

Transportation Impact Analysis



HEXAGON TRANSPORTATION CONSULTANTS, INC.



128 Lorton Avenue

Draft Transportation Impact Analysis

Prepared for:

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Executive Summary

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed 128 Lorton Avenue residential development. The project is located in downtown Burlingame. The site is currently occupied by four residential units. The proposed project would replace the existing homes with a four-story residential building over an at-grade parking garage. The project would consist of 19 dwelling units. Access to the proposed project would be provided via a full-access driveway on Lorton Avenue to the parking garage.

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County Congestion Management Program (CMP). The study includes an analysis of AM and PM peak hour traffic conditions during weekdays on two unsignalized study intersections in the vicinity of the project site. Potential impacts to pedestrians, bikes, and transit services were also considered.

Based on the project description, and trip generation rates recommended by the Institute of Transportation Engineers, it is estimated that the proposed project would generate 67 net new daily vehicle trips, with 4 net new trips during the AM peak hour and 5 net new trips during the PM peak hour.

The City of Burlingame does not have a Council-adopted level of service threshold, thus significance standards (such as LOS D or better) that have typically been applied in traffic studies and EIRs, were used. The results of the intersection level of service analysis under all scenarios with and without the project are summarized in Table ES-1. The results determined that under all scenarios with and without the project, both study intersections would operate at an acceptable LOS A or LOS B during the AM and PM peak hours.

This report provides the following recommendations for the project:

- Appropriate visible warning signs and audible warning signals should be provided at the parking garage exit to alert pedestrians and bicyclists of vehicles exiting the garage.
- Signs prohibiting parking during garbage pickup hours should be placed along the project frontage on Lorton Avenue.
- The proposed project should provide seven more parking spaces to meet the City's requirements.

- The proposed project should include 19 long term bicycle parking spaces and four short term bicycle parking spaces.
- The proposed puzzle stackers should be designed and installed to accommodate all typical passenger vehicles, including trucks, SUVs, and vans.

Table ES-1
Intersection Levels of Service Summary

Study Number	Intersection	Peak Hour	Count Date	Traffic Control	Existing		Background		Cumulative	
					No Project	with Project	No Project	with Project	No Project	with Project
					Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
1	Lorton Avenue and Howard Avenue	AM	01/10/19	AWSC ¹	9.8	A	9.8	A	10.2	B
		PM	01/10/19		12.6	B	12.7	B	13.6	B
2	Lorton Avenue and Bayswater Avenue	AM	03/28/18	TWSC ²	11.6	B	11.6	B	12.1	B
		PM	03/28/18		11.5	B	11.6	B	12.0	B

Note:
 AWSC = All-Way Stop Control
 TWSC = Two-Way Stop Control
¹ Average delay for an all-way stop controlled intersection is reported for the entire intersection.
² Average delay for a two-way stop controlled intersection is reported for the worst stop-controlled approach.

1. Introduction

This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed residential development at 128 Lorton Avenue in Burlingame, CA. The project is located in downtown Burlingame (see Figure 1). The site is currently occupied by four residential units. The proposed project would replace the existing homes with a four-story residential building over an at-grade parking garage (see Figure 2). The project would consist of 19 dwelling units. Access to the proposed project would be provided via a full-access driveway on Lorton Avenue to the parking garage.

Scope of Study

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County. The C/CAG administers the San Mateo County Congestion Management Program (CMP). Given that the project is expected to add fewer than 100 peak hour trips to CMP roadways (El Camino Real), a C/CAG trip reduction analysis was not prepared. The traffic study includes an analysis of AM and PM peak hour traffic conditions for two unsignalized intersections in the vicinity of the project site. The study also includes an analysis of site access and on-site circulation, vehicle queuing, and transit, bicycle, and pedestrian access.

Study Intersections

1. Lorton Avenue and Howard Avenue (unsignalized)
2. Lorton Avenue and Bayswater Avenue (unsignalized)

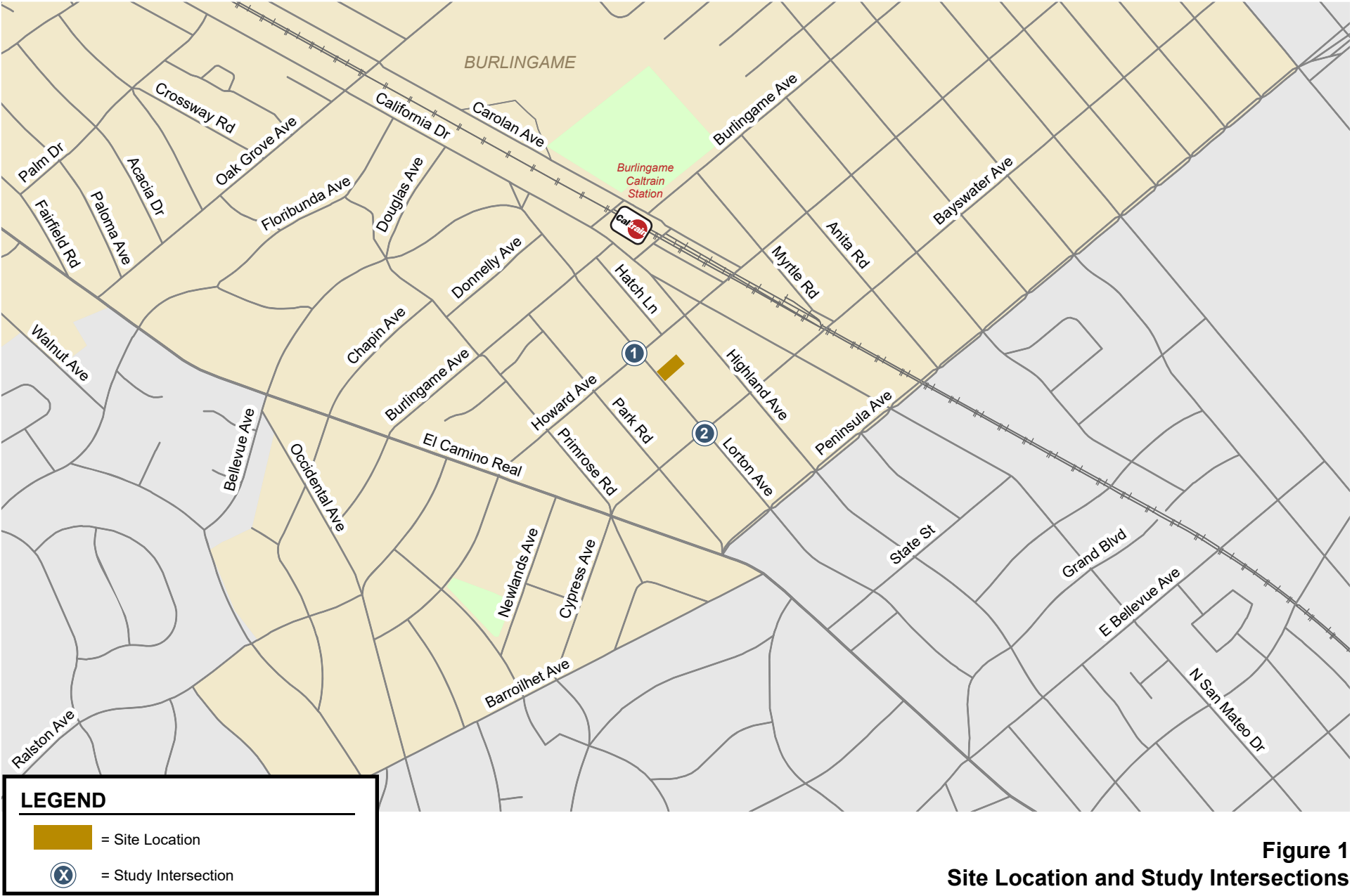


Figure 1
Site Location and Study Intersections

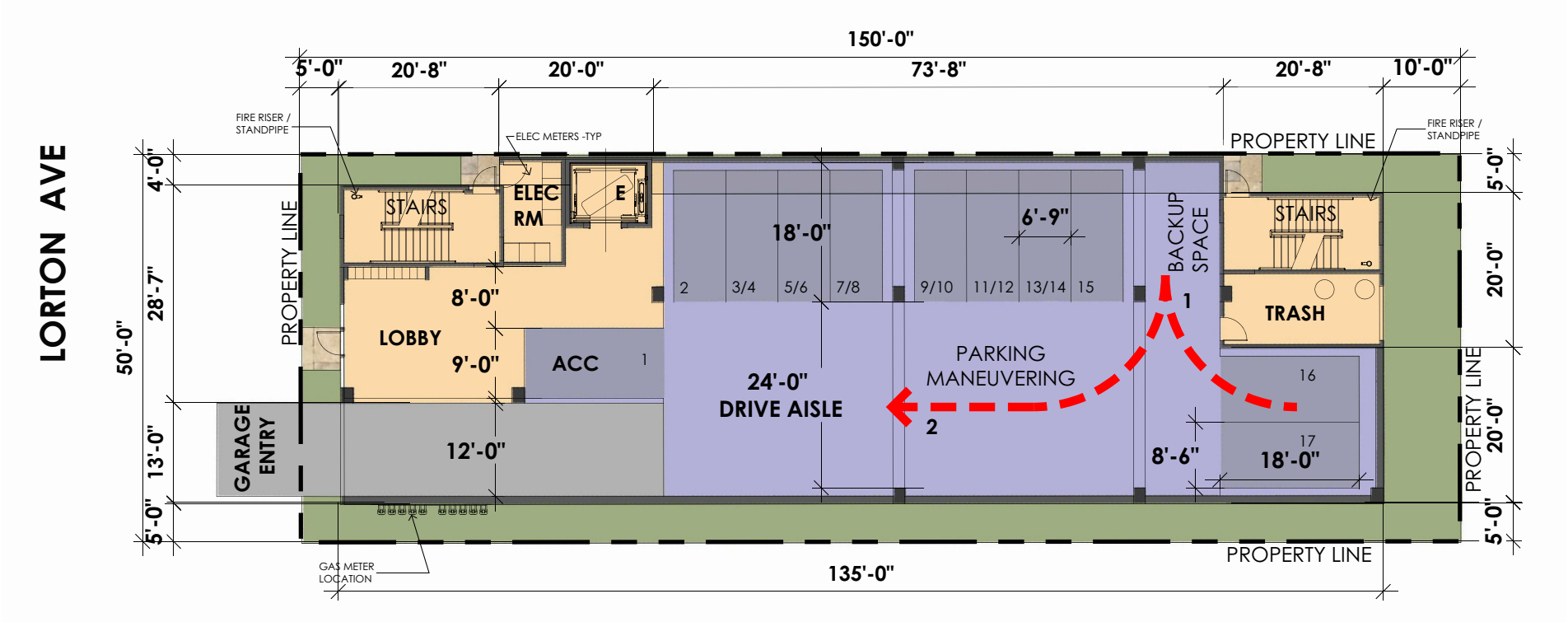


Figure 2
Project Site Plan

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways in the study area.

Traffic conditions were evaluated for the following scenarios:

- Scenario 1: *Existing Conditions.*** Existing traffic volumes at the study intersections were obtained from traffic counts conducted in March 2018 and January 2019. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the *2010 Highway Capacity Manual* methodology.
- Scenario 2: *Background Conditions.*** Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area. The approved project trips and/or approved project information were obtained from recent traffic studies in the City of Burlingame.
- Scenario 3: *Existing plus Project Conditions.*** Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- Scenario 4: *Project Conditions.*** Background traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to background traffic volumes the additional traffic generated by the project. Project Conditions were evaluated relative to background conditions to determine potential project impacts.
- Scenario 5: *Cumulative Conditions.*** Cumulative traffic volumes represent traffic growth through the year 2028. Cumulative traffic volumes were estimated by applying an annual growth factor of 1.0 percent to the existing volumes, then adding trips from approved developments, as well as project-generated traffic. Cumulative conditions were evaluated relative to cumulative no project conditions to determine potential project impacts.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the City of Burlingame, local traffic studies and EIRs, and field observations. The following data were collected from these sources:

- existing peak-hour intersection turning-movement volumes
- lane configurations
- approved project trips

Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions

with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

City of Burlingame Unsignalized Intersections

Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

Level of service at unsignalized intersections was based on the 2010 HCM method using the Synchro software platform. This method is applicable for both side-street and all-way stop-controlled intersections. At side-street stop-controlled intersections (e.g., the Lorton Avenue/Bayswater Avenue intersection), the levels of service are reported for the worst stop-controlled approach delay. For all-way stop-controlled intersections (e.g., the Lorton Avenue/Howard Avenue intersection), a weighted average delay of the entire intersection is presented.

The City of Burlingame does not have a formally-adopted level of service standard for unsignalized intersections. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 1.

Table 1
Unsignalized Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Little or no traffic delay	Up to 10.0
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	Greater than 80.0

Traffic Signal Warrant

The level of service calculations at the unsignalized intersections is supplemented with an assessment of the need for installation of a traffic signal, known as a signal warrant analysis. The need for signalization of unsignalized intersections in an urban or suburban context is typically assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CA MUTCD), Part 4, Highway Traffic Signals. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour volumes are, or would be, sufficiently high to justify installation of a traffic signal.

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the decision should be considered when one or more of the warrants are met, which triggers further feasibility analysis. Engineering judgment should be exercised to determine how a traffic signal could affect collision rates and traffic conditions at the subject intersection, as well as at adjacent intersections. Other options besides a traffic signal should also be considered, such as all-way stop control, new or enhanced signage, or roadway geometry changes; these measures may be more appropriate than a new traffic signal.

CMP Roadway Impact and Compliance

As the Congestion Management Agency (CMA) for San Mateo County, the City/County Association of Governments (C/CAG) is responsible for maintaining the performance and standards of the Congestion Management Program (CMP) roadway network. Per CMP technical guidelines, all new developments estimated to add at least 100 net peak hour trips to the CMP roadway network are required to implement Travel Demand Management (TDM) measures in accordance with the C/CAG CMP checklist. Given that the proposed project is expected to add fewer than 100 net peak hour vehicle trips to the CMP roadway network, implementation of TDM measures is not required.

Report Organization

The remainder of this report is divided into six chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian facilities. Chapter 3 presents the intersection operations under background conditions and describes the approved projects in the City of Burlingame that would likely add traffic to the study area. Chapter 4 describes the methods used to estimate project-generated traffic and its impact on the transportation system. Chapter 5 describes cumulative traffic conditions, both without and with the project. Chapter 6 presents the analysis of other transportation related issues including transit, bicycle, and pedestrian facilities.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, pedestrian and bicycle facilities, and the existing levels of service for the key intersections in the study area.

Existing Roadway Network

Regional access to the project site is provided via US 101 and El Camino Real (SR 82). Local access to the site is provided by Broadway, Peninsula Avenue, California Drive, Howard Avenue, Bayswater Avenue and Lorton Avenue. These roadways are described below.

US 101 is a north/south, eight-lane freeway in the vicinity of the site. US 101 extends northward through San Francisco and southward through San Jose. Access to and from the project study area is provided via a full interchange at Broadway and a partial interchange at Peninsula Avenue.

El Camino Real (SR 82) is a four-lane roadway west of the project site that serves as a north-south route of travel along the Peninsula in the vicinity of the site. El Camino Real extends northward to San Francisco, and southward to San Jose. The speed limit on El Camino Real is 35 MPH. There are sidewalks on both sides of the road in the project vicinity. Access to the project site from El Camino Real is provided via Howard Avenue and Bayswater Avenue.

Broadway is an east/west, two- to four-lane arterial that extends from west of Vancouver Avenue to Old Bayshore Highway, where it transitions into Airport Boulevard. Broadway operates north of the project site, and as one of the main gateways into the city with high volumes and access to other parts to the city. On-street parking and sidewalks are present on both the sides of the road in the project vicinity. Bike lanes available on Broadway east of Carolan Avenue. The posted speed limit on Broadway is 35 MPH. Access to the project site from Broadway is provided via California Drive and El Camino Real.

Peninsula Avenue is an east/west, two- to three-lane arterial that extends from El Camino Real east to Airport Boulevard, where it transitions into Coyote Point Drive. Peninsula Avenue operates south of the project site and acts as the southern gateway into the city, connecting the downtown Burlingame area with US 101 and El Camino Real. On-street parking and sidewalks are present on both sides of Peninsula Avenue, and the posted speed limit is 30 MPH. Access to the project site from Peninsula Avenue is provided via Lorton Avenue.

California Drive is a north/south roadway that extends from Millbrae Avenue in the City of Millbrae to Peninsula Avenue in San Mateo to the south, at which point it becomes North San Mateo Drive. California Drive consists of two lanes between Millbrae Avenue and Broadway, and four lanes south of

Broadway. In the project vicinity, on-street parking and sidewalks are present on both the sides of California Drive. The speed limit on California Drive is 30 MPH. California Drive is a designated Class III bike route north of South Lane. Access to the project site from California Drive is provided via Howard Avenue and Bayswater Avenue.

Howard Avenue is an east/west roadway with two or three lanes extending from Occidental Avenue in the west to N. Amphlett Boulevard in the east. The speed limit on Howard Avenue is 25 MPH. Four-hour metered parking is provided between 8 AM to 6 PM in the project vicinity. There are sidewalks on the both sides of the road. A Class III bike route on Howard Avenue extends from Occidental Avenue to East Lane, where it transitions into Class II bike lanes and extends east to Humboldt Street. Access to the project site from Howard Avenue is provided via Lorton Avenue.

Bayswater Avenue is an east/west roadway with two lanes extending from El Camino Real in the west to N. Amphlett Boulevard in the east. The speed limit on Bayswater Avenue is 25 MPH. There is two-hour on street parking between 8 AM to 6 PM. There is a sidewalk on both sides of the road. Access to the project site from Bayswater Avenue is provided via Lorton Avenue.

Lorton Avenue is a north/south roadway with two lanes extending from Bellevue Avenue in the north to Peninsula Avenue in the south, where it transitions into Prospect Row. The speed limit on Lorton Avenue is 25 MPH. Lorton Avenue has ten-hour metered parking along the project frontage and two-hour free parking along the west side between 8 AM and 6 PM. There are sidewalks on both sides of the road. Lorton Avenue provides direct access to the project site.

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, sidewalks exist along both sides of Howard Avenue, Bayswater Avenue, Lorton Avenue, and Park Road, providing pedestrian access to and from the project site. Marked crosswalks are provided along all stop-controlled approaches except at the south leg of the Lorton Avenue/Bayswater Avenue intersection.

The overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site.

Existing Bicycle Facilities

There are some bicycle facilities in the vicinity of the project site. The existing bicycle facilities within the study area are described below and are shown on Figure 3.

North-south bicycle connections in the study area include Class III bike routes along California Drive, Carolan Avenue, Primrose Road, and Highland Avenue. There are also Class II bike lanes north of the project site along Carolan Avenue.

East-west bicycle connections in the study area consist of bike routes along Oak Grove Avenue, Floribunda Avenue, Chapin Avenue, and Howard Avenue.

Although Lorton Avenue is not a designated bike route, due to low travel speed and traffic volume, it is conducive to bicycle travel.



Figure 3
Existing Bicycle Facilities

Existing Transit Service

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans), the City of Burlingame, and Caltrain (See Figure 4). The study area is served directly by express bus route and shuttle routes. The transit service routes that run through the study area are listed in Table 2, including their route description and commute hour headways. The nearest bus stops are located at the intersections along Howard Avenue at California Drive and El Camino Real. The Howard Avenue and California Drive bus stop is located approximately 900 feet walking distance from the project site, and the Howard Avenue and El Camino Real bus stop is 1,500 feet walking distance from the project site.

Table 2
Existing Transit Services

Transit Route	Route Description	Headway ¹
Operated by SamTrans		
Express Route 292	Hillsdale Shopping Center to Transbay Transit Center	20 to 30 mins
Express Route 397	Downtown San Francisco to Palo Alto Transit Center (provides limited overnight service)	60 mins ²
Multi-City Route ECR	Daly City BART Station to Palo Alto Transit Center	8 - 20 mins
Route ECR Rapid	Daly City BART Station to Redwood City Transit Center (provides service between 6 a.m. to 9 a.m. and 3.30 p.m. to 8 p.m.)	20 mins
Route 46	Burlingame Intermediate School to Burlingame Caltrain Station (schoolday service only)	
Operated by the City of Burlingame		
Burlingame Trolley Service	Burlingame Caltrain Station to San Francisco Airport Marriott Hotel	45 mins
Notes: ¹ Approximate headways during peak commute periods.		

Caltrain Service

Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy. The closest Caltrain station is the Burlingame Station (approximately a quarter mile north of the project site), providing weekday and weekend service. The Burlingame Station provides local and limited Caltrain service. Trains that stop at the Burlingame Station operate at approximately 20 to 40-minute headways in both directions during the commute hours, with somewhat less frequent service midday. Service operates between about 5:30 AM and 11:35 PM in the northbound direction and between 5:20 AM and 12:35 AM (next day) in the southbound direction.

As part of the Caltrain Modernization Program, the rail service will be electrified. The electrified Caltrain system will provide increased service and is also expected to help accommodate the increase in system ridership through much improved system operations.

Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 5. Existing traffic volumes were obtained from peak hour counts collected on March 28th of 2018 and January 10th of 2019. The existing peak-hour intersection volumes are shown on Figure 6. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.



Figure 4
Existing Transit Services

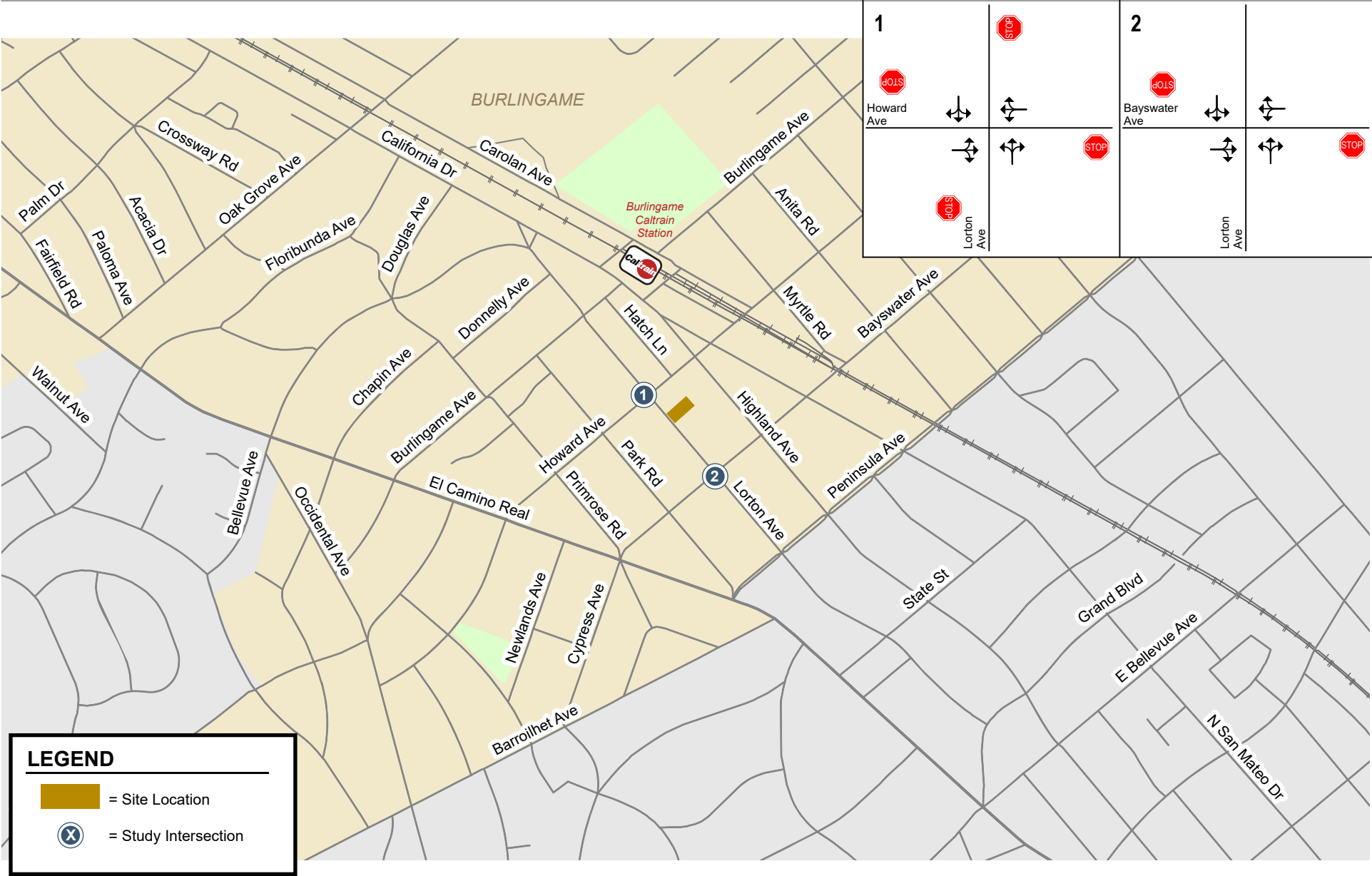


Figure 5
Existing Intersection Lane Configurations

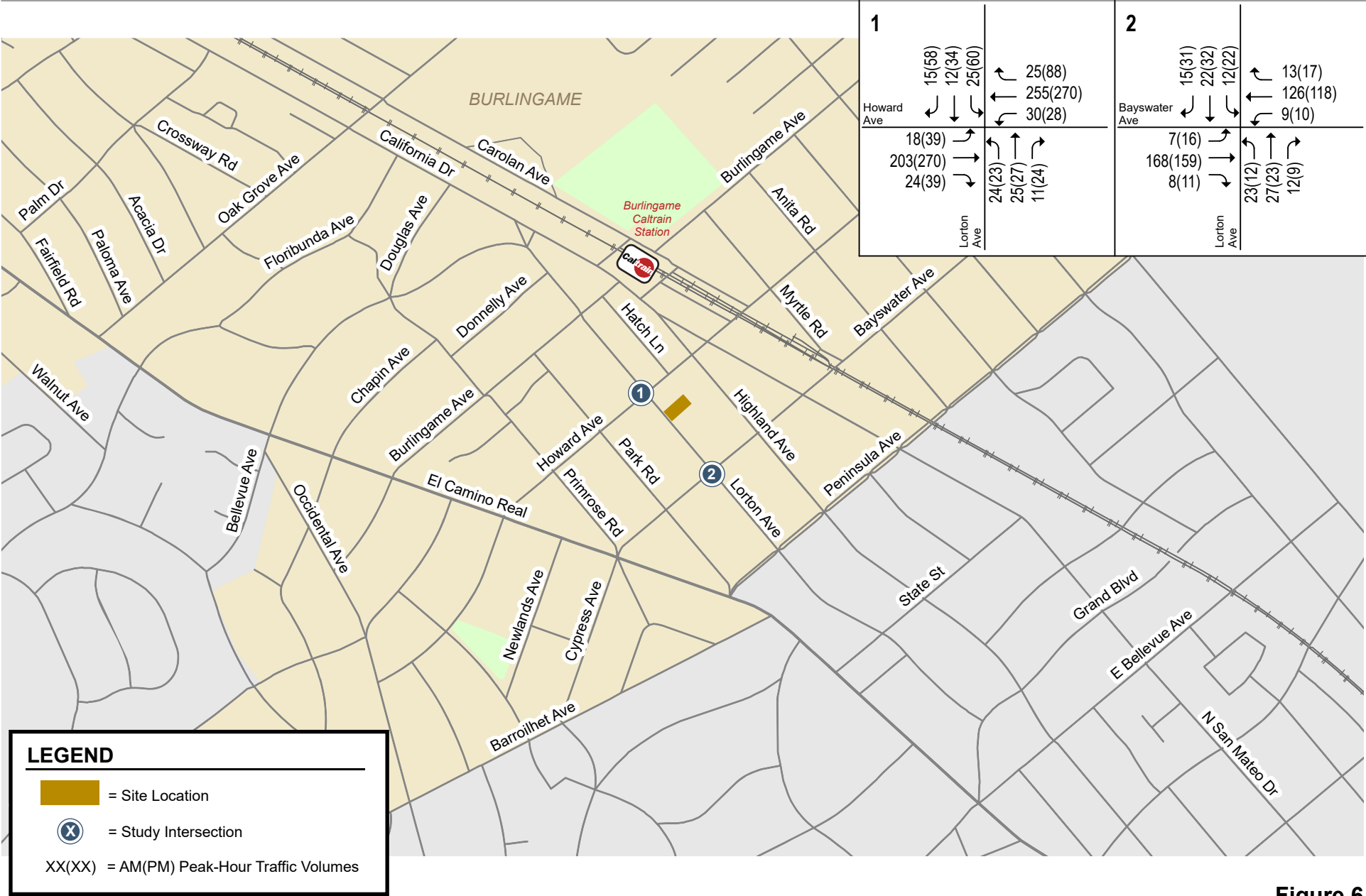


Figure 6
Existing Traffic Volumes

Existing Intersection Levels of Service

The results of the analysis show that both the unsignalized study intersections currently operate at LOS A or LOS B during the AM and PM peak hours (see Table 3). This indicates that vehicles at the stop-controlled approaches experience only minor delays.

The intersection level of service calculation sheets are included in Appendix C. A tabular summary of existing traffic volumes at each study intersection is contained in Appendix E.

Table 3
Existing Intersection Levels of Service

Study Number	Intersection	Count Date	Traffic Control	Peak Hour	Existing Conditions	
					Avg. Delay (sec.)	LOS
1	Lorton Avenue and Howard Avenue	01/10/19	AWSC ¹	AM	9.8	A
		01/10/19		PM	12.6	B
2	Lorton Avenue and Bayswater Avenue	03/28/18	TWSC ²	AM	11.6	B
		03/28/18		PM	11.5	B

Notes:
 AWSC = All-Way Stop Control
 TWSC = Two-Way Stop Control
¹ Average delay for an all-way stop controlled intersection is reported for the entire intersection.
² Average delay for a two-way stop controlled intersection is reported for the worst stop-controlled approach.

Observed Existing Traffic Conditions

Traffic conditions in the field were observed to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions. The study intersections nearest to the project site operate adequately during the AM and PM peak hours of traffic, and the level of service analysis accurately reflects existing traffic conditions observed in the field.

3. Background Conditions

This chapter describes background traffic conditions. Background conditions are defined as conditions within the next 3-5 years (a horizon year of 2021-2023) just prior to completion/occupancy of the proposed development. Traffic volumes for background conditions comprise existing traffic volumes plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Roadway Network and Traffic Volumes

It is assumed in this analysis that the transportation network under background conditions, including roadways and intersection lane configurations, would be the same as that described under existing conditions at all study intersections

Background traffic volumes for the study intersections were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects in the area. A list of approved developments was obtained from the City of Burlingame. Trip generation estimates for the approved projects were based on their respective traffic study, if available. For small projects that did not require a traffic study, trips were estimated based on ITE trip rates. The estimated trips from the approved projects were distributed and assigned throughout the study area based on the trip distribution assumptions present in the traffic studies or based on knowledge of travel patterns in the study area. The approved background project trips are shown on Figure 7. Background peak hour traffic volumes are shown on Figure 8. The approved developments list from the City is included in Appendix B.

Background Intersection Levels of Service

Table 4 shows that both of the study intersections would continue to operate at acceptable levels of service (LOS B or better) during both the AM and PM peak hours under background conditions. This indicates that, under background conditions, vehicles at the stop-controlled approaches would continue to experience only minor delays.

The intersection level of service calculation sheets are provided in Appendix C. A tabular summary of approved trips and background traffic volumes at each study intersection is contained in Appendix E.

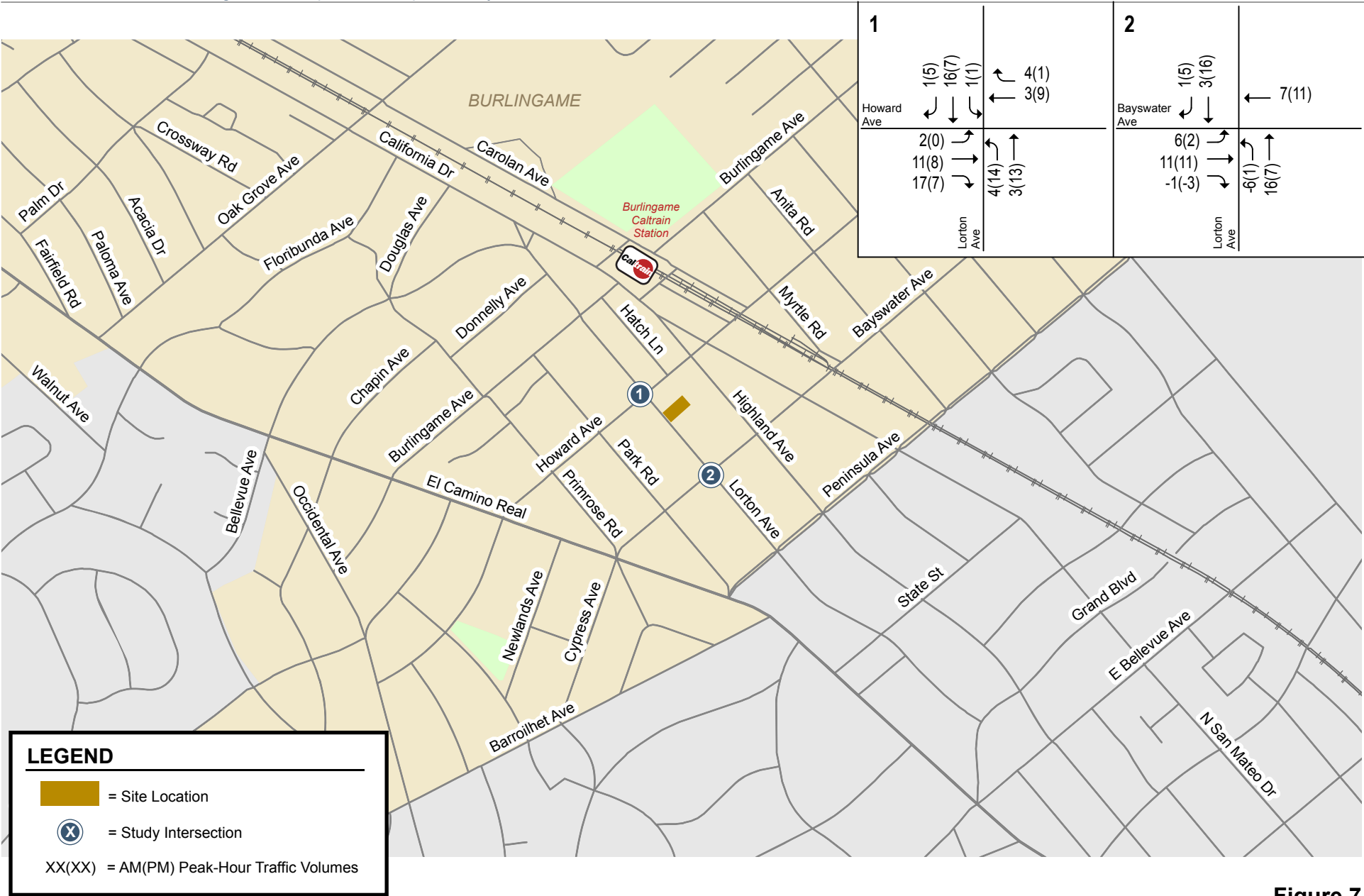


Figure 7
Approved Background Project Trips

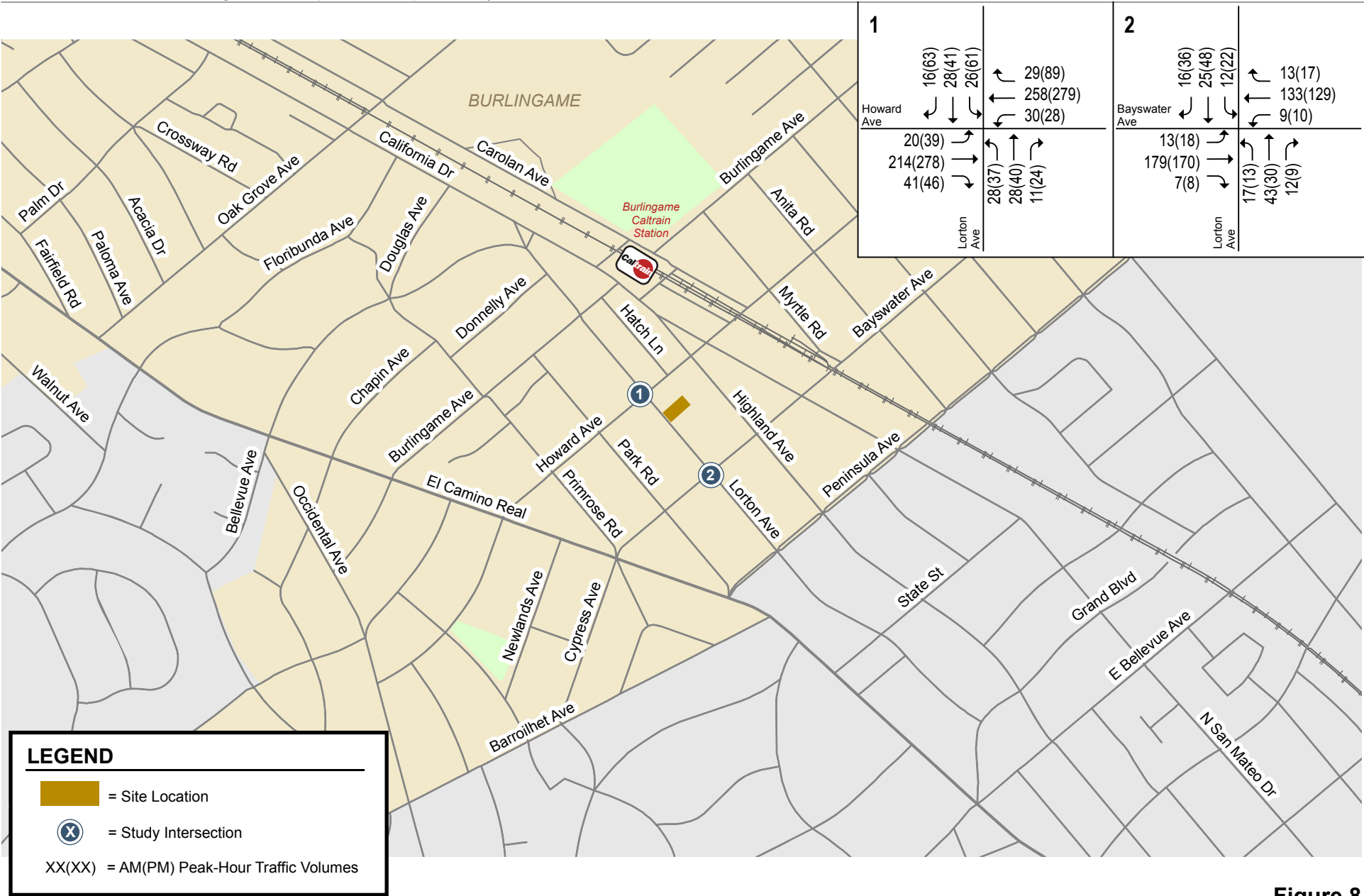


Figure 8
Background Traffic Volumes

Table 4
Background Intersection Levels of Service

Study Number	Intersection	Traffic Control	Peak Hour	Existing		Background	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Lorton Avenue and Howard Avenue	AWSC ¹	AM	9.8	A	10.2	B
			PM	12.6	B	13.6	B
2	Lorton Avenue and Bayswater Avenue	TWSC ²	AM	11.6	B	12.1	B
			PM	11.5	B	12.0	B

Notes:

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

¹ Average delay for an all-way stop controlled intersection is reported for the entire intersection.

² Average delay for a two-way stop controlled intersection is reported for the worst stop-controlled approach.

4. Project Conditions

This chapter describes traffic conditions with the project and includes: (1) the method by which project traffic is estimated and (2) a level of service summary. Existing plus project conditions are represented by existing traffic conditions with the addition of traffic generated by the project. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. Project conditions are represented by background traffic conditions with the addition of traffic generated by the project.

Roadway Network

It is assumed in this analysis that the transportation network under project conditions would be the same as the background transportation network.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed residential development was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic expected to be produced by many types of land uses. The research is published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 10th Edition* (2017). Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates obtained from the ITE Trip Generation Manual, 10th Edition. The average trip generation rates for Multi-Family Housing Mid-Rise (Land Use 221) was applied to the project. Mid-rise multifamily housing is defined as apartments located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Based on the size of the project, the proposed development would generate a total of 103 gross daily vehicle trips, with 7 gross trips occurring during the AM peak hour and 8 gross trips occurring during the PM peak hour (see Table 5).

Trips being generated by the existing four homes on the site can be subtracted from the project trip estimates. The rates published for Multi-Family Housing Low-Rise (Land Use 220) were used to estimate the trips that are being generated by the existing homes. Low-rise multifamily housing is defined as condominiums located within the same building with at least three other dwelling units and

that have one or two levels (floors). Based on the ITE trip generation rates, the homes are generating 2 outbound trips during the AM peak hour, and 2 inbound trips during the PM peak hour.

Trip Reductions

A transit trip reduction of 10 percent was applied to the peak hour trip generation estimates to both the existing and proposed project trips. The reduction is based on the project's proximity to the Burlingame Trolley service and the Burlingame Caltrain Station. The project site is located one quarter mile south of the Burlingame Caltrain Station, which also serves the Burlingame Trolley.

Net Project Trips

After applying the trip reductions, the project is estimated to generate 67 net new daily vehicle trips, with 4 net new trips (2 inbound and 2 outbound) during the AM peak hour and 5 net new trips (2 inbound and 3 outbound) during the PM peak hour (See Table 5).

Table 5
Project Trip Generation Estimates

Land Use	Size	Unit	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Uses												
Multi-Family Housing ¹	19	DU	5.44	103	0.36	2	5	7	0.44	5	3	8
Proximity to Transit Trip Reduction (10%) ³				(10)		(0)	(1)	(1)		(1)	(0)	(1)
Subtotal				93		2	4	6		4	3	7
Existing Uses												
Low-Rise Housing ²	4	DU	7.32	29	0.46	0	2	2	0.56	2	0	2
Proximity to Transit Trip Reduction (10%) ³				(3)		0	0	0		0	0	0
Subtotal				26		0	2	2		2	0	2
Total Project Trips				67		2	2	4		2	3	5
Notes:												
DU = Dwelling Units												
¹ Multifamily Housing (Mid-Rise) (Land Use 221) average rates published in ITE's Trip Generation Manual, 10th Edition, 2017.												
² Multifamily Housing (Low-Rise) (Land Use 220) average rates published in ITE's Trip Generation Manual, 10th Edition, 2017.												
³ A 10% trip reduction was applied given the project's proximity to the Burlingame Caltrain Station (within 1/4 mile).												

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern.

Figure 9 show the trip distribution pattern and trip assignment for the proposed project.

Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 10.

Existing Plus Project Intersection Analysis

The results of the analysis show that all the unsignalized study intersections currently operate at LOS A or LOS B during the AM and PM peak hours would continue to operate at LOS B or better during both peak hours (see Table 6). This indicates that, with the addition of project traffic under existing conditions, vehicles at the stop-controlled approaches are expected to continue to experience only minor delay.

The intersection level of service calculation sheets are provided in Appendix C. Traffic volumes for all components of traffic are tabulated in Appendix E.

Table 6
Existing Plus Project Intersection Levels of Service

Study Number	Intersection	Traffic Control	Peak Hour	Existing Conditions			
				No Project		With Project	
				Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
1	Lorton Avenue and Howard Avenue	AWSC ¹	AM	9.8	A	9.8	A
			PM	12.6	B	12.7	B
2	Lorton Avenue and Bayswater Avenue	TWSC ²	AM	11.6	B	11.6	B
			PM	11.5	B	11.6	B

Note:
 AWSC = All-Way Stop Control
 TWSC = Two-Way Stop Control
¹ Average delay for an all-way stop controlled intersection is reported for the entire intersection.
² Average delay for a two-way stop controlled intersection is reported for the worst stop-controlled approach.

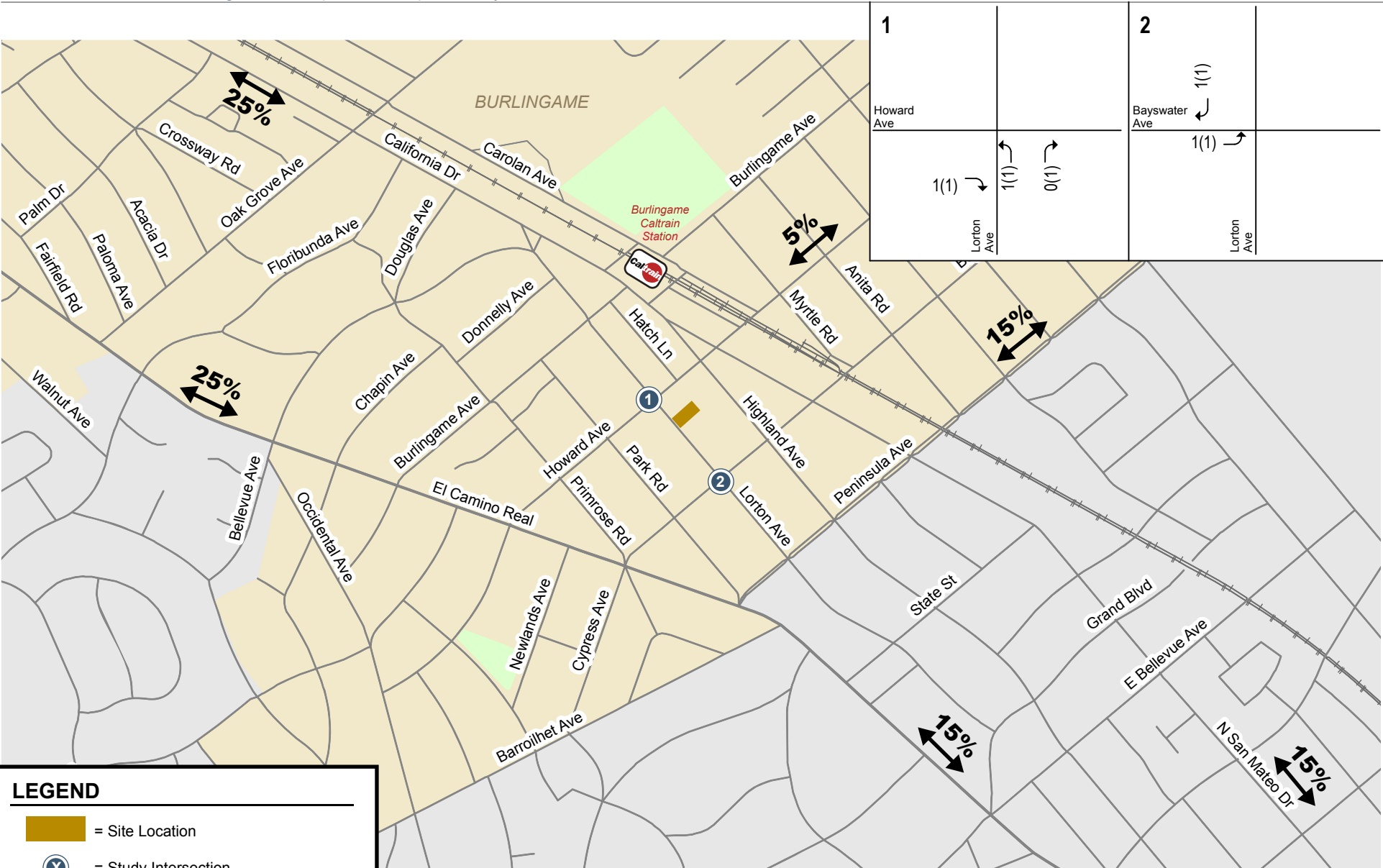


Figure 9
Project Trip Distribution and Assignment

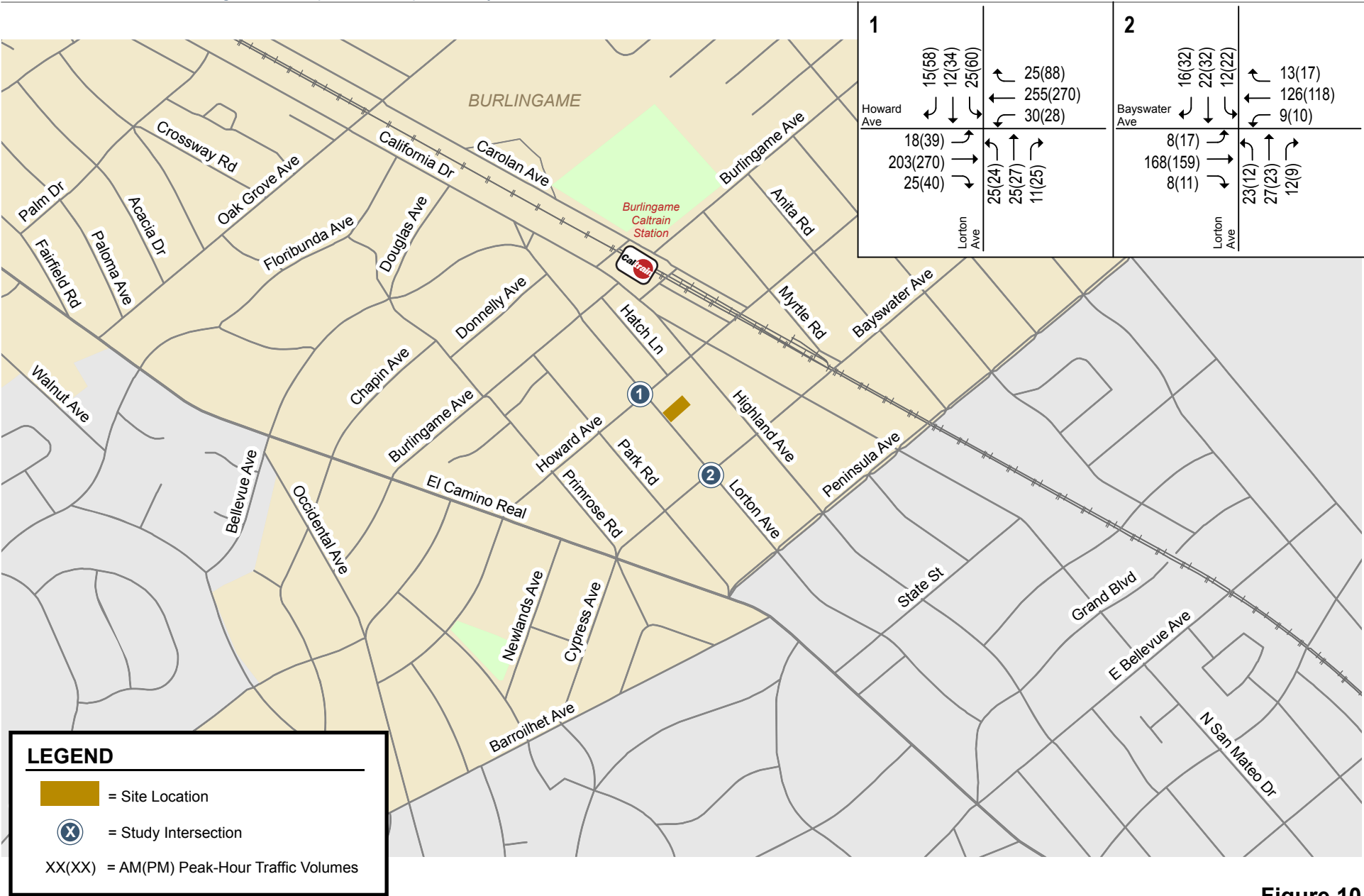


Figure 10
Existing Plus Project Traffic Volumes

Project Condition Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to background traffic volumes to obtain project condition traffic volumes. The project condition traffic volumes at the study intersections are shown on Figure 11.

Project Condition Intersection Analysis

All the stop-controlled approaches of the unsignalized study intersections would continue to operate at LOS B or better during both peak hours (see Table 7). This indicates that, with the addition of project traffic under background conditions, vehicles at the stop-controlled approaches are expected continue to experience only minor delays.

Intersection level of service calculation sheets are provided in Appendix C. Traffic volumes for all components of traffic are tabulated in Appendix E.

Table 7
Background Plus Project Intersection Levels of Service

Study Number	Intersection	Traffic Control	Peak Hour	Existing Conditions		Background Conditions			
				No Project		No Project		With Project	
				Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
1	Lorton Avenue and Howard Avenue	AWSC ¹	AM	9.8	A	10.2	B	10.2	B
			PM	12.6	B	13.6	B	13.7	B
2	Lorton Avenue and Bayswater Avenue	TWSC ²	AM	11.6	B	12.1	B	12.1	B
			PM	11.5	B	12.0	B	12.1	B

Note:
 AWSC = All-Way Stop Control
 TWSC = Two-Way Stop Control
¹ Average delay for an all-way stop controlled intersection is reported for the entire intersection.
² Average delay for a two-way stop controlled intersection is reported for the worst stop-controlled approach.

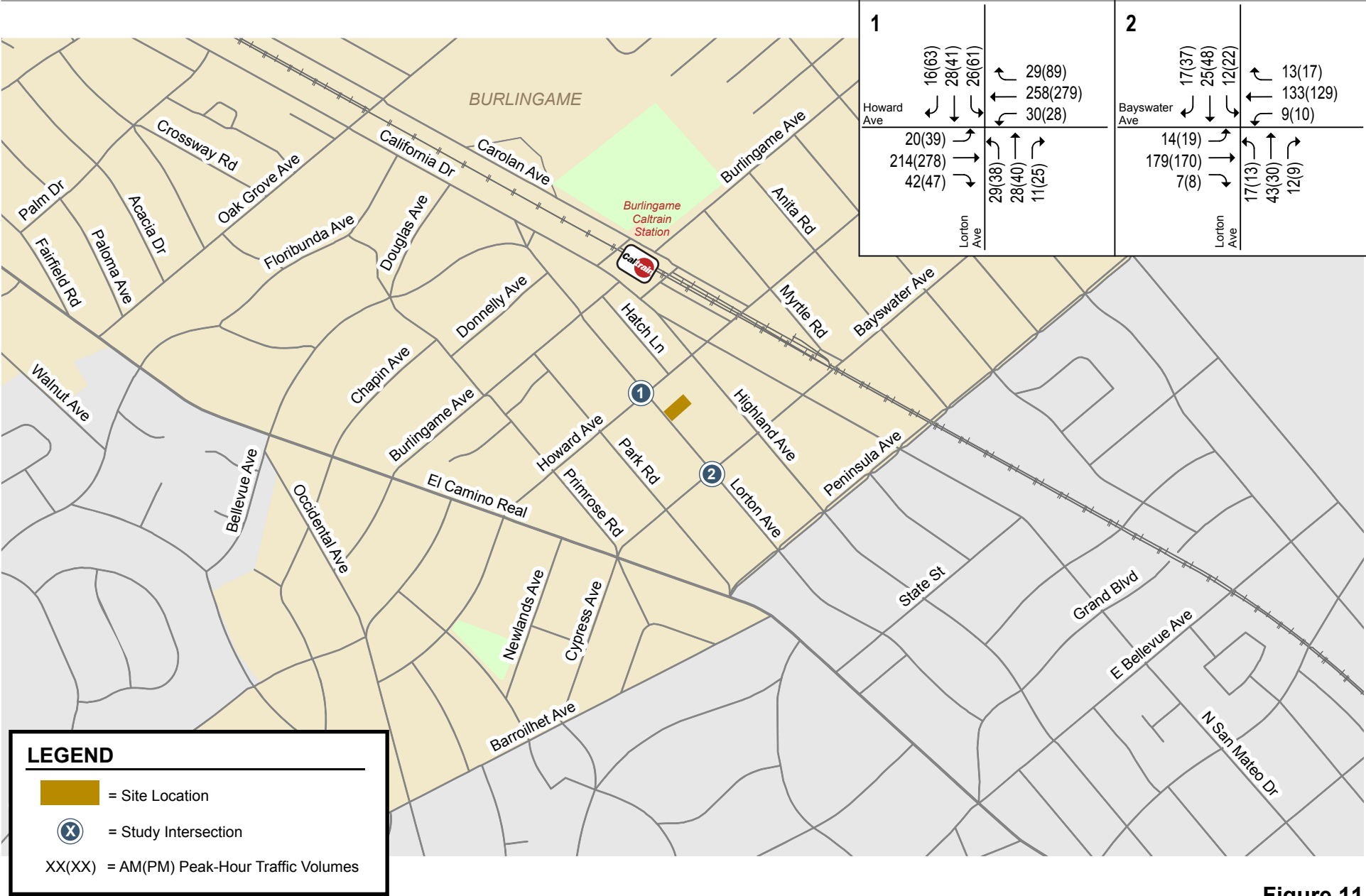


Figure 11
Background Plus Project Traffic Volumes

5. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions with the proposed project. Cumulative conditions represent future traffic conditions with expected growth in the area. The expected future traffic growth was estimated by applying an annual growth factor to the existing counts over 10 years and then adding trips from approved developments. Thus, cumulative conditions reflect a horizon year of 2029.

Roadway Network and Traffic Volumes

The intersection lane configurations under cumulative conditions were assumed to be the same as described under background conditions.

Based on the C/CAG travel demand model, as well as previously completed traffic studies within the City of Burlingame, the traffic volumes under cumulative no project conditions for the study intersections were estimated by applying a 1.0 percent annual growth rate to the existing traffic counts and adding traffic from approved developments. The growth rate was applied to the study intersections through the year 2029 (ten-year horizon). Project trips were then added to the growth estimates to create the cumulative conditions volumes (see Figure 12).

Intersection Levels of Service Analysis

The results of the level of service analysis under cumulative conditions show that all the stop-controlled approaches of the unsignalized study intersections would operate at LOS B or C during both peak hours (see Table 8). This indicates that, even with the addition of project traffic and general future traffic growth in the area under cumulative conditions, vehicles at the stop-controlled approaches are expected to experience only moderate delays.

Level of service calculation sheets are included in Appendix C. Traffic volumes for cumulative conditions are tabulated in Appendix E.

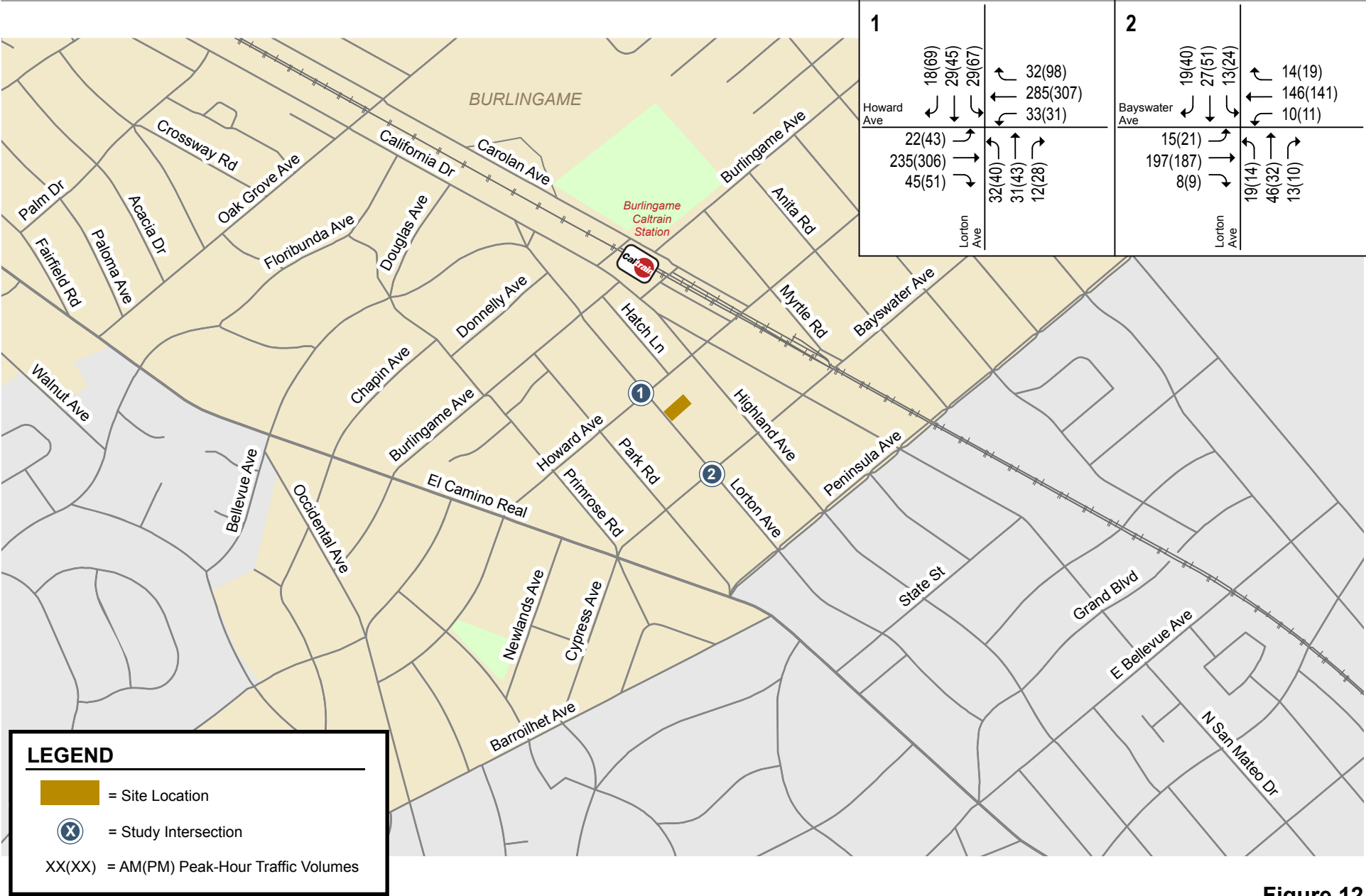


Figure 12
Cumulative Plus Project Traffic Volumes

Table 8
Cumulative Levels of Service Summary

Study Number	Intersection	Traffic Control	Peak Hour	Existing Conditions		Cumulative Conditions			
				No Project		No Project		With Project	
				Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS	Avg Delay (sec.)	LOS
1	Lorton Avenue and Howard Avenue	AWSC ¹	AM	9.8	A	10.8	B	10.8	B
			PM	12.6	B	16.0	C	16.1	C
2	Lorton Avenue and Bayswater Avenue	TWSC ²	AM	11.6	B	12.6	B	12.6	B
			PM	11.5	B	12.5	B	12.6	B

Note:

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

¹ Average delay for an all-way stop controlled intersection is reported for the entire intersection.

² Average delay for a two-way stop controlled intersection is reported for the worst stop-controlled approach.

6. Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Project site access and circulation
- Truck access and circulation
- Parking analysis
- Signal warrant analysis
- Potential impacts to pedestrian, bicycle, and transit facilities

Unlike the level of service impact methodology, most of the analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by traffic engineering professionals. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Site Access and On-Site Circulation

The site access and on-site circulation evaluation is based on the March 15, 2019 site plan prepared by Architects Orange (see Figure 2). Site access was evaluated to determine the adequacy of the site's driveway with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway Design

Vehicular access to the project site would be provided via a single full-access driveway on Lorton Avenue. The project driveway is shown to be 12 feet wide and would provide access to the residential parking garage with 17 stalls. The City of Burlingame Zoning Code (25.70.025) requires a minimum of 12-foot driveway with not more than 30 vehicle spaces. Therefore, the project would meet the City's minimum width requirement for a two-way driveway. The driveway would not be wide enough for two vehicles to pass each other. Therefore, a vehicle entering would have to wait on Lorton Avenue if another vehicle was exiting. This would not be a problem because of the low volume and speed of traffic on Lorton Avenue.

Nearby Driveways

The location of the project driveway was also reviewed with respect to other driveways in the vicinity of the project site. There is a driveway immediately adjacent to the project driveway and a driveway across the street. Both driveways serve small apartment buildings. Because all driveways would have low volume, no conflicts are expected to occur.

The intersections along Lorton Avenue at Howard Avenue and Bayswater Avenue are located approximately 250 feet north and 300 south of the project driveway, respectively. While the project driveway would be somewhat close to the Lorton Avenue/Howard Avenue intersection, vehicle queues at the intersection are not expected to back-up to the driveway and block access to the project site.

Sight Distance

There are no existing trees or visual obstructions along the project frontage that could obscure sight distance at the project driveway. The project access points should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Lorton Avenue. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Adequate sight distance (sight distance triangles) should be provided at the project driveway in accordance with Caltrans standards. There is a driveway to an apartment building immediately adjacent to the project driveway. This driveway provides a clear sight zone to the south of the site. Altogether, there is sight distance of about 100 feet in each direction from the parking garage entrance. This distance is adequate for a downtown setting. It is expected that vehicles are traveling slowly on Lorton Avenue. The edge of the proposed building would be five feet from the sidewalk, which would not allow vehicles exiting the garage to see pedestrians on the sidewalk and vice versa. Appropriate visible warning signs and audible warning signals should also be considered at the parking garage entrance to alert pedestrians and bicyclists of vehicles exiting the garage.

Project Driveway Operations

The project-generated gross trips that are estimated to occur at the project driveway are 2 inbound trips and 4 outbound trips during the AM peak hour, and 4 inbound trips and 3 outbound trips during the PM peak hour. Based on the relatively low traffic volumes near the project site and observations of existing traffic operations along Lorton Avenue, vehicle queues should rarely exceed one vehicle in length during the peak hours.

The project driveway would provide full-access, allowing right and left inbound and outbound turns to and from Lorton Avenue. Outbound left turns from the project driveway would require vehicles to wait for gaps in traffic in both the northbound and southbound directions, while inbound left turns would require vehicles to wait for a gap in the northbound traffic flow only. Given that Lorton Avenue consists of only one lane in each direction with no left-turn pockets, inbound left turns at the project driveway would be made from the through lane. Thus, there would be interruptions to the through traffic flow while left-turn vehicles wait for a gap in the on-coming traffic flow, albeit momentary. This condition is standard in downtown areas such as this.

A level of service analysis was conducted for left-turns at the project driveways to ensure that vehicles would operate without excessive delays or queues (see Table 9). Under all scenarios with project traffic, the project driveway would operate at LOS A or better during the AM and PM peak hours. This indicates that left-turning vehicles at the project driveway would experience minor delays and are expected to have a minimal effect on operations at the adjacent intersections.

Table 9
Project Driveway Levels of Service Summary

Study Number	Intersection	Movement	Peak Hour	Existing with Project		Background with Project		Cumulative with Project	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
3	Project Driveway and Lorton Avenue	Inbound Left	AM	7.3	A	7.4	A	7.4	A
			PM	7.4	A	7.4	A	7.4	A
		Outbound Left	AM	8.8	A	9.0	A	9.0	A
			PM	8.9	A	9.0	A	9.1	A

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of Burlingame Zoning Code and generally accepted traffic engineering standards. In general, the proposed site plan would provide vehicle traffic with adequate connectivity through the parking areas. The project would provide 90-degree parking stalls throughout the parking garage. The City's standard minimum width for two-way drive aisles is 24 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the two-way drive aisles with parking available on one side measure 24 feet wide throughout the parking garage, providing adequate access to the parking stalls.

Parking Stall Dimensions

The City of Burlingame Zoning Code does not include standards for mechanical-stack parking systems. The project proposes to use a puzzle stacker system. It is not clear what dimensions of vehicle could be accommodated. The proposed puzzle stackers should be designed and installed to accommodate all typical passenger vehicles, including trucks, SUVs, and vans.

Parking Garage Circulation

The parking garage design shows two parking spaces at the end against the wall. A back-up space has been provided to allow those vehicles to turn around to exit the garage.

Within the parking garage, most of the parking spaces would consist of a mechanical-stack parking system. Comprised of eight (8) parking spaces plus one (1) open space, the vehicle stackers would present an open parking stall, that once occupied would automatically shift downward or rotate, presenting another open stall. This system would also allow residents to retrieve their vehicle without the need to move the other accompanying vehicles. Based on the project site plan, the parking garage shows adequate circulation.

Truck Access and Circulation

The project plans do not show a formal loading/unloading space, and the City code does not require one. Therefore, all residential loading and unloading activities, as well as truck deliveries, are expected to occur curbside along Lorton Avenue. Currently, Lorton Avenue along the project frontage provides metered on-street parking between 8 AM to 6 PM.

Garbage Collection

The site plan shows the trash room to be located in the northeast corner on the ground floor. Garbage collection activities for the project are not expected to occur on-site due to height and access

limitations. Therefore, it is assumed that trash bins would be wheeled out to the curb along Lorton Avenue on designated garbage collection days. Given that on-street parking is permitted along Lorton Avenue, signs prohibiting parking during garbage pickup hours should be placed adjacent to the building entrance. The trash bins also should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak hour traffic conditions or reduce on-street parking.

Emergency Vehicle Access

Emergency vehicles access (EVA) would be provided from Lorton Avenue. Smaller emergency vehicles also would be able to access the parking garage.

Parking Supply

The City of Burlingame Zoning Code (Section 25.70.032) states that residential uses within the Burlingame Downtown Specific Plan Area are to provide parking as follows: 1.0 parking space per studio and one-bedroom unit, 1.5 parking spaces per two-bedroom unit and 2 parking spaces per three-bedroom unit. The project as proposed would construct 11 one-bedroom units, 7 two-bedroom units and one three-bedroom unit. Based on the City's parking requirements and the current project description, the project would be required to provide 24 parking spaces.

Based on the project site plan dated March 15, 2019, the parking garage would provide a total of 17 parking spaces; therefore, the proposed parking supply would not meet the City's Parking Code. The project should provide seven more parking spaces to meet the City's requirements. It is assumed that residential guests would utilize the public parking in the downtown area, including the on-street parking along the project frontage.

Per the California Building Code (CBC) Table 11B-6, one van accessible space is required for projects with 1 to 25 parking spaces. The plan shows one accessible space located adjacent to the garage entrance/exit. Thus, the project adheres to the CBC accessible parking provisions.

The City of Burlingame municipal code does not include standards for bicycle parking. No bicycle parking facilities are shown on the site plan. The project should add long-term bicycle parking spaces for residents and a bike rack for short-term visitor parking. Based on GreenTRIP guidelines, the project should provide at least one space per unit and one guest parking space for each 5 units. Therefore, the project should include 19 long term bicycle parking spaces and four short term spaces.

Signal Warrant Analysis

Signal warrant checks (California *MUTCD*, Section 4, Warrant 3) were performed for the unsignalized study intersections. The results of the signal warrant analysis are described and summarized below. Signal warrant worksheets and threshold tables are included in Appendix D.

Based on their peak-hour traffic volumes, the study intersections would not warrant signalization under any traffic scenario without and with the project.

Evaluation of The Village at Burlingame TIA Study Intersections

Twelve signalized intersections and four unsignalized intersections (including two 128 Lorton Avenue study intersections) were studied in the Village at Burlingame project. Based on the intersection level of service analysis study from the Village at Burlingame project, all but one of the study intersections would operate at an acceptable LOS D or better during both the AM and PM peak hours. The California Drive/Broadway intersection would operate at an unacceptable level of service (LOS E) during the AM

peak hour under all traffic scenarios. The 128 Lorton Avenue project would not add any trips to the intersections at Carolan Avenue/Broadway, Carolan Avenue/Oak Grove Avenue, California Drive/Bayswater Avenue and California Drive/Peninsula Avenue. The proposed project would add only one outbound trip during the PM peak hour to the intersections at California Driveway/Broadway, California Drive/Oak Grove Avenue, California Drive/Burlingame Avenue and California Drive/Howard Avenue. The 128 Lorton Avenue project would add a maximum of two trips (one inbound and one outbound trip) to the other intersections during the AM and PM peak hours. The addition of such a small number of trips would not change the operating conditions of any of the intersections.

Pedestrian, Bicycle, and Transit Analysis

All new development projects in the City of Burlingame should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve Burlingame's mobility goals. In addition, the adopted Bicycle Transportation Plan establishes goals and policies to make bicycling a daily part of life in Burlingame. The Transportation Plan includes designated bike lanes where possible, as well as designated routes for both local and regional trips, to provide a complete connection through Burlingame. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). The project is expected to increase the number of pedestrians using the sidewalks and crosswalks. Project plans show existing sidewalks of approximately 5 feet in width along its Lorton Avenue frontage. The overall network of sidewalks and crosswalks in the vicinity of the project site has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest. Note that the project would not remove any pedestrian facilities, nor would it conflict with any adopted plans or policies for new pedestrian facilities.

Bicycle Facilities

There are some bike facilities in the immediate vicinity of the project site (see Chapter 2 for details).

Bicycles are also allowed on Caltrain and BART. The Burlingame Station is served by Caltrain (approximately a quarter mile north of the project site), while the Millbrae Station is served by Caltrain and BART (located about three miles from the project site). There are bicycle racks and bicycle lockers available at both transit stations.

Residents cycling to and from the site to the Burlingame Caltrain station could use Burlingame Avenue and Lorton Avenue. Although neither street is a designated bike route, due to low speed limit and traffic volume, both streets are conducive to bicycle travel.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities.

Transit Services

The project study area is well-served by SamTrans, Caltrain, and the Burlingame Trolley. The study area is served directly by two express bus route and two shuttle routes. The project would generate about 7 person-trips during the AM peak hour and 8 person-trips during the PM peak hour. Given the project site's proximity to transit services, it could be expected that a portion (10%) of residents' trips would be made by transit. Assuming up to 10% of the total trips are made by transit, that translates into

a maximum of about 1 new transit rider during the peak hours. It is assumed that the existing transit services have sufficient capacity to accommodate this minor increase in ridership.

The project would not remove any transit facilities, nor would it conflict with any adopted plans or policies associated with new transit facilities.

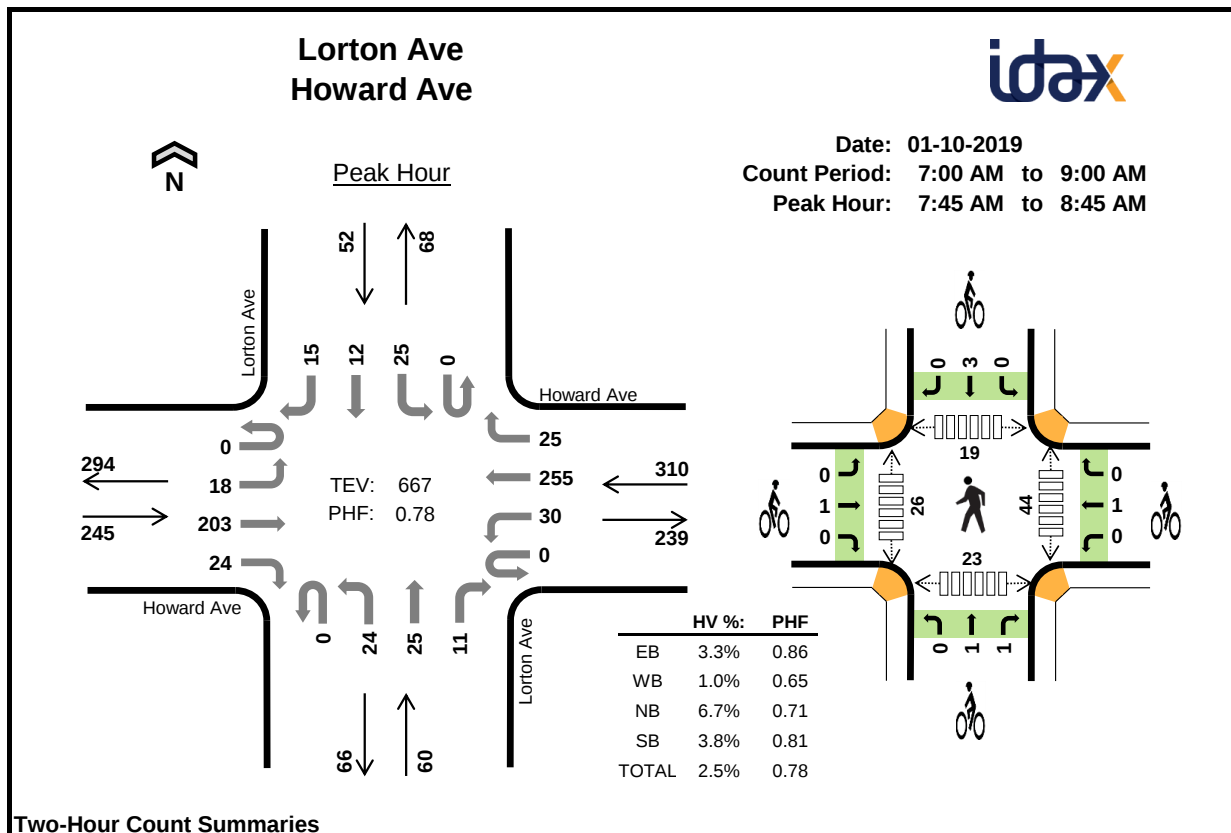
Future Transit Services

As previously mentioned, the PCEP is expected to increase service by up to six Caltrain trains per peak hour per direction by 2020. With the proposed electrification project, it is expected that the transit ridership at the Burlingame Station will increase. Given the nearby Caltrain station, development of this residential project would result in new transit riders, thus reducing vehicle trips. The Burlingame Station is within walking distance (approximately a quarter mile north of the project site). Bicycling to the site would also be a suitable option, given that the local streets between the Burlingame Station and the project site consist of low speed limits and traffic volumes which make them conducive to bicycle travel.

128 Lorton Avenue TIA
Technical Appendices

Appendix A

Traffic Counts

**Two-Hour Count Summaries**

Interval Start		Howard Ave				Howard Ave				Lorton Ave				Lorton Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	5	25	1	0	1	30	8	0	1	5	3	0	2	5	3	89	0
7:15 AM		0	4	29	2	0	0	31	4	0	2	8	2	0	5	3	3	93	0
7:30 AM		0	7	47	0	0	5	46	8	0	1	6	2	0	5	2	6	135	0
7:45 AM		0	4	59	5	0	8	100	11	0	8	6	3	0	7	1	3	215	532
8:00 AM		0	5	45	4	0	7	60	2	0	10	7	4	0	6	3	6	159	602
8:15 AM		0	3	60	8	0	9	46	5	0	3	8	1	0	5	2	3	153	662
8:30 AM		0	6	39	7	0	6	49	7	0	3	4	3	0	7	6	3	140	667
8:45 AM		0	8	38	6	0	7	53	11	0	6	6	3	0	7	6	10	161	613
Count Total		0	42	342	33	0	43	415	56	0	34	50	21	0	44	28	37	1,145	0
Peak Hour	All	0	18	203	24	0	30	255	25	0	24	25	11	0	25	12	15	667	0
	HV	0	1	6	1	0	0	3	0	0	2	2	0	0	0	0	2	17	0
	HV%	-	6%	3%	4%	-	0%	1%	0%	-	8%	8%	0%	-	0%	0%	13%	3%	0

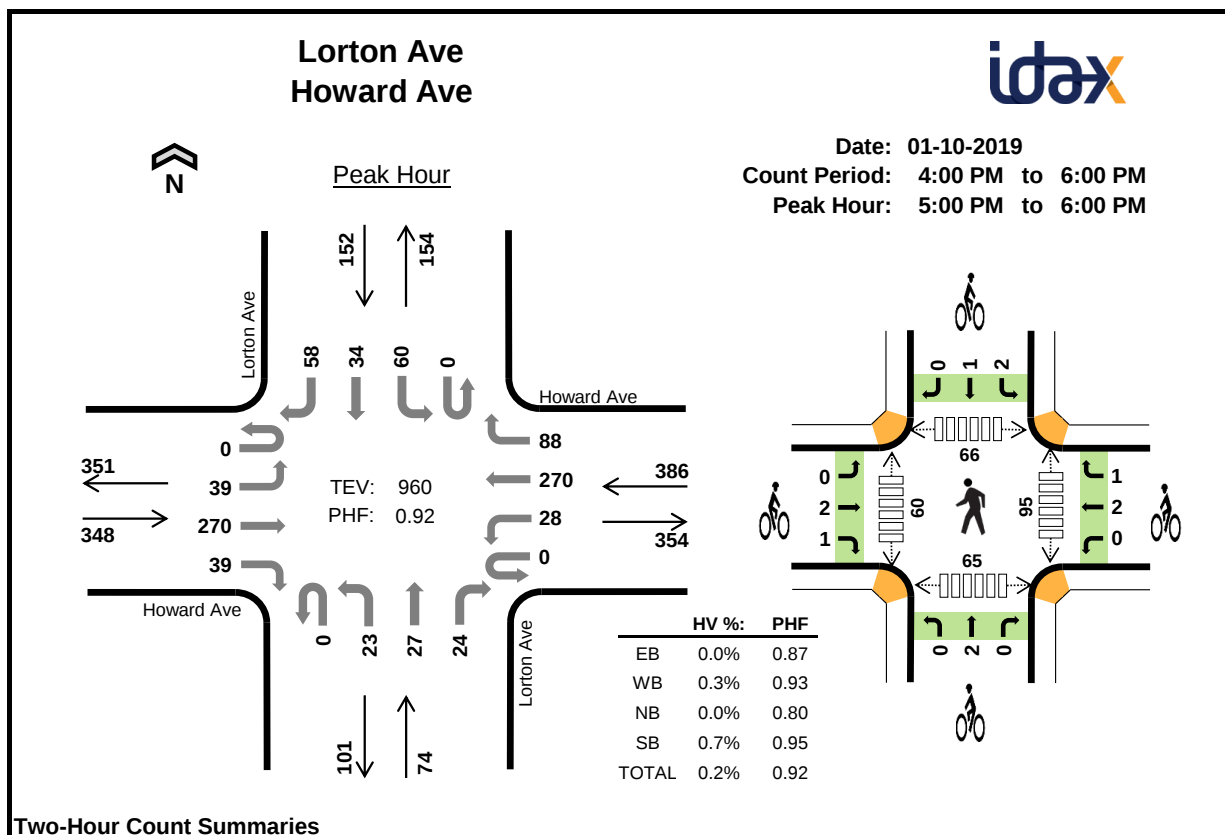
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	6	2	1	1	10
7:15 AM	0	2	0	1	3	0	0	0	0	0	9	3	2	1	15
7:30 AM	0	2	0	1	3	2	2	2	0	6	6	1	7	4	18
7:45 AM	2	0	1	1	4	0	0	0	1	1	5	6	4	3	18
8:00 AM	3	1	1	1	6	0	1	1	0	2	8	2	1	2	13
8:15 AM	1	2	0	0	3	0	0	0	0	0	22	4	6	11	43
8:30 AM	2	0	2	0	4	1	0	1	2	4	9	14	8	7	38
8:45 AM	1	3	0	2	6	0	0	1	0	1	17	3	10	8	38
Count Total	9	10	4	6	29	3	3	5	3	14	82	35	39	37	193
Peak Hour	8	3	4	2	17	1	1	2	3	7	44	26	19	23	112

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Howard Ave				Howard Ave				Lorton Ave				Lorton Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	3	
7:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	3	
7:45 AM	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1	4	
8:00 AM	0	0	3	0	0	0	1	0	0	1	0	0	0	0	0	1	6	
8:15 AM	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	3	
8:30 AM	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	4	
8:45 AM	0	0	1	0	0	1	1	1	0	0	0	0	0	0	1	1	6	
Count Total	0	1	7	1	0	1	6	3	0	2	2	0	0	0	1	5	29	
Peak Hour	0	1	6	1	0	0	3	0	0	2	2	0	0	0	0	2	17	

Two-Hour Count Summaries - Bikes																	
Interval Start	Howard Ave			Howard Ave			Lorton Ave			Lorton Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	2	0	0	2	0	0	1	1	0	0	0	6	0			
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	7			
8:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	2	9			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	9			
8:30 AM	0	1	0	0	0	0	0	0	1	0	2	0	4	7			
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	7			
Count Total	0	3	0	0	3	0	0	3	2	0	3	0	14	0			
Peak Hour	0	1	0	0	1	0	0	1	1	0	3	0	7	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Howard Ave				Howard Ave				Lorton Ave				Lorton Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
	4:00 PM	0	4	67	17	0	2	59	7	0	8	5	3	0	13	9	10	204	0
	4:15 PM	0	5	59	7	0	6	69	15	0	7	9	3	0	9	8	7	204	0
	4:30 PM	0	8	77	6	0	6	80	11	0	8	5	2	0	11	5	9	228	0
	4:45 PM	0	8	66	7	0	8	57	20	0	5	4	5	0	4	10	9	203	839
	5:00 PM	0	8	70	14	0	6	76	16	0	9	7	7	0	14	9	16	252	887
	5:15 PM	0	11	67	3	0	4	63	18	0	4	6	2	0	12	6	15	211	894
	5:30 PM	0	11	79	10	0	7	65	27	0	5	8	9	0	17	9	14	261	927
	5:45 PM	0	9	54	12	0	11	66	27	0	5	6	6	0	17	10	13	236	960
Count Total		0	64	539	76	0	50	535	141	0	51	50	37	0	97	66	93	1,799	0
Peak Hour	All	0	39	270	39	0	28	270	88	0	23	27	24	0	60	34	58	960	0
	HV	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0
	HV%	-	0%	0%	0%	-	0%	0%	0%	-	0%	0%	0%	-	0%	0%	2%	0%	0

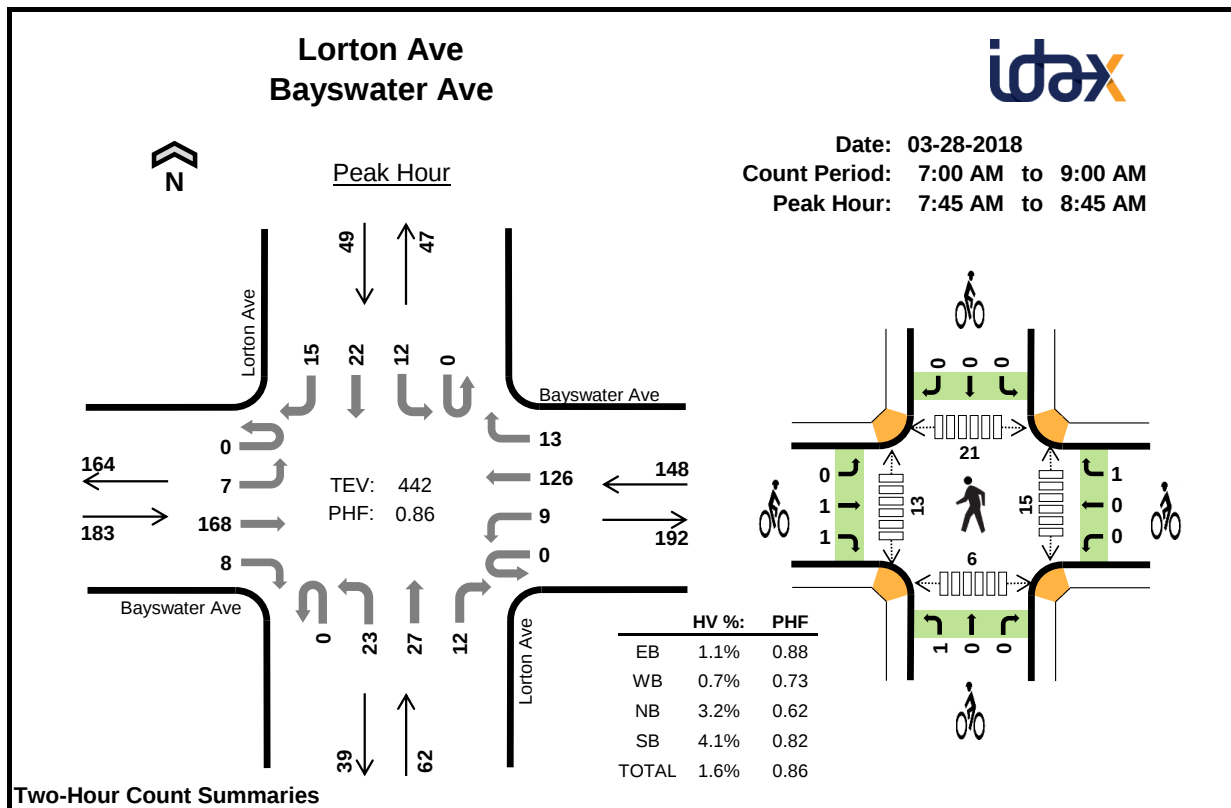
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	20	8	10	15	53
4:15 PM	1	0	0	0	1	0	3	0	0	3	16	9	20	10	55
4:30 PM	0	1	0	0	1	1	2	1	0	4	8	12	19	10	49
4:45 PM	1	0	0	0	1	0	0	1	0	1	18	15	22	10	65
5:00 PM	0	0	0	0	0	1	0	0	0	1	20	17	15	19	71
5:15 PM	0	0	0	0	0	0	1	1	1	3	27	14	22	15	78
5:30 PM	0	1	0	0	1	0	0	1	2	3	24	14	8	8	54
5:45 PM	0	0	0	1	1	2	2	0	0	4	24	15	21	23	83
Count Total	2	2	0	1	5	4	8	4	3	19	157	104	137	110	508
Peak Hour	0	1	0	1	2	3	3	2	3	11	95	60	66	65	286

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Howard Ave				Howard Ave				Lorton Ave				Lorton Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
Count Total	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	5	
Peak Hour	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	

Two-Hour Count Summaries - Bikes																	
Interval Start	Howard Ave			Howard Ave			Lorton Ave			Lorton Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3	0			
4:30 PM	0	1	0	0	2	0	0	1	0	0	0	0	4	0			
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	8			
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	9			
5:15 PM	0	0	0	0	1	0	0	1	0	0	1	0	3	9			
5:30 PM	0	0	0	0	0	0	0	1	0	2	0	0	3	8			
5:45 PM	0	1	1	0	1	1	0	0	0	0	0	0	4	11			
Count Total	0	3	1	0	7	1	0	4	0	2	1	0	19	0			
Peak Hour	0	2	1	0	2	1	0	2	0	2	1	0	11	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries

Interval Start		Bayswater Ave				Bayswater Ave				Lorton Ave				Lorton Ave				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	4	14	2	0	0	15	1	0	0	3	1	0	3	1	1	45	0
7:15 AM		0	4	29	0	0	0	10	3	0	1	4	2	0	2	4	5	64	0
7:30 AM		0	3	39	4	1	2	18	3	0	4	9	2	0	4	2	2	93	0
7:45 AM		0	3	42	3	0	2	46	3	0	5	7	3	0	4	5	6	129	331
8:00 AM		0	1	50	1	0	4	30	4	0	12	11	2	0	3	3	5	126	412
8:15 AM		0	2	36	2	0	1	21	5	0	3	7	5	0	3	6	1	92	440
8:30 AM		0	1	40	2	0	2	29	1	0	3	2	2	0	2	8	3	95	442
8:45 AM		0	10	44	0	0	0	22	2	0	0	7	0	0	6	3	3	97	410
Count Total		0	28	294	14	1	11	191	22	0	28	50	17	0	27	32	26	741	0
Peak Hour	All	0	7	168	8	0	9	126	13	0	23	27	12	0	12	22	15	442	0
	HV	0	0	2	0	0	0	1	0	0	1	1	0	0	0	2	0	7	0
	HV%	-	0%	1%	0%	-	0%	1%	0%	-	4%	4%	0%	-	0%	9%	0%	2%	0

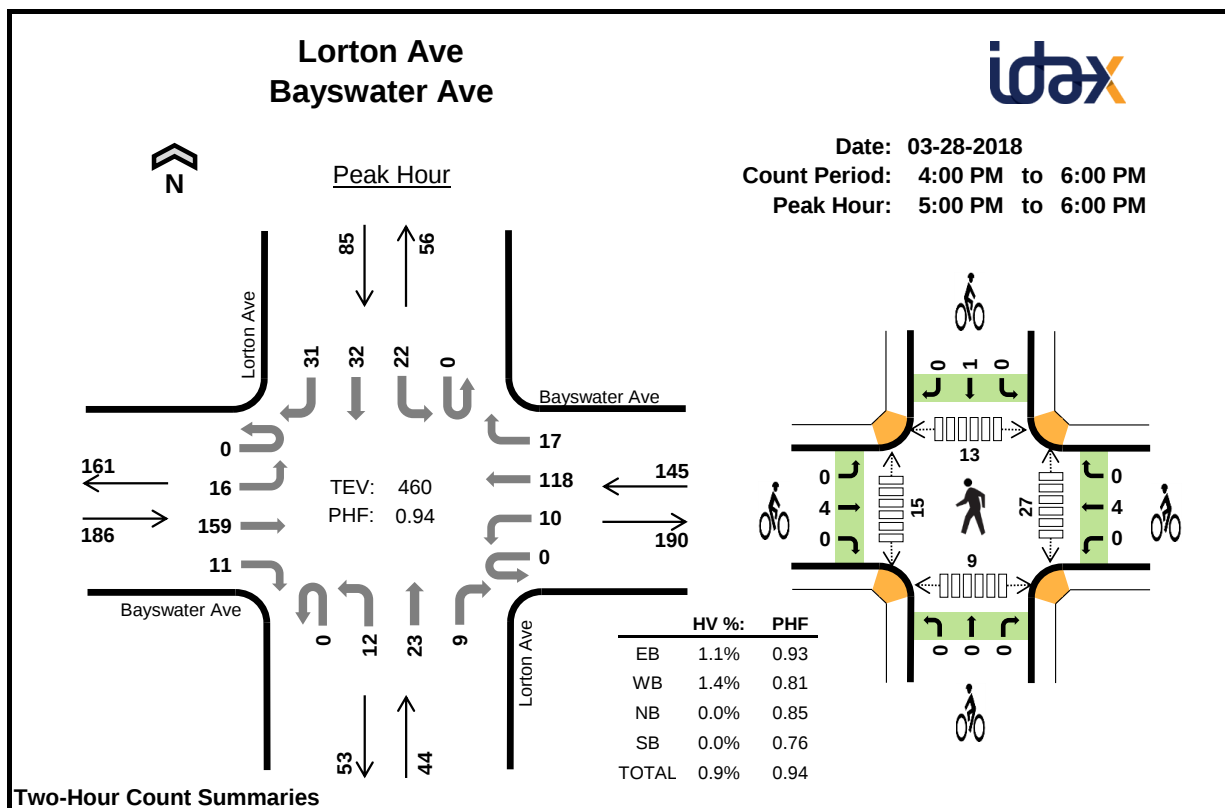
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	0	1	1	0	1	3	2	9	4	2	17
7:15 AM	0	0	1	0	1	0	0	0	0	0	1	3	4	0	8
7:30 AM	0	0	2	1	3	0	0	0	0	0	3	1	7	3	14
7:45 AM	0	0	1	1	2	0	0	0	0	0	1	1	2	0	4
8:00 AM	0	0	1	0	1	0	1	1	0	2	1	2	6	1	10
8:15 AM	1	0	0	0	1	1	0	0	0	1	6	5	7	2	20
8:30 AM	1	1	0	1	3	1	0	0	0	1	7	5	6	3	21
8:45 AM	2	1	0	0	3	0	1	0	0	1	7	1	3	1	12
Count Total	4	2	5	3	14	3	3	1	1	8	28	27	39	12	106
Peak Hour	2	1	2	2	7	2	1	1	0	4	15	13	21	6	55

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Bayswater Ave				Bayswater Ave				Lorton Ave				Lorton Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	3	
8:45 AM	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	3	
Count Total	0	1	3	0	0	0	2	0	0	1	4	0	0	0	3	0	14	
Peak Hour	0	0	2	0	0	0	1	0	0	1	1	0	0	0	2	0	7	

Two-Hour Count Summaries - Bikes																	
Interval Start	Bayswater Ave			Bayswater Ave			Lorton Ave			Lorton Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	1	0	1	0	0	0	0	1	0	0	3	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3			
8:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	2	2			
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	3			
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	4			
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	5			
Count Total	0	1	2	0	2	1	1	0	0	1	0	0	8	0			
Peak Hour	0	1	1	0	0	1	1	0	0	0	0	0	4	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Interval Start	Bayswater Ave Eastbound				Bayswater Ave Westbound				Lorton Ave Northbound				Lorton Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	3	51	5	0	2	29	2	0	3	6	4	0	5	4	8	122	0
4:15 PM	0	4	35	2	0	3	24	4	0	6	9	0	0	7	4	3	101	0
4:30 PM	0	0	29	6	0	3	28	2	0	6	6	3	0	6	8	4	101	0
4:45 PM	0	3	40	6	0	2	20	3	0	4	8	0	0	3	6	8	103	427
5:00 PM	0	2	43	3	0	2	25	2	0	4	5	4	0	5	6	17	118	423
5:15 PM	0	3	38	3	0	2	25	4	0	0	2	4	0	6	16	5	108	430
5:30 PM	0	6	36	2	0	4	36	0	0	4	7	1	0	5	6	5	112	441
5:45 PM	0	5	42	3	0	2	32	11	0	4	9	0	0	6	4	4	122	460
Count Total	0	26	314	30	0	20	219	28	0	31	52	16	0	43	54	54	887	0
Peak Hour	All	0	16	159	11	0	10	118	17	0	12	23	9	0	22	32	460	0
	HV	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	4	0
	HV%	-	0%	1%	0%	-	0%	2%	0%	-	0%	0%	0%	-	0%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	0	1	0	0	0	1	3	2	6	1	12
4:15 PM	0	0	1	0	1	0	0	1	1	2	1	2	7	0	10
4:30 PM	0	0	1	0	1	0	1	0	0	1	6	2	2	1	11
4:45 PM	2	1	0	0	3	0	0	2	0	2	2	1	0	0	3
5:00 PM	0	0	0	0	0	1	3	0	0	4	1	4	2	2	9
5:15 PM	1	1	0	0	2	1	1	0	0	2	13	3	4	1	21
5:30 PM	0	0	0	0	0	1	0	0	0	1	3	4	3	1	11
5:45 PM	1	1	0	0	2	1	0	0	1	2	10	4	4	5	23
Count Total	4	3	2	0	9	5	5	3	2	15	39	22	28	11	100
Peak Hour	2	2	0	0	4	4	4	0	1	9	27	15	13	9	64

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Bayswater Ave				Bayswater Ave				Lorton Ave				Lorton Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
4:45 PM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	3	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	6
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	4
Count Total	0	0	3	1	0	0	3	0	0	0	2	0	0	0	0	0	9	0
Peak Hour	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Bayswater Ave			Bayswater Ave			Lorton Ave			Lorton Ave			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0			
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0			
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0			
4:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	6			
5:00 PM	0	1	0	0	3	0	0	0	0	0	0	0	4	9			
5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	9			
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	9			
5:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	2	9			
Count Total	0	4	1	0	5	0	0	3	0	0	2	0	15	0			
Peak Hour	0	4	0	0	4	0	0	0	0	0	1	0	9	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix B
List of Approved Projects

[Home](#) [Departments](#) [Planning](#) [Major Projects](#)

Major Projects

Welcome to the Planning Division Major Projects page. Click on the tabs in the navigation menus below to access each list of projects and the individual project pages. The projects are sorted into four categories: **Approved Projects**, **Proposed Projects Under Review**, **City Planning Initiatives**, and **Preliminary Projects**.

The Planning Division maintains summaries of major development applications in separate commercial and residential application overview reports. Each report summarizes the status of approved and proposed projects, together with links to the project information web pages. Click on the links below to download each report:

- **Residential Applications Overview** - updated June 2019 (PDF)
- **Commercial Applications Overview** - updated June 2019 (PDF)

APPROVED PROJECTS

CITY INITIATIVES

PRELIMINARY PROJECTS

PROPOSED PROJECTS

APPROVED PROJECTS

BAYSWATER AVENUE - 920 BAYSWATER AVENUE

An application has been submitted for a new four-story, 128-unit apartment development with below-grade at the corner of Bayswater Avenue and Myrtle Road within the Downtown Specific Plan planning area.

[Read More](#)[\(650\) 558-7250](#)ckeylon@burlingame.org

920 Bayswater Avenue,
Burlingame, California 94010

APPROVED PROJECTS

BURLINGAME POINT PROJECT - 300 AIRPORT BOULEVARD

Burlingame Point is an approved office/life science campus consisting of four office buildings and an amenities building with a total of 767,000 square feet of floor area on an 18.13 acre site located at 300 Airport Boulevard.

[Read More](#)[\(650\) 558-7250](#)kgardiner@burlingame.org

300 Airport Boulevard,
Burlingame, CA 94010

APPROVED PROJECTS

CALIFORNIA DRIVE - 225 CALIFORNIA DRIVE

The City of Burlingame has approved an application for construction of a new 4-story mixed use office building at 225 California Drive. A building permit was issued and construction is in progress.

[Read More](#)[\(650\) 558-7250](#)kgardiner@burlingame.org

255 California Drive,
Burlingame, CA 94010

APPROVED PROJECTS

CALIFORNIA DRIVE - 250 CALIFORNIA DRIVE

The City of Burlingame has approved an application for construction of a new 4-story, mixed use office building at 250 California Drive, across South Lane from the Burlingame Caltrain Station.

[Read More](#)[\(650\) 558-7250](#)rhurin@burlingame.org

250 California Drive,
Burlingame, CA 94010

Residents Doing Business Government Departments

An application has been approved for a new four-story, 26-unit live/work development at the corner of California Drive and Oak Grove Avenue within the Downtown Specific Plan planning area.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org Search Burlingame, California

619 California Drive,
Burlingame, California 94010

APPROVED PROJECTS

CAROLAN AVENUE/ROLLINS ROAD MULTI-FAMILY RESIDENTIAL DEVELOPMENT

SummerHill Apartment Communities/SummerHill Homes has received approval of a new apartment and townhome development at 1008-1028 Carolan Avenue.

[Read More](#)

(650) 558-7250

kgardiner@burlingame.org

1008-1028 Carolan Avenue,
Burlingame, CA 94010

APPROVED PROJECTS

DOUGLAS AVENUE - 1128-1132 DOUGLAS AVENUE

The City of Burlingame approved an application for construction of a new 5-story, 27-unit apartment building at 1128-1132 Douglas Avenue.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org

1128-1132 Douglas Avenue,
Burlingame, CA 94010

APPROVED PROJECTS

EL CAMINO REAL - 1431 EL CAMINO REAL

The City of Burlingame has approved an application for construction of new 3-story, 6-unit residential condominium at 1431 El Camino Real.

[Read More](#)

(650) 558-7250

ckeylon@burlingame.org

1431 El Camino Real,
Burlingame, CA 94402

APPROVED PROJECTS

EL CAMINO REAL - 1509 EL CAMINO REAL

The City of Burlingame has approved an application for construction of a new 3-story, 11-unit residential condominium at 1509 El Camino Real.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org

1509 El Camino Real,
Burlingame, CA 94010

APPROVED PROJECTS

FLORIBUNDA AVENUE - 1433 FLORIBUNDA AVENUE

The City of Burlingame has received an application for a new four-story, 8-unit residential condominium building with at-grade parking 1433 Floribunda Avenue.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org

1433 Floribunda Avenue,
Burlingame, CA 94010

APPROVED PROJECTS

HOWARD AVENUE - 988 HOWARD AVENUE

The City of Burlingame has approved an application for construction of a new 3-story, mixed use office building at 988 Howard Avenue. A building permit was issued and construction is in progress.

[Read More](#)

(650) 558-7250

ckeylon@burlingame.org

988 Howard Avenue,
Burlingame, CA 94010

APPROVED PROJECTS

LORTON AVENUE - 240 LORTON AVENUE

The City of Burlingame has approved an application for construction of a new 4-story, mixed use office building at 240 Lorton Avenue. A building permit was issued and construction is in progress.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org

240 Lorton Avenue,
Burlingame, CA 94010

APPROVED PROJECTS

OAK GROVE AVENUE - 1491-1493 OAK GROVE AVENUE

(650) 558-7250

ckeylon@burlingame.org

APPROVED PROJECTS

PARK ROAD - 21 PARK ROAD

The City of Burlingame has approved an application for construction of a new 3-story, 7-unit condominium building at 21 Park Road.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org

21 Park Road,
Burlingame, CA 94010

APPROVED PROJECTS

TROUSDALE DRIVE - 1600 TROUSDALE DRIVE

The City of Burlingame has approved an application for construction of a new 6-story, 124-unit senior assisted living facility at 1600 Trousdale Drive. A building permit was issued and construction is in progress.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org

1600 Trousdale Drive,
Burlingame, CA 94010

APPROVED PROJECTS

VILLAGE AT BURLINGAME (LOT F AFFORDABLE HOUSING DEVELOPMENT AND LOT N PARKING STRUCTURE)

The "Village at Burlingame" has been proposed for City of Burlingame Parking Lots F and N, in downtown just south of Howard Avenue.

[Read More](#)

(650) 558-7250

rhurin@burlingame.org

Lot F,
Burlingame, CA 94010

HOT TOPICS

[Broadway Grade Separation](#)
[Carolyn Complete Streets Project](#)
[Downtown Parking Projects](#)
[General Plan Update](#)
[Parks & Rec Community Center Plan](#)

INFORMATION

[City Directory](#)
[City's Website Administrator](#)
[Department Hours & Locations](#)
[Privacy Policy](#)
[Social Media Comment Policy](#)

CITY STAFF ONLY

[Intranet](#)

Appendix C

Level of Service Calculations

Intersection

Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	203	24	30	255	25	24	25	11	25	12	15
Future Vol, veh/h	18	203	24	30	255	25	24	25	11	25	12	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	203	24	30	255	25	24	25	11	25	12	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	10.3	8.8	8.7
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	7%	10%	48%
Vol Thru, %	42%	83%	82%	23%
Vol Right, %	18%	10%	8%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	245	310	52
LT Vol	24	18	30	25
Through Vol	25	203	255	12
RT Vol	11	24	25	15
Lane Flow Rate	60	245	310	52
Geometry Grp	1	1	1	1
Degree of Util (X)	0.087	0.307	0.384	0.075
Departure Headway (Hd)	5.214	4.515	4.463	5.18
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	684	794	806	688
Service Time	3.271	2.552	2.497	3.238
HCM Lane V/C Ratio	0.088	0.309	0.385	0.076
HCM Control Delay	8.8	9.6	10.3	8.7
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.3	1.8	0.2

HCM 2010 TWSC
2: Lorton Avenue & Bayswater Avenue

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Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	168	8	9	126	13	23	27	12	12	22	15
Future Vol, veh/h	7	168	8	9	126	13	23	27	12	12	22	15
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	168	8	9	126	13	23	27	12	12	22	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	176	0	0	355	343	172	357	341	133
Stage 1	-	-	-	-	-	-	186	186	-	151	151	-
Stage 2	-	-	-	-	-	-	169	157	-	206	190	-
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	1445	-	-	1400	-	-	600	579	872	598	581	916
Stage 1	-	-	-	-	-	-	816	746	-	851	772	-
Stage 2	-	-	-	-	-	-	833	768	-	796	743	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1445	-	-	1400	-	-	568	572	872	563	574	916
Mov Cap-2 Maneuver	-	-	-	-	-	-	568	572	-	563	574	-
Stage 1	-	-	-	-	-	-	812	742	-	847	767	-
Stage 2	-	-	-	-	-	-	790	763	-	753	739	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.5			11.6			11		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	611	1445	-	-	1400	-	-	645
HCM Lane V/C Ratio	0.101	0.005	-	-	0.006	-	-	0.076
HCM Control Delay (s)	11.6	7.5	0	-	7.6	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2

Intersection

Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	270	39	28	270	88	23	27	24	60	34	58
Future Vol, veh/h	39	270	39	28	270	88	23	27	24	60	34	58
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	270	39	28	270	88	23	27	24	60	34	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13	13.6	9.8	10.6
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	11%	7%	39%
Vol Thru, %	36%	78%	70%	22%
Vol Right, %	32%	11%	23%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	348	386	152
LT Vol	23	39	28	60
Through Vol	27	270	270	34
RT Vol	24	39	88	58
Lane Flow Rate	74	348	386	152
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.493	0.533	0.243
Departure Headway (Hd)	5.949	5.095	4.975	5.754
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	601	706	726	623
Service Time	4.001	3.128	3.009	3.798
HCM Lane V/C Ratio	0.123	0.493	0.532	0.244
HCM Control Delay	9.8	13	13.6	10.6
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	2.7	3.2	0.9

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Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	159	11	10	118	17	12	23	9	22	32	31
Future Vol, veh/h	16	159	11	10	118	17	12	23	9	22	32	31
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	159	11	10	118	17	12	23	9	22	32	31
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	135	0	0	170	0	0	375	352	165	360	349	127
Stage 1	-	-	-	-	-	-	197	197	-	147	147	-
Stage 2	-	-	-	-	-	-	178	155	-	213	202	-
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	1449	-	-	1407	-	-	582	573	879	596	575	923
Stage 1	-	-	-	-	-	-	805	738	-	856	775	-
Stage 2	-	-	-	-	-	-	824	769	-	789	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1449	-	-	1407	-	-	530	562	879	563	564	923
Mov Cap-2 Maneuver	-	-	-	-	-	-	530	562	-	563	564	-
Stage 1	-	-	-	-	-	-	795	729	-	846	769	-
Stage 2	-	-	-	-	-	-	757	763	-	747	725	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.5			11.5			11.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	596	1449	-	-	1407	-	-	657				
HCM Lane V/C Ratio	0.074	0.011	-	-	0.007	-	-	0.129				
HCM Control Delay (s)	11.5	7.5	0	-	7.6	0	-	11.3				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.4				

Intersection

Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	203	25	30	255	25	25	25	11	25	12	15
Future Vol, veh/h	18	203	25	30	255	25	25	25	11	25	12	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	203	25	30	255	25	25	25	11	25	12	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	10.3	8.8	8.7
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	7%	10%	48%
Vol Thru, %	41%	83%	82%	23%
Vol Right, %	18%	10%	8%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	246	310	52
LT Vol	25	18	30	25
Through Vol	25	203	255	12
RT Vol	11	25	25	15
Lane Flow Rate	61	246	310	52
Geometry Grp	1	1	1	1
Degree of Util (X)	0.088	0.309	0.385	0.075
Departure Headway (Hd)	5.222	4.518	4.468	5.186
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	683	795	806	687
Service Time	3.28	2.553	2.501	3.245
HCM Lane V/C Ratio	0.089	0.309	0.385	0.076
HCM Control Delay	8.8	9.6	10.3	8.7
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1.3	1.8	0.2

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Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	168	8	9	126	13	23	27	12	12	22	16
Future Vol, veh/h	8	168	8	9	126	13	23	27	12	12	22	16
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	168	8	9	126	13	23	27	12	12	22	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	176	0	0	358	345	172	359	343	133
Stage 1	-	-	-	-	-	-	188	188	-	151	151	-
Stage 2	-	-	-	-	-	-	170	157	-	208	192	-
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	1445	-	-	1400	-	-	597	578	872	596	579	916
Stage 1	-	-	-	-	-	-	814	745	-	851	772	-
Stage 2	-	-	-	-	-	-	832	768	-	794	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1445	-	-	1400	-	-	564	571	872	561	571	916
Mov Cap-2 Maneuver	-	-	-	-	-	-	564	571	-	561	571	-
Stage 1	-	-	-	-	-	-	809	741	-	846	767	-
Stage 2	-	-	-	-	-	-	788	763	-	750	738	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.5			11.6			11		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	609	1445	-	-	1400	-	-	646				
HCM Lane V/C Ratio	0.102	0.006	-	-	0.006	-	-	0.077				
HCM Control Delay (s)	11.6	7.5	0	-	7.6	0	-	11				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

Intersection

Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	39	270	40	28	270	88	24	27	25	60	34	58
Future Vol, veh/h	39	270	40	28	270	88	24	27	25	60	34	58
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	270	40	28	270	88	24	27	25	60	34	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.1	13.6	9.9	10.7
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	11%	7%	39%
Vol Thru, %	36%	77%	70%	22%
Vol Right, %	33%	11%	23%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	76	349	386	152
LT Vol	24	39	28	60
Through Vol	27	270	270	34
RT Vol	25	40	88	58
Lane Flow Rate	76	349	386	152
Geometry Grp	1	1	1	1
Degree of Util (X)	0.126	0.495	0.535	0.243
Departure Headway (Hd)	5.952	5.102	4.986	5.762
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	600	705	722	622
Service Time	4.007	3.137	3.019	3.811
HCM Lane V/C Ratio	0.127	0.495	0.535	0.244
HCM Control Delay	9.9	13.1	13.6	10.7
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	2.8	3.2	0.9

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Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	159	11	10	118	17	12	23	9	22	32	32
Future Vol, veh/h	17	159	11	10	118	17	12	23	9	22	32	32
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	159	11	10	118	17	12	23	9	22	32	32
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	135	0	0	170	0	0	378	354	165	362	351	127
Stage 1	-	-	-	-	-	-	199	199	-	147	147	-
Stage 2	-	-	-	-	-	-	179	155	-	215	204	-
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	1449	-	-	1407	-	-	580	571	879	594	573	923
Stage 1	-	-	-	-	-	-	803	736	-	856	775	-
Stage 2	-	-	-	-	-	-	823	769	-	787	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1449	-	-	1407	-	-	527	559	879	560	561	923
Mov Cap-2 Maneuver	-	-	-	-	-	-	527	559	-	560	561	-
Stage 1	-	-	-	-	-	-	793	726	-	845	769	-
Stage 2	-	-	-	-	-	-	755	763	-	744	723	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.5			11.6			11.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	593	1449	-	-	1407	-	-	657				
HCM Lane V/C Ratio	0.074	0.012	-	-	0.007	-	-	0.131				
HCM Control Delay (s)	11.6	7.5	0	-	7.6	0	-	11.3				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.4				

Intersection

Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	214	41	30	258	29	28	28	11	26	28	16
Future Vol, veh/h	20	214	41	30	258	29	28	28	11	26	28	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	214	41	30	258	29	28	28	11	26	28	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	10.7	9	9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	7%	9%	37%
Vol Thru, %	42%	78%	81%	40%
Vol Right, %	16%	15%	9%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	67	275	317	70
LT Vol	28	20	30	26
Through Vol	28	214	258	28
RT Vol	11	41	29	16
Lane Flow Rate	67	275	317	70
Geometry Grp	1	1	1	1
Degree of Util (X)	0.1	0.35	0.402	0.103
Departure Headway (Hd)	5.355	4.577	4.569	5.302
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	784	786	671
Service Time	3.43	2.624	2.615	3.377
HCM Lane V/C Ratio	0.101	0.351	0.403	0.104
HCM Control Delay	9	10.1	10.7	9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.3	1.6	2	0.3

HCM 2010 TWSC
2: Lorton Avenue & Bayswater Avenue

07/15/2019

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	179	7	9	133	13	17	43	12	12	25	16
Future Vol, veh/h	13	179	7	9	133	13	17	43	12	12	25	16
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	179	7	9	133	13	17	43	12	12	25	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	146	0	0	186	0	0	387	373	183	394	370	140
Stage 1	-	-	-	-	-	-	209	209	-	158	158	-
Stage 2	-	-	-	-	-	-	178	164	-	236	212	-
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	1436	-	-	1388	-	-	572	557	859	566	560	908
Stage 1	-	-	-	-	-	-	793	729	-	844	767	-
Stage 2	-	-	-	-	-	-	824	762	-	767	727	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1436	-	-	1388	-	-	535	548	859	518	551	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	535	548	-	518	551	-
Stage 1	-	-	-	-	-	-	785	722	-	836	762	-
Stage 2	-	-	-	-	-	-	777	757	-	704	720	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.4			12.1			11.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	580	1436	-	-	1388	-	-	615				
HCM Lane V/C Ratio	0.124	0.009	-	-	0.006	-	-	0.086				
HCM Control Delay (s)	12.1	7.5	0	-	7.6	0	-	11.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.3				

Intersection

Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	214	42	30	258	29	29	28	11	26	28	16
Future Vol, veh/h	20	214	42	30	258	29	29	28	11	26	28	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	214	42	30	258	29	29	28	11	26	28	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	10.7	9	9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	7%	9%	37%
Vol Thru, %	41%	78%	81%	40%
Vol Right, %	16%	15%	9%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	276	317	70
LT Vol	29	20	30	26
Through Vol	28	214	258	28
RT Vol	11	42	29	16
Lane Flow Rate	68	276	317	70
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.351	0.403	0.103
Departure Headway (Hd)	5.36	4.577	4.572	5.305
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	663	784	783	670
Service Time	3.436	2.625	2.618	3.382
HCM Lane V/C Ratio	0.103	0.352	0.405	0.104
HCM Control Delay	9	10.1	10.7	9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.3	1.6	2	0.3

HCM 2010 TWSC
2: Lorton Avenue & Bayswater Avenue

07/15/2019

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	179	7	9	133	13	17	43	12	12	25	17
Future Vol, veh/h	14	179	7	9	133	13	17	43	12	12	25	17
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	179	7	9	133	13	17	43	12	12	25	17
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	146	0	0	186	0	0	390	375	183	396	372	140
Stage 1	-	-	-	-	-	-	211	211	-	158	158	-
Stage 2	-	-	-	-	-	-	179	164	-	238	214	-
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	1436	-	-	1388	-	-	569	556	859	564	558	908
Stage 1	-	-	-	-	-	-	791	728	-	844	767	-
Stage 2	-	-	-	-	-	-	823	762	-	765	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1436	-	-	1388	-	-	532	546	859	516	548	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	532	546	-	516	548	-
Stage 1	-	-	-	-	-	-	782	720	-	835	762	-
Stage 2	-	-	-	-	-	-	776	757	-	701	717	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.4			12.1			11.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	577	1436	-	-	1388	-	-	616				
HCM Lane V/C Ratio	0.125	0.01	-	-	0.006	-	-	0.088				
HCM Control Delay (s)	12.1	7.5	0	-	7.6	0	-	11.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.3				

Intersection

Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	39	278	46	28	279	89	37	40	24	61	41	63
Future Vol, veh/h	39	278	46	28	279	89	37	40	24	61	41	63
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	278	46	28	279	89	37	40	24	61	41	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.2	14.9	10.6	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	11%	7%	37%
Vol Thru, %	40%	77%	70%	25%
Vol Right, %	24%	13%	22%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	363	396	165
LT Vol	37	39	28	61
Through Vol	40	278	279	41
RT Vol	24	46	89	63
Lane Flow Rate	101	363	396	165
Geometry Grp	1	1	1	1
Degree of Util (X)	0.173	0.532	0.569	0.272
Departure Headway (Hd)	6.178	5.279	5.174	5.939
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	578	682	697	602
Service Time	4.249	3.329	3.222	4.003
HCM Lane V/C Ratio	0.175	0.532	0.568	0.274
HCM Control Delay	10.6	14.2	14.9	11.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.6	3.2	3.6	1.1

HCM 2010 TWSC
2: Lorton Avenue & Bayswater Avenue

07/15/2019

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	18	170	8	10	129	17	13	30	9	22	48	36
Future Vol, veh/h	18	170	8	10	129	17	13	30	9	22	48	36
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	170	8	10	129	17	13	30	9	22	48	36
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	146	0	0	178	0	0	410	376	174	388	372	138
Stage 1	-	-	-	-	-	-	210	210	-	158	158	-
Stage 2	-	-	-	-	-	-	200	166	-	230	214	-
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	1436	-	-	1398	-	-	552	555	869	571	558	910
Stage 1	-	-	-	-	-	-	792	728	-	844	767	-
Stage 2	-	-	-	-	-	-	802	761	-	773	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1436	-	-	1398	-	-	486	543	869	532	546	910
Mov Cap-2 Maneuver	-	-	-	-	-	-	486	543	-	532	546	-
Stage 1	-	-	-	-	-	-	781	718	-	832	761	-
Stage 2	-	-	-	-	-	-	716	755	-	723	715	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.5			12			11.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	563	1436	-	-	1398	-	-	628				
HCM Lane V/C Ratio	0.092	0.013	-	-	0.007	-	-	0.169				
HCM Control Delay (s)	12	7.5	0	-	7.6	0	-	11.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.6				

Intersection

Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	39	278	47	28	279	89	38	40	25	61	41	63
Future Vol, veh/h	39	278	47	28	279	89	38	40	25	61	41	63
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	278	47	28	279	89	38	40	25	61	41	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.3	15	10.6	11.3
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	11%	7%	37%
Vol Thru, %	39%	76%	70%	25%
Vol Right, %	24%	13%	22%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	364	396	165
LT Vol	38	39	28	61
Through Vol	40	278	279	41
RT Vol	25	47	89	63
Lane Flow Rate	103	364	396	165
Geometry Grp	1	1	1	1
Degree of Util (X)	0.177	0.535	0.571	0.273
Departure Headway (Hd)	6.182	5.29	5.187	5.951
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	577	681	693	601
Service Time	4.257	3.34	3.236	4.018
HCM Lane V/C Ratio	0.179	0.535	0.571	0.275
HCM Control Delay	10.6	14.3	15	11.3
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.6	3.2	3.6	1.1

HCM 2010 TWSC
2: Lorton Avenue & Bayswater Avenue

07/15/2019

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	170	8	10	129	17	13	30	9	22	48	37
Future Vol, veh/h	19	170	8	10	129	17	13	30	9	22	48	37
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	170	8	10	129	17	13	30	9	22	48	37
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	146	0	0	178	0	0	412	378	174	390	374	138
Stage 1	-	-	-	-	-	-	212	212	-	158	158	-
Stage 2	-	-	-	-	-	-	200	166	-	232	216	-
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	1436	-	-	1398	-	-	550	554	869	569	557	910
Stage 1	-	-	-	-	-	-	790	727	-	844	767	-
Stage 2	-	-	-	-	-	-	802	761	-	771	724	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1436	-	-	1398	-	-	484	541	869	530	544	910
Mov Cap-2 Maneuver	-	-	-	-	-	-	484	541	-	530	544	-
Stage 1	-	-	-	-	-	-	778	716	-	831	761	-
Stage 2	-	-	-	-	-	-	715	755	-	720	713	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.5			12.1			11.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	561	1436	-	-	1398	-	-	628				
HCM Lane V/C Ratio	0.093	0.013	-	-	0.007	-	-	0.17				
HCM Control Delay (s)	12.1	7.5	0	-	7.6	0	-	11.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.6				

HCM 2010 AWSC
1: Lorton Avenue & Howard Avenue

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Intersection

Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	235	44	33	285	32	31	31	12	29	29	18
Future Vol, veh/h	22	235	44	33	285	32	31	31	12	29	29	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	235	44	33	285	32	31	31	12	29	29	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	11.5	9.3	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	7%	9%	38%
Vol Thru, %	42%	78%	81%	38%
Vol Right, %	16%	15%	9%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	301	350	76
LT Vol	31	22	33	29
Through Vol	31	235	285	29
RT Vol	12	44	32	18
Lane Flow Rate	74	301	350	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.113	0.39	0.452	0.115
Departure Headway (Hd)	5.512	4.664	4.646	5.456
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	768	770	650
Service Time	3.607	2.725	2.704	3.551
HCM Lane V/C Ratio	0.115	0.392	0.455	0.117
HCM Control Delay	9.3	10.7	11.5	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.9	2.4	0.4

HCM 2010 TWSC
2: Lorton Avenue & Bayswater Avenue

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Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	197	8	10	146	14	19	46	13	13	27	18
Future Vol, veh/h	14	197	8	10	146	14	19	46	13	13	27	18
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	197	8	10	146	14	19	46	13	13	27	18
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	205	0	0	425	409	201	432	406	153
Stage 1	-	-	-	-	-	-	229	229	-	173	173	-
Stage 2	-	-	-	-	-	-	196	180	-	259	233	-
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	1419	-	-	1366	-	-	540	532	840	534	534	893
Stage 1	-	-	-	-	-	-	774	715	-	829	756	-
Stage 2	-	-	-	-	-	-	806	750	-	746	712	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1366	-	-	501	522	840	483	524	893
Mov Cap-2 Maneuver	-	-	-	-	-	-	501	522	-	483	524	-
Stage 1	-	-	-	-	-	-	765	707	-	820	750	-
Stage 2	-	-	-	-	-	-	755	744	-	679	704	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.5			12.6			11.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	551	1419	-	-	1366	-	-	588				
HCM Lane V/C Ratio	0.142	0.01	-	-	0.007	-	-	0.099				
HCM Control Delay (s)	12.6	7.6	0	-	7.7	0	-	11.8				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.3				

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	235	45	33	285	32	32	31	12	29	29	18
Future Vol, veh/h	22	235	45	33	285	32	32	31	12	29	29	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	235	45	33	285	32	32	31	12	29	29	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	11.5	9.3	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	7%	9%	38%
Vol Thru, %	41%	78%	81%	38%
Vol Right, %	16%	15%	9%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	302	350	76
LT Vol	32	22	33	29
Through Vol	31	235	285	29
RT Vol	12	45	32	18
Lane Flow Rate	75	302	350	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.115	0.392	0.452	0.115
Departure Headway (Hd)	5.518	4.667	4.651	5.462
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	767	770	649
Service Time	3.613	2.728	2.71	3.557
HCM Lane V/C Ratio	0.117	0.394	0.455	0.117
HCM Control Delay	9.3	10.7	11.5	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.9	2.4	0.4

HCM 2010 TWSC
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Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	197	8	10	146	14	19	46	13	13	27	19
Future Vol, veh/h	15	197	8	10	146	14	19	46	13	13	27	19
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	197	8	10	146	14	19	46	13	13	27	19
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	205	0	0	427	411	201	434	408	153
Stage 1	-	-	-	-	-	-	231	231	-	173	173	-
Stage 2	-	-	-	-	-	-	196	180	-	261	235	-
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	1419	-	-	1366	-	-	538	531	840	532	533	893
Stage 1	-	-	-	-	-	-	772	713	-	829	756	-
Stage 2	-	-	-	-	-	-	806	750	-	744	710	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1366	-	-	498	520	840	481	522	893
Mov Cap-2 Maneuver	-	-	-	-	-	-	498	520	-	481	522	-
Stage 1	-	-	-	-	-	-	763	704	-	819	750	-
Stage 2	-	-	-	-	-	-	754	744	-	676	701	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.5			12.6			11.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	549	1419	-	-	1366	-	-	590				
HCM Lane V/C Ratio	0.142	0.011	-	-	0.007	-	-	0.1				
HCM Control Delay (s)	12.6	7.6	0	-	7.7	0	-	11.8				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.3				

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	43	306	50	31	307	98	39	43	27	67	45	69
Future Vol, veh/h	43	306	50	31	307	98	39	43	27	67	45	69
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	306	50	31	307	98	39	43	27	67	45	69
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.8	18.1	11.3	12.2
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	11%	7%	37%
Vol Thru, %	39%	77%	70%	25%
Vol Right, %	25%	13%	22%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	399	436	181
LT Vol	39	43	31	67
Through Vol	43	306	307	45
RT Vol	27	50	98	69
Lane Flow Rate	109	399	436	181
Geometry Grp	1	1	1	1
Degree of Util (X)	0.2	0.608	0.651	0.318
Departure Headway (Hd)	6.602	5.487	5.374	6.323
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	546	650	667	572
Service Time	4.61	3.58	3.464	4.323
HCM Lane V/C Ratio	0.2	0.614	0.654	0.316
HCM Control Delay	11.3	16.8	18.1	12.2
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	0.7	4.1	4.8	1.4

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Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	187	9	11	141	19	14	32	10	24	51	39
Future Vol, veh/h	20	187	9	11	141	19	14	32	10	24	51	39
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	187	9	11	141	19	14	32	10	24	51	39
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	196	0	0	450	414	192	426	409	151
Stage 1	-	-	-	-	-	-	232	232	-	173	173	-
Stage 2	-	-	-	-	-	-	218	182	-	253	236	-
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	1419	-	-	1377	-	-	519	529	850	539	532	895
Stage 1	-	-	-	-	-	-	771	713	-	829	756	-
Stage 2	-	-	-	-	-	-	784	749	-	751	710	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1377	-	-	450	516	850	498	519	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	450	516	-	498	519	-
Stage 1	-	-	-	-	-	-	759	702	-	816	749	-
Stage 2	-	-	-	-	-	-	692	742	-	697	699	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.5			12.5			12.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	534	1419	-	-	1377	-	-	600				
HCM Lane V/C Ratio	0.105	0.014	-	-	0.008	-	-	0.19				
HCM Control Delay (s)	12.5	7.6	0	-	7.6	0	-	12.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.7				

Intersection

Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	306	51	31	307	98	40	43	28	67	45	69
Future Vol, veh/h	43	306	51	31	307	98	40	43	28	67	45	69
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	306	51	31	307	98	40	43	28	67	45	69
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17	18.1	11.3	12.3
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	11%	7%	37%
Vol Thru, %	39%	77%	70%	25%
Vol Right, %	25%	13%	22%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	400	436	181
LT Vol	40	43	31	67
Through Vol	43	306	307	45
RT Vol	28	51	98	69
Lane Flow Rate	111	400	436	181
Geometry Grp	1	1	1	1
Degree of Util (X)	0.204	0.611	0.652	0.319
Departure Headway (Hd)	6.608	5.499	5.387	6.337
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	546	648	663	570
Service Time	4.617	3.591	3.478	4.337
HCM Lane V/C Ratio	0.203	0.617	0.658	0.318
HCM Control Delay	11.3	17	18.1	12.3
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	0.8	4.2	4.8	1.4

HCM 2010 TWSC
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Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	187	9	11	141	19	14	32	10	24	51	40
Future Vol, veh/h	21	187	9	11	141	19	14	32	10	24	51	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	187	9	11	141	19	14	32	10	24	51	40
Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	160	0	0	196	0	0	452	416	192	428	411	151
Stage 1	-	-	-	-	-	-	234	234	-	173	173	-
Stage 2	-	-	-	-	-	-	218	182	-	255	238	-
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	1419	-	-	1377	-	-	518	527	850	537	531	895
Stage 1	-	-	-	-	-	-	769	711	-	829	756	-
Stage 2	-	-	-	-	-	-	784	749	-	749	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1419	-	-	1377	-	-	449	513	850	496	517	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	449	513	-	496	517	-
Stage 1	-	-	-	-	-	-	756	699	-	815	749	-
Stage 2	-	-	-	-	-	-	692	742	-	694	696	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0.7		0.5			12.6			12.4			
HCM LOS						B			B			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	532	1419	-	-	1377	-	-	600				
HCM Lane V/C Ratio	0.105	0.015	-	-	0.008	-	-	0.192				
HCM Control Delay (s)	12.6	7.6	0	-	7.6	0	-	12.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.7				

HCM 2010 TWSC
3: Lorton Avenue & Project Driveway

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Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	54	1	1	58
Future Vol, veh/h	2	2	54	1	1	58
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	54	1	1	58

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	115	55	0
Stage 1	55	-	-
Stage 2	60	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	881	1012	-
Stage 1	968	-	-
Stage 2	963	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	880	1012	-
Mov Cap-2 Maneuver	880	-	-
Stage 1	968	-	-
Stage 2	962	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	941	1550
HCM Lane V/C Ratio	-	-	0.004	0.001
HCM Control Delay (s)	-	-	8.8	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC
3: Lorton Avenue & Project Driveway

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Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	66	2	2	93
Future Vol, veh/h	1	2	66	2	2	93
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	66	2	2	93

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	164	67	0	0	68
Stage 1	67	-	-	-	-
Stage 2	97	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	827	997	-	-	1533
Stage 1	956	-	-	-	-
Stage 2	927	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	826	997	-	-	1533
Mov Cap-2 Maneuver	826	-	-	-	-
Stage 1	956	-	-	-	-
Stage 2	926	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	933	1533
HCM Lane V/C Ratio	-	-	0.003	0.001
HCM Control Delay (s)	-	-	8.9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC
3: Lorton Avenue & Project Driveway

07/16/2019

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	68	1	1	76
Future Vol, veh/h	2	2	68	1	1	76
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	68	1	1	76

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	147	69	0
Stage 1	69	-	-
Stage 2	78	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	845	994	-
Stage 1	954	-	-
Stage 2	945	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	844	994	-
Mov Cap-2 Maneuver	844	-	-
Stage 1	954	-	-
Stage 2	944	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	913	1532
HCM Lane V/C Ratio	-	-	0.004	0.001
HCM Control Delay (s)	-	-	9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC

3: Lorton Avenue & Project Driveway

07/16/2019

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	84	2	2	111
Future Vol, veh/h	1	2	84	2	2	111
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	84	2	2	111

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	200	85	0	0	86
Stage 1	85	-	-	-	-
Stage 2	115	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	789	974	-	-	1510
Stage 1	938	-	-	-	-
Stage 2	910	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	788	974	-	-	1510
Mov Cap-2 Maneuver	788	-	-	-	-
Stage 1	938	-	-	-	-
Stage 2	909	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	1510
HCM Lane V/C Ratio	-	-	0.003	0.001
HCM Control Delay (s)	-	-	9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC
3: Lorton Avenue & Project Driveway

07/16/2019

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	74	1	1	82
Future Vol, veh/h	2	2	74	1	1	82
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	74	1	1	82

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	159	75	0	0	75
Stage 1	75	-	-	-	-
Stage 2	84	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	832	986	-	-	1524
Stage 1	948	-	-	-	-
Stage 2	939	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	831	986	-	-	1524
Mov Cap-2 Maneuver	831	-	-	-	-
Stage 1	948	-	-	-	-
Stage 2	938	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	902	1524
HCM Lane V/C Ratio	-	-	0.004	0.001
HCM Control Delay (s)	-	-	9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC
3: Lorton Avenue & Project Driveway

07/16/2019

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	91	2	2	121
Future Vol, veh/h	1	2	91	2	2	121
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	91	2	2	121

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	217	92	0
Stage 1	92	-	-
Stage 2	125	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	771	965	-
Stage 1	932	-	-
Stage 2	901	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	770	965	-
Mov Cap-2 Maneuver	770	-	-
Stage 1	932	-	-
Stage 2	900	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	890	1501
HCM Lane V/C Ratio	-	-	0.003	0.001
HCM Control Delay (s)	-	-	9.1	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Appendix D

Signal Warrant Analysis

Lorton Avenue and Howard Avenue

TRAFFIC SIGNAL WARRANTS WORKSHEETAnalyst: SS date: 7/15/19Major Street: Howard Avenue
Minor Street: Lorton AvenueCritical Approach Speed* (mph) 25Critical Approach Speed* (mph) 25

*Posted Speed.

Critical speed of major street traffic > 50 mph (64 km/h)..... ☐ }
 In built up area of isolated community of < 10,000 population..... ☐ } **Rural (R)**
☒ **Urban (U)**

AM PEAK PERIOD**Warrant 3 - Peak Hour****PART A**

(All parts 1, 2, and 3 below must be satisfied)

		AM PEAK PERIOD							
		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
Minor Street Approach Direction w/ Highest Delay		NB	SB	NB	SB	SB	SB		
Highest Minor Street Average Delay (sec/veh)		8.8	9.0	8.8	9.0	9.3	9.3		
Corresponding Minor Street Approach Volume (veh/hr)		60	70	61	70	76	76		
Minor Street Total Delay (veh-hrs)		0.1	0.2	0.1	0.2	0.2	0.2		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; <u>AND</u>		No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; <u>AND</u>		No	No	No	No	No	No		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.		No	No	No	No	No	No		
Signal Warranted based on Part A?		No	No	No	No	No	No		

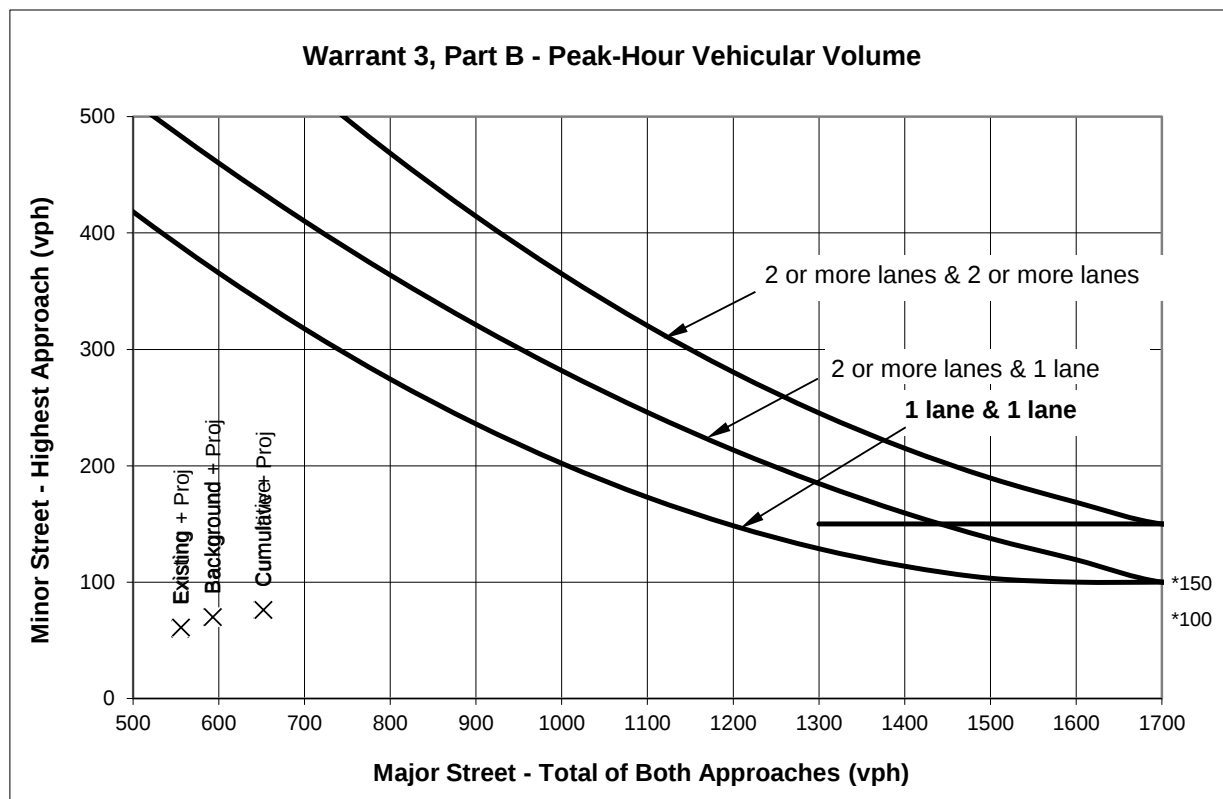
PART B

				AM PEAK PERIOD							
		Approach Lanes		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
		One	2 or More								
Major Street - Both Approaches	Howard Avenue	X		555	592	556	593	651	652		
Minor Street - Highest Approach	Lorton Avenue	X		60	70	61	70	76	76		
Signal Warranted based on Part B?				No	No	No	No	No	No		

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).
 Notes:

Lorton Avenue and Howard Avenue

Lorton Avenue and Howard Avenue**AM PEAK PERIOD**

Source: Figure 4C-3 California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

				AM PEAK PERIOD							
		Approach Lanes		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
		One	Two or More								
Major Street - Both Approaches	Howard Avenue	X		555	592	556	593	651	652		
Minor Street - Highest Approach	Lorton Avenue	X		60	70	61	70	76	76		
Signal Warranted Based on Part B - Peak-Hour Volumes?				No	No	No	No	No	No		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Lorton Avenue and Howard Avenue

TRAFFIC SIGNAL WARRANTS WORKSHEETAnalyst: SS date: 7/15/19Major Street: Howard Avenue
Minor Street: Lorton AvenueCritical Approach Speed* (mph) 25Critical Approach Speed* (mph) 25

*Posted Speed.

Critical speed of major street traffic > 50 mph (64 km/h)..... ☐ }
 In built up area of isolated community of < 10,000 population..... ☐ } **Rural (R)**
☒ **Urban (U)**

PM PEAK HOUR**Warrant 3 - Peak Hour****PART A**

(All parts 1, 2, and 3 below must be satisfied)

PM PEAK HOUR							
	Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj	
Minor Street Approach Direction w/ Highest Delay	SB	SB	SB	SB	SB	SB	
Highest Minor Street Average Delay (sec/veh)	10.6	11.2	10.7	11.3	12.2	12.3	
Corresponding Minor Street Approach Volume (veh/hr)	152	165	152	165	181	181	
Minor Street Total Delay (veh-hrs)	0.4	0.5	0.5	0.5	0.6	0.6	
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; <u>AND</u>	No	No	No	No	No	No	
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; <u>AND</u>	Yes	Yes	Yes	Yes	Yes	Yes	
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.	Yes	Yes	Yes	Yes	Yes	Yes	
Signal Warranted based on Part A?	No	No	No	No	No	No	

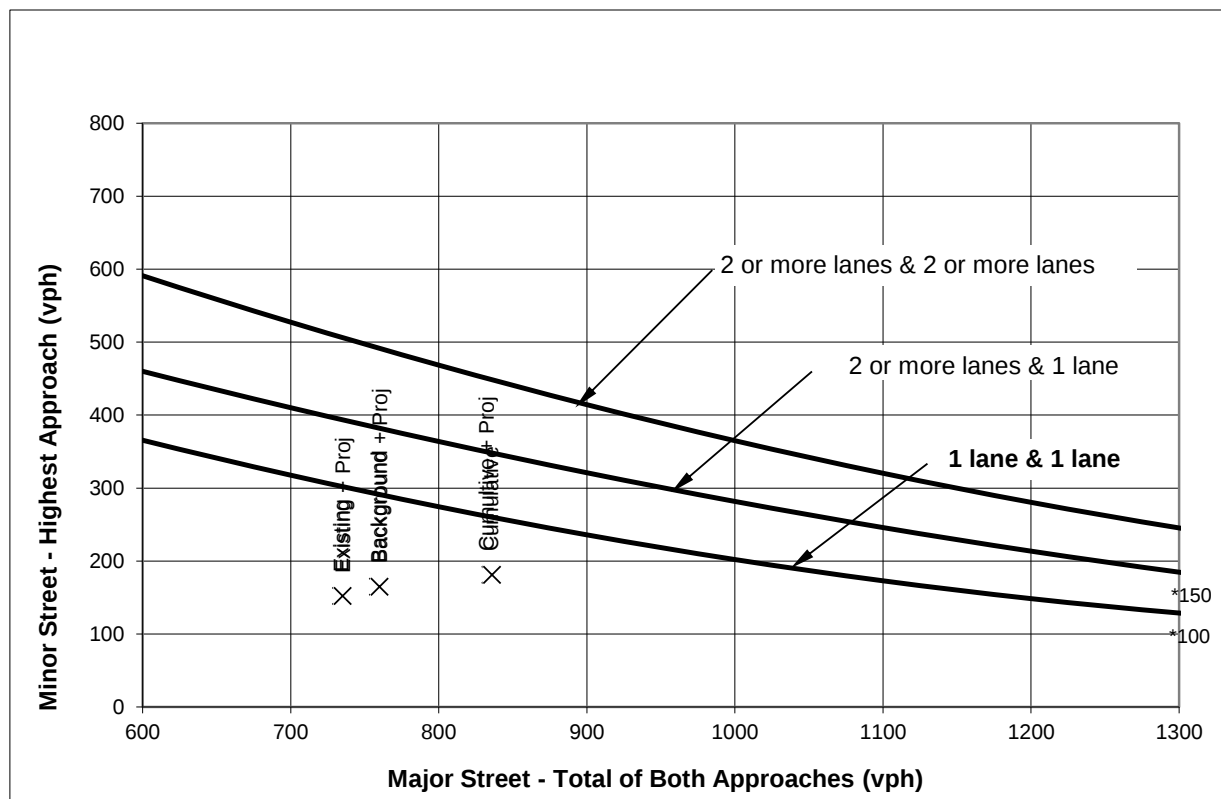
PART B

				PM PEAK HOUR							
				Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
				One	2 or More						
Major Street - Both Approaches	Howard Avenue	X		734	759	735	760	835	836		
Minor Street - Highest Approach	Lorton Avenue	X		152	165	152	165	181	181		
Signal Warranted based on Part B?				No	No	No	No	No	No		

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).
 Notes:

Lorton Avenue and Howard Avenue

Lorton Avenue and Howard Avenue**PM PEAK HOUR**

Source: Figure 4C-3 California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

					PM PEAK HOUR									
					Approach Lanes		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
					2 or One	More								
Major Street - Both Approaches	Howard Avenue	X			734	759	735	760	835	836				
Minor Street - Highest Approach	Lorton Avenue	X			152	165	152	165	181	181				
Signal Warranted Based on Part B - Peak-Hour Volumes?					No	No	No	No	No	No				

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Lorton Avenue and Bayswater Avenue

TRAFFIC SIGNAL WARRANTS WORKSHEETAnalyst: SS date: 7/15/19Major Street: Bayswater Avenue
Minor Street: Lorton AvenueCritical Approach Speed* (mph) 25Critical Approach Speed* (mph) 25

*Posted Speed.

Critical speed of major street traffic > 50 mph (64 km/h)..... ☐ }
 In built up area of isolated community of < 10,000 population..... ☐ } **Rural (R)**
☒ **Urban (U)**

AM PEAK PERIOD**Warrant 3 - Peak Hour****PART A**

(All parts 1, 2, and 3 below must be satisfied)

		AM PEAK PERIOD							
		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
Minor Street Approach Direction w/ Highest Delay		NB	NB	NB	NB	NB	NB		
Highest Minor Street Average Delay (sec/veh)		11.6	12.1	11.6	12.1	12.6	12.6		
Corresponding Minor Street Approach Volume (veh/hr)		62	72	62	72	78	78		
Minor Street Total Delay (veh-hrs)		0.2	0.2	0.2	0.2	0.3	0.3		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; <u>AND</u>		No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; <u>AND</u>		No	No	No	No	No	No		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.		No	No	No	No	No	No		
Signal Warranted based on Part A?		No	No	No	No	No	No		

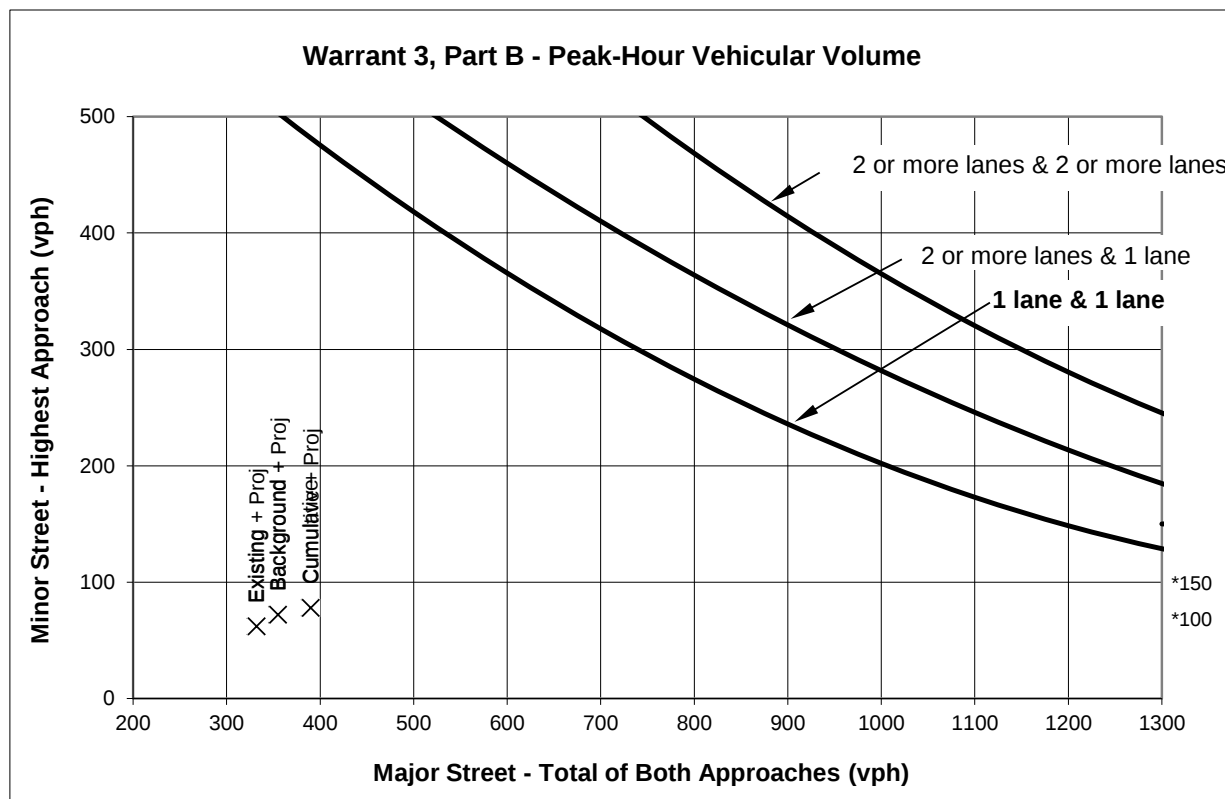
PART B

				AM PEAK PERIOD							
		Approach Lanes		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
		One	2 or More								
Major Street - Both Approaches	Bayswater Avenue	X		331	354	332	355	389	390		
Minor Street - Highest Approach	Lorton Avenue	X		62	72	62	72	78	78		
Signal Warranted based on Part B?				No	No	No	No	No	No		

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).
 Notes:

Lorton Avenue and Bayswater Avenue

Lorton Avenue and Bayswater Avenue**AM PEAK PERIOD**

Source: Figure 4C-3 California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	Two or More	Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
Major Street - Both Approaches	Bayswater Avenue	X		331	354	332	355	389	390		
Minor Street - Highest Approach	Lorton Avenue	X		62	72	62	72	78	78		
Signal Warranted Based on Part B - Peak-Hour Volumes?				No	No	No	No	No	No		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Lorton Avenue and Bayswater Avenue

TRAFFIC SIGNAL WARRANTS WORKSHEETAnalyst: SS date: 7/15/19Major Street: Bayswater Avenue
Minor Street: Lorton AvenueCritical Approach Speed* (mph) 25Critical Approach Speed* (mph) 25

*Posted Speed.

Critical speed of major street traffic > 50 mph (64 km/h)..... ☐ }
 In built up area of isolated community of < 10,000 population..... ☐ } **Rural (R)**
☒ **Urban (U)**

PM PEAK HOUR**Warrant 3 - Peak Hour****PART A**

(All parts 1, 2, and 3 below must be satisfied)

		PM PEAK HOUR							
		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
Minor Street Approach Direction w/ Highest Delay		NB	NB	NB	NB	NB	NB		
Highest Minor Street Average Delay (sec/veh)		11.5	12.0	11.6	12.1	12.5	12.6		
Corresponding Minor Street Approach Volume (veh/hr)		44	52	44	52	56	56		
Minor Street Total Delay (veh-hrs)		0.1	0.2	0.1	0.2	0.2	0.2		
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a 1-lane approach and 5 vehicle-hours for a 2-lane approach; <u>AND</u>		No	No	No	No	No	No		
2. The volume on the same minor street approach equals or exceeds 100 vph for 1 moving lane of traffic or 150 vph for 2 moving lanes; <u>AND</u>		No	No	No	No	No	No		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with 4 or more approaches or 650 vph for intersections with 3 approaches.		No	No	No	No	No	No		
Signal Warranted based on Part A?		No	No	No	No	No	No		

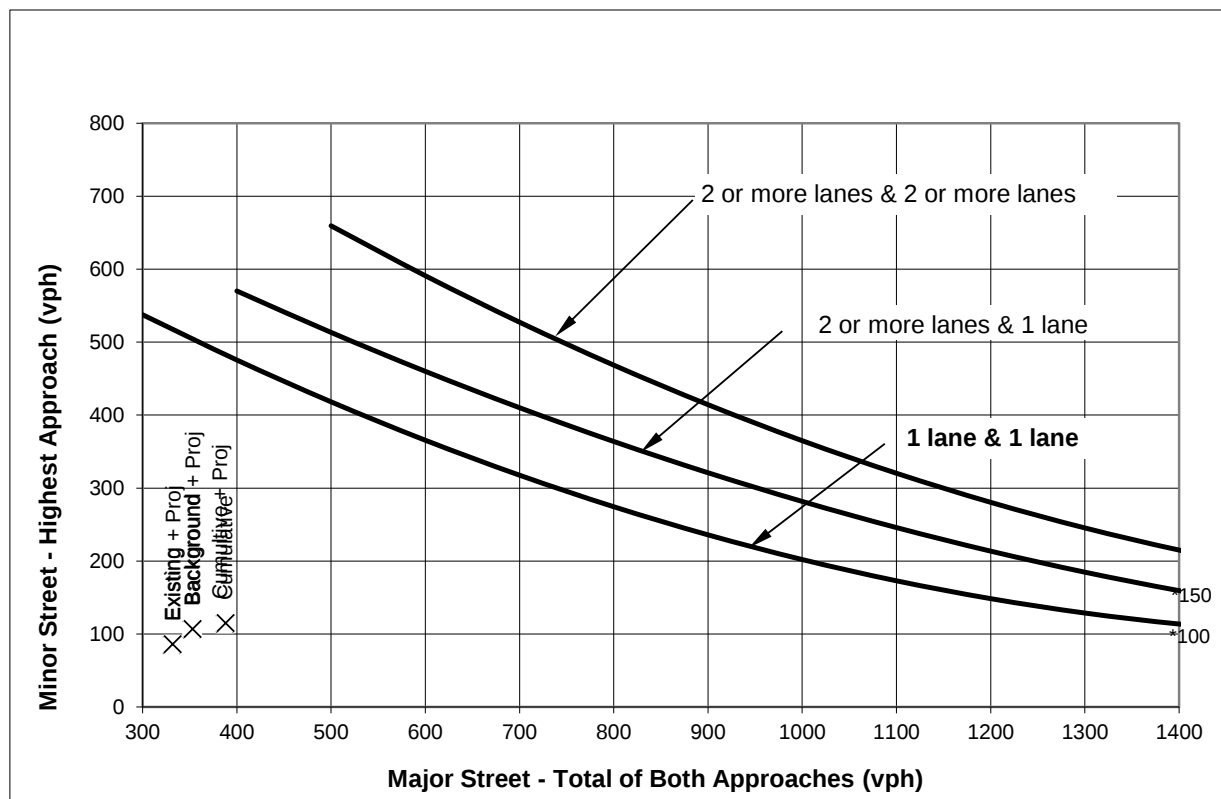
PART B

				PM PEAK HOUR							
				Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
		Approach Lanes									
		One	2 or More								
Major Street - Both Approaches	Bayswater Avenue	X		331	352	332	353	387	388		
Minor Street - Highest Approach	Lorton Avenue	X		85	106	86	107	114	115		
Signal Warranted based on Part B?				No	No	No	No	No	No		

The Warrant is satisfied if the plotted point for vehicles per hour on the major street (both approaches) and the corresponding per hour higher vehicle volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) fall above the applicable curves in California MUTCD Figure 4C-3 or 4C-4.

Source: California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).
 Notes:

Lorton Avenue and Bayswater Avenue

Lorton Avenue and Bayswater Avenue**PM PEAK HOUR**

Source: Figure 4C-3 California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California).

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

					PM PEAK HOUR									
					Approach Lanes		Existing	Background	Existing + Proj	Background + Proj	Cumulative	Cumulative + Proj		
					2 or One	More								
Major Street - Both Approaches	Bayswater Avenue	X			331	352	332	353	387	388				
Minor Street - Highest Approach	Lorton Avenue	X			85	106	86	107	114	115				
Signal Warranted Based on Part B - Peak-Hour Volumes?					No	No	No	No	No	No				

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

Appendix E

Volume Summary Tables

Intersection Number: 1
 Traffic Node Number: 1
 Intersection Name: Lorton Avenue and Howard Avenue
 Peak Hour: AM
 Count Date: 1/10/2019

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	15	12	25	25	255	30	11	25	24	24	203	18	667
Approved Project Trips													
1008-1028 Carolan Avenue	0	0	0	0	3	0	0	0	0	0	0	0	3
920 Bayswater Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
The Village at Burlingame	0	15	0	0	-1	0	0	3	4	17	6	0	44
250 California Drive	1	1	1	0	1	0	0	0	0	0	5	0	9
240 Lorton Avenue	0	0	0	4	0	0	0	0	0	0	0	2	6
225 California Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
988 Howard Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1491-93 Oak Grove Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1509 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
1128-32 Douglas Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1433 Floribunda Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1431 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Park Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 Trousdale Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
300 Airport Boulevard	0	0	0	0	0	0	0	0	0	0	0	0	0
619-625 California Drive Live/Work	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Project Trips	1	16	1	4	3	0	0	3	4	17	11	2	62
Background Conditions	16	28	26	29	258	30	11	28	28	41	214	20	729
Project Trips	0	0	0	0	0	0	0	0	1	1	0	0	2
Existing Plus Project Conditions	15	12	25	25	255	30	11	25	25	25	203	18	669
Background Plus Project Conditions	16	28	26	29	258	30	11	28	29	42	214	20	731
Cumulative Conditions	18	29	29	32	285	33	12	31	31	44	235	22	801
Cumulative Plus Project Conditions	18	29	29	32	285	33	12	31	32	45	235	22	803

Intersection Number: **2**
 Traffic Node Number: **2**
 Intersection Name: Lorton Avenue and Bayswater Avenue
 Peak Hour: AM
 Count Date: 3/28/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	15	22	12	13	126	9	12	27	23	8	168	7	442
Approved Project Trips													
1008-1028 Carolan Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
920 Bayswater Avenue	0	0	0	0	14	0	0	0	0	0	5	0	19
The Village at Burlingame	1	3	0	0	-7	0	0	16	-6	-1	6	6	18
250 California Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
240 Lorton Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
225 California Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
988 Howard Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1491-93 Oak Grove Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1509 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
1128-32 Douglas Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1433 Floribunda Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1431 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Park Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 Trousdale Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
300 Airport Boulevard	0	0	0	0	0	0	0	0	0	0	0	0	0
619-625 California Drive Live/Work	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Project Trips	1	3	0	0	7	0	0	16	-6	-1	11	6	37
Background Conditions													
Background Conditions	16	25	12	13	133	9	12	43	17	7	179	13	479
Project Trips													
Project Trips	1	0	0	0	0	0	0	0	0	0	0	1	2
Existing Plus Project Conditions													
Existing Plus Project Conditions	16	22	12	13	126	9	12	27	23	8	168	8	444
Background Plus Project Conditions													
Background Plus Project Conditions	17	25	12	13	133	9	12	43	17	7	179	14	481
Cumulative Conditions													
Cumulative Conditions	18	27	13	14	146	10	13	46	19	8	197	14	525
Cumulative Plus Project Conditions													
Cumulative Plus Project Conditions	19	27	13	14	146	10	13	46	19	8	197	15	527

Intersection Number: 1
 Traffic Node Number: 1
 Intersection Name: Lorton Avenue and Howard Avenue
 Peak Hour: PM
 Count Date: 1/10/2019

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	58	34	60	88	270	28	24	27	23	39	270	39	960
Approved Project Trips													
1008-1028 Carolan Avenue	0	0	0	0	0	0	0	0	0	0	2	0	2
920 Bayswater Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
The Village at Burlingame	0	5	0	0	7	0	0	13	14	7	3	0	49
250 California Drive	0	0	0	0	2	0	0	0	0	0	3	0	5
240 Lorton Avenue	5	2	1	1	0	0	0	0	0	0	0	0	9
225 California Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
988 Howard Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1491-93 Oak Grove Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1509 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
1128-32 Douglas Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1433 Floribunda Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1431 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Park Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 Trousdale Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
300 Airport Boulevard	0	0	0	0	0	0	0	0	0	0	0	0	0
619-625 California Drive Live/Work	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Project Trips	5	7	1	1	9	0	0	13	14	7	8	0	65
Background Conditions													
Background Conditions	63	41	61	89	279	28	24	40	37	46	278	39	1025
Net Project Trips													
Net Project Trips	0	0	0	0	0	0	1	0	1	1	0	0	3
Existing Plus Project Conditions													
Existing Plus Project Conditions	58	34	60	88	270	28	25	27	24	40	270	39	963
Background Plus Project Conditions													
Background Plus Project Conditions	63	41	61	89	279	28	25	40	38	47	278	39	1028
Cumulative Conditions													
Cumulative Conditions	69	45	67	98	307	31	27	43	39	50	306	43	1125
Cumulative Plus Project Conditions													
Cumulative Plus Project Conditions	69	45	67	98	307	31	28	43	40	51	306	43	1128

Intersection Number: 2
 Traffic Node Number: 2
 Intersection Name: Lorton Avenue and Bayswater Avenue
 Peak Hour: PM
 Count Date: 3/28/2018

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	31	32	22	17	118	10	9	23	12	11	159	16	460
Approved Project Trips													
1008-1028 Carolan Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
920 Bayswater Avenue	0	0	0	0	9	0	0	0	0	0	14	0	23
The Village at Burlingame	5	14	0	0	2	0	0	7	1	-3	-3	2	25
250 California Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
240 Lorton Avenue	0	2	0	0	0	0	0	0	0	0	0	0	2
225 California Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
988 Howard Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1491-93 Oak Grove Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1509 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
1128-32 Douglas Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1433 Floribunda Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0
1431 El Camino Real	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Park Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 Trousdale Drive	0	0	0	0	0	0	0	0	0	0	0	0	0
300 Airport Boulevard	0	0	0	0	0	0	0	0	0	0	0	0	0
619-625 California Drive Live/Work	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Project Trips	5	16	0	0	11	0	0	7	1	-3	11	2	50
Background Conditions													
Background Conditions	36	48	22	17	129	10	9	30	13	8	170	18	510
Net Project Trips													
Net Project Trips	1	0	0	0	0	0	0	0	0	0	0	1	2
Existing Plus Project Conditions													
Existing Plus Project Conditions	32	32	22	17	118	10	9	23	12	11	159	17	462
Background Plus Project Conditions													
Background Plus Project Conditions	37	48	22	17	129	10	9	30	13	8	170	19	512
Cumulative Conditions													
Cumulative Conditions	39	51	24	19	141	11	10	32	14	9	187	20	557
Cumulative Plus Project Conditions													
Cumulative Plus Project Conditions	40	51	24	19	141	11	10	32	14	9	187	21	559

Traffic Noise Screening Tables

Existing Volumes - AM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	539	347
EAST LINK (Total)	549	340
NORTH LINK (Total)	120	96
SOUTH LINK (Total)	126	101

Existing Volumes - PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	699	347
EAST LINK (Total)	740	335
NORTH LINK (Total)	306	141
SOUTH LINK (Total)	175	97

Background Volumes - AM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	577	365
EAST LINK (Total)	568	358
NORTH LINK (Total)	147	122
SOUTH LINK (Total)	166	113

Background Volumes - PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	742	374
EAST LINK (Total)	759	357
NORTH LINK (Total)	333	171
SOUTH LINK (Total)	216	118

Existing + Project Volumes - AM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	541	349
EAST LINK (Total)	549	340
NORTH LINK (Total)	120	98
SOUTH LINK (Total)	128	101

Existing + Project Volumes - PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	701	349
EAST LINK (Total)	741	335
NORTH LINK (Total)	306	143
SOUTH LINK (Total)	178	97

Background + Project Volumes AM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	579	367
EAST LINK (Total)	568	358
NORTH LINK (Total)	147	124
SOUTH LINK (Total)	168	113

Background + Project Volumes PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	744	376
EAST LINK (Total)	760	357
NORTH LINK (Total)	333	173
SOUTH LINK (Total)	219	118

Cumulative + Project Volumes AM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	637	404
EAST LINK (Total)	626	393
NORTH LINK (Total)	161	134
SOUTH LINK (Total)	182	123

Cumulative + Project Volumes PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	816	412
EAST LINK (Total)	837	392
NORTH LINK (Total)	365	187
SOUTH LINK (Total)	238	127

Change - Existing - AM

INTERSECTION—>	Battery Street Washington Street	Battery Street Clay Street
WEST LINK (Total)	0.37%	0.58%
EAST LINK (Total)	0.00%	0.00%
NORTH LINK (Total)	0.00%	2.08%
SOUTH LINK (Total)	1.59%	0.00%

Change - Existing - PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	0.29%	0.58%
EAST LINK (Total)	0.14%	0.00%
NORTH LINK (Total)	0.00%	1.42%
SOUTH LINK (Total)	1.71%	0.00%

Change - Background - AM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	0.35%	0.55%
EAST LINK (Total)	0.00%	0.00%
NORTH LINK (Total)	0.00%	1.64%
SOUTH LINK (Total)	1.20%	0.00%

Change - Background - PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	0.27%	0.53%
EAST LINK (Total)	0.13%	0.00%
NORTH LINK (Total)	0.00%	1.17%
SOUTH LINK (Total)	1.39%	0.00%

Change - Cumulative relative to Existing AM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	18.18%	16.43%
EAST LINK (Total)	14.03%	15.59%
NORTH LINK (Total)	34.17%	39.58%
SOUTH LINK (Total)	44.44%	21.78%

Change - Cumulative relative to Existing PM

INTERSECTION—>	Lorton Avenue Howard Avenue	Lorton Avenue Bayswater Avenue
WEST LINK (Total)	16.74%	18.73%
EAST LINK (Total)	13.11%	17.01%
NORTH LINK (Total)	19.28%	32.62%
SOUTH LINK (Total)	36.00%	30.93%

Supporting Air Quality Information

Project Construction CalEEMod Output

128 Lorton Avenue - San Mateo County, Annual

128 Lorton Avenue
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	17.00	Space	0.00	6,800.00	0
Condo/Townhouse	19.00	Dwelling Unit	0.17	26,325.00	54

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - All data from PD.

Construction Phase - Start/end dates by phase from 128 Lorton Ave - Construction Schedule.pdf

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Construction Off-road Equipment Mitigation - Tier 4 Final engines assume as a project design feature to reduce health risk impacts

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	5.00	100.00
tblConstructionPhase	NumDays	5.00	120.00
tblGrading	AcresOfGrading	1.88	0.17
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	19,000.00	26,325.00
tblLandUse	LotAcreage	0.15	0.00
tblLandUse	LotAcreage	1.19	0.17

tblOffRoadEquipment	HorsePower	78.00	5.00
tblOffRoadEquipment	HorsePower	89.00	123.00
tblOffRoadEquipment	HorsePower	89.00	123.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	158.00	144.00
tblOffRoadEquipment	HorsePower	158.00	22.00
tblOffRoadEquipment	HorsePower	158.00	22.00
tblOffRoadEquipment	HorsePower	89.00	123.00
tblOffRoadEquipment	HorsePower	187.00	145.00
tblOffRoadEquipment	HorsePower	402.00	380.00
tblOffRoadEquipment	HorsePower	402.00	380.00
tblOffRoadEquipment	HorsePower	402.00	140.00
tblOffRoadEquipment	HorsePower	402.00	140.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripNumber	40.00	15.00
tblTripsAndVMT	HaulingTripNumber	63.00	55.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00
tblTripsAndVMT	WorkerTripNumber	17.00	40.00
tblTripsAndVMT	WorkerTripNumber	17.00	0.00
tblTripsAndVMT	WorkerTripNumber	17.00	60.00
tblTripsAndVMT	WorkerTripNumber	3.00	50.00

tblTripsAndVMT	WorkerTripNumber	3.00	40.00
tblVehicleTrips	ST_TR	5.67	5.44
tblVehicleTrips	SU_TR	4.84	5.44
tblVehicleTrips	WD_TR	5.81	5.44

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3964	0.5454	0.5381	1.2800e-003	0.0570	0.0264	0.0834	0.0146	0.0252	0.0398	0.0000	114.0244	114.0244	0.0167	0.0000	114.4417
2021	0.0530	1.2800e-003	0.0119	5.0000e-005	5.2200e-003	3.0000e-005	5.2600e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.2213	4.2213	8.0000e-005	0.0000	4.2233
Maximum	0.3964	0.5454	0.5381	1.2800e-003	0.0570	0.0264	0.0834	0.0146	0.0252	0.0398	0.0000	114.0244	114.0244	0.0167	0.0000	114.4417

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3476	0.0788	0.5585	1.2800e-003	0.0570	1.5300e-003	0.0585	0.0146	1.5000e-003	0.0161	0.0000	114.0243	114.0243	0.0167	0.0000	114.4416
2021	0.0530	1.2800e-003	0.0119	5.0000e-005	5.2200e-003	3.0000e-005	5.2600e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.2213	4.2213	8.0000e-005	0.0000	4.2233
Maximum	0.3476	0.0788	0.5585	1.2800e-003	0.0570	1.5300e-003	0.0585	0.0146	1.5000e-003	0.0161	0.0000	114.0243	114.0243	0.0167	0.0000	114.4416

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	10.87	85.36	-3.72	0.00	0.00	94.10	28.04	0.00	93.94	57.54	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-8-2020	7-7-2020	0.2149	0.0522
2	7-8-2020	10-7-2020	0.3990	0.1825
3	10-8-2020	1-7-2021	0.3337	0.1986
4	1-8-2021	4-7-2021	0.0473	0.0473
		Highest	0.3990	0.1986

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1701	2.6400e-003	0.2019	1.3000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.8662	0.5865	1.4528	1.6200e-003	6.0000e-005	1.5101
Energy	2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	62.2676	62.2676	2.2200e-003	7.9000e-004	62.5582
Mobile	0.0253	0.0777	0.2866	9.7000e-004	0.0885	8.3000e-004	0.0893	0.0238	7.7000e-004	0.0246	0.0000	88.3715	88.3715	3.2400e-003	0.0000	88.4524
Waste						0.0000	0.0000		0.0000	0.0000	1.7741	0.0000	1.7741	0.1049	0.0000	4.3954
Water						0.0000	0.0000		0.0000	0.0000	0.3927	2.7433	3.1360	0.0405	9.8000e-004	4.4390
Total	0.1977	0.1002	0.4970	1.2300e-003	0.0885	0.0119	0.1003	0.0238	0.0118	0.0356	3.0331	153.9689	157.0019	0.1524	1.8300e-003	161.3551

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1701	2.6400e-003	0.2019	1.3000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.8662	0.5865	1.4528	1.6200e-003	6.0000e-005	1.5101
Energy	2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	62.2676	62.2676	2.2200e-003	7.9000e-004	62.5582
Mobile	0.0253	0.0777	0.2866	9.7000e-004	0.0885	8.3000e-004	0.0893	0.0238	7.7000e-004	0.0246	0.0000	88.3715	88.3715	3.2400e-003	0.0000	88.4524
Waste						0.0000	0.0000		0.0000	0.0000	1.7741	0.0000	1.7741	0.1049	0.0000	4.3954
Water						0.0000	0.0000		0.0000	0.0000	0.3927	2.7433	3.1360	0.0405	9.8000e-004	4.4390
Total	0.1977	0.1002	0.4970	1.2300e-003	0.0885	0.0119	0.1003	0.0238	0.0118	0.0356	3.0331	153.9689	157.0019	0.1524	1.8300e-003	161.3551

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/8/2020	4/22/2020	5	11	
2	Grading	Grading	4/22/2020	4/28/2020	5	5	
3	Foundations and Backfill	Building Construction	4/29/2020	6/9/2020	5	30	
4	Parking Podium	Building Construction	6/3/2020	7/14/2020	5	30	
5	Framing and Exterior Finishes	Architectural Coating	7/15/2020	12/1/2020	5	100	
6	Interior Finishes	Architectural Coating	9/2/2020	2/16/2021	5	120	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.17

Acres of Paving: 0

Residential Indoor: 53,308; Residential Outdoor: 17,769; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	1	6.00	144	0.38
Demolition	Off-Highway Trucks	2	3.00	380	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	6.00	250	0.37
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Grading	Graders	1	6.00	145	0.41
Grading	Off-Highway Trucks	2	3.00	380	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	6.00	250	0.37
Foundations and Backfill	Concrete/Industrial Saws	1	2.00	81	0.73
Foundations and Backfill	Cranes	0	0.00	231	0.29
Foundations and Backfill	Excavators	1	5.00	22	0.38
Foundations and Backfill	Forklifts	1	1.00	123	0.20
Foundations and Backfill	Graders	0	0.00	187	0.41
Foundations and Backfill	Off-Highway Trucks	1	5.00	140	0.38
Foundations and Backfill	Rubber Tired Dozers	0	0.00	247	0.40
Foundations and Backfill	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Foundations and Backfill	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Parking Podium	Cranes	1	2.00	231	0.29
Parking Podium	Forklifts	1	1.00	123	0.20
Parking Podium	Off-Highway Trucks	1	5.00	140	0.38
Parking Podium	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Framing and Exterior Finishes	Air Compressors	0	0.00	78	0.48
Framing and Exterior Finishes	Air Compressors	2	6.00	78	0.48
Framing and Exterior Finishes	Cement and Mortar Mixers	0	0.00	9	0.56
Framing and Exterior Finishes	Cranes	1	4.00	231	0.29

Framing and Exterior Finishes	Excavators	1	5.00	22	0.38
Framing and Exterior Finishes	Forklifts	1	1.00	123	0.20
Framing and Exterior Finishes	Pavers	0	0.00	130	0.42
Framing and Exterior Finishes	Rollers	0	0.00	80	0.38
Framing and Exterior Finishes	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Interior Finishes	Air Compressors	3	6.00	5	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	0.00	15.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Grading	4	24.00	0.00	55.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Foundations and Backfill	4	40.00	3.00	30.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Foundations and Backfill	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Parking Podium	3	60.00	3.00	30.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Framing and Exterior Finishes	5	50.00	0.00	12.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Interior Finishes	3	40.00	0.00	5.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.2800e-003	0.0000	4.2800e-003	6.5000e-004	0.0000	6.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	5.0200e-003	0.0522	0.0352	1.0000e-004		1.9400e-003	1.9400e-003		1.7900e-003	1.7900e-003	0.0000	9.1010	9.1010	2.9400e-003	0.0000	9.1746
Total	5.0200e-003	0.0522	0.0352	1.0000e-004	4.2800e-003	1.9400e-003	6.2200e-003	6.5000e-004	1.7900e-003	2.4400e-003	0.0000	9.1010	9.1010	2.9400e-003	0.0000	9.1746

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	2.1500e-003	8.9000e-004	1.0000e-005	1.1000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5402	0.5402	7.0000e-005	0.0000	0.5418
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.0000e-004	2.1400e-003	1.0000e-005	8.7000e-004	1.0000e-005	8.7000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7211	0.7211	1.0000e-005	0.0000	0.7214
Total	3.6000e-004	2.3500e-003	3.0300e-003	2.0000e-005	9.8000e-004	2.0000e-005	9.8000e-004	2.6000e-004	2.0000e-005	2.8000e-004	0.0000	1.2612	1.2612	8.0000e-005	0.0000	1.2633

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.28E-03	0	4.28E-03	6.50E-04	0	6.50E-04	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.27E-03	5.52E-03	0.0527	1.00E-04		1.70E-04	1.70E-04		1.70E-04	1.70E-04	0.0000	9.1010	9.1010	2.9400e-003	0.0000	9.1746
Total	1.27E-03	5.52E-03	0.0527	1.00E-04	4.28E-03	1.70E-04	4.45E-03	6.50E-04	1.70E-04	8.20E-04	0.0000	9.1010	9.1010	2.9400e-003	0.0000	9.1746

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.00E-05	2.15E-03	8.90E-04	1.00E-05	1.10E-04	1.00E-05	1.10E-04	3.00E-05	1.00E-05	4.00E-05	0.0000	0.5402	0.5402	7.0000e-005	0.0000	0.5418
Vendor	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.00E-04	2.00E-04	2.14E-03	1.00E-05	8.70E-04	1.00E-05	8.70E-04	2.30E-04	1.00E-05	2.40E-04	0.0000	0.7211	0.7211	1.0000e-005	0.0000	0.7214
Total	3.60E-04	2.35E-03	3.03E-03	2.00E-05	9.80E-04	2.00E-05	9.80E-04	2.60E-04	2.00E-05	2.80E-04	0.0000	1.2612	1.2612	8.0000e-005	0.0000	1.2633

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0305	0.0175	5.0000e-005		1.2900e-003	1.2900e-003		1.1900e-003	1.1900e-003	0.0000	4.2141	4.2141	1.3600e-003	0.0000	4.2482
Total	2.9800e-003	0.0305	0.0175	5.0000e-005	1.2000e-004	1.2900e-003	1.4100e-003	1.0000e-005	1.1900e-003	1.2000e-003	0.0000	4.2141	4.2141	1.3600e-003	0.0000	4.2482

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	2.1000e-004	7.9000e-003	3.2500e-003	2.0000e-005	3.9000e-004	2.0000e-005	4.1000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.9805	1.9805	2.5000e-004	0.0000	1.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.1000e-004	1.1700e-003	0.0000	4.7000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3933	0.3933	1.0000e-005	0.0000	0.3935
Total	3.7000e-004	8.0100e-003	4.4200e-003	2.0000e-005	8.6000e-004	2.0000e-005	8.9000e-004	2.4000e-004	2.0000e-005	2.6000e-004	0.0000	2.3739	2.3739	2.6000e-004	0.0000	2.3802

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.20E-04	0	1.20E-04	1.00E-05	0	1.00E-05	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.90E-04	2.55E-03	0.0245	5.00E-05		8.00E-05	8.00E-05		8.00E-05	8.00E-05	0.0000	4.2141	4.2141	1.3600e-003	0.0000	4.2482
Total	5.90E-04	2.55E-03	0.0245	5.00E-05	1.20E-04	8.00E-05	2.00E-04	1.00E-05	8.00E-05	9.00E-05	0.0000	4.2141	4.2141	1.3600e-003	0.0000	4.2482

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.10E-04	7.90E-03	3.25E-03	2.00E-05	3.90E-04	2.00E-05	4.10E-04	1.10E-04	2.00E-05	1.30E-04	0.0000	1.9805	1.9805	2.5000e-004	0.0000	1.9867
Vendor	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.60E-04	1.10E-04	1.17E-03	0	4.70E-04	0	4.80E-04	1.30E-04	0	1.30E-04	0.0000	0.3933	0.3933	1.0000e-005	0.0000	0.3935
Total	3.70E-04	8.01E-03	4.42E-03	2.00E-05	8.60E-04	2.00E-05	8.90E-04	2.40E-04	2.00E-05	2.60E-04	0.0000	2.3739	2.3739	2.6000e-004	0.0000	2.3802

3.4 Foundations and Backfill - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3900e-003	0.0438	0.0521	8.0000e-005		2.4000e-003	2.4000e-003		2.2700e-003	2.2700e-003	0.0000	6.7748	6.7748	1.6700e-003	0.0000	6.8165
Total	5.3900e-003	0.0438	0.0521	8.0000e-005		2.4000e-003	2.4000e-003		2.2700e-003	2.2700e-003	0.0000	6.7748	6.7748	1.6700e-003	0.0000	6.8165

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	4.3100e-003	1.7700e-003	1.0000e-005	3.7000e-004	1.0000e-005	3.9000e-004	1.0000e-004	1.0000e-005	1.1000e-004	0.0000	1.0803	1.0803	1.3000e-004	0.0000	1.0837
Vendor	1.7000e-004	5.2200e-003	2.0800e-003	1.0000e-005	5.0000e-004	3.0000e-005	5.3000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.1925	1.1925	1.0000e-004	0.0000	1.1951
Worker	1.6400e-003	1.1100e-003	0.0117	4.0000e-005	8.8000e-003	3.0000e-005	8.8300e-003	2.2600e-003	3.0000e-005	2.2900e-003	0.0000	3.9332	3.9332	8.0000e-005	0.0000	3.9351
Total	1.9300e-003	0.0106	0.0155	6.0000e-005	9.6700e-003	7.0000e-005	9.7500e-003	2.5000e-003	6.0000e-005	2.5600e-003	0.0000	6.2059	6.2059	3.1000e-004	0.0000	6.2138

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.10E-04	3.52E-03	0.05	8.00E-05		1.10E-04	1.10E-04		1.10E-04	1.10E-04	0.0000	6.7748	6.7748	1.6700e-003	0.0000	6.8165
Total	8.10E-04	3.52E-03	0.05	8.00E-05		1.10E-04	1.10E-04		1.10E-04	1.10E-04	0.0000	6.7748	6.7748	1.6700e-003	0.0000	6.8165

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.20E-04	4.31E-03	1.77E-03	1.00E-05	3.70E-04	1.00E-05	3.90E-04	1.00E-04	1.00E-05	1.10E-04	0.0000	1.0803	1.0803	1.3000e-004	0.0000	1.0837
Vendor	1.70E-04	5.22E-03	2.08E-03	1.00E-05	5.00E-04	3.00E-05	5.30E-04	1.40E-04	2.00E-05	1.60E-04	0.0000	1.1925	1.1925	1.0000e-004	0.0000	1.1951
Worker	1.64E-03	1.11E-03	0.0117	4.00E-05	8.80E-03	3.00E-05	8.83E-03	2.26E-03	3.00E-05	2.29E-03	0.0000	3.9332	3.9332	8.0000e-005	0.0000	3.9351
Total	1.93E-03	0.0106	0.0155	6.00E-05	9.67E-03	7.00E-05	9.75E-03	2.50E-03	6.00E-05	2.56E-03	0.0000	6.2059	6.2059	3.1000e-004	0.0000	6.2138

3.5 Parking Podium - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7000e-003	0.0460	0.0400	7.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	6.0008	6.0008	1.9400e-003	0.0000	6.0493

Total	4.7000e-003	0.0460	0.0400	7.0000e-005		2.1800e-003	2.1800e-003		2.0100e-003	2.0100e-003	0.0000	6.0008	6.0008	1.9400e-003	0.0000	6.0493
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	4.3100e-003	1.7700e-003	1.0000e-005	2.1000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	1.0803	1.0803	1.3000e-004	0.0000	1.0837
Vendor	1.7000e-004	5.2200e-003	2.0800e-003	1.0000e-005	2.9000e-004	3.0000e-005	3.2000e-004	8.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.1925	1.1925	1.0000e-004	0.0000	1.1951
Worker	2.4500e-003	1.6600e-003	0.0175	7.0000e-005	7.0900e-003	4.0000e-005	7.1300e-003	1.8900e-003	4.0000e-005	1.9300e-003	0.0000	5.8998	5.8998	1.2000e-004	0.0000	5.9026
Total	2.7400e-003	0.0112	0.0214	9.0000e-005	7.5900e-003	8.0000e-005	7.6800e-003	2.0300e-003	7.0000e-005	2.1100e-003	0.0000	8.1725	8.1725	3.5000e-004	0.0000	8.1814

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.40E-04	3.65E-03	0.0453	7.00E-05		1.10E-04	1.10E-04		1.10E-04	1.10E-04	0.0000	6.0008	6.0008	1.9400e-003	0.0000	6.0493
Total	8.40E-04	3.65E-03	0.0453	7.00E-05		1.10E-04	1.10E-04		1.10E-04	1.10E-04	0.0000	6.0008	6.0008	1.9400e-003	0.0000	6.0493

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.20E-04	4.31E-03	1.77E-03	1.00E-05	2.10E-04	1.00E-05	2.30E-04	6.00E-05	1.00E-05	7.00E-05	0.0000	1.0803	1.0803	1.3000e-004	0.0000	1.0837
Vendor	1.70E-04	5.22E-03	2.08E-03	1.00E-05	2.90E-04	3.00E-05	3.20E-04	8.00E-05	2.00E-05	1.10E-04	0.0000	1.1925	1.1925	1.0000e-004	0.0000	1.1951
Worker	2.45E-03	1.66E-03	0.0175	7.00E-05	7.09E-03	4.00E-05	7.13E-03	1.89E-03	4.00E-05	1.93E-03	0.0000	5.8998	5.8998	1.2000e-004	0.0000	5.9026
Total	2.74E-03	0.0112	0.0214	9.00E-05	7.59E-03	8.00E-05	7.68E-03	2.03E-03	7.00E-05	2.11E-03	0.0000	8.1725	8.1725	3.5000e-004	0.0000	8.1814

3.6 Framing and Exterior Finishes - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1867					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0392	0.3308	0.2656	4.8000e-004		0.0182	0.0182		0.0176	0.0176	0.0000	41.5631	41.5631	7.1600e-003	0.0000	41.7421
Total	0.2259	0.3308	0.2656	4.8000e-004		0.0182	0.0182		0.0176	0.0176	0.0000	41.5631	41.5631	7.1600e-003	0.0000	41.7421

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	5.0000e-005	1.7200e-003	7.1000e-004	0.0000	9.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.4321	0.4321	5.0000e-005	0.0000	0.4335
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8200e-003	4.6200e-003	0.0487	1.8000e-004	0.0197	1.2000e-004	0.0198	5.2400e-003	1.1000e-004	5.3500e-003	0.0000	16.3882	16.3882	3.2000e-004	0.0000	16.3962
Total	6.8700e-003	6.3400e-003	0.0494	1.8000e-004	0.0198	1.3000e-004	0.0199	5.2600e-003	1.1000e-004	5.3800e-003	0.0000	16.8204	16.8204	3.7000e-004	0.0000	16.8297

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1867					0	0		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.91E-03	0.0213	0.2583	4.80E-04		6.50E-04	6.50E-04		6.50E-04	6.50E-04	0.0000	41.5630	41.5630	7.1600e-003	0.0000	41.7421
Total	0.1916	0.0213	0.2583	4.80E-04		6.50E-04	6.50E-04		6.50E-04	6.50E-04	0.0000	41.5630	41.5630	7.1600e-003	0.0000	41.7421

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.00E-05	1.72E-03	7.10E-04	0	9.00E-05	1.00E-05	9.00E-05	2.00E-05	0	3.00E-05	0.0000	0.4321	0.4321	5.0000e-005	0.0000	0.4335
Vendor	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.82E-03	4.62E-03	0.0487	1.80E-04	0.0197	1.20E-04	0.0198	5.24E-03	1.10E-04	5.35E-03	0.0000	16.3882	16.3882	3.2000e-004	0.0000	16.3962
Total	6.87E-03	6.34E-03	0.0494	1.80E-04	0.0198	1.30E-04	0.0199	5.26E-03	1.10E-04	5.38E-03	0.0000	16.8204	16.8204	3.7000e-004	0.0000	16.8297

3.7 Interior Finishes - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1354					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1354					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	5.2000e-004	2.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1305	0.1305	2.0000e-005	0.0000	0.1309
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7400e-003	3.2200e-003	0.0339	1.3000e-004	0.0137	9.0000e-005	0.0138	3.6500e-003	8.0000e-005	3.7200e-003	0.0000	11.4062	11.4062	2.2000e-004	0.0000	11.4118
Total	4.7500e-003	3.7400e-003	0.0341	1.3000e-004	0.0137	9.0000e-005	0.0138	3.6600e-003	8.0000e-005	3.7300e-003	0.0000	11.5368	11.5368	2.4000e-004	0.0000	11.5427

Mitigated Construction On-Site

Total	0.0514					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.8000e-004	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0487	0.0487	1.0000e-005	0.0000	0.0488
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	1.0900e-003	0.0119	5.0000e-005	5.2000e-003	3.0000e-005	5.2300e-003	1.3800e-003	3.0000e-005	1.4100e-003	0.0000	4.1726	4.1726	8.0000e-005	0.0000	4.1745
Total	1.6900e-003	1.2700e-003	0.0119	5.0000e-005	5.2300e-003	3.0000e-005	5.2600e-003	1.3900e-003	3.0000e-005	1.4200e-003	0.0000	4.2213	4.2213	9.0000e-005	0.0000	4.2233

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0514					0	0		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0514					0	0		0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.00E-05	1.80E-04	8.00E-05	0	3.00E-05	0	3.00E-05	1.00E-05	0	1.00E-05	0.0000	0.0487	0.0487	1.0000e-005	0.0000	0.0488
Vendor	0	0	0	0	0	0	0	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.68E-03	1.09E-03	0.0119	5.00E-05	5.20E-03	3.00E-05	5.23E-03	1.38E-03	3.00E-05	1.41E-03	0.0000	4.1726	4.1726	8.0000e-005	0.0000	4.1745
Total	1.69E-03	1.27E-03	0.0119	5.00E-05	5.23E-03	3.00E-05	5.26E-03	1.39E-03	3.00E-05	1.42E-03	0.0000	4.2213	4.2213	9.0000e-005	0.0000	4.2233

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0253	0.0777	0.2866	9.7000e-004	0.0885	8.3000e-004	0.0893	0.0238	7.7000e-004	0.0246	0.0000	88.3715	88.3715	3.2400e-003	0.0000	88.4524
Unmitigated	0.0253	0.0777	0.2866	9.7000e-004	0.0885	8.3000e-004	0.0893	0.0238	7.7000e-004	0.0246	0.0000	88.3715	88.3715	3.2400e-003	0.0000	88.4524

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Condo/Townhouse	103.36	103.36	103.36	238,721	238,721
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	103.36	103.36	103.36	238,721	238,721

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
Enclosed Parking with Elevator	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	39.2323	39.2323	1.7700e-003	3.7000e-004	39.3860
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	39.2323	39.2323	1.7700e-003	3.7000e-004	39.3860
NaturalGas Mitigated	2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	23.0353	23.0353	4.4000e-004	4.2000e-004	23.1722
NaturalGas Unmitigated	2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	23.0353	23.0353	4.4000e-004	4.2000e-004	23.1722

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	431665	2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	23.0353	23.0353	4.4000e-004	4.2000e-004	23.1722
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	23.0353	23.0353	4.4000e-004	4.2000e-004	23.1722

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	431665	2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	23.0353	23.0353	4.4000e-004	4.2000e-004	23.1722
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.3300e-003	0.0199	8.4600e-003	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003	0.0000	23.0353	23.0353	4.4000e-004	4.2000e-004	23.1722

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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Land Use	kWh/yr	MT/yr			
Condo/Townhouse	95012	27.6401	1.2500e-003	2.6000e-004	27.7484
Enclosed Parking with Elevator	39848	11.5922	5.2000e-004	1.1000e-004	11.6377
Total		39.2323	1.7700e-003	3.7000e-004	39.3860

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	95012	27.6401	1.2500e-003	2.6000e-004	27.7484
Enclosed Parking with Elevator	39848	11.5922	5.2000e-004	1.1000e-004	11.6377
Total		39.2323	1.7700e-003	3.7000e-004	39.3860

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1701	2.6400e-003	0.2019	1.3000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.8662	0.5865	1.4528	1.6200e-003	6.0000e-005	1.5101

Unmitigated	0.1701	2.6400e-003	0.2019	1.3000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.8662	0.5865	1.4528	1.6200e-003	6.0000e-005	1.5101
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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1033					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0438	1.0100e-003	0.0604	1.2000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003	0.8662	0.3558	1.2220	1.3900e-003	6.0000e-005	1.2737
Landscaping	4.3000e-003	1.6300e-003	0.1415	1.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	0.2308	0.2308	2.2000e-004	0.0000	0.2364
Total	0.1701	2.6400e-003	0.2019	1.3000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.8662	0.5865	1.4528	1.6100e-003	6.0000e-005	1.5101

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0187					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1033					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0438	1.0100e-003	0.0604	1.2000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003	0.8662	0.3558	1.2220	1.3900e-003	6.0000e-005	1.2737
Landscaping	4.3000e-003	1.6300e-003	0.1415	1.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	0.2308	0.2308	2.2000e-004	0.0000	0.2364

Total	0.1701	2.6400e-003	0.2019	1.3000e-004		9.4100e-003	9.4100e-003		9.4100e-003	9.4100e-003	0.8662	0.5865	1.4528	1.6100e-003	6.0000e-005	1.5101
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7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.1360	0.0405	9.8000e-004	4.4390
Unmitigated	3.1360	0.0405	9.8000e-004	4.4390

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.23793 / 0.780432	3.1360	0.0405	9.8000e-004	4.4390
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		3.1360	0.0405	9.8000e-004	4.4390

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	1.23793 / 0.780432	3.1360	0.0405	9.8000e-004	4.4390
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		3.1360	0.0405	9.8000e-004	4.4390

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.7741	0.1049	0.0000	4.3954
Unmitigated	1.7741	0.1049	0.0000	4.3954

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Land Use	tons	MT/yr			
Condo/Townhouse	8.74	1.7741	0.1049	0.0000	4.3954
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		1.7741	0.1049	0.0000	4.3954

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	8.74	1.7741	0.1049	0.0000	4.3954
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		1.7741	0.1049	0.0000	4.3954

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

128 Lorton Avenue - San Mateo County, Summer

128 Lorton Avenue
San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	17.00	Space	0.00	6,800.00	0
Condo/Townhouse	19.00	Dwelling Unit	0.17	26,325.00	54

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - All data from PD.

Construction Phase - Start/end dates by phase from 128 Lorton Ave - Construction Schedule.pdf

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Off-road Equipment - Equipment data from 128 Lorton Ave - Follow Up Data Need.xlsx

Construction Off-road Equipment Mitigation - Tier 4 Final engines assume as a project design feature to reduce health risk impacts

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	5.00	100.00
tblConstructionPhase	NumDays	5.00	120.00
tblGrading	AcresOfGrading	1.88	0.17
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	19,000.00	26,325.00
tblLandUse	LotAcreage	0.15	0.00
tblLandUse	LotAcreage	1.19	0.17

tblOffRoadEquipment	HorsePower	78.00	5.00
tblOffRoadEquipment	HorsePower	89.00	123.00
tblOffRoadEquipment	HorsePower	89.00	123.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	158.00	144.00
tblOffRoadEquipment	HorsePower	158.00	22.00
tblOffRoadEquipment	HorsePower	158.00	22.00
tblOffRoadEquipment	HorsePower	89.00	123.00
tblOffRoadEquipment	HorsePower	187.00	145.00
tblOffRoadEquipment	HorsePower	402.00	380.00
tblOffRoadEquipment	HorsePower	402.00	380.00
tblOffRoadEquipment	HorsePower	402.00	140.00
tblOffRoadEquipment	HorsePower	402.00	140.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	6.00	1.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripLength	20.00	17.00
tblTripsAndVMT	HaulingTripNumber	40.00	15.00
tblTripsAndVMT	HaulingTripNumber	63.00	55.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00
tblTripsAndVMT	WorkerTripNumber	17.00	40.00
tblTripsAndVMT	WorkerTripNumber	17.00	0.00
tblTripsAndVMT	WorkerTripNumber	17.00	60.00
tblTripsAndVMT	WorkerTripNumber	3.00	50.00

tblTripsAndVMT	WorkerTripNumber	3.00	40.00
tblVehicleTrips	ST_TR	5.67	5.44
tblVehicleTrips	SU_TR	4.84	5.44
tblVehicleTrips	WD_TR	5.81	5.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.8793	25.2067	15.7660	0.0501	1.3695	0.8816	2.2511	0.3140	0.8115	1.0807	0.0000	5,006.2844	5,006.2844	1.3193	0.0000	5,039.2674
2021	3.2150	0.0693	0.7716	3.0000e-003	0.3304	1.9500e-003	0.3324	0.0876	1.8000e-003	0.0894	0.0000	299.1776	299.1776	5.7500e-003	0.0000	299.3213
Maximum	7.8793	25.2067	15.7660	0.0501	1.3695	0.8816	2.2511	0.3140	0.8115	1.0807	0.0000	5,006.2844	5,006.2844	1.3193	0.0000	5,039.2674

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.1934	5.5655	21.7317	0.0501	1.3695	0.0750	1.4444	0.3140	0.0743	0.3436	0.0000	5,006.2844	5,006.2844	1.3193	0.0000	5,039.2674
2021	3.2150	0.0693	0.7716	3.0000e-003	0.3304	1.9500e-003	0.3324	0.0876	1.8000e-003	0.0894	0.0000	299.1776	299.1776	5.7500e-003	0.0000	299.3213
Maximum	7.1934	5.5655	21.7317	0.0501	1.3695	0.0750	1.4444	0.3140	0.0743	0.3436	0.0000	5,006.2844	5,006.2844	1.3193	0.0000	5,039.2674

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	6.18	77.71	-36.07	0.00	0.00	91.30	31.22	0.00	90.64	63.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5298	0.1909	11.8964	0.0200		1.4743	1.4743		1.4743	1.4743	159.0461	73.2380	232.2841	0.2204	0.0112	241.1439
Energy	0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613
Mobile	0.1533	0.4059	1.5915	5.5700e-003	0.5070	4.5400e-003	0.5116	0.1358	4.2400e-003	0.1400		561.9812	561.9812	0.0197		562.4723
Total	8.6958	0.7058	13.5343	0.0262	0.5070	1.4876	1.9947	0.1358	1.4873	1.6231	159.0461	774.3537	933.3997	0.2427	0.0138	943.5775

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.5298	0.1909	11.8964	0.0200		1.4743	1.4743		1.4743	1.4743	159.0461	73.2380	232.2841	0.2204	0.0112	241.1439
Energy	0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613
Mobile	0.1533	0.4059	1.5915	5.5700e-003	0.5070	4.5400e-003	0.5116	0.1358	4.2400e-003	0.1400		561.9812	561.9812	0.0197		562.4723
Total	8.6958	0.7058	13.5343	0.0262	0.5070	1.4876	1.9947	0.1358	1.4873	1.6231	159.0461	774.3537	933.3997	0.2427	0.0138	943.5775

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/8/2020	4/22/2020	5	11	
2	Grading	Grading	4/22/2020	4/28/2020	5	5	
3	Foundations and Backfill	Building Construction	4/29/2020	6/9/2020	5	30	
4	Parking Podium	Building Construction	6/3/2020	7/14/2020	5	30	
5	Framing and Exterior Finishes	Architectural Coating	7/15/2020	12/1/2020	5	100	
6	Interior Finishes	Architectural Coating	9/2/2020	2/16/2021	5	120	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.17

Acres of Paving: 0

Residential Indoor: 53,308; Residential Outdoor: 17,769; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	1	6.00	144	0.38
Demolition	Off-Highway Trucks	2	3.00	380	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	6.00	250	0.37
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Grading	Graders	1	6.00	145	0.41
Grading	Off-Highway Trucks	2	3.00	380	0.38

Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	6.00	250	0.37
Foundations and Backfill	Concrete/Industrial Saws	1	2.00	81	0.73
Foundations and Backfill	Cranes	0	0.00	231	0.29
Foundations and Backfill	Excavators	1	5.00	22	0.38
Foundations and Backfill	Forklifts	1	1.00	123	0.20
Foundations and Backfill	Graders	0	0.00	187	0.41
Foundations and Backfill	Off-Highway Trucks	1	5.00	140	0.38
Foundations and Backfill	Rubber Tired Dozers	0	0.00	247	0.40
Foundations and Backfill	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Foundations and Backfill	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Parking Podium	Cranes	1	2.00	231	0.29
Parking Podium	Forklifts	1	1.00	123	0.20
Parking Podium	Off-Highway Trucks	1	5.00	140	0.38
Parking Podium	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Framing and Exterior Finishes	Air Compressors	0	0.00	78	0.48
Framing and Exterior Finishes	Air Compressors	2	6.00	78	0.48
Framing and Exterior Finishes	Cement and Mortar Mixers	0	0.00	9	0.56
Framing and Exterior Finishes	Cranes	1	4.00	231	0.29
Framing and Exterior Finishes	Excavators	1	5.00	22	0.38
Framing and Exterior Finishes	Forklifts	1	1.00	123	0.20
Framing and Exterior Finishes	Pavers	0	0.00	130	0.42
Framing and Exterior Finishes	Rollers	0	0.00	80	0.38
Framing and Exterior Finishes	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Interior Finishes	Air Compressors	3	6.00	5	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	0.00	15.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT

Grading	4	24.00	0.00	55.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Foundations and Backfill	4	40.00	3.00	30.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Foundations and Backfill	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Parking Podium	3	60.00	3.00	30.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Framing and Exterior Finishes	5	50.00	0.00	12.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT
Interior Finishes	3	40.00	0.00	5.00	10.80	7.30	17.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7782	0.0000	0.7782	0.1178	0.0000	0.1178			0.0000			0.0000
Off-Road	0.9132	9.4817	6.3982	0.0188		0.3531	0.3531		0.3248	0.3248		1,824.0262	1,824.0262	0.5899		1,838.7744
Total	0.9132	9.4817	6.3982	0.0188	0.7782	0.3531	1.1312	0.1178	0.3248	0.4427		1,824.0262	1,824.0262	0.5899		1,838.7744

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0105	0.3829	0.1594	9.6000e-004	0.0201	1.1600e-003	0.0213	5.5100e-003	1.1100e-003	6.6200e-003		108.8192	108.8192	0.0135		109.1554

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0326	0.4139	1.5400e-003	0.1643	9.9000e-004	0.1653	0.0436	9.1000e-004	0.0445		153.4238	153.4238	2.9700e-003		153.4979
Total	0.0655	0.4155	0.5733	2.5000e-003	0.1844	2.1500e-003	0.1866	0.0491	2.0200e-003	0.0511		262.2430	262.2430	0.0164		262.6533

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7782	0.0000	0.7782	0.1178	0.0000	0.1178			0.0000			0.0000
Off-Road	0.2315	1.0029	9.5722	0.0188		0.0309	0.0309		0.0309	0.0309	0.0000	1,824.0262	1,824.0262	0.5899		1,838.7744
Total	0.2315	1.0029	9.5722	0.0188	0.7782	0.0309	0.8090	0.1178	0.0309	0.1487	0.0000	1,824.0262	1,824.0262	0.5899		1,838.7744

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0105	0.3829	0.1594	9.6000e-004	0.0201	1.1600e-003	0.0213	5.5100e-003	1.1100e-003	6.6200e-003		108.8192	108.8192	0.0135		109.1554
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0326	0.4139	1.5400e-003	0.1643	9.9000e-004	0.1653	0.0436	9.1000e-004	0.0445		153.4238	153.4238	2.9700e-003		153.4979
Total	0.0655	0.4155	0.5733	2.5000e-003	0.1844	2.1500e-003	0.1866	0.0491	2.0200e-003	0.0511		262.2430	262.2430	0.0164		262.6533

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0474	0.0000	0.0474	5.6100e-003	0.0000	5.6100e-003			0.0000			0.0000
Off-Road	1.1913	12.1817	7.0120	0.0192		0.5158	0.5158		0.4745	0.4745		1,858.0986	1,858.0986	0.6010		1,873.1223
Total	1.1913	12.1817	7.0120	0.0192	0.0474	0.5158	0.5632	5.6100e-003	0.4745	0.4802		1,858.0986	1,858.0986	0.6010		1,873.1223

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0849	3.0887	1.2859	7.7500e-003	0.1624	9.4000e-003	0.1718	0.0444	8.9900e-003	0.0534		877.8081	877.8081	0.1085		880.5200
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0659	0.0391	0.4967	1.8500e-003	0.1972	1.1900e-003	0.1983	0.0523	1.0900e-003	0.0534		184.1085	184.1085	3.5600e-003		184.1975
Total	0.1508	3.1278	1.7825	9.6000e-003	0.3595	0.0106	0.3701	0.0967	0.0101	0.1068		1,061.9166	1,061.9166	0.1120		1,064.7175

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Fugitive Dust					0.0474	0.0000	0.0474	5.6100e-003	0.0000	5.6100e-003			0.0000			0.0000
Off-Road	0.2352	1.0192	9.8037	0.0192		0.0314	0.0314		0.0314	0.0314	0.0000	1,858.0986	1,858.0986	0.6010		1,873.1223
Total	0.2352	1.0192	9.8037	0.0192	0.0474	0.0314	0.0787	5.6100e-003	0.0314	0.0370	0.0000	1,858.0986	1,858.0986	0.6010		1,873.1223

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0849	3.0887	1.2859	7.7500e-003	0.1624	9.4000e-003	0.1718	0.0444	8.9900e-003	0.0534		877.8081	877.8081	0.1085		880.5200
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0659	0.0391	0.4967	1.8500e-003	0.1972	1.1900e-003	0.1983	0.0523	1.0900e-003	0.0534		184.1085	184.1085	3.5600e-003		184.1975
Total	0.1508	3.1278	1.7825	9.6000e-003	0.3595	0.0106	0.3701	0.0967	0.0101	0.1068		1,061.9166	1,061.9166	0.1120		1,064.7175

3.4 Foundations and Backfill - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3593	2.9171	3.4705	5.1700e-003		0.1601	0.1601		0.1512	0.1512		497.8632	497.8632	0.1225		500.9253
Total	0.3593	2.9171	3.4705	5.1700e-003		0.1601	0.1601		0.1512	0.1512		497.8632	497.8632	0.1225		500.9253

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7100e-003	0.2808	0.1169	7.0000e-004	0.0260	8.5000e-004	0.0269	6.8000e-003	8.2000e-004	7.6200e-003		79.8007	79.8007	9.8600e-003		80.0473
Vendor	0.0114	0.3426	0.1328	8.0000e-004	0.0347	1.7200e-003	0.0364	9.3800e-003	1.6400e-003	0.0110		88.2790	88.2790	7.5300e-003		88.4674
Worker	0.1099	0.0652	0.8278	3.0800e-003	0.6142	1.9800e-003	0.6162	0.1573	1.8200e-003	0.1591		306.8476	306.8476	5.9300e-003		306.9959
Total	0.1290	0.6886	1.0775	4.5800e-003	0.6749	4.5500e-003	0.6794	0.1734	4.2800e-003	0.1777		474.9273	474.9273	0.0233		475.5105

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0541	0.2344	3.3351	5.1700e-003		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	497.8632	497.8632	0.1225		500.9253
Total	0.0541	0.2344	3.3351	5.1700e-003		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	497.8632	497.8632	0.1225		500.9253

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7100e-003	0.2808	0.1169	7.0000e-004	0.0260	8.5000e-004	0.0269	6.8000e-003	8.2000e-004	7.6200e-003		79.8007	79.8007	9.8600e-003		80.0473
Vendor	0.0114	0.3426	0.1328	8.0000e-004	0.0347	1.7200e-003	0.0364	9.3800e-003	1.6400e-003	0.0110		88.2790	88.2790	7.5300e-003		88.4674
Worker	0.1099	0.0652	0.8278	3.0800e-003	0.6142	1.9800e-003	0.6162	0.1573	1.8200e-003	0.1591		306.8476	306.8476	5.9300e-003		306.9959
Total	0.1290	0.6886	1.0775	4.5800e-003	0.6749	4.5500e-003	0.6794	0.1734	4.2800e-003	0.1777		474.9273	474.9273	0.0233		475.5105

3.5 Parking Podium - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3134	3.0689	2.6630	4.5500e-003		0.1456	0.1456		0.1340	0.1340		440.9801	440.9801	0.1426		444.5456
Total	0.3134	3.0689	2.6630	4.5500e-003		0.1456	0.1456		0.1340	0.1340		440.9801	440.9801	0.1426		444.5456

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	7.7100e-003	0.2808	0.1169	7.0000e-004	0.0148	8.5000e-004	0.0156	4.0400e-003	8.2000e-004	4.8600e-003		79.8007	79.8007	9.8600e-003		80.0473
Vendor	0.0114	0.3426	0.1328	8.0000e-004	0.0203	1.7200e-003	0.0220	5.8300e-003	1.6400e-003	7.4700e-003		88.2790	88.2790	7.5300e-003		88.4674
Worker	0.1648	0.0978	1.2417	4.6100e-003	0.4929	2.9700e-003	0.4959	0.1307	2.7300e-003	0.1335		460.2713	460.2713	8.9000e-003		460.4938
Total	0.1839	0.7212	1.4914	6.1100e-003	0.5279	5.5400e-003	0.5334	0.1406	5.1900e-003	0.1458		628.3511	628.3511	0.0263		629.0084

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0562	0.2434	3.0203	4.5500e-003		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003	0.0000	440.9801	440.9801	0.1426		444.5456
Total	0.0562	0.2434	3.0203	4.5500e-003		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003	0.0000	440.9801	440.9801	0.1426		444.5456

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7100e-003	0.2808	0.1169	7.0000e-004	0.0148	8.5000e-004	0.0156	4.0400e-003	8.2000e-004	4.8600e-003		79.8007	79.8007	9.8600e-003		80.0473
Vendor	0.0114	0.3426	0.1328	8.0000e-004	0.0203	1.7200e-003	0.0220	5.8300e-003	1.6400e-003	7.4700e-003		88.2790	88.2790	7.5300e-003		88.4674
Worker	0.1648	0.0978	1.2417	4.6100e-003	0.4929	2.9700e-003	0.4959	0.1307	2.7300e-003	0.1335		460.2713	460.2713	8.9000e-003		460.4938
Total	0.1839	0.7212	1.4914	6.1100e-003	0.5279	5.5400e-003	0.5334	0.1406	5.1900e-003	0.1458		628.3511	628.3511	0.0263		629.0084

3.6 Framing and Exterior Finishes - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.7346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7841	6.6150	5.3114	9.5900e-003		0.3632	0.3632		0.3519	0.3519		916.3093	916.3093	0.1579		920.2564
Total	4.5186	6.6150	5.3114	9.5900e-003		0.3632	0.3632		0.3519	0.3519		916.3093	916.3093	0.1579		920.2564

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.3000e-004	0.0337	0.0140	8.0000e-005	1.7700e-003	1.0000e-004	1.8700e-003	4.8000e-004	1.0000e-004	5.8000e-004		9.5761	9.5761	1.1800e-003		9.6057
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1374	0.0815	1.0347	3.8500e-003	0.4107	2.4700e-003	0.4132	0.1090	2.2800e-003	0.1112		383.5594	383.5594	7.4100e-003		383.7448
Total	0.1383	0.1152	1.0487	3.9300e-003	0.4125	2.5700e-003	0.4151	0.1094	2.3800e-003	0.1118		393.1355	393.1355	8.5900e-003		393.3505

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.7346					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0981	0.4252	5.1651	9.5900e-003		0.0131	0.0131		0.0131	0.0131	0.0000	916.3093	916.3093	0.1579		920.2564
Total	3.8327	0.4252	5.1651	9.5900e-003		0.0131	0.0131		0.0131	0.0131	0.0000	916.3093	916.3093	0.1579		920.2564

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.3000e-004	0.0337	0.0140	8.0000e-005	1.7700e-003	1.0000e-004	1.8700e-003	4.8000e-004	1.0000e-004	5.8000e-004		9.5761	9.5761	1.1800e-003		9.6057
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1374	0.0815	1.0347	3.8500e-003	0.4107	2.4700e-003	0.4132	0.1090	2.2800e-003	0.1112		383.5594	383.5594	7.4100e-003		383.7448
Total	0.1383	0.1152	1.0487	3.9300e-003	0.4125	2.5700e-003	0.4151	0.1094	2.3800e-003	0.1118		393.1355	393.1355	8.5900e-003		393.3505

3.7 Interior Finishes - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.2000e-004	0.0117	4.8700e-003	3.0000e-005	7.9000e-004	4.0000e-005	8.3000e-004	2.1000e-004	3.0000e-005	2.5000e-004		3.3250	3.3250	4.1000e-004		3.3353
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1099	0.0652	0.8278	3.0800e-003	0.3286	1.9800e-003	0.3306	0.0872	1.8200e-003	0.0890		306.8476	306.8476	5.9300e-003		306.9959
Total	0.1102	0.0769	0.8326	3.1100e-003	0.3294	2.0200e-003	0.3314	0.0874	1.8500e-003	0.0892		310.1726	310.1726	6.3400e-003		310.3312

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.2000e-004	0.0117	4.8700e-003	3.0000e-005	7.9000e-004	4.0000e-005	8.3000e-004	2.1000e-004	3.0000e-005	2.5000e-004		3.3250	3.3250	4.1000e-004		3.3353
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1099	0.0652	0.8278	3.0800e-003	0.3286	1.9800e-003	0.3306	0.0872	1.8200e-003	0.0890		306.8476	306.8476	5.9300e-003		306.9959
Total	0.1102	0.0769	0.8326	3.1100e-003	0.3294	2.0200e-003	0.3314	0.0874	1.8500e-003	0.0892		310.1726	310.1726	6.3400e-003		310.3312

3.7 Interior Finishes - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	3.1000e-004	0.0108	5.0400e-003	3.0000e-005	1.8500e-003	3.0000e-005	1.8800e-003	4.7000e-004	3.0000e-005	5.0000e-004		3.2694	3.2694	4.1000e-004		3.2797
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1026	0.0585	0.7665	2.9700e-003	0.3286	1.9200e-003	0.3305	0.0872	1.7700e-003	0.0889		295.9082	295.9082	5.3400e-003		296.0416
Total	0.1029	0.0693	0.7716	3.0000e-003	0.3304	1.9500e-003	0.3324	0.0876	1.8000e-003	0.0894		299.1776	299.1776	5.7500e-003		299.3213

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	3.1122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.1000e-004	0.0108	5.0400e-003	3.0000e-005	1.8500e-003	3.0000e-005	1.8800e-003	4.7000e-004	3.0000e-005	5.0000e-004		3.2694	3.2694	4.1000e-004		3.2797
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1026	0.0585	0.7665	2.9700e-003	0.3286	1.9200e-003	0.3305	0.0872	1.7700e-003	0.0889		295.9082	295.9082	5.3400e-003		296.0416
Total	0.1029	0.0693	0.7716	3.0000e-003	0.3304	1.9500e-003	0.3324	0.0876	1.8000e-003	0.0894		299.1776	299.1776	5.7500e-003		299.3213

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1533	0.4059	1.5915	5.5700e-003	0.5070	4.5400e-003	0.5116	0.1358	4.2400e-003	0.1400		561.9812	561.9812	0.0197		562.4723
Unmitigated	0.1533	0.4059	1.5915	5.5700e-003	0.5070	4.5400e-003	0.5116	0.1358	4.2400e-003	0.1400		561.9812	561.9812	0.0197		562.4723

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	103.36	103.36	103.36	238,721	238,721
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	103.36	103.36	103.36	238,721	238,721

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759

Enclosed Parking with Elevator	0.482816	0.049967	0.258264	0.138365	0.017696	0.006700	0.022365	0.006431	0.004044	0.003214	0.008927	0.000452	0.000759
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613
NaturalGas Unmitigated	0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613

5.2 Energy by Land Use - NaturalGas Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1182.64	0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1.18264	0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0128	0.1090	0.0464	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003		139.1345	139.1345	2.6700e-003	2.5500e-003	139.9613

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.5298	0.1909	11.8964	0.0200		1.4743	1.4743		1.4743	1.4743	159.0461	73.2380	232.2841	0.2204	0.0112	241.1439
Unmitigated	8.5298	0.1909	11.8964	0.0200		1.4743	1.4743		1.4743	1.4743	159.0461	73.2380	232.2841	0.2204	0.0112	241.1439

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5658					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	7.8139	0.1727	10.3238	0.0199		1.4656	1.4656		1.4656	1.4656	159.0461	70.4118	229.4578	0.2177	0.0112	238.2491
Landscaping	0.0478	0.0182	1.5727	8.0000e-005		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003		2.8262	2.8262	2.7500e-003		2.8948
Total	8.5298	0.1909	11.8964	0.0200		1.4743	1.4743		1.4743	1.4743	159.0461	73.2380	232.2841	0.2204	0.0112	241.1439

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5658					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	7.8139	0.1727	10.3238	0.0199		1.4656	1.4656		1.4656	1.4656	159.0461	70.4118	229.4578	0.2177	0.0112	238.2491
Landscaping	0.0478	0.0182	1.5727	8.0000e-005		8.6700e-003	8.6700e-003		8.6700e-003	8.6700e-003		2.8262	2.8262	2.7500e-003		2.8948
Total	8.5298	0.1909	11.8964	0.0200		1.4743	1.4743		1.4743	1.4743	159.0461	73.2380	232.2841	0.2204	0.0112	241.1439

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Project Health Risk Assessment Inputs and Outputs

Health Risk - Dose and Risk Factors and Values

Dose factors

$$\text{Dose-air} = C_{\text{air}} \times \{BR/BW\} \times A \times EF \times 10^{-6}$$

$$\text{Dose-air} = (C_{\text{air}} \times WAF) \times \{BR/BW\} \times A \times EF \times 10^{-6}$$

		3rd trimester	0<2	2<9	2<16	16<30	16-70	source
Daily Breath Rate (BR/BW) (L/kg-day)	Residential	361	1090	631	572	261	233	OEHHA 2015, Table 5.6, 95th %ile for 3rdtri-2yrs old; 80th for other age groups
	Recreational	240	1200	640	520	240	230	OEHHA 2015, Table 5.8 (95th, moderate) for all bins but 3rd tri, which was taken from SJVAPCD's draft guidance
	School	240	1200	640	520	240	230	SJVAPCD for 3rd tri; 95th percentile for all
A		1	1	1	1	1	1	OEHHA 2015, page 5-24
EF, Exposure frequency (unitless), days/365 days	Residential	0.96	0.96	0.96	0.96	0.96	0.96	OEHHA 2015, page 5-24, 350 days/yr
	Recreational	0.036	0.036	0.036	0.036	0.036	0.036	3x/week, 2 hours/day, for 9 years
	School	0.12	0.12	0.12	0.12	0.12	0.12	180 days/yr, 6 hours/day (BAAQMD 2016)
Conversion Factor		1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	(mg/ug + m3/L)

Risk Factors

$$\text{RISK}_{\text{inh-res}} = \text{DOSE}_{\text{air}} \times \text{CPF} \times \text{ASF} \times \text{ED/AT} \times \text{FAH}$$

		3rd trimester	0<2	2<9	2<16	16<30	16-70	source
CPF, DPM ([mg/kg-day] ⁻¹)		1.1	1.1	1.1	1.1	1.1	1.1	OEHHA 2015, Table 7.1
Average Age Sensitivity Factor		10	10	3	3	1	1	OEHHA 2015, Table 8.3
AT, Average Time (days)		70	70	70	70	70	70	Averaging time for lifetime cancer risk
								OEHHA 2015, Table 8.4: Use FAH = 1 if a school is within the 1×10-6 (or greater) cancer risk isopleth
FAH		0.85	0.85	0.72	0.72	0.73	0.73	
ED, Exposure Duration (years)		0.25	2	7	14	14	54	Equation 8.2.4 A, OEHHA 2015
Adjustment Factor	Residential	1.00	1.00	1.00	1.00	1.00	1.00	OEHHA 2015, Page 4-44 and Equation 4.1; exposure is adjusted upward to account for overlapping daytime exposure.
	Recreational	3.36	3.36	3.36	3.36	3.36	3.36	
	School	3.36	3.36	3.36	3.36	3.36	3.36	

Hazard Index

Chronic Inhalation Reference Exposure Level, respiratory, DPM	5	OEHHA 2015, Table 6.3
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Source Inputs		
Burlingame Population	30,301	
<u>offroad sources</u>		
Release Height (RH)	5 m	Accounts for thermal plume rise
Vertical Dimension	2.33 m	CAPCOA 2009/AERMOD (RH/2.15)
Elevation	0 m	
<u>onroad/truck sources</u>		
Release Height (RH)	6.8 m	EPA PM Hostpot, Appx J
Vertical Dimension	3.16 m	CAPCOA 2009/AERMOD (RH/2.15)
Elevation	0 m	
receptor height (m)	1.2	child breathing level
met from SFO Airport (2011-2015)		
PM2.5 = DPM		

SUMMARY OF DPM			ONSITE DPM - OFFROAD																	
	2020					2021					2022					2023				
Phase	Start date	End date	Days (2020)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2022)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2023)	PM2.5 Ex (tons)	PM2.5 (grams)
Demolition	4/8/2020	4/22/2020	11	0.0002	154.221	4/8/2020	4/22/2020	0	0.000	0.000	4/8/2020	4/22/2020	0	0.000	0.000	4/8/2020	4/22/2020	0	0.000	0.000
Grading	4/22/2020	4/28/2020	5	0.0001	72.575	4/22/2020	4/28/2020	0	0.000	0.000	4/22/2020	4/28/2020	0	0.000	0.000	4/22/2020	4/28/2020	0	0.000	0.000
Foundations and Backfill	4/29/2020	6/9/2020	30	0.0001	99.790	4/29/2020	6/9/2020	0	0.000	0.000	4/29/2020	6/9/2020	0	0.000	0.000	4/29/2020	6/9/2020	0	0.000	0.000
	6/3/2020	7/14/2020	30	0.0001	99.790	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000
Parking Podium	6/3/2020	7/14/2020	30	0.0001	99.790	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000
Framing and Exterior Finishes	7/15/2020	12/1/2020	100	0.0007	589.670	7/15/2020	12/1/2020	0	0.000	0.000	7/15/2020	12/1/2020	0	0.000	0.000	7/15/2020	12/1/2020	0	0.000	0.000
Interior Finishes	9/2/2020	2/16/2021	87	0.0000	0.000	9/2/2020	2/16/2021	33	0.000	0.000	9/2/2020	2/16/2021	0	0.000	0.000	9/2/2020	2/16/2021	0	0.000	0.000
Total	4/8/2020	12/31/2020	192	0.001	1016.047	1/1/2021	2/16/2021	33	0.000	0.000	1/1/2022	12/31/2022	0	0.000	0.000	1/1/2023	12/31/2023	0	0.000	0.000
	4/8/2020	2/16/2021	225																	

seconds/hour 3600
work hours/day 8
seconds per work day 28800

ONSITE

Phase	Start date	End date	days	Days in Bin per OEHHA			g/day	total g			g/sec			g/sec-m2			days sum
				3rd tri	0<2	2-9		3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9	
Demolition	4/8/2020	4/22/2020	11	11			14	154			0.00049	0.00000077				11	
Grading	4/22/2020	4/28/2020	5	5			15	73			0.00050	0.00000080				5	
Foundations and Backfill	4/29/2020	6/9/2020	30	30			3	100			0.00012	0.00000018				30	
Parking Podium	6/3/2020	7/14/2020	30	25	5		3	83	17		0.00012	0.00000018	0.00000018			30	
Framing and Exterior Finishes	7/15/2020	12/1/2020	100		100		6	590			0.00020	0.00000032				100	
Interior Finishes	9/2/2020	2/16/2021	120		120		0	0			0.00000	0.00000000				120	
Total				71	225	0		410	606	0	0.00020	0.00009	#DIV/0!	0.00000032	0.00000015	#DIV/0!	296
			max per oehha	91	730	2555											
			range of days	4/8/2020	7/8/2020	7/9/2022											
				7/7/2020	7/8/2022	7/7/2029											
				90	730	2555											

ONROAD

Phase	Total trips in Caleemod	caleemod trip length	Caleemod	Aermod	VMT scalar	<-- using this to scale onroad PM2.5 for each phase
	haul	haul	avg trip length	avg trip length		
Demolition	30	8.5	9	0.258490336	0.030	
Grading	110	8.5	9	0.258490336	0.030	
Foundations and Backfill	60	8.5	9	0.258490336	0.030	
Parking Podium	60	8.5	9	0.258490336	0.030	
Framing and Exterior Finishes	24	8.5	9	0.258490336	0.030	
Interior Finishes	10	8.5	9	0.258490336	0.030	

Phase	6/3/2020	7/14/2020	days	Days in Bin per OEHHA			g/day, caleemod	g/day, aermod	total g			g/sec	g/sec-m2		
				3rd tri	0<2	2-9			3rd tri	0<2	2-9		3rd tri	0<2	2-9
Demolition	4/8/2020	4/22/2020	11	11			0.825	0.025	0			0.00000	0.00000000		
Grading	4/22/2020	4/28/2020	5	5			3.629	0.110	1			0.00000	0.00000000		
Foundations and Backfill	4/29/2020	6/9/2020	30	30			0.907	0.028	1			0.00000	0.00000000		
Parking Podium	6/3/2020	7/14/2020	30	25	5		0.907	0.028	1	0		0.00000	0.00000000	0.00000000	
Framing and Exterior Finishes	7/15/2020	12/1/2020	100		100		0.000	0.000		0		0.00000	0.00000000	0.00000000	
Interior Finishes	9/2/2020	2/16/2021	120		120		0.000	0.000		0		0.00000	0.00000000	0.00000000	
Total				71	225	0	6.268	0.191	2	0	0	0.00000	0.00000	#DIV/0!	#DIV/0!

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9
ONSITE	3.18E-07	1.48E-07	#DIV/0!
OFFSITE	2.96E-10	5.50E-12	#DIV/0!

ASSUMPTIONS

Areas	onsite 630.20	offsite 3868.8	m2
AERMOD segment meters to mile	416 0.000621371	meters	

OFFSITE DPM - ONROAD TRUCKS																									
2020					2021					2022					2023					onsite combined			offsite combined		
Start date	End date	Days (2020)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2022)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2023)	PM2.5 Ex (tons)	PM2.5 (grams)	PM2.5 Ex g	days	g/d	PM2.5 Ex g	days	g/d
4/8/2020	4/22/2020	11	0.00001	9.072	4/8/2020	4/22/2020	0	0.00000	0.000	4/8/2020	4/22/2020	0	0.00000	0.000	4/8/2020	4/22/2020	0	0.00000	0.000	154.221	11	14.020	9.072	11	0.825
4/22/2020	4/28/2020	5	0.00002	18.144	4/22/2020	4/28/2020	0	0.00000	0.000	4/22/2020	4/28/2020	0	0.00000	0.000	4/22/2020	4/28/2020	0	0.00000	0.000	72.575	5	14.515	18.144	5	3.629
4/29/2020	6/9/2020	30	0.00003	27.216	4/29/2020	6/9/2020	0	0.00000	0.000	4/29/2020	6/9/2020	0	0.00000	0.000	4/29/2020	6/9/2020	0	0.00000	0.000	99.790	30	3.326	27.216	30	0.907
6/3/2020	7/14/2020	30	0.00003	27.216	6/3/2020	7/14/2020	0	0.00000	0.000	6/3/2020	7/14/2020	0	0.00000	0.000	6/3/2020	7/14/2020	0	0.00000	0.000	99.790	30	3.326	27.216	30	0.907
7/15/2020	12/1/2020	100	0.00000	0.000	7/15/2020	12/1/2020	0	0.00000	0.000	7/15/2020	12/1/2020	0	0.00000	0.000	7/15/2020	12/1/2020	0	0.00000	0.000	589.670	100	5.897	0.000	100	0.000
9/2/2020	2/16/2021	87	0.00000	0.000	9/2/2020	2/16/2021	33	0.00000	0.000	9/2/2020	2/16/2021	0	0.00000	0.000	9/2/2020	2/16/2021	0	0.00000	0.000	0.000	120	0.000	0.000	120	0.000
			0.00009	81.647				0.00000	0.000				0.00000	0.000				0.00000	0.000	1016.047	296	3.433	81.647	296	0.276

TRUE

qc
seconds 2044800 6480000
grams 2.344985 0.13794029
2.48292517 FALSE
0.000

SUMMARY OF PM2.5 Ex		ONSITE PM2.5Ex - OFFROAD																		
	2020					2021					2022					2023				
Phase	Start date	End date	Days (2020)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2022)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2023)	PM2.5 Ex (tons)	PM2.5 (grams)
Demolition	4/8/2020	4/22/2020	11	0.0002	154.221	4/8/2020	4/22/2020	0	0.000	0.000	4/8/2020	4/22/2020	0	0.000	0.000	4/8/2020	4/22/2020	0	0.000	0.000
Grading	4/22/2020	4/28/2020	5	0.0001	72.575	4/22/2020	4/28/2020	0	0.000	0.000	4/22/2020	4/28/2020	0	0.000	0.000	4/22/2020	4/28/2020	0	0.000	0.000
Foundations and Backfill	4/29/2020	6/9/2020	30	0.0001	99.790	4/29/2020	6/9/2020	0	0.000	0.000	4/29/2020	6/9/2020	0	0.000	0.000	4/29/2020	6/9/2020	0	0.000	0.000
	6/3/2020	7/14/2020	30	0.0001	99.790	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000
Parking Podium	6/3/2020	7/14/2020	30	0.0001	99.790	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000	6/3/2020	7/14/2020	0	0.000	0.000
Framing and Exterior Finishes	7/15/2020	12/1/2020	100	0.0007	589.670	7/15/2020	12/1/2020	0	0.000	0.000	7/15/2020	12/1/2020	0	0.000	0.000	7/15/2020	12/1/2020	0	0.000	0.000
Interior Finishes	9/2/2020	2/16/2021	87	0.0000	0.000	9/2/2020	2/16/2021	33	0.000	0.000	9/2/2020	2/16/2021	0	0.000	0.000	9/2/2020	2/16/2021	0	0.000	0.000
Total	4/8/2020	12/31/2020	192	0.001	1016.047	1/1/2021	2/16/2021	33	0.000	0.000	1/1/2022	12/31/2022	0	0.000	0.000	1/1/2023	12/31/2023	0	0.000	0.000
	4/8/2020	2/16/2021	225																	

seconds/hour3600

work hours/day8

seconds per work day28800

ONSITE																		
Phase	Start date	End date	days	Days in Bin per OEHHA			g/day	total g			g/sec			g/sec-m2				
				3rd tri	0<2	2-9		3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9	days sum	
Demolition	4/8/2020	4/22/2020	11	11			14	154			0.00049			0.00000077			0	11
Grading	4/22/2020	4/28/2020	5	5			15	73			0.00050			0.00000080			0	5
Foundations and Backfill	4/29/2020	6/9/2020	30	30			3	100			0.00012			0.00000018			0	30
Parking Podium	6/3/2020	7/14/2020	30	25	5		3	83	17		0.00012	0.00012		0.00000018	0.00000018		0	30
Framing and Exterior Finishes	7/15/2020	12/1/2020	100		100		6		590			0.00020			0.00000032		0	100
Interior Finishes	9/2/2020	2/16/2021	120		120		0		0			0.00000			0.00000000		0	120
Total				71	225	0		410	606	0	0.00020	0.00009	#DIV/0!	0.00000032	0.00000015	#DIV/0!		296
				max per oehha			91	730	2555									
				range of days			4/8/2020	7/8/2020	7/9/2022									
							7/7/2020	7/8/2022	7/7/2029									
							90	730	2555									

ONROAD																
Phase	Total trips in Caleemod	caleemod trip length	Caleemod	Aermod	VMT scalar	<-- using this to scale onroad PM2.5 for each phase										
	haul	haul	avg trip length	avg trip length												
Demolition	30	8.5	9	0.258490336	0.030											
Grading	110	8.5	9	0.258490336	0.030											
Foundations and Backfill	60	8.5	9	0.258490336	0.030											
Parking Podium	60	8.5	9	0.258490336	0.030											
Framing and Exterior Finishes	24	8.5	9	0.258490336	0.030											
Interior Finishes	10	8.5	9	0.258490336	0.030											

Phase	6/3/2020	7/14/2020	days	Days in Bin per OEHHA			g/day, caleemod	g/day, aermod	total g			g/sec			g/sec-m2		
				3rd tri	0<2	2-9			3rd tri	0<2	2-9	3rd tri	0<2	2-9	3rd tri	0<2	2-9
Demolition	4/8/2020	4/22/2020	11	11			1.649	0.050	1			0.00000			0.00000000		
Grading	4/22/2020	4/28/2020	5	5			3.629	0.110	1			0.00000			0.00000000		
Foundations and Backfill	4/29/2020	6/9/2020	30	30			1.814	0.055	2			0.00000			0.00000000		
Parking Podium	6/3/2020	7/14/2020	30	25	5		2.117	0.064	2	0		0.00000	0.00000		0.00000000	0.00000000	
Framing and Exterior Finishes	7/15/2020	12/1/2020	100		100		0.998	0.030		3			0.00000			0.00000000	
Interior Finishes	9/2/2020	2/16/2021	120		120		0.832	0.025		3			0.00000			0.00000000	
Total				71	225	0	11.039	0.336	4	6	0	0.00000	0.00000	#DIV/0!	0.00000000	0.00000000	#DIV/0!

SUMMARY (g/sec/m2)

Source	3rd tri	0<2	2-9
ONSITE	3.18E-07	1.48E-07	#DIV/0!
OFFSITE	5.52E-10	2.55E-10	#DIV/0!

ASSUMPTIONS

Areas	onsite 630.20	offsite 3868.8	m2
AERMOD segment meters to mile	416 0.000621371	meters	

OFFSITE PM2.5Ex - ONROAD VEHICLES																									
2020					2021					2022					2023					onsite combined			offsite combined		
Start date	End date	Days (2020)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2021)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2022)	PM2.5 Ex (tons)	PM2.5 (grams)	Start date	End date	Days (2023)	PM2.5 Ex (tons)	PM2.5 (grams)	PM2.5 Ex g	days	g/d	PM2.5 Ex g	days	g/d
4/8/2020	4/22/2020	11	0.00002	18.144	4/8/2020	4/22/2020	0	0.00000	0.000	4/8/2020	4/22/2020	0	0.00000	0.000	4/8/2020	4/22/2020	0	0.00000	0.000	154.221	11	14.020	18.144	11	1.649
4/22/2020	4/28/2020	5	0.00002	18.144	4/22/2020	4/28/2020	0	0.00000	0.000	4/22/2020	4/28/2020	0	0.00000	0.000	4/22/2020	4/28/2020	0	0.00000	0.000	72.575	5	14.515	18.144	5	3.629
4/29/2020	6/9/2020	30	0.00006	54.431	4/29/2020	6/9/2020	0	0.00000	0.000	4/29/2020	6/9/2020	0	0.00000	0.000	4/29/2020	6/9/2020	0	0.00000	0.000	99.790	30	3.326	54.431	30	1.814
6/3/2020	7/14/2020	30	0.00007	63.503	6/3/2020	7/14/2020	0	0.00000	0.000	6/3/2020	7/14/2020	0	0.00000	0.000	6/3/2020	7/14/2020	0	0.00000	0.000	99.790	30	3.326	63.503	30	2.117
7/15/2020	12/1/2020	100	0.00011	99.790	7/15/2020	12/1/2020	0	0.00000	0.000	7/15/2020	12/1/2020	0	0.00000	0.000	7/15/2020	12/1/2020	0	0.00000	0.000	589.670	100	5.897	99.790	100	0.998
9/2/2020	2/16/2021	87	0.00008	72.575	9/2/2020	2/16/2021	33	0.00003	27.216	9/2/2020	2/16/2021	0	0.00000	0.000	9/2/2020	2/16/2021	0	0.00000	0.000	0.000	120	0.000	99.790	120	0.832
			0.00036	326.587				0.00003	27.216				0.00000	0.000				0.00000	0.000	1016.047	296	3.433	353.802	296	1.195

TRUE

qc
seconds 2044800 6480000
grams 4.368109 6.39123331
10.7593424 FALSE
0.000

Averagin Period (AVE)	Receptor ID	X	Y	concat	DPM Concentration (AVERAGE CONC) [ug/m^3]	PM2.5 Ex Concentration (AVERAGE CONC) [ug/m^3]	Source Group (GRP)
ANNUAL	Res_1stHighest	557938.75	4159138.19	Res_1stHighest3RDTRI	0.05037	0.05037	3RDTRI
ANNUAL	Res_2ndHighest	557952.4	4159152.77	Res_2ndHighest3RDTRI	0.04928	0.04928	3RDTRI
ANNUAL	Res_3rdHighest	557949.1	4159147.6	Res_3rdHighest3RDTRI	0.04707	0.04707	3RDTRI
ANNUAL	Res_1stHighest	557938.75	4159138.19	Res_1stHighest0_2	0.02344	0.02344	0_2
ANNUAL	Res_2ndHighest	557952.4	4159152.77	Res_2ndHighest0_2	0.02293	0.02294	0_2
ANNUAL	Res_3rdHighest	557949.1	4159147.6	Res_3rdHighest0_2	0.02191	0.02191	0_2

Receptors					Concentration ug/m3		Dose Inhalation by Bin		Cancer Risk by Bin		Sum of Cancer Risk		Chronic HI (max annual)	Max PM2.5 Ex (ug/m3)
Rec ID	Detail	X	Y	Type	3RDTRI	0_2	3RDTRI	0_2	3RDTRI	0_2	Summed Risk	Cases Per Million		
Res_1stHighest	Residence	557938.75	4159138.19	Residential	5.04E-02	2.34E-02	1.7E-05	2.4E-05	5.8E-07	6.5E-06	7E-06	7.13	0.01	0.05
Res_2ndHighest	Residence	557952.4	4159152.77	Residential	4.93E-02	2.29E-02	1.7E-05	2.4E-05	5.7E-07	6.4E-06	7E-06	6.97	0.01	0.05
Res_3rdHighest	Residence	557949.1	4159147.6	Residential	4.71E-02	2.19E-02	1.6E-05	2.3E-05	5.4E-07	6.1E-06	7E-06	6.66	0.01	0.05

0

$$\text{Dose-air} = C_{\text{air}} \times \{BR/BW\} \times A \times EF \times 10^{-6}$$

$$\text{RISKinh-res} = \text{DOSEair} \times \text{CPF} \times \text{ASF} \times \text{ED/AT} \times \text{FAH}$$

Summary of Cancer and Noncancer Health Risks and PM2.5 Concentrations for the MEI

Receptor	Cancer Risk (per million)	Chronic HI	PM2.5 (ug/m3)
MEI	7.13	0.01	0.05
Threshold	10	1.0	0.3

Existing Sources of Health Risks to 1st Highest Residence (UTM X: 557938.75, UTM Y: 4159138.19)

Plant No.	Existing Source	Source Address	Distance to Receptor (feet)	Cancer	Hazard	PM2.5	Notes
	9867 Caliber Collision Center	123 California Drive		305	0.091332963	0.000141471	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	11731 Shaffer Property Trust c/o RRM	1200 Howard Ave		365	1.963505055	0.009672977	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	20929 Former Caine Cleaners	1319 Howard Ave		625	0.361413059	0.000425538	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	22786 Atria-Burlingame	250 Myrtle Rd	1,200		0	0	0.000119877 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	109557 Eagle Car Wash	177 California Drive		330	1.636828351	0.00876393	0 Cancer, Hazard, PM2.5 values calculated from GDF Distance Multiplier Tool
			Total Stationary Risks	4.053079429	0.019003915	0.000119877	
N/A	Highway			6.386940002		0	0.142715007 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Major Roads			0.0810664		0	0.00206948 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Rail			6.775400162		0	0.0130001 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
			Total Risks	17.29648599	0.019003915	0.157904464	

Existing Sources of Health Risks to 2nd Highest Residence (UTM X: 557952.4, UTM Y: 4159152.77)

Plant No.	Existing Source	Source Address	Distance to Receptor (feet)	Cancer	Hazard	PM2.5	Notes
	9867	Caliber Collision Center	123 California Drive	245	0.100779702	0.000156103	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	11731	Shaffer Property Trust c/o RRM	1200 Howard Ave	390	1.900130883	0.009360771	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	20929	Former Caine Cleaners	1319 Howard Ave	690	0.316963908	0.000373202	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	22786	Atria-Burlingame	250 Myrtle Rd	1,125	0	0	0.000119877 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	109557	Eagle Car Wash	177 California Drive	250	2.575788463	0.014159639	0 Cancer, Hazard, PM2.5 values calculated from GDF Distance Multiplier Tool
			Total Stationary Risks	4.893662956	0.024049715	0.000119877	
N/A		Highway		6.441929817		0	0.143347993 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A		Major Roads		0.081133299		0	0.00207119 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A		Rail		7.08355999		0	0.0135914 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
			Total Risks	18.50028606	0.024049715	0.159130461	

Existing Sources of Health Risks to 3rd Highest Residence (UTM X: 557949.1, UTM Y: 4159147.6)

Plant No.	Existing Source	Source Address	Distance to Receptor (feet)	Cancer	Hazard	PM2.5	Notes
	9867 Caliber Collision Center	123 California Drive		260	0.100779702	0.000156103	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	11731 Shaffer Property Trust c/o RRM	1200 Howard Ave		385	1.900130883	0.009360771	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	20929 Former Caine Cleaners	1319 Howard Ave		675	0.327535456	0.000385649	0 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	22786 Atria-Burlingame	250 Myrtle Rd	1,160		0	0	0.000119877 Cancer, Hazard, PM2.5 values calculated from BAAQMD Health Risk Calculator
	109557 Eagle Car Wash	177 California Drive		290	2.116496678	0.011491632	0 Cancer, Hazard, PM2.5 values calculated from GDF Distance Multiplier Tool
			Total Stationary Risks	4.444942719	0.021394156	0.000119877	
N/A	Highway			6.418769836		0	0.143068999 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Major Roads			0.081114501		0	0.00207071 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
N/A	Rail			6.968780041		0	0.0133711 ArcMap cancer risk and PM2.5 concentration data from BAAQMD
			Total Risks	17.9136071	0.021394156	0.158630686	

Existing, Project, and Total Health Risks

		Cancer	Hazard	PM2.5
Existing	1st Highest Res	17.29649	0.019004	0.157904
	2nd Highest Res	18.50029	0.02405	0.15913
	3rd Highest Res	17.91361	0.021394	0.158631
Project	1st Highest Res	7.13	0.01	0.05
	2nd Highest Res	6.97	0.01	0.05
	3rd Highest Res	6.66	0.01	0.05
Total	1st Highest Res	24.42	0.03	0.21
	2nd Highest Res	25.47	0.03	0.21
	3rd Highest Res	24.58	0.03	0.21
BAAQMD Cumulative Threshold		100	10	0.8