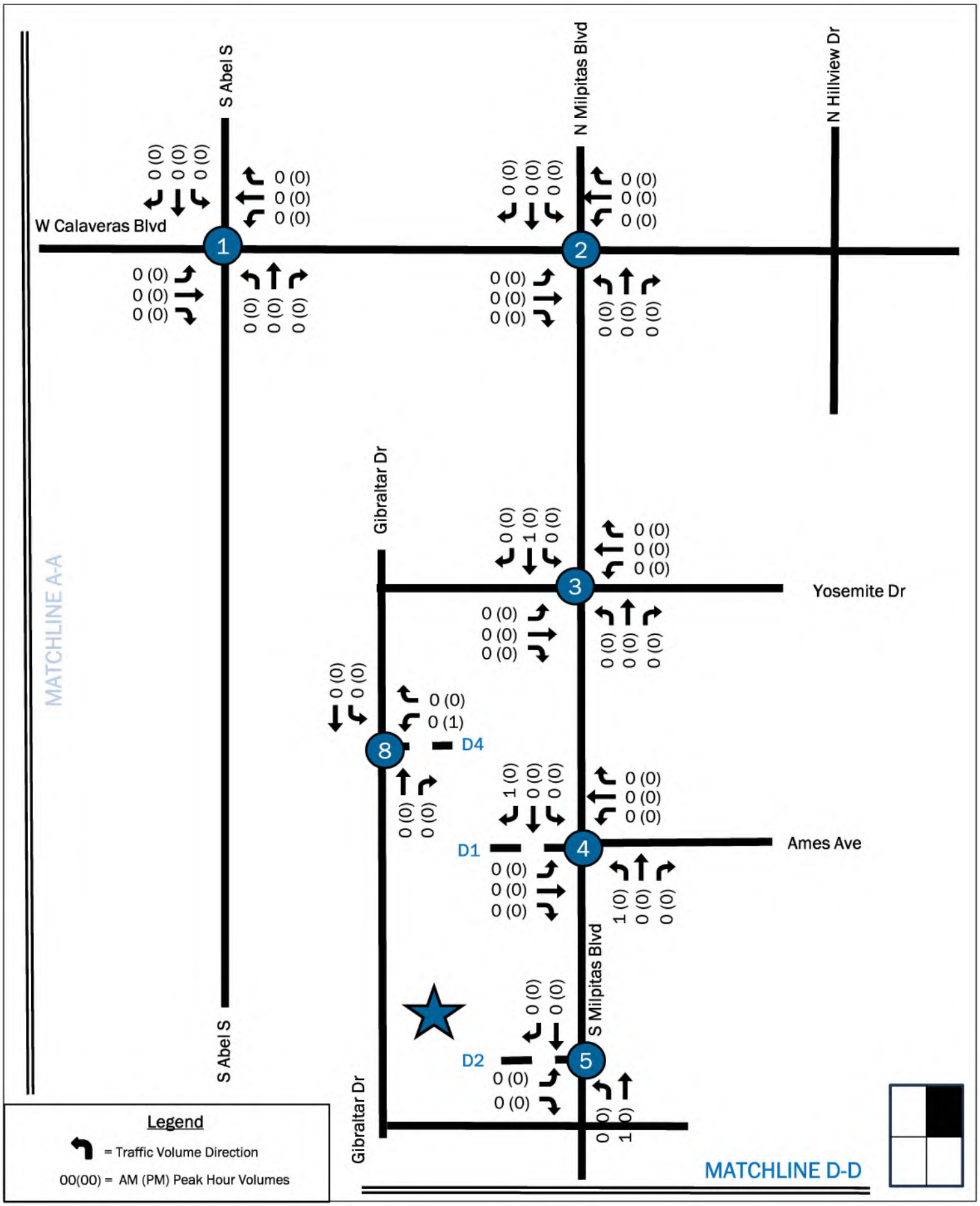
00(00) = AM (PM) Peak Hour Volumes
MATCHLINE C-C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MATCHLINE D-D
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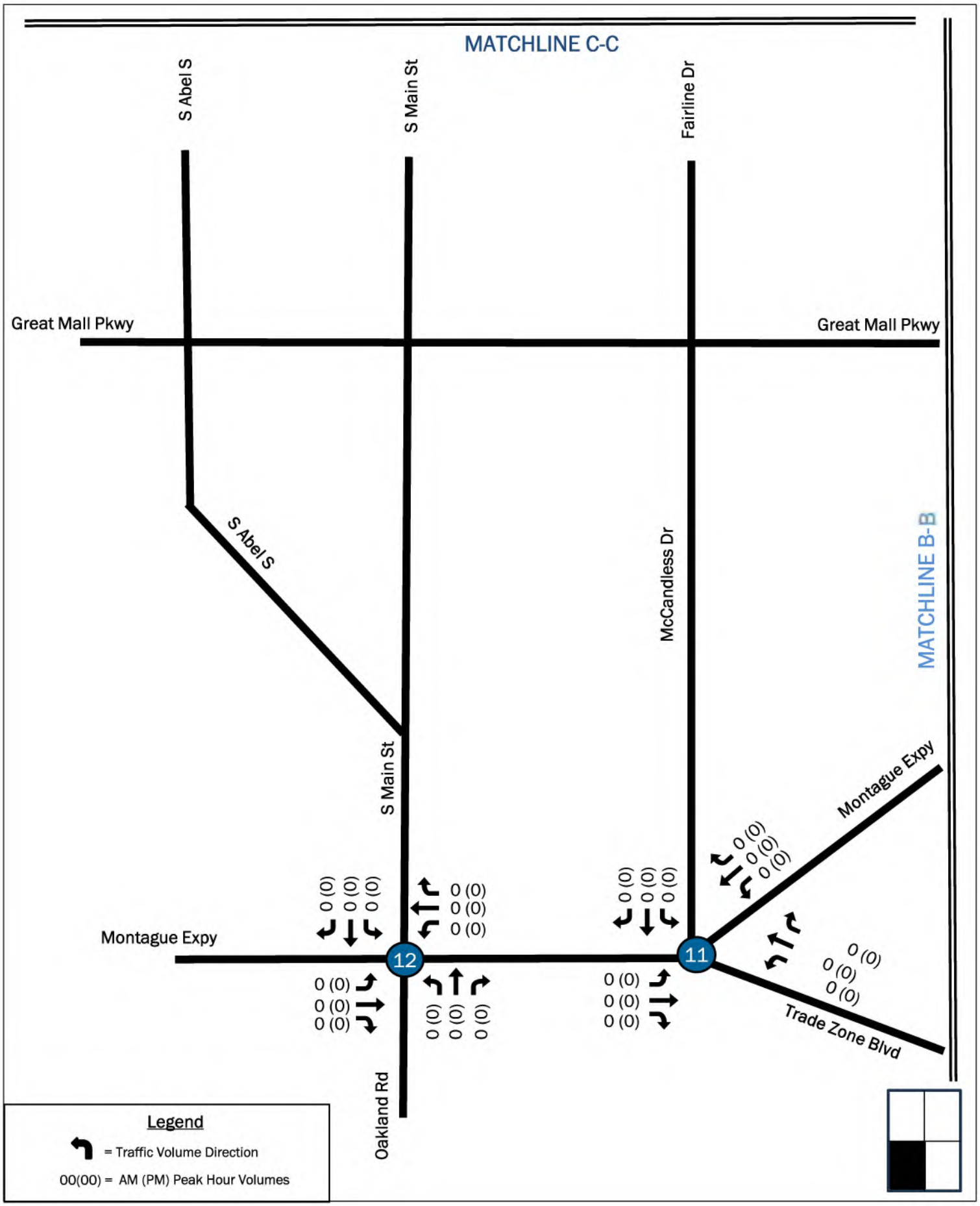
00(00) = AM (PM) Peak Hour Volumes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McCandless Dr
MATCHLINE B-B
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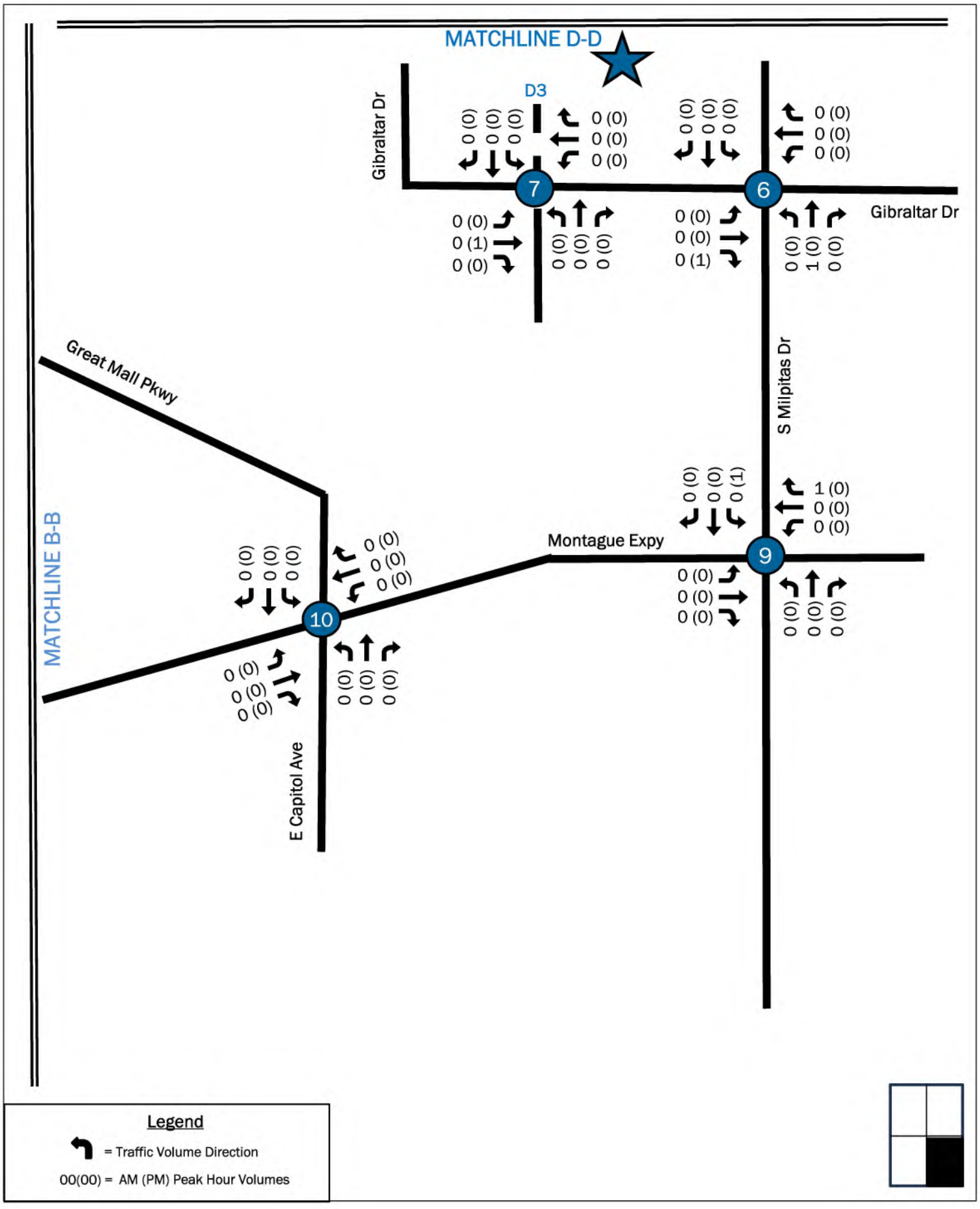
00(00) = AM (PM) Peak Hour Volumes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Great Mall Pkwy
MATCHLINE B-B
Montague Expy
9
10
E Capitol Ave
Legend
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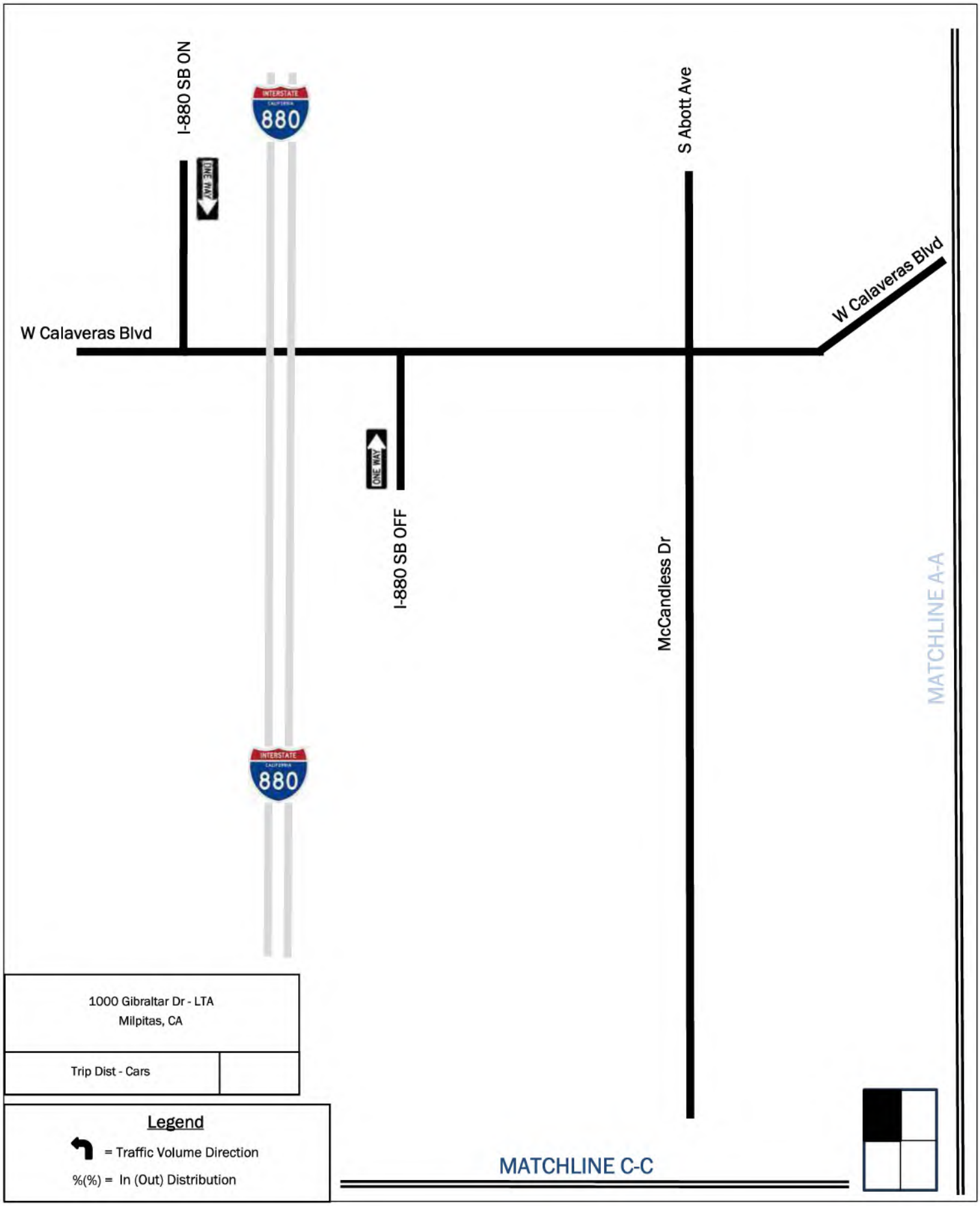
00(00) = AM (PM) Peak Hour Volumes

Appendix C – Car Trip Distribution and Peak Hour Volumes



1000 Gibraltar Dr - LTA
Milpitas, CA

Trip Dist - Cars

Legend

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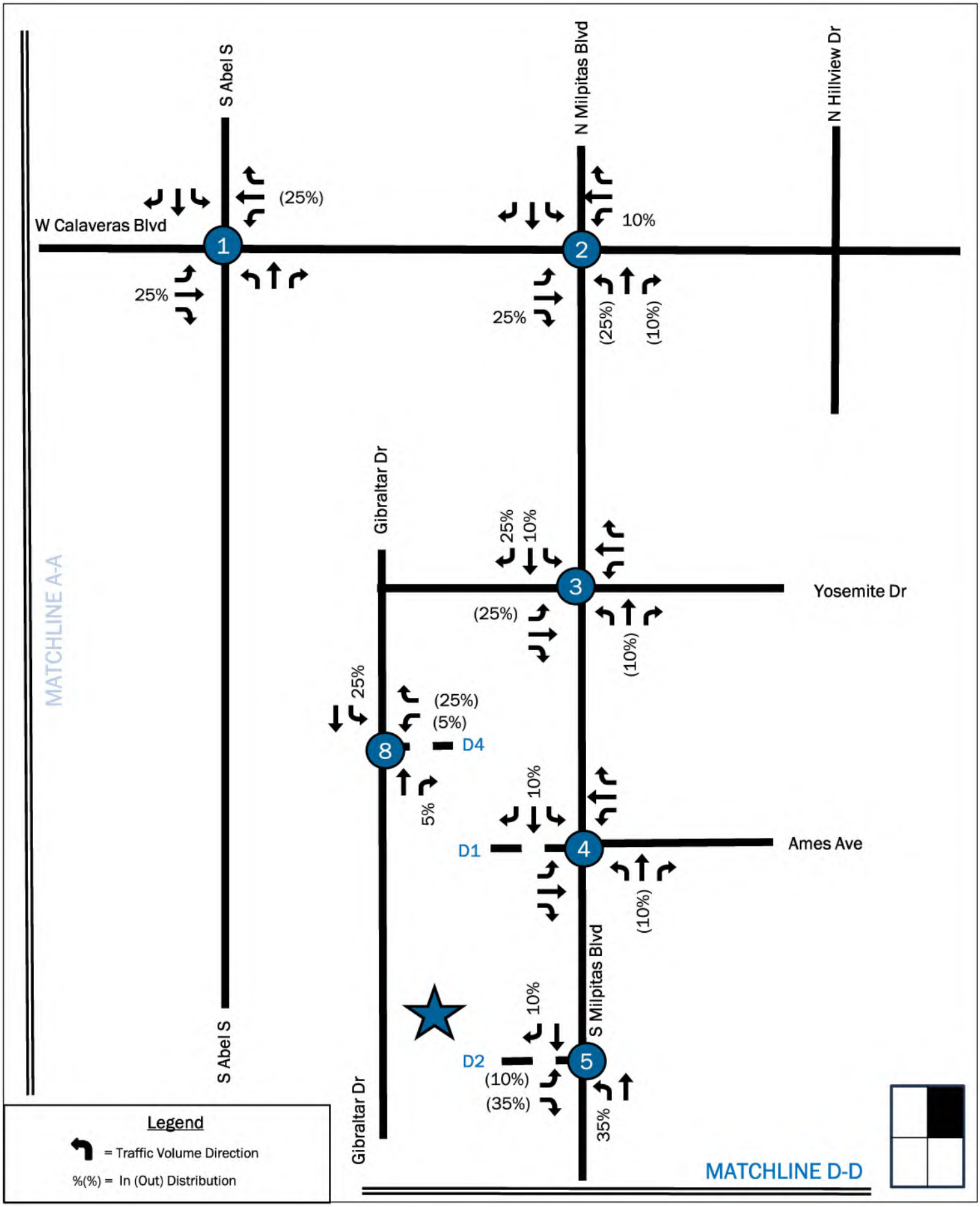
%(%) = In (Out) Distribution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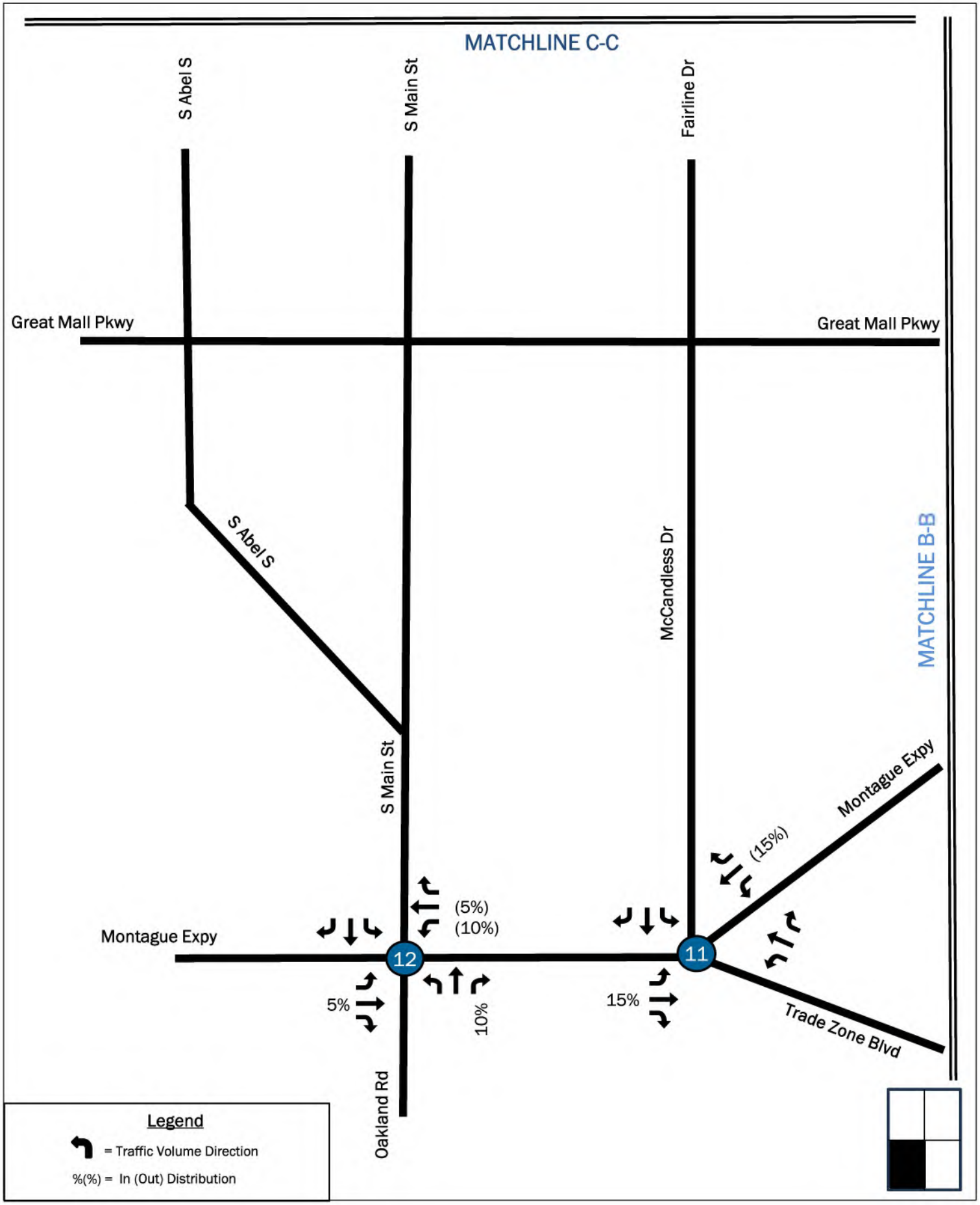
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Trade Zone Blvd
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Legend
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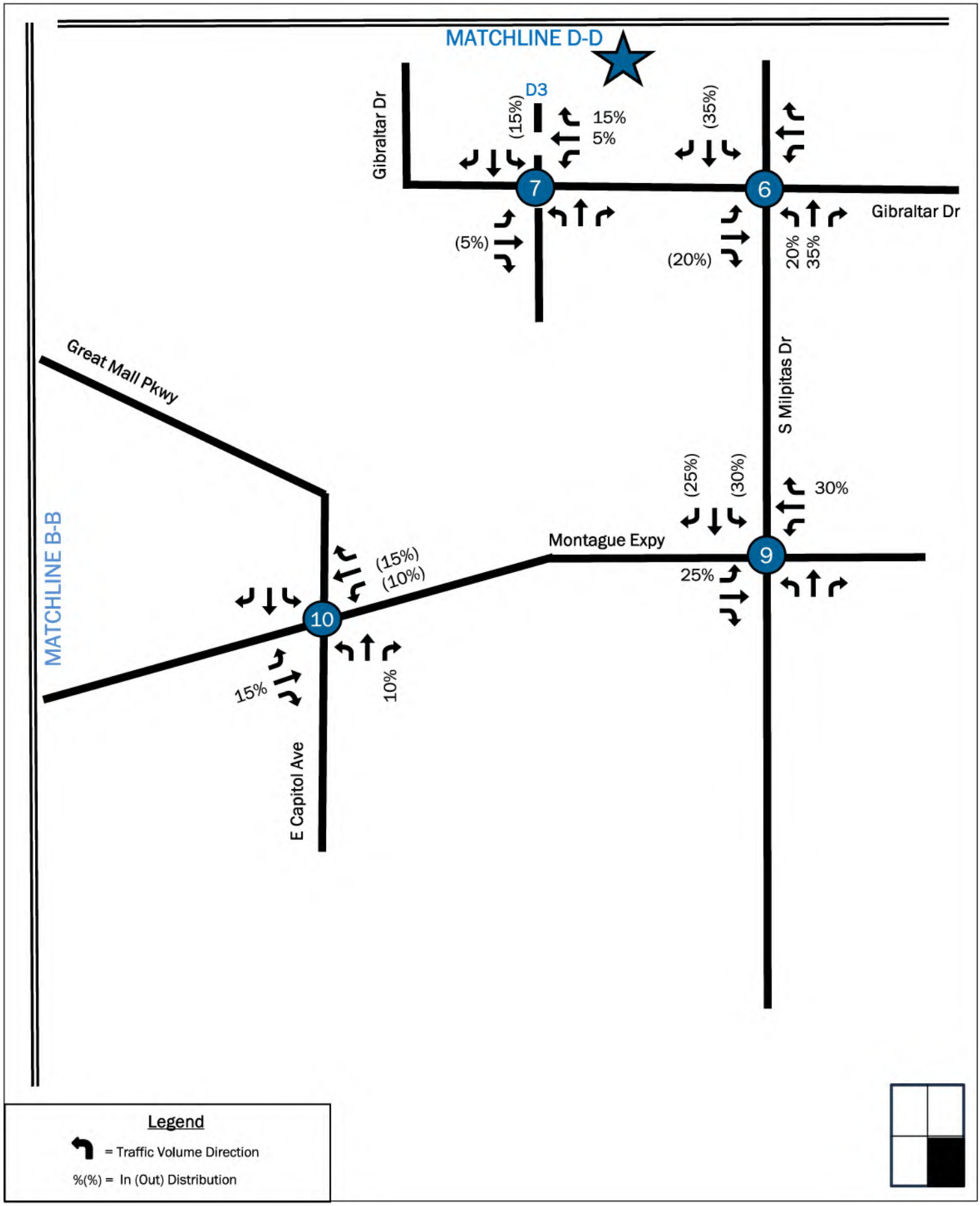
%(%) = In (Out) Distribution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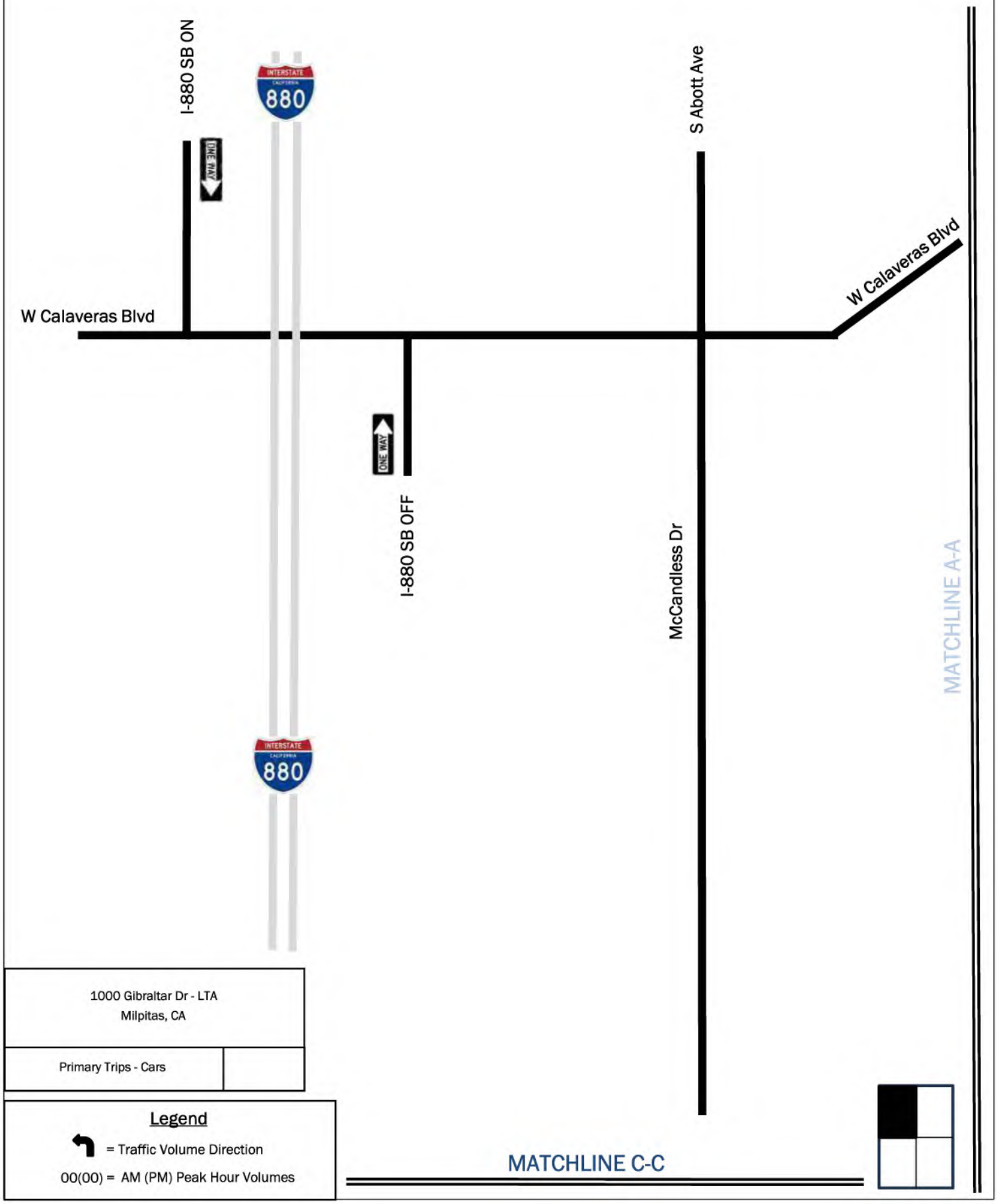
%(%) = In (Out) Distribution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I-880 SB OFF
McCandless Dr
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INTERSTATE
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1000 Gibraltar Dr - LTA
Milpitas, CA
Primary Trips - Cars
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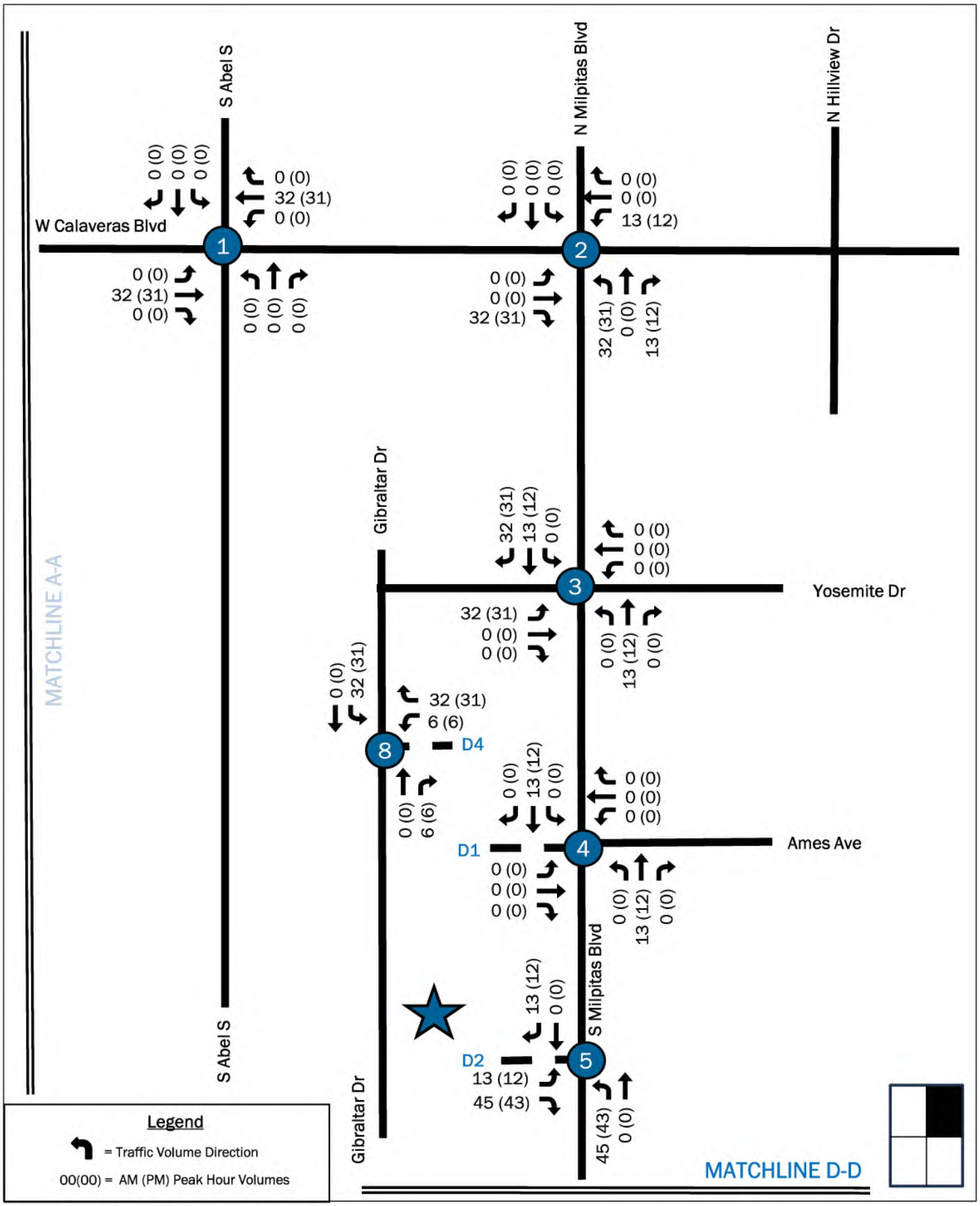
00(00) = AM (PM) Peak Hour Volumes
MATCHLINE C-C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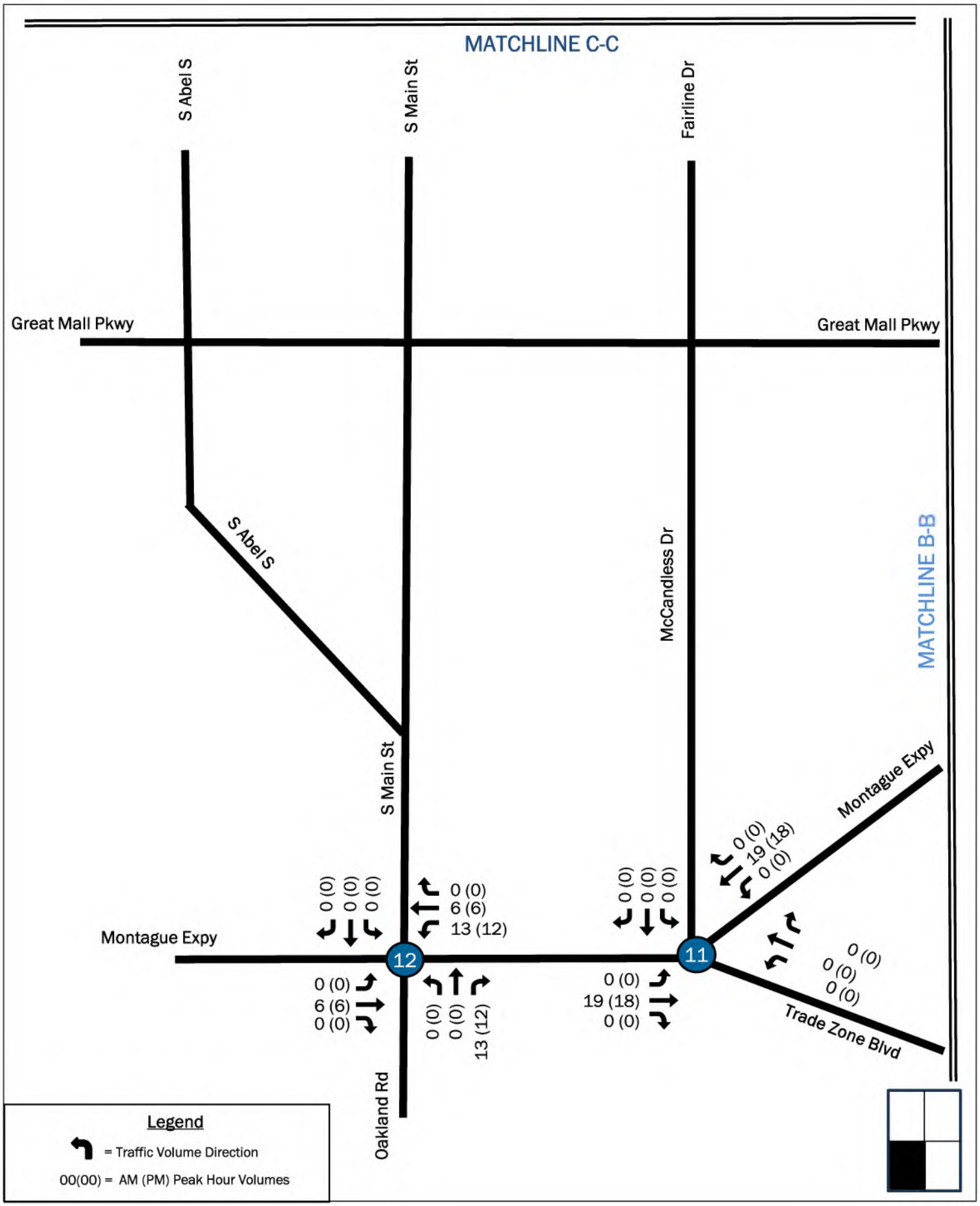
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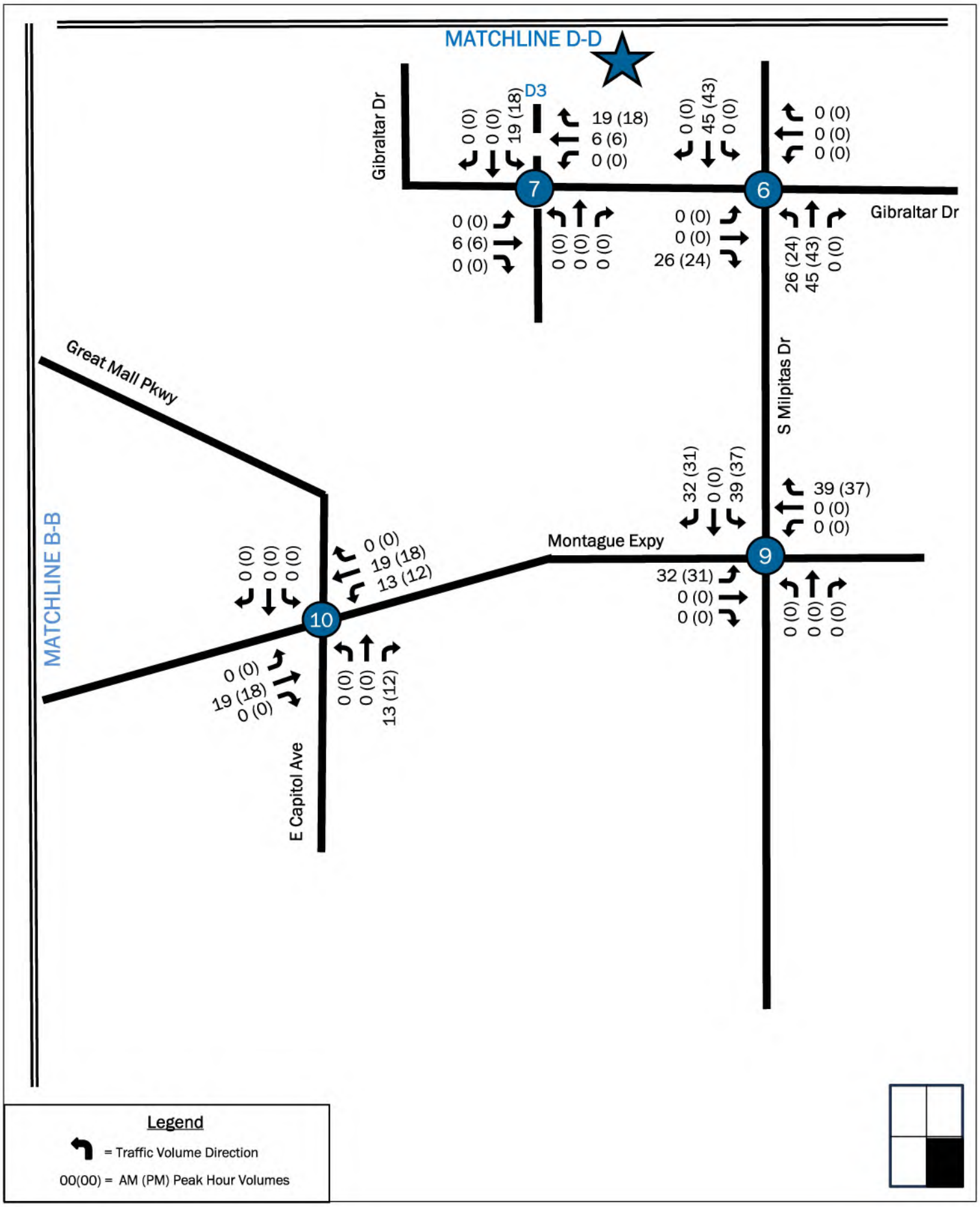
00(00) = AM (PM) Peak Hour Volumes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0 (0)
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Gibraltar Dr
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6 (6)
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0 (0)
0 (0)
0 (0)
0 (0)
26 (24)
26 (24)
45 (43)
0 (0)
S Milpitas Dr
Great Mall Pkwy
MATCHLINE B-B
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0 (0)
39 (37)
39 (37)
0 (0)
0 (0)
Montague Expy
9
0 (0)
0 (0)
0 (0)
0 (0)
19 (18)
13 (12)
32 (31)
0 (0)
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0 (0)
19 (18)
0 (0)
0 (0)
0 (0)
13 (12)
E Capitol Ave
Legend
= Traffic Volume Direction
00(00) = AM (PM) Peak Hour Volumes

D.2 - Vehicle Miles Traveled Analysis

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VEHICLE MILES TRAVELED (VMT) ANALYSIS FOR

1000 Gibraltar Drive Delivery Center

DATE:
August 15, 2025

LOCATION:
Milpitas, California

PREPARED FOR:
City of Milpitas, CA

WITH:
FCS

PREPARED BY:
NV5 Engineers & Consultants
15092 Avenue of Science, Suite 200
San Diego, CA 92128

TABLE OF CONTENTS

LIST OF TABLES

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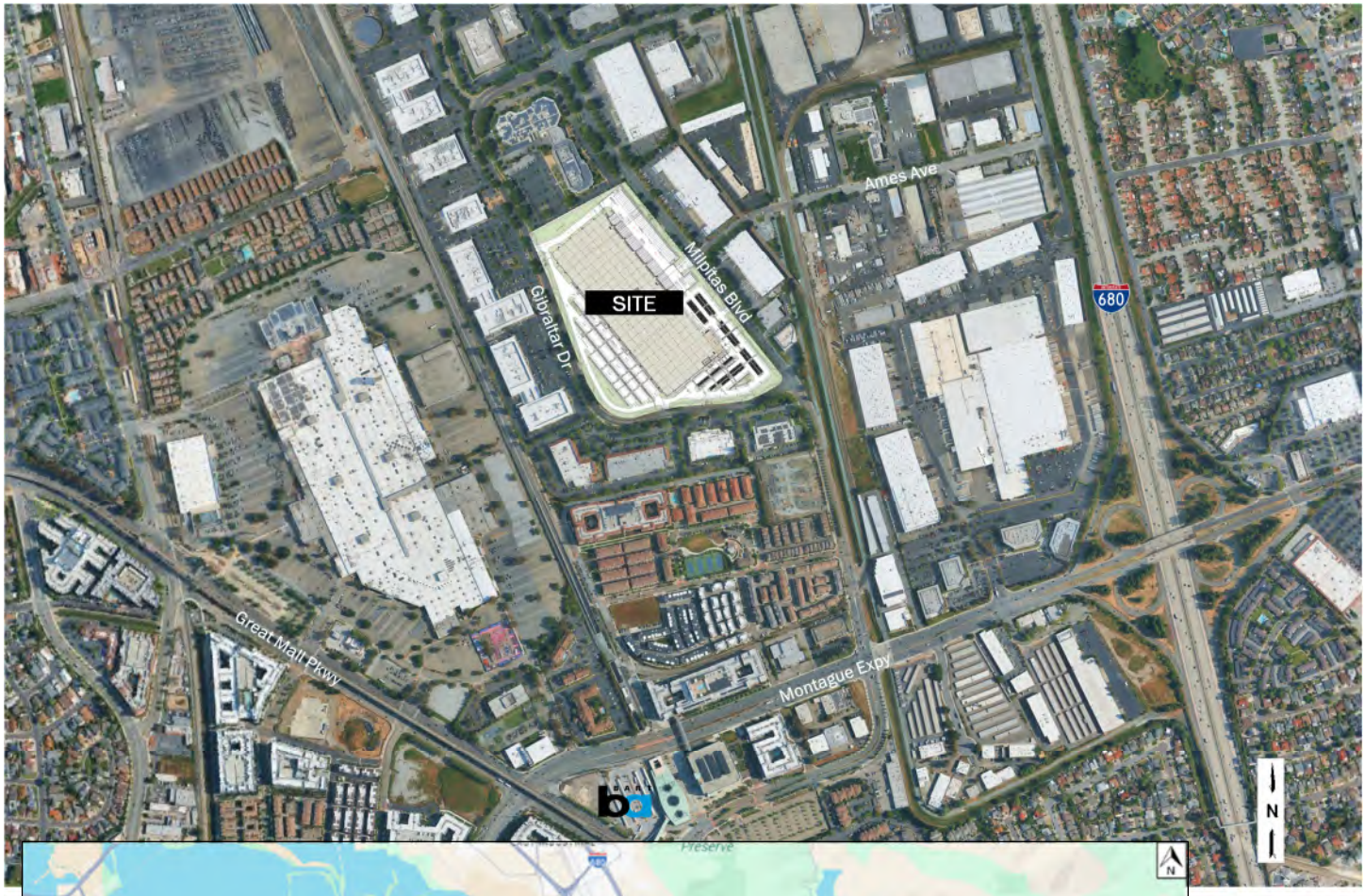
LIST OF ATTACHMENTS

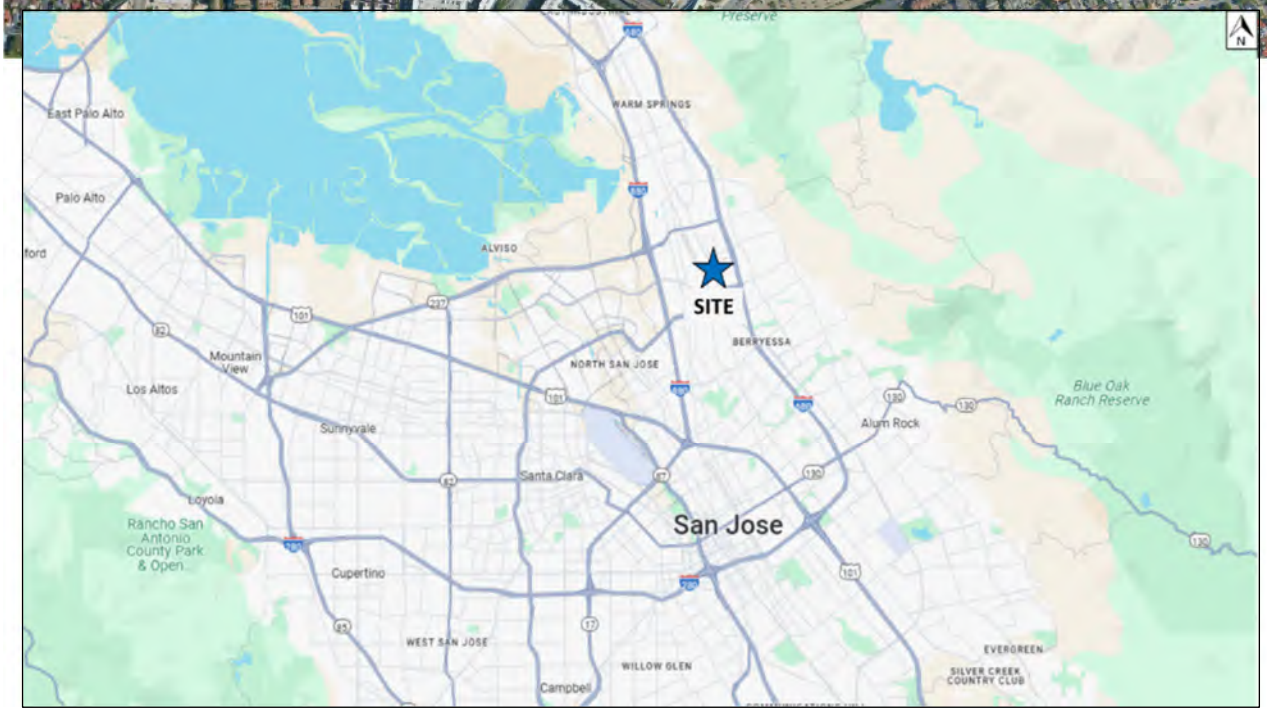
A. Introduction

A new 487,564 square-foot warehouse is planned for construction at 1000 Gibraltar Drive, on what is currently a vacant LifeScan facility, formerly Johnson & Johnson. The project will include demolition of the existing on-site structures. The proposed site (the "Project") will include a delivery center for the purpose of delivering ecommerce goods to a specific service area. Figure 1 depicts the site location in Milpitas, CA.

To adhere to local and state policies, the following vehicle miles traveled (VMT) study was prepared for the purpose of determining whether the Project may have significant transportation impacts.

Figure 1. Vicinity Map





B. Analysis Guidelines

State Requirements

The California Environmental Quality Act, known as CEQA, was enacted in 1970. In 2013, Governor Brown signed Senate Bill (SB) 743 to better align CEQA with State policies that promote public health, improve air quality, encourage infill development, promote multimodal transportation, and help reduce greenhouse gas emissions to achieve climate action goals.

In December 2018, the Natural Resources Agency certified amendments to the CEQA Guidelines to implement SB 743. Pursuant to the new CEQA Guidelines, as of July 1, 2020, transportation impacts under CEQA are no longer analyzed using LOS and instead use the VMT metric.

Section 15064.3 of the CEQA Guidelines states that "a lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project."

Local Requirements

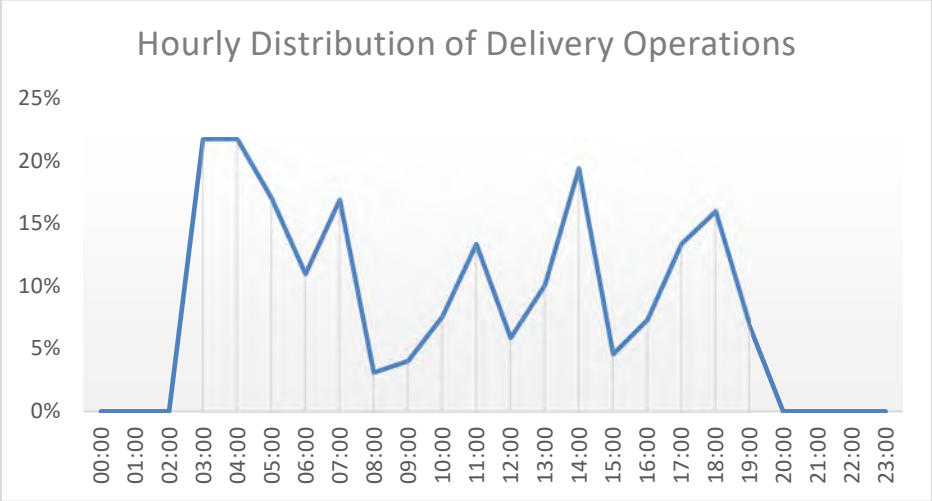
The City of Milpitas adopted a Transportation Analysis Policy in May 2021 that includes VMT analysis for many discretionary development projects. Consistent with CEQA Guidelines Section 15064.7, Thresholds of Significance, the City of Milpitas adopted the Santa Clara Congestion Management Program baseline average and thresholds set at 85% of the citywide baseline averages for determining whether a project's VMT will be significant. The citywide baseline average for VMT per employee is 17.54. The 85% (15% below) citywide baseline average is 14.91 VMT per employee per day. Projects that exceed these thresholds may have a significant effect on the environment and may require project revisions and/or mitigation measures may be implemented to reduce the impact to less than significant.

C. Project Trip Generation

The Project, referred to as a "sub-same day" delivery center. is a specialized warehouse that stores a wide range of everyday consumer goods, enabling delivery of those goods within a 4-5 hour window. Packages are dispatched to customers using private carrier vehicles.

The Project will operate 24/7 to support delivery of packages to customer locations between approximately 3:00 AM and 7:00 PM. The operations are designed to minimize traffic impacts by concentrating most of its morning deliveries between 3:00 AM and 7:30 AM. On-site employees generally work in 4-5 hours shifts beginning at 1:00 AM, 6:00 AM, 11:00 AM, 3:00 PM, and 9:00 PM with exceptions for some managerial staff.

All deliveries are handled via "Flex" drivers, who are independent, private-vehicle carries. Flex drivers generally enter and exit the facility in fifteen minutes intervals; this includes arrival, check-in, loading, and departure. The daily delivery operations will follow a pattern illustrated in the chart below.



At the proposed delivery center, up to 15 line-haul trucks are expected to deliver packages to the delivery center each day. The line-haul trucks arrive at the site between throughout the 24-hour day.

Table 1: Project Trip Generation - Traffic Volume by Vehicle Type

Traffic	Number of Vehicles	Daily Trips
Auto - Employees	363	726
Flex – Commuter	509	1018
Flex – Delivery	509*	3054**
Line-Haul Trucks	15	30
Total	**1,396**	**4,828**

*Does not represent new vehicles but are the same vehicles as the Flex-Commuter
**Assumes each driver makes 3 round trips, which over-accounts total daily trips by 1018 since Flex delivery drivers do not normally return to the center at the end of their shift. Therefore, the trip information in Table 1 does not match the trip generation shown in Table 3 of the Location Transportation Analysis (LTA). See Section 4 for more details.

D. Project Level VMT Analysis

Based on the anticipated daily trip generation for the Project, there are three types of vehicle trips:

- Line-haul truck trips
- Employee commute trips
- Personal delivery vehicles (private carrier - Flex) trips

Line-haul Truck Trips

Note: Section 15064.3 of the CEQA Guidelines states that VMT for transportation impacts refers to "… the amount and distance of automobile travel…" Per guidance provided by the California Institute of Transportation Engineers (ITE) SB 743 Task Force (April 2021), SB 743 does not apply to the movement of goods (i.e. trucks). Therefore, line-haul truck trips are not considered in VMT impact calculations.

While not germane to measuring site impacts, line-haul VMT is used in the air quality analysis, and is therefore calculated for inclusion in other studies. Line haul trucks will generally deliver goods to the delivery center from area warehouses. Table 2 shows the estimated VMT for line-haul trips. The likely warehouses that may serve the site include:

- USF1, 750 Laurelwood Rd, Santa Clara, CA 95054 (5 miles from site)
- SJC7, 188 S Mountain House Pkwy, Tracy, CA 95377 (41 miles from site)
- MCE1, 3200 Fulkerth Rd, Turlock, CA 95380 (92 miles from site)

Table 2: Freight Vehicle Miles Travels (VMT) for New Delivery Center

Traffic	Number	Daily Trips	Average Delivery Miles	Daily VMT
Line-Haul*	15	30	46	1,380

*Not used in site VMT calculations; included for air quality analysis

The total VMT for the site is the sum of the different vehicle types (except line-haul trucks). The methodology and assumptions for determining the VMT for each vehicle type other than line-haul trucks are provided below. The below analysis provides both the Project generated VMT (per vehicle type and total), as well as the Project's effect on VMT. The Project's effect on VMT is analyzed through determining changes to VMT by locating delivery operations closer to customers to reduce overall miles traveled.

Commuter Trips

The analysis assumes that employees (onsite workers) will live within a reasonable commuting distance of the site and follow the same trends as other industrial workers that are now employed

within the same area. The Santa Clara Countywide VMT Evaluation Tool – Version 2.1 was used to determine the employee-level VMT for the Project. The model estimates the commute distance for industrial employees who will work at the site is 16.42 vehicle-miles per day.

Employee_Commute_VMT = (Number of Employees * Average Employee VMT)

Employee_Commute_VMT = 363 * 16.42 = 5,960 vehicle miles per day.

Delivery Trips

There are two trips associated with delivery operations. The first is the commute trips by the drivers. For the purposes of this specific analysis, this is assumed to be home-based trips much like the on-site employees. Flex drivers will often complete three (3) round trips in a day, which would, on average require 509 drivers in a day to cover all deliveries.

Flex_Commute_VMT = (Number of Daily Drivers * Average Employee VMT)

Flex_Commute_VMT is 509 * 16.42 = 8,358 vehicle miles per day

The second type of trip is the delivery of packages to customers. The Tenant delivers packages to zones much like the U.S. Postal Service (the "USPS"), except that the routes the Flex carriers take vary by day and are optimized for the most efficient movement. The analysis estimates the VMT for delivery vehicles (via GIS) by finding the distance from the site to the furthest point within the delivery zone and multiplying by the number of vehicles bound for those zones. The furthest point within the zone is assumed to account for circuitous travel as packages are dropped off throughout a route. (Note: not every Flex vehicle will travel to the furthest point within a zone but the analysis makes that conservative assumption). The total number of private carrier delivery vehicles is shown in Table 1.

Some of the customers from the new delivery center (i.e. the Project) are currently being served by an existing delivery center. The analysis accounts for the shifting of business from two other similar delivery centers: SCA2 - 3745 Bayshore Blvd, Brisbane, CA 94005 and SCA3 - 6045 Giant Hwy, Richmond, CA 94806. Not all of the zip codes that the new site will deliver to are currently being served by the other two centers; some are new and represent an expected expansion of business. For confidential and business proprietary reasons, the locations and number of deliveries to those locations cannot be identified here. However, the percentage of trips to [redacted] zip codes before and after the new site opens is shown in Appendix C.

The private carrier drivers at these types of delivery centers will often return after their first delivery and make additional runs until the end of their day when they will not return to the center. Since the private carriers leave the site and then return, the VMT to the delivery location would be doubled to account for the return trip. In daily practice, the drivers do not normally return to the delivery center after their last delivery; however, since there is no way to account for their trip pattern after at the end of their shift, the analysis assumes they return to the center and then commute home. This likely over estimates the daily VMT but it presents a more conservative analysis.

The delivery VMT is calculated as such:

$Delivery\_VMT_{EX} = \sum$ (Existing Flex Trips to Zip Code * Dist. To Zip Code * 2)

$Delivery\_VMT_{FU} = \sum$ (Future Flex Trips to Zip Code * Dist. To Zip Code * 2) - $Delivery\_VMT_{EX}$

The $Delivery\_VMT_{EX}$ to/from the two existing delivery centers and 46 zip codes they collectively serve is 49,185 per day. The $Delivery\_VMT_{FU}$ to/from the new delivery center in Milpitas and 118 zip codes is 34,151. After locating a new delivery center closer to the user's customers, as well as serving an expanded geographic area, there will be 15,034 less VMT per day than there is currently. The calculations are shown in Appendix C.

The Total Flex VMT would be calculated as follows:

$Flex\_VMT = Flex\_Commute\_VMT + Delivery\_VMT_{FU}$

Flex_VMT = 8,358 + -15,034 = -6,676

Total Site VMT

The future total VMT for the site, including employee trips, is calculated as follows:

$Total\_VMT = Employee\_Commute\_VMT + Flex\_Commute\_VMT + Delivery\_VMT_{FU}$

Total_VMT = 5,960 + 8,358 + (15,034) = -716

VMT/person = Total_VMT / $\sum$ (All Commuters and Flex Drivers)

The per capita VMT is -716 divided by 1,381 personnel or -0.52 per person, per day. The VMT calculation results are shown in Table 3.

Table 3: Project VMT Results

Traffic	Personnel	Daily Trips	VMT per Day	VMT per Person per Day
On-site Commute Trips	363	726	5,960	16.42
Flex Driver Commute Trips	509	1018	8,358	16.42
Delivery Trips	509	3054	-15,034	-0.79
Total	**1,381**	**4,798**	**-716**	**-0.52**

VMT Thresholds

As mentioned, employment generating projects (commercial, industrial, manufacturing, etc.) are required to generate less than 14.91 VMT per employee per day. The results show that the proposed Project's VMT is less than the targeted Citywide VMT, resulting in a less than significant impact on VMT. See Table 4.

Table 4: VMT Significance

Description	Project VMT per Capita per Day	City of Milpitas Threshold	Compared to Threshold	Impact Significance
Commuter Trips	16.42	14.91	10% higher	Potentially Significant
Delivery Trips	-0.79	14.91	100% lower	Less than Significant
TOTAL	**-0.52**	**14.91**	**100% lower**	**Less than Significant**

E. Mitigation

The VMT for the delivery center can be viewed in three parts:

1. On-site employees who commute to the site (Employee_Commute_VMT)
2. Flex delivery drivers commuting to the site; drivers must use their own vehicles to make deliveries (Flex_Commute_VMT)
3. VMT associated with the delivery of goods and packages to the customer (Delivery_VMT).

The on-site commuter VMT is fairly low at 16.42 per person per day and is due to the relatively close proximity of the workforce expected for industrial uses in Milpitas. While the number is higher than the citywide desired threshold of 14.91, it is still less than the citywide average VMT of 17.54. The potentially feasible mitigation measures to reduce commuter VMT is using transportation demand management (TDM) techniques such as increased bicycle use, carpooling, vanpooling, or transit use for those on-site employees.

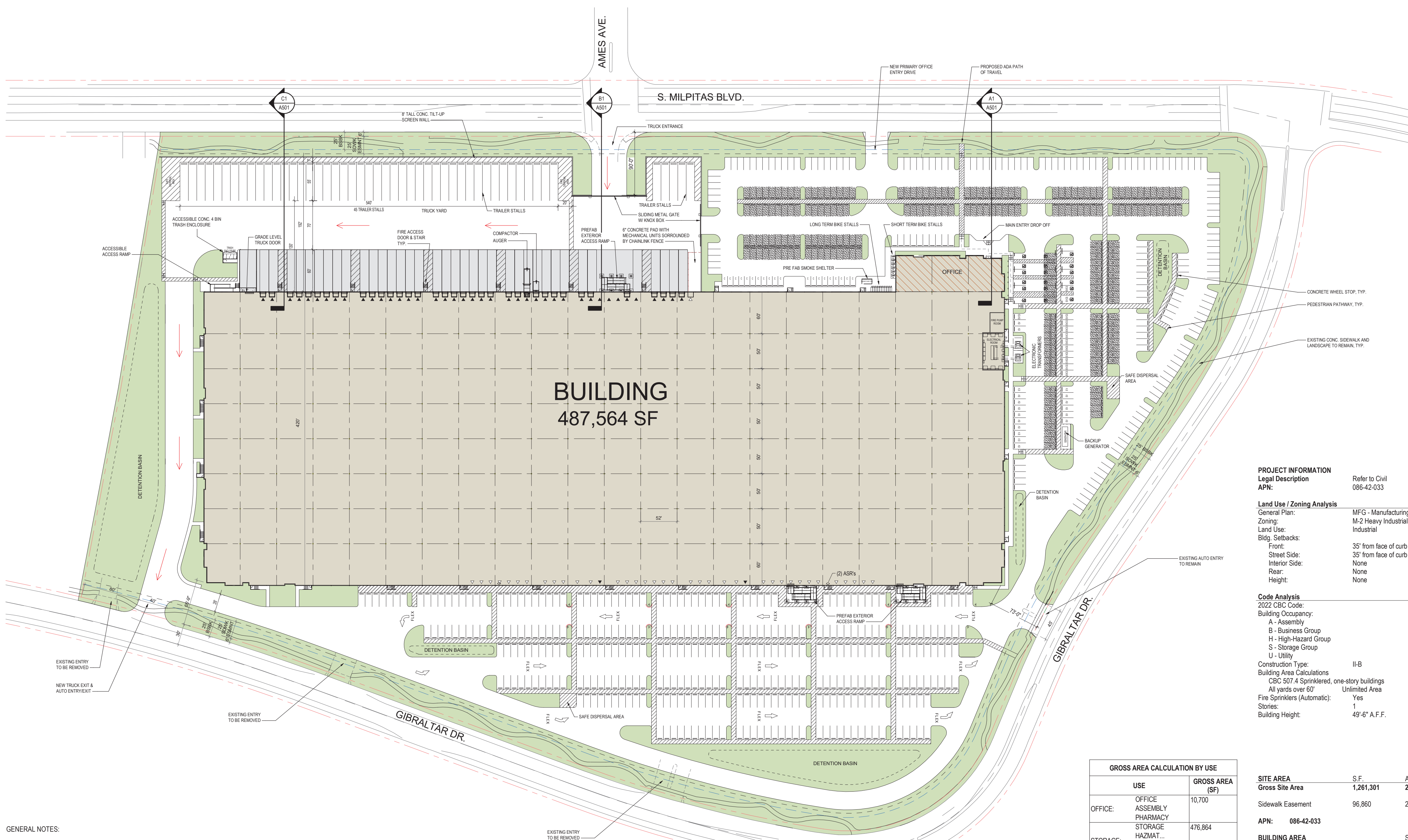
For this project, TDM techniques are more likely to be effective for those drivers who work shifts during the day. The 6:00 AM, 11:00 AM, and 3:00 PM shift workers would have the opportunity to take transit or would be candidates for carpooling programs or alternative modes of travels. This represents 204 of the 363 on-site employees. If 20% of those employees arrived by transit or carpooled with someone else, that would equate to a commuter VMT of 14.57 per day, which is under the Citywide significance level. To accomplish this reduction, the Tenant should consider the following TDM measures:

- Carpool matching programs
- Transit passes
- Guaranteed rides home

Transit is readily available in the area with VTA, BART, and Milpitas Microtransit as options. The #217 bus departs the Milpitas Transit Center every 30 minutes and has a stop on Milpitas Blvd near the site.

There are no feasible mitigation measures to reduce delivery operations VMT. This VMT could only be reduced by reducing delivery service, which would defeat the primary purpose of the Project.

Attachment A – Site Plan



PROJECT INFORMATION

Legal Description	Refer to Civil
APN:	086-42-033

Land Use / Zoning Analysis

General Plan:	MFG - Manufacturing
Zoning:	M-2 Heavy Industrial District
Land Use:	Industrial
Bldg. Setbacks:	
Front:	35' from face of curb
Street Side:	35' from face of curb
Interior Side:	None
Rear:	None
Height:	None

Code Analysis

2022 CBC Code:	
Building Occupancy:	
A - Assembly	
B - Business Group	
H - High-Hazard Group	
S - Storage Group	
U - Utility	
Construction Type:	II-B
Building Area Calculations	
CBC 507.4 Sprinklered, one-story buildings	
All yards over 60'	Unlimited Area
Fire Sprinklers (Automatic):	Yes
Stories:	1
Building Height:	49'-6" A.F.F.

GROSS AREA CALCULATION BY USE

USE		GROSS AREA (SF)
OFFICE:	OFFICE ASSEMBLY PHARMACY	10,700
STORAGE:	STORAGE HAZMAT... UTILITY ASSEMBLY	476,864
TOTAL		487,564

LEGEND

- DOCK DOORS 9' x 10' — ▲
- KNOCK-OUT PANELS — △
- PROPERTY LINE
- BUILDING SETBACK
- SIDEWALK ESMT
- PEDESTRIAN CIRCULATION
- PERMEABLE PAVEMENT
- TRUCK TRAFFIC FLOW
- ACCESSABLE PATH OF TRAVEL

REFER TO SHEET A102 FOR FIRE ACCESS PLAN

SITE AREA	S.F.	ACRES
Gross Site Area	**1,261,301**	**28.96**
Sidewalk Easement	96,860	2.22

APN: 086-42-033

BUILDING AREA		S.F.
Ground Floor Office		10,700
Storage		476,864
TOTAL BUILDING AREA		**487,564**
COVERAGE		38.7%
Gross FAR (1.0 Max)		.387

PARKING REQUIRED		
Office	1/350	31
Warehouse/Distribution	1/1500	318
TOTAL PARKING REQUIRED		**349**

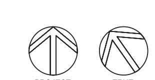
PARKING PROVIDED		
Associate Parking (9'x18')		410
Accessible Parking (9'x18')	2%	16
Compact Stalls (7.5'x15')	3%	20
EV Ready Stalls (20% of total)	90	-
EVCS (25% of EV)	23	-
Flex Parking (10'x20')		335
TOTAL PARKING PROVIDED		**781**
PARKING RATIO		**1.61/1000**

Dock Doors (9'x10')		25
Knock Out Panels (9'x10')		54
Grade Level Doors (12'x14')		1
Trailer Stalls (12'x55')		63
Bicycle Stalls Short Term	2.5%	12
Bicycle Stalls Long Term	2.5%	12

LANDSCAPE Required front yard area and street side yard areas shall be landscaped

GENERAL NOTES:

1. GUARDS SHALL BE LOCATED ALONG OPEN SIDE OF WALKING SURFACES, STAIRS, RAMPS AND LANDINGS THAT ARE LOCATED MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. GUARDS ARE NOT REQUIRED ON THE LOADING SIDE OF LOADING DOCKS (CBC 1013.2)
2. THE RUNNING SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:20 (5%). THE CROSS SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:48 (2.083%).
3. THE CLEAR WIDTH FOR SIDEWALKS AND WALKSSHALL BE 48 INCHES MINIMUM.
4. THE WASTE STORAGE AREA SHALL BE GRADED SO THAT STORAGE CONTAINERS REMAIN AT REST WITHOUT AUXILIARY RESTRAINING DEVICES.



A1 / A101 **SITE PLAN**
1" = 60'-0"

Stantec
Stantec Architecture Inc.
801 South Figueroa Street Suite 300
Los Angeles, CA 90017-3007
Tel: (213) 955-9775 • www.stantec.com

Consultant

Revision Remarks	Issuance	Date
FIFTH ENTITLEMENT SUBMITTAL		08/08/2025
FOURTH ENTITLEMENT SUBMITTAL		05/23/2025
THIRD ENTITLEMENT SUBMITTAL		03/28/2025
SECOND ENTITLEMENT SUBMITTAL		01/30/2025
FIRST ENTITLEMENT SUBMITTAL		9/13/2024

Permit/Seal

NOT IN SCOPE

HEA2 ABE3

Tenant
SSD - SSJ1 MILPITAS
1000 Gibraltar Dr
Milpitas, CA 95035

Project No.:2014333000

Sheet Date: 01/30/25 (YYYY.MM.DD)

Title
SITE PLAN

Scale: 1" = 60'-0"
Revision:
Drawing No. **A101**

Attachment B – Tenant Specified Trip Schedule

Traffic Schedule

Cars (Associates-Personal Car)			
Average Weekday			
	In	Out	Total
00:00	0	0	0
01:00	64	95	159
02:00	0	0	0
03:00	0	0	0
04:00	0	0	0
05:00	0	0	0
06:00	66	64	130
07:00	0	0	0
08:00	0	0	0
09:00	0	0	0
10:00	0	0	0
11:00	43	66	109
12:00	0	0	0
13:00	0	0	0
14:00	0	0	0
15:00	95	43	138
16:00	0	0	0
17:00	0	0	0
18:00	0	0	0
19:00	0	0	0
20:00	0	95	95
21:00	95	0	95
22:00	0	0	0
23:00	0	0	0
	363	363	726

53' Trucks (LineHaul) - Inbound			
Average Weekday			
	In	Out	Total
00:00	1	1	2
01:00	0	1	1
02:00	0	0	0
03:00	1	0	1
04:00	0	1	1
05:00	0	0	0
06:00	0	0	0
07:00	1	0	1
08:00	0	1	1
09:00	0	0	0
10:00	0	0	0
11:00	1	0	1
12:00	0	1	1
13:00	0	0	0
14:00	0	0	0
15:00	1	0	1
16:00	0	1	1
17:00	1	0	1
18:00	0	1	1
19:00	1	0	1
20:00	0	1	1
21:00	1	0	1
22:00	0	1	1
23:00	1	0	1
	9	9	18

53' Trucks (LineHaul) - NAFC Injection			
Average Weekday			
	In	Out	Total
00:00	0	1	1
01:00	0	0	0
02:00	0	0	0
03:00	1	0	1
04:00	0	1	1
05:00	0	0	0
06:00	0	0	0
07:00	1	0	1
08:00	0	1	1
09:00	0	0	0
10:00	0	0	0
11:00	1	0	1
12:00	0	1	1
13:00	0	0	0
14:00	0	0	0
15:00	1	0	1
16:00	0	1	1
17:00	0	0	0
18:00	0	0	0
19:00	1	0	1
20:00	0	1	1
21:00	0	0	0
22:00	0	0	0
23:00	1	0	1
	6	6	12

DP (FLEX Car)			
Average Weekday			
	In	Out	Total
00:00	0	0	0
01:00	0	0	0
02:00	0	0	0
03:00	166	166	333
04:00	166	166	333
05:00	130	130	260
06:00	84	84	167
07:00	129	129	257
08:00	24	24	48
09:00	31	31	62
10:00	58	58	115
11:00	102	102	205
12:00	45	45	90
13:00	77	77	155
14:00	148	148	296
15:00	35	35	70
16:00	56	56	112
17:00	102	102	204
18:00	122	122	243
19:00	53	53	106
20:00	0	0	0
21:00	0	0	0
22:00	0	0	0
23:00	0	0	0
	1528	1528	3056

Total (Adj)			
Adjusted Avg Weekday			
	In	Out	Total
00:00	1	2	3
01:00	64	96	160
02:00	0	0	0
03:00	168	166	335
04:00	166	168	335
05:00	130	130	260
06:00	150	148	297
07:00	131	129	259
08:00	24	26	50
09:00	31	31	62
10:00	58	58	115
11:00	147	168	316
12:00	45	47	92
13:00	77	77	155
14:00	148	148	296
15:00	132	78	210
16:00	56	58	114
17:00	103	102	205
18:00	122	123	244
19:00	55	53	108
20:00	0	97	97
21:00	96	0	96
22:00	0	1	1
23:00	2	0	2
	1,906	1,906	3,812

Attachment C – VMT Resources

Santa Clara Countywide VMT Evaluation Tool - Version 2.1 - Report

Project Details

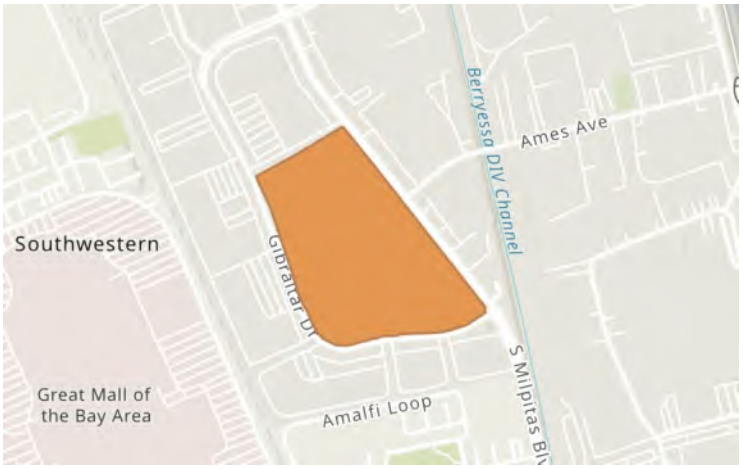
Timestamp of Analysis	July 10, 2025, 08:32:53 AM
Project Name	Delivery Center - 1000 Gibraltar Drive
Project Description	eCommerce delivery hub

Project Location Map

Jurisdiction:

Milpitas

APN	TAZ
08642033	279



Analysis Details

Data Version	VTA Countywide Model December 2019
Analysis Methodology	TAZ
Baseline Year	2026

Project Land Use

Residential:

Single Family DU:	
Multifamily DU:	
Total DUs:	0

Non-Residential:

Office KSF:	
Local Serving Retail KSF:	
Industrial KSF:	487564

Residential Affordability (percent of all units):

Extremely Low Income:	0 %
Very Low Income:	0 %
Low Income:	0 %

Parking:

Motor Vehicle Parking:	450
Bicycle Parking:	

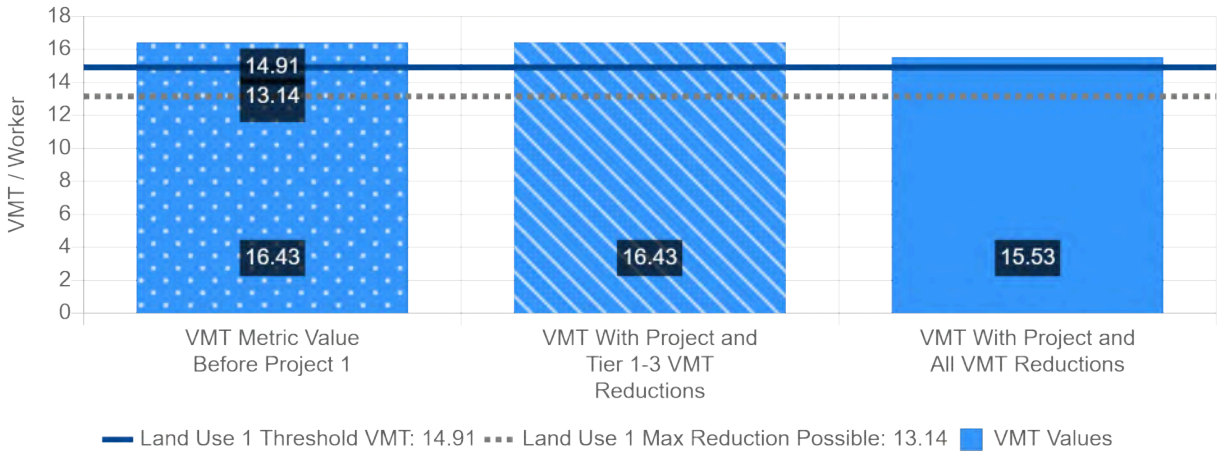
Proximity to Transit Screening

Inside a transit priority area? No (Fail)

Industrial Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Industrial
VMT Metric 1:	Home-based Work VMT per Worker
VMT Baseline Description 1:	City Average
VMT Baseline Value 1:	17.54
VMT Threshold Description 1 / Threshold Value 1:	-15% / 14.91
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	16.43	16.43	15.53
Low VMT Screening Analysis	No (Fail)	No (Fail)	No (Fail)



Tier 4 TDM Programs

TP13 Ride-Sharing Programs

Expected Percent of Ride-Sharing Participants:	10 %

Existing Delivery Station	Proposed Project Site	Zip Code	Existing Distribution Site				Proposed Project Site				Net VMT Change (Proposed – Existing)
			Distance Between Site and Zip Code	Percent Trips	Total Trips	VMT	Distance Between Site and Zip Code	Percent Trips	Total Trips	VMT	
SCA2	SSJ1		32.63	1.600%	10.6	689.4	25.58	1.037%	10.6	540.7	-148.7
	SSJ1						14.51	0.001%	0.0	0.4	0.4
SCA2	SSJ1		34.24	1.658%	10.9	749.4	16.70	1.074%	10.9	365.6	-383.7
SCA2	SSJ1		23.97	3.410%	22.5	1078.6	20.73	2.210%	22.5	933.5	-145.2
	SSJ1						18.55	0.001%	0.0	0.5	0.5
SCA2	SSJ1		23.17	0.697%	4.6	213.3	21.89	0.452%	4.6	201.6	-11.7
SCA2	SSJ1		31.70	0.659%	4.3	275.7	28.38	0.427%	4.4	247.0	-28.7
	SSJ1						11.21	0.006%	0.1	1.4	1.4
	SSJ1						11.94	0.000%	0.0	0.0	0.0
SCA2	SSJ1		33.07	2.282%	15.1	995.9	14.38	1.479%	15.1	433.5	-562.5
SCA2	SSJ1		31.68	1.124%	7.4	470.2	13.05	0.729%	7.4	193.8	-276.5
	SSJ1						11.94	0.000%	0.0	0.1	0.1
SCA2	SSJ1		31.73	2.349%	15.5	983.7	13.41	1.522%	15.5	415.9	-567.8
SCA2	SSJ1		21.80	2.416%	15.9	695.3	23.90	1.566%	16.0	762.5	67.2
SCA2	SSJ1		32.45	2.508%	16.6	1074.3	34.08	1.625%	16.6	1128.7	54.4
SCA2	SSJ1		20.95	1.796%	11.9	496.6	22.63	1.164%	11.9	536.8	40.2
	SSJ1						21.44	0.001%	0.0	0.5	0.5
SCA2	SSJ1		33.96	1.532%	10.1	686.8	10.37	0.993%	10.1	209.8	-477.0
SCA2	SSJ1		35.45	2.784%	18.4	1302.9	11.57	1.804%	18.4	425.4	-877.6
SCA2	SSJ1		36.33	3.205%	21.2	1536.8	13.77	2.077%	21.2	582.7	-954.0
	SSJ1						8.30	0.003%	0.0	0.5	0.5
SCA2	SSJ1		34.30	1.362%	9.0	616.3	8.90	0.882%	9.0	160.1	-456.2
SCA2	SSJ1		25.68	1.343%	8.9	455.2	17.15	0.870%	8.9	304.2	-151.0
	SSJ1						16.87	0.001%	0.0	0.3	0.3
SCA2	SSJ1		27.74	2.262%	14.9	828.2	17.67	1.466%	14.9	527.9	-300.3
SCA2	SSJ1		30.18	0.458%	3.0	182.5	25.72	0.297%	3.0	155.6	-26.9
SCA2	SSJ1		26.37	1.156%	7.6	402.4	17.99	0.749%	7.6	274.6	-127.8
SCA2	SSJ1		28.41	1.879%	12.4	704.6	16.72	1.218%	12.4	414.8	-289.8
	SSJ1						18.42	0.001%	0.0	0.4	0.4
SCA3	SSJ1		41.26	5.009%	33.1	2728.0	16.21	3.246%	33.1	1072.4	-1655.5
SCA3	SSJ1		39.61	0.003%	0.0	1.5	13.07	0.002%	0.0	0.5	-1.0
SCA3	SSJ1		45.27	4.337%	28.6	2591.7	11.35	2.811%	28.6	650.1	-1941.6
SCA2	SSJ1		40.90	3.090%	20.4	1668.0	11.79	2.002%	20.4	481.2	-1186.8
SCA3	SSJ1		38.14	2.081%	13.7	1047.9	16.12	1.349%	13.7	443.0	-604.8
SCA3	SSJ1		42.94	3.419%	22.6	1938.0	14.79	2.216%	22.6	667.6	-1270.4
SCA3	SSJ1		38.56	3.768%	24.9	1917.7	17.51	2.442%	24.9	871.3	-1046.4
SCA2	SSJ1		36.10	0.124%	0.8	59.2	5.90	0.080%	0.8	9.7	-49.5
	SSJ1						43.77	1.354%	13.8	1208.2	1208.2
	SSJ1						35.97	0.339%	3.5	248.3	248.3
	SSJ1						38.26	0.436%	4.4	339.7	339.7
	SSJ1						34.28	0.032%	0.3	22.4	22.4
SCA2	SSJ1		43.14	4.058%	26.8	2310.8	13.90	2.630%	26.8	745.0	-1565.8
	SSJ1						11.56	0.001%	0.0	0.3	0.3
	SSJ1						38.35	0.435%	4.4	340.1	340.1
	SSJ1						11.46	0.001%	0.0	0.3	0.3
	SSJ1						19.15	0.001%	0.0	0.5	0.5
SCA2	SSJ1		38.29	3.682%	24.3	1861.0	16.37	2.386%	24.3	795.9	-1065.1
	SSJ1						13.91	0.002%	0.0	0.5	0.5
	SSJ1						38.11	0.397%	4.1	308.7	308.7
	SSJ1						18.36	0.908%	9.3	339.7	339.7
	SSJ1						16.76	0.004%	0.0	1.4	1.4
	SSJ1						17.85	1.618%	16.5	588.7	588.7
	SSJ1						29.81	0.450%	4.6	273.6	273.6
SCA2	SSJ1		43.49	4.087%	27.0	2346.2	5.10	2.649%	27.0	275.1	-2071.1
	SSJ1						2.17	0.001%	0.0	0.1	0.1
	SSJ1						34.03	0.033%	0.3	23.0	23.0
	SSJ1						22.25	0.004%	0.0	1.9	1.9
SCA2	SSJ1		39.24	2.557%	16.9	1324.1	9.20	1.657%	16.9	310.8	-1013.4
SCA2	SSJ1		38.63	3.467%	22.9	1768.2	10.34	2.247%	22.9	473.3	-1294.9
	SSJ1						6.93	0.001%	0.0	0.1	0.1
	SSJ1						7.17	0.047%	0.5	6.8	6.8
SCA2	SSJ1		37.00	2.035%	13.4	993.8	6.89	1.319%	13.4	185.1	-808.7
	SSJ1						8.67	0.002%	0.0	0.3	0.3

Existing Delivery Station	Proposed Project Site	Zip Code	Existing Distribution Site				Proposed Project Site				Net VMT Change (Proposed – Existing)
			Distance Between Site and Zip Code	Percent Trips	Total Trips	VMT	Distance Between Site and Zip Code	Percent Trips	Total Trips	VMT	
	SSJ1	[redacted]					5.86	0.002%	0.0	0.2	0.2
	SSJ1						47.54	1.874%	19.1	1815.7	1815.7
	SSJ1						39.88	1.565%	15.9	1271.9	1271.9
	SSJ1						39.94	0.311%	3.2	253.3	253.3
	SSJ1						38.92	0.391%	4.0	310.3	310.3
	SSJ1						32.16	0.773%	7.9	507.0	507.0
	SSJ1						32.28	0.004%	0.0	2.9	2.9
SCA2	SSJ1		41.95	2.479%	16.4	1372.8	21.60	1.607%	16.4	707.2	-665.6
	SSJ1						14.25	0.001%	0.0	0.4	0.4
	SSJ1						38.25	0.541%	5.5	422.0	422.0
	SSJ1						7.01	0.000%	0.0	0.0	0.0
SCA2	SSJ1		42.60	1.097%	7.2	617.0	9.13	0.711%	7.2	132.3	-484.7
	SSJ1						14.35	1.594%	16.2	466.3	466.3
	SSJ1						8.93	1.873%	19.1	340.8	340.8
SCA2	SSJ1		41.63	0.495%	3.3	272.2	7.98	0.321%	3.3	52.2	-219.9
	SSJ1						6.56	1.024%	10.4	137.0	137.0
SCA2	SSJ1		41.55	1.459%	9.6	800.3	11.06	0.946%	9.6	213.2	-587.1
	SSJ1						15.54	1.443%	14.7	457.1	457.1
	SSJ1						17.06	0.570%	5.8	198.3	198.3
	SSJ1						20.81	2.033%	20.7	862.1	862.1
	SSJ1						16.15	1.008%	10.3	331.8	331.8
	SSJ1						12.05	1.123%	11.4	276.0	276.0
	SSJ1						9.80	2.709%	27.6	540.9	540.9
SCA2	SSJ1		46.60	3.428%	22.6	2108.6	16.27	2.222%	22.6	736.7	-1371.8
	SSJ1						16.10	2.568%	26.2	842.7	842.7
SCA2	SSJ1		42.27	2.343%	15.5	1307.3	12.54	1.518%	15.5	388.2	-919.1
	SSJ1						10.45	1.802%	18.4	383.8	383.8
SCA2	SSJ1		41.77	2.269%	15.0	1250.9	10.04	1.470%	15.0	300.8	-950.1
SCA2	SSJ1		39.96	2.081%	13.7	1097.6	10.99	1.349%	13.7	301.9	-795.7
SCA2	SSJ1		40.89	0.787%	5.2	424.8	13.80	0.510%	5.2	143.5	-281.4
SCA2	SSJ1		41.32	1.580%	10.4	861.4	13.35	1.024%	10.4	278.5	-582.9
SCA2	SSJ1		44.20	2.053%	13.5	1197.4	3.98	1.330%	13.6	107.8	-1089.6
	SSJ1						5.44	0.812%	8.3	89.9	89.9
SCA2	SSJ1		38.48	1.732%	11.4	879.8	5.27	1.123%	11.4	120.6	-759.2
	SSJ1						5.34	0.797%	8.1	86.8	86.8
	SSJ1						14.74	1.749%	17.8	525.5	525.5
	SSJ1						14.29	0.793%	8.1	230.8	230.8
	SSJ1						16.80	0.301%	3.1	103.0	103.0
	SSJ1						17.76	0.002%	0.0	0.7	0.7
	SSJ1						24.16	1.426%	14.5	702.1	702.1
	SSJ1						11.58	0.001%	0.0	0.3	0.3
	SSJ1						10.97	0.002%	0.0	0.4	0.4
	SSJ1						8.80	0.006%	0.1	1.0	1.0
	SSJ1						3.74	0.001%	0.0	0.1	0.1
	SSJ1						14.35	0.001%	0.0	0.4	0.4
	SSJ1						13.11	0.001%	0.0	0.2	0.2
	SSJ1						9.57	0.001%	0.0	0.3	0.3
	SSJ1						6.68	0.001%	0.0	0.1	0.1
	SSJ1						11.18	0.002%	0.0	0.5	0.5
	SSJ1						12.89	0.001%	0.0	0.4	0.4
	SSJ1						8.86	0.001%	0.0	0.3	0.3
	SSJ1						2.87	0.002%	0.0	0.1	0.1
	SSJ1						3.49	0.000%	0.0	0.0	0.0
	SSJ1						8.60	0.000%	0.0	0.0	0.0
	SSJ1						6.96	0.002%	0.0	0.3	0.3
		TOTAL	**0.00**	**100%**	**660**	**49,185**	**3.74**	**100%**	**1019**	**34,151**	**(15,034)**

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