APPENDIX K

TRANSPORTATION ANALYSIS







1065 South Winchester Mixed-Use **Development**



Transportation Analysis

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Areawide Circulation Plans Corridor Studies Pavement Delineation Plans Traffic Handling Plans Impact Fees Interchange Analysis Parking Transportation Planning Traffic Calming Traffic Control Plans Traffic Simulation Traffic Impact Analysis Traffic Signal Design Travel Demand Forecasting

Table of Contents

 Intro Exist CEQ Local 	Summaryduction	
Append	ices	
Appendix Appendix C Appendix C Appendix E Appendix E Appendix E Appendix E Appendix E Appendix I	Traffic Counts Approved Trips Inventory Volume Summary Intersection Level of Service Calculations Queue Length Calculations Signal Warrant Check	
List of T	ables	
Table 1	CEQA VMT Analysis Screening Criteria for Development Projects	
Table 2	CEQA VMT Analysis Significant Impact Criteria for Development Projects	23
Table 3	VMT Mitigation Measures and Resulting VMT	26
Table 4	Project Trip Generation Estimates	
Table 5	Signalized Intersection Level of Service Definitions Based on Control Delay	
Table 6 Table 7	Intersection Level of Service Results	
Table 7	Queuing Analysis Summary Vehicular Parking Requirement	
Table 9	Freeway Segment Capacity	
List of F		
Figure 1	Site Location	
Figure 2	Proposed Site Plan	
Figure 3	VMT per Capita Heat Map in San Jose	
Figure 4	VMT per Job Heat Map in San Jose	
Figure 5	Low VMT per Capita Areas in San Jose	
Figure 6	Low VMT per Job Areas in San Jose	
Figure 7	Existing Bicycle Facilities	
Figure 8	Existing Transit Services	
Figure 9	VMT per Employee Heat Map in Project Area	
Figure 10	VMT per Capita Heat Map in Project Area	
Figure 11 Figure 12	VMT Analysis Summary Project Trip Distribution	
Figure 12 Figure 13	Project Trip Assignment	
i igui e 13	i Tojoot Tiip Assigiiiileitt	



Figure 14	Existing Lane Configurations	35
Figure 15	Winchester Boulevard Complete Street Improvement	
Figure 16	Existing Traffic Volumes	
Figure 17	Background Traffic Volumes	
Figure 18	Background Plus Project Traffic Volumes	
Figure 19	Cumulative Traffic Volumes	43
Figure 20	Gross Project Trips at Site Driveways and Ground Level Circulation	50
Figure 21	Basement Level Circulation	51
Figure 22	Truck Turning Template	55
Figure 23	Cadillac Residential Parking Program	59



Executive Summary

This report presents the results of a Transportation Analysis (TA) for the proposed Winchester Mixed-Use development located at 1065 South Winchester Blvd in the City of San Jose. The project site is located along the west side of Winchester Boulevard, approximately 350 feet south of Williams Road and within a designated Urban Village (Winchester Boulevard). According to the Envision San Jose 2040 General Plan, the Urban Village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

As proposed, the development would consist of the replacement of a single-family home currently onsite with 70 condominium units and 20,410 square feet of office space. A total of 104 parking spaces will be provided on-site. Access to and from the project site would be provided via one right-in/right-out driveway along Winchester Boulevard.

Transportation Analysis Scope

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), the City of San Jose *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-miles-traveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

CEQA Transportation Analysis Scope

The CEQA transportation analysis for the project consists of a project-level VMT impact analysis using the City's VMT tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

Local Transportation Analysis Scope

The LTA includes the evaluation of weekday AM and PM peak hour operations at a limited number of intersections for the purpose of identifying operational issues (queuing, signal operations, and potential multi-modal issues) at intersections in the general vicinity of the project site. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.



CEQA VMT Analysis

CEQA Transportation Analysis Exemption Criteria

The City of San Jose Transportation Analysis Handbook identifies screening criteria that determine whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

The project site is located within a planned Growth Area (Winchester Boulevard Urban Village). However, neither the proposed 70 residential units nor 20,410 s.f. of office space meets the VMT screening criteria as a small infill project with less than 25 multi-family housing units or 10,000 s.f. of office space. Additionally, the existing VMT per capita and VMT per employee within a ½-mile radius of the project site are estimated to be 10.16 and 13.14, which exceed the CEQA significance thresholds of 10.12 and 12.21, respectively. Therefore, an evaluation of VMT for both the residential and office components of the project is required and presented in Chapter 3.

Project-Level VMT Impact Analysis

The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the proposed project is projected to generate VMT per capita (10.07), which is below the established VMT impact threshold. The office component of the project is projected to generate VMT per employee (13.13), which would exceed the established impact threshold. Therefore, the proposed office component of the project would result in an impact on the transportation system based on the City's VMT impact criteria.

Project Impacts and Mitigation Measures

<u>Project Impact</u>: Since the VMT generated by the office component of the project (13.13 per employee) would exceed the threshold of 12.21 VMT per employee, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact. According to the *Transportation Analysis Handbook*, projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas", and projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the greatest extent possible.

<u>Mitigation Measures</u>: Based on the four strategy tiers included in the VMT Evaluation Tool, it is recommended that the project implement one of the following mitigation measures to reduce the significant VMT impact.

- <u>Telecommuting and Alternative Work Schedules</u>: Encourage 50% of the employees to telecommute, shift work schedules, or commute outside of peak congestion periods on a 4/40 weekly schedule (10-hour work days for four days a week). This measure reduces commute vehicle trips. or
- Operate a Free Direct Shuttle: Provide shuttle service for at least 15% of the project employees that would serve the project site and areas with high concentrations of employed residents. This measure reduces drive-alone commute trips. **or**
- <u>Provide Ride-Sharing Programs</u>: Organize a program to match individuals interested in carpooling who have similar commutes for at least 15% of the project employees. This measure promotes the use of carpooling and reduces the number of drive-alone trips. <u>or</u>



- 1. Car Sharing Program: Provide subsidies and promotions, as well as dedicated parking spaces, for carsharing services such as ZipCar, Car2Go, and GetAround, etc... for 100% of the project employees. Supporting a carsharing program gives people on-demand access to shared fleets of vehicles. Car-sharing reduces personal motorized vehicle dependence, which supports more walking, biking, carpooling, and transit use. Subject to negotiations with the City and possible negotiations with Car Share companies. and
- 2. Commute Trip Reduction Marketing/Education: Implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes for 100% of the project employees. Strategies may include the incorporation of alternative commute options into new employee orientations, event promotions, and publications. and
- 3. Employee Parking "Cash Out": Require project employers to offer parking "cash-out" for 70% of the project employees. Providing "cash-out" incentives gives employees the choice to forgo subsidized/free parking for a cash payment equivalent to the cost that the employer would otherwise pay for the parking space. Providing an alternative to subsidized/free parking encourages commuters to travel by walking, biking, carpooling, and transit.

The implementation of the mitigation measures would reduce the VMT generated by the project by supporting bicycle usage and increasing transit ridership by employees. The implementation of one of the above mitigation measures would reduce the project VMT to below the threshold of 12.21 per employee, which would reduce the project impact to less than significant.

Additionally, the TDM plan proposes measures that would reduce the project's parking demand and support a 21 percent parking reduction needed to satisfy the City's parking requirement. The TDM plan includes maintaining an online kiosk of trip-planning resources, providing 100 percent unbundled parking for all residential spaces, providing VTA SmartPasses to residential and commercial tenants, and providing on-site bicycle parking that will exceed the minimum required by the City.

Cumulative (GP Consistency) Evaluation

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan's goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The project site is located within the Winchester Boulevard Urban Village, which is generally bounded by I-280 to the north, SR 17 to the east, Hamilton Avenue to the south, and San Tomas Expressway to the west. Urban villages were developed as one of the major strategies of the *Envision San José 2040 General Plan*. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan.

The project is consistent with the General Plan and Winchester Boulevard Urban Village goals and policies for the following reasons:

- The project frontage along Winchester Boulevard will be improved to be consistent with the planned streetscape design features of Grand Boulevards and the Winchester Boulevard Urban Village Plan.
- The project frontage along Winchester Boulevard will be designed to accommodate the planned Winchester Boulevard Complete Street improvements including protected bicycle lanes, wider sidewalks, and other pedestrian safety features.
- The project site is adjacent to bus stops and bicycle lanes on Winchester Boulevard.



Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

Local Transportation Analysis

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection operation is not considered a CEQA impact metric.

The LTA includes the analysis of AM and PM peak-hour traffic conditions for two signalized and one unsignalized intersections, following the standards and methodology set forth by the City of San Jose.

Trip Generation

After applying the ITE trip rates and appropriate trip reductions, the proposed mixed-use development is estimated to generate a total of 499 daily vehicle trips, with 42 trips (24 inbound and 18 outbound) occurring during the AM peak hour and 46 trips (20 inbound and 26 outbound) occurring during the PM peak hour.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the City of San Jose intersection operations standard of LOS D under background conditions and background plus project conditions during both the AM and PM peak hours.

I-280/Winchester Boulevard Interchange Area Transportation Development Policy

The TDP provides partial funding, via a traffic impact fee imposed on the proposed development, for the implementation of a new westbound off-ramp from I-280 to Winchester Boulevard to reduce traffic congestion at the I-880/Stevens Creek and Stevens Creek Boulevard corridors. The traffic fee is based on the estimated trips to be added to the new westbound off-ramp from I-280 to Winchester Boulevard by each individual development. It is estimated that the proposed project will result in the addition of three PM peak hour trips to the planned I-280 to Winchester Boulevard ramp.

Recommended Site Access and On-Site Circulation Improvements

<u>Winchester Complete Street Improvements.</u> The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.
- Construction of a raised median with limited breaks.

Adhere to City of San Jose Design Standards and Guidelines. The design of the project site, including but not limited to driveways, sidewalks, corner radii, street width, parking dimensions, and signage, should adhere to the City of San Jose design standards and guidelines. Specific site access and on-site circulation recommended improvements are summarized below:

- Provide a 20-foot sidewalk along the project frontage.
- The proposed parking space dimensions, while not an unusual design, do not meet City standards and should be reviewed by City staff prior to the final design.
- The parking spaces located at the end of the dead-end aisle be assigned parking.



- Appropriate visible and/or audible warning signals and convex mirrors should be provided at the
 pedestrian walkway to alert pedestrians of vehicles and entering and exiting the parking
 garages and to assist drivers with blind turns while turning around corners.
- The garage clearance should be a minimum of 15' to allow for truck access to the loading space within the garage.
- The site plan and loading dock location should be redesigned to accommodate larger trucks or access should be restricted to smaller trucks and passenger vehicles. The project applicant will be required to provide a site plan with turning templates indicating that trucks can sufficiently maneuver into and out of the garage and loading area. Ideally, the loading dock should be relocated outside of the garage along the outer drive aisle.
- The City also will consider the feasibility of an on-street public loading zone along Winchester Boulevard during the implementation phase of the project.
- A physical device, such as convex mirrors, should be installed at the end of the ramp near the loading area to aid circulation and reduce vehicular conflict at the loading area.
- The emergency vehicle access (EVA) easement should be a minimum of 20 feet wide to allow access for emergency vehicles per the City's requirement.

Parking Supply

Vehicular Parking

Based on the City's standard parking requirements, the project is required to provide a total of 177 off-street parking spaces before any reductions. However, the project is located in the Winchester Urban Village and will exceed the City's requirements for bicycle parking as discussed below. The Urban Village Overlay automatically allows for a 20 percent reduction in parking. With the 20 percent reduction, the required parking would be reduced to 142 spaces, consisting of 86 spaces for residential use and 56 spaces for office use. The project is proposing a total of 105 parking spaces, which would not meet the City's reduced parking requirements.

The proposed number of parking spaces represents a 41% reduction from the standard required number of spaces. With the 20% Urban Village reduction, the project requires an additional 21% reduction in on-site parking spaces. Therefore, the project will need to submit and have approved a TDM plan.

Bicycle Parking

According to the City's Bicycle Parking Standards, the project is required to provide 11 short-term and 12 long-term bicycle parking spaces. The project site plan indicates that bicycle storage areas to accommodate 44 bicycles will be located within the ground level (near the residential lobby) and the two basement bike storage rooms. Therefore, the proposed bicycle parking on-site will exceed the City's requirements and encourage the use of non-auto modes of travel and minimize the demand for on-site parking.

Motorcycle Parking

According to the City's Motorcycle Parking Standards, the project is required to provide 20 motorcycle parking spaces (two spaces for the office space and 18 spaces for the residential units). The site plan shows that the project would provide a total of 24 motorcycle parking spaces within the parking garage. Therefore, the number of proposed motorcycle parking spaces would meet the City's requirement.



Pedestrian, Bicycle, and Transit Analysis

Pedestrian Facilities

Existing sidewalks along Winchester Boulevard provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity. Pedestrian traffic primarily would consist of residents and employees of the proposed project walking to and from surrounding retail establishments, as well as bus stops on Winchester Boulevard. Crosswalks with pedestrian signal heads are located at the signalized intersection of Winchester Boulevard and Williams Road. Sidewalks are currently provided on the following major roadway segments in the project vicinity.

- Winchester Boulevard
- Williams Road, west of Winchester Boulevard
- Eden Avenue
- Payne Avenue
- Hamilton Avenue
- Moorpark Avenue

The project will install a 20-foot sidewalk along its frontage on Winchester Boulevard. However, some of the residential streets in the project vicinity do not have sidewalks.

Bicycle Facilities

The San Jose Bike Plan 2025 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class III bike routes are planned for:

- Eden Avenue, between Moorpark Avenue and Impala Drive
- Payne Avenue, between Monica Lane and Central Avenue
- Westfield Avenue, between Central and Daniel Way
- Cadillac Drive, between Eden Avenue and Maria Way
- Maria Way, between Cadillac Drive and Valley Forge Way
- Valley Forge Way between Maria Way and Phelps Avenue

Class IV protected bike lanes are planned for:

- Winchester Boulevard, between Hamilton Avenue and Newhall Street
- Payne Avenue, between Winchester Boulevard and Saratoga Avenue
- Williams Road, between Winchester Boulevard and Moorpark Avenue
- Hamilton Avenue, between Bascom Avenue and Campbell Avenue
- Moorpark Avenue, between Lawrence Expressway and Menker Avenue

The Winchester Boulevard Urban Village Plan identifies the improvement of Winchester Boulevard between Moorpark Avenue and Payne Avenue to a complete street. The complete street improvements will include protected bike lanes along both sides of Winchester Boulevard as well as crosswalks at Walgrove Way and Fireside Drive with potential Rectangular Rapid Flashing Beacons (RRFB) at Walgrove Way. The City will require that the project provide a fair-share contribution towards the future pedestrian crossing with RRFB improvement at Walgrove Drive.

The project will be required to provide an in-lieu fee for the Class IV protected bike lanes planned along its frontage along Winchester Boulevard at \$121 per linear foot and to provide a \$25,000 in-lieu monetary contribution for the hardscape implementation per the future Winchester Blvd Urban Village planline (RRFB/enhanced pedestrian crosswalk at Walgrove Way).



Transit Services

The project site is adequately served by the existing VTA transit services. The nearest bus stop to the project site is located near the Winchester Boulevard/Williams Road intersection approximately 100 feet from the project site and is served by Route 60. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

As a Grand Boulevard, it is envisioned that Winchester Boulevard could potentially be included in the VTA Bus Rapid Transit (BRT) System. However, there are no plans at this time for a BRT line on Winchester Boulevard.

Freeway Segment Evaluation

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent or higher to any freeway segments in the area, freeway analysis for the CMP was not required.



1. Introduction

This report presents the results of a Transportation Analysis (TA) for the proposed Winchester Mixed-Use development located at 1065 South Winchester Blvd in the City of San Jose. The project site is located along the west side of Winchester Boulevard, approximately 350 feet south of Williams Road and within a designated Urban Village (Winchester Boulevard). According to the Envision San Jose 2040 General Plan, the Urban Village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

As proposed, the development would consist of the replacement of a single-family home currently onsite with 70 condominium units and 20,410 square feet of office space. A total of 104 parking spaces will be provided on-site. Access to and from the project site would be provided via one right-in/right-out driveway along Winchester Boulevard. The project site location, the surrounding study area, and the Winchester Boulevard Urban Village boundary are shown in Figure 1. The project site plan is shown in Figure 2.

The transportation analysis of the project was evaluated following the standards and methodologies set forth in the City of San Jose's Transportation Analysis Policy (Council Policy 5-1), the City of San Jose *Transportation Analysis Handbook 2018*, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program's *Transportation Impact Guidelines* (October 2014), and by the California Environmental Quality Act (CEQA). Based on the City of San Jose's Transportation Policy and *Transportation Analysis Handbook 2018*, the TA report for the project consists of a CEQA vehicle-miles-traveled (VMT) analysis and a supplemental Local Transportation Analysis (LTA).

Transportation Policies

Historically, transportation analysis has utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to proposed/planned growth. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections and in 2013 passed Senate Bill (SB) 743, which requires jurisdictions to stop using congestion and delay metrics, such as Level of Service (LOS), as the measurement for CEQA transportation analysis. With the adoption of SB 743 legislation, public agencies are now required to base the determination of transportation impacts on Vehicle Miles Traveled (VMT) rather than level of service.



Figure 1 Site Location

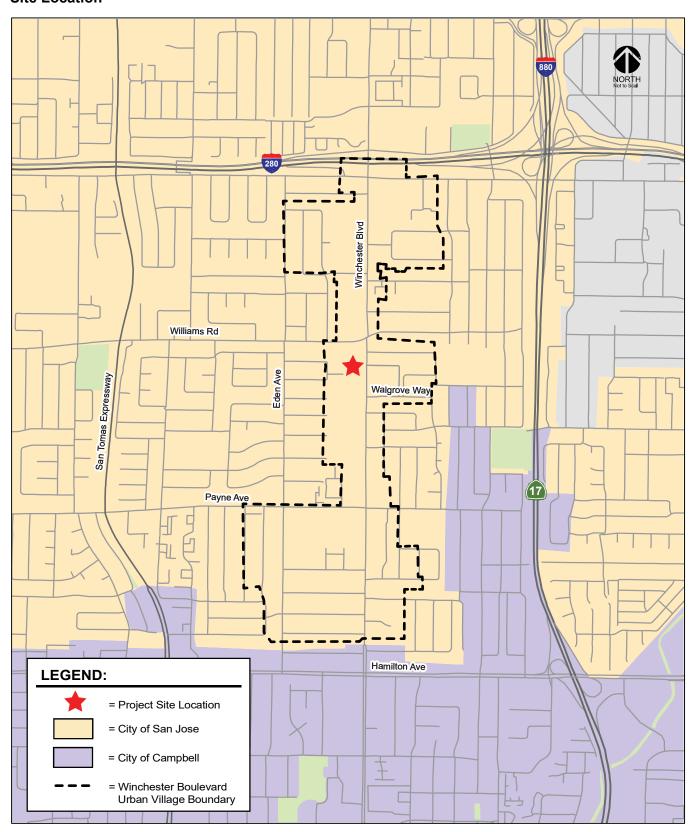
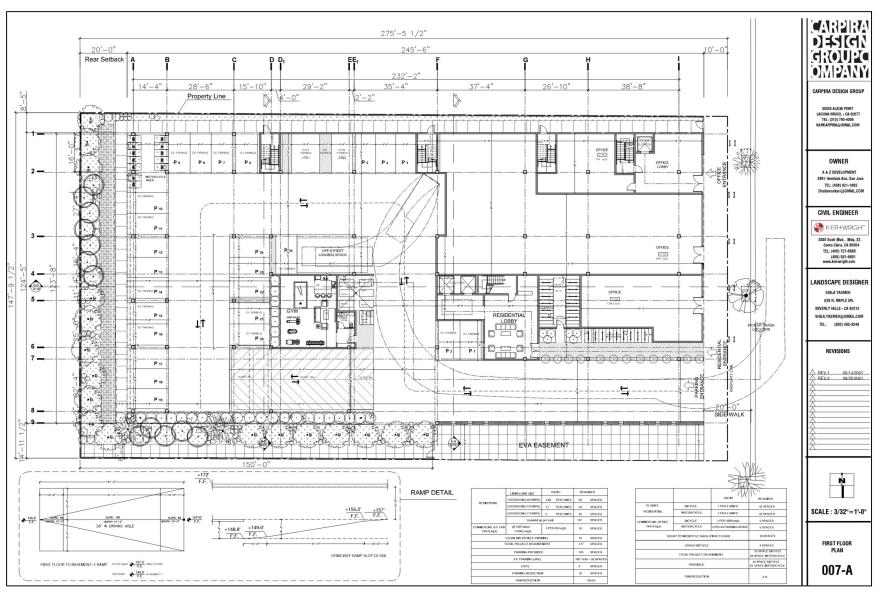




Figure 2 Proposed Site Plan





In adherence to SB 743, the City of San Jose has adopted a new Transportation Analysis Policy, Council Policy 5-1. The policy replaces its predecessor (Policy 5-3) and establishes the thresholds for transportation impacts under the CEQA based on vehicle miles traveled (VMT) instead of levels of service (LOS). The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway auto capacity to a reduction in vehicle emissions, and the creation of robust multimodal networks that support integrated land uses. The new transportation policy aligns with the currently adopted General Plan which seeks to focus on new development growth within Planned Growth Areas, bringing together office, residential, and supporting service land uses to internalize trips and reduce VMT. All new development projects are required to analyze transportation impacts using the VMT metric and conform to Council Policy 5-1.

The Circulation Element of the *Envision San José 2040 General Plan* includes a set of balanced, long-range, multi-modal transportation goals and policies that provide for a transportation network that is safe, efficient, and sustainable (minimizes environmental, financial, and neighborhood impacts). These transportation goals and policies are intended to improve multi-modal accessibility to all land uses and create a city where people are less reliant on driving to meet their daily needs. The Envision San Jose 2040 General Plan contains the following policies to encourage the use of non-automobile transportation modes to minimize vehicle trip generation and reduce VMT:

- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- Through the entitlement process for new development, projects shall be required to fund or construct needed transportation improvements for all transportation modes, giving first consideration to the improvement of biking, walking, and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements (TR-2.8);
- As part of the development review process, require that new development along existing and
 planned transit facilities consist of land use and development types and intensities that
 contribute towards transit ridership. In addition, require that new development is designed to
 accommodate and to provide direct access to transit facilities (TR-3.3);
- Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use (TR-8.4);
- Allow reduced parking requirements for mixed-use developments and for developments
 providing shared parking or a comprehensive transportation demand management (TDM)
 program, or developments located near major transit hubs or within Villages and Corridors and
 other growth areas (TR-8.6);
- Encourage private property owners to share their underutilized parking supplies with the general public and/or other adjacent private developments (TR-8.7);
- Within new development, create and maintain a pedestrian-friendly environment by connecting
 the internal components with safe, convenient, accessible, and pleasant pedestrian facilities and
 by requiring pedestrian connections between building entrances, other site features, and
 adjacent public streets (CD-3.3);
- Create a pedestrian-friendly environment by connecting new residential development with safe, convenient, accessible, and pleasant pedestrian facilities. Provide such connections between new development, its adjoining neighborhood, transit access points, schools, parks, and nearby commercial areas (LU-9.1);
- Encourage all developers to install and maintain trails when new development occurs adjacent to a designated trail location. Use the City's Parkland Dedication Ordinance and Park Impact



Ordinance to have residential developers build trails when new residential development occurs adjacent to a designated trail location, consistent with other parkland priorities. Encourage developers or property owners to enter into formal agreements with the City to maintain trails adjacent to their properties (PR-8.5).

CEQA Transportation Analysis Scope

The CEQA transportation analysis for the project consists of a project-level VMT impact analysis using the City's VMT tool and a cumulative impact analysis that demonstrates the project's consistency with the Envision San Jose 2040 General Plan.

VMT Analysis

The City of San Jose's Transportation Analysis Policy establishes procedures for determining project impacts on VMT based on project description, characteristics, and/or location. The City of San Jose defines VMT as the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT is calculated for residential, office, and industrial projects using the Origin-Destination VMT method, which measures the full distance of personal motorized vehicle trips with one end within the project. A project's VMT is compared to established thresholds of significance based on the project location and type of development. When assessing a residential project, the project's VMT is divided by the number of residents expected to occupy the project to determine the VMT per capita. When assessing an office or industrial project, the project's VMT is divided by the number of employees.

Typically, development projects that are farther from other, complementary land uses (such as a business park far from housing) and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options. Therefore, developments located in a central business district with high density and diversity of complementary land uses and frequent transit services are expected to internalize trips and generate shorter and fewer vehicle trips than developments located in a suburban area with low density of residential developments and no transit serve in the project vicinity.

VMT Evaluation Tool

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for development projects. For non-residential or non-office projects, very large projects, or projects that can potentially shift travel patterns, the City's Travel Demand Model can be used to determine project VMT.

Based on the assessor's parcel number (APN) of a project, the VMT evaluation tool identifies the existing average VMT per capita and VMT per employee for the project area. Based on the project location, type of development, project description, and proposed trip reduction measures, the VMT evaluation tool calculates the project VMT. Projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas". Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.



The thresholds of significance for development projects, as established in the Transportation Analysis Policy, are based on the existing citywide average VMT level for residential uses and the existing regional average VMT level for employment uses. Figures 3 and 4 show the current VMT levels estimated by the City's travel demand model. Areas are color-coded based on the level of existing VMT:

- Green-filled areas are parcels with existing VMT less than the City's residential and employee
 thresholds of 10.12 VMT per capita and 12.21 per employee. The thresholds are calculated by
 subtracting 15 percent from the citywide average of 11.91 VMT per capita and regional average
 of 14.37 per employee.
- Yellow-filled areas are parcels with existing VMT between the residential and employee thresholds and the city-wide average of 11.91 VMT per capita and regional average of 14.37 VMT per employee.
- Orange-filled areas are parcels with existing VMT greater than the residential and employee thresholds. However, a project's VMT impact may be mitigated by implementing VMT-reducing measures.
 - Red-filled areas are parcels with existing VMT greater than the residential and employee threshold. Implementing VMT-reducing measures will not be sufficient to reduce a project's VMT to less than the threshold of significance.

Average per-capita and per-employee VMT for all the existing developments within ½ mile buffer of each parcel in the City serves as the baseline from which a project is evaluated. The VMT in the proposed project site vicinity is presented in further detail in Chapter 3.

Screening for VMT Analysis

The City's VMT methodology includes screening criteria that are used to identify types, characteristics, and/or locations of projects that would not exceed the CEQA thresholds of significance. If a project or a component of a mixed-use project meets the screening criteria, it is then presumed that the project or the component would result in a less-than-significant VMT impact and a VMT analysis is not required. The type of development projects that may meet the screening criteria include the following:

- (1) small infill projects
- (2) local-serving retail
- (3) local-serving public facilities
- (4) projects located in Planned Growth Areas with low VMT and High-Quality Transit
- (5) deed-restricted affordable housing located in Planned Growth Areas with High-Quality Transit

Table 1 summarizes the screening criteria that must be considered for each type of development project as identified in the City of San Jose Transportation Analysis Handbook. Figures 5 and 6 identify areas within the City that currently have low VMT levels estimated by the City for residents and workers, respectively, for which transit-supportive development located within a priority growth area would be screened out of the evaluation of VMT.

The project site is located within a planned Growth Area (Winchester Boulevard Urban Village). However, neither the proposed 70 residential units nor 20,410 s.f. of office space meets the VMT screening criteria as a small infill project with less than 25 multi-family housing units or 10,000 s.f. of office space. Additionally, the existing VMT per capita and VMT per employee within a ½-mile radius of the project site are estimated to be 10.16 and 13.14, which exceed the CEQA significance thresholds of 10.12 and 12.21, respectively. Therefore, an evaluation of VMT for both the residential and office components of the project is required and presented in Chapter 3.



Figure 3 VMT per Capita Heat Map in San Jose

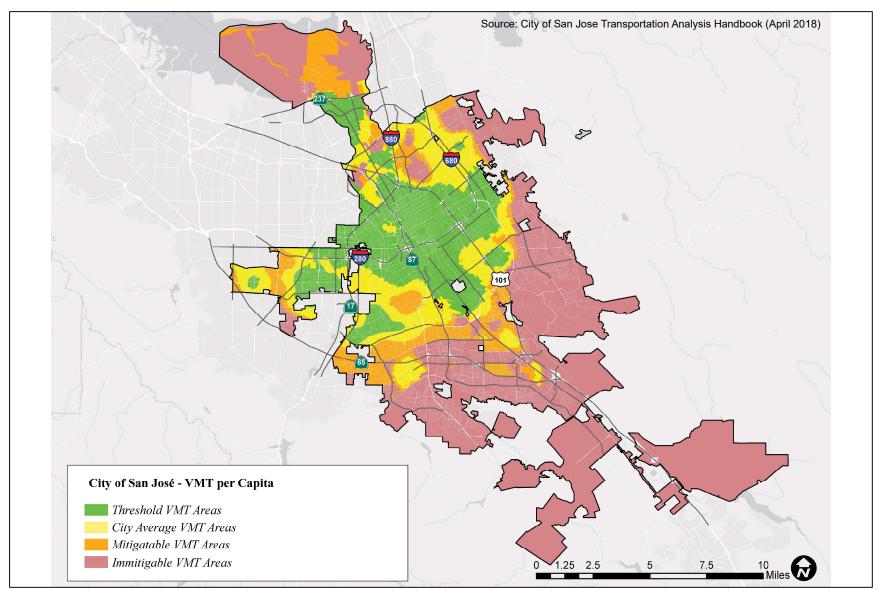




Figure 4 VMT per Job Heat Map in San Jose

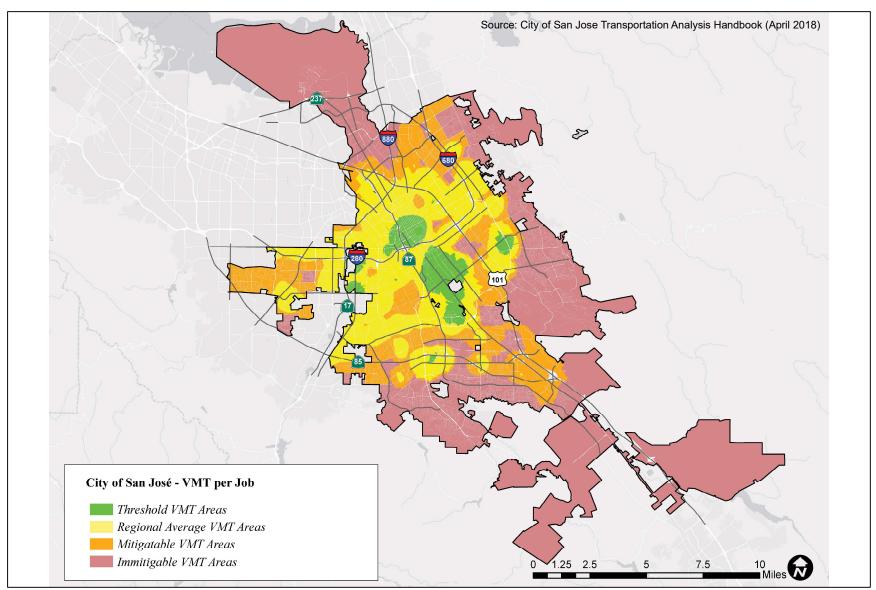




Figure 5 Low VMT per Capita Areas in San Jose

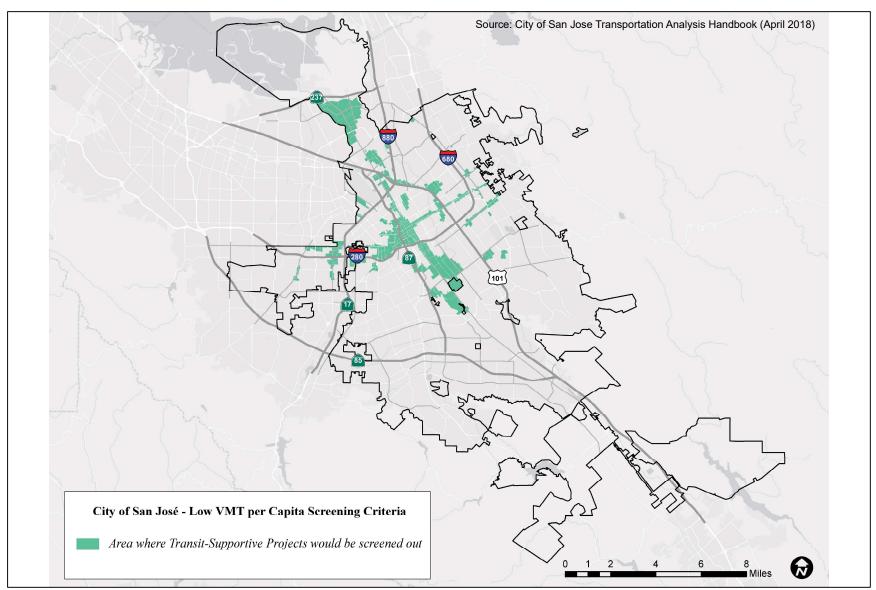




Figure 6 Low VMT per Job Areas in San Jose

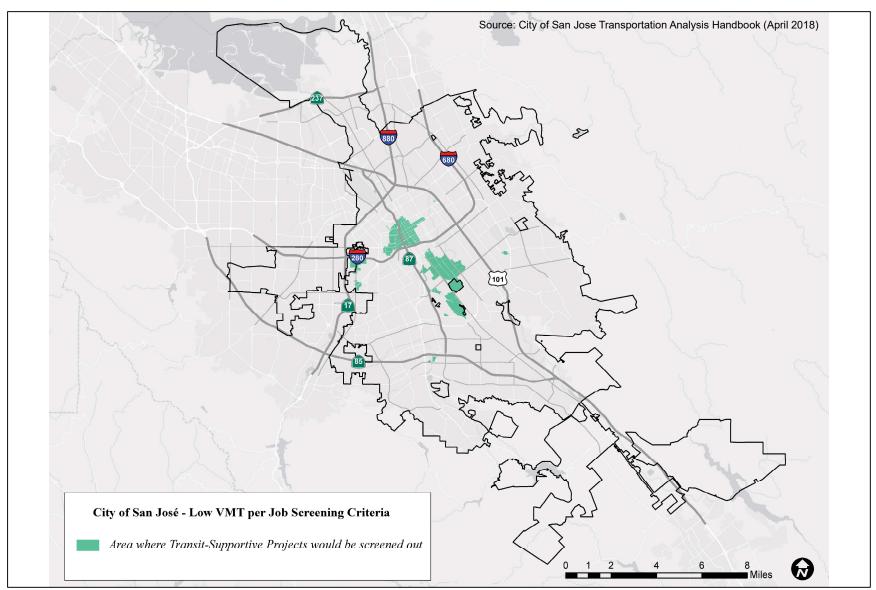




Table 1 CEQA VMT Analysis Screening Criteria for Development Projects

Туре	Screening Criteria				
Small Infill Projects	 Single-family detached housing of 15 units or less; <u>OR</u> Single-family attached or multi-family housing of 25 units or less; <u>OR</u> Office of 10,000 square feet of gross floor area or less; <u>OR</u> Industrial of 30,000 square feet of gross floor area or less 				
Local-Serving Retail	100,000 square feet of total gross floor area or less without drive-through operations				
Local-Serving Public Facilities	Local-serving public facilities				
Residential/Office Projects or Components	 Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan; AND High-Quality Transit: Located within ½ a mile of an existing major transit stop or an existing stop along a high-quality transit corridor; AND Low VMT: Located in an area in which the per capita VMT is less than or equal to the CEQA significance threshold for the land use; AND Transit-Supporting Project Density: Minimum Gross Floor Area Ratio (FAR) of 0.75 for office projects or components; Minimum of 35 units per acre for residential projects or components; If located in a Planned Growth Area that has a maximum density below 0.75 FAR or 35 units per acre, the maximum density allowed in the Planned Growth Area must be met; AND Parking: No more than the minimum number of parking spaces required; If located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure. 				
Restricted Affordable Residential Projects or Components	 Affordability: 100% restricted affordable units, excluding unrestricted manager units; affordability must extend for a minimum of 55 years for rental homes or 45 years for for-sale homes; AND Planned Growth Areas: Located within a Planned Growth Area as defined in the Envision San José 2040 General Plan; AND High Quality Transit: Located within ½ a mile of an existing major transit stop or an existing stop along a high quality transit corridor; AND Transit-Supportive Project Density: o Minimum of 35 units per acre for residential projects or components; o If located in a Planned Growth Area that has a maximum density below 35 units per acre, the maximum density allowed in the Planned Growth Area must be met; AND Transportation Demand Management (TDM): If located in an area in which the per capita VMT is higher than the CEQA significance threshold, a robust TDM plan must be included; AND Parking: o No more than the minimum number of parking spaces required; o If located in Urban Villages or Downtown, the number of parking spaces must be adjusted to the lowest amount allowed; however, if the parking is shared, publicly available, and/or "unbundled", the number of parking spaces can be up to the zoned minimum; AND Active Transportation: Not negatively impact transit, bike or pedestrian infrastructure. 				
Source: City of San Jos	sé Transportation Analysis Handbook, April 2018.				



Local Transportation Analysis Scope

A local transportation analysis (LTA) supplements the CEQA VMT analysis and identifies transportation and traffic operational issues that may arise due to a development project. The LTA includes an evaluation of the effects of the project on transportation, access, circulation, and related safety elements in the proximate area of the project.

Intersection Operations Analysis

Per Senate Bill (SB) 743 and the updated CEQA Guidelines. (Section 15064.3) Nov 2017, beginning July 1, 2020 the use of intersection level of service as a metric for determining impacts of development growth on the transportation system will no longer be permitted. Therefore, the evaluation of a project's impact on level of service at intersections under the jurisdiction of the City of San Jose is no longer required.

The LTA includes the evaluation of weekday AM and PM peak hour operations at a limited number of intersections for the purpose of identifying operational issues (queuing, signal operations, and potential multi-modal issues) at intersections in the general vicinity of the project site. However, the determination of project impacts per CEQA requirements is based solely on the VMT analysis.

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 weekday traffic congestion occurs on the roadways in the study area.

Intersection operations conditions were evaluated for the following scenarios:

- **Existing Conditions.** Existing AM and PM peak hour traffic volumes at all study intersections were obtained recently completed traffic studies.
- Background Conditions. Background traffic volumes were estimated by adding to existing
 peak hour volumes the projected volumes from approved but not yet completed developments.
 The approved project traffic was provided by the City of San Jose in the form of the Approved
 Trips Inventory (ATI).
- Background Plus Project Conditions. Background plus project conditions reflect projected
 traffic volumes on the planned roadway network with completion of the project and approved
 developments. Background traffic volumes with the project were estimated by adding to
 background traffic volumes the additional traffic generated by the project.
- **Cumulative Conditions**. Cumulative traffic volumes reflect projected traffic volumes on the planned roadway network with completion of the pending developments in the area as well as the proposed project and approved developments. A list of pending projects in the vicinity was provided by the City of San Jose.

The LTA also includes a vehicle queuing analysis, an evaluation of potential project impacts on bicycle, pedestrian, and transit facilities, and a review of site access, on-site circulation, and parking demand.

Report Organization

The remainder of this report is divided into four chapters. Chapter 2 describes the existing transportation system including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 describes the CEQA transportation analysis, including VMT analysis methodology,



baseline and potential project VMT impacts, and potential cumulative transportation impacts. Chapter 4 describes the LTA including the method by which project traffic is estimated, intersection operations analysis methodology, any adverse intersection traffic effects caused by the project, intersection vehicle queuing analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking. Chapter 5 presents the conclusions of the transportation analysis.



2.

Existing Transportation Setting

This chapter describes the existing conditions of the transportation system within the study area of the project. It describes transportation facilities in the vicinity of the project site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via SR 17 and I-280. These facilities are described below.

SR 17 is a six-lane freeway in the vicinity of the site. It extends from Santa Cruz to I-280 in San Jose, at which point it makes a transition to I-880 to Oakland. Access to the site from the south and north are provided via its interchanges with Hamilton Avenue and Stevens Creek Boulevard, respectively.

I-280 is an eight-lane freeway in the vicinity of the site. It extends northwest to San Francisco and east to King Road in San Jose, at which point it makes a transition to I-680 to Oakland. North of I-880, I-280 has high occupancy vehicle (HOV) lanes in both directions. Access to and from northbound I-280 to the site is provided via its interchange with Winchester Boulevard. Access to and from southbound I-280 to the site is provided via Moorpark Avenue and Stevens Creek Boulevard.

Local access to the site is provided by Winchester Boulevard, Moorpark Avenue, Williams Road, Payne Avenue, Hamilton Avenue, San Tomas Expressway, and Eden Avenue. These roadways are described below.

Winchester Boulevard is designated as a Main Street in the 2040 General Plan and is a divided six-lane north-south roadway that runs from Los Gatos to Lincoln Street in Santa Clara. In the project vicinity, Winchester Boulevard has a posted speed limit of 35 mph with sidewalks on both sides of the street and on-street bike lanes between I-280 and Stevens Creek Boulevard. Direct access to and from the project site is provided via a right-in/right-out-only driveway along Winchester Boulevard.

Moorpark Avenue is designated as a City Connector Street in the 2040 General Plan and is a four-lane east-west roadway that runs from Lawrence Expressway to Bascom Avenue. East of Bascom Avenue, Moorpark Avenue makes a transition into a three-lane one-way roadway to Leigh Avenue. Moorpark Avenue provides access to the project site via Winchester Boulevard.

Williams Road is designated as an On-Street Primary Bicycle Facility in the 2040 General Plan and is a two-lane east-west roadway in the vicinity of the project site. It extends east from Moorpark Avenue to South Daniel Way, just east of Winchester Boulevard. Williams Road provides access to the project site via Winchester Boulevard.



Payne Avenue is designated as a Local Connector Street in the 2040 General Plan and is a two-lane east-west roadway in the vicinity of the project site. It extends east from Saratoga Avenue to Almarida Drive, just east of Winchester Boulevard. Payne Avenue provides access to the project site via Winchester Boulevard.

Hamilton Avenue is designated as a City Connector Street in the 2040 General Plan and is a six-lane east-west roadway between Marathon Drive and Leigh Avenue. West of Marathon Drive, Hamilton Avenue narrows to a four-lane roadway and extends west to Campbell Avenue. East of Leigh Avenue, Hamilton Avenue narrows to a four-lane roadway and extends west to Meridian Avenue. Hamilton Avenue provides access to the project site via Winchester Boulevard.

San Tomas Expressway is designated as an Expressway in the 2040 General Plan and is a north-south expressway that begins at its interchange with US 101 and extends southward through Santa Clara and San Jose and into Campbell, where it transitions into Camden Avenue at SR 17. San Tomas Expressway provides access to and from the project site via Williams Road and Payne Avenue.

Eden Avenue is a two-lane north-south roadway in the vicinity of the project site. It extends north from Hamilton Avenue to Moorpark Avenue. Eden Avenue provides access to the project site via Williams Road and Payne Avenue.

Existing Bicycle and Pedestrian Facilities

Class II Bikeway (Bike Lane). Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Within the vicinity of the project site, striped bike lanes are present on the following roadway segments.

- Winchester Boulevard, between Hamilton Avenue and Williams Road
- Winchester Boulevard, between Tisch Way and Stevens Creek Boulevard
- Hamilton Avenue, west of SR 17
- Payne Avenue, west of Winchester Boulevard
- Williams Road, west of Baywood Avenue
- Moorpark Avenue, west of Thornton Way
- Monroe Street, between Tisch Way and Stevens Creek Boulevard

Class III Bikeway (Bike Route). Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations. In the vicinity of the project site, the following roadway segments are designated as bike routes.

- Payne Avenue, between Winchester Boulevard and Greenbriar Avenue
- Eden Avenue, between Impala Drive and Hamilton Avenue
- Milton Avenue, south of Hamilton Avenue
- Darryl Drive, between Hamilton Avenue and Payne Avenue
- Monroe Street, between Moorpark Avenue and Williams Road
- Williams Road, between Baywood Avenue and Daniel Way
- Daniel Way, between Williams Road and Westfield Avenue
- Thornton Way, between Moorpark Avenue and Downing Avenue
- Central Avenue, between Hamilton Avenue and Westfield Avenue
- Downing Avenue, east of SR 17
- Phelps Avenue, along its entire length
- Boynton Avenue, along its entire length
- Cypress Avenue, between Moorpark Avenue and Williams Road



Although none of the residential streets near the project site provide bike lanes or are designated as bike routes, due to their low traffic volumes, many of them are conducive to bicycle usage. The existing bicycle facilities are shown in Figure 7.

The locations of three pedestrian footbridge crossings over freeways in the vicinity of the project site are listed below and shown in Figure 7.

- SR 17 pedestrian footbridge connecting Westfield Avenue and Downing Avenue
- I-280 pedestrian footbridge connecting Moorpark Avenue and Cypress Avenue
- I-280 pedestrian footbridge connecting Moorpark Avenue and Tisch Way

Controlled crosswalks across Winchester Boulevard are provided near the project site at the signalized Williams Road and Payne Avenue intersections with Winchester Boulevard. Overall, the existing network of sidewalks and crosswalks provides good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the area.

Existing Transit Services

Existing transit service to the study area is provided by the VTA. The VTA transit services are described below and shown in Figure 8.

VTA Bus Services

The project site is served directly by the following VTA bus routes.

Local/Frequent Route 25 provides local services between De Anza College and Santa Clara Valley Medical Center and frequent services between Santa Clara Valley Medical Center and Alum Rock Transit Center. Route 25 operates from 5:00 AM to 12:00 AM on weekdays with 30-minute headways during commute periods in the project vicinity. Route 25 operates along Winchester Boulevard and Williams Road in the project area. The closest bus stop is located approximately 350 north of the project site at the intersection of Winchester Boulevard and Williams Road.

Local Route 56 runs from Lockheed Martin to Tamien Station and operates from 5:30 AM to 10:30 PM on weekdays with 30-minute headways during commute periods. The closest bus stop is located approximately 0.9 miles from the project site at the intersection of Winchester Boulevard and Hamilton Avenue.

Frequent Route 60 runs from the BART Station in Milpitas to Winchester Station via SJC Airport and operates from 5:00 AM to 11:30 PM on weekdays with 20- to 30-minute headways during commute periods. Route 60 operates along Winchester Boulevard in the project area. The closest southbound and northbound bus stops to the project site are located at most approximately 100 feet away from the project site along Winchester Boulevard.

Express Route 101 runs from Camden Avenue near Highway 85 to Stanford Research Park in Palo Alto and operates two northbound trips during the morning commute period and two southbound trips during the afternoon commute period with 60-minute headways. The closest bus stop is located approximately 0.9 miles from the project site at the intersection of Winchester Boulevard and Hamilton Avenue.

VTA Light Rail Transit (LRT) Service

GreenLine LRT runs from the Winchester Transit Center in Campbell to Old Ironsides in Santa Clara and operates from 5:30 AM to 12:30 AM with 20-minute headways during the peak commute periods. The closest LRT station is located approximately 1.4 miles from the project site at the interchange of SR 17 and Hamilton Avenue.



Figure 7
Existing Bicycle Facilities

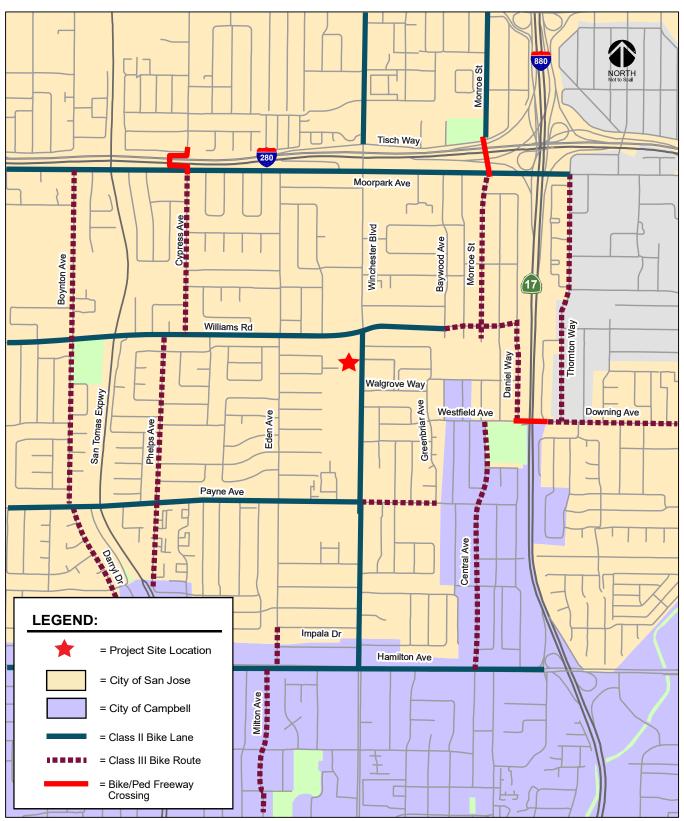
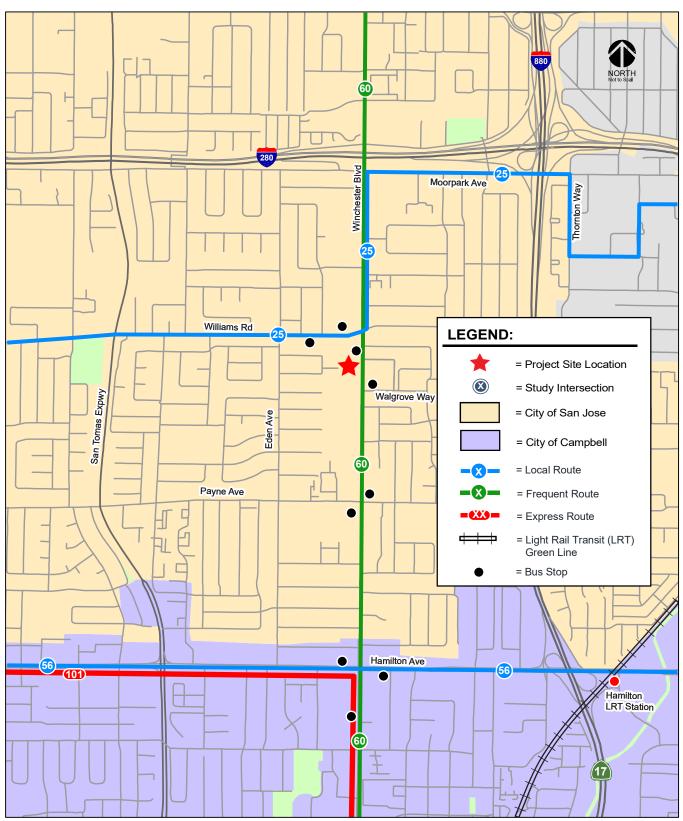




Figure 8 Existing Transit Services





3. **CEQA Transportation Analysis**

This chapter describes the CEQA transportation analysis, including the VMT analysis methodology and significance criteria, potential project impacts on VMT, mitigation measures recommended to reduce significant impacts, and an evaluation of consistency with the City of San Jose's General Plan.

VMT Analysis Methodology

Per Council Policy 5-1, the effects of the proposed project on VMT were evaluated using the methodology outlined in the City's *Transportation Analysis Handbook*. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT measures the full distance of personal motorized vehicle trips with one end within the project. When the proposed project is relatively small and would not significantly alter existing traffic patterns, the City's VMT evaluation tool is used to estimate the project VMT and determine whether the project would result in a significant VMT impact.

VMT Evaluation Tool

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for development projects. Based on the assessor's parcel number (APN) of a project, the VMT evaluation tool identifies the existing average VMT per employee for the project area. Based on the project location, type of development, project description, and proposed trip reduction measures, the VMT evaluation tool calculates the project VMT. Projects located in areas where the existing VMT is greater than the established threshold are referred to as being in "high-VMT areas". Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible. Figures 9 and 10 show the current VMT levels estimated by the City for workers and residents in the immediate project area, respectively.

The VMT evaluation tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT. There are four strategy tiers whose effects on VMT can be calculated with the VMT evaluation tool:

- 1. Project characteristics (e.g. density, diversity of uses, design, and affordability of housing) that encourage walking, biking, and transit uses.
- 2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians,



Figure 9
VMT per Employee Heat Map in Project Area

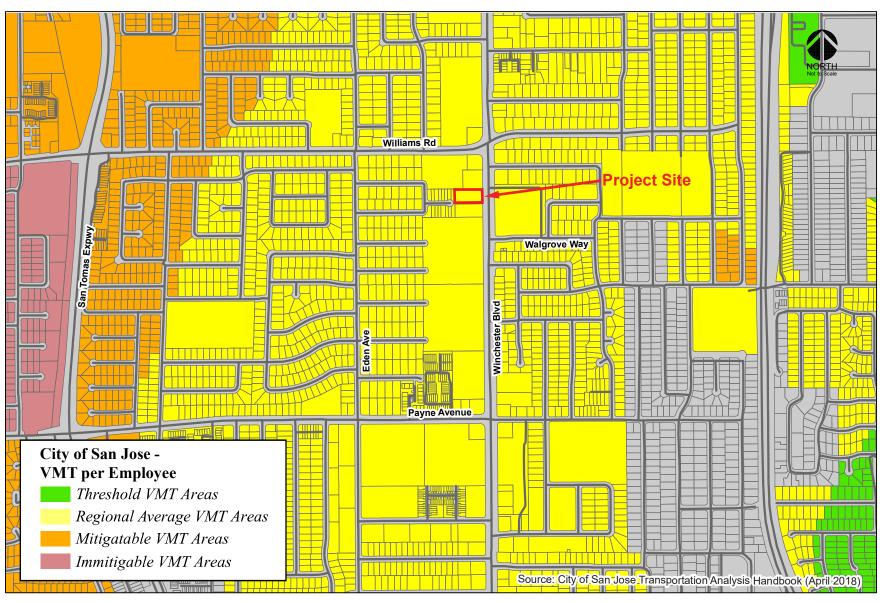
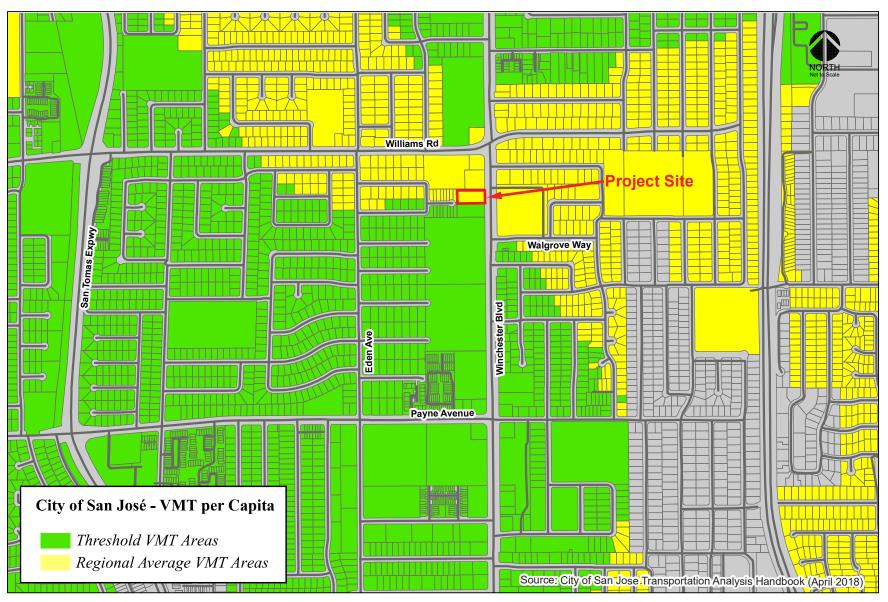




Figure 10 VMT per Capita Heat Map in Project Area





- 3. Parking measures that discourage personal motorized vehicle-trips, and
- 4. Transportation demand management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle trips.

The first three strategies – land use characteristics, multimodal network improvements, and parking – are physical design strategies that can be incorporated into the project design. TDM includes programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and by encouraging more walking, biking, and riding transit. TDM measures should be enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

Thresholds of Significance

If a project is found to have a significant impact on VMT, the impact must be reduced by modifying the project to reduce its VMT to an acceptable level (below the established thresholds of significance applicable to the project) and/or mitigating the impact through multimodal transportation improvements or establishing a Trip Cap. Table 2 shows the VMT thresholds of significance for development projects, as established in the Transportation Analysis Policy.

CEQA Transportation Analysis Exemption Criteria

The City of San Jose Transportation Analysis Handbook identifies screening criteria that determine whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

The project site is located within a planned Growth Area (Winchester Boulevard Urban Village). However, neither the proposed 70 residential units nor 20,410 s.f. of office space meets the VMT screening criteria as a small infill project with less than 25 multi-family housing units or 10,000 s.f. of office space. Additionally, the existing VMT per capita and per employee within a ½-mile radius of the project site are estimated to be 10.16 and 13.14, which exceed the CEQA significance thresholds of 10.12 and 12.21, respectively. Therefore, an evaluation of VMT of both the residential and office components of the project is required.

VMT of Existing Land Uses

The results of the VMT analysis using the VMT Evaluation Tool indicate that the existing VMT for residential uses in the project vicinity is 10.16 per capita and for employment uses is 13.14 per employee. As shown in Table 2, the current citywide average VMT for residential uses is 11.91 per capita and the regional average VMT for employment uses is 14.37 per employee. Therefore, the existing VMT levels of residential and employment uses in the project vicinity are currently less than the average VMT levels. Appendix A presents the VMT Evaluation Tool summary report for the project.

Project-Level VMT Impact Analysis

The City's Transportation Policy identifies an impact threshold of 15% below the citywide average per capita VMT of 11.91 and regional average per employee VMT of 14.37. Thus, the proposed project would result in a significant impact if it results in VMT that exceeds per capita VMT of 10.12 and per employee VMT of 12.21.



Table 2
CEQA VMT Analysis Significant Impact Criteria for Development Projects

Туре	Significance Criteria	Current Level	Threshold	
Residential Uses	Project VMT per capita exceeds existing citywide average VMT per capita minus 15 percent <u>OR</u> existing regional average VMT per capita minus 15 percent, whichever is lower.	11.91 VMT per capita (Citywide Average)	10.12 VMT per capita	
General Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee minus 15 percent	14.37 VMT per employee (Regional Average)	12.21 VMT per employee	
Industrial Employment Uses	Project VMT per employee exceeds existing regional average VMT per employee	14.37 VMT per employee (Regional Average)	14.37 VMT per employee	
Retail/ Hotel/ School Uses	Net increase in existing regional total VMT	Regional Total VMT	Net Increase	
Public/Quasi-Public Uses	In accordance with the most appropriate type(s) as determined by Public Works Director	Appropriate levels listed above	Appropriate thresholds listed above	
Mixed Uses	Evaluate each land use component of a mixed-use project independently, and apply the threshold of significance for each land use type included	Appropriate levels listed above	Appropriate thresholds listed above	
Change of Use or Additions to Existing Development	Evaluate the full site with the change of use or additions to existing development, and apply the threshold of significance for each project type included	Appropriate levels listed above	Appropriate thresholds listed above	
Area Plans Evaluate each land use component of the area plan independently, and apply the threshold of significance for each land use type included		Appropriate levels listed above	Appropriate thresholds listed above	
Source: City of San José Transportation Analysis Handbook, April 2018.				



The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the proposed project is projected to generate VMT per capita (10.07), which is below the established VMT impact threshold. The office component of the project is projected to generate VMT per employee (13.13), which would exceed the established impact threshold. Therefore, the proposed office component of the project would result in an impact on the transportation system based on the City's VMT impact criteria. Figure 11 shows the VMT evaluation summary generated by the City of San Jose's VMT Evaluation Tool.

Project Impacts and Mitigation Measures

Project Impact: Since the VMT generated by the office component of the project (13.13 per employee) would exceed the threshold of 12.21 VMT per employee, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact. According to the *Transportation Analysis Handbook*, projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas", and projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the greatest extent possible.

<u>Mitigation Measures</u>: Based on the four strategy tiers included in the VMT Evaluation Tool, it is recommended that the project implement one of the following mitigation measures to reduce the significant VMT impact. These mitigation measures and the resulting VMT are summarized in Table 3.

- <u>Telecommuting and Alternative Work Schedules</u>: Encourage 50% of the employees to telecommute, shift work schedules, or commute outside of peak congestion periods on a 4/40 weekly schedule (10-hour work days for four days a week). This measure reduces commute vehicle trips. **or**
- Operate a Free Direct Shuttle: Provide shuttle service for at least 15% of the project employees
 that would serve the project site and areas with high concentrations of employed residents. This
 measure reduces drive-alone commute trips. or
- <u>Provide Ride-Sharing Programs</u>: Organize a program to match individuals interested in carpooling who have similar commutes for at least 15% of the project employees. This measure promotes the use of carpooling and reduces the number of drive-alone trips. <u>or</u>
 - 1. Car Sharing Program: Provide subsidies and promotions, as well as dedicated parking spaces, for carsharing services such as ZipCar, Car2Go, and GetAround, etc... for 100% of the project employees. Supporting a carsharing program gives people on-demand access to shared fleets of vehicles. Car-sharing reduces personal motorized vehicle dependence, which supports more walking, biking, carpooling, and transit use. Subject to negotiations with the City and possible negotiations with Car Share companies. and
 - 2. Commute Trip Reduction Marketing/Education: Implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes for 100% of the project employees. Strategies may include the incorporation of alternative commute options into new employee orientations, event promotions, and publications. and
 - 3. Employee Parking "Cash Out": Require project employers to offer parking "cash-out" for 70% of the project employees. Providing "cash-out" incentives gives employees the choice to forgo subsidized/free parking for a cash payment equivalent to the cost that the employer would otherwise pay for the parking space. Providing an alternative to subsidized/free parking encourages commuters to travel by walking, biking, carpooling, and transit.



Figure 11 VMT Analysis Summary

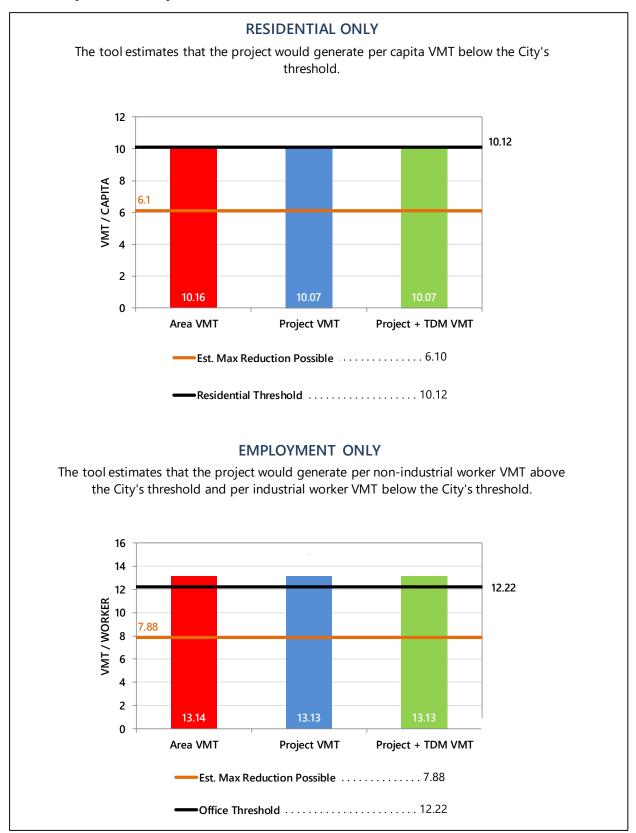




Table 3 VMT Mitigation Measures and Resulting VMT

Mitigation	Mitigation Description	VTM per Employee	VMT Threshold	VMT Impact?
Project	None	13.13	12.21	Yes
Telecommuting and Alternative Work Schedules	Encourage 50% of the employees to telecommute, shift work schedules, or commute outside of peak congestion periods on a 4/40 weekly schedule (10-hour work days for four days a week). This measure reduces commute vehicle trips.	12.14	12.21	No
Operate a Free Direct Shuttle	Provide shuttle service for at least 15% of the project employees that would serve the project site and areas with high concentrations of employed residents. This measure reduces drive-alone commute trips.	12.20	12.21	No
Ride-Sharing Programs	Organize a program to match individuals interested in carpooling who have similar commutes for at least 15% of the project employees. This measure promotes the use of carpooling and reduces the number of drive-alone trips.	12.05	12.21	No
Car Sharing Program, Commute Trip Reduction Marketing/Education, and Employee Parking "Cash Out"	Car Sharing Program - Provide subsidies and promotions, as well as dedicated parking spaces, for carsharing services such as ZipCar, Car2Go, and GetAround, etc for 100% of the project employees. Supporting a carsharing program gives people on-demand access to shared fleets of vehicles. Car-sharing reduces personal motorized vehicle dependence, which supports more walking, biking, carpooling, and transit use. Subject to negotiations with the City and possible negotiations with Car Share companies. Commute Trip Reduction Marketing/Education - Implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes for 100% of the project employees. Strategies may include incorporation of alternative commute options into new employee orientations, event promotions, and publications. Employee Parking "Cash Out" - Require project employers to offer parking "cash-out" incentives gives employees the choice to forgo subsidized/free parking for a cash payment equivalent to the cost that the employer would otherwise pay for the parking space. Providing an alternative to subsidized/free parking encourages commuters to travel by walking, biking, carpooling, and transit.	12.19	12.21	No

The implementation of the mitigation measures would reduce the VMT generated by the project by supporting bicycle usage and increasing transit ridership by employees. The implementation of one of the above mitigation measures would reduce the project VMT to below the threshold of 12.21 per employee, which would reduce the project impact to less than significant. Appendix A presents the VMT Evaluation Tool summary report for the project with the mitigation measures.



Additionally, the TDM plan (see Appendix H) proposes measures that would reduce the project's parking demand and support a 22 percent parking reduction needed to satisfy the City's parking requirement. The TDM plan includes maintaining an online kiosk of trip-planning resources, providing 100 percent unbundled parking for all residential spaces, providing VTA SmartPasses to residential and commercial tenants, and providing on-site bicycle parking that will exceed the minimum required by the City.

Cumulative (GP Consistency) Evaluation

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan's goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The project site is located within the Winchester Boulevard Urban Village, which is generally bounded by I-280 to the north, SR 17 to the east, Hamilton Avenue to the south, and San Tomas Expressway to the west (see Figure 1). Urban villages were developed as one of the major strategies of the *Envision San José 2040 General Plan*. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan.

The Winchester Boulevard Urban Village Plan identifies the following goals to improve traffic flow, alternative transportation options, and reduce neighborhood cut-through traffic.

- Improve traffic flow through multimodal data collection and application and signal coordination and timing improvements.
- Reduce congestion from the road by encouraging off-peak travel as well as more travel through sustainable modes, including walking, biking, transit, and ridesharing.
- Support robust technology improvements, and appropriately accommodate new technologies, such as autonomous vehicles, in ways that provide a net benefit.
- Improve transit options and connections to regional transit facilities by prioritizing transit and by upgrading existing bus stop facilities.
- Improve walkability and bikeability with better connections, wider walkways, improved over/undercrossings, shared bikeway in residential neighborhoods, protected or buffered bike lanes on major streets, and better bike parking.
- Limit cut-through traffic, speeding, and parking overflow in residential neighborhoods by slowing speeds and increasing cut-through travel times in residential neighborhoods, and by providing enough parking to meet the needs of businesses and residents.
- Improve wayfinding in ways that reinforce and enhance the identity of the Urban Village and its surrounding neighborhood.
- Remain consistent with the community's top priorities for future designs of Winchester Boulevard, which are sufficient vehicular travel lanes and protected bike lanes.

The project is consistent with the General Plan and Winchester Boulevard Urban Village goals and policies for the following reasons:

 The project frontage along Winchester Boulevard will be improved to be consistent with the planned streetscape design features of Grand Boulevards and the Winchester Boulevard Urban Village Plan.



- The project frontage along Winchester Boulevard will be designed to accommodate the planned Winchester Boulevard Complete Street improvements including protected bicycle lanes, wider sidewalks, and other pedestrian safety features.
- The project site is adjacent to bus stops and bicycle lanes on Winchester Boulevard.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.



4.

Local Transportation Analysis

This chapter describes the local transportation analysis including the method by which project traffic is estimated, intersection operations analysis for existing, background, background plus project, and cumulative conditions, and any adverse effects on study intersections caused by the project, intersection vehicle queuing analysis, freeway segment capacity, site access, and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking.

Project Description

As proposed, the development would consist of the replacement of a single-family home currently onsite with 70 condominium units and 20,410 square feet of office space. A total of 104 parking spaces will be provided on-site. Access to and from the project site would be provided via one right-in/right-out driveway along Winchester Boulevard.

The project site is located within a designated Urban Village (Winchester Boulevard) per the Envision San Jose 2040 General Plan. Urban villages are walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the General Plan's environmental goals.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are 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 entering and exiting the site is 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 are estimated. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Proposed Project Trips

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. Project trip generation was estimated by applying to the size and uses of the development the appropriate trip generation rates. The average trip generation rates for Multifamily Housing (Mid-Rise) (Land Use 221) and General Office Building (Land Use 710) as published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (2017) were applied to the proposed number of condominium units and office space to estimate the project trips. Based on the trip generation rates, it is estimated that the project would generate a total of 580



daily vehicle trips with 49 trips (28 inbound and 21 outbound) occurring during the AM peak hour and 54 trips (23 inbound and 31 outbound) occurring during the PM peak hour before any reductions.

Trip Reductions

In accordance with San Jose's *Transportation Analysis Handbook* (April 2018, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions from the baseline (gross) trip generation described above.

A mixed-use development with complementary land uses such as residential and office, will result in a reduction of external site trips. Thus, the number of vehicle trips generated for each use may be reduced, since a portion of the trips would not require entering or exiting the site. Therefore, based on VTA's recommended mixed-use reduction, a 3 percent trip reduction is applied for the housing/office mixed-use, based on the smaller office component. The reduction is applied to the smaller of the two complimentary trip generators and the same number of trips is then subtracted from the larger trip generator.

Based on the 2018 San Jose guidelines, the project qualifies for a location-based adjustment. The location-based adjustment reflects the project's vehicle mode share based on the place type in which the project is located per the San Jose Travel Demand Model. The project's place type was obtained from the San Jose VMT Evaluation Tool. Based on the Tool, the project site is located within a designated urban area with low access to transit. Therefore, the baseline project trips were adjusted to reflect an urban low-transit mode share. Urban low-transit is characterized as an area with good accessibility, low vacancy, and middle-aged housing stock. Residential and office developments within urban low-transit areas have vehicle mode shares of 87% and 91%, respectively. Thus, 13% and 9% reductions were applied to the residential and office trips generated by the proposed project, respectively.

Total Project Trips

After applying the ITE trip rates and appropriate trip reductions, the proposed mixed-use development is estimated to generate a total of 499 daily vehicle trips, with 42 trips (24 inbound and 18 outbound) occurring during the AM peak hour and 46 trips (20 inbound and 26 outbound) occurring during the PM peak hour. The project trip generation estimates are presented in Table 4.

Existing Site Trips

A single-family home is currently occupying the project site. Field observations revealed that the existing use generates less than 10 trips during each of the peak hours. Therefore, the LTA utilized a conservative approach and did not take trip credit for the existing use.

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was developed 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, with an emphasis on freeway access and project driveway location. Figure 12 shows the trip distribution pattern, and Figure 13 shows the assignment of project traffic on the local transportation network.



Table 4
Project Trip Generation Estimates

					AM Peak Hour							PM Peak Hour						
		VI	MT ³		Da	ily		Sp	olit		Trip			Sp	olit		Trip	
Land Use	Size	Existing	Project	Reduction %	Rate	Trip	Rate	ln	Out	In	Out	Total	Rate	In	Out	In	Out	Total
Multifamily Housing (Mid-Rise) (ITE LU 221)	70 Dwelling Units	3			5.44	381	0.36	26%	74%	7	18	25	0.44	61%	39%	19	12	31
Housing and Employment Mixed-Use Reduction	(3%) ¹					-6				0	-1	-1				-1	0	-1
Location-Based Reduction (13%) ²						-49				-1	-2	-3				-2	-2	-4
VMT Reduction ³		10.16	10.07	0.89%		-3				0	0	0				0	0	0
General Office Building (ITE LU 710)	20,410 Square Feet				9.74	199	1.16	86%	14%	21	3	24	1.15	16%	84%	4	19	23
Housing and Employment Mixed-Use Reduction	(3%) ¹					-6				-1	0	-1				0	-1	-1
Location-Based Reduction (9%) 2						-17				-2	0	-2				0	-2	-2
VMT Reduction ³		13.14	13.13	0.08%		0				0	0	0				0	0	0
Total Project Trips						499				24	18	42				20	26	46

Source: ITE Trip Generation Manual, 10th Edition 2017

¹As prescribed by the VTA Transportation Impact Analysis Guidelines (October 2014), the maximum trip reduction for a mixed-use development project with housing and employment components is equal to 3% off the smaller trip generator.

²The project site is located within an urban low-transit area based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode shares were obtained from Table 6 of the City of San Jose Transportation Analysis Handbook (April 2018). The trip reductions are based on the percent of mode share for other modes of travel beside vehicle.

³VMT per capita for residential use and VMT per non-industrial worker for office use. Existing and project VMTs were estimated using the City of San Jose Evaluation Tool (February 29, 2019). It is assumed that every percent reduction in VMT per capita or per employee is equivalent to one percent reduction in peak-hour vehicle trips.



Figure 12 Project Trip Distribution

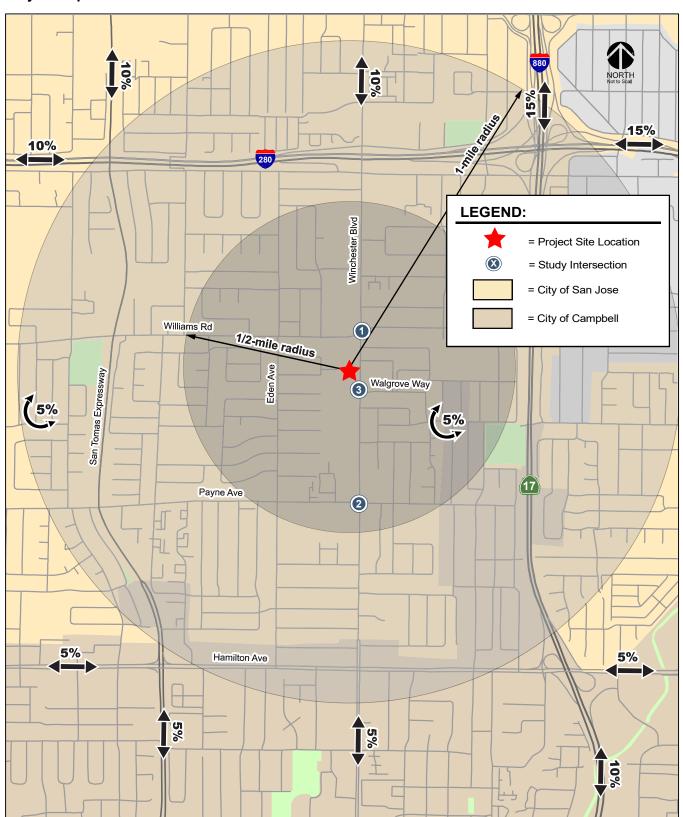
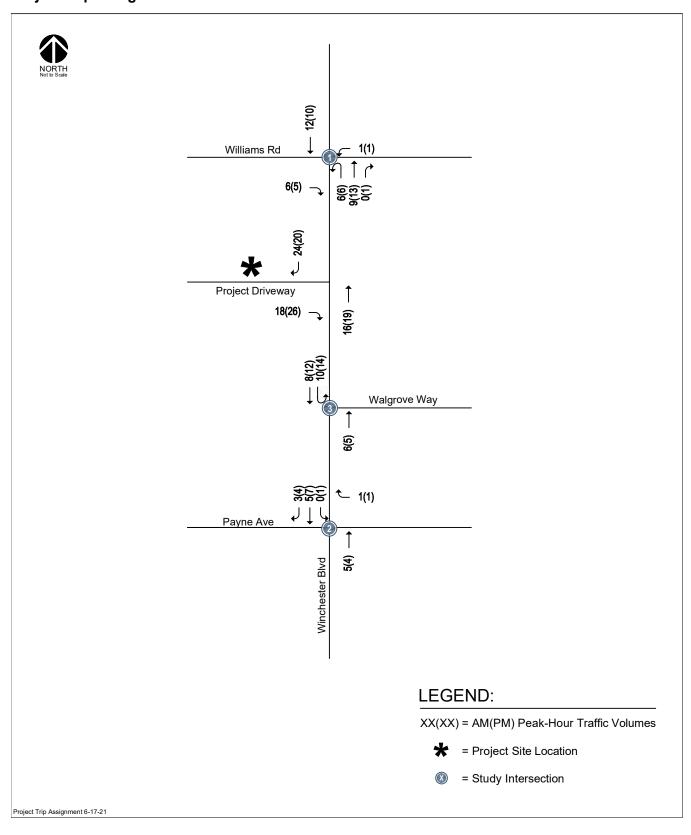




Figure 13 Project Trip Assignment





Intersection Operations Methodology

This section presents the methods used to evaluate traffic operations at the study intersections. It includes descriptions of the data requirements, the analysis methodologies, the applicable level of service standards, and the criteria defining adverse effects at the study intersections.

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection is not considered a CEQA impact metric.

Study Intersections

The study includes an analysis of AM and PM peak-hour traffic conditions for two signalized intersections and one unsignalized intersection. Intersections were selected for study if the project is expected to add 10 vehicle trips per hour per lane to an intersection that meets one of the following criteria as outlined in the *Transportation Analysis Handbook*.

- Within a ½-mile buffer from the project's property line;
- Outside a ½-mile buffer but within a one-mile buffer from the project AND currently operating at D or worse;
- Designated Congestion Management Program (CMP) facility outside of the City's Infill Opportunity Zones;
- Outside the City limits with the potential to be affected by the project, per the transportation standards of the corresponding external jurisdiction;
- With the potential to be affected by the project, per engineering judgment of Public Works.

The following study intersections are located between a one-half mile and one-mile radii from the project site and were selected based on the above criteria (see Figure 13).

- 1. Winchester Boulevard and Williams Road
- 2. Winchester Boulevard and Pavne Avenue
- 3. Winchester Boulevard and Walgrove Way (unsignalized)

Data Requirements

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

- existing traffic volumes
- existing lane configurations
- signal timing and phasing
- approved and pending project trips

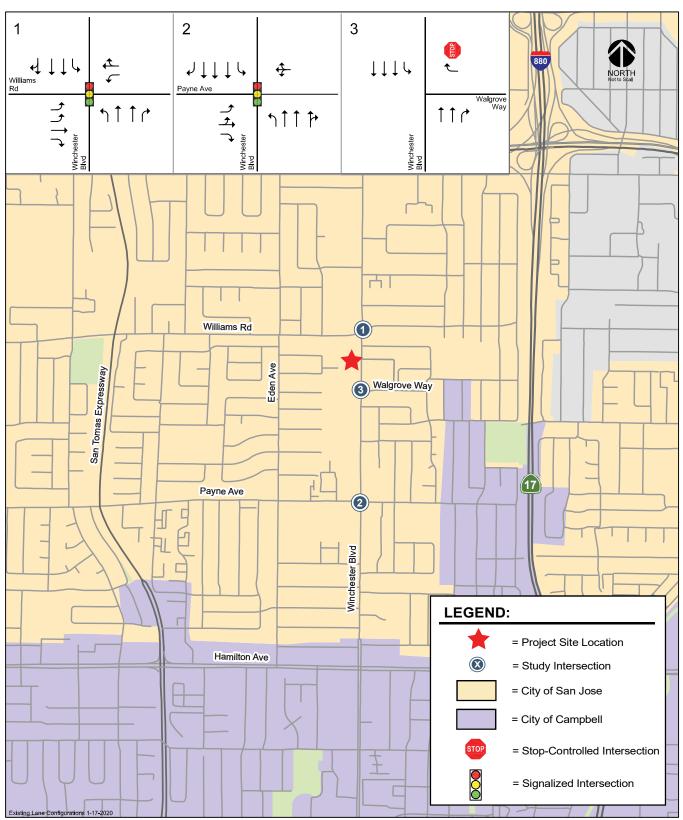
Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown in Figure 14.

It is assumed in this analysis that the transportation network under background, background plus project, and cumulative would be the same as the existing transportation network, with the following exceptions which are planned as part of the Winchester Boulevard Complete Street Improvements.



Figure 14 Existing Lane Configurations





The Winchester Boulevard Urban Village Plan identifies the improvement of Winchester Boulevard between Hamilton Avenue and I-280 to a complete street. Complete streets are roadways designed to safely accommodate many different users, including people who bike, people who walk, transit riders, motorists, and emergency vehicles. The planned streetscape design for Winchester Boulevard includes features of Grand Boulevards and Complete Streets as defined in San José's General Plan and Complete Streets Design Guidelines (see Figure 15). The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.
- Construction of a raised median with limited breaks including at its intersections with Walgrove Way and Fireside Drive.
- Crosswalks at Walgrove Way and Fireside Drive with potential Rectangular Rapid Flashing Beacons (RRFB) at Walgrove Way.

This study conservatively assumes Winchester Boulevard would have four vehicular travel lanes (two lanes in each direction).

Traffic Volumes

Existing Conditions

Existing peak hour traffic volumes at all study intersections were obtained from recently completed traffic studies. The existing peak-hour intersection volumes are shown in Figure 16. Intersection turning-movement counts conducted for this analysis are presented in Appendix B. Peak hour intersection turning movement volumes for all intersections and study scenarios are tabulated in Appendix D.

Future Conditions

Background peak hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments was obtained from the City of San Jose's Approved Trips Inventory (ATI) database. The background traffic scenario predicts a realistic traffic condition that would occur as approved development is built. Background traffic volumes are shown in Figure 17. Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 18).

Traffic volumes under cumulative conditions were estimated by adding to the background plus project traffic volumes the trips from proposed but not yet approved (pending) development projects within the City of San Jose. A list of pending projects was obtained from the City of San Jose and listed below. The cumulative traffic volumes at study intersections are shown in Figure 19.

- 1212 South Winchester Hotel Development with a 119-room hotel
- 1073 South Winchester Mixed-Use Development with 61 condominium units and 17,970 s.f. of office space
- 1495 S. Winchester Boulevard Mixed-Use Development with 46 residential units, 7,000 s.f. of retail space, and 12,700 s.f. of office space

The approved trip inventory (ATI) is included in Appendix C. The approved trips, proposed project trips, and traffic volumes for all components of traffic are tabulated in Appendix D.



Figure 15
Winchester Boulevard Complete Street Improvement

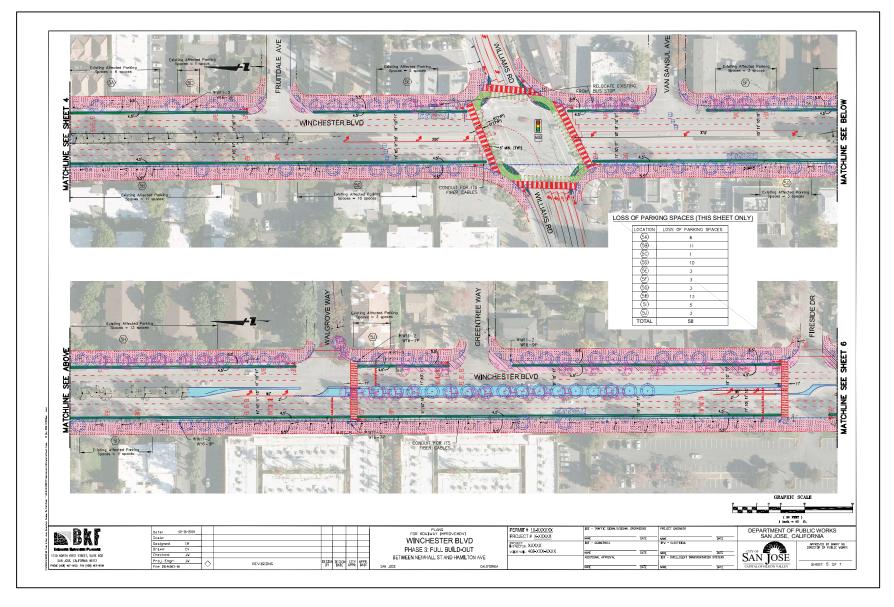




Figure 15 (Continued)
Winchester Boulevard Complete Street Improvement

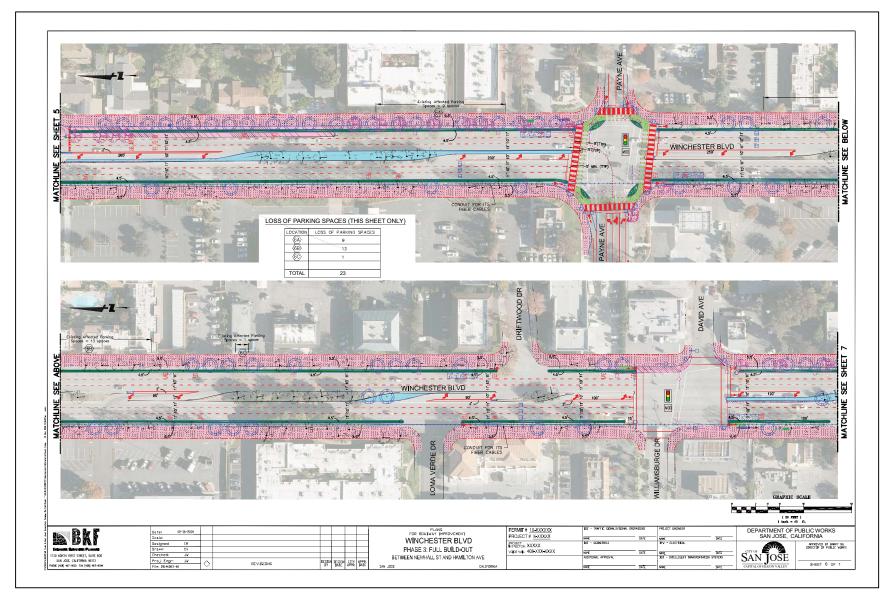




Figure 15 (Continued)
Winchester Boulevard Complete Street Improvement

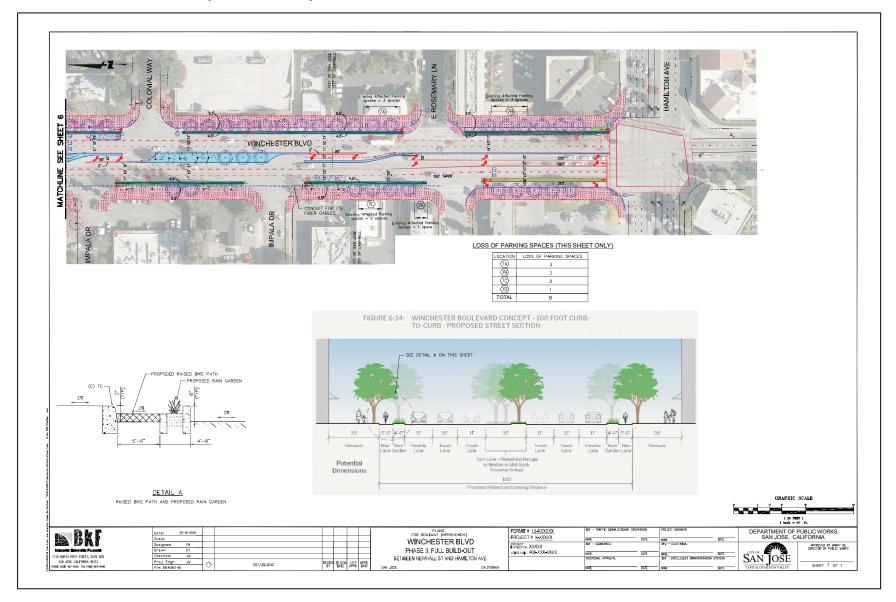




Figure 16 Existing Traffic Volumes

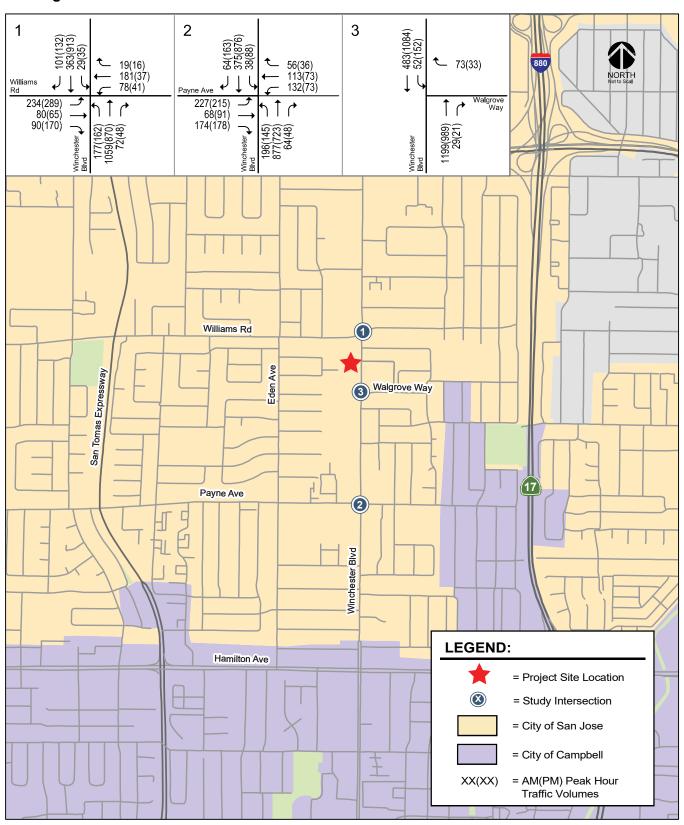




Figure 17
Background Traffic Volumes

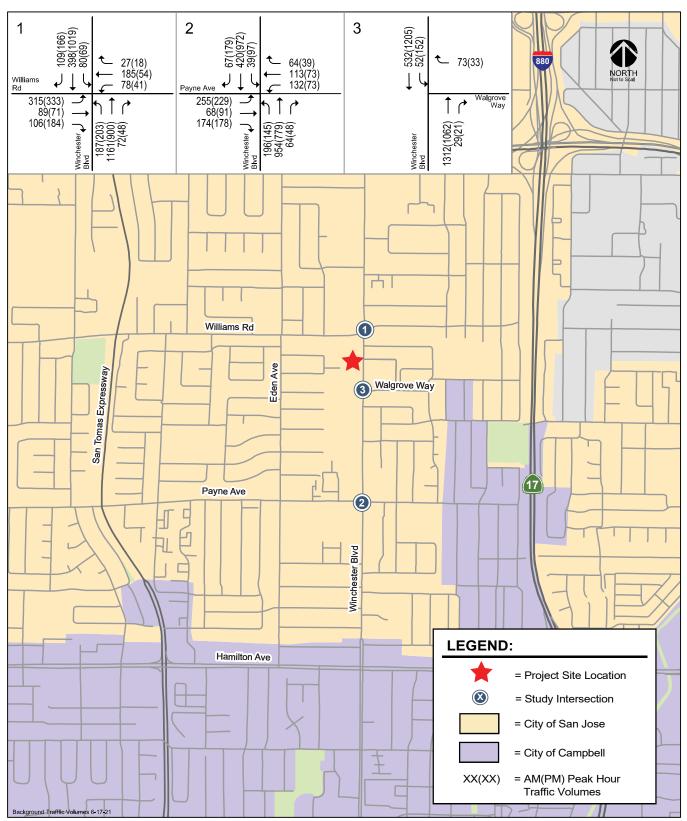




Figure 18
Background Plus Project Traffic Volumes

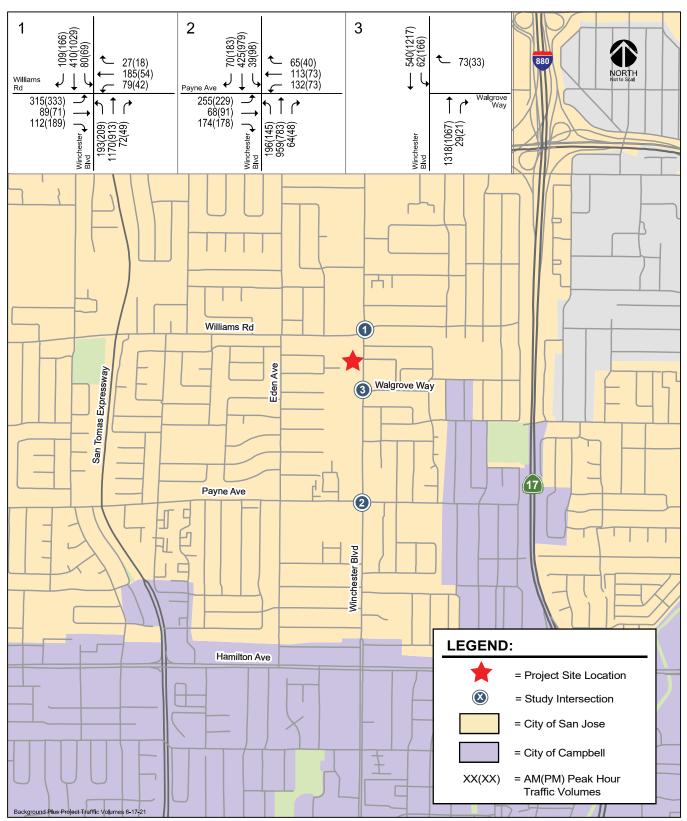
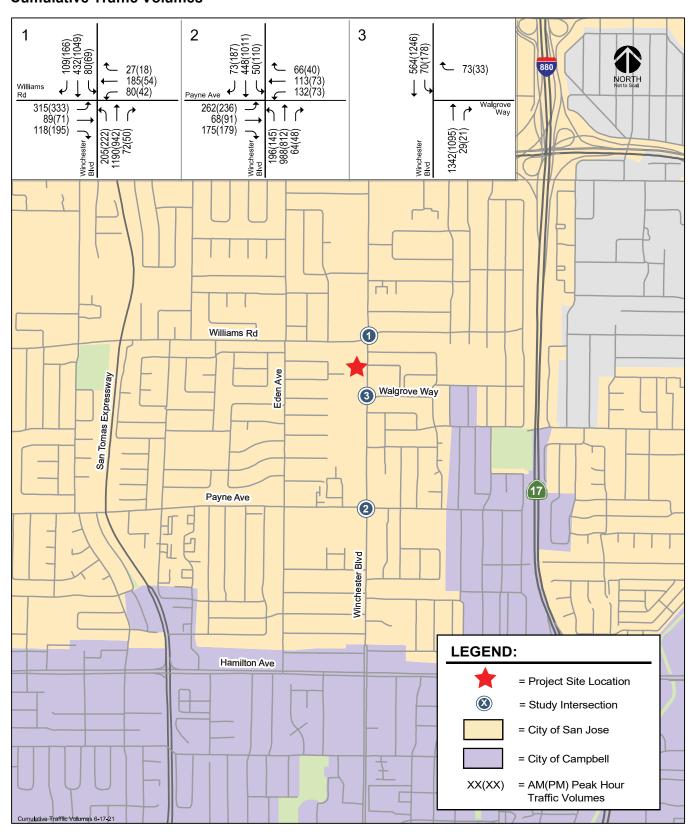




Figure 19 Cumulative Traffic Volumes





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 analysis methods are described below.

All study intersections were evaluated based on the 2000 Highway Capacity Manual (HCM) level of service methodology using the TRAFFIX software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. TRAFFIX is also the CMP-designated intersection level of service methodology, thus, the City of San Jose employs the CMP default values for the analysis parameters. The correlation between average control delay and level of service at signalized intersections is shown in Table 5.

Table 5
Signalized Intersection Level of Service Definitions Based on Control Delay

rations with very low delay occurring with favorable ression and/or short cycle lengths. rations with low delay occurring with good progression and/or t cycle lengths. rations with average delays resulting from fair progression for longer cycle lengths. Individual cycle failures begin to ear. rations with longer delays due to a combination of unfavorable	up to 10.0 10.1 to 20.0 20.1 to 35.0
rations with average delays resulting from fair progression for longer cycle lengths. Individual cycle failures begin to ear.	
or longer cycle lengths. Individual cycle failures begin to ear.	20.1 to 35.0
rations with longer delays due to a combination of unfavorable	
ression, long cycle lengths, or high V/C ratios. Many vehicles and individual cycle failures are noticeable.	35.1 to 55.0
rations with high delay values indicating poor progression, cycle lengths, and high V/C ratios. Individual cycle failures are uent occurrences. This is considered to be the limit of eptable delay.	55.1 to 80.0
ration with delays unacceptable to most drivers occurring due versaturation, poor progression, or very long cycle lengths.	Greater than 80.0
	rations with high delay values indicating poor progression, cycle lengths, and high V/C ratios. Individual cycle failures are uent occurrences. This is considered to be the limit of eptable delay. ration with delays unacceptable to most drivers occurring due

Sources: Transportation Research Board, 2000 Highway Capacity Manual. Traffic Level of Service Analysis Guidelines, Santa Clara County Transportation Authority Congestion Management Program, June 2003.



Signalized study intersections are subject to the City of San Jose level of service standards. The City of San Jose has established LOS D as the minimum acceptable intersection operations standard for all signalized intersections unless superseded by an Area Development Policy.

City of San Jose Definition of Adverse Intersection Operations Effects

According to the City of San Jose's *Transportation Analysis Handbook 2018*, an adverse effect on intersection operations occurs if for either peak hour:

- 1. The level of service at the intersection degrades from an acceptable level (LOS D or better) under background conditions to an unacceptable level under background plus project conditions, or
- 2. The level of service at the intersection is an unacceptable level (LOS E or F) under background conditions and the addition of project trips cause both the critical-movement delay at the intersection to increase by four or more seconds and the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements is negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

An adverse intersection operations effect by City of San Jose standards may be addressed by implementing measures that would restore the intersection level of service to background conditions or better. The City recommends prioritizing improvements related to alternative transportation modes, parking measures, and/or TDM measures. Improvements that increase vehicle capacity are secondary and must not have unacceptable effects on existing or planned transportation facilities. Unacceptable effects on existing or planned transportation facilities include the following:

- Inconsistent with the General Plan Transportation Network and Street Typologies;
- Reduction of any physical dimension of a transportation facility below the minimum design standards per the San José Complete Streets Design Standards and Guidelines; OR
- Substantial deterioration in the quality of existing or planned transportation facilities, including pedestrian, bicycle, and transit systems and facilities, as determined by the Director of Transportation.

Intersection Operations Analysis Results

The intersection level of service analysis is summarized in Table 6.

Existing Intersection Operation Conditions

Intersection levels of service were evaluated against the City of San Jose intersection operations standards. The results of the level of service analysis show that each of the signalized study intersections currently operate at an acceptable LOS D or better during both the AM and PM peak hours, based on the City of San Jose intersection operations standard of LOS D. The level of service calculation sheets are included in Appendix E.

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to the intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect the level of service in the field. Field observations did not reveal any operational problem at the two signalized study intersections.



Table 6
Intersection Level of Service Results

					Exis	ting	Backg	round	d Background Plus Project		roject	Cumulative		
Int.		LOS	Peak	Count	Avg.		Avg.		Avg.		Incr. In	Incr. In	Avg.	
#	Intersection	Standard	Hour	Date	Delay	LOS	Delay	LOS	Delay	LOS	Crit. Delay	Crit. V/C	Delay	LOS
1	Winchester Boulevard and Williams Road	D	AM	11/19/19	31.8	С	34.9	С	34.9	С	0.0	0.003	34.9	С
			PM	11/19/19	31.3	С	32.6	С	32.7	С	0.3	0.007	32.9	С
2	Winchester Boulevard and Payne Avenue	D	AM	11/19/19	38.0	D	37.5	D	37.5	D	0.0	0.002	37.8	D
			PM	11/19/19	39.2	D	37.6	D	37.6	D	0.0	0.004	37.9	D



Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the City of San Jose intersection operations standard of LOS D under background conditions, background plus project conditions, and cumulative conditions during both the AM and PM peak hours. The intersection level of service calculation sheets are included in Appendix E.

I-280/Winchester Boulevard Interchange Area Transportation Development Policy

The I-280/Winchester Boulevard interchange area Transportation Development Policy (TDP) provides for additional capacity in the immediate area of the I-880/Stevens Creek Boulevard and I-280/Winchester Boulevard interchanges. The TDP was completed for the purpose of managing existing traffic congestion in the I-880/Stevens Creek and I-280/Winchester interchange areas as well as provide additional traffic capacity to accommodate future development such as the proposed project. The I-880/Stevens Creek and I-280/Winchester interchanges serve as the primary access points to regional freeway facilities in the project area. As such, the Stevens Creek Boulevard and Winchester Boulevard corridors that serve the I-880/Stevens Creek and I-280/Winchester interchanges currently experience traffic congestion during the peak commute hours. The corridors include two Protected Intersections that are currently and projected to continue to operate well below the City's standard Level of Service Policy. There are no further vehicular capacity improvements available at the intersections.

The TDP provides partial funding, via a traffic impact fee imposed on the proposed development, for the implementation of a new westbound off-ramp from I-280 to Winchester Boulevard to reduce traffic congestion at the I-880/Stevens Creek and Stevens Creek Boulevard corridors. The traffic fee is based on the estimated trips to be added to the new westbound off-ramp from I-280 to Winchester Boulevard by each individual development. It is estimated that the proposed project will result in the addition of three PM peak hour trips to the planned I-280 to Winchester Boulevard ramp.

Intersection Queuing Analysis

The analysis of intersection operations was supplemented with a vehicle queuing analysis at intersections where the project would add a substantial number of trips to the left-turn movements. The queuing analysis is presented for informational purposes only since the City of San Jose has not defined a policy related to queuing. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x=n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P(x=n) = probability of "n" vehicles in queue per lane

n = number of vehicles in the queue per lane

 λ = average # of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles for a particular left-turn movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the left-turn movement. This analysis thus provides a basis for estimating future turn pocket storage requirements at intersections. For signalized intersections, the 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95



percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Thus, turn pocket storage designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement. Vehicle queuing at unsignalized intersections is evaluated based on the delay experienced at the specific study turn movement.

A vehicle queuing analysis was conducted for high-demand turn movements at the intersections of Winchester Boulevard/Williams Road and Winchester Boulevard/Walgrove Way (see Table 7). The analysis indicates that, with the addition of project traffic, the 95th percentile vehicle queues could be accommodated by the existing storage provided at all study locations. The queue length calculations are included in Appendix F.

Signal Warrant Analysis

The need for signalization of an unsignalized intersection is 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, 2014. This method makes no evaluation of intersection level of service but simply provides an indication of whether vehicular peak hour traffic volumes are, or would be, sufficient to justify the installation of a traffic signal. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary. Additional analysis may include unsignalized level of service analysis and/or operational analysis such as evaluating vehicle queuing and delay. Other options such as traffic control devices, signage, or geometric changes may be preferable based on existing field conditions.

A peak-hour traffic signal warrant check was conducted for the unsignalized intersection of Winchester Boulevard and Walgrove Way. The results indicate that the projected traffic volumes at the intersection would fall below the thresholds that warrant signalization under all study scenarios during the AM and PM peak hours. The traffic signal warrant calculations are included in Appendix G.

Site Access and On-Site Circulation

The evaluation of site access and circulation is based on the August 25, 2021 site plan prepared by the Carpira Design Group. Site access was evaluated to determine the adequacy of the site's access points 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.

Site Access

Vehicular access to the project site at its proposed driveway would be restricted to right-in/right-out turn movements only due to the existing median along Winchester Boulevard. Therefore, inbound project traffic from northbound Winchester Boulevard would be required to proceed past the project site and make a U-turn at the Williams Road. Similarly, outbound project traffic that is bound for northbound Winchester Boulevard would be required to exit the project driveway and proceed south along Winchester Boulevard to make a U-turn at Walgrove Way. It is anticipated that the project driveway would serve approximately 42 AM peak hour trips (24 inbound and 18 outbound) and 46 PM peak hour trips (20 inbound and 26 outbound). The estimated gross project trips at the site driveway are shown in Figure 20.



Table 7
Queuing Analysis Summary

		oulevard and s Road	Winchester Boulevard and Walgrove Way Southbound Left			
	Northbo	und Left				
Measurement	AM	PM	AM	PM		
Existing Conditions						
Cycle Length/Control Delay (sec) ¹	126	140	11.9	11.6		
Lanes	1	1	1	1		
Volume (vph)	177	162	52	152		
Volume (vphpl)	177	162	52	152		
95 th %. Queue (veh/ln.)	11	11	1	2		
95 th %. Queue (ft./ln) ²	275	275	25	50		
Storage (ft./ In.)	325	325	100	100		
Adequate (Y/N)	YES	YES	YES	YES		
Background Conditions						
Cycle Length/Control Delay (sec) ¹	126	140	12.7	12.2		
Lanes	1	1	1	1		
Volume (vph)	187	203	52	152		
Volume (vphpl)	187	203	52	152		
95 th %. Queue (veh/ln.)	11	13	1	2		
95 th %. Queue (ft./ln) ²	275	325	25	50		
Storage (ft./ ln.)	325	325	100	100		
Adequate (Y/N)	YES	YES	YES	YES		
Background Plus Project Condition	ns					
Cycle Length/Control Delay (sec) ¹	126	140	12.9	12.4		
Lanes	1	1	1	1		
Volume (vph)	193	209	62	166		
Volume (vphpl)	193	209	62	166		
95 th %. Queue (veh/ln.)	11	13	1	2		
95 th %. Queue (ft./In) ²	275	325	25	50		
Storage (ft./ ln.)	325	325	100	100		
Adequate (Y/N)	YES	YES	YES	YES		

Notes:



¹ Cycle length for signalized intersection and control delay for unsignalized intersection

² Assumes 25 feet per vehicle queued

Figure 20 Gross Project Trips at Site Driveways and Ground Level Circulation

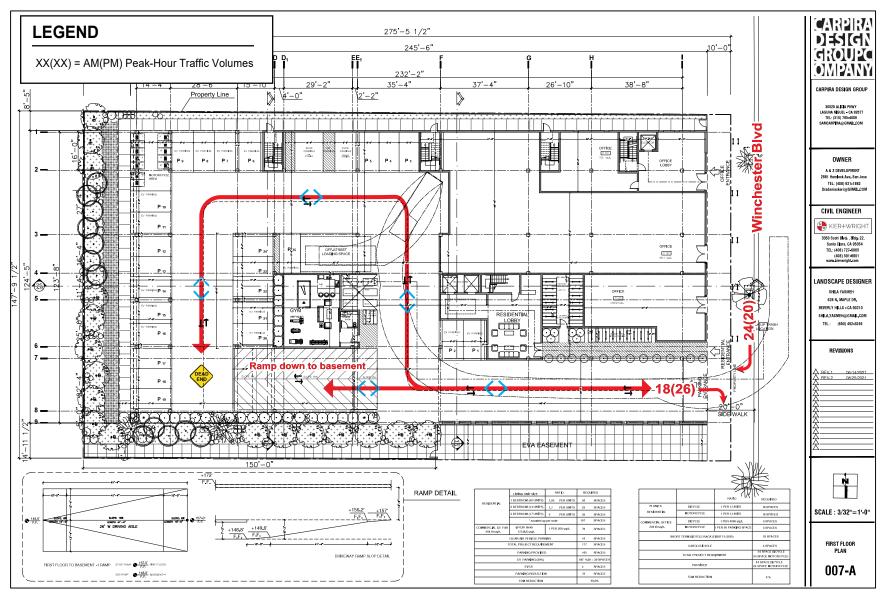




Figure 21
Basement Level Circulation





According to the City of San Jose municipal code, on-site two-way drive aisles must be a minimum of 26 feet wide and driveway widths should match the 26 feet wide drive aisles. The widths of the proposed driveway and on-site drive aisle are shown to be 26 feet, which satisfy the City's driveway design requirement. The driveway has a clear throat distance of 133 feet (measured between the driveway face of curb and the garage drive aisle), which can accommodate five to six vehicles. It is estimated that there would be at most 24 vehicles entering the project site during the AM peak hour or one vehicle every three minutes on average. Therefore, vehicle queuing issues are not expected to occur at the parking garage entrance based on the relatively low number of project trips.

Sight Distance

Adequate sight distance will be required at the project driveway along Winchester Boulevard. The project driveway 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 other vehicles traveling on Winchester Boulevard. Any landscaping and signage should be located in such a way as 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 the *American Association of State Highway Transportation Officials* (AASHTO) standards. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway and locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the AASHTO stopping sight distance. Sight distance requirements vary depending on the roadway speeds. Winchester Boulevard has a posted speed limit of 40 miles per hour (mph). The AASHTO stopping sight distance for a facility with a posted speed limit of 40 mph is 305 feet. Thus, a driver exiting the proposed project driveway on Winchester Boulevard must be able to see 305 feet to the north along Winchester Boulevard.

Based on the project site plan and observations in the field, vehicles exiting the project site driveway on Winchester Boulevard would be able to see approaching traffic on southbound Winchester Boulevard at least to Williams Road located approximately 350 feet to the north of the project site. Therefore, it can be concluded that the project driveway on Winchester Boulevard would meet the AASHTO minimum stopping sight distance standards.

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of San Jose Zoning Code and generally accepted traffic engineering standards. The ground floor level of the parking garage would provide 25 parking spaces and access to a ramp serving the basement parking level. The basement parking level would provide 79 parking spaces including eight tandem parking spaces. In order to guarantee effective use of the tandem parking spaces, all of the tandem spaces should be assigned parking. If assigned, the tandem spaces would not be expected to create any parking-related issues. The parking garage follows a standard 90-degree parking layout. The parking drive aisles are 26 feet wide, which meets the City's standard for 90-degree parking. The widths of the garage entrance and the ramp are shown to be 26 feet on the site plan, which also meets the City's standard. The dimensions of the regular parking spaces are 8.6 feet by 17 feet, which do not meet the minimum City standards of 8.5 feet by 18 feet for full-size car spaces.

Recommendation: The proposed parking space dimensions, while not an unusual design, do not meet City standards and should be reviewed by City staff prior to the final design.



Upon entering the garage from Winchester Boulevard, vehicles can either proceed straight down the ramp to the basement parking level or make a right turn to access the parking spaces on the ground floor parking level. Vehicles would then circulate in a clockwise direction in the basement level. Overall, the parking layout would provide for adequate vehicular circulation within the parking garage. The parking garage circulations for the ground floor and basement levels are shown in Figures 20 and 21.

Typical engineering standards require garage ramps to have no greater than a 20 percent grade, and slopes over 10% require transition slopes so that vehicles do not "bottom out". The project site plan indicates the slope of the ramp within the parking garage to be at most 16%. Therefore, the proposed ramp design is adequate, based on typical engineering standards. Ultimately, City staff will determine if the proposed ramp design is adequate.

Dead-end aisles would exist at the end of the drive aisle on both levels of the parking garage. Deadend aisles are undesirable because drivers will enter the aisle and upon discovering that there is no available parking, must back out or conduct three-point turns. In areas where parking spaces are designated for specific individuals, dead-end aisles are less problematic.

Recommendation: It is recommended that the parking spaces located at the end of the dead-end aisle be assigned parking.

The loading area, discussed below, will require that trucks utilize the drive aisle to and from the upper garage levels to maneuver into and out of the loading area. The trucks may not be clearly visible to drivers exiting the garage. Thus, it is recommended that a physical device, such as convex mirrors, be installed at the end of the ramp near the loading area to aid circulation and reduce vehicular conflict at the loading area.

Recommendation: It is recommended that a physical device, such as convex mirrors, be installed at the end of the ramp near the loading area to aid circulation and reduce vehicular conflict at the loading area.

Bike and Pedestrian On-Site Circulation

Pedestrian access to the project site would be provided via two entrances – one for the residential units and the second for the office space – along the building frontage on Winchester Boulevard. The main pedestrian entrance would be connected to the proposed 20-foot sidewalk along the project frontage on Winchester Boulevard. Pedestrian circulation within the site appears to provide adequate connectivity between vehicle parking, off-site pedestrian facilities, and on-site amenities.

Recommendation: It is recommended that appropriate visible and/or audible warning signals and convex mirrors should be provided at the pedestrian walkway to alert pedestrians of vehicles and entering and exiting the parking garages and to assist drivers with blind turns while turning around corners.

Truck Access

The site plan indicates a 15' x 30' loading space located adjacent to the gym and garbage containers on the ground floor level. The loading space will meet the City's minimum required dimension of 10' x 30' for loading spaces. The site plan also indicates that the ground level garage clearance would be only approximately 13 feet high, which will not meet the City's minimum requirement of 15 feet high.

Recommendation: The garage clearance should be a minimum of 15' to allow for truck access to the loading space within the garage.

A truck-turning template showing access for a standard-sized single-unit truck (SU-30) accessing the garage entrance and loading dock that was prepared by the project's architect, Carpira Design Group,



is shown in Figure 22. Based on the review of the architect's turning template and turning templates prepared by Hexagon, it will be extremely difficult for a SU-30 truck to enter and exit the loading dock. It appears that trucks may require several maneuvers to back into the loading dock upon entering the garage and may clip the building corner when exiting the garage. The turning templates prepared by Hexagon are provided in Appendix I. The site plan and loading dock location should be redesigned to accommodate larger trucks or access should be restricted to smaller trucks and passenger vehicles. The project applicant will be required to provide a site plan with turning templates indicating that trucks can sufficiently maneuver into and out of the garage and loading area. Ideally, the loading dock should be relocated outside of the garage along the outer drive aisle. The City also will consider the feasibility of an on-street public loading zone along Winchester Boulevard during the implementation phase of the project.

Recommendation: The site plan and loading dock location should be redesigned to accommodate larger trucks or access should be restricted to smaller trucks and passenger vehicles. The project applicant will be required to provide a site plan with turning templates indicating that trucks can sufficiently maneuver into and out of the garage and loading area. Ideally, the loading dock should be relocated outside of the garage along the outer drive aisle.

The site plan also indicates a 15-foot emergency vehicle access (EVA) easement located adjacent to the parking garage entrance. This EVA easement would not be shared with the adjacent property located at 1073 South Winchester Boulevard. The width of the EVA easement does not meet the City's minimum width requirement of 20 feet.

Recommendation: The emergency vehicle access (EVA) easement should be a minimum of 20 feet wide to allow access for emergency vehicles per the City's requirement.

A designated trash collection area is shown on the ground floor level adjacent to the gym area. Because garbage trucks would not be able to access the trash collection area, trash bins would have to be wheeled out to the trash staging area along the Winchester Boulevard project frontage, where garbage trucks would perform their operations outside of the development at the curb.

Recommended Site Access and On-Site Circulation Improvements

<u>Winchester Complete Street Improvements.</u> The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

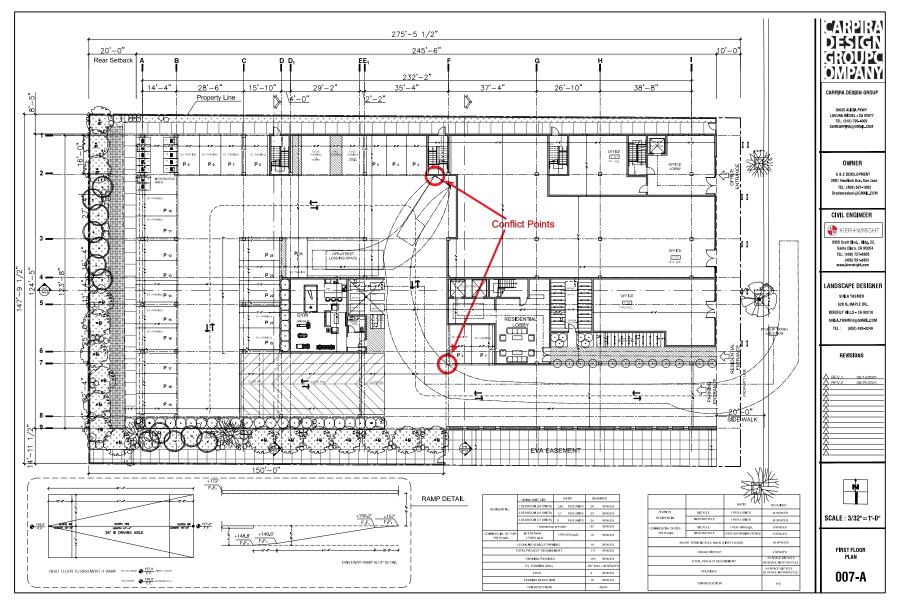
- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.
- Construction of a raised median with limited breaks.

Adhere to City of San Jose Design Standards and Guidelines. The design of the project site, including but not limited to driveways, sidewalks, corner radii, street width, parking dimensions, and signage, should adhere to the City of San Jose design standards and guidelines. Specific site access and on-site circulation recommended improvements are summarized below:

- Provide a 20-foot sidewalk along the project frontage.
- The proposed parking space dimensions, while not an unusual design, do not meet City standards and should be reviewed by City staff prior to the final design.
- The parking spaces located at the end of the dead-end aisle be assigned parking.
- Appropriate visible and/or audible warning signals and convex mirrors should be provided at the
 pedestrian walkway to alert pedestrians of vehicles and entering and exiting the parking
 garages and to assist drivers with blind turns while turning around corners.



Figure 22 Truck Turning Template





- The garage clearance should be a minimum of 15' to allow for truck access to the loading space within the garage.
- The site plan and loading dock location should be redesigned to accommodate larger trucks or access should be restricted to smaller trucks and passenger vehicles. The project applicant will be required to provide a site plan with turning templates indicating that trucks can sufficiently maneuver into and out of the garage and loading area. Ideally, the loading dock should be relocated outside of the garage along the outer drive aisle.
- The City also will consider the feasibility of an on-street public loading zone along Winchester Boulevard during the implementation phase of the project.
- A physical device, such as convex mirrors, should be installed at the end of the ramp near the loading area to aid circulation and reduce vehicular conflict at the loading area.
- The emergency vehicle access (EVA) easement should be a minimum of 20 feet wide to allow access for emergency vehicles per the City's requirement.

Parking Supply

The City of San Jose Zoning Code (Section 20.90.060) states that office uses are required to provide one parking space per 250 square feet of floor area. The required parking spaces for multi-family residential units are dependent on the living unit size. The project as proposed would construct 20,410 gross square feet of office space and 70 multi-family residential units. According to the City's Zoning Code, "floor area" is defined as 85 percent of the "total gross floor area" of the building. Based on the City's parking requirements and the current project description, the project would be required to provide 70 parking spaces for the office space and 107 parking spaces for the residential units for a total of 177 parking spaces. The project is proposing to provide a total of 105 parking spaces on-site, which is 72 parking spaces or 41 percent less than the City's standard parking requirement.

A 20 percent reduction in required off-street vehicle parking spaces is allowed with a development permit or a development exception if no development permit is required for developments that meet the following conditions (Section 20.90.220.A.1):

- 1. The structure or use is located within two thousand feet of a proposed or an existing rail station or bus rapid transit station, or an area designated as a neighborhood business district, or as an urban village, or as an area subject to an area development policy in the city's general plan or the use is listed in Section 20.90.220.G; and
- 2. The structure or use provides bicycle parking spaces in conformance with the City's Zoning Code requirements.

The project site is within the Winchester Boulevard Urban Village and will exceed the City's requirements for bicycle parking as discussed below. Therefore, the vehicle parking requirement would be reduced to 56 parking spaces for the office space and 86 parking spaces for the residential units for a total of 142 parking spaces.

With the 20% Urban Village reduction, the project requires an additional 21% reduction in on-site parking spaces. In accordance with Section 20.90.220 of the San Jose Code of Ordinances, an additional 21 percent reduction could be allowed with the implementation and maintenance of a TDM plan included in Appendix H. The vehicle parking requirement is shown in Table 8.

Per the 2016 California Building Code (CBC) Table 11B-208.2, five ADA accessible parking spaces are required for projects with providing 101 to 150 parking spaces. Of the required accessible parking spaces, one van-accessible space is required. The plans show a total of five van-accessible spaces in the basement level of the garage. Therefore, the proposed parking complies with ADA requirements.



Table 8 Vehicular Parking Requirement

Propose	ed Project	City of Sa	Required Parking				
Land Use	Size	Land Use		Parking Ratio	General	Urban Village ²	
Residential Residential Residential	40 units 13 units 17 units 70 units	Multiple dwelling residential Multiple dwelling residential Multiple dwelling residential	1.70 s 2.00 s	spaces per one-bedroom unit spaces per two-bedroom unit spaces per three-bedroom unit Required Residential Parking	50 23 34 107	40 19 27 86	
Office	20,410 s.f.	Offices, business and admin	1.00 s	space per 250 s.f. of floor area ³ Total Required Parking	70 177	56 142	

Notes:



¹City of San Jose Zoning Ordinance: Parking Spaces Required by Land Use

²Includes 20% allowable reduction of parking requirement in an Urban Village.

³According to the City's Zoning Code, "Floor area" is defined as 85 percent of the "total gross floor area" of the building.

Bicycle Parking

According to the City's Bicycle Parking Standards (Chapter 20.90, Table 20-210), the project is required to provide bicycle parking for the office building at a rate of one bicycle parking space per 4,000 square feet of office space and one bicycle parking space per four residential units. This equates to a total requirement of 23 bicycle parking spaces, of which five bicycle parking spaces would serve the office space and 18 bicycle parking spaces would serve the residential units. Of the required bicycle parking, City standards require that 80 and 40 percent be short-term bicycle spaces with 20 and 60 percent be secured long-term bicycle spaces for office and residential uses, respectively. Based on these requirements, the project would need to provide 11 short-term and 12 long-term bicycle parking spaces.

The project site plan indicates that bicycle storage areas to accommodate 44 bicycles will be located within the ground level (near the residential lobby) and the two basement bike storage rooms. Therefore, the proposed bicycle parking on-site will exceed the City's requirements and encourage the use of non-auto modes of travel and minimize the demand for on-site parking.

Motorcycle Parking

According to the City's Motorcycle Parking Standards (Chapter 20.90, Table 20-250), the project is required to provide 1 motorcycle parking space per 50 code-required vehicle spaces for the office component and 1 motorcycle parking space for every four residential units. Based on the current project description, the project is required to provide 20 motorcycle parking spaces (two spaces for the office space and 18 spaces for the residential units).

The site plan shows that the project would provide a total of 24 motorcycle parking spaces within the parking garage. Therefore, the number of proposed motorcycle parking spaces would meet the City's requirement.

Surrounding On-Street Parking

The project site is located just outside the perimeter of the Cadillac Residential Parking Program (RPP) zone, where a permit is required to use on-street parking from 10:00 PM to 6:00 AM every day except on holidays. In order to obtain a parking permit, the applicant must live in or own a residential property or operate a business in a parking permit zone. Generally, this means that the residence or business must be located on the same side of the street and block face where permit parking signs are posted. The locations of on-street parking, where an RPP permit is required, are shown in Figure 23.

With the implementation of the required TDM plan, the project will provide adequate parking spaces onsite to satisfy its parking demand and will not have an effect on the Cadillac RPP.

Pedestrian, Bicycle, and Transit Analysis

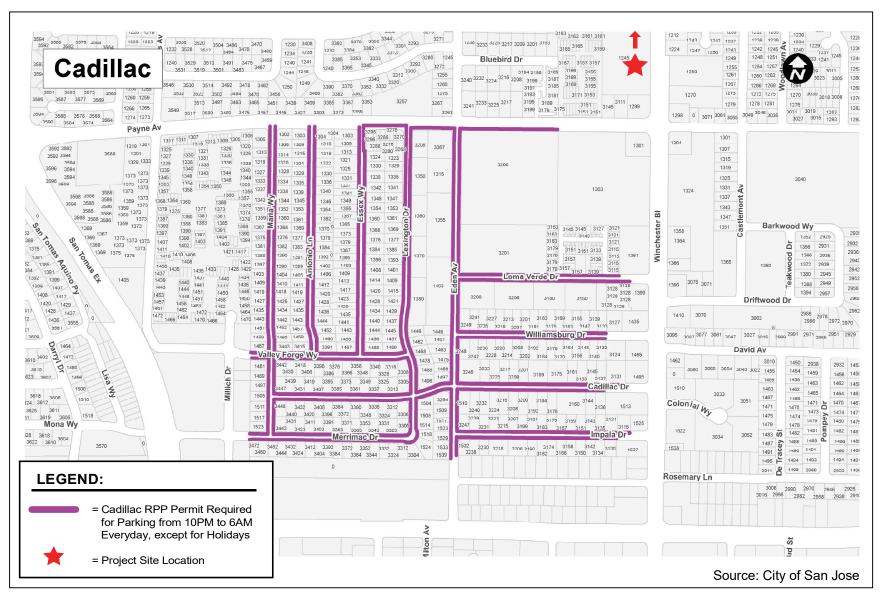
Pedestrian Facilities

Existing sidewalks along Winchester Boulevard provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity. Pedestrian traffic primarily would consist of residents and employees of the proposed project walking to and from surrounding retail establishments, as well as bus stops on Winchester Boulevard. Crosswalks with pedestrian signal heads are located at the signalized intersection of Winchester Boulevard and Williams Road. Sidewalks are currently provided on the following major roadway segments in the project vicinity.

Winchester Boulevard



Figure 23
Cadillac Residential Parking Program





- Williams Road, west of Winchester Boulevard
- Eden Avenue
- Payne Avenue
- Hamilton Avenue
- Moorpark Avenue

The project will install a 20-foot sidewalk along its frontage on Winchester Boulevard. However, some of the residential streets in the project vicinity do not have sidewalks.

Bicycle Facilities

The bikeways within the vicinity of the project site would remain unchanged under project conditions. Currently, no bike facilities exist on Winchester Boulevard between Williams Road and Moorpark Avenue that would provide connections to other bicycle facilities in the project vicinity. The San Jose Bike Plan 2025 and Envision 2040 General Plan, as described below, identify planned improvements to the bicycle network within the City and provide policies and goals that are intended to promote and encourage the use of multi-modal travel options and reduce the identified project impacts to the roadway system. The planned improvements to the bicycle network will provide the project site with improved connections to surrounding pedestrian/bike and transit facilities and a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies.

Transit Services

The project site is served directly by VTA frequent bus line 60, which operates along Winchester Boulevard. The southbound and northbound bus stops for line 60 are located near the intersection of Winchester Boulevard and Williams Road. It can be assumed that some residents and employees of the proposed project would utilize the existing transit services. Applying an estimated three percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately one new transit rider during each of the AM and PM peak hours. VTA operations reports indicate that the 60-bus line, as well as several other bus lines in the project area, serve less than ideal ridership. Therefore, the new riders due to the proposed project could be accommodated by the current available capacity of the bus service in the study area and improvement of the existing transit service would not be necessary with the project.

Transit/Pedestrian/Bike Improvements

The proposed project site is located within the Winchester Boulevard Urban Village Boundary and fronts Winchester Boulevard, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites within an Urban Village and located along a Grand Boulevard must incorporate additional urban design and architectural elements that will facilitate a building with pedestrian orientated design and activate the pedestrian public right-of-way.

- The Envision 2040 General Plan identifies goals and policies that are dedicated to the enhancement of the transportation infrastructure, including public transit and pedestrian/bike facilities. The Transportation Policies contained in the General Plan create incentives for non-auto modes of travel while reducing the use of single-occupant automobile travel as generally described below: Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to the improvement of bicycling walking, and transit facilities.
- Give priority to the funding of multimodal projects to provide the most benefit to all users of the transportation system.
- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)



- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The planned improvements discussed below are intended to provide for a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies. However, the full implementation of the improvements is beyond the means of the proposed project given that they may require right-of-way from adjacent properties. The project could be required to make a fair-share contribution towards the cost of the improvements since the identified improvements would be of benefit to the project.

Bicycle and Pedestrian Facility Improvements

The Envision 2040 General Plan identifies the following goals in regard to bicycling and pedestrians:

- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments.
- Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
- Give priority to pedestrian improvement projects that improve pedestrian safety, improve pedestrian access to and within the Urban Villages and other growth areas.

The San Jose Bike Plan 2025 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class III bike routes are planned for:

- Eden Avenue, between Moorpark Avenue and Impala Drive
- Payne Avenue, between Monica Lane and Central Avenue
- Westfield Avenue, between Central and Daniel Way
- Cadillac Drive, between Eden Avenue and Maria Way
- Maria Way, between Cadillac Drive and Valley Forge Way
- Valley Forge Way between Maria Way and Phelps Avenue

Class IV protected bike lanes are planned for:

- Winchester Boulevard, between Hamilton Avenue and Newhall Street
- Payne Avenue, between Winchester Boulevard and Saratoga Avenue
- Williams Road, between Winchester Boulevard and Moorpark Avenue
- Hamilton Avenue, between Bascom Avenue and Campbell Avenue
- Moorpark Avenue, between Lawrence Expressway and Menker Avenue

The Winchester Boulevard Urban Village Plan identifies the improvement of Winchester Boulevard between Moorpark Avenue and Payne Avenue to a complete street. The complete street improvements will include protected bike lanes along both sides of Winchester Boulevard as well as crosswalks at Walgrove Way and Fireside Drive with potential Rectangular Rapid Flashing Beacons (RRFB) at Walgrove Way. The City will require that the project provide a fair-share contribution towards the future pedestrian crossing with RRFB improvement at Walgrove Drive.

The project will be required to provide an in-lieu fee for the Class IV protected bike lanes planned along its frontage along Winchester Boulevard at \$121 per linear foot and to provide a \$25,000 in-lieu monetary contribution for the hardscape implementation per the future Winchester Blvd Urban Village planline (RRFB/enhanced pedestrian crosswalk at Walgrove Way).



Transit Facility Improvements

The Envision 2040 General Plan identifies the following goals in regard to public transit:

- Pursue development of BRT, bus, shuttle, and fixed guideway services on designated streets and connections to major destinations.
- Ensure that roadways designated as Grand Boulevards adequately accommodate transit vehicle circulation and transit stops. Prioritize bus mobility along Stevens Creek Boulevard.

Winchester Boulevard between Moorpark Avenue and Impala Drive has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. Given that the project fronts Winchester Boulevard, the project shall be required to implement the following Grand Boulevard design principles:

- Provide a minimum 15 feet sidewalk width along its frontage on Winchester Boulevard
- Minimize driveway cuts to minimize transit delay
- Provide enhanced shelters for transit services

In addition, as a Grand Boulevard, it is envisioned that Winchester Boulevard could potentially be included in the VTA Bus Rapid Transit (BRT) System. However, there are no plans at this time for a BRT line on Winchester Boulevard.

Freeway Segment Evaluation

The City is still required to conform to the requirements of the Valley Transit Authority (VTA) which establishes a uniform program for evaluating the transportation impacts of land use decisions on the designated CMP Roadway System. The VTA's Congestion Management Program (CMP) has yet to adopt and implement guidelines and standards for the evaluation of the CMP roadway system using VMT. Therefore, the effects of the proposed project on freeway segments in the vicinity of the project area following the current methodologies as outlined in the *VTA Transportation Impact Analysis Guidelines* were completed. However, this analysis is presented for informational purposes only.

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent or higher to any freeway segments in the area, freeway analysis for the CMP was not required. The percentage of traffic projected to be added by the project to freeway segments in the project area is summarized in Table 9.



Table 9 Freeway Segment Capacity

						Existing	Capacity	•		Projec	ct Trips	
					Mixed-l	Flow Lane	HO	/ Lane	Mixed-F	low Lane	HOV	Lane
				Peak	# of	Capacity	# of	Capacity		% of		% of
#	Freeway	/ Segment	Direction	Hour	Lanes	(vph)	Lanes	(vph)	Volume	Capacity	Volume	Capacity
1	SR 17	from San Tomas Expressway/Camden Avenue to Hamilton Avenue	NB NB	AM PM	3 3	6,900			2 2	0.03 0.03		
2	SR 17	from Hamilton Avenue to I-280	NB NB	AM	3	6,900 6,900			0	0.03		
			NB	PM	3	6,900			0	0.00		
3	I-880	from I-280 to Stevens Creek Boulevard	NB NB	AM PM	3 3	6,900 6,900		 	3 4	0.04 0.06		
4	I-280	from Saratoga Avenue to Winchester Boulevard	EB EB	AM	3	6,900	1	1,650	2	0.03	0	0.00
5	I-280	from Winchester Boulevard to I-880	EB	PM AM	3	6,900 6,900	1	1,650 1,650	0	0.01	0	0.06
•	1.000		EB	PM	3	6,900	1	1,650	0	0.00	0	0.00
6	I-280	from I-880 to Meridian Avenue	EB EB	AM PM	3 3	6,900 6,900	1	1,650 1,650	3 2	0.04 0.03	0 2	0.00 0.12
7	I-280	from Meridian Avenue to I-880	WB WB	AM PM	3 3	6,900 6.900	1	1,650 1.650	3 3	0.04 0.04	1 0	0.06 0.00
8	I-280	from I-880 to Winchester Boulevard	WB	AM	3	6,900	1	1,650	0	0.04	0	0.00
			WB	PM	3	6,900	1	1,650	0	0.00	0	0.00
9	I-280	from Winchester Boulevard to Saratoga Avenue	WB WB	AM PM	3 3	6,900 6,900	1 1	1,650 1,650	1 3	0.01 0.04	1 0	0.06 0.00
10	I-880	from Stevens Creek Boulevard to I-280	SB SB	AM PM	3	6,900 6,900	 		4 3	0.06 0.04		
11	SR 17	from I-280 to Hamilton Avenue	SB	AM	3	6,900			0	0.00		
10	CD 47	from Hamilton Assessed to Com Towns Francisco (Complete Assessed	SB SB	PM	3	6,900			0	0.00		
12	SR 17	R 17 from Hamilton Avenue to San Tomas Expressway/Camden Avenu		AM PM	3 3	6,900 6,900			2 3	0.03 0.04		



5. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Jose, the Congestion Management Program (CMP) of Santa Clara County, and the California Environmental Quality Act (CEQA). The study included the analysis of AM and PM peak hour traffic conditions for two signalized intersections and one unsignalized intersection. Project impacts on other transportation facilities, such as bicycle facilities and transit service, were determined on the basis of engineering judgment.

CEQA VMT Analysis

CEQA Transportation Analysis Exemption Criteria

The City of San Jose Transportation Analysis Handbook identifies screening criteria that determine whether a CEQA transportation analysis would be required for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required.

The project site is located within a planned Growth Area (Winchester Boulevard Urban Village). However, neither the proposed 70 residential units nor 20,410 s.f. of office space meets the VMT screening criteria as small infill projects with less than 25 multi-family housing units or 10,000 s.f. of office space. Additionally, the existing VMT per capita and VMT per employee within a ½-mile radius of the project site are estimated to be 10.16 and 13.14, which exceed the CEQA significance thresholds of 10.12 and 12.21, respectively. Therefore, an evaluation of VMT for both the residential and office components of the project is required and presented in Chapter 3.

Project-Level VMT Impact Analysis

The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the proposed project is projected to generate VMT per capita (10.07), which is below the established VMT impact threshold. The office component of the project is projected to generate VMT per employee (13.13), which would exceed the established impact threshold. Therefore, the proposed office component of the project would result in an impact on the transportation system based on the City's VMT impact criteria.



Project Impacts and Mitigation Measures

<u>Project Impact</u>: Since the VMT generated by the office component of the project (13.13 per employee) would exceed the threshold of 12.21 VMT per employee, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact. According to the *Transportation Analysis Handbook*, projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas", and projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the greatest extent possible.

<u>Mitigation Measures</u>: Based on the four strategy tiers included in the VMT Evaluation Tool, it is recommended that the project implement one of the following mitigation measures to reduce the significant VMT impact.

- <u>Telecommuting and Alternative Work Schedules</u>: Encourage 50% of the employees to telecommute, shift work schedules, or commute outside of peak congestion periods on a 4/40 weekly schedule (10-hour work days for four days a week). This measure reduces commute vehicle trips. <u>or</u>
- Operate a Free Direct Shuttle: Provide shuttle service for at least 15% of the project employees that would serve the project site and areas with high concentrations of employed residents. This measure reduces drive-alone commute trips. or
- <u>Provide Ride-Sharing Programs</u>: Organize a program to match individuals interested in carpooling who have similar commutes for at least 15% of the project employees. This measure promotes the use of carpooling and reduces the number of drive-alone trips. **or**
 - <u>Car Sharing Program</u>: Provide subsidies and promotions, as well as dedicated parking spaces, for carsharing services such as ZipCar, Car2Go, and GetAround, etc... for 100% of the project employees. Supporting a carsharing program gives people on-demand access to shared fleets of vehicles. Car-sharing reduces personal motorized vehicle dependence, which supports more walking, biking, carpooling, and transit use. Subject to negotiations with the City and possible negotiations with Car Share companies. <u>and</u>
 - 2. Commute Trip Reduction Marketing/Education: Implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes for 100% of the project employees. Strategies may include the incorporation of alternative commute options into new employee orientations, event promotions, and publications. and
 - 3. Employee Parking "Cash Out": Require project employers to offer parking "cash-out" for 70% of the project employees. Providing "cash-out" incentives gives employees the choice to forgo subsidized/free parking for a cash payment equivalent to the cost that the employer would otherwise pay for the parking space. Providing an alternative to subsidized/free parking encourages commuters to travel by walking, biking, carpooling, and transit.

The implementation of the mitigation measures would reduce the VMT generated by the project by supporting bicycle usage and increasing transit ridership by employees. The implementation of one of the above mitigation measures would reduce the project VMT to below the threshold of 12.21 per employee, which would reduce the project impact to less than significant.

Additionally, the TDM plan proposes measures that would reduce the project's parking demand and support a 21 percent parking reduction needed to satisfy the City's parking requirement. The TDM plan includes maintaining an online kiosk of trip-planning resources, providing 100 percent unbundled parking for all residential spaces, providing VTA SmartPasses to residential and commercial tenants, and providing on-site bicycle parking that will exceed the minimum required by the City.



Cumulative (GP Consistency) Evaluation

Projects must demonstrate consistency with the *Envision San José 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on the project's density, design, and conformance to the General Plan's goals and policies. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required per the City's *Transportation Analysis Handbook*.

The project site is located within the Winchester Boulevard Urban Village, which is generally bounded by I-280 to the north, SR 17 to the east, Hamilton Avenue to the south, and San Tomas Expressway to the west. Urban villages were developed as one of the major strategies of the *Envision San José 2040 General Plan*. Urban villages are defined as walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the policies and goals of the General Plan.

The project is consistent with the General Plan and Winchester Boulevard Urban Village goals and policies for the following reasons:

- The project frontage along Winchester Boulevard will be improved to be consistent with the planned streetscape design features of Grand Boulevards and the Winchester Boulevard Urban Village Plan.
- The project frontage along Winchester Boulevard will be designed to accommodate the planned Winchester Boulevard Complete Street improvements including protected bicycle lanes, wider sidewalks, and other pedestrian safety features.
- The project site is adjacent to bus stops and bicycle lanes on Winchester Boulevard.

Therefore, based on the project description, the proposed project would be consistent with the *Urban Village Planning Concepts* and the *Envision San José 2040 General Plan*. Thus, the project would be considered as part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

Local Transportation Analysis

The intersection operations analysis is intended to quantify the operations of intersections and to identify potential negative effects due to the addition of project traffic. However, a potential adverse effect on a study intersection operation is not considered a CEQA impact metric.

The LTA includes the analysis of AM and PM peak-hour traffic conditions for two signalized and one unsignalized intersections, following the standards and methodology set forth by the City of San Jose.

Trip Generation

After applying the ITE trip rates and appropriate trip reductions, the proposed mixed-use development is estimated to generate a total of 499 daily vehicle trips, with 42 trips (24 inbound and 18 outbound) occurring during the AM peak hour and 46 trips (20 inbound and 26 outbound) occurring during the PM peak hour.

Future Intersection Operation Conditions

The operations analysis shows that all of the study intersections are projected to operate at acceptable levels of service, based on the City of San Jose intersection operations standard of LOS D under background conditions and background plus project conditions during both the AM and PM peak hours.



I-280/Winchester Boulevard Interchange Area Transportation Development Policy

The TDP provides partial funding, via a traffic impact fee imposed on the proposed development, for the implementation of a new westbound off-ramp from I-280 to Winchester Boulevard to reduce traffic congestion at the I-880/Stevens Creek and Stevens Creek Boulevard corridors. The traffic fee is based on the estimated trips to be added to the new westbound off-ramp from I-280 to Winchester Boulevard by each individual development. It is estimated that the proposed project will result in the addition of three PM peak hour trips to the planned I-280 to Winchester Boulevard ramp.

Recommended Site Access and On-Site Circulation Improvements

<u>Winchester Complete Street Improvements.</u> The Winchester Boulevard Urban Village Plan identifies the following complete street improvements along Winchester Boulevard:

- Protected bike lanes along both sides of Winchester Boulevard. The bike lanes will be physically separated from vehicle travel lanes.
- At least four vehicular travel lanes and two flex lanes for vehicle travel or parking.
- Construction of a raised median with limited breaks.

Adhere to City of San Jose Design Standards and Guidelines. The design of the project site, including but not limited to driveways, sidewalks, corner radii, street width, parking dimensions, and signage, should adhere to the City of San Jose design standards and guidelines. Specific site access and on-site circulation recommended improvements are summarized below:

- Provide a 20-foot sidewalk along the project frontage.
- The proposed parking space dimensions, while not an unusual design, do not meet City standards and should be reviewed by City staff prior to the final design.
- The parking spaces located at the end of the dead-end aisle be assigned parking.
- Appropriate visible and/or audible warning signals and convex mirrors should be provided at the
 pedestrian walkway to alert pedestrians of vehicles and entering and exiting the parking
 garages and to assist drivers with blind turns while turning around corners.
- The garage clearance should be a minimum of 15' to allow for truck access to the loading space within the garage.
- The site plan and loading dock location should be redesigned to accommodate larger trucks or access should be restricted to smaller trucks and passenger vehicles. The project applicant will be required to provide a site plan with turning templates indicating that trucks can sufficiently maneuver into and out of the garage and loading area. Ideally, the loading dock should be relocated outside of the garage along the outer drive aisle.
- The City also will consider the feasibility of an on-street public loading zone along Winchester Boulevard during the implementation phase of the project.
- A physical device, such as convex mirrors, should be installed at the end of the ramp near the loading area to aid circulation and reduce vehicular conflict at the loading area.
- The emergency vehicle access (EVA) easement should be a minimum of 20 feet wide to allow access for emergency vehicles per the City's requirement.

Parking Supply

Vehicular Parking

Based on the City's standard parking requirements, the project is required to provide a total of 177 off-street parking spaces before any reductions. However, the project is located in the Winchester Urban Village and will exceed the City's requirements for bicycle parking as discussed below. The Urban Village Overlay automatically allows for a 20 percent reduction in parking. With the 20 percent reduction, the



required parking would be reduced to 142 spaces, consisting of 86 spaces for residential use and 56 spaces for office use. The project is proposing a total of 105 parking spaces, which would not meet the City's reduced parking requirements.

The proposed number of parking spaces represents a 41% reduction from the standard required number of spaces. With the 20% Urban Village reduction, the project requires an additional 21% reduction in on-site parking spaces. Therefore, the project will need to submit and have approved a TDM plan.

Bicycle Parking

According to the City's Bicycle Parking Standards, the project is required to provide 11 short-term and 12 long-term bicycle parking spaces. The project site plan indicates that bicycle storage areas to accommodate 44 bicycles will be located within the ground level (near the residential lobby) and the two basement bike storage rooms. Therefore, the proposed bicycle parking on-site will exceed the City's requirements and encourage the use of non-auto modes of travel and minimize the demand for on-site parking.

Motorcycle Parking

According to the City's Motorcycle Parking Standards, the project is required to provide 20 motorcycle parking spaces (two spaces for the office space and 18 spaces for the residential units). The site plan shows that the project would provide a total of 24 motorcycle parking spaces within the parking garage. Therefore, the number of proposed motorcycle parking spaces would meet the City's requirement.

Pedestrian, Bicycle, and Transit Analysis

Pedestrian Facilities

Existing sidewalks along Winchester Boulevard provide a pedestrian connection between the project site and pedestrian destinations in the project vicinity. Pedestrian traffic primarily would consist of residents and employees of the proposed project walking to and from surrounding retail establishments, as well as bus stops on Winchester Boulevard. Crosswalks with pedestrian signal heads are located at the signalized intersection of Winchester Boulevard and Williams Road. Sidewalks are currently provided on the following major roadway segments in the project vicinity.

- Winchester Boulevard
- Williams Road, west of Winchester Boulevard
- Eden Avenue
- Payne Avenue
- Hamilton Avenue
- Moorpark Avenue

The project will install a 20-foot sidewalk along its frontage on Winchester Boulevard. However, some of the residential streets in the project vicinity do not have sidewalks.

Bicycle Facilities

The San Jose Bike Plan 2025 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class III bike routes are planned for:

- Eden Avenue, between Moorpark Avenue and Impala Drive
- Payne Avenue, between Monica Lane and Central Avenue



- Westfield Avenue, between Central and Daniel Way
- Cadillac Drive, between Eden Avenue and Maria Way
- Maria Way, between Cadillac Drive and Valley Forge Way
- Valley Forge Way between Maria Way and Phelps Avenue

Class IV protected bike lanes are planned for:

- Winchester Boulevard, between Hamilton Avenue and Newhall Street
- Payne Avenue, between Winchester Boulevard and Saratoga Avenue
- Williams Road, between Winchester Boulevard and Moorpark Avenue
- Hamilton Avenue, between Bascom Avenue and Campbell Avenue
- Moorpark Avenue, between Lawrence Expressway and Menker Avenue

The Winchester Boulevard Urban Village Plan identifies the improvement of Winchester Boulevard between Moorpark Avenue and Payne Avenue to a complete street. The complete street improvements will include protected bike lanes along both sides of Winchester Boulevard as well as crosswalks at Walgrove Way and Fireside Drive with potential Rectangular Rapid Flashing Beacons (RRFB) at Walgrove Way. The City will require that the project provide a fair-share contribution towards the future pedestrian crossing with RRFB improvement at Walgrove Drive.

The project will be required to provide an in-lieu fee for the Class IV protected bike lanes planned along its frontage along Winchester Boulevard at \$121 per linear foot and to provide a \$25,000 in-lieu monetary contribution for the hardscape implementation per the future Winchester Blvd Urban Village planline (RRFB/enhanced pedestrian crosswalk at Walgrove Way).

Transit Services

The project site is adequately served by the existing VTA transit services. The nearest bus stop to the project site is located near the Winchester Boulevard/Williams Road intersection approximately 100 feet from the project site and is served by Route 60. The new transit trips generated by the project are not expected to create demand in excess of the transit service that is currently provided.

As a Grand Boulevard, it is envisioned that Winchester Boulevard could potentially be included in the VTA Bus Rapid Transit (BRT) System. However, there are no plans at this time for a BRT line on Winchester Boulevard.

Freeway Segment Evaluation

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent or higher to any freeway segments in the area, freeway analysis for the CMP was not required.



1073 South Winchester Mixed-Use Development TA Technical Appendices

Appendix ASan Jose VMT Evaluation Tool Output Sheet

No Mitigation

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name: 1065 Winchester Mixed-Use Development Tool Version: 2/29/2019 Location: 1065 South Winchester Boulevard Date: 6/15/2021

Parcel: 29925037 Parcel Type: Urban Low Transit

Proposed Parking Spaces Vehicles: 105 Bicycles: 44

LAND USE:

Residential: Percent of All Residential Units

Single Family 0 DU Extremely Low Income (\leq 30% MFI) 0 % Affordable Multi Family 70 DU Very Low Income (> 30% MFI, \leq 50% MFI) 0 % Affordable Subtotal 70 DU Low Income (> 50% MFI, \leq 80% MFI) 0 % Affordable

Office: 20.41 KSF
Retail: 0 KSF
Industrial: 0 KSF

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Development Diversity

Integrate Affordable and Below Market Rate

Increase Employment Density

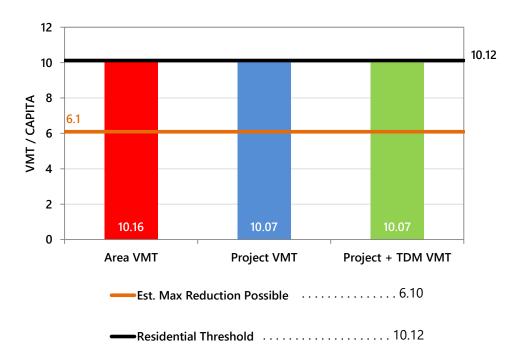
Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

Tier 4 - TDM Programs

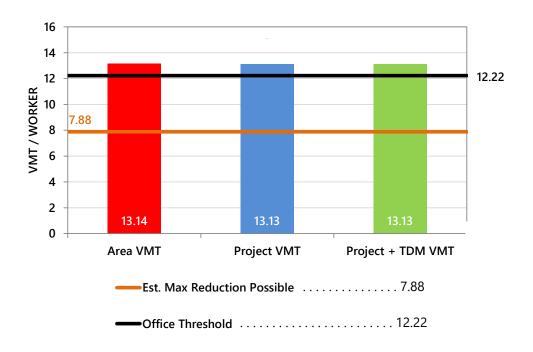
RESIDENTIAL ONLY

The tool estimates that the project would generate per capita VMT below the City's threshold.



EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT above the City's threshold and per industrial worker VMT below the City's threshold.



Page 2 of 2

Telecommuting and Alternative Work Schedules

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

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Name: 1065 Winchester Mixed-Use Development Tool Version: 2/29/2019 Location: 1065 South Winchester Boulevard Date: 6/15/2021

Parcel: 29925037 Parcel Type: Urban Low Transit

Proposed Parking Spaces Vehicles: 105 Bicycles: 44

LAND USE:

Residential: Percent of All Residential Units

Single Family 0 DU Extremely Low Income (\leq 30% MFI) 0 % Affordable Multi Family 70 DU Very Low Income (> 30% MFI, \leq 50% MFI) 0 % Affordable Subtotal 70 DU Low Income (> 50% MFI, \leq 80% MFI) 0 % Affordable

Office: 20.41 KSF
Retail: 0 KSF
Industrial: 0 KSF

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Residential Density
Existing Density (DU/Residential Acres in half-mile buffer) 8
With Project Density (DU/Residential Acres in half-mile buffer) 8
Increase Development Diversity
Existing Activity Mix Index 0.44
With Project Activity Mix Index 0.44

Tier 2 - Multimodal Infrastructure

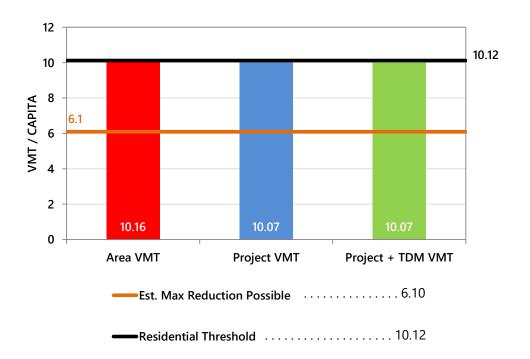
Tier 3 - Parking

Tier 4 - TDM Programs

Telecommuting and Alternative Work Schedule Program

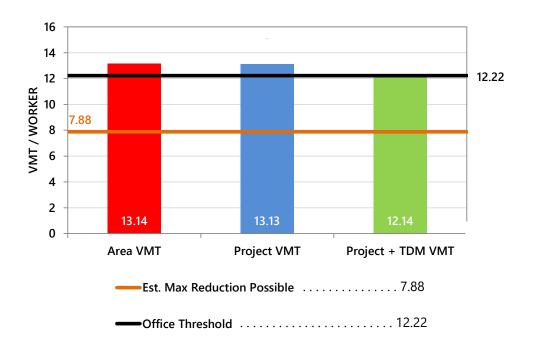
RESIDENTIAL ONLY

The tool estimates that the project would generate per capita VMT below the City's threshold.



EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold.



Operate a Free Direct Shuttle

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

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Name: 1065 Winchester Mixed-Use Development Tool Version: 2/29/2019 Location: 1065 South Winchester Boulevard Date: 6/15/2021

Parcel: 29925037 Parcel Type: Urban Low Transit

Proposed Parking Spaces Vehicles: 105 Bicycles: 44

LAND USE:

Residential: Percent of All Residential Units

Single Family 0 DU Extremely Low Income (\leq 30% MFI) 0 % Affordable Multi Family 70 DU Very Low Income (> 30% MFI, \leq 50% MFI) 0 % Affordable Subtotal 70 DU Low Income (> 50% MFI, \leq 80% MFI) 0 % Affordable

Office: 20.41 KSF
Retail: 0 KSF
Industrial: 0 KSF

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

Increase Development Diversity

Integrate Affordable and Below Market Rate

Increase Employment Density

Tier 2 - Multimodal Infrastructure

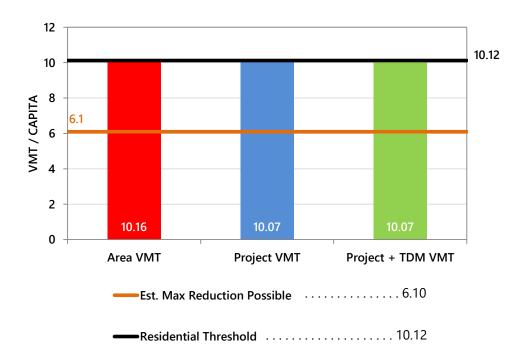
Tier 3 - Parking

Tier 4 - TDM Programs

Operate Free Direct Shuttle Service (In Coordination with SJ)

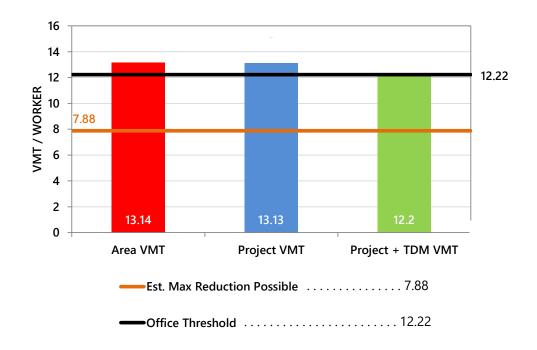
RESIDENTIAL ONLY

The tool estimates that the project would generate per capita VMT below the City's threshold. There are selected strategies that require coordination with the City of San Jose to implement.



EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold. There are selected strategies that require coordination with the City of San Jose to implement.



Provide Ride-Sharing Programs

CITY OF SAN JOSE VEHICLE MILES TRAVELED EVALUATION TOOL SUMMARY REPORT

PROJECT:

Name: 1065 Winchester Mixed-Use Development Tool Version: 2/29/2019 Location: 1065 South Winchester Boulevard Date: 6/15/2021

Parcel: 29925037 Parcel Type: Urban Low Transit

Proposed Parking Spaces Vehicles: 105 Bicycles: 44

LAND USE:

Residential: Percent of All Residential Units

Single Family 0 DU Extremely Low Income (\leq 30% MFI) 0 % Affordable Multi Family 70 DU Very Low Income (> 30% MFI, \leq 50% MFI) 0 % Affordable Subtotal 70 DU Low Income (> 50% MFI, \leq 80% MFI) 0 % Affordable

Office: 20.41 KSF
Retail: 0 KSF
Industrial: 0 KSF

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

24

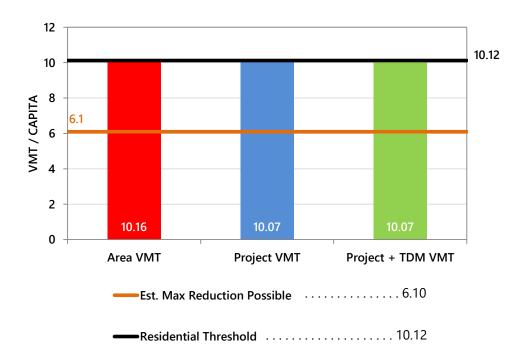
Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

Tier 4 - TDM Programs

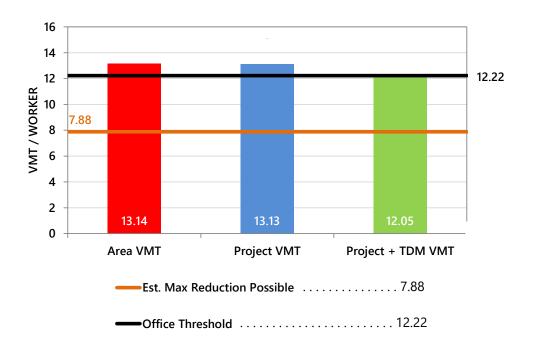
RESIDENTIAL ONLY

The tool estimates that the project would generate per capita VMT below the City's threshold.



EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold.



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Name: 1065 Winchester Mixed-Use Development Tool Version: 2/29/2019 Location: 1065 South Winchester Boulevard Date: 6/15/2021

Parcel: 29925037 Parcel Type: Urban Low Transit

Proposed Parking Spaces Vehicles: 105 Bicycles: 44

LAND USE:

Residential: Percent of All Residential Units

Single Family 0 DU Extremely Low Income (\leq 30% MFI) 0 % Affordable Multi Family 70 DU Very Low Income (> 30% MFI, \leq 50% MFI) 0 % Affordable Subtotal 70 DU Low Income (> 50% MFI, \leq 80% MFI) 0 % Affordable

Office: 20.41 KSF
Retail: 0 KSF
Industrial: 0 KSF

VMT REDUCTION STRATEGIES

Tier 1 - Project Characteristics

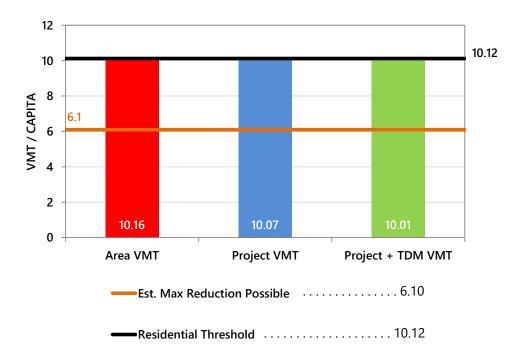
Tier 2 - Multimodal Infrastructure

Tier 3 - Parking

Tier 4 - TDM Programs

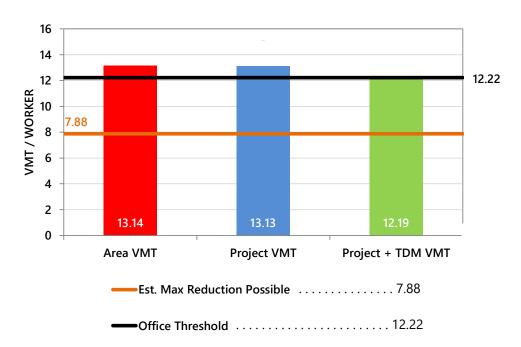
RESIDENTIAL ONLY

The tool estimates that the project would generate per capita VMT below the City's threshold. There are selected strategies that require coordination with the City of San Jose to implement.



EMPLOYMENT ONLY

The tool estimates that the project would generate per non-industrial worker VMT below the City's threshold. There are selected strategies that require coordination with the City of San Jose to implement.



Appendix B Traffic Counts

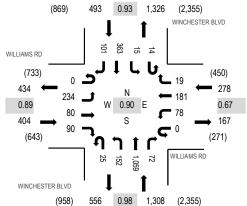


Location: 1 WINCHESTER BLVD & WILLIAMS RD AM

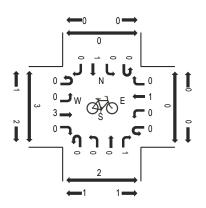
Date: Tuesday, November 19, 2019 Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

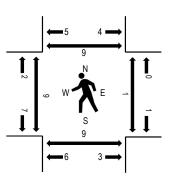




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	WILLIAMS RD				W	/ILLIAN	/IS RD		WIN	CHEST	ER BL	VD	WIN	CHEST	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	destriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	25	9	8	0	3	15	2	8	20	187	4	2	4	48	22	357	2,030	0	0	1	1
7:15 AM	0	31	8	14	0	13	28	3	6	34	216	12	2	2	61	22	452	2,301	0	0	1	1
7:30 AM	0	34	30	17	0	24	43	12	7	32	215	18	2	6	74	20	534	2,439	6	0	1	4
7:45 AM	0	43	42	20	0	29	90	6	5	44	235	41	3	5	99	25	687	2,483	3	0	0	4
8:00 AM	0	50	9	31	0	31	47	10	8	44	267	13	2	3	93	20	628	2,287	4	0	2	2
8:15 AM	0	58	17	20	0	9	22	3	4	39	277	8	4	4	96	29	590		1	1	2	2
8:30 AM	0	83	12	19	0	9	22	0	8	25	280	10	5	3	75	27	578		1	0	5	1
8:45 AM	0	42	5	16	0	13	12	4	4	28	250	6	2	0	86	23	491		1	0	1	1

		East	bound			Westk	oound			North	oound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	6
Lights	0	228	80	90	0	78	180	19	25	147	1,032	71	11	14	353	93	2,421
Mediums	0	6	0	0	0	0	1	0	0	5	27	1	2	1	10	3	56
Total	0	234	80	90	0	78	181	19	25	152	1,059	72	14	15	363	101	2,483

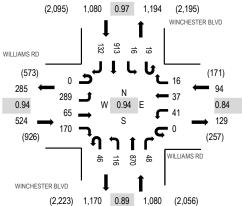


Location: 1 WINCHESTER BLVD & WILLIAMS RD PM

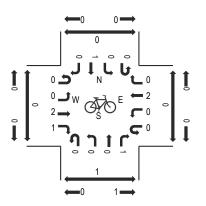
Date: Tuesday, November 19, 2019 Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

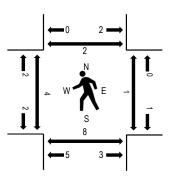
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

	WILLIAMS RD				W	ILLIAN	IS RD		WIN	CHEST	ER BL	VD	WIN	CHES'	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	bound			Rolling	Ped	lestriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	44	12	38	0	1	7	0	11	20	179	12	2	1	214	41	582	2,470	3	2	3	0
4:15 PM	0	41	17	28	0	9	7	1	6	20	235	8	4	1	206	34	617	2,554	1	0	1	3
4:30 PM	0	60	19	34	0	6	10	4	8	31	174	12	7	5	187	31	588	2,624	0	0	9	5
4:45 PM	0	42	23	44	0	15	14	3	17	34	197	12	8	6	229	39	683	2,771	4	4	0	4
5:00 PM	0	66	15	42	0	11	11	6	9	27	197	11	6	3	229	33	666	2,778	3	1	3	1
5:15 PM	0	68	16	42	0	9	14	2	5	29	216	15	5	5	238	23	687		0	0	2	1
5:30 PM	0	74	21	41	0	12	4	6	15	34	240	13	5	5	226	39	735		1	0	0	0
5:45 PM	0	81	13	45	0	9	8	2	17	26	217	9	3	3	220	37	690		0	0	3	0

				West	oound			Northb	ound			South	bound				
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	285	65	169	0	41	36	16	46	115	862	47	19	16	905	130	2,752
Mediums	0	4	0	1	0	0	1	0	0	1	8	1	0	0	8	2	26
Total	0	289	65	170	0	41	37	16	46	116	870	48	19	16	913	132	2,778



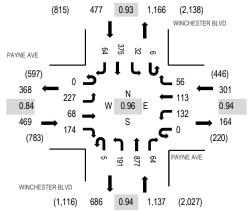
Location: 4 WINCHESTER BLVD & PAYNE AVE AM

Date: Tuesday, November 19, 2019

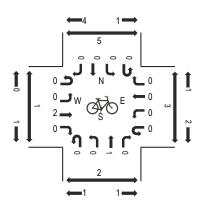
Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

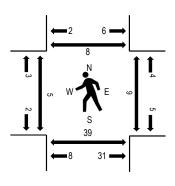
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

			PAYNE AVE				PAYNE	AVE		WIN	CHEST	ER BL	VD	WIN	CHEST	TER BL	.VD						
	Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	lestriar	n Crossi	ngs
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
_	7:00 AM	0	24	4	26	0	8	14	10	0	17	132	1	3	3	45	12	299	1,851	1	4	4	0
	7:15 AM	0	41	6	28	0	8	16	13	1	38	168	3	0	4	61	14	401	2,171	2	0	3	1
	7:30 AM	0	54	10	48	0	34	28	8	1	41	194	13	0	5	87	20	543	2,384	0	2	5	2
	7:45 AM	0	71	20	48	0	35	27	18	2	40	222	13	0	2	97	13	608	2,374	2	2	7	4
	8:00 AM	0	58	23	37	0	29	32	17	2	46	229	18	4	19	89	16	619	2,220	2	4	15	1
	8:15 AM	0	44	15	41	0	34	26	13	0	64	232	20	2	6	102	15	614		1	1	12	1
	8:30 AM	0	51	9	45	0	13	20	13	0	34	255	6	4	2	59	22	533		3	3	6	0
	8:45 AM	0	40	10	30	0	10	8	12	6	19	204	6	2	2	90	15	454		6	1	1	2

				Westk	ound			Northb	ound			South	bound				
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Lights	0	226	67	173	0	132	112	55	5	188	856	63	6	31	365	63	2,342
Mediums	0	1	1	1	0	0	1	1	0	3	21	1	0	1	10	0	41
Total	0	227	68	174	0	132	113	56	5	191	877	64	6	32	375	64	2,384

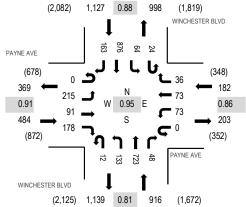


Location: 4 WINCHESTER BLVD & PAYNE AVE PM

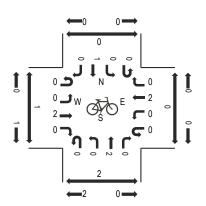
Date: Tuesday, November 19, 2019
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

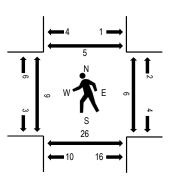
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

		PAYNI	E AVE		F	PAYNE	AVE		WIN	CHEST	ER BL	VD	WIN	CHES ⁻	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			Southl	ound			Rolling	Ped	destriar	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	23	16	37	0	21	16	12	2	20	133	5	5	8	186	51	535	2,265	1	1	6	1
4:15 PM	0	51	16	48	0	12	9	10	3	29	172	9	4	11	188	28	590	2,411	2	6	5	2
4:30 PM	0	40	18	33	0	14	14	17	2	33	145	11	5	13	193	28	566	2,458	6	2	1	4
4:45 PM	0	40	23	43	0	18	13	10	6	32	145	9	9	10	180	36	574	2,608	7	2	6	1
5:00 PM	0	44	25	40	0	19	16	9	4	31	162	9	9	19	246	48	681	2,709	6	3	7	0
5:15 PM	0	47	26	57	0	18	16	4	2	26	175	7	5	14	199	41	637		2	1	4	2
5:30 PM	0	57	19	36	0	18	22	13	2	41	221	18	6	13	217	33	716		1	2	9	2
5:45 PM	0	67	21	45	0	18	19	10	4	35	165	14	4	18	214	41	675		0	0	6	1

				West	oound			Northb	ound			South	bound				
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	213	91	178	0	73	73	36	11	133	712	47	24	64	866	161	2,682
Mediums	0	2	0	0	0	0	0	0	1	0	11	1	0	0	10	2	27
Total	0	215	91	178	0	73	73	36	12	133	723	48	24	64	876	163	2,709



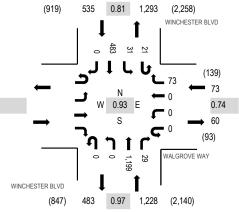
Location: 2 WINCHESTER BLVD & WALGROVE WAY AM

Date: Tuesday, November 19, 2019

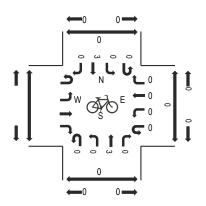
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

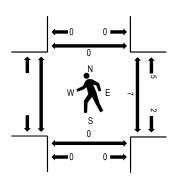
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

			WAL	_GRO	VE WA	Υ	WIN	CHEST	ER BL	VD	WIN	CHES ⁻	ΓER BL	.VD								
Interval		Eastb	ound		,	Westb	ound			Northb	ound			South	oound			Rolling	Ped	destriar	Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM					0	0	0	21	0	0	168	1	2	1	57	0	250	1,455		1	0	0
7:15 AM					0	0	0	19	0	0	233	5	1	7	85	0	350	1,697		2	0	0
7:30 AM					0	0	0	17	0	0	245	14	3	3	108	0	390	1,794		0	0	0
7:45 AM					0	0	0	29	0	0	273	19	3	10	131	0	465	1,836		2	0	0
8:00 AM					0	0	0	16	0	0	302	5	7	10	152	0	492	1,743		0	0	0
8:15 AM					0	0	0	15	0	0	310	3	6	7	106	0	447			4	0	0
8:30 AM					0	0	0	13	0	0	314	2	5	4	94	0	432			1	0	0
8:45 AM					0	0	0	9	0	0	246	0	1	2	114	0	372			0	1	0

	East	bound			Westb	ound			North	oound			South	bound		
Vehicle Type	U-Turn Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks				0	0	0	0	0	0	2	0	0	0	1	0	3
Lights				0	0	0	69	0	0	1,175	28	21	31	473	0	1,797
Mediums				0	0	0	4	0	0	22	1	0	0	9	0	36
Total				0	0	0	73	0	0	1,199	29	21	31	483	0	1,836

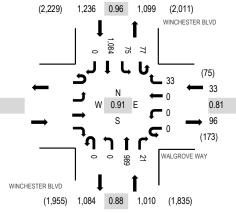


Location: 2 WINCHESTER BLVD & WALGROVE WAY PM

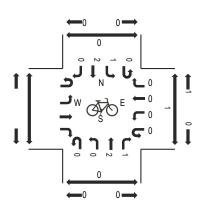
Date: Tuesday, November 19, 2019
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

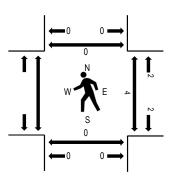
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

			WAI	_GRO\	/E WA	·Υ	WIN	CHEST	ER BL	VD	WIN	CHEST	ΓER BL	.VD								
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestriar	Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM					0	0	0	11	0	0	178	6	19	15	205	0	434	1,860		0	0	0
4:15 PM					0	0	0	10	0	0	222	5	18	8	218	0	481	1,976		0	0	0
4:30 PM					0	0	0	8	0	0	208	8	10	10	213	0	457	2,029		2	0	0
4:45 PM					0	0	0	13	0	0	192	6	23	19	235	0	488	2,195		5	1	0
5:00 PM					0	0	0	7	0	0	223	4	21	18	277	0	550	2,279		2	0	0
5:15 PM					0	0	0	9	0	0	238	7	15	17	248	0	534			2	0	0
5:30 PM					0	0	0	13	0	0	283	5	16	24	282	0	623			0	0	0
5:45 PM					0	0	0	4	0	0	245	5	25	16	277	0	572			0	0	0

	Eas	tbound			Westk	oound			Northb	ound			South	nbound		
Vehicle Type	U-Turn Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks				0	0	0	0	0	0	0	0	0	0	0	0	0
Lights				0	0	0	33	0	0	976	21	76	75	1,072	0	2,253
Mediums				0	0	0	0	0	0	13	0	1	0	12	0	26
Total				0	0	0	33	0	0	989	21	77	75	1,084	0	2,279

Existing Reassignment Due to Winchester Boulevard Improvement



Location: 1 WINCHESTER BLVD & COLONIAL WAY AM

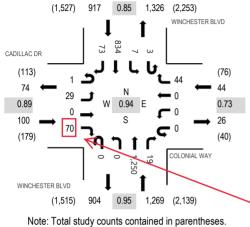
Date and Start Time: Tuesday, April 24, 2018

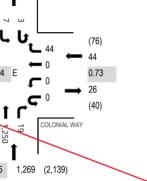
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles in Crosswalk





Only 15 of 70 vehicles make a U-turn and go NB on Winchester

Traffic Counts																						
	C	CADILL	AC DF	?	C	OLONIA	L WAY		WIN	CHEST	ER BL	VD	WIN	CHES'	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	bound			Rolling	Ped	destrair	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	6	0	12	0	0	0	7	0	0	195	1	0	1	99	14	335	1,792	8	1	0	1
7:15 AM	0	7	0	20	0	0	0	6	0	0	223	2	0	2	135	13	408	2,076	4	3	1	0
7:30 AM	0	10	0	10	0	0	0	8	0	0	226	1	1	0	183	4	443	2,259	10	5	1	2
7:45 AM	0	11	0	19	0	0	0	8	0	0	288	5	0	4	246	25	606	2,330	5	1	0	1
8:00 AM	0	6	0	24	0	0	0	16	0	0	323	6	3	1	224	16	619	2,129	10	1	0	1
8:15 AM	0	4	0	17	0	0	0	9	0	0	332	3	0	1	211	14	591		8	3	0	0
8:30 AM	1	8	0	10	0	0	0	11	0	0	307	5	0	1	153	18	514		4	3	0	1
8:45 AM	0	10	0	4	0	0	0	11	0	0	217	5	0	2	148	8	405		7	2	0	0

		East	bound			West	oound			North	bound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	1	28	0	68	0	0	0	44	0	0	1,226	19	3	7	817	71	2,284
Mediums	0	1	0	2	0	0	0	0	0	0	23	0	0	0	17	2	45
Total	1	29	0	70	0	0	0	44	0	0	1,250	19	3	7	834	73	2,330



Location: 1 WINCHESTER BLVD & COLONIAL WAY PM

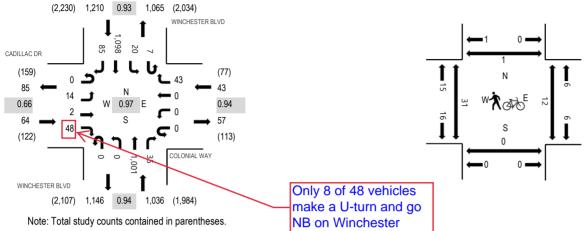
Date and Start Time: Tuesday, April 24, 2018

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

		CADILL	AC DF	?	CC	DLONIA	L WAY		WIN	CHEST	ER BL	VD	WIN	CHES'	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	bound			Rolling	Ped	estrair	n Crossii	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru F	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	2	1	6	0	0	0	4	0	0	244	7	2	2	255	17	540	2,156	6	3	0	0
4:15 PM	0	7	0	5	0	0	0	9	0	0	211	14	2	6	216	25	495	2,222	13	4	0	0
4:30 PM	0	6	1	18	0	0	0	12	0	0	240	9	0	8	218	17	529	2,302	8	1	0	0
4:45 PM	0	5	1	14	0	0	0	12	0	0	223	11	1	3	307	15	592	2,353	7	3	0	0
5:00 PM	0	2	0	6	0	0	0	11	0	0	269	4	3	4	284	23	606	2,257	9	4	0	0
5:15 PM	0	0	0	11	0	0	0	10	0	0	264	12	3	7	248	20	575		0	2	0	0
5:30 PM	0	7	1	17	0	0	0	10	0	0	245	8	0	6	259	27	580		12	1	0	1
5:45 PM	0	2	0	10	0	0	0	9	0	0	218	5	1	3	233	15	496		10	0	0	0

				Westh	oound			North	bound			Sout	hbound				
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	14	2	48	0	0	0	42	0	0	994	34	7	20	1,087	85	2,333
Mediums	0	0	0	0	0	0	0	1	0	0	7	1	0	0	10	0	19
Total	0	14	2	48	0	0	0	43	0	0	1,001	35	7	20	1,098	85	2,353

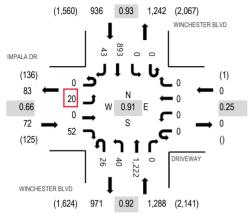


Location: 2 WINCHESTER BLVD & DRIVEWAY AM **Date and Start Time:** Tuesday, April 24, 2018

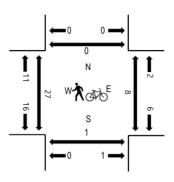
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

		IMPAL	A DR		1	DRIVE	WAY		WIN	CHEST	ER BL	VD	WIN	CHEST	TER BL	VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	destrair	n Crossir	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
7:00 AM	0	4	0	3	0	0	0	1	3	7	150	0	0	0	113	3	284	1,679	7	3	0	0
7:15 AM	0	4	0	10	0	0	0	0	5	8	222	0	0	0	145	5	399	2,023	4	1	0	0
7:30 AM	0	7	0	10	0	0	0	0	5	8	218	0	0	0	190	6	444	2,221	7	5	0	0
7:45 AM	0	10	0	19	0	0	0	0	10	5	251	0	0	0	242	15	552	2,296	6	3	0	0
8:00 AM	0	5	0	12	0	0	0	0	7	8	334	0	0	0	255	7	628	2,148	6	2	0	0
8:15 AM	0	3	0	7	0	0	0	0	5	13	309	0	0	0	248	12	597		7	3	1	0
8:30 AM	0	2	0	14	0	0	0	0	4	14	328	0	0	0	148	9	519		7	0	0	0
8:45 AM	0	6	0	9	0	0	0	0	9	5	213	0	0	0	151	11	404		4	1	1	0

		East	bound			Westh	oound			North	bound			South	bound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4
Lights	0	20	0	52	0	0	0	0	26	39	1,200	0	0	0	875	41	2,253
Mediums	0	0	0	0	0	0	0	0	0	1	21	0	0	0	15	2	39
Total	0	20	0	52	0	0	0	0	26	40	1,222	0	0	0	893	43	2,296

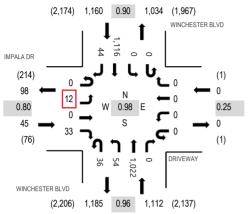


Location: 2 WINCHESTER BLVD & DRIVEWAY PM Date and Start Time: Tuesday, April 24, 2018

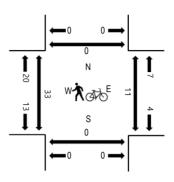
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

		IMPAL	A DR								ER BL	VD	WIN	CHES ⁻	TER BL	.VD						
Interval		Eastb	ound			Westb	ound			Northb	ound			South	oound			Rolling	Ped	lestrair	n Crossi	ngs
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
 4:00 PM	0	0	0	6	0	0	0	0	9	18	228	0	0	0	272	16	549	2,128	3	3	0	0
4:15 PM	0	2	0	3	0	0	0	1	4	15	210	0	1	1	203	9	449	2,167	10	1	0	0
4:30 PM	0	1	0	8	0	0	0	0	8	20	259	0	0	0	230	11	537	2,307	6	4	0	0
4:45 PM	0	3	0	8	0	0	0	0	6	19	234	0	0	0	304	19	593	2,317	7	4	0	0
5:00 PM	0	2	0	12	0	0	0	0	14	15	256	0	0	0	283	6	588	2,260	12	0	0	0
5:15 PM	0	3	0	7	0	0	0	0	8	9	262	0	0	0	290	10	589		5	5	0	0
5:30 PM	0	4	0	6	0	0	0	0	8	11	270	0	0	0	239	9	547		5	2	0	0
5:45 PM	0	2	0	9	0	0	0	0	8	17	229	0	0	0	261	10	536		17	0	1	0

		East	bound			Westh	oound			North	bound			South	nbound		
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	12	0	33	0	0	0	0	36	54	1,014	0	0	0	1,103	44	2,296
Mediums	0	0	0	0	0	0	0	0	0	0	8	0	0	0	12	0	20
Total	0	12	0	33	0	0	0	0	36	54	1,022	0	0	0	1,116	44	2,317



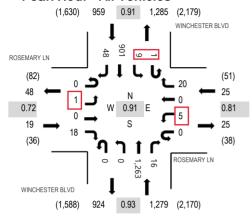
Location: 3 WINCHESTER BLVD & ROSEMARY LN AM

Date and Start Time: Tuesday, April 24, 2018

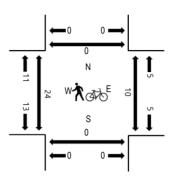
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

	ROSEMARY LN						ROSEMARY LN				WINCHESTER BLVD					TER BL	.VD						
	Interval		Eastb	ound		Westbound				Northbound				Southbound					Rolling	Pedestrain Crossings			
	Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru R	ight	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
-	7:00 AM	1	0	0	3	0	6	0	1	0	0	169	2	0	1	111	3	297	1,748	3	0	0	0
	7:15 AM	0	0	0	5	0	3	0	5	0	0	243	2	0	0	157	8	423	2,078	7	1	0	0
	7:30 AM	0	0	0	5	0	1	0	2	0	0	226	4	0	2	209	15	464	2,237	4	0	0	1
	7:45 AM	0	0	0	5	0	2	0	2	0	0	271	5	0	1	254	24	564	2,282	4	2	0	0
	8:00 AM	0	0	0	8	0	0	0	7	0	0	343	1	0	3	252	13	627	2,139	7	1	0	0
	8:15 AM	0	1	0	3	0	1	0	8	0	0	327	2	0	3	234	3	582		3	3	0	0
	8:30 AM	0	0	0	2	0	2	0	3	0	0	322	8	1	2	161	8	509		6	1	0	0
	8:45 AM	0	0	0	3	0	4	0	4	0	0	244	1	0	1	157	7	421		2	1	0	0

		East	bound			Westh	bound			North	bound						
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3
Lights	0	0	0	18	0	5	0	20	0	0	1,239	16	1	9	880	48	2,236
Mediums	0	1	0	0	0	0	0	0	0	0	23	0	0	0	19	0	43
Total	0	1	0	18	0	5	0	20	0	0	1,263	16	1	9	901	48	2,282



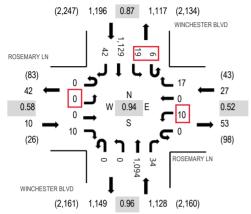
Location: 3 WINCHESTER BLVD & ROSEMARY LN PM

Date and Start Time: Tuesday, April 24, 2018

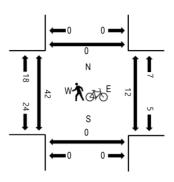
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk

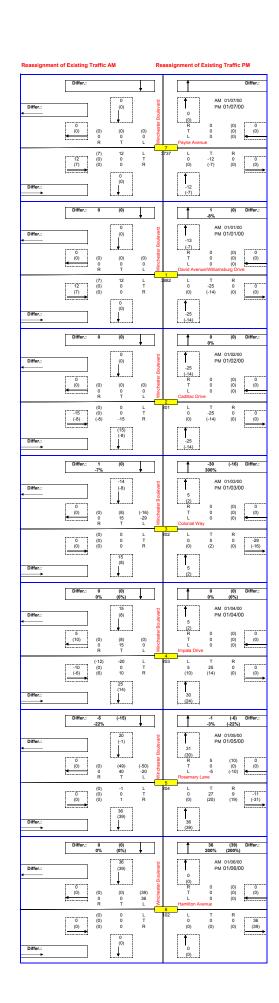


Note: Total study counts contained in parentheses.

Traffic Counts

	V	ROSEMARY LN				WIN	VD	WIN	CHES'	TER BL	.VD											
Interval	Eastbound				Westbound				Northbound				Southbound					Rolling	Pedestrain Crossings			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	Hour	West	East	South	North
4:00 PM	0	0	0	5	0	0	0	3	0	0	245	8	0	4	270	11	546	2,155	3	3	0	1
4:15 PM	0	0	0	2	0	2	0	4	0	0	241	10	0	4	197	9	469	2,238	6	0	0	0
4:30 PM	0	0	0	3	0	0	0	1	0	0	272	5	1	2	259	7	550	2,356	2	6	0	0
4:45 PM	0	0	0	2	0	1	0	3	0	0	269	8	2	3	296	6	590	2,361	10	4	0	0
5:00 PM	0	0	0	1	0	5	0	9	0	0	263	6	3	7	319	16	629	2,321	12	1	0	0
5:15 PM	0	0	0	4	0	2	0	4	0	0	289	6	0	6	268	8	587		3	5	0	0
5:30 PM	0	0	0	3	0	2	0	1	0	0	273	14	1	3	246	12	555		10	2	0	0
5:45 PM	0	1	0	5	0	2	0	4	0	0	245	6	0	6	267	14	550		16	0	0	0

	Eastbound						oound			North	bound						
Vehicle Type	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	10	0	9	0	17	0	0	1,086	34	6	18	1,117	42	2,339
Mediums	0	0	0	0	0	1	0	0	0	0	8	0	0	1	12	0	22
Total	0	0	0	10	0	10	0	17	0	0	1,094	34	6	19	1,129	42	2,361



Appendix C Approved Trips Inventory

AM PROJECT TRIPS

											0 1 / 2 0	,, 2021
Intersection of : Payne Av & S Winchest	er Bl											
Traffix Node Number : 3737												
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC12-009 (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	16	0	0	3	1	3	0	0	0	0	2
PDC14-040 (3-01388) LEGACY 863-917 WINCHESTER BLVD WINCHESTER RESERVE	0	10	0	0	35	0	0	0	0	0	0	0
PDC14-068 (3-10478) Retail/Commercial 3161 OLSEN DRIVE SANTANA WEST	0	62	0	1	7	2	13	0	0	0	0	6
PDC97-036 RET (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C)	0	1	0	0	0	0	0	0	0	0	0	0

TOTAL: 0 89 0 1 45 3 16 0 0 0 8

	LEFT	THRU	RIGHT
NORTH	1	45	3
EAST	0	0	8
SOUTH	0	89	0
WEST	16	0	0

SANTANA ROW

PM PROJECT TRIPS 04/20/2021

											04/20	7/2021
Intersection of : Payne Av & S Winches	ster Bl											
Traffix Node Number : 3737												
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC12-009 (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	9	0	2	15	3	2	0	0	0	0	1
PDC14-040 (3-01388) LEGACY 863-917 WINCHESTER BLVD WINCHESTER RESERVE	0	40	0	1	23	1	1	0	0	0	0	1
PDC14-068 (3-10478) Retail/Commercial 3161 OLSEN DRIVE SANTANA WEST	0	11	0	6	55	11	3	0	0	0	0	1
PDC97-036 RET (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	3	0	0	3	1	1	0	0	0	0	0

TOTAL:	0	63	0	9	96	16	7	0	0	0	0	3

	LEFT	THRU	RIGHT
NORTH	9	96	16
EAST	0	0	3
SOUTH	0	63	0
WEST	7	0	0

AM PROJECT TRIPS

Intersection of : Williams Rd & S Winchester	r Bl											
Traffix Node Number: 3836												
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC12-009 (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	21	0	0	4	1	3	0	0	0	0	2
PDC14-040 (3-01388) LEGACY 863-917 WINCHESTER BLVD WINCHESTER RESERVE	10	0	0	50	20	5	65	9	16	0	4	0
PDC14-068 (3-10478) Retail/Commercial 3161 OLSEN DRIVE	0	80	0	1	10	2	13	0	0	0	0	6

TOTAL: 10 102 0 51 35 8 81 9 16 0 4 8

	LEFT	THRU	RIGHT
NORTH	51	35	8
EAST	0	4	8
SOUTH	10	102	0
WEST	81	9	16

SANTANA WEST

SANTANA ROW

PDC97-036 RET (3-06815)

STEVENS CREEK & WINCHESTER (SE/C)

Retail/Commercial

PM PROJECT TRIPS 04/20/2021

											0 1 / 2 0	,
Intersection of : Williams Rd & S Wind	chester Bl											
Traffix Node Number : 3836												
Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC12-009 (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	12	0	2	20	3	2	0	0	0	0	1
PDC14-040 (3-01388) LEGACY 863-917 WINCHESTER BLVD WINCHESTER RESERVE	41	0	0	26	10	19	38	6	14	0	17	0
PDC14-068 (3-10478) Retail/Commercial 3161 OLSEN DRIVE SANTANA WEST	0	14	0	6	72	11	3	0	0	0	0	1
PDC97-036 RET (3-06815) Retail/Commercial STEVENS CREEK & WINCHESTER (SE/C) SANTANA ROW	0	4	0	0	4	1	1	0	0	0	0	0

TOTAL: 41 30 0 34 106 34 44 6 14 0 17 2

	LEFT	THRU	RIGHT
NORTH	34	106	34
EAST	0	17	2
SOUTH	41	30	0
WEST	44	6	14

Appendix D Volume Summary

Intersection Number: 1
Traffix Node Number: 3836

Intersection Name: Winchester Boulevard and Williams Road

Peak Hour: AM Count Date: 11/19/19

					Мс	vemer	nts						
-	Nor	th Appro	oach	Eas	t Appro	oach	Sou	th Appr	oach	Wes	oach		
Scenario:	RT	TH	LT	RT	ŤĤ	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	101	363	29	19	181	78	72	1059	177	90	80	234	2483
ATI	8	35	51	8	4	0	0	102	10	16	9	81	324
Background Conditions	109	398	80	27	185	78	72	1161	187	106	89	315	2807
Project Trips	0	12	0	0	0	1	0	9	6	6	0	0	34
Background Plus Project Conditions	109	410	80	27	185	79	72	1170	193	112	89	315	2841
1073 Winchester	0	7	0	0	0	1	0	7	8	5	0	0	28
1212 Winchester	0	11	0	0	0	0	0	10	4	0	0	0	25
1495 Winchester	0	4	0	0	0	0	0	3	0	1	0	0	8
Total Pending Trips	0	22	0	0	0	1	0	20	12	6	0	0	61
Cumulative Conditions	109	432	80	27	185	80	72	1190	205	118	89	315	2902

Intersection Number: 2
Traffix Node Number: 3737

Intersection Name: Winchester Boulevard and Payne Avenue

Peak Hour: AM
Count Date: 11/19/19

					М	ovemen	ıts						
_	Noi	rth Appro	oach	Eas	t Appro	oach	Sout	th Appı	roach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	64	375	38	56	113	132	64	877	196	174	68	227	2384
A.T.I	•	45	4	0	0	^	0	00	0	0	0	40	400
ATI	3	45	1	8	0	0	0	89	0	0	0	16	162
Reassignment of Existing Traffic	0	0	0	0	0	0	0	-12	0	0	0	12	0
due to Winchester Blvd Improvements													
Background Conditions	67	420	39	64	113	132	64	954	196	174	68	255	2546
Project Trips	3	5	0	1	0	0	0	5	0	0	0	0	14
Background Plus Project Conditions	70	425	39	65	113	132	64	959	196	174	68	255	2560
1073 Winchester	3	5	0	1	0	0	0	7	0	0	0	0	16
1212 Winchester	0	13	11	0	0	0	0	20	0	0	0	6	50
1495 Winchester	0	5	0	0	0	0	0	2	Ö	1	0	1	9
Total Pending Trips	3	23	11	1	0	0	0	29	0	1	0	7	75
Cumulative Conditions	73	448	50	66	113	132	64	988	196	175	68	262	2635

Intersection Number: 4034 Traffix Node Number:

Winchester Boulevard and Walgrove Way AM Intersection Name:

Peak Hour: Count Date: 11/19/19

					Mo	ovemer	nts						
-	Noi	th Appro	oach	Eas	t Appro			th Appro	pach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
													<u></u>
Existing Conditions	0	483	52	73	0	0	29	1199	0	0	0	0	1836
ATI	0	49	0	0	0	0	0	113	0	0	0	0	162
Background Conditions	0	532	52	73	0	0	29	1312	0	0	0	0	1998
Project Trips	0	8	10	0	0	0	0	6	0	0	0	0	24
Background Plus Project Conditions	0	540	62	73	0	0	29	1318	0	0	0	0	2022
1073 Winchester	0	8	8	0	0	0	0	8	0	0	0	0	24
1212 Winchester	0	11	0	0	0	0	0	14	0	0	0	0	25
1495 Winchester	0	5	0	0	0	0	0	2	0	0	0	0	7
Total Pending Trips	0	24	8	0	0	0	0	24	0	0	0	0	56
Cumulative Conditions	0	564	70	73	0	0	29	1342	0	0	0	0	2078

Intersection Number: 1
Traffix Node Number: 3836

Intersection Name: Winchester Boulevard and Williams Road

Peak Hour: PM Count Date: 11/19/19

					М	ovemer	nts						
·	Noi	rth Appro	oach	Eas	t Appro	oach	Sout	th Appi	roach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	132	913	35	16	37	41	48	870	162	170	65	289	2778
ATI	34	106	34	2	17	0	0	30	41	14	6	44	328
Background Conditions	166	1019	69	18	54	41	48	900	203	184	71	333	3106
Project Trips	0	10	0	0	0	1	1	13	6	5	0	0	36
Background Plus Project Conditions	166	1029	69	18	54	42	49	913	209	189	71	333	3142
1073 Winchester	0	6	0	0	0	0	1	11	7	4	0	0	29
1212 Winchester	0	11	0	0	0	0	0	14	6	0	0	0	31
1495 Winchester	0	3	0	0	0	0	0	4	0	2	0	0	9
Total Pending Trips	0	20	0	0	0	0	1	29	13	6	0	0	69
Cumulative Conditions	166	1049	69	18	54	42	50	942	222	195	71	333	3211

Intersection Number: 2
Traffix Node Number: 3737

Intersection Name: Winchester Boulevard and Payne Avenue

Peak Hour: PM Count Date: 11/19/19

					Mo	ovemen	ts						
-	Noi	rth Appr	oach	Eas	t Appro			th Appr	oach	Wes	t Appr	oach	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	163	876	88	36	73	73	48	723	145	178	91	215	2709
ATI	16	96	9	3	0	0	0	63	0	0	0	7	194
Reassignment of Existing Traffic due to Winchester Blvd Improvements	0	0	0	0	0	0	0	-7	0	0	0	7	0
Background Conditions	179	972	97	39	73	73	48	779	145	178	91	229	2903
Project Trips	4	7	1	1	0	0	0	4	0	0	0	0	17
Background Plus Project Conditions	183	979	98	40	73	73	48	783	145	178	91	229	2920
1073 Winchester	4	8	1	0	0	0	0	6	0	0	0	0	19
1212 Winchester	0	19	11	0	0	0	0	20	0	0	0	6	56
1495 Winchester	0	5	0	0	0	0	0	3	0	1	0	1	10
Total Pending Trips	4	32	12	0	0	0	0	29	0	1	0	7	85
Cumulative Conditions	187	1011	110	40	73	73	48	812	145	179	91	236	3005

3 4034 Intersection Number: Traffix Node Number:

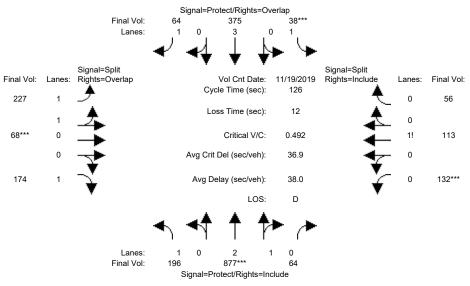
Winchester Boulevard and Walgrove Way PM Intersection Name:

Peak Hour: Count Date: 11/19/19

					Мо	vement	s						
_	No	rth Appr	oach	Eas	t Appro	oach	Sou	th Appre	oach	Wes	t Appro	oach	
Scenario:	RT	TH	LT	RT	ŤĤ	LT	RT	TH	LT	RT	ΤΉ	LT	Total
Existing Conditions	0	1084	152	33	0	0	21	989	0	0	0	0	2279
ATI	0	121	0	0	0	0	0	73	0	0	0	0	194
Background Conditions	0	1205	152	33	0	0	21	1062	0	0	0	0	2473
Project Trips	0	12	14	0	0	0	0	5	0	0	0	0	31
Background Plus Project Conditions	0	1217	166	33	0	0	21	1067	0	0	0	0	2504
1073 Winchester	0	13	12	0	0	0	0	6	0	0	0	0	31
1212 Winchester	0	11	0	0	0	0	0	19	0	0	0	0	30
1495 Winchester	0	5	0	0	0	0	0	3	0	0	0	0	8
Total Pending Trips	0	29	12	0	0	0	0	28	0	0	0	0	69
Cumulative Conditions	0	1246	178	33	0	0	21	1095	0	0	0	0	2573

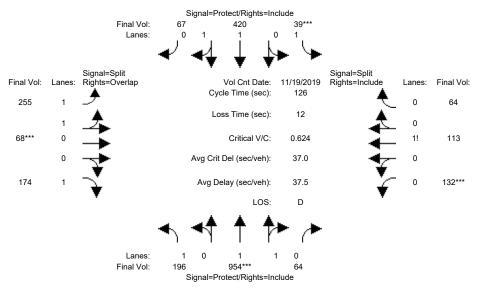
Appendix EIntersection Level of Service Calculations

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (AM)



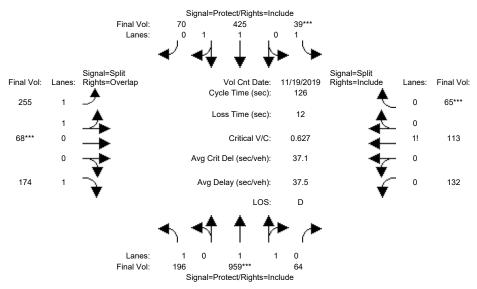
Approach: Movement:	L -	- T	- R	L ·	- T	- R	L ·	- T	- R	L - T	- R
Min. Green:		10			10			 10		10 10	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Volume Module											
Base Vol:	196	877	64	38	375	64	227	68	174	132 113	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Initial Bse:	196	877	64	38	375	64	227	68	174	132 113	56
	0	0	0	0	0	0	0	0	0	0 0	0
ATI:	0	0	0	0	0	0	0	0	0	0 0	0
Initial Fut:	196	877	64	38	375	64	227	68	174	132 113	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
	196	877	64	38	375	64	227	68	174	132 113	56
Reduct Vol:		0	0	0	0		0	0	0	0 0	0
Reduced Vol:	196	877	64	38	375	64	227	68	174	132 113	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
FinalVolume:	196	877	64	38	375	64	227	68	174	132 113	56
Saturation Fl	low Mo	odule:									
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900 1900	1900
Adjustment:	0.92	0.99	0.95	0.92	1.00	0.92	0.93	0.95	0.92	0.92 0.92	0.92
Lanes:	1.00	2.79	0.21	1.00	3.00	1.00	1.55	0.45	1.00	0.44 0.37	0.19
Final Sat.:	1750	5219	381	1750	5700	1750	2732	818	1750	767 657	326
Capacity Anal	lysis	Modul	e:								
Vol/Sat:					0.07	0.04	0.08	0.08	0.10	0.17 0.17	0.17
Crit Moves:		****		****				****		***	
Green Time:	29.0	42.5	42.5	7.0	20.5	41.5	21.0	21.0	50.0	43.5 43.5	43.5
Volume/Cap:			0.50	0.39	0.40	0.11	0.50	0.50	0.25	0.50 0.50	0.50
Delay/Veh:			33.5	60.0	47.5	29.5	48.4	48.4	25.7	33.3 33.3	33.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:	43.0	33.5	33.5	60.0	47.5	29.5	48.4	48.4	25.7	33.3 33.3	33.3
LOS by Move:			-	E		C	D	_		C C	C
		9	-	2	-	2	-		5	10 10	10
Note: Queue	report	ted is	the n	umber	of ca	rs per	lane	•			

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (AM)



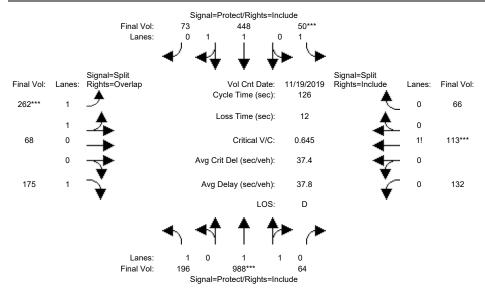
Approach: Movement:											est Bo	
Movement:												
		10				10				10		
Y+R:		4.0				4.0				4.0	4.0	4.0
Volume Module	e: >>	Count	Date:	19 No	ov 201	19 <<						
Base Vol:	196	877	64	38	375	64	227	68	174	132	113	56
Growth Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:			64	38	375	64	227	68		132	113	56
Added Vol:		0	0	0	0	0	0		0	0	0	0
ATI:			0	1	45		28	0	0	0	0	8
Initial Fut:			64		420	67	255		174		113	64
User Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00
PHF Volume:		954	64	39	420	67	255	68	174	132	113	64
Reduct Vol:		0		0		0	0	-	0	0	0	0
Reduced Vol:			64	39		67	255	68		132		64
PCE Adj:	1.00	1.00	1.00			1.00		1.00	1.00	1.00		1.00
MLF Adj:								1.00	1.00			1.00
FinalVolume:						67			174			64
Saturation Fi				1000	1000	1000	1000	1000	1000	1000	1000	1000
Sat/Lane:		1900		1900				1900	1900		1900	
Adjustment:				0.92		0.95		0.95	0.92	0.92		0.92
Lanes:				1.00		0.28		0.42	1.00	0.43		0.21
Final Sat.:								747		748		362
Capacity Anal												
Vol/Sat:				0 02	0 13	0.13	n na	n na	0.10	0.18	Λ 1 Ω	0.18
Crit Moves:				****	0.13	0.13	0.09	****	0.10	****	0.10	0.10
Green Time:				7.0	33 1	33.1	17 9	17.9	46.1	34.8	34 8	34.8
Volume/Cap:					0.50	0.50		0.64	0.27	0.64		0.64
Delay/Veh:			29.1	60.2		39.9		53.7	28.4	42.9		42.9
User DelAdi:			1.00	1.00		1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:						39.9		53.7	28.4	42.9		42.9
LOS by Move:							D			D		D
HCM2kAvqQ:				2	8		_	_	5			12
Note: Queue				_	-				,			

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background+Project (AM)



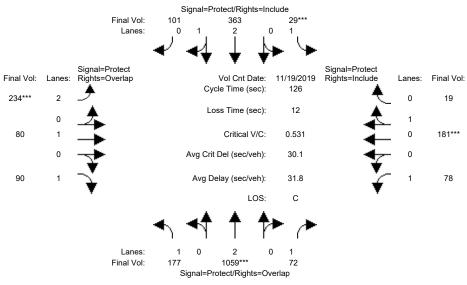
Approach: Movement:											est Bo - T	
Movement.												
		10						10		10		
Y+R:		4.0				4.0					4.0	
Volume Module	e: >>	Count	Date:	19 No	ov 201	9 <<						
Base Vol:	196	877	64	38	375	64	227	68	174	132	113	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	196		64	38	375	64	227	68		132	113	56
Added Vol:		5	0	0	5	3	0	0	0	0	0	1
ATI:	0	77	0	1	45		28	0	0	0	0	8
Initial Fut:			64	39	425	70	255	68	174	132	113	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:			1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00
PHF Volume:	196	959	64	39	425	70	255	68	174	132	113	65
Reduct Vol:				0		0	0	0	0	0	0	0
Reduced Vol:			64	39		70	255	68		132	113	65
PCE Adj:	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00
MLF Adj:						1.00		1.00	1.00			1.00
FinalVolume:				39		70	255		174			65
Saturation F												
Sat/Lane:		1900		1900		1900		1900	1900		1900	
Adjustment:				0.92		0.95		0.95	0.92		0.92	0.92
Lanes:				1.00		0.29		0.42	1.00	0.43		0.21
Final Sat.:						523		747		745		367
Capacity Anal Vol/Sat:				0 00	0 10	0.13	0 00	0 00	0 10	0 10	0 10	0 10
Crit Moves:				****	0.13	0.13	0.09	****	0.10	0.18	0.18	0.18
					22.4	22.4	17 0		45 0	24.0	24.0	
Green Time:						33.4		17.9 0.64	45.8	34.8		34.8
Volume/Cap:			0.64	0.40		0.51 39.7		53.8	0.27			43.0
Delay/Veh:					39.7				28.6	43.0		
User DelAdj:			1.00 29.1	1.00		1.00 39.7		1.00	28.6	1.00		1.00 43.0
AdjDel/Veh: LOS by Move:							53.8 D					43.0 D
HCM2kAvqQ:				£ 2			_	_	C 5			
-				_		-			5	12	12	12
Note: Queue	repor	tea is	the n	umper	OI Ca	ırs per	⊥ane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Cumulative (AM)



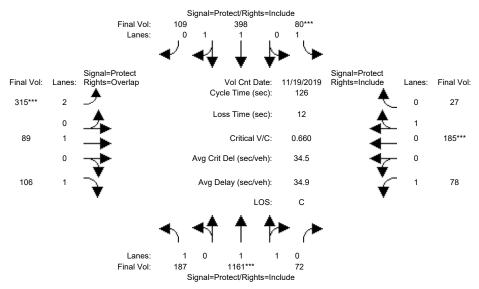
Approach:	No	rth Bo	und	Soi	uth Bo	und	Εá	ast Bo	und	Wes	st Bo	und
		- T				- R		- T		L -	T	- R
										1		
Min. Green:		10		7				10		10		10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0
Volume Module												
Base Vol:	196	954	64	39	420	67	255	68	174	132	113	64
Growth Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:		954	64	39	420	67	255	68	174	132	113	64
Added Vol:	0	5	0	0	5	3	0	0	0	0	0	1
ATI:	0		0	11	23	3	7	-	1	0	0	1
Initial Fut:			64	50	448	73	262	68	175	132	113	66
_	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
	196	988	64	50	448	73	262	68	175	132	113	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		988	64	50	448	73	262	68	175	132	113	66
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00
FinalVolume:			64	50	448	73 l	262	68	175	132		66
Saturation F												
Saturation F. Sat/Lane:		1900	1900	1900	1000	1900	1000	1900	1900	1900	1000	1900
Adjustment:			0.95	0.92		0.95		0.95	0.92	0.92		0.92
Lanes:		1.87	0.13		1.71	0.29		0.41	1.00	0.43		0.32
Final Sat.:		3475	225		3181	518	2818		1750	743		371
rinai sat												
Capacity Anal				1		'	1		ı	1		
Vol/Sat:	-	0.28		0.03	0 14	0.14	0 09	0.09	0.10	0.18	0 18	0.18
	0.11		0.20	****	0.11	0.11	****	0.03	0.10		****	0.10
Green Time:			54.8	7.0	34 4	34.4	17 9	17.9	45.3	34.3	34 3	34.3
Volume/Cap:			0.65			0.52		0.65	0.28	0.65		0.65
Delay/Veh:		29.1	29.1		39.2	39.2		54.2	29.0	43.9		43.9
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:			29.1		39.2	39.2		54.2	29.0	43.9		43.9
LOS by Move:			C	E	D	D	D	D	C	D	D	D
HCM2kAvqQ:	7		16	3	9	9	7	7	5	12	12	12
Note: Queue							lane		-	·		
~	· I · -				, , ,	. 1						

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (AM)



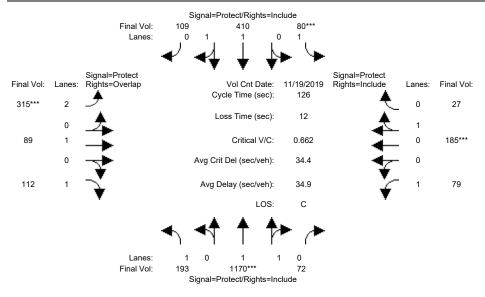
Approach: Movement:											est Bo - T	
		10						10		7		
Y+R:		4.0				4.0			4.0		4.0	
Volume Module				•					'	'		'
Base Vol:	177	1059	72	29	363	101	234	80	90	78	181	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:			72	29	363	101	234	80	90	78	181	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:		0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	177	1059	72	29		101	234		90	78	181	19
User Adj:	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	177	1059	72	29	363	101	234	80	90	78	181	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	177		72	29		101	234	80	90	78	181	19
PCE Adj:	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:				29	363	101	234	80	90	78	181	19
Saturation F	low M	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:				0.92	0.99	0.95	0.83	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	2.00	1.00	1.00	2.32	0.68	2.00	1.00	1.00	1.00	0.91	0.09
Final Sat.:	1750	3800	1750			1219		1900	1750		1629	171
Capacity Anal												
Vol/Sat:						0.08		0.04	0.05	0.04	0.11	0.11
Crit Moves:				****			****				****	
Green Time:				7.0		32.1		25.1	64.3		25.6	25.6
Volume/Cap:			0.06	0.30		0.33		0.21	0.10		0.55	0.55
Delay/Veh:			8.1		38.3	38.3		42.4	16.0		46.7	46.7
User DelAdj:				1.00		1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	33.6	21.3	8.1			38.3		42.4	16.0		46.7	46.7
LOS by Move:							D	_		D		D
HCM2kAvgQ:			_	1	-		6		2	3	8	8
Note: Queue	repor	ted is	the n	umber	of ca	ars per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (AM)



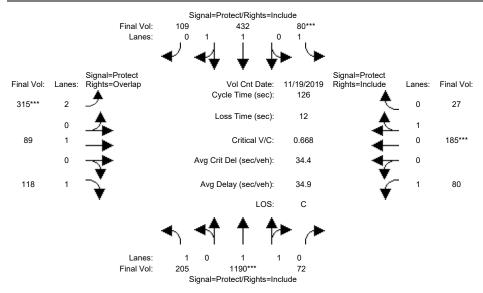
Approach: Movement:												
		10						10		7		
Y+R:		4.0				4.0			4.0		4.0	
Volume Module	e: >>	Count	Date:	19 No	ov 201	.9 <<			·			·
Base Vol:	177	1059	72	29	363	101	234	80	90	78	181	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	177	1059	72	29	363	101	234	80	90	78	181	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	10	102	0	51	35	8	81	9	16	0	4	8
Initial Fut:	187	1161	72	80	398	109	315	89	106	78	185	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	1161	72	80	398	109	315	89	106	78	185	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	1161	72	80	398	109	315	89	106	78	185	27
PCE Adj:	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:				1.00		1.00	1.00		1.00		1.00	1.00
FinalVolume:										78		27
Saturation F												
Sat/Lane:		1900		1900		1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		1.00	0.92		0.95	0.95
Lanes:			0.12	1.00			2.00		1.00		0.87	
Final Sat.:						795		1900	1750		1571	229
Capacity Ana												
Vol/Sat:						0.14		0.05	0.06	0.04	0.12	0.12
Crit Moves:							****				****	
Green Time:						40.7		24.5	56.2		22.5	22.5
Volume/Cap:			0.66	0.66		0.42		0.24	0.14		0.66	0.66
Delay/Veh:			24.0	69.8		33.7		43.3	20.7		53.2	53.2
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:						33.7		43.3	20.7		53.2	53.2
LOS by Move:				E		С	D	_	C	_	D	D
HCM2kAvgQ:				, 3		-	8		3	3	9	9
Note: Queue	repor	ted is	the n	umber	oi ca	ırs per	ıane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background+Project (AM)



Approach:	No	rth Bo	und	Sou	ıth Bo	und	Εā	ast Bo	und	We	est Bo	und
Movement:		- T		L -	- T	- R		- T		_	- T	- R
Min. Green:		10			10	10		10	10	7		10
Y+R:	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Volume Module												
Base Vol:		1059	72	29	363	101	234	80	90	78	181	19
Growth Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		1059	72	29	363	101	234	80	90	78	181	19
Added Vol:	6		0	0	12	0	0	0	6	1	0	0
ATI:	10		0	51	35	8	81	9	16	0	4	8
Initial Fut:	193	1170	72	80	410	109	315	89	112	79	185	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	193	1170	72	80	410	109	315	89	112	79	185	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	193	1170	72	80	410	109	315	89	112	79	185	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:			72	80	410	109	315	89	112	79	185	27
Saturation F.	low M	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.83	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	1.88	0.12	1.00	1.57	0.43	2.00	1.00	1.00	1.00	0.87	0.13
Final Sat.:	1750	3485	214	1750	2922	777	3150	1900	1750	1750	1571	229
Capacity Ana	lysis	Modul	e:									
Vol/Sat:	0.11	0.34	0.34	0.05	0.14	0.14	0.10	0.05	0.06	0.05	0.12	0.12
Crit Moves:		****		****			****				****	
Green Time:	31.9	63.9	63.9	8.7	40.6	40.6	19.0	24.4	56.3	17.1	22.4	22.4
Volume/Cap:	0.44	0.66	0.66	0.66	0.44	0.44	0.66	0.24	0.14	0.33	0.66	0.66
Delay/Veh:	40.1	24.0	24.0	70.1	33.9	33.9	53.9	43.3	20.7	50.2	53.4	53.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.1	24.0	24.0	70.1	33.9	33.9	53.9	43.3	20.7	50.2	53.4	53.4
LOS by Move:	D	С	С	E	С	С	D	D	С	D	D	D
HCM2kAvqQ:	7		18	3	8	8	8	3	3	3	9	9
Note: Queue	repor			umber	of ca	rs per	lane					
-	-					-						

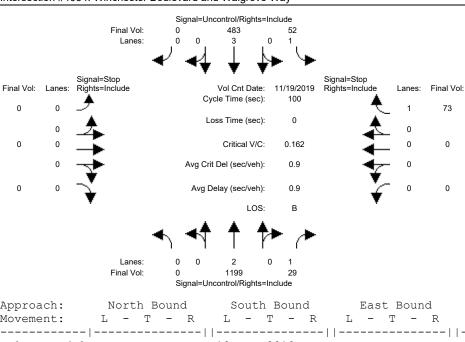
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Cumulative (AM)



Min. Green: 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 7 10 10 10 10 10 10 10 10 10 10 10 10 10	Approach: Movement:	L -	- T ·	- R	L -	- T	- R	L -	- T	- R	L ·	- T	- R
Y+R:													
Volume Module: >> Count Date: 19 Nov 2019 << Base Vol: 187 1161 72 80 398 109 315 89 106 78 185 27 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Base Vol: 187 1161 72 80 398 109 315 89 106 78 185 27 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Volume Module	e: >>	Count	Date:	19 No	ov 201	9 <<						
Initial Bse: 187 1161 72 80 398 109 315 89 106 78 185 27 Added Vol: 6 9 0 0 12 0 0 0 6 1 0 0 0 ATI: 12 20 0 0 0 22 0 0 0 0 6 1 0 0 0 Initial Fut: 205 1190 72 80 432 109 315 89 118 80 185 27 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Base Vol:	187	1161	72	80	398	109	315	89	106	78	185	27
Added Vol: 6 9 0 0 12 0 0 0 6 1 0 0 0 ATI: 12 20 0 0 0 6 1 0 0 ATI: 12 20 0 0 0 22 0 0 0 0 6 1 0 0 0 ATI: 12 20 0 0 0 22 0 0 0 0 6 1 0 0 0 ATI: 12 205 1190 72 80 432 109 315 89 118 80 185 27 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	_						1.00			1.00			
ATI: 12 20 0 0 0 22 0 0 0 0 6 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1												185	
Initial Fut: 205 1190 72 80 432 109 315 89 118 80 185 27 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Added Vol:											0	
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0												-	
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
PHF Volume: 205 1190 72 80 432 109 315 89 118 80 185 27 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	_												
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	_												
Reduced Vol: 205 1190											80	185	
Reduced Vol: 205 1190 72 80 432 109 315 89 118 80 185 27 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0			0	0	-	-	-			-		-	
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0			1190	72									
FinalVolume: 205 1190 72 80 432 109 315 89 118 80 185 27	PCE Adj:	1.00	1.00										
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190	_												
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190													
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190													
Adjustment: 0.92 0.98 0.95 0.92 0.98 0.95 0.83 1.00 0.92 0.92 0.95 0.95 Lanes: 1.00 1.88 0.12 1.00 1.59 0.41 2.00 1.00 1.00 1.00 0.87 0.13 Final Sat.: 1750 3489 211 1750 2954 745 3150 1900 1750 1750 1571 229													
Lanes: 1.00 1.88 0.12 1.00 1.59 0.41 2.00 1.00 1.00 1.00 0.87 0.13 Final Sat.: 1750 3489 211 1750 2954 745 3150 1900 1750 1750 1571 229	,												
Final Sat.: 1750 3489 211 1750 2954 745 3150 1900 1750 1750 1571 229	_												
Capacity Analysis Module: Vol/Sat: 0.12 0.34 0.34 0.05 0.15 0.15 0.10 0.05 0.07 0.05 0.12 0.12 Crit Moves: **** **** **** **** Green Time: 32.4 64.3 64.3 8.6 40.5 40.5 18.9 24.2 56.6 16.9 22.2 22.2 Volume/Cap: 0.46 0.67 0.67 0.67 0.46 0.46 0.67 0.24 0.15 0.34 0.67 0.67 Delay/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Capacity Analysis Module: Vol/Sat: 0.12 0.34 0.34 0.05 0.15 0.15 0.10 0.05 0.07 0.05 0.12 0.12 Crit Moves: **** **** **** **** Green Time: 32.4 64.3 64.3 8.6 40.5 40.5 18.9 24.2 56.6 16.9 22.2 22.2 Volume/Cap: 0.46 0.67 0.67 0.67 0.46 0.46 0.67 0.24 0.15 0.34 0.67 0.67 Delay/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Vol/Sat: 0.12 0.34 0.34 0.05 0.15 0.15 0.10 0.05 0.07 0.05 0.12 0.12 Crit Moves: **** **** **** **** **** **** Green Time: 32.4 64.3 64.3 8.6 40.5 40.5 18.9 24.2 56.6 16.9 22.2 22.2 Volume/Cap: 0.46 0.67 0.67 0.46 0.46 0.67 0.24 0.15 0.34 0.67 0.67 Delay/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00													
Crit Moves: **** **** **** **** **** **** Green Time: 32.4 64.3 64.3 8.6 40.5 40.5 18.9 24.2 56.6 16.9 22.2 22.2 Volume/Cap: 0.46 0.67 0.67 0.67 0.46 0.46 0.67 0.24 0.15 0.34 0.67 0.67 Delay/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0		-			0 05	0 15	0 15	0 10	0 05	0 07	0 05	0 12	0 10
Green Time: 32.4 64.3 64.3 8.6 40.5 40.5 18.9 24.2 56.6 16.9 22.2 22.2 Volume/Cap: 0.46 0.67 0.67 0.67 0.46 0.46 0.67 0.24 0.15 0.34 0.67 0.67 Delay/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0						0.13	0.13		0.05	0.07	0.05		0.12
Volume/Cap: 0.46 0.67 0.67 0.67 0.46 0.46 0.67 0.24 0.15 0.34 0.67 0.67 Delay/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0						40 E	40 E		24.2	5.6 G	160		22.2
Delay/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
AdjDel/Veh: 40.1 23.8 23.8 70.9 34.3 34.3 54.3 43.5 20.6 50.4 53.9 53.9 LOS by Move: D C C E C D D C D D D	-												
LOS by Move: D C C E C C D D C D D													
TOO DA MOAC D C C P C C D C C D													
HCM2kAvgQ: 7 19 19 3 8 8 8 3 3 9 9	TOS DA MOAG:	ם 7	10	10	3			_	د ر	3			9
Note: Queue reported is the number of cars per lane.										3	3	9	9

Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Existing (AM)

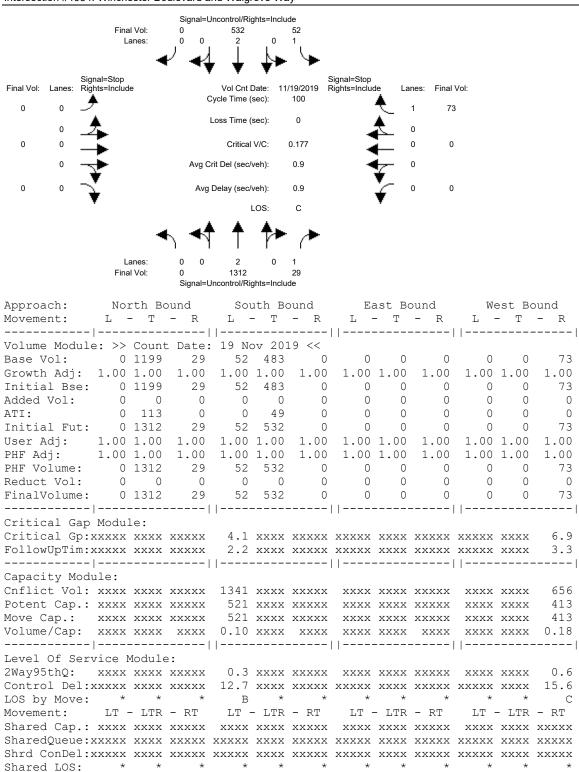
Intersection #4034: Winchester Boulevard and Walgrove Way



Approach:	orth B	ound	Soi	uth Bo	ound	Εä	ast Bo	ound	We	est Bo	ound
Movement: L	- T	- R	L ·	- T	- R	L ·	- T	- R	L ·	- T	- R
Volume Module:	> Coun	t Date:	: 19 No	ov 201	19 <<						
Base Vol:	0 1199	29	52	483	0	0	0	0	0	0	73
Growth Adj: 1.	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0 1199	29	52	483	0	0	0	0	0	0	73
Added Vol:	0 0	0	0	0	0	0	0	0	0	0	0
ATI:	0 0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0 1199	29	52	483	0	0	0	0	0	0	73
User Adj: 1.	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj: 1.	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0 1199	29	52	483	0	0	0	0	0	0	73
Reduct Vol:	0 0	0	0	0	0	0	0	0	0	0	0
FinalVolume:			52		-	0	-	0	0	0	73
Critical Gap Mod	lule:										
Critical Gp:xxx	x xxxx	XXXXX	4.1	XXXX	XXXXX	XXXXX	XXXX	XXXXX	XXXXX	XXXX	6.9
FollowUpTim:xxx											
Capacity Module											
Cnflict Vol: xx								XXXXX		XXXX	600
Potent Cap.: xx								XXXXX		XXXX	449
Move Cap.: xx:							XXXX	XXXXX	XXXX	XXXX	449
Volume/Cap: xx:					XXXX			XXXX		XXXX	
Level Of Service											
2Way95thQ: xx											
Control Del:xxx								XXXXX			14.6
LOS by Move:								*			В
Movement: L'										- LTR	- RT
Shared Cap.: xx											XXXXX
SharedQueue:xxx											
Shrd ConDel:xxx											
bilarca hob.	* *					*	*	*	*	*	*
ApproachDel:	XXXXXX		X			X				14.6	
ApproachLOS:	*			*			*			В	
Note: Queue rep	rted i	s the r	number	of ca	ars pe	r lane					

Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Background (AM)

Intersection #4034: Winchester Boulevard and Walgrove Way



ApproachDel:

ApproachLOS:

XXXXXX

Note: Queue reported is the number of cars per lane.

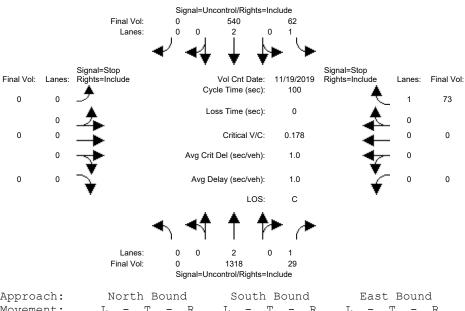
XXXXXX

XXXXXX

15.6

Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Background+Project (AM)

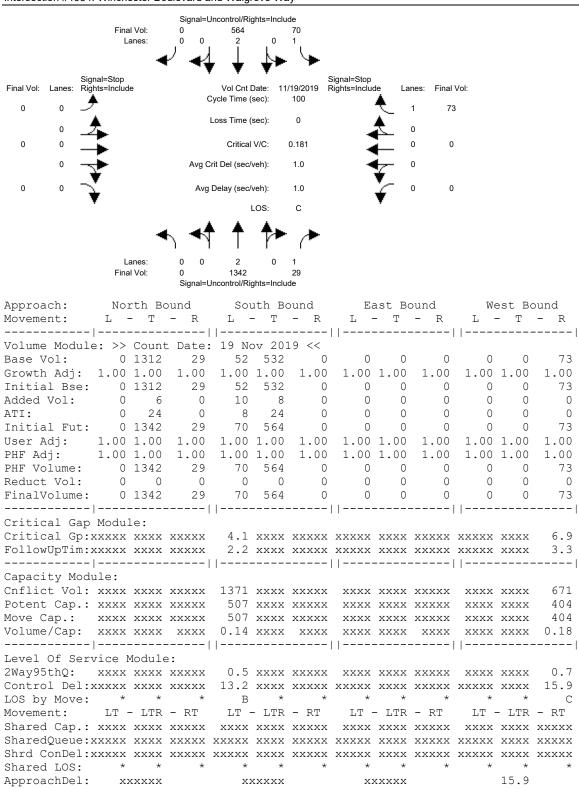
Intersection #4034: Winchester Boulevard and Walgrove Way



Movement:	L ·	- Т	- R	L -	- Т	- R	L -	- T	- R	West Bound L - T - R -		
Volume Module										' '		'
Base Vol:	0	1199	29	52	483	0	0	0	0	0	0	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1199	29	52	483	0	0	0	0	0	0	73
Added Vol:	0	6	0	10	8	0	0	0	0	0	0	0
ATI:	0	113	0	0	49	0	0	0	0	0	0	0
Initial Fut:	0	1318	29	62	540	0	0	0	0	0	0	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	-	1318	29	62	540	0	0	0	0	0	0	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	1318	29	62	540	0	0	0	0	0	0	73
Critical Gap	Modu:	le:										
Critical Gp:x	XXXX	XXXX	XXXXX	4.1	XXXX	XXXXX	XXXXX	XXXX	XXXXX	XXXXX	XXXX	6.9
FollowUpTim:x												3.3
Capacity Modu												
Cnflict Vol:						XXXXX		XXXX	XXXXX	XXXX	XXXX	659
Potent Cap.:						XXXXX			XXXXX		XXXX	411
Move Cap.:									XXXXX		XXXX	411
Volume/Cap:									XXXX		XXXX	0.18
Level Of Serv												
2Way95thQ:												
Control Del:x									XXXXX			15.6
LOS by Move:				В		*		*	*		*	С
Movement:											- LTR	- RT
Shared Cap.:												XXXXX
SharedQueue:x	XXXX	XXXX	XXXXX	XXXXX	XXXX	XXXXX	XXXXX	XXXX	XXXXX	XXXXX	XXXX	XXXXX
Shrd ConDel:x												XXXXX
Shared LOS:	*	*	*	*	*	*	*	*	*	*		*
ApproachDel:	X			X			XX				15.6	
ApproachLOS:		*			*			*			С	
Note: Queue r	eport	ted is	s the r	number	of ca	ars per	r lane	•				

Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Cumulative (AM)

Intersection #4034: Winchester Boulevard and Walgrove Way

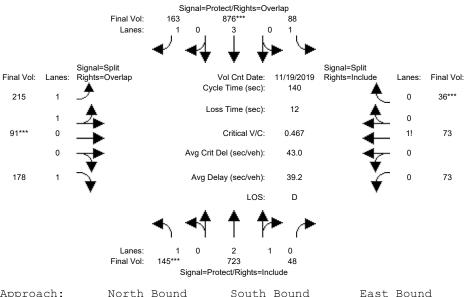


ApproachLOS:

Note: Queue reported is the number of cars per lane.

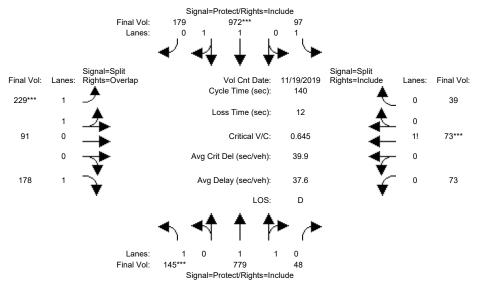
C

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (PM)



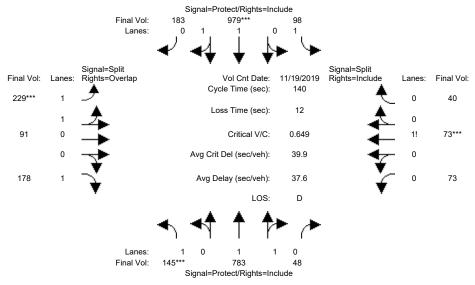
Movement:	L ·	- T ·	- R	South Bound L - T - R			L -	- T	- R	L -	- T	- R
Min. Green: Y+R:	7 4.0	10 4.0	10	7 4.0	10 4.0	10	10	10 4.0	10 4.0	10	10 4.0	10
				•								
Volume Module Base Vol:	e: >> 145	723	Date:	19 No	876	9 << 163	215	91	178	73	73	36
Growth Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
Initial Bse:		723	48	88	876	163	215	91	178	73	73	36
	0	0		0	0	0	0	0	0	0	0	0
ATI:				0	-	-	0	0	0	0	0	0
Initial Fut:				88	876	163	215	91	178	73	73	36
	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	145	723	48	88	876	163	215	91	178	73	73	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	723	48	88	876	163	215	91	178	73	73	36
PCE Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
FinalVolume:			48			163	215		178	73		36
	1											
Saturation F			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Sat/Lane:		1900		1900		1900		1900	1900		1900	1900
Adjustment:			0.95	0.92		0.92		0.95	0.92 1.00		0.92	0.92 0.20
Lanes: Final Sat.:	1.00		349			1750		1056		702		346
rinai sat												
Capacity Ana				1		ı	1		ı	1		1
Vol/Sat:	-			0.05	0.15	0.09	0.09	0.09	0.10	0.10	0.10	0.10
	***				***			***				***
Green Time:	24.9	52.0	52.0	19.0	46.1	72.0	25.9	25.9	50.7	31.2	31.2	31.2
Volume/Cap:	0.47	0.37	0.37	0.37	0.47	0.18	0.47	0.47	0.28	0.47	0.47	0.47
Delay/Veh:	52.7	35.8	35.8	56.1		18.3	51.4		31.9	48.1	48.1	48.1
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				56.1		18.3		51.4	31.9	48.1	48.1	48.1
LOS by Move:				Ε		_	D	D	С	D	D	D
HCM2kAvgQ:			_	4	10	4	7		6	8	8	8
Note: Queue	report	ted is	the n	umber	of ca	rs per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (PM)



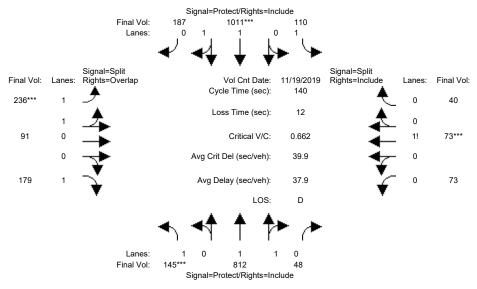
Min. Green: 7 10 10 7 10 10 10 10 10 10 10 10 10 10 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Volume Module: >> Count Date: 19 Nov 2019 << Base Vol: 145 723 48 88 876 163 215 91 178 73 73 36 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Base Vol: 145 723 48 88 876 163 215 91 178 73 73 36 Growth Adj: 1.00 1.
Base Vol: 145 723 48 88 876 163 215 91 178 73 73 36 Growth Adj: 1.00 1.
Initial Bse: 145 723 48 88 876 163 215 91 178 73 73 36 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ATI: 0 56 0 9 96 16 14 0 0 0 0 0 3 Initial Fut: 145 779 48 97 972 179 229 91 178 73 73 39 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Initial Fut: 145 779 48 97 972 179 229 91 178 73 73 39 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Volume: 145 779 48 97 972 179 229 91 178 73 73 39
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 145 779 48 97 972 179 229 91 178 73 73 39
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
FinalVolume: 145 779 48 97 972 179 229 91 178 73 73 39
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190
Adjustment: 0.92 0.98 0.95 0.92 0.98 0.95 0.93 0.95 0.92 0.92 0.92 0.92
Lanes: 1.00 1.88 0.12 1.00 1.68 0.32 1.44 0.56 1.00 0.40 0.39 0.21
Final Sat.: 1750 3485 215 1750 3124 575 2540 1009 1750 691 691 369
Capacity Analysis Module:
Vol/Sat: 0.08 0.22 0.22 0.06 0.31 0.31 0.09 0.09 0.10 0.11 0.11 0.11 Crit Moves: ***
CITC MOVES.
Green Time: 18.0 68.5 68.5 17.0 67.5 67.5 19.6 19.6 37.5 22.9 22.9 Volume/Cap: 0.65 0.46 0.46 0.46 0.65 0.65 0.65 0.65 0.38 0.65 0.65
•
Delay/Veh: 64.3 29.0 29.0 58.8 28.1 28.1 59.9 59.9 42.3 59.7 59.7 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
AdjDel/Veh: 64.3 29.0 29.0 58.8 28.1 28.1 59.9 59.9 42.3 59.7 59.7
LOS by Move: E C C E C C E E D E E E
HCM2kAvgQ: 7 14 14 5 19 19 8 8 7 9 9 9
Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background+Project (PM)



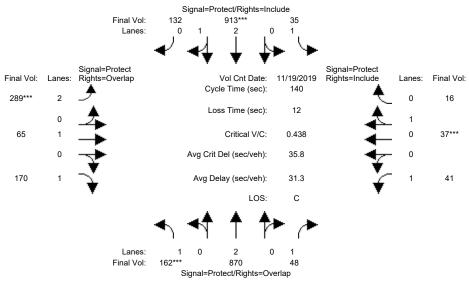
	North Bound L - T - R			South Bound								
Movement:												
		10				10						
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module	e: >>				ov 201							
	145	723	48	88	876				178		73	36
Growth Adj:			1.00	1.00			1.00		1.00		1.00	1.00
Initial Bse:			48	88	876	163	215	91	178	73	73	36
Added Vol:		4	0	1	7	4	0	0	0	0	0	1
ATI:		56		9				0		0		3
Initial Fut:				98		183	229		178			40
User Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:		783	48	98	979	183	229	91	178	73	73	40
Reduct Vol:		0		0		0	0	-	0	0	0	0
Reduced Vol:				98		183	229		178	73		40
PCE Adj: MLF Adj:	1.00	1.00		1.00		1.00		1.00	1.00		1.00	1.00
				1.00				1.00	1.00		1.00	1.00
FinalVolume:					979					73		40
Saturation F.												
		1900		1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:				0.92				0.95	0.92		0.92	0.92
Lanes:				1.00				0.56	1.00		0.39	0.22
Final Sat.:						583		1009		687		376
Capacity Ana	lysis	Module	∋:									
Vol/Sat:		0.22	0.22	0.06	0.31	0.31			0.10	0.11	0.11	0.11
Crit Moves:	****				****		****				****	
Green Time:	17.9	68.5	68.5	17.1	67.8	67.8	19.4	19.4	37.3	22.9	22.9	22.9
Volume/Cap:	0.65	0.46	0.46	0.46	0.65	0.65	0.65	0.65	0.38	0.65	0.65	0.65
Delay/Veh:			29.1	58.7	28.0	28.0		60.1	42.4		59.9	59.9
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				58.7		28.0		60.1	42.4		59.9	59.9
LOS by Move:				E				E		E		E
HCM2kAvgQ:				5					7	9	9	9
Note: Queue	report	ed is	the n	umber	of ca	rs per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Cumulative (PM)



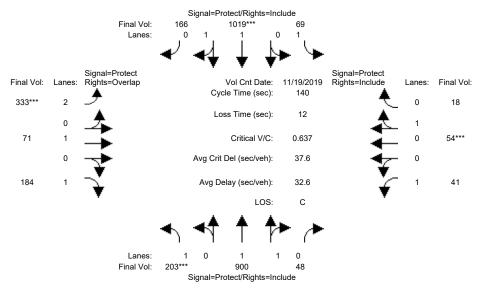
Approach: Movement:	L -	т -	R	L -	- т	- R	L -	- T	- R	L -	- T	- R
	7				10			10			10	
Y+R:						4.0					4.0	
Volume Module	e: >> C	ount I	Date:	19 No	ov 201	9 <<						
Base Vol:	145 ′	779	48	97	972	179	229	91	178	73	73	39
Growth Adj:	1.00 1	.00 1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:		779	48	97		179	229	91	178	73	73	39
				1		4	0	0	0	0	0	1
	0		0	12	32	4	7	0	_	0	0	0
Initial Fut:	145	812	48	110	1011	187	236	91	179	73	73	40
User Adj:			1.00	1.00		1.00	1.00		1.00	1.00		1.00
PHF Adj:			1.00	1.00		1.00	1.00		1.00	1.00		1.00
PHF Volume:	145	812	48	110	1011	187	236	91	179	73	73	40
Reduct Vol:		0	-	0		0	0		0	0	0	0
Reduced Vol:		812	48	110	1011	187	236	91	179	73	73	40
PCE Adj:	1.00 1	.00 1		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00 1	.00 1			1.00		1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:					1011					73		40
Saturation F												
Sat/Lane:	1900 19			1900		1900		1900	1900		1900	1900
Adjustment:				0.92		0.95		0.95	0.92		0.92	0.92
Lanes:				1.00		0.32	1.45		1.00		0.39	0.22
Final Sat.:			207			577	2562		1750	687		376
Capacity Ana	-											
Vol/Sat:		.23 (0.09	0.09	0.10	0.11	0.11	0.11
CIIC MOVES.	****						****				****	
	17.5 6			18.3		68.5		19.5	37.0		22.5	22.5
Volume/Cap:				0.48		0.66	0.66		0.39		0.66	0.66
Delay/Veh:			29.9	58.0		27.9	60.5		42.7	61.0		61.0
User DelAdj:				1.00		1.00	1.00		1.00		1.00	1.00
AdjDel/Veh:				58.0		27.9		60.5	42.7	61.0		61.0
LOS by Move:	E	С				С	E	Ε	D	E	E	E
HCM2kAvgQ:			15	5	20		8		7	9	9	9
Note: Queue	reported	d is t	the nu	umber	of car	rs per	lane					

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Existing (PM)



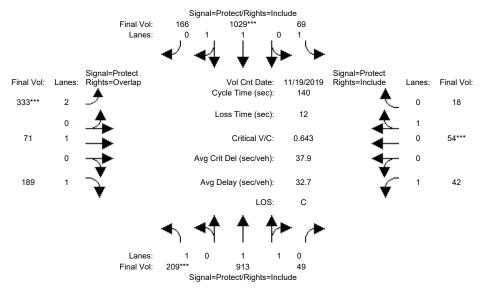
Approach:	No	rth Bo	und	Soi	ıth Bo	und	E	ast Bo	und	West Bound L - T - R		
Movement:		- T				- R		- T				
Min. Green:		10			10			10		7		10
Y+R:		4.0			4.0			- · ·	4.0	4.0		4.0
Volume Module												
Base Vol:	162		48	35	913	132	289	65	170	41	37	16
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			48	35	913	132	289	65	170	41	37	16
Added Vol:	0		0	0	0	0	0		0	0	0	0
ATI:	0		0	0	0	0	0	0	0	0	0	0
Initial Fut:	162	870	48	35	913	132	289	65	170	41	37	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	162	870	48	35	913	132	289	65	170	41	37	16
Reduct Vol:	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			48	35	913	132	289		170	41	37	16
PCE Adj:	1.00	1.00		1.00		1.00		1.00	1.00		1.00	1.00
MLF Adj:				1.00		1.00		1.00	1.00	1.00		1.00
FinalVolume:						132	289		170	41	37	16
Saturation F												
Saturation r. Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:				0.92		0.95		1.00	0.92		0.95	0.95
_	1.00		1.00		2.61	0.39		1.00	1.00		0.70	0.30
Final Sat.:			1750			707		1900	1750		1257	543
Capacity Ana	lysis	Modul	e:									
Vol/Sat:		0.23	0.03	0.02	0.19	0.19		0.03	0.10	0.02	0.03	0.03
Crit Moves:	****				****		****				****	
Green Time:	29.4	72.9	89.0		59.4	59.4	29.2	23.0	52.5		10.0	10.0
Volume/Cap:			0.04	0.18		0.44		0.21	0.26		0.41	0.41
Delay/Veh:			9.6	56.5		28.7		50.9	30.5		64.3	64.3
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:			9.6			28.7		50.9	30.5		64.3	64.3
LOS by Move:			A	E	C	C	D		С	E		E
	7		1	1		10	7		5	2	3	3
Note: Queue	repor	tea is	tne n	umber	oi ca	rs per	⊥ane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background (PM)



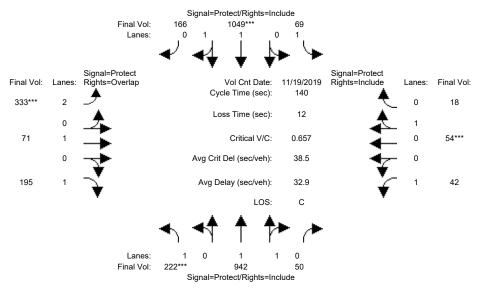
Approach: Movement:	L - T - R								und - R	West Bound R L - T - R 		
Min. Green:		10			 10			 10		7		10
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0		4.0
Volume Module												
Base Vol:	162	870	48	35	913	132	289	65	170	41	37	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	870	48	35	913	132	289	65	170	41	37	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	41	30	0	34	106	34	44	6	14	0	17	2
Initial Fut:	203	900	48	69	1019	166	333	71	184	41	54	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	203	900	48	69	1019	166	333	71	184	41	54	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	900	48	69	1019	166	333	71	184	41	54	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	203	900	48	69	1019	166	333	71	184	41	54	18
Saturation F	low M	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.83	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	1.90	0.10	1.00	1.71	0.29	2.00	1.00	1.00	1.00	0.75	0.25
Final Sat.:	1750	3513	187	1750	3181	518		1900	1750	1750		450
Capacity Ana												
Vol/Sat:		0.26	0.26	0.04	0.32	0.32		0.04	0.11	0.02		0.04
OTTO HOVOD.	****				****		****				****	
Green Time:		79.5	79.5		69.7	69.7		19.4	44.7	13.6		10.0
-			0.45		0.64	0.64		0.27	0.33	0.24		0.56
Delay/Veh:		17.7	17.7		26.7	26.7		54.5	36.6	59.2		68.4
User DelAdj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:			17.7		26.7	26.7		54.5	36.6	59.2		68.4
LOS by Move:		В	В	E	С	С	Ε	D	D	E	E	E
HCM2kAvgQ:	10	12	12	3	19	19	9	-	6	2	4	4
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background+Project (PM)



Movement:	L ·	- T	- R	L -	- T	- R	L -	- Т	- R	-		
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10	7 4.0	10 4.0	10	7 4.0	10 4.0	10
Volume Module					ov 201							
Base Vol:	162	870	48	35	913	132	289	65	170	41	37	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	870	48	35	913	132	289	65	170	41	37	16
Added Vol:	6	13	1	0	10	0	0	0	5	1	0	0
ATI:	41	30	0	34	106	34	44	6	14	0	17	2
Initial Fut:	209	913	49	69	1029	166	333	71	189	42	54	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	209	913	49	69	1029	166	333	71	189	42	54	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	209	913	49	69	1029	166	333	71	189	42	54	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	209	913	49	69	1029	166	333	71	189	42	54	18
Saturation F	low Mo	odule:										
Sat/Lane:		1900	1900	1900	1900	1900	1900	1900	1900	1900		1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.95	0.83	1.00	0.92	0.92	0.95	0.95
Lanes:	1.00	1.90	0.10	1.00	1.71	0.29	2.00	1.00	1.00	1.00	0.75	0.25
Final Sat.:	1750	3511	188	1750	3186	514	3150	1900	1750	1750	1350	450
Capacity Anal												
Vol/Sat:		0.26	0.26	0.04	0.32	0.32		0.04	0.11	0.02		0.04
OTTO HOVOD.	****				***		****				***	
		79.9	79.9	15.4		69.5		19.3	45.0	13.5		10.0
Volume/Cap:			0.46		0.65	0.65		0.27	0.34	0.25		0.56
Delay/Veh:		17.6	17.6		27.0	27.0		54.6	36.5	59.3		68.4
User DelAdj:			1.00		1.00	1.00	1.00		1.00	1.00		1.00
AdjDel/Veh:			17.6		27.0	27.0		54.6	36.5	59.3		68.4
LOS by Move:		В	В	E	С	С	E	D	D	E	E	E
HCM2kAvgQ:	10	12	12	3	19	19	9	-	7	2	4	4
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

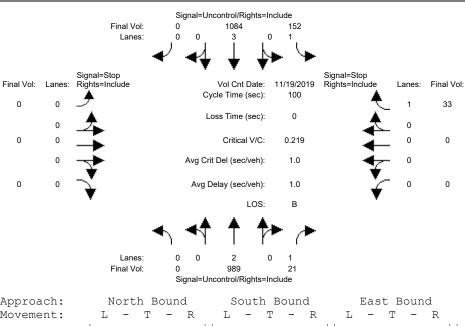
Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Cumulative (PM)



Approach:	No	rth Bo	und	Soi	uth Bo	und	Εa	ast Bo	und	We	st Bo	und
Movement:												
Min. Green:		10								7		
Y+R:		4.0				4.0						4.0
Volume Modul	e: >>	Count	Date:	19 No	ov 201	9 <<						
Base Vol:	203		48	69	1019	166	333	71	184	41	54	18
Growth Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:			48	69	1019	166	333	71	184	41	54	18
Added Vol:			1	0	10	0	0	0	5	1	0	0
ATI:		29	1	0	20	0	0	0	6	0	0	0
Initial Fut:	222	942	50	69	1049	166	333	71	195	42	54	18
User Adj:			1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00
PHF Volume:				69		166	333	71	195	42	54	18
		0	0	0		0	0		0	0	0	0
Reduced Vol:				69		166	333		195	42	54	18
PCE Adj:	1.00	1.00				1.00			1.00	1.00		1.00
MLF Adj:							1.00		1.00			1.00
FinalVolume:									195	42		18
Saturation F				1000	1000	1000	1000	1000	1000	1000	1000	1000
		1900	1900		1900			1900	1900			1900
Adjustment:				0.92			0.83		0.92	0.92		0.95
Lanes:				1.00		0.28			1.00			0.25
Final Sat.:						505			1750	1750		450
Capacity Ana												
Vol/Sat:				0 04	U 33	U 33	0 11	0 04	0 11	0.02	0 04	0.04
Crit Moves:		0.27			****		****	0.04	0.11		****	0.04
Green Time:		80.7	80.7	15.1	69.1	69.1	22.2	19.0	45.6	13.3	10.0	10.0
Volume/Cap:				0.37		0.67		0.28	0.34	0.25		0.56
Delay/Veh:			17.3	59.3		27.7		54.9	36.1	59.6		68.4
User DelAdj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:			17.3						36.1	59.6		68.4
LOS by Move:			В			С			D	E		E
HCM2kAvqQ:			12	3			9	3	7	2	4	4
Note: Queue			the n	umber	of ca	rs per	lane					

Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Existing (PM)

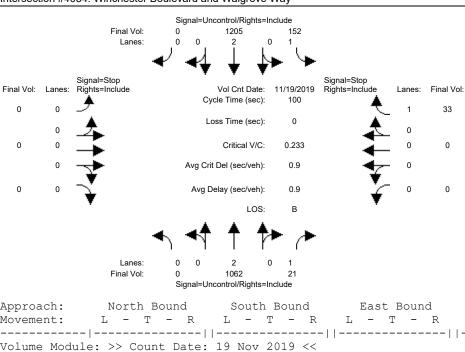
Intersection #4034: Winchester Boulevard and Walgrove Way



Movement:												
Volume Module												
Base Vol:	0	989	21		1084	0	0	0	0	0	0	33
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		989	21		1084	0	0	0	0	0	0	33
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:		989	21		1084	0	0	0	0	0	0	33
_	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
_	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
	0	989	21	152	1084	0	0	0	0	0	0	33
Reduct Vol:	-	-	0	0	0	0	0	0	0	0	0	0
FinalVolume:			21		1084		-	0	0	0	0	33
Critical Gap												
Critical Gp:												
FollowUpTim:												
Capacity Modu	,											
				1010								495
Cnflict Vol:									XXXXX		XXXX	526
Potent Cap.:									XXXXX		XXXX	
Move Cap.:									XXXXX		XXXX	526
Volume/Cap:						XXXX			XXXX		XXXX	
Level Of Serv												
				0 0								0 0
2Way95thQ:												
Control Del:				11.0				XXXX *	XXXXX	*		12.3
LOS by Move:						*					*	В
Movement:												
Shared Cap.:												XXXXX
SharedQueue:												
Shrd ConDel:												
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	X	XXXXX		X			X	XXXXX			12.3	
ApproachLOS:		*			*			*			В	
Note: Queue	repor	ted i	s the r	number	of ca	ars pe	r lane	•				

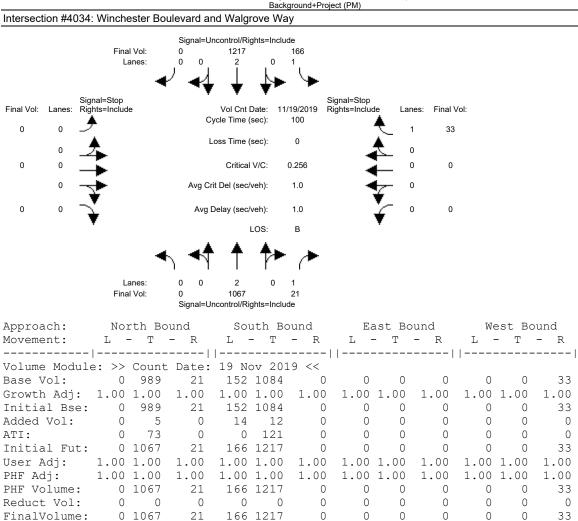
Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Background (PM)

Intersection #4034: Winchester Boulevard and Walgrove Way



11	rth Bound								
Movement: L									
Volume Module: >>									
Base Vol: 0				0				0	33
Growth Adj: 1.00				1.00				1.00	1.00
Initial Bse: 0				0	0	0	0	0	33
Added Vol: 0				0	0	0	0	0	0
	73 0			0	0	0	0	0	0
Initial Fut: 0				0	0	0	0	0	33
User Adj: 1.00				1.00		1.00		1.00	1.00
_	1.00 1.00				1.00	1.00		1.00	1.00
	1062 21		0	0	0	0	0	0	33
	0 0		-	•	0	0	0	0	0
	1062 21			-	0	0	0	0	33
Critical Gap Modu									
Critical Gp:xxxxx									6.9
FollowUpTim:xxxxx									3.3
Companie to a Marila la co									
Capacity Module:		1000							F 0.1
Cnflict Vol: xxxx								XXXX	531
Potent Cap.: xxxx								XXXX	498
Move Cap.: xxxx								XXXX	498
Volume/Cap: xxxx						XXXX		XXXX	0.07
Level Of Service		0 0							0 0
2Way95thQ: xxxx									
Control Del:xxxxx									12.7
LOS by Move: *						*			B
Movement: LT									
Shared Cap.: xxxx									XXXXX
SharedQueue:xxxxx									
Shrd ConDel:xxxxx									
Shared LOS: *	* *	* *	*	*	*	*	*	*	*
ApproachDel: x		XXXXXX		XX				12.7	
ApproachLOS:		*			*			В	
Note: Queue repor	ted is the	number of c	ars pe	r lane.					

Level Of Service Computation Report



-----|----| Critical Gap Module:

-----||-----||-----|

Capacity Module:

496 496 Volume/Cap: xxxx xxxx xxxx 0.26 xxxx xxxx xxxx xxxx xxxx xxxx xxxx 0.07 -----|

Level Of Service Module:

LOS by Move: * * * B * * * * * B LT - LTR - RT Movement: Shared LOS: * * * * XXXXXX ApproachDel: 12.8 XXXXXX XXXXXX

Note: Queue reported is the number of cars per lane.

ApproachLOS:

0

0

Ω

0

0

33

0

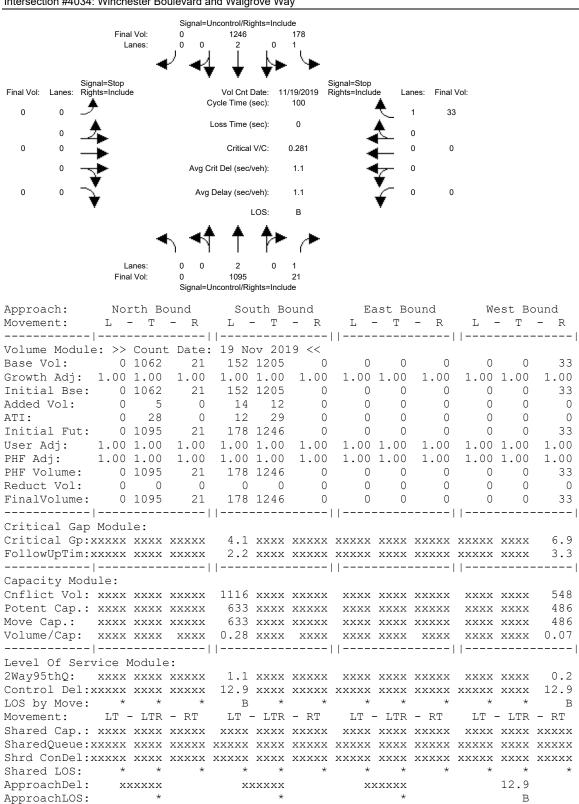
Ω

33

0

Level Of Service Computation Report 2000 HCM Unsignalized (Future Volume Alternative) Cumulative (PM)

Intersection #4034: Winchester Boulevard and Walgrove Way



Note: Queue reported is the number of cars per lane.

Appendix F Queue Length Calculations

Winchester/WilliamsWinchester/WilliamsWinchester/WilliamsNBLNBLNBLAMAMAM

AM AM AM AM Background Conditions Background Plus Project Conditions

Avg. Queue Per Lane in Veh= 6.2 Avg. Queue Per Lane in Veh= 6.5 Avg. Queue Per Lane in Veh= 6.8

Percentile = 95% 11 Percentile = 95% 11 Percentile = 95% 11

		Number of			Number of				Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued		Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.0020	0.0020	0	0.0014	0.0014	0		0.0012	0.0012	0
0.0126	0.0147	1	0.0094	0.0108	1		0.0079	0.0090	1
0.0391	0.0538	2	0.0308	0.0416	2		0.0266	0.0356	2 3
0.0808	0.1346	3	0.0672	0.1088	3		0.0599	0.0955	3
0.1252 0.1551	0.2598 0.4149	4 5	0.1099 0.1438	0.2187 0.3625	4 5		0.1011 0.1365	0.1965 0.3331	4 5
0.1601	0.5750	6	0.1569	0.5625	6		0.1537	0.3331	6
0.1417	0.7167	7	0.1369	0.6662	7		0.1337	0.6352	7
0.1097	0.8265	8	0.1200	0.7862	8		0.1253	0.7604	8
0.0755	0.9020	9	0.0873	0.8735	9		0.0940	0.8544	9
0.0468	0.9488	10	0.0571	0.9306	10		0.0635	0.9180	10
0.0264	0.9751	11	0.0340	0.9646	11		0.0390	0.9570	11
0.0136	0.9888	12	0.0185	0.9832	12		0.0220	0.9789	12
0.0065	0.9952	13	0.0093	0.9925	13		0.0114	0.9903	13
0.0029	0.9981	14	0.0044	0.9969	14		0.0055	0.9958	14
0.0012	0.9993	15	0.0019	0.9988	15		0.0025	0.9983	15
0.0005	0.9997	16	0.0008	0.9995	16		0.0010	0.9993	16
0.0002	0.9999	17	0.0003	0.9998	17		0.0004	0.9998	17
0.0001	1.0000	18 10	0.0001	0.9999	18		0.0002	0.9999	18 10
0.0000 0.0000	1.0000 1.0000	19 20	0.0000 0.0000	1.0000 1.0000	19 20		0.0001 0.0000	1.0000 1.0000	19 20
0.0000	1.0000	20 21	0.0000	1.0000	20 21		0.0000	1.0000	20 21
0.0000	1.0000	22	0.0000	1.0000	22		0.0000	1.0000	22
0.0000	1.0000	23	0.0000	1.0000	23		0.0000	1.0000	23
0.0000	1.0000	24	0.0000	1.0000	24		0.0000	1.0000	24
0.0000	1.0000	25	0.0000	1.0000	25		0.0000	1.0000	25
0.0000	1.0000	26	0.0000	1.0000	26		0.0000	1.0000	26
0.0000	1.0000	27	0.0000	1.0000	27		0.0000	1.0000	27
0.0000	1.0000	28	0.0000	1.0000	28		0.0000	1.0000	28
0.0000	1.0000	29	0.0000	1.0000	29		0.0000	1.0000	29
0.0000	1.0000	30	0.0000	1.0000	30		0.0000	1.0000	30
0.0000	1.0000	31	0.0000	1.0000	31		0.0000	1.0000	31
0.0000	1.0000	32	0.0000	1.0000	32		0.0000	1.0000	32
0.0000	1.0000	33	0.0000	1.0000	33		0.0000	1.0000	33
0.0000	1.0000	34 35	0.0000	1.0000	34 35		0.0000	1.0000	34 35
0.0000 0.0000	1.0000 1.0000	36	0.0000 0.0000	1.0000 1.0000	35 36		0.0000 0.0000	1.0000 1.0000	35 36
0.0000	1.0000	37	0.0000	1.0000	36 37		0.0000	1.0000	36 37
0.0000	1.0000	38	0.0000	1.0000	38		0.0000	1.0000	38
0.0000	1.0000	39	0.0000	1.0000	39		0.0000	1.0000	39
0.0000	1.0000	40	0.0000	1.0000	40		0.0000	1.0000	40
0.0000	1.0000	41	0.0000	1.0000	41		0.0000	1.0000	41
0.0000	1.0000	42	0.0000	1.0000	42		0.0000	1.0000	42
0.0000	1.0000	43	0.0000	1.0000	43		0.0000	1.0000	43
0.0000	1.0000	44	0.0000	1.0000	44		0.0000	1.0000	44
0.0000	1.0000	45	0.0000	1.0000	45		0.0000	1.0000	45
0.0000	1.0000	46	0.0000	1.0000	46		0.0000	1.0000	46
0.0000	1.0000	47	0.0000	1.0000	47 49		0.0000	1.0000	47 49
0.0000 0.0000	1.0000 1.0000	48 49	0.0000 0.0000	1.0000 1.0000	48 49		0.0000 0.0000	1.0000 1.0000	48 49
0.0000	1.0000	50	0.0000	1.0000	49 50		0.0000	1.0000	49 50
0.0000	1.0000	50 51	0.0000	1.0000	50 51		0.0000	1.0000	50 51
0.0000	1.0000	52	0.0000	1.0000	52		0.0000	1.0000	52
0.0000	1.0000	53	0.0000	1.0000	53		0.0000	1.0000	53
0.0000	1.0000	54	0.0000	1.0000	54		0.0000	1.0000	54
0.0000	1.0000	55	0.0000	1.0000	55		0.0000	1.0000	55
0.0000	1.0000	56	0.0000	1.0000	56		0.0000	1.0000	56
0.0000	1.0000	57	0.0000	1.0000	57		0.0000	1.0000	57
0.0000	1.0000	58	0.0000	1.0000	58		0.0000	1.0000	58
0.0000	1.0000	59	0.0000	1.0000	59		0.0000	1.0000	59
0.0000	1.0000	60	0.0000	1.0000	60		0.0000	1.0000	60
0.0000	1.0000	61	0.0000	1.0000	61		0.0000	1.0000	61
0.0000 0.0000	1.0000 1.0000	62 63	0.0000 0.0000	1.0000 1.0000	62 63		0.0000 0.0000	1.0000 1.0000	62 63
0.0000	1.0000	64	0.0000	1.0000	63 64		0.0000	1.0000	63 64
0.0000	1.0000	65	0.0000	1.0000	65		0.0000	1.0000	65
0.0000	1.5000	5 5	0.0000	1.5000	50	ı	0.0000	1.5000	00

Winchester/WilliamsWinchester/WilliamsWinchester/WilliamsNBLNBLNBLPMPMPM

Existing Conditions

Avg. Queue Per Lane in Veh=
Percentile = 95%

Background Conditions

Background Plus Project Conditions

Background Plus Project Conditions

Avg. Queue Per Lane in Veh=
7.9

Avg. Queue Per Lane in Veh=
8.1

Percentile = 95%

13

Percentile = 95%

13

		Number of	1			Number of			Number of
Individual	Cumulative	Queued		Individual	Cumulative	Queued	Individual	Cumulative	Queued
Probability	Probability	Vehicles		Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.0018	0.0018	0		0.0004	0.0004	0	0.0003	0.0003	0
0.0016	0.0134	1		0.0029	0.0033	1	0.0003	0.0003	1
0.0364	0.0498	2		0.0116	0.0149	2	0.0024	0.0124	2
0.0765	0.1264	3		0.0306	0.0455	3	0.0264	0.0389	3
0.1205	0.2469	4		0.0603	0.1058	4	0.0537	0.0925	4
0.1519	0.3988	5		0.0953	0.2011	5	0.0873	0.1798	5
0.1595	0.5582	6		0.1253	0.3264	6	0.1182	0.2980	6
0.1435	0.7017	7		0.1414	0.4678	7	0.1373	0.4353	7
0.1130	0.8148	8		0.1395	0.6073	8	0.1394	0.5747	8
0.0791	0.8939	9		0.1224	0.7296	9	0.1259	0.7006	9
0.0498	0.9437	10		0.0966	0.8262	10	0.1024	0.8030	10
0.0285	0.9723	11		0.0693	0.8955	11	0.0756	0.8786	11
0.0150	0.9873	12		0.0456	0.9411	12	0.0512	0.9299	12
0.0073	0.9945	13		0.0277	0.9688	13	0.0320	0.9619	13
0.0033	0.9978	14		0.0156	0.9845	14	0.0186	0.9805	14
0.0014	0.9992	15		0.0082	0.9927	15	0.0101	0.9905	15
0.0005	0.9997	16		0.0041	0.9967	16	0.0051	0.9957	16
0.0002	0.9999	17		0.0019	0.9986	17	0.0024	0.9981	17
0.0001	1.0000	18		0.0008	0.9994	18	0.0011	0.9992	18
0.0000	1.0000	19		0.0003	0.9998 0.9999	19	0.0005	0.9997	19
0.0000	1.0000	20		0.0001		20	0.0002	0.9999	20
0.0000	1.0000	21 22		0.0001 0.0000	1.0000	21 22	0.0001	1.0000	21
0.0000 0.0000	1.0000 1.0000	22		0.0000	1.0000 1.0000	23	0.0000 0.0000	1.0000 1.0000	22 23
0.0000	1.0000	23 24		0.0000	1.0000	23 24	0.0000	1.0000	23 24
0.0000	1.0000	25 25		0.0000	1.0000	2 4 25	0.0000	1.0000	25 25
0.0000	1.0000	26		0.0000	1.0000	26 26	0.0000	1.0000	26 26
0.0000	1.0000	27		0.0000	1.0000	27	0.0000	1.0000	27
0.0000	1.0000	28		0.0000	1.0000	28	0.0000	1.0000	28
0.0000	1.0000	29		0.0000	1.0000	29	0.0000	1.0000	29
0.0000	1.0000	30		0.0000	1.0000	30	0.0000	1.0000	30
0.0000	1.0000	31		0.0000	1.0000	31	0.0000	1.0000	31
0.0000	1.0000	32		0.0000	1.0000	32	0.0000	1.0000	32
0.0000	1.0000	33		0.0000	1.0000	33	0.0000	1.0000	33
0.0000	1.0000	34		0.0000	1.0000	34	0.0000	1.0000	34
0.0000	1.0000	35		0.0000	1.0000	35	0.0000	1.0000	35
0.0000	1.0000	36		0.0000	1.0000	36	0.0000	1.0000	36
0.0000	1.0000	37		0.0000	1.0000	37	0.0000	1.0000	37
0.0000	1.0000	38		0.0000	1.0000	38	0.0000	1.0000	38
0.0000	1.0000	39		0.0000	1.0000	39	0.0000	1.0000	39
0.0000	1.0000	40		0.0000	1.0000	40	0.0000	1.0000	40
0.0000	1.0000	41		0.0000	1.0000	41	0.0000	1.0000	41
0.0000	1.0000	42		0.0000	1.0000	42	0.0000	1.0000	42
0.0000	1.0000	43		0.0000	1.0000	43	0.0000	1.0000	43
0.0000	1.0000	44		0.0000	1.0000	44	0.0000	1.0000	44
0.0000	1.0000	45 46		0.0000	1.0000	45 46	0.0000	1.0000	45 46
0.0000	1.0000	46		0.0000	1.0000	46 47	0.0000	1.0000	46
0.0000 0.0000	1.0000 1.0000	47 48		0.0000 0.0000	1.0000 1.0000	47 48	0.0000 0.0000	1.0000 1.0000	47 48
0.0000	1.0000	48 49		0.0000	1.0000	48 49	0.0000	1.0000	48 49
0.0000	1.0000	49 50		0.0000	1.0000	49 50	0.0000	1.0000	49 50
0.0000	1.0000	50 51		0.0000	1.0000	50 51	0.0000	1.0000	50 51
0.0000	1.0000	52		0.0000	1.0000	52	0.0000	1.0000	52
0.0000	1.0000	53		0.0000	1.0000	53	0.0000	1.0000	53
0.0000	1.0000	54		0.0000	1.0000	54	0.0000	1.0000	54
0.0000	1.0000	55		0.0000	1.0000	55	0.0000	1.0000	55
0.0000	1.0000	56		0.0000	1.0000	56	0.0000	1.0000	56
0.0000	1.0000	57		0.0000	1.0000	57	0.0000	1.0000	57
0.0000	1.0000	58		0.0000	1.0000	58	0.0000	1.0000	58
0.0000	1.0000	59		0.0000	1.0000	59	0.0000	1.0000	59
0.0000	1.0000	60		0.0000	1.0000	60	0.0000	1.0000	60
0.0000	1.0000	61		0.0000	1.0000	61	0.0000	1.0000	61
0.0000	1.0000	62		0.0000	1.0000	62	0.0000	1.0000	62
0.0000	1.0000	63		0.0000	1.0000	63	0.0000	1.0000	63
0.0000	1.0000	64		0.0000	1.0000	64	0.0000	1.0000	64
0.0000	1.0000	65		0.0000	1.0000	65	0.0000	1.0000	65

Winchester/Walgrove SBL Winchester/Walgrove SBL Winchester/Walgrove SBL AM
Existing Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% ΑM AM Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% Background Plus Project Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% 0.2 0.2

1

Individual Cumulative Queued Individual Cumulative Queued Individual Cumulative Queued	Percenule =	95%	1	Percentile =	95%	Į.		Percentile =	95%	ļ
Individual			Number of			Number of	l			Number of
O 8421	Individual	Cumulative		Individual	Cumulative			Individual	Cumulative	Queued
0.1447	Probability	Probability	Vehicles	Probability	Probability	Vehicles		Probability	Probability	Vehicles
0.1447	0.8421	0.8421	0	0.8324	0.8324	0		0.8008	0.8008	0
0.0124										
0.0007										
0.0000										
0.0000										
0.0000						5				
0.0000						6				6
0.0000						7				7
0.0000										
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0.0000	0.0000	1.0000	11	0.0000	1.0000	11		0.0000	1.0000	
0.0000				0.0000					1.0000	12
0.0000									1.0000	
0.0000	0.0000	1.0000	14	0.0000	1.0000	14		0.0000	1.0000	14
0.0000	0.0000	1.0000	15	0.0000	1.0000	15		0.0000	1.0000	15
0.0000			16	0.0000		16				
0.0000	0.0000	1.0000	17	0.0000	1.0000	17		0.0000	1.0000	17
0.0000	0.0000		18						1.0000	18
0.0000	0.0000			0.0000						
0.0000	0.0000	1.0000	20	0.0000	1.0000	20		0.0000	1.0000	20
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0.2

1

Winchester/Walgrove Winchester/Walgrove Winchester/Walgrove SBL SBL SBL
PM PM PM PM
Replacement Conditions Replacement Conditions Replacement Conditions

Existing Conditions

Avg. Queue Per Lane in Veh=

95%

2

Background Conditions

Background Plus Project Conditions

Avg. Queue Per Lane in Veh=

0.5

Avg. Queue Per Lane in Veh=

95%

2

Percentile = 95%

2

Percentile = 95%

2

Percentile = 95%

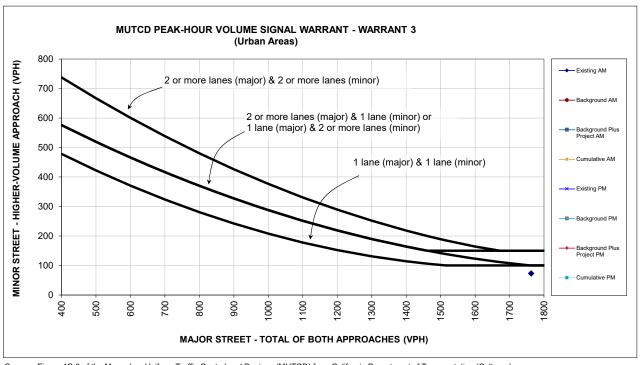
2

Individual	Cumulative	Number of Queued	Individual	Cumulative	Number of Queued	Individual	Cumulative	Number of Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles	Probability	Probability	Vehicles
0.6128	0.6128	0	0.5974	0.5974	0	0.5645	0.5645	0
0.3001	0.9129	1	0.3077	0.9052	1	0.3228	0.8873	1
0.0735 0.0120	0.9864 0.9984	2 3	0.0793 0.0136	0.9844 0.9981	2 3	0.0923 0.0176	0.9796 0.9972	2 3
0.0015	0.9998	4	0.0018	0.9998	4	0.0176	0.9972	4
0.0001	1.0000	5	0.0002	1.0000	5	0.0003	1.0000	5
0.0000	1.0000	6	0.0000	1.0000	6	0.0000	1.0000	6
0.0000	1.0000	7	0.0000	1.0000	7	0.0000	1.0000	7
0.0000	1.0000	8	0.0000	1.0000	8	0.0000	1.0000	8
0.0000	1.0000	9	0.0000	1.0000	9	0.0000	1.0000	9
0.0000 0.0000	1.0000 1.0000	10	0.0000 0.0000	1.0000 1.0000	10 11	0.0000	1.0000	10
0.0000	1.0000	11 12	0.0000	1.0000	12	0.0000 0.0000	1.0000 1.0000	11 12
0.0000	1.0000	13	0.0000	1.0000	13	0.0000	1.0000	13
0.0000	1.0000	14	0.0000	1.0000	14	0.0000	1.0000	14
0.0000	1.0000	15	0.0000	1.0000	15	0.0000	1.0000	15
0.0000	1.0000	16	0.0000	1.0000	16	0.0000	1.0000	16
0.0000	1.0000	17	0.0000	1.0000	17	0.0000	1.0000	17
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Appendix G Signal Warrant Check

1065 S. Winchester Mixed-Use

3 . Winchester Boulevard and Walgrove Way



Source: Figure 4C-3 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).

^{* 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.

		La	roach nes 2 or More	Existing AM	Background AM	Background Plus Project AM	Cumulative AM
Major Street - Both Approaches	Winchester Boulevard		X	1763	1925	1949	2005
Minor Street - Highest Approach	Walgrove Way	X		73	73	73	73
Maximum warrant threshold for minor street volu	me			100	100	100	100
Difference between warrant threshold & minor st	reet volume			27	27	27	27
		Warra	nt Met?	No	No	No	No
			roach nes	Existing PM	Background PM	Background Plus Project PM	Cumulative PM
		One	2 or More	Exis	Back	Back Proje	Cumul
Major Street - Both Approaches	Winchester Boulevard	One		2246	9ac 0440	Proje	2540
Major Street - Both Approaches Minor Street - Highest Approach	Winchester Boulevard Walgrove Way	One	More				
	Walgrove Way		More	2246	2440	2471	2540
Minor Street - Highest Approach	Walgrove Way		More	2246 33	2440	2471	2540 33

Appendix H Traffic Demand Management (TDM) Plan







1065 South Winchester Mixed-Use **Development**

Draft Transportation Demand Management (TDM) Plan

Prepared for:

Visrael 26, LLC.

October 13, 2021













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Hexagon Job Number: 21RD01

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Areawide Circulation Plans Corridor Studies Pavement Delineation Plans Traffic Handling Plans Impact Fees Interchange Analysis Parking Studies Transportation Planning Neighborhood Traffic Calming Traffic Operations Traffic Impact Analysis Traffic Signal Design Travel Demand Forecasting

Table of Contents

1. Intro	oduction	1
2. Exis	sting Transportation Facilities	5
3. TDI	M Plan	11
List of	Tables	
Table 1	Vehicle Parking Requirements	15
List of	Figures	
Figure 1	Project Site Location	3
Figure 2	Project Site Plan	4
Figure 3	Existing Bicycle Facilities	9
	Existing Transit Services	



1. Introduction

Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems. The purpose of TDM is to (1) reduce the number of trips generated by new development; (2) promote more efficient utilization of existing transportation facilities and ensure that new developments are designed to maximize the potential for sustainable transportation usage; (3) reduce the parking demand generated by new development and allow for a reduction in parking supply; (4) establish an ongoing monitoring and enforcement program to guarantee the desired trip and parking reductions are achieved.

This TDM plan has been prepared for the proposed mixed-use development located at 1065 S. Winchester Boulevard to satisfy the requirements outlined in Section 20.90.220 of the San Jose Code of Ordinances. The ordinance allows developments to use up to a maximum of 50 percent parking reduction, so long as the following requirements are met:

- The reduction in parking will not adversely affect surrounding projects
- The reduction in parking will not rely upon or reduce the public parking supply
- The project provides a detailed TDM plan and demonstrates that the TDM program can be maintained indefinitely

This TDM Plan addresses all the requirements of the City's ordinance and includes TDM measures designed to reduce the proposed project's parking demand and trips by residents and office tenants. The TDM plan includes maintaining an online kiosk of trip-planning resources, providing 100 percent unbundled parking for all residential spaces, providing VTA SmartPasses to residential and commercial tenants, and providing adequate on-site bicycle storage.

Additionally, the Transportation Analysis dated October 13, 2021 completed for the project indicates that the proposed office component of the project would result in an impact on the transportation system based on the City's VMT impact criteria. The project will implement one of the following mitigation measures to reduce the identified significant VMT impact.

- Telecommuting and Alternative Work Schedules eligible to 50% of employees on a 4/40 schedule **or**
- Operate a Free Direct Shuttle eligible to 15% of employees or
- Provide Ride-Sharing Programs eligible to 15% of employees or
- A combination of the following:



- i) Car Sharing Program eligible to 100% of employees and
- ii) Commute Trip Reduction Marketing/Education eligible to 100% of employees and
- iii) Employee Parking "Cash-Out" eligible to 70% of employees

Project Description

The project site is located along the west side of Winchester Boulevard, approximately 350 feet south of Williams Road and within a designated Urban Village (Winchester Boulevard). According to the Envision San Jose 2040 General Plan, an Urban Village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

As proposed, the development would consist of the replacement of a single-family home currently on-site with 70 condominium units and 20,410 square feet of office space. A total of 105 parking spaces will be provided on-site. Access to and from the project site would be provided via one right-in/right-out driveway along Winchester Boulevard. The project site location, the surrounding study area, and the Winchester Boulevard Urban Village boundary are shown in Figure 1. The project site plan is shown in Figure 2.

Location and Proximity to Transit

The location of a project within an urban village promotes pedestrian and bicycle travel in a high-density area of complementary land uses.

The project site is located approximately 1.4 miles from the Hamilton LRT Station, at the interchange of SR 17 and Hamilton Avenue, which connects to the San Jose Diridon Station. Several VTA local and express route bus stops are located within walking distance of the project site. Chapter 2 describes the existing transit services in the study area.

Parking

Based on the City's standard parking requirements, the project is required to provide a total of 177 off-street parking spaces before any reductions. However, the project is located in the Winchester Urban Village. The Urban Village Overlay automatically allows for a 20 percent reduction in parking. With the 20 percent reduction, the required parking would be reduced to 142 spaces, consisting of 86 spaces for the residential use and 56 spaces for the office use. The project is proposing a total of 105 parking spaces, which would not meet the City's reduced parking requirements.

The proposed number of parking spaces represents a 41% reduction from the standard required number of spaces. With the 20% Urban Village reduction, the project requires an additional 21% reduction in on-site parking spaces. Therefore, the project will need to submit and have approved a TDM plan. The TDM plan will need to include at least three TDM measures specified in Subsections c and d of Section 20.90.220.A.1.

Report Organization

The remainder of this report is divided into two chapters. Chapter 2 describes the transportation facilities and services in the vicinity of the project site. Chapter 3 describes the TDM measures that would be implemented for the proposed project, including the program for implementing and monitoring the TDM plan.



Figure 1
Project Site Location

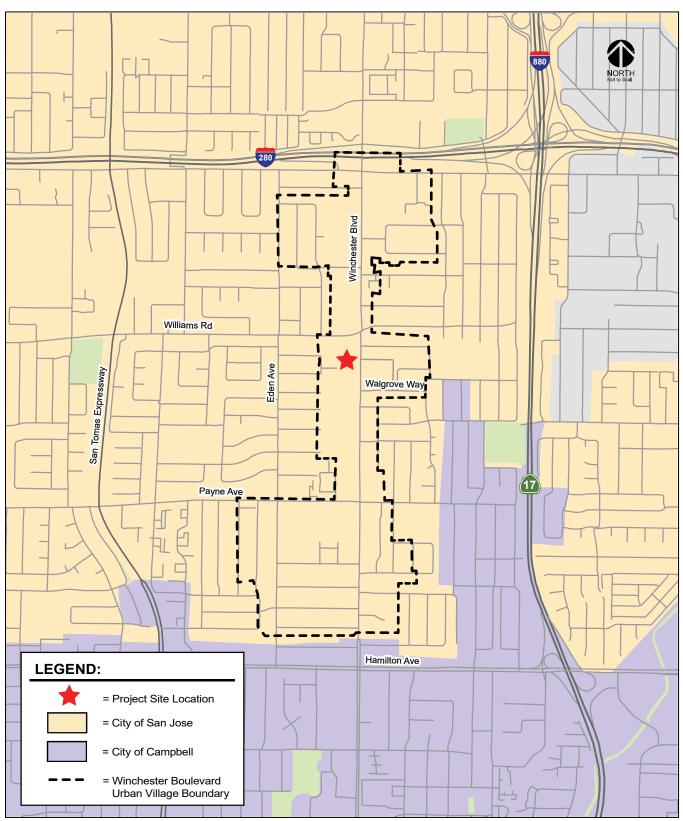
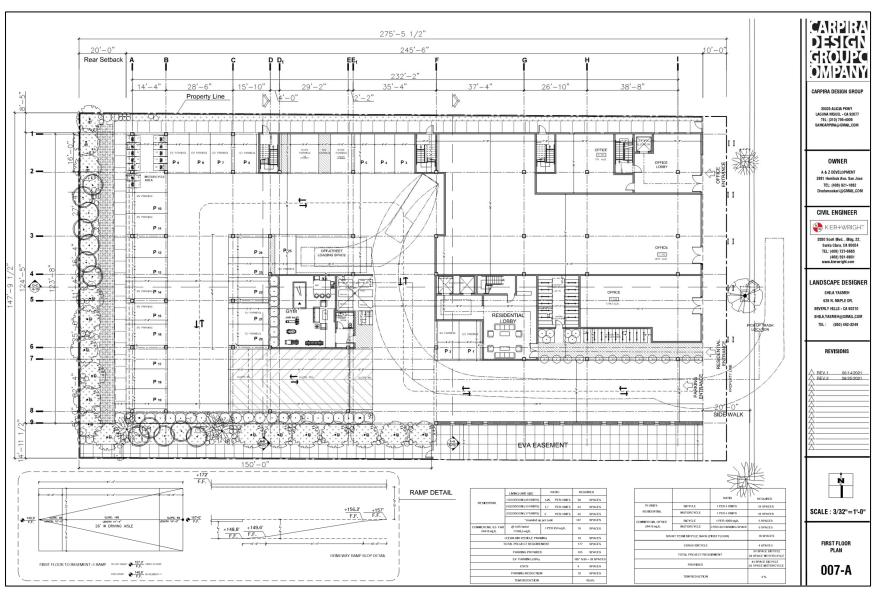




Figure 2 Project Site Plan





2.

Existing Transportation Facilities

This chapter describes the existing conditions of the transportation system within the study area of the project. It describes transportation facilities in the vicinity of the project site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via SR 17 and I-280. These facilities are described below.

SR 17 is a six-lane freeway in the vicinity of the site. It extends from Santa Cruz to I-280 in San Jose, at which point it makes a transition to I-880 to Oakland. Access to the site from the south and north are provided via its interchanges with Hamilton Avenue and Stevens Creek Boulevard, respectively.

I-280 is an eight-lane freeway in the vicinity of the site. It extends northwest to San Francisco and east to King Road in San Jose, at which point it makes a transition to I-680 to Oakland. North of I-880, I-280 has high occupancy vehicle (HOV) lanes in both directions. Access to and from northbound I-280 to the site is provided via its interchange with Winchester Boulevard. Access to and from southbound I-280 to the site is provided via Moorpark Avenue, Stevens Creek Boulevard, and SR 17 to Hamilton Avenue.

Local access to the site is provided by Winchester Boulevard, Moorpark Avenue, Williams Road, Payne Avenue, Hamilton Avenue, San Tomas Expressway, and Eden Avenue. These roadways are described below.

Winchester Boulevard is designated as a Main Street in the 2040 General Plan and is a divided six-lane north-south roadway that runs from Los Gatos to Lincoln Street in Santa Clara. In the project vicinity, Winchester Boulevard has a posted speed limit of 35 mph with sidewalks on both sides of the street and on-street bike lanes between I-280 and Stevens Creek Boulevard. Direct access to and from the project site is provided via a right-in/right-out-only driveway along Winchester Boulevard.

Moorpark Avenue is designated as a City Connector Street in the 2040 General Plan and is a four-lane east-west roadway that runs from Lawrence Expressway to Bascom Avenue. East of Bascom Avenue, Moorpark Avenue makes a transition into a three-lane one-way roadway to Leigh Avenue. Moorpark Avenue provides access to the project site via Winchester Boulevard.



Williams Road is designated as an On-Street Primary Bicycle Facility in the 2040 General Plan and is a two-lane east-west roadway in the vicinity of the project site. It extends east from Moorpark Avenue to South Daniel Way, just east of Winchester Boulevard. Williams Road provides access to the project site via Winchester Boulevard.

Payne Avenue is designated as a Local Connector Street in the 2040 General Plan and is a two-lane east-west roadway in the vicinity of the project site. It extends east from Saratoga Avenue to Almarida Drive, just east of Winchester Boulevard. Payne Avenue provides access to the project site via Winchester Boulevard.

Hamilton Avenue is designated as a City Connector Street in the 2040 General Plan and is a six-lane east-west roadway between Marathon Drive and Leigh Avenue. West of Marathon Drive, Hamilton Avenue narrows to a four-lane roadway and extends west to Campbell Avenue. East of Leigh Avenue, Hamilton Avenue narrows to a four-lane roadway and extends west to Meridian Avenue. Hamilton Avenue provides access to the project site via Winchester Boulevard.

San Tomas Expressway is designated as an Expressway in the 2040 General Plan and is a north-south expressway that begins at its interchange with US 101 and extends southward through Santa Clara and San Jose and into Campbell, where it transitions into Camden Avenue at SR 17. San Tomas Expressway provides access to and from the project site via Williams Road and Payne Avenue.

Eden Avenue is a two-lane north-south roadway in the vicinity of the project site. It extends north from Hamilton Avenue to Moorpark Avenue. Eden Avenue provides access to the project site via Williams Road and Payne Avenue.

Existing Bicycle and Pedestrian Facilities

Class II Bikeway (Bike Lane). Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Within the vicinity of the project site, striped bike lanes are present on the following roadway segments.

- Winchester Boulevard, between Hamilton Avenue and Williams Road
- Winchester Boulevard, between Tisch Way and Stevens Creek Boulevard
- Hamilton Avenue, west of SR 17
- Payne Avenue, west of Winchester Boulevard
- Williams Road, west of Baywood Avenue
- Moorpark Avenue, west of Thornton Way
- Monroe Street, between Tisch Way and Stevens Creek Boulevard

Class III Bikeway (Bike Route). Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations. In the vicinity of the project site, the following roadway segments are designated as bike routes.

- Payne Avenue, between Winchester Boulevard and Greenbriar Avenue
- Eden Avenue, between Impala Drive and Hamilton Avenue
- Milton Avenue, south of Hamilton Avenue
- Darryl Drive, between Hamilton Avenue and Payne Avenue
- Monroe Street, between Moorpark Avenue and Williams Road
- Williams Road, between Baywood Avenue and Daniel Way
- Daniel Way, between Williams Road and Westfield Avenue
- Thornton Way, between Moorpark Avenue and Downing Avenue
- Central Avenue, between Hamilton Avenue and Westfield Avenue
- Downing Avenue, east of SR 17



- Phelps Avenue, along its entire length
- Boynton Avenue, along its entire length
- Cypress Avenue, between Moorpark Avenue and Williams Road

Although none of the residential streets near the project site provide bike lanes or are designated as bike routes, due to their low traffic volumes, many of them are conducive to bicycle usage. The existing bicycle facilities are shown in Figure 3.

The locations of three pedestrian footbridge crossings over freeways in the vicinity of the project site are listed below and shown in Figure 3.

- SR 17 pedestrian footbridge connecting Westfield Avenue and Downing Avenue
- I-280 pedestrian footbridge connecting Moorpark Avenue and Cypress Avenue
- I-280 pedestrian footbridge connecting Moorpark Avenue and Tisch Way

Controlled crosswalks across Winchester Boulevard are provided near the project site at the signalized Williams Road and Payne Avenue intersections with Winchester Boulevard. Overall, the existing network of sidewalks and crosswalks provides good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the area.

Existing Transit Services

Existing transit service to the study area is provided by the VTA. The VTA transit services are described below and shown in Figure 4.

VTA Bus Services

The project site is served directly by the following VTA bus routes.

Local/Frequent Route 25 provides local services between De Anza College and Santa Clara Valley Medical Center and frequent services between Santa Clara Valley Medical Center and Alum Rock Transit Center. Route 25 operates from 5:00 AM to 12:00 AM on weekdays with 30-minute headways during commute periods in the project vicinity. Route 25 operates along Winchester Boulevard and Williams Road in the project area. The closest bus stop is located approximately 350 north of the project site at the intersection of Winchester Boulevard and Williams Road.

Local Route 56 runs from Lockheed Martin to Tamien Station and operates from 5:30 AM to 10:30 PM on weekdays with 30-minute headways during commute periods. The closest bus stop is located approximately 0.9 miles from the project site at the intersection of Winchester Boulevard and Hamilton Avenue.

Frequent Route 60 runs from the BART Station in Milpitas to Winchester Station via SJC Airport and operates from 5:00 AM to 11:30 PM on weekdays with 20- to 30-minute headways during commute periods. Route 60 operates along Winchester Boulevard in the project area. The closest southbound and northbound bus stops to the project site are located at most approximately 100 feet away from the project site along Winchester Boulevard.

Express Route 101 runs from Camden Avenue near Highway 85 to Stanford Research Park in Palo Alto and operates two northbound trips during the morning commute period and two southbound trips during the afternoon commute period with 60-minute headways. The closest bus stop is located approximately 0.9 miles from the project site at the intersection of Winchester Boulevard and Hamilton Avenue.



VTA Light Rail Transit (LRT) Service

GreenLine LRT runs from the Winchester Transit Center in Campbell to Old Ironsides in Santa Clara and operates from 5:30 AM to 12:30 AM with 20-minute headways during the peak commute periods. The closest LRT station is located approximately 1.4 miles from the project site at the interchange of SR 17 and Hamilton Avenue.



Figure 3
Existing Bicycle Facilities

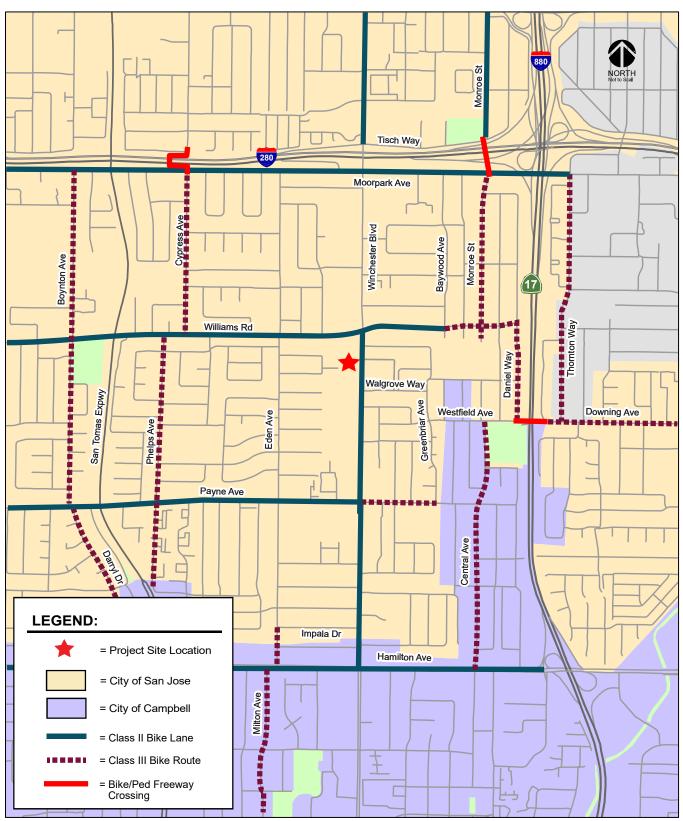
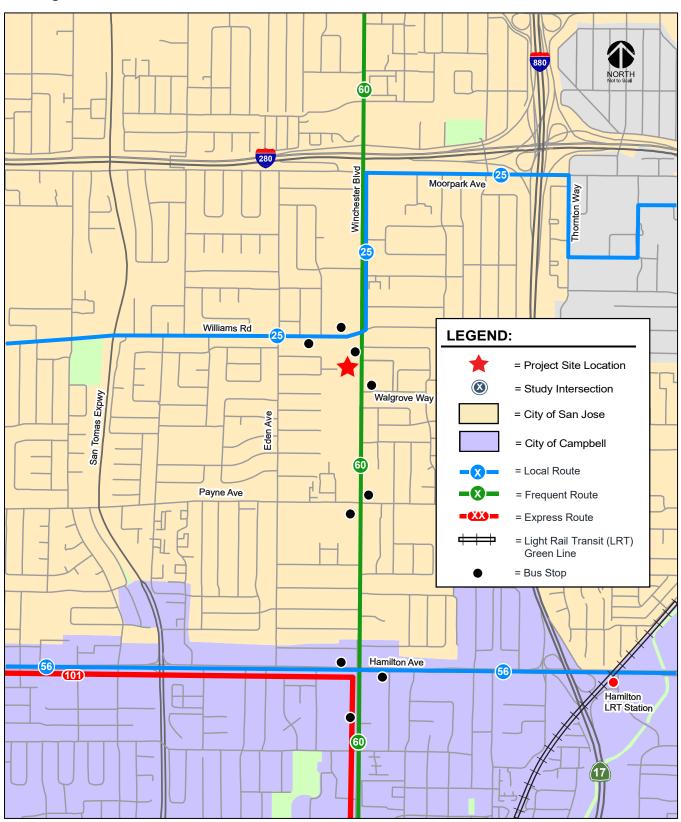




Figure 4
Existing Transit Services





3. TDM Plan

The TDM measures for the project were developed based on the parking reduction requirements outlined in Section 20.90.220 of the San Jose Code of Ordinances and were geared to meeting up to a 41 percent parking reduction.

Implementation of the proposed TDM measures would encourage future residents and office tenants to utilize alternative transportation modes (transit, bicycle, and carpool) to further reduce the SOV trips and parking demand generated by the project.

City of San Jose Parking Code

According to Section 20.90.220.A.1 of the San Jose Parking Code, a reduction in the required off-street vehicle parking spaces of up to 20 percent is automatically allowed if the provisions of Subsections a and b are met. A reduction of up to 50 percent may be authorized if the project conforms to the requirements specified in Subsections a and b, and implements at least three TDM measures specified in Subsections c and d. Section 20.90.220.A.1 is outlined below.

Section 20.90.220.A.1 – Reduction in Required Off-street Parking Spaces

A. Alternative transportation.

- 1. A reduction in the required off-street vehicle parking spaces of up to fifty percent may be authorized with a development permit or a development exception if no development permit is required, for structures or uses that conform to all of the following and implement a total of at least three transportation demand management (TDM) measures as specified in the following provisions:
 - a. The structure or use is located within two thousand feet of a proposed or an existing rail station or bus rapid transit station, or an area designated as a Neighborhood Business District, or as an Urban Village, or as an area subject to an area development policy in the city's general plan or the use is listed in Section 20.90.220G.; and
 - b. The structure or use provides bicycle parking spaces in conformance with the requirements of Table 20-90.
 - c. For any reduction in the required off-street parking spaces that is more than twenty percent, the project shall be required to implement a transportation demand



management (TDM) program that contains but is not limited to at least one of the following measures:

- i. Implement a carpool/vanpool or car-share program, e.g., carpool ride-matching for employees, assistance with vanpool formation, provision of vanpool or car-share vehicles, etc. and assign carpool, vanpool, and car-share parking at the most desirable onsite locations at the ratio set forth in the development permit or development exception considering the type of use; or
- ii. Develop a transit use incentive program for employees and tenants, such as on-site distribution of passes or subsidized transit passes for local transit system (participation in the region-wide Clipper Card or VTA EcoPass system will satisfy this requirement).
- d. In addition to the requirements above in Section 20.90.220.A.1.c. for any reduction in the required off-street parking spaces that is more than twenty percent, the project shall be required to implement a transportation demand management (TDM) program that contains but is not limited to at least two of the following measures:
 - i. Implement a carpool/vanpool or car-share program, e.g., carpool ridematching for employees, assistance with vanpool formation, provision of vanpool or car-share vehicles, etc. and assign carpool, vanpool, and car-share parking at the most desirable on-site locations; or
 - ii. Develop a transit use incentive program for employees, such as on-site distribution of passes or subsidized transit passes for local transit system (participation in the region-wide Clipper Card or VTA EcoPass system will satisfy this requirement); or
 - iii. Provide preferential parking with charging facility for electric or alternativelyfueled vehicles; or
 - iv. Provide a guaranteed ride home program; or
 - v. Implement telecommuting and flexible work schedules; or
 - vi. Implement a parking cash-out program for employees (non-driving employees receive transportation allowance equivalent to the value of subsidized parking); or
 - vii. Implement public information elements such as the designation of an on-site TDM manager and education of employees regarding alternative transportation options; or
 - viii. Make available transportation during the day for emergency use by employees who commute on alternate transportation. (This service may be provided by access to company vehicles for private errands during the workday and/or combined with contractual or pre-paid use of taxicabs, shuttles, or other privately provided transportation); or
 - ix. Provide shuttle access to Caltrain stations; or
 - x. Provide or contract for on-site or nearby child-care services; or
 - xi. Incorporate on-site support services (food service, ATM, dry cleaner, gymnasium, etc. where permitted in zoning districts); or
 - xii. Provide on-site showers and lockers: or



- xiii. Provide a bicycle-share program or free use of bicycles on-site that is available to all tenants of the site; or
- xiv. Unbundled parking; and
- e. For any project that requires a TDM program:
 - i. The decision maker for the project application shall first find in addition to other required findings that the project applicant has demonstrated that it can maintain the TDM program for the life of the project, and it is reasonably certain that the parking shall continue to be provided and maintained at the same location for the services of the building or use for which such parking is required, during the life of the building or use; and
 - ii. The decision maker for the project application also shall first find that the project applicant will provide replacement parking either on-site or off-site within reasonable walking distance for the parking required if the project fails to maintain a TDM program.

Compliance with the City Parking Code

The following sections describe how the project could comply with the City Parking Code.

Urban Village Area (Subsection A)

The project is located in a designated Urban Village area. Therefore, the project would conform to Subsection 20.90.220.A.1.a.

Bicycle Parking Requirement (Subsection B)

According to the City's Bicycle Parking Standards (Chapter 20.90, Table 20-210), the project is required to provide bicycle parking for the office building at a rate of one bicycle parking space per 4,000 square feet gross floor area of office space and one bicycle parking space per four residential units. This equates to a total requirement of 23 bicycle parking spaces, of which five bicycle parking spaces would serve the office space and 18 bicycle parking spaces would serve the residential units. Of the required bicycle parking, City standards require that 80 and 40 percent be short-term bicycle spaces with 20 and 60 percent be secured long-term bicycle spaces for office and residential uses, respectively. Based on these requirements, the project would need to provide 11 short-term and 12 long-term bicycle parking spaces.

The project site plan indicates that bicycle storage areas to accommodate 44 bicycles will be located within the ground level (near the residential lobby) and the two basement bike storage rooms. Therefore, the proposed bicycle parking on-site will exceed the City's requirements and encourage the use of non-auto modes of travel and minimize the demand for on-site parking. Therefore, the project would comply with Subsection 20.90.220.A.1.b.

Vehicle Parking Requirement

The City of San Jose Zoning Code (Section 20.90.060) states that office uses are required to provide one parking space per 250 square feet of floor area. The required parking spaces for multi-family residential units are dependent on the living unit size. The project as proposed would construct 20,410 gross square feet of office space and 70 multi-family residential units. According to the City's Zoning Code, "Floor area" is defined as 85 percent of the "total gross floor area" of the building. Based on the City's parking requirements and the current project description, the project would be required to provide a total of 177 off-street parking spaces consisting of 70 parking spaces for the office space and 107 parking spaces for the residential units before any reductions (see Table 1). However, the project is located in the Winchester Urban Village. The Urban Village Overlay automatically allows for a 20



percent reduction in parking. With the 20 percent reduction, the required parking would be reduced to 142 spaces, consisting of 86 spaces for the residential use and 56 spaces for the office use. The project is proposing a total of 105 parking spaces, which would not meet the City's reduced parking requirements.

The proposed number of parking spaces represents a 41% reduction from the standard required number of spaces. With the 20% Urban Village reduction, the project requires an additional 21% reduction in on-site parking spaces. Therefore, the project will need to submit and have approved a TDM plan. The TDM plan will need to include at least three TDM measures specified in Subsections c and d of Section 20.90.220.A.1.

Recommended TDM Measures to Reduce Parking Demand

The recommended TDM measures are intended to encourage residents and office employees to utilize alternative transportation modes available in the area to reduce single-occupancy vehicle trips and parking demand generated by the project. The specific TDM measures that are recommended for the project are described below and are based on the measures specified in Subsections 20.90.220.A.1.c and d. Additionally, the project needs to ensure that the TDM plan will be maintained for the life of the project, which is in compliance with Subsection 20.90.220.A.1.e.

Online Kiosk

This TDM Plan recommends an online kiosk with information regarding non-auto transportation alternatives. The online kiosk will update key transportation information included in the welcome packets. Additionally, transportation news and commuter alerts will be posted online. Residents and commercial tenants should be able to access the kiosk from their desk at work, their home, or anywhere else. TDM-related links and information will be posted on this forum, and the Transportation Coordinator will have host permissions to send tenants email notifications pertaining to the TDM Plan and measures. The online kiosk will include information about all the measures, services, and facilities discussed in this Plan, including:

- A summary of VTA and Caltrain services and links to further information about their routes and schedules.
- Bicycling resources on 511.org.
- A local bikeways map.
- Information about ride-matching services (511.org, Zimride, and TwoGo).
- A link to the many other trip-planning resources available in the Bay Area such as Dadnab, the 511 Transit Trip Planner, real-time traffic conditions, etc.

The building developer would have responsibility for creating the website so that it is up and running as soon as the new building is ready for leasing. More specific information can be added later to reflect any programs specific to certain tenants.

Trip Planning Resources

There are several free trip planning resources that tenants may not be aware of. Information on these services should be included in an online kiosk for new residential tenants and future employees of the commercial uses. These include:



Table 1 Vehicle Parking Requirements

Proposed Project		City of Sai	Requ	ired Parking		
Land Use	Size	Land Use		Parking Ratio	General	Urban Village ²
Residential Residential Residential	40 units 13 units 17 units	Multiple dwelling residential Multiple dwelling residential Multiple dwelling residential	1.25 1.70 2.00	spaces per one-bedroom unit spaces per two-bedroom unit spaces per three-bedroom unit	50 23 34	40 19 27
	70 units	p.o a.vog .oo.aoaa.		al Required Residential Parking	107	86
Office	20,410 s.f.	Offices, business and admin	1.00	space per 250 s.f. of floor area ³ Total Required Parking	70 177	<u>56</u> 142

Notes:



¹City of San Jose Zoning Ordinance: Parking Spaces Required by Land Use

²Includes 20% allowable reduction of parking requirement in an Urban Village.

³According to the City's Zoning Code, "Floor area" is defined as 85 percent of the "total gross floor area" of the building.

Show Select Rail Stations/Stops

Show Ferry Landings

511 Transit Trip Planner

Online transit trip planning services are available to the greater San Francisco Bay Area through 511.org. Users enter their starting and ending points, and either the desired starting or ending trip time. The service can build an itinerary that best suits the user's preferences for the fastest trip, fewest transfers, or least walking.

511 Mobile

Many popular features from 511.org can be accessed using smartphones or mobile devices. With 511 Mobile, commuters can: (1) receive real-time transit departure predictions, (2) plan a public transit trip, (3) check real-time traffic conditions on the live traffic map, and (4) get current driving times for the most popular routes in the Bay Area.

511 Carpool Calculator

The 511 Carpool Calculator is a 511-sponsored online calculator that determines the cost of commuting by driving alone. Users input commute details such as the number of miles traveled to and from work, vehicle mileage, fuel cost, parking costs, and bridge tolls. The tool then calculates solo commuting costs and vehicle CO2 emissions, as well as the potential savings by adding carpool partners.

511 RideMatch

The 511 RideMatch service provides an interactive, on-demand system that helps commuters find carpools, vanpools, or bicycle partners. These free car and vanpool ride-matching services help commuters find others with similar routes and travel patterns with whom they may share a ride. Registered users are provided with a list of other commuters near their employment or residential ZIP code along with the closest cross street, email, phone number, and hours they are available to commute to and from work. Participants are then able to select and contact others with whom they wish to commute. The service also provides a list of existing carpools and vanpools in their residential area that may have vacancies. Ride matching assistance is also available through a number of peer-to-peer matching programs, such as Zimride, which utilize social networks to match commuters.

Dadnab

Dadnab.com enables Bay Area commuters to get transit directions by text message. Users send a text message with their origin, destination, and optional departure or arrival time and Dadnab replies with a detailed itinerary listing which buses or trains to take, stop locations, and departure times.

Unbundled Parking

The project will provide 100 percent unbundled parking for all residential spaces. Unbundled parking means separating the cost of parking from residential leases and allowing residents to choose whether or not to lease a parking space. With this approach, those tenants without a vehicle would not be required to pay for parking that they do not want or need. This is the most equitable approach and would free up parking for those tenants that require a space and are willing to pay for it. The parking spaces will be priced to avoid tenants parking on the streets or in nearby parking lots. Unbundling residential parking costs from the cost of housing can reduce tenant vehicle ownership and parking demand and can be implemented on a month-to-month lease basis. With a lease, residents receive a monthly bill showing how much they are spending on a parking space and have the option to give up the space if they no longer need it.



Note that Policy TR-8.8 of the Envision San Jose 2040 General Plan calls for San Jose to "Promote the use of unbundled private off-street parking associated with existing or new development, so that the sale or rental of a parking space is separated from the rental or sale price for a residential unit or for non-residential building square footage." In addition, Policy TR-10.1 states: "Explore the development of a program... to require that parking spaces within a new development in areas adjacent to transit and in all mixed-use projects be unbundled from rent or sale of the dwelling unit or building square footage."

Transit Subsidies

Subsidized transit passes are an extremely effective means of encouraging residents and employees to use transit rather than drive. Transit passes allow residents and employees to save money, as well as help them to avoid the stress of driving during commute periods. One way of doing this is to provide VTA SmartPasses to all residential tenants. SmartPasses will give tenants unlimited rides on VTA Bus, LRT, and Express Bus service seven days a week. SmartPass is deeply discounted below the standard fares, making it an attractive low-cost benefit to residential communities.

Bicycle Programs

The project will provide adequate bicycle parking spaces for both the residential and commercial (office and retail) uses, per the City of San Jose Parking Code.

Recommended TDM Measures to Mitigate VMT Impacts

Per Council Policy 5-1, the effects of the proposed project on VMT were evaluated in the Transportation Analysis dated October 13, 2021 using the methodology outlined in the City's *Transportation Analysis Handbook*. The results of the VMT evaluation, using the City's VMT Evaluation Tool, indicate that the office component of the project is projected to generate VMT per employee which would exceed the established impact threshold. Therefore, the proposed office component of the project would result in an impact on the transportation system based on the City's VMT impact criteria.

Project Impacts and Mitigation Measures

<u>Mitigation Measures</u>: Based on the four strategy tiers included in the VMT Evaluation Tool, it is recommended that the project implement one of the following mitigation measures to reduce the significant VMT impact.

- <u>Telecommuting and Alternative Work Schedules</u>: Encourage 50% of the employees to telecommute, shift work schedules, or commute outside of peak congestion periods on a 4/40 schedule (10-hour work days for four days a week). This measure reduces commute vehicle trips. <u>or</u>
- Operate a Free Direct Shuttle: Provide shuttle service for at least 15% of the project employees that would serve the project site and areas with high concentrations of employed residents. This measure reduces drive-alone commute trips. **or**
- <u>Provide Ride-Sharing Programs</u>: Organize a program to match individuals interested in carpooling who have similar commutes for at least 15% of the project employees. This measure promotes the use of carpooling and reduces the number of drive-alone trips. <u>or</u>
 - <u>Car Sharing Program</u>: Provide subsidies and promotions, as well as dedicated parking spaces, for carsharing services such as ZipCar, Car2Go, and GetAround, etc... for 100% of the project employees. Supporting a carsharing program gives people on-demand access to shared fleets of vehicles. Car-sharing reduces personal motorized vehicle dependence,



- which supports more walking, biking, carpooling, and transit use. Subject to negotiations with the City and possible negotiations with Car Share companies. **and**
- 2. Commute Trip Reduction Marketing/Education: Implement marketing/educational campaigns that promote the use of transit, shared rides, and travel through active modes for 100% of the project employees. Strategies may include the incorporation of alternative commute options into new employee orientations, event promotions, and publications. and
- 3. Employee Parking "Cash Out": Require project employers to offer parking "cash-out" for 70% of the project employees. Providing "cash-out" incentives gives employees the choice to forgo subsidized/free parking for a cash payment equivalent to the cost that the employer would otherwise pay for the parking space. Providing an alternative to subsidized/free parking encourages commuters to travel by walking, biking, carpooling, and transit.

The implementation of the mitigation measures would reduce the VMT generated by the project by supporting bicycle usage and increasing transit ridership by employees. The implementation of one of the above mitigation measures would reduce the project VMT to below the threshold of 12.21 per employee, which would reduce the project impact to less than significant.

TDM Implementation and Monitoring

As previously stated, the primary purpose of the TDM plan is to reduce the proposed project's parking demand by up to 41 percent. Per Section 20.90.220 of the San Jose Code of Ordinances, monitoring progress would be necessary to ensure that the TDM measures are effective and continue to be successfully implemented.

The TDM plan would need to be re-evaluated annually for the life of the project. If it is determined that the 41 percent parking reduction is not being achieved (i.e., the on-site parking garage reaches full capacity), additional TDM measures would need to be introduced to ensure that the parking demand is being addressed by the project without the burden being placed on outside entities.

Conclusions

The TDM measures to be implemented by the project include planning and design measures related to the attributes of the site location, the site design, and on-site amenities. Such measures encourage walking, biking, and the use of transit. The TDM plan includes maintaining an online kiosk of tripplanning resources, providing 100 percent unbundled parking for all residential spaces, providing VTA SmartPasses to residential and commercial tenants, and providing adequate on-site bicycle storage. Additionally, the project will implement one of the following mitigation measures to reduce its significant VMT impact.

- Telecommuting and Alternative Work Schedules eligible to 50% of employees on a 4/40 schedule or
- Operate a Free Direct Shuttle eligible to 15% of employees or
- Provide Ride-Sharing Programs eligible to 15% of employees or
- A combination of the following:
 - i) Car Sharing Program eligible to 100% of employees and
 - ii) Commute Trip Reduction Marketing/Education eligible to 100% of employees and
 - iii) Employee Parking "Cash-Out" eligible to 70% of employees



Appendix ITruck Turning Templates

