APPENDIX G Local Transportation Analysis







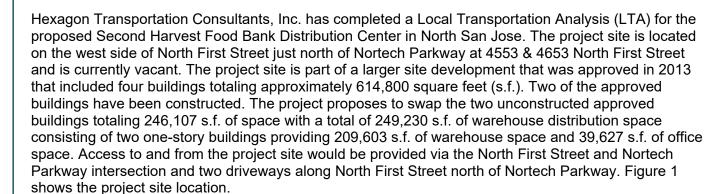
Memorandum

Date: March 31, 2022

To: Manjit Banwait, City of San Jose

From: Robert Del Rio, T.E., Huy Tran, T.E.

Subject: Second Harvest Food Bank Distribution Center Local Transportation Analysis



Prior Site Approvals

The area of land comprising the project site was included as part of the approved development of 1.6 million s.f. (m.s.f) of office/R&D space of the Cisco Site 6 Environmental Impact Report (EIR), approved by the San Jose City Council in 2000. A subsequent Planned Development Permit was approved by the City in 2013 that allowed for the development of four buildings totaling approximately 614,800 square feet (s.f.) of office/R&D space on the project site and adjacent parcel to the south. The 2013 approval found the proposed 614,800 s.f. of building space to be consistent with the approved zoning and certified Cisco Site 6 EIR. This project now proposes to swap the two unconstructed approved buildings, totaling 246,107 s.f. of office/R&D space, with a total of 249,230 sf of warehouse distribution space.

Although the currently proposed project varies somewhat from the previous approvals, the proposed warehouse distribution space would generate no more trips than the approved office/R&D space uses on the site and would not result in any greater impact to the transportation system than were reported in the completed traffic study for the approved office/R&D buildings. Therefore, the proposed uses for the project site can be found to be consistent with the prior 2000 Cisco Site 6 EIR and 2013 approvals of the project site. Accordingly, City staff has concluded that the project is in conformance with the City of San Jose Transportation Level of Service Policy (Council Policy 5-3) which was in use at the time of the 2000 and 2013 approvals and will not require preparation of a Transportation Analysis (TA) per the current Council Policy 5-1.

The Public Works Department has indicated, however, that a Local Transportation Analysis (LTA) is required in order to identify potential operational issues that could occur as a result of the proposed project. This traffic analysis is intended to satisfy the City's request.

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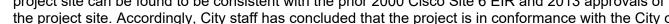
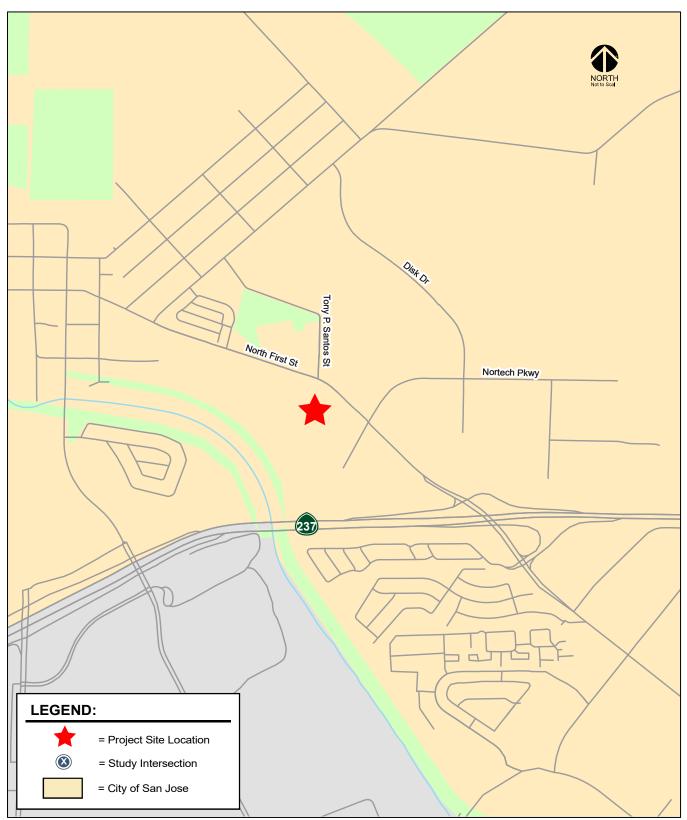


Figure 1 Site Location and Study Intersections





Scope of Study

The purpose of the LTA is to identify any potential operational issues that could occur as a result of the project and to recommend necessary improvements to ensure adequate access to the site is provided and review the project's effect on the surrounding transit, pedestrian, and bicycle facilities. Based on the proposed project size, site-generated traffic was estimated. Vehicular site access was evaluated based on the proposed driveway locations. Truck access, including trash pickup and loading activities, was evaluated. Parking and on-site vehicular circulation also were analyzed. Lastly, an operational analysis of vehicle turn pocket storage was evaluated.

Existing Conditions

This section describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network, transit service, and bicycle and pedestrian facilities.

Existing Roadway Network

Regional access to the project site is provided by State Route 237. Local site access is provided by North First Street, Nortech Parkway, and Tony P. Santos Street. The freeway and local roadways are described below.

State Route 237 is a six-lane freeway that extends in an east/west direction between Sunnyvale and Milpitas and provides access to I-880 and US 101. Two of the six lanes (one in each direction) are designated as HOV/Toll lanes. Access to the project site from SR 237 is provided via its interchange with North First Street.

North First Street is designated as a Main Street in the project vicinity per the Envision San Jose 2040 General Plan and is a four to six-lane arterial running through the center of North San Jose. It extends from downtown San Jose to Alviso. North First Street is four lanes wide along the project frontage between Tony P. Santos Street and SR 237. The roadway widens to six lanes between SR 237 and Tasman Drive. South of Tasman Drive, North First Street narrows to four lanes. The Santa Clara County Light Rail Transit (LRT) system operates in the median of the roadway between downtown San Jose and Tasman Drive. North First Street provides access to the project site via its intersection with Nortech Parkway and two driveways.

Nortech Parkway is an east-west two-to-four lane street that runs from North First Street to its eastern terminus east of Fortran Drive. Nortech Parkway provides access to and from the project site via its intersection with North First Street.

Tony P. Santos Street/Wilson Way is generally a north-south two-lane street that runs between North First Street and Grand Boulevard. Tony P. Santos Street provides access to and from the project site via its intersection with North First Street.

Existing Bicycle Facilities

There are several bike lanes and bike paths in the vicinity of the project site. Bicycle facilities are divided into four classes of relative significance. Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations. Class IV bicycle facilities (protected bike lanes) are currently being installed throughout the city as part of the Better Bikeways project.



Class II bicycle facilities (striped bike lanes) are provided along the following roadways within the project vicinity:

- Nortech Parkway, along its entire length
- Disk Drive, along its entire length
- Holger Way, along its entire length
- North First Street, between Brokaw Road and Michigan Avenue
- Tasman Drive, along its entire length within city limits

Guadalupe River Park Trail

The Guadalupe River multi-use trail system runs through the City of San Jose along the Guadalupe River and is shared between pedestrians and bicyclists and separated from motor vehicle traffic. The Guadalupe River Trail is an 11-mile Class I bikeway from Curtner Avenue to Willow Street, and between Virginia Street and Palm Street to Alviso. This trail system can be accessed at the North First Street and SR 237 eastbound ramps and Oakcrest Estates, located approximately 0.5 miles south of the project site.

The existing bicycle facilities are shown in Figure 2.

Existing Pedestrian Facilities

Pedestrian facilities in the study area consist mostly of sidewalks along all of the previously described local roadways in the study area, with a few exceptions, as well as the aforementioned bike/pedestrian paths. Within the study area, there are no sidewalks along the following roadways:

North First Street - Sidewalks are found along both sides of North First Street south of the SR 237 eastbound ramps and north of Syntax Court. However, no sidewalks are present along the west side of North First Street between Syntax Court and the SR 237 westbound ramps. There also is no sidewalk along the east side of the North First Street overpass of SR 237.

Tony P. Santos Street - Sidewalks are found along the north side of Tony P. Santos Street east of North First Street. However, no sidewalks are present along the south side of Tony P. Santos Street between North First Street and Wilson Way.

Grand Boulevard - Sidewalks are found along both sides of Grand Boulevard between North First Street and Archer Street. However, no sidewalks are present along the south side of Grand Boulevard between Archer Street and Disk Drive.

Overall, the existing sidewalks and pedestrian facilities have good connectivity and provide pedestrians with safe routes to the surrounding pedestrian destinations in the area.

Existing Transit Services

Existing transit service to the study area is provided by the VTA. The existing transit services are described below and shown in Figure 3.

Bus Service

The nearest bus stops to the project site are located along its North First Street frontage near its intersections with Nortech Parkway and Tony P. Santos Street.

Local Route 59 provides service between Saratoga/Stevens Creek and the Baypointe LRT Station on Tasman Drive. Route 59 operates along North First Street in the project study area, with 30-minute headways during the weekday peak commute hours. Bus stops for Route 59 are situated on the east and west sides of North First Street just north of Nortech Parkway and Tony P. Santos Street.

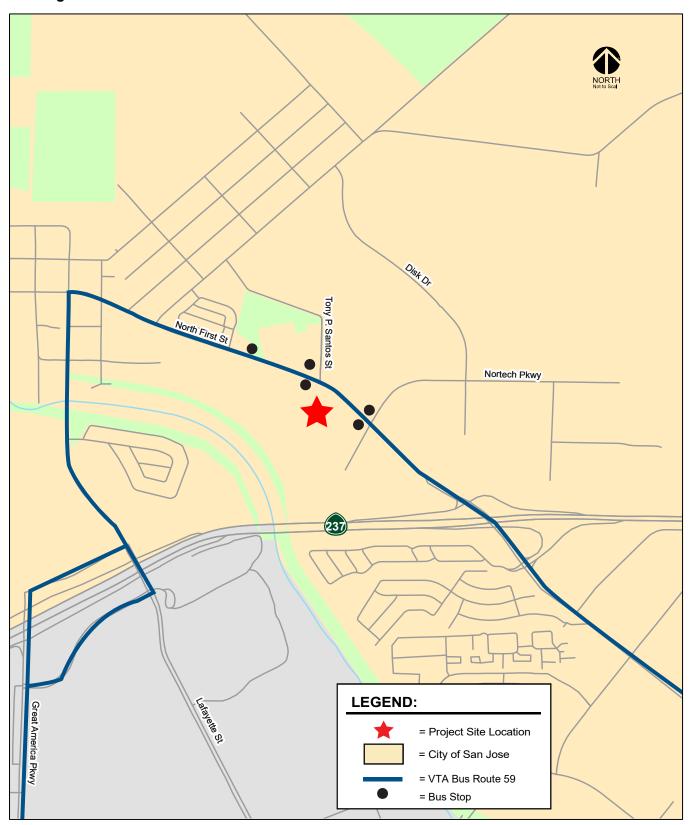


Figure 2 Existing Bicycle Facilities





Figure 3 Existing Transit Facilities





VTA Light Rail Transit (LRT) Service

Light Rail Transit (LRT) service is provided in the project area by VTA. The Tasman LRT Station is located along North First Street just south of Tasman Drive, approximately 1.5 miles south of the project site, and serves the Green and Blue LRT lines. The Green Line provides service between Old Ironside Drive in Santa Clara and downtown Campbell/Los Gatos via downtown San Jose and operates from 5:30 AM to 12:30 AM with 20-minute headways during peak commute periods. The Blue Line provides service from the Santa Teresa LRT station in south San Jose, through downtown San Jose to North San Jose where it curves and terminates at the Baypointe LRT Station. The Blue Line operates between 5:00 AM and 1:00 AM with 20-minute headways during peak commute periods. The Baypointe LRT Station is served by the Orange Line which provides service between downtown Mountain View and Alum Rock via the Tasman Corridor. At the Milpitas Transit Center, the line bends south and runs along the Capitol Corridor, and ultimately terminates in east San Jose just south of Alum Rock Avenue. The Orange Line operates from 5:30 AM to 12:45 AM with 20-minute headways during peak commute periods. The Orange line provides service to the Great America and Milpitas Transit Stations which provide connection to other transit services described below.

Altamont Commuter Express Service (ACE)

ACE provides commuter rail service between Stockton, Tracy, Pleasanton, and San Jose during commute hours, Monday through Friday. Service is limited to four westbound trips in the morning and four eastbound trips in the afternoon and evening with headways averaging 60 minutes. ACE trains stop at the Great America Station between 6:03 AM and 9:25 AM in the westbound direction and between 3:49 PM and 6:52 PM in the eastbound direction.

Bay Area Rapid Transit (BART) Service

BART provides service between 5:00 and 12:00 AM Monday through Friday. The Milpitas BART Station is served by the Richmond – Berryessa/North San Jose line (Orange Line) and the Berryessa/North San Jose – Daly City line (Green line) which operate on 15-minute headways throughout the day.

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

Through empirical research, data have been collected that quantify the amount of traffic produced by common land uses. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development.

Approved Office/R&D Space Trip Estimates

The estimate of trips for the approved 246,107 s.f. of office/R&D space on the project site is based on trip rates in effect at the time of the preparation of the traffic analysis completed for the Cisco Site 6 EIR in 2006. The trip estimates used in the 2006 traffic analysis were based on City of San Jose trip rates for research & development space. Based on the research & development trip rates, it is estimated that



the approved office/R&D space would generate 1,969 daily trips, with 315 trips occurring during the AM peak hour and 276 trips occurring during the PM peak hour.

Proposed Warehouse Distribution Space Trip Estimates

The magnitude of traffic generated by the proposed warehouse distribution space was estimated by applying to the size of the development the applicable trip generation rates published in the Institute of Transportation Engineers (ITE) manual entitled Trip Generation, Eleventh Edition for warehouse uses (ITE Land Use 150) as well as office (ITE Land Use 710) space. In addition, trips also were estimated for the proposed warehouse distribution space based on site operations information provided by the applicant. Hourly site-generated trips, both truck and non-truck trips, were estimated based on the proposed facility operations data that included estimates of the number of trucks, employees, volunteers, and operational times for each of the site operations. Assumptions in regard to arrival and departure times for employees, volunteers, and trucks were made per provided shift times. The estimates based on the operations data also conservatively presume that all trips will be made to the site by single-occupant vehicles since no data is available to apply a reduction in trips for use of alternative travel modes. Therefore, the trip estimates may be an over-estimation of the trips that could be generated by the project. A breakdown of site operations per the applicant information is provided in Table 1.

The trip estimates for the proposed warehouse space indicate that the use of ITE trip rates for warehouse and office uses results in trip estimates that are much less than the trip estimates based on the applicant information. Therefore, to provide a conservative evaluation of the project's operational effect on the roadway system, the trip generation estimates based on the applicant operations information were utilized in this study.

Net Project Trips

The comparison of trip generation for the approved and proposed uses of the project site indicates that the proposed warehouse distribution space use on the project site will result in a reduction in estimated trips to be generated by the project site regardless of the trip rates used to estimate trips when compared to the trips that would be generated by the approved office/R&D space. The project trip generation estimates are presented in Table 2.It should be noted that the planned site operations have been reduced from information that was provided by the applicant when work began and used in this analysis. When compared to the trip estimates described above and used in the analysis, the revised project information results in an approximately 30% reduction in daily trips, 70% reduction in AM peak hour trips, and 50% reduction in PM peak hour trips. The trip estimates for the proposed project would be much less than the approved uses for the site with the revised project information. In addition, the trip reductions would result in an improvement in the reported intersection operations described later in this report.

Project Trip Distribution and Trip Assignment

The trip distribution pattern for the project was based on the previous traffic studies prepared for the project site. The project trips were assigned to the roadway network based on the proposed project driveway locations, existing travel patterns in the area, freeway access, and the relative locations of complementary land uses. The project trip distribution patterns and trip assignments for the proposed development are shown in Figure 4.



Table 1
Daily Operations Based on Applicant's Information

					Al	l Operatio	ons
	Trip		Operations		C	Car + Truc	k
Time	Туре	Employees ¹	Volunteers ²	Trucks ³	In	Out	Total
7:00 AM	Arrival	130	125	10	265	49	314
to 8:00 AM	Departure	14	25	10			
8:00 AM	Arrival		87	4	91	17	108
to 9:00 AM	Departure		13	4			
9:00 AM	Arrival			4	4	4	8
to 10:00 AM	Departure			4			-
10:00 AM	Arrival			4	4	4	8
to 11:00 AM	Departure			4	•	•	Ü
11:00 AM	Arrival			3	3	3	6
to 12:00 PM	Departure			3	3	3	O
12:00 PM	Arrival			3	3	3	6
to 1:00 PM	Departure			3	3	3	O
1:00 PM	Arrival			3	3	3	6
to 2:00 PM	Departure			3	3	3	U
2:00 PM	Arrival			3	3	3	6
to 3:00 PM	Departure			3	3	3	б
3:00 PM	Arrival			3	3	0	0
to 4:00 PM	Departure			3	3	3	6
4:00 PM	Arrival		25	3	00	400	450
to 5:00 PM	Departure		125	3	28	128	156
5:00 PM	Arrival	14	13	10	37	227	264
to 6:00 PM	Departure	130	87	10	31	221	204
TOTAL							
DAILY TRIPS:		288	500	100	444	444	888

Notes

- 1. 144 employees per day = 288 daily tips 90% arrival & 10% outbound (drop-off) during AM, 90% departure & 10% inbound (pick-up) during PM. Employee shift is assumed to be from 8AM to 5PM
- 2. 250 volunteers per day = 500 daily trips. Two shifts one from 8AM to 4PM (50% arrival/departure & 10% drop-off/pickup), and the other from 9AM to 5PM (35% arrival/departure & 5% drop-off/pickup).
- 3.50 trucks per day = 100 daily trips 40% arrival/departures during peak hours. The remainder distributes evenly.

Note: The now planned site operations have been reduced from information that was provided by the applicant when work began and indicted in the table. When compared to the trip estimates presented in this table, the revised project information results in an approximately 30% reduction in daily trips, 70% reduction in AM peak hour trips, and 50% reduction in PM peak hour trips.



Table 2 Project Trip Generation Estimates

			Da	ily			AM Pe	ak Hour					PM Pe	ak Hou	r	
Land Use	Trip Rate Source	Size	Rate	Trips	Rate	ln	Out	ln	Out	Trips	Rate	In	Out	In	Out	Trips
Approved Office Spa	ace															
Two Office Buildings	Research and Development ¹	246,107 square feet	8.00	1,969	16%	80%	20%	252	63	315	14%	10%	90%	28	248	276
Dunnan d Monahana	a Distribution Course (ITE Dates)															
	e Distribution Space (ITE Rates)	000 000 0 5 /		050	0.47	 0/	000/	-00	•		0.40	000/	700/			
Warehouse	ITE # 150 - Warehousing ²	209,603 Square Feet	1.71	358	0.17	77%	23%	28	8	36	0.18	28%	72%	11	27	38
Office	ITE # 710 - General Office Building ²	39,627 Square Feet	10.84	430	1.52	88%	12%	53	7	60	1.44	17%	83%	10	47	57
Total Project Trips				788				81	15	96				21	74	95
Net Project Trips (Pr	roposed - Approved)			-1,181				-171	-48	-219				-7	-174	-181
Proposed Warehous	e Distribution Space (Applicant's Information)															
Warehouse	Applicant's Information	249,230 Square Feet	3.563	888				265	49	314				37	227	264
Net Project Trips (Pr	roposed - Approved)			-1,081				13	-14	-1				9	-21	-12

Notes

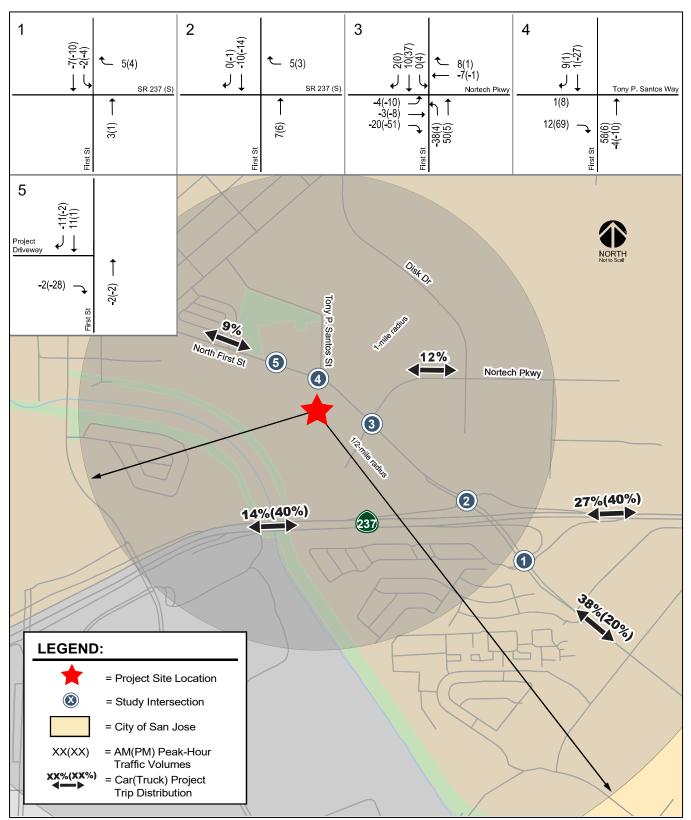
¹Interim Guidelines for Traffic Impact Analysis of Land Developments, June 1994 based on the original Cisco Site 6 EIR traffic study.

²ITE Trip Generation Manual, 11th Edition 2021

Note: The now planned site operations have been reduced from information that was provided by the applicant when work began and indicted in the table. When compared to the trip estimates presented in this table, the revised project information results in an approximately 30% reduction in daily trips, 70% reduction in AM peak hour trips, and 50% reduction in PM peak hour trips. The trip estimates for the proposed project would be much less than the approved uses for the site with the revised project information.



Figure 4
Project Trip Distribution and Net 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 operational effects due to the addition of project traffic.

Study Intersections

The study includes an analysis of AM and PM peak-hour traffic conditions for three signalized intersections and one unsignalized intersection. Intersections were selected based on their proximity to the project site and focused on only those intersections that serve as gateways to the project site. The following study intersections were selected (see Figure 4).

Signalized Study Intersections

- 1. North First Street and SR 237 (N)*
- 2. North First Street and SR 237 (S)*
- 3. North First Street and Nortech Parkway

Unsignalized Study Intersections

- 4. North First Street and Tony P. Santos Street
- * Denotes CMP Intersection

Data Requirements

The data required for the analysis were obtained from traffic counts collected for prior traffic studies in the area, 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 project trips

Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field. It is assumed in this analysis that the transportation network under background and background plus project would be the same as the existing transportation network.

Traffic Volumes

Existing Traffic Volumes

Existing peak hour traffic volumes at all study intersections were obtained from the City of San Jose or recently completed traffic studies. Due to the current COVID-19 pandemic situation and its effect on traffic patterns, the City of San Jose is requiring that all new traffic counts for study intersections be put on hold until further notice. Therefore, as recommended by the City of San Jose staff, a 1% compounded annual growth factor was applied to traffic counts that are older than two years to estimate traffic conditions in 2021. Existing traffic counts are included in Appendix A and tabulated in Appendix C.



Background Traffic Volumes

The background traffic scenario predicts a realistic traffic condition that would occur as approved development is built. 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 included in Appendix B. Existing traffic volumes were adjusted at the study intersections to reflect current vacancies in surrounding buildings. The volume adjustments were based on field observations of parking occupancy at the surrounding buildings. The background peak-hour intersection volumes are included in Appendix C.

Background Plus Project Traffic Volumes

Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Appendix C). A passenger-car equivalent (PCE) factor of 2 was applied to the proposed number of trucks in the level of service and queuing calculations.

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 3.

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,



Table 3
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay per Vehicle (sec.)
Α	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
В	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
С	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
Е	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0
	ransportation Research Board, 2000 Highway Capacity Manual. Traffic Let, , Santa Clara County Transportation Authority Congestion Management Pro	

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.

Conformance to the CMP Standard

Based on CMP criteria, a project would fail to meet the CMP intersection standard if the additional project traffic caused one of the following during either peak hour:

- 1. The level of service at the intersection degrades from an acceptable LOS E or better under background conditions to an unacceptable LOS F under project conditions, <u>or</u>
- 2. The level of service at the intersection is an unacceptable LOS F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e. the change in average delay for critical movements is negative). In this case, the threshold is an increase in the critical V/C value by 0.01 or more.

An adverse intersection effect by CMP standards is said to be satisfactorily addressed when measures are implemented that would restore the intersection level of service to background conditions or better.



Intersection Operations Analysis Results

The intersection level of service analysis is summarized in Table 4. Intersection levels of service were evaluated against the City of San Jose intersection operations standards.

Table 4
Intersection Level of Service Results

					Exist	ting	Backgı	round	Ва	ckgro	und Plus P	roject
Int.		LOS	Peak	Count	Avg.		Avg.		Avg.		Incr. In	Incr. In
#	Intersection	Standard	Hour	Date	Delay	LOS	Delay	LOS	Delay	LOS	Crit. Delay	Crit. V/C
1	North First Street and SR-237 (N) *	D	AM PM	10/07/15 11/01/18	19.7 15.3	B B	93.3 210.5	F F	96.4 208.5	F F	3.9 -1.2	0.009 -0.002
2	North First Street and SR-237 (S) *	D	AM PM	10/12/16 11/01/18	26.2 22.8	C C	61.3 36.2	E D	62.0 36.3	E D	0.8 0.2	0.002 0.001
3	North First Street and Nortech Parkway	D	AM PM	11/01/18 11/01/18	15.0 12.5	B B	20.5 24.0	C C	20.3 25.4	C C	-0.1 3.5	-0.005 0.012
	* Denotes CMP Intersection Bold indicates unacceptable level of serv	ice.										

Existing Intersection Operation Conditions

The results of the level of service analysis show that each of the study intersections is currently operating at acceptable levels of service (LOS C or better) during each of the peak hours under existing conditions based on the City of San Jose and CMP intersection operations standards. The intersection level of service calculation sheets are included in Appendix D.

Background Intersection Operation Conditions

The results of the level of service analysis show that the following two intersections are projected to operate at unacceptable levels of service during at least one of the peak hours under background conditions based on the City of San Jose intersection operations standard of LOS D.

- 1. North First Street and SR 237 (N)* (AM & PM Peak Hours)
- 2. North First Street and SR 237 (S)* (AM Peak Hour)

The following CMP designated intersection is projected to operate at unacceptable LOS F conditions during both peak hours based on the CMP LOS standard of LOS E:

1. North First Street and SR 237 (N)* – (AM & PM Peak Hours)

The remaining study intersection is projected to operate at acceptable levels of service under background conditions during both the AM and PM peak hours based on the City of San Jose intersection operations standards. The intersection level of service calculation sheets are included in Appendix D.

Background Plus Project Intersection Operation Conditions

The results of the level of service analysis show that, based on the City of San Jose intersection operations standard of LOS D, the same two intersections identified to operate at unacceptable levels of service under background conditions would continue to operate at the same levels of service under



^{*} Denotes CMP Intersection

background plus project conditions. However, the net added trips as a result of the proposed project would not result in an adverse effect on either intersection.

The projected LOS F conditions under background plus project conditions would not be in conformance with the CMP LOS E standard at the North First Street and SR 237 (N) intersection which is a CMP designated intersection.

The added trips as a result of the proposed project would not have an adverse effect on intersection operations at the remaining study intersection based on the City of San Jose guidelines. The intersection level of service calculation sheets are included in Appendix D.

North San Jose Area Deficiency Plan Fee

A deficiency plan for North San Jose (North San Jose Deficiency Plan) was adopted by the City in 1994. The deficiency plan acknowledged that operating levels of designated Congestion Management Plan (CMP) intersections would not meet established levels. All proposed development projects within the North San Jose development boundary were required to pay a North San Jose Deficiency Plan Fee (Deficiency Plan Fee) in the amount of \$362 per PM peak hour trip. The Deficiency Plan Fee was intended to fund identified traffic improvements that were necessary to support new development in the North San Jose area. Upon adoption of the North San Jose Area Development Policy (NSJADP) and associated North San Jose Traffic Impact Fee (TIF), the City incorporated the Deficiency Plan Fee into the TIF.

However, the development of the proposed project site was part of a Planned Development Permit (PD13-012) approved by the City in 2013 that allowed for the development of four buildings totaling approximately 614,800 square feet (s.f.) of office/R&D space on the project site and adjacent parcel to the south. The 2013 approval was found to be consistent with the Planned Development Permit (PD00-027) and certified Cisco Site 6 EIR approved by the San Jose City Council in 2000. The first 1.6 m.s.f. of R&D development (Phase 1) approved under the Cisco Site 6 zoning was required to pay the NSJDP TIF. The 2013 development approval of 614,800 sf of R&D space utilized a portion of the approved Cisco R&D space and was required to pay the Deficiency Plan Fee in the amount of \$267,156 for its estimated 738 PM peak hour trips. Since the proposed project will rely on the Cisco zoning approval, the proposed project will be required to pay the remainder of Deficiency Plan Fees equivalent to \$107,152 for its estimated 296 PM peak hour trips that were identified for the 2013 site approval for the two approved but unconstructed buildings of the project site totaling 246,107 s.f. of R&D space.



Vehicular Site Access and Circulation

The evaluation of site access and circulation is based on the site plan December 23, 2021 and prepared by Arc Tec. 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. The site plan is shown in Figure 5.

Project Driveway Design

Vehicular access to the project site is proposed via the North First Street and Nortech Parkway intersection as well as two driveways along North First Street. The northernmost driveway along North First Street will be located approximately 300 feet north of Tony P. Santos Street. The southern driveway would be located at the existing median break along North First Street at its intersection with Tony P. Santos Street. The northernmost driveway along North First Street will be restricted to right turns in and out only due to the median along North First Street.

The northern project driveways along North First Street will be 42 feet wide with flaring to provide for the exit of trucks while the driveway at Tony P. Santos street is shown to be 26 feet wide. According to the City of San Jose municipal code, the City's minimum width for a two-way driveway is 26 feet. Therefore, each of the project driveways will meet the City's minimum width requirement.

Sight Distance

Adequate sight distance will be required at each of the project driveways along North First Street. The project driveways 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 North First Street. 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 driveways 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. North First Street has a posted speed limit of 35 mph along the project frontage. The AASHTO stopping sight distance is 250 feet for facilities with posted speed limits of 35 mph. Thus, a driver must be able to see 250 feet in both directions of travel along North First Street to locate sufficient gaps in the traffic stream to turn out of the driveways. The site plan shows new street trees to be added along the project frontage on North First Street. The trees should be maintained so that the vision of drivers exiting the project driveway is not obstructed. On-street parking along the project frontage is currently prohibited along North First Street.

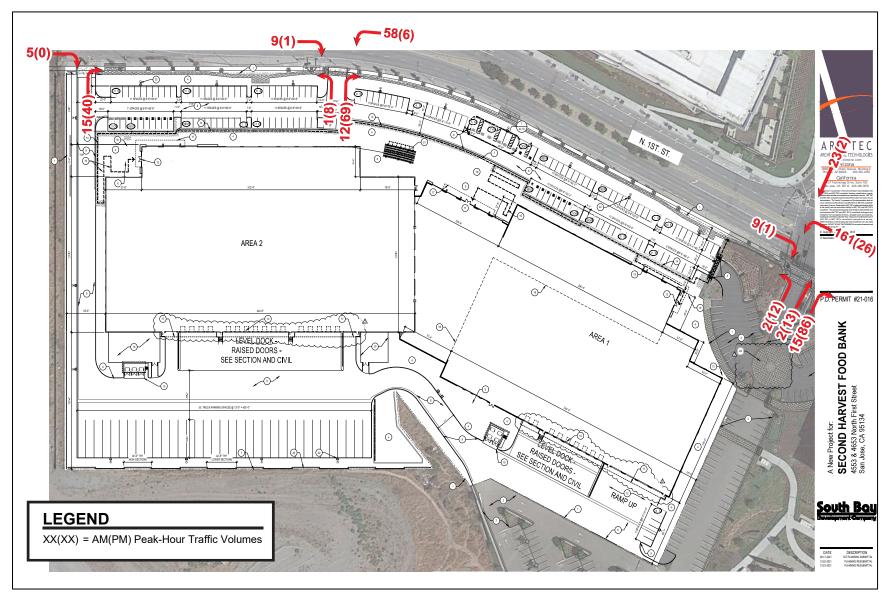
Recommendation: The proposed landscaping along North First Street should be maintained ensuring a minimum clear sight distance of 250 feet along North First Street from each of the project driveways.

Project Driveway Operations

The estimated project trips at the project site driveways are shown in Figure 5. The project driveway at Tony P. Santos Street is proposed to provide full access to/from North First Street. The signal warrant checks included in Appendix E indicate that the volume at the North First Street and Tony P. Santos Street intersection would fall below the threshold that warrants signalization during both the AM and PM peak hours under background plus project conditions.



Figure 5
Gross Project Trips at Driveways





The proposed project driveway at the North First Street and Tony P. Santos Street intersection will result in uncontrolled left-turn movements from the project driveway across the pedestrian crossing on the north side of the intersection. However, the City will not require that further improvements at the North First Street and Tony P. Santos Street intersection be implemented since there currently is enhanced crosswalk striping and Rectangular Rapid Flashing beacons on the north approach of the intersection.

An estimated 58 northbound left-turning vehicles are projected to enter the project driveway at Tony P. Santos Street during the AM peak hour. With an average arrival rate of one vehicle every minute, minimal left-turn queuing (up to one vehicle) is expected to form at the driveway during the AM peak hour.

With the minimal use of the northernmost driveway and the need to use the entire driveway width by exiting trucks (described below), the northernmost driveway should be restricted to right turns out only.

Recommendation: The City supports the restriction of the northernmost project driveway along North First Street to exit only due to its use by exiting trucks.

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. In general, the proposed site plan would provide vehicle traffic with adequate connectivity throughout the on-site parking lots.

To provide adequate on-site circulation for all vehicle types, including larger emergency vehicles and garbage trucks, the design of all internal drive aisles should adhere to the City of San Jose design standards and guidelines. The design of the site must include adequate corner radii along all internal drive aisles, as well as driveway width, drive aisle width, parking dimensions, and signage that satisfies the City of San Jose design standards. A minimum width of 26 feet is typically required for two-way drive aisles.

The project would provide 90-degree parking stalls throughout the surface parking areas, as shown in Figure 5. All on-site drive aisles are shown to provide two-way access and are shown to be 26 feet wide. The proposed parking spaces are shown to be 15 feet long. The City identifies full-size parking spaces as 18 feet long and 9 feet wide and compact parking spaces as 16 feet long and 8 feet wide.

Each of the project driveways provides access to all parking areas. There are no dead-ends within the parking lots, thus providing continuous circulation for vehicles.

Recommendation: Parking space widths will need to be at least 16 feet long and 8 feet wide to meet standards for compact parking spaces.

Truck and Emergency Vehicle Access

The site plan shows that a total of 25 truck loading spaces are proposed to be provided at the rear of both of the two buildings on site (9 at Building 1 and 16 at Building 2). The proposed site access points will enable larger vehicles, such as garbage trucks, emergency vehicles, and delivery trucks, to access the site from the North First Street and Nortech Parkway intersection and exit onto North First Street at the northernmost project driveway. Figure 6 presents truck circulation to and from North First Street along with truck turning templates into and through the project site.

Truck Turning Templates for Loading Docks

Trucks are prohibited from using Grand Boulevard north of the project site. Therefore, trucks will primarily originate from and be bound for SR 237 and utilize North First Street south of Nortech



Parkway. As shown in Figure 6, WB-55 trucks would be able to back into and out of the loading docks of both buildings. In addition, trucks exiting at the northernmost driveway onto southbound North First Street will need to utilize the full width of the driveway to exit. Therefore, the northernmost driveway along North First Street is proposed to be 42-feet wide and provide a flare to allow for trucks to exit without running over the curb or median along North First Street.

Designated trash collection areas are located near the truck loading spaces at the rear of each of the buildings.

Recommendation: All curb returns along the on-site roadways should be a minimum of 30-feet to accommodate service and emergency (such as a garbage truck or fire truck) vehicle circulation.

Recommendation: All trucks should be routed to enter from only northbound North First Street at the Nortech Parkway entrance. All trucks will be required to utilize the northernmost driveway to exit to southbound North First Street only. The northernmost driveway should be restricted to exit only to minimize passenger vehicle and truck conflicts due to the use of the entire driveway width by exiting trucks.

Parking Supply

Vehicular Parking

The City of San Jose Zoning Code (Section 20.90.060) states that warehouse uses are required to provide one parking space per 5,000 s.f. of floor area while office uses are required to provide one parking space per 300 s.f. of floor area. The project as proposed would construct 39,627 gross s.f. of office space and 209,603 s.f. of gross warehouse space. According to the City's Zoning Code, "floor area" is defined as 85 percent of the "total gross floor area" of the building which equates to 33,683 gross s.f. of office space and 178,162 s.f. of gross warehouse space. Based on the City's parking requirements and the current project description, the project would be required to provide 113 parking spaces for the proposed office space and 36 spaces for the warehouse space. The project is proposing to provide a total of 161 parking spaces on-site, which would satisfy the City's parking requirements.

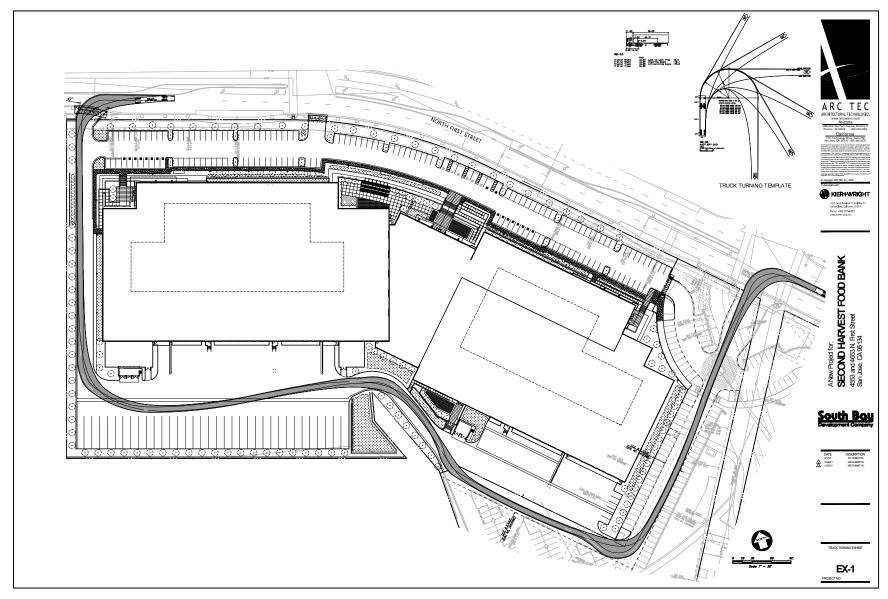
Per the 2016 California Building Code (CBC) Table 11B-208.2, projects providing between 151 to 200 parking spaces are required to provide six ADA parking spaces. Additionally, the requirement also states that at least one space shall be a van-accessible parking space. The project is proposing to provide five standard ADA spaces and one van space, which would satisfy the ADA parking requirements.

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 proposed office space at a rate of one bicycle parking space per 4,000 s.f. of the floor area of office space and one space per employee for the warehouse space. According to the City's Zoning Code, "floor area" is defined as 85 percent of the "total gross floor area" of the building. This equates to a total requirement of nine bicycle parking spaces for the proposed 39,627 s.f. of gross office space and four spaces for the proposed 40 employees of the 209,603 s.f. of warehouse space. Of the required bicycle parking, City standards require that 80 percent be short-term bicycle spaces with 20 percent be secured long-term bicycle spaces for office uses and 100 percent of the employee-based parking be long-term parking. Based on these requirements, the project would need to provide eight short-term and five long-term bicycle parking spaces. The project is proposing to provide a total of 14 bicycle parking spaces on-site which will exceed the required bicycle parking and encourage the use of non-auto modes of travel and minimize the demand for on-site parking described above.



Figure 6
On-Site Truck Circulation and Turning Templates for Loading Spaces





City of San Jose Long-Term and Short-Term Bicycle Parking

Long-term bicycle parking facilities are secure bicycle storage facilities for tenants of a building that fully enclose and protect bicycles and may include:

- A covered, access-controlled enclosure such as a fenced and gated area with short-term bicycle parking facilities,
- An access-controlled room with long-term bicycle parking facilities, and Individual bicycle lockers that securely enclose one bicycle per locker.
- Short-term bicycle parking facilities are accessible and usable by visitors, guests, or business patrons and may include:
- Permanently anchored bicycle racks,
- Covered, lockable enclosures with permanently anchored racks for bicycles,
- Lockable bicycle rooms with permanently anchored racks, and
- Lockable, permanently anchored bicycle lockers.

Pedestrian, Bicycle, and Transit Analysis

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and vehicle miles traveled. In addition, the adopted City Bike Master Plan establishes goals, policies, and actions to make bicycling a daily part of life in San Jose. The Master Plan includes designated bike lanes along all City streets, as well as on designated bike corridors. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

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.
- 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 City's General Plan identifies both walk and bicycle commute mode split targets as 15 percent or more by the year 2040. This level of pedestrian and bicycle mode share is a reasonable goal for the project.



In addition, the proposed project site fronts North First Street, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites 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.

Pedestrian and Bicycle Facilities

Pedestrian and bicycle facilities in the study area consist of sidewalks, crosswalks, pedestrian signals at signalized intersections, and bike lanes on North First Street.

The site plan shows that the existing sidewalk along the project site frontage on North First Street would be maintained and will provide a connection between the project site to existing pedestrian facilities and destinations outside of the project site, including the bus stops on North First Street. Sidewalks are found along both sides of North First Street south of the SR 237 eastbound ramps and north of Syntax Court. However, no sidewalks are present along the west side of North First Street between Syntax Court and the SR 237 westbound ramps. There also is no sidewalk along the east side of the North First Street overpass of SR 237. Crosswalks with pedestrian signal heads are located at the signalized intersection of North First Street and Nortech Parkway. A crosswalk with rectangular rapid flashing beacons also is provided across North First Street on the north side of its intersection with Tony P. Santos Street. The project will construct an on-site crosswalk along the main drive aisle that provides access from and to the Nortech Parkway driveway to the parking areas along the building's frontages on North First Street. The on-site crosswalk will provide a pedestrian connection from the buildings and the sidewalks, crosswalks, and bus stop along North First Street.

Class II bicycle facilities are provided along North First Street, between Brokaw Road and Michigan Avenue.

The San Jose Better 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.

Pedestrian and Bike Improvements

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. The San Jose Better 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. Protected bike lanes are planned along North First Street north of SR 237.

The project would not impede the implementation of the planned bicycle facilities. However, the full implementation of the above-listed improvements is beyond the means of the proposed project given that they may require right-of-way from adjacent properties and benefit multiple properties. The project will, however, be required to provide a monetary contribution (\$121 per Linear Foot) to improve the Class II bike lanes along its North First Street project frontages to Class IV bike lanes (7-foot bikeways) per the Better Bike Plan 2025.

Additionally, the project could be required to implement and/or contribute to the following pedestrian/bike improvements:

• Protected intersection signal modifications at the North First Street and Nortech Parkway intersection that include striped bike lanes adjacent to all crosswalks.



Transit Services

The project site is served directly by VTA frequent bus line 59, which operates along North First Street. Bus stops for Route 59 are situated on the east and west sides of North First Street just north of Nortech Parkway and Tony P. Santos Street. With the convenient location of bus stops, it can be assumed that some employees/volunteers of the proposed project would utilize the existing transit services. Applying an estimated three percent transit mode share equates to approximately at most nine new transit riders during the peak hours. VTA operations reports indicate that the route 59 bus line as well as several other bus routes in the area currently 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 Facility Improvements

The bus stops located along the project frontage near Nortech Parkway and Tony P. Santos Street provide only a bus sign with no amenities. VTA's Better Bus Stops Program is an annual program that was implemented in 2020 to improve bus stop locations throughout its network. Improvements include the implementation of shelters, information signs, metal benches, metal trash cans, and solar lighting. The improved bus stops also aim to upgrade the boarding area with wider sidewalks to accommodate the amenities and concrete bus pads. The project would not prohibit the improvement of the bus stops along its frontage. However, it is recommended that the project work with VTA to allow for adequate space along its frontages to accommodate the future improvement of the bus stop including wider sidewalks and a bus duck out.

Recommendation: VTA standard VTA 8' x 40' boarding area and a VTA standard 7' x 25' shelter pad and a 13' full-back and shelter should be installed at each of the existing southbound Route 59 bus stops along the project frontage. The project should include in its design, a connection between the bus stops and the pedestrian pathways into the project buildings. The final design should be coordinated between the project and VTA.

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. This analysis thus provides a basis for estimating future turn pocket storage requirements at intersections. 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.

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. The results of the queuing analysis are summarized in Table 5. The queuing calculations are included in Appendix F.

First Street and Nortech Parkway – Northbound Left-Turn

The queuing analysis indicates that the maximum vehicle queues for the northbound left-turn pocket at the First Street and Nortech Parkway intersection would exceed the existing vehicle storage capacity during the AM peak hour under background and background plus project conditions.

The northbound left-turn pocket currently provides approximately 200 feet of vehicle storage, which can accommodate approximately eight vehicles. The estimated 95th percentile vehicle queues for the northbound left-turn movement are projected to be approximately ten vehicles during the AM peak hour under background conditions. The addition of project traffic would not lengthen the projected queues, however, the queues under background plus project conditions would exceed the existing storage capacity by one vehicle or 25 feet. The northbound left-turn pocket at Nortech Parkway cannot be extended due to inadequate spacing with the back-to-back southbound left-turn pocket at Syntax Court.

Construction Activities

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. Per City standard practice, the project would be required to submit a construction management plan for City approval that addresses the construction schedule, street closures and/or detours, construction staging areas and parking, and the planned truck routes.



Table 5
Queuing Analysis

		at North First Street and Parkway
Measurement	AM	PM
Existing Conditions		
Cycle Length (sec)	76	76
Lanes	1	1
Volume (vph)	7	2
Volume (vphpl)	7	2
95 th %. Queue (veh/ln.)	1	0
95 th %. Queue (ft./ln) ¹	25	0
Storage (ft./ ln.)	200	200
Adequate (Y/N)	YES	YES
Background Conditions		
Cycle Length (sec)	76	76
Lanes	1	1
Volume (vph)	281	32
Volume (vphpl)	281	32
95 th %. Queue (veh/ln.)	10	2
95 th %. Queue (ft./ln) ¹	250	50
Storage (ft./ ln.)	200	200
Adequate (Y/N)	NO	YES
Background Plus Project Conditions	S	
Cycle Length (sec)	76	76
Lanes	1	1
Volume (vph) ²	253	46
Volume (vphpl)	253	46
95 th %. Queue (veh/ln.)	9	3
95 th %. Queue (ft./ln) ¹	225	75
Storage (ft./ ln.)	200	200
Adequate (Y/N)	NO	YES

¹ Assumes 25 feet per vehicle queued



² Include passenger car equivalent factor of 2 for truck project trips.

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* was 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 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 6.



Table 6 Freeway Segment Capacity

					Freeway	Capacity			Net Proj	ect Trips	
				Mixed-	Flow Lane	HO'	V Lane	Mixed-F	low Lane	HOV	' Lane
Freeway	Segment	Direction	Peak Hour	# of Lanes	Capacity (vph)	# of Lanes	Capacity (vph)	Volume	% of Capacity	Volume	% of Capacity
SR 237	Great America Parkway to North First Street	EB EB	AM PM	2.0 2.0	4,400 4.400	1.0 1.0	1,650 1,650	3	0.1% 0.1%	1 1	0.1% 0.1%
SR 237	North First Street to Zanker Road	EB EB	AM PM	2.0 2.0	4,400 4,400	1.0 1.0	1,650 1,650	-2 -3	0.0% -0.1%	-1 -2	-0.1% -0.1%
SR 237	Zanker Road to North First Street	WB WB	AM PM	2.0 2.0	4,400 4,400	1.0 1.0	1,650 1,650	3 3	0.1% 0.1%	2 1	0.1% 0.1%
SR 237	North First Street to Great America Parkway	WB WB	AM PM	2.0 2.0	4,400 4,400	1.0 1.0	1,650 1,650	1 0	0.0% 0.0%	0 0	0.0% 0.0%



Conclusions

The Second Harvest Food Bank project proposes to swap the two unconstructed approved buildings totaling 246,107 s.f. of space with a total of 249,230 s.f. of warehouse distribution space consisting of two one-story buildings providing 209,603 s.f. of warehouse space and 39,627 s.f. of office space. Access to and from the project site is proposed to be provided via the North First Street intersections at Nortech Parkway and Tony P. Santos Street and a right-turn-only driveway along North First Street north of Tony P. Santos Street.

The area of land comprising the project site was included as part of the approved development of 1.6 million s.f. of office/R&D space of the Cisco Site 6 Environmental Impact Report (EIR), approved by the San Jose City Council in 2000. A subsequent Planned Development Permit was approved by the City in 2013 that allowed for the development of four buildings totaling approximately 614,800 square feet (s.f.) of office/R&D space on the project site and adjacent parcel to the south. The 2013 approval found the proposed 614,800 s.f. of building space to be consistent with the approved zoning and certified Cisco Site 6 EIR.

Although the currently proposed project varies somewhat from the previous approvals, the proposed warehouse distribution space would generate no more trips than the approved office/R&D space uses on the site and would not result in any greater impact to the transportation system than were reported in the completed traffic study for the approved office/R&D buildings. Therefore, the proposed uses for the project site can be found to be consistent with the prior 2000 Cisco Site 6 EIR and 2013 approvals of the project site. Accordingly, City staff has concluded that the project is in conformance with the City of San Jose Transportation Level of Service Policy (Council Policy 5-3) which was in use at the time of the 2000 and 2013 approvals and will not require preparation of a Transportation Analysis (TA) per the current Council Policy 5-1. However, this Local Transportation Analysis (LTA) was required to be completed in order to identify potential operational issues that could occur as a result of the proposed project.

The 2013 development approval of 614,800 sf of R&D space utilized a portion of the approved Cisco R&D space and was required to pay North San Jose Deficiency Plan Fees in the amount of \$267,156 for its estimated 738 PM peak hour trips. Since the proposed project will rely on the 2000 zoning approval, the proposed project will be required to pay the remainder of Deficiency Plan Fees equivalent to \$107,152 for its estimated 296 PM peak hour trips that were identified for the 2013 site approval for the two approved but unconstructed buildings of the project site totaling 246,107 s.f. of R&D space.

It should be noted that the planned site operations have been reduced from information that was provided by the applicant when work began and used in this analysis. The trip estimates for the proposed project would be much less than the approved uses for the site with the revised project information. In addition, the trip reductions would result in an improvement in the reported intersection operations of this report

A summary of the site access and circulation review along with recommended adjustments is provided below.

Recommendations

- The proposed landscaping along North First Street should be maintained ensuring a minimum clear sight distance of 250 feet along North First Street from each of the project driveways.
- The City supports the restriction of the northernmost project driveway along North First Street to exit only due to its use by exiting trucks.



- Parking space widths will need to be at least 16 feet long and 8 feet wide to meet standards for compact parking spaces.
- All curb returns along the on-site roadways should be a minimum of 30-feet to accommodate service and emergency (such as a garbage truck or fire truck) vehicle circulation.
- All trucks should be routed to enter from only northbound North First Street at the Nortech Parkway entrance. All trucks will be required to utilize the northernmost driveway to exit to southbound North First Street only. The northernmost driveway should be restricted to exit only to minimize passenger vehicle and truck conflicts due to the use of the entire driveway width by exiting trucks.
- The project will be required to provide a monetary contribution (\$121 per Linear Foot) to improve the Class II bike lanes along its North First Street project frontages to Class IV bike lanes (7-foot bikeways) per the Better Bike Plan 2025.
- The project could be required to implement and/or contribute to Protected intersection signal modifications at the North First Street and Nortech Parkway intersection that include striped bike lanes adjacent to all crosswalks.
- VTA standard VTA 8' x 40' boarding area and a VTA standard 7' x 25' shelter pad and a 13' full-back and shelter should be installed at each of the existing southbound Route 59 bus stops along the project frontage. The project should include in its design, a connection between the bus stops and the pedestrian pathways into the project buildings. The final design should be coordinated between the project and VTA.



Second Harvest Food Bank LTA Technical Appendices

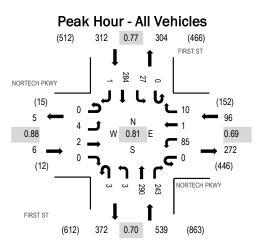
Appendix A Traffic Counts



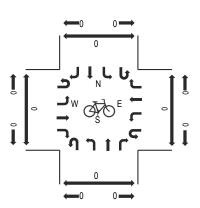
(303) 216-2439 www.alltrafficdata.net Location: 1 FIRST ST & NORTECH PKWY AM

Date: Thursday, November 1, 2018 **Peak Hour:** 07:45 AM - 08:45 AM

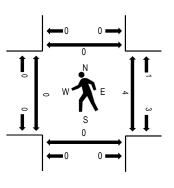
Peak 15-Minutes: 07:45 AM - 08:00 AM



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

	Interval	NC	RTEC Eastb	H PKW	/Y		RTECH Westb	H PKWY ound			FIRST Northb				FIRS' South				Rolling	Ped	destriar	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	0	West	East	South	North
_	7:00 AM	0	0	0	2	0	6	0	1	1	3	29	36	0	0	30	1	109	723	0	0	0	0
	7:15 AM	0	0	0	1	0	15	0	1	0	1	33	39	0	2	44	1	137	818	0	0	0	0
	7:30 AM	0	0	0	1	0	8	0	1	0	2	59	42	0	3	67	0	183	923	0	0	0	0
	7:45 AM	0	1	0	0	0	15	0	5	1	0	118	77	0	9	68	0	294	953	0	0	0	0
	8:00 AM	0	0	2	0	0	34	1	1	0	1	37	60	0	2	65	1	204	816	0	1	0	0
	8:15 AM	0	1	0	0	0	22	0	4	2	1	89	57	0	9	57	0	242		0	0	0	0
	8:30 AM	0	2	0	0	0	14	0	0	0	1	46	49	0	7	94	0	213		0	3	0	0
	8:45 AM	0	1	0	1	0	22	0	2	0	1	35	43	Ω	9	42	1	157		0	1	0	2

Peak Rolling Hour Flow Rates

		East	bound			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	1	0	1	0	0	1	0	0	0	1	0	4
Lights	0	3	2	0	0	78	0	8	3	2	282	234	0	27	275	1	915
Mediums	0	1	0	0	0	6	1	1	0	1	7	9	0	0	8	0	34
Total	0	4	2	0	0	85	1	10	3	3	290	243	0	27	284	1	953



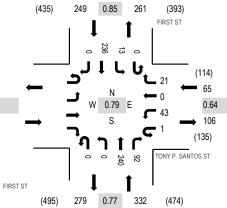
(303) 216-2439 www.alltrafficdata.net Location: 2 FIRST ST & TONY P. SANTOS ST AM

Date: Thursday, November 1, 2018

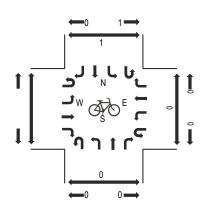
Peak Hour: 07:30 AM - 08:30 AM

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

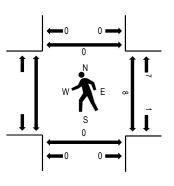




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

					TONY	P. SA	NTOS	ST		FIRS1	ST			FIRS'	TST							
Interval		Eastb	ound			Westb	ound			Northb	ound			South	ound			Rolling	Ped	destriar	n Crossii	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	1	0	0	0	0	27	2	0	1	27	0	58	500		0	0	0
7:15 AM					0	3	0	0	0	0	24	11	0	4	47	0	89	564		2	0	0
7:30 AM					0	8	0	6	0	0	56	19	0	1	58	0	148	646		2	0	0
7:45 AM					0	15	0	7	0	0	78	30	0	4	71	0	205	638		1	0	0
8:00 AM					0	13	0	5	0	0	40	14	0	2	48	0	122	523		1	0	0
8:15 AM					1	7	0	3	0	0	66	29	0	6	59	0	171			4	0	0
8:30 AM					0	25	0	8	0	0	34	7	0	1	65	0	140			3	0	0
8:45 AM					0	7	0	5	1	0	34	2	0	1	40	0	90			3	0	0

Peak Rolling Hour Flow Rates

	Eas	tbound			Westk	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	2	0	0	0	1	0	3
Lights				1	43	0	21	0	0	227	92	0	13	226	0	623
Mediums				0	0	0	0	0	0	11	0	0	0	9	0	20
Total				1	43	0	21	0	0	240	92	0	13	236	0	646

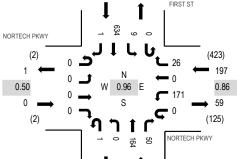


(303) 216-2439 www.alltrafficdata.net Location: 1 FIRST ST & NORTECH PKWY PM

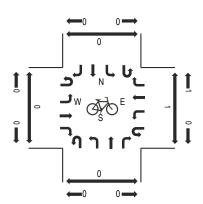
Date: Thursday, November 1, 2018 **Peak Hour:** 04:45 PM - 05:45 PM

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

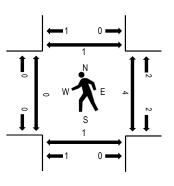




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

0.79

215

(421)

Traffic Counts

(1,568) 806

FIRST ST

		NC	NORTECH PKWY NORTECH PI Eastbound Westboun								FIRS1	ST			FIRS	TST							
	Interval		Eastb	ound			Westb	ound			Northb	ound			Southl	ound			Rolling	Ped	lestriar	n Crossi	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	1	0	0	0	58	0	3	1	0	26	14	0	4	137	0	244	997	1	0	0	0
	4:15 PM	0	1	0	0	0	71	0	3	2	0	39	9	0	4	128	0	257	1,020	0	0	0	0
	4:30 PM	0	0	0	0	1	54	0	3	0	0	45	7	0	3	107	0	220	1,025	0	0	0	0
	4:45 PM	0	0	0	0	0	49	0	12	0	0	54	15	0	4	141	1	276	1,056	0	1	0	1
	5:00 PM	0	0	0	0	0	54	0	6	1	0	35	11	0	1	159	0	267	1,053	0	1	1	0
	5:15 PM	0	0	0	0	0	39	0	6	0	0	37	11	0	4	165	0	262		0	2	0	0
	5:30 PM	0	0	0	0	0	29	0	2	0	0	38	13	0	0	169	0	251		0	0	0	0
	5:45 PM	0	0	0	0	0	30	0	3	1	0	41	21	0	3	173	1	273		0	1	0	0

Peak Rolling Hour Flow Rates

		East	bound			Westh	oound			North	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	1	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	0	0	0	167	0	26	1	0	160	50	0	9	629	0	1,042
Mediums	0	0	0	0	0	3	0	0	0	0	4	0	0	0	5	1	13
Total	0	0	0	0	0	171	0	26	1	0	164	50	0	9	634	1	1,056

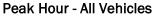


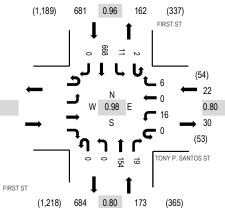
(303) 216-2439 www.alltrafficdata.net Location: 2 FIRST ST & TONY P. SANTOS ST PM

Date: Thursday, November 1, 2018

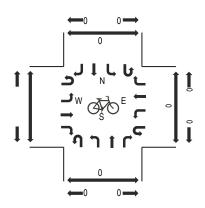
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:45 PM - 06:00 PM

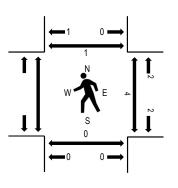




Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

					TONY	P. SA	NTOS S	ST		FIRS1	ΓST			FIRS	TST							
Interval		Eastb	ound		,	Westb	ound			Northb	ound			South	oound			Rolling	Ped	destrian	Crossi	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	5	0	2	2	0	23	4	0	1	133	0	170	732		0	0	0
4:15 PM					0	9	0	0	1	0	40	3	0	3	126	0	182	783		0	0	0
4:30 PM					0	4	0	1	1	0	50	3	1	1	116	0	177	815		0	0	0
4:45 PM					0	10	0	1	1	0	57	7	0	1	126	0	203	855		0	0	0
5:00 PM					0	6	0	3	0	0	38	6	1	5	162	0	221	876		2	0	1
5:15 PM					0	7	0	3	0	0	35	5	1	6	157	0	214			1	0	0
5:30 PM					0	3	0	0	0	0	38	4	0	0	172	0	217			1	0	0
5:45 PM					0	0	0	0	0	0	43	4	0	0	177	0	224			0	0	0

Peak Rolling Hour Flow Rates

	Eas	tbound			West	oound			North	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
Lights				0	16	0	6	0	0	151	19	2	11	665	0	870
Mediums				0	0	0	0	0	0	3	0	0	0	3	0	6
Total				0	16	0	6	0	0	154	19	2	11	668	0	876

Appendix B Approved Trip Inventory

AM PROJECT TRIPS

											10/20	3/2021
<pre>Intersection of : 1st St / WB 237 To 1st R</pre>	p & N 1s	t St &	WB 23	7 From	ı 1st 1	Rp						
Traffix Node Number : 3026												
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
H14-011 (3-18810) Retail/Commercial NW CORNER OF SR 237 AND N. FIRST STREET HOMEWOOD SUITES HOTEL	0	47	0	0	36	6	0	0	0	0	0	16
NSJ LEGACY	4	2	0	0	7	1	0	0	0	21	0	11
NORTH SAN JOSE												
PD13-012 (3-09684) Office/Industrial NW CORNER OF SR237 AND N. FIRST STREET SOUTH BAY	0	324	0	0	102	22	0	0	0	0	0	172
PD13-039 (3-18698) Office/Industrial NW CORNER OF NORTHECH PKWY AND DISK DR TRAMMEL CROW (R&D)	0	0	0	0	0	0	0	0	0	0	0	0
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	0	214	0	0	42	9	0	0	0	0	0	113
PDC16-013 (3-06800) Retail/Commercial N. FIRST ST. BETWEEN GOLD STREET AND SR 237 TOP GOLF	0	87	0	0	46	10	0	0	0	0	0	23

TOTAL:	4	674	0	0	233	48	0	0	0	21	0	335	
--------	---	-----	---	---	-----	----	---	---	---	----	---	-----	--

	LEFT	THRU	RIGHT
NORTH	0	233	48
EAST	21	0	335
SOUTH	4	674	0
WEST	0	0	0

PM PROJECT TRIPS

											10/20	3/2021
<pre>Intersection of : 1st St / WB 237 To 1st R</pre>	p & N 1s	t St &	WB 23	7 From	1st I	qs.						
Traffix Node Number : 3026												
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
H14-011 (3-18810) Retail/Commercial NW CORNER OF SR 237 AND N. FIRST STREET HOMEWOOD SUITES HOTEL	0	53	0	0	40	7	0	0	0	0	0	18
NSJ LEGACY	15	3	0	0	8	4	0	0	0	8	0	2
NORTH SAN JOSE												
PD13-012 (3-09684) Office/Industrial NW CORNER OF SR237 AND N. FIRST STREET SOUTH BAY	0	36	0	0	403	87	0	0	0	0	0	19
PD13-039 (3-18698) Office/Industrial NW CORNER OF NORTHECH PKWY AND DISK DR TRAMMEL CROW (R&D)	0	0	0	0	0	0	0	0	0	0	0	0
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	0	40	0	0	240	51	0	0	0	0	0	21
PDC16-013 (3-06800) Retail/Commercial N. FIRST ST. BETWEEN GOLD STREET AND SR 237 TOP GOLF	0	186	0	0	194	51	0	0	0	0	0	47

TOTAL:	15	318	0	0	885	200	0	0	0	8	0	107

	LEFT	THRU	RIGHT
NORTH	0	885	200
EAST	8	0	107
SOUTH	15	318	0
WEST	0	0	0

AM PROJECT TRIPS

											10/20	0/2021
Intersection of : N 1st St & Lamplighter M	HP Acces	S										
Traffix Node Number: 3027												
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
H14-011 (3-18810) Retail/Commercial NW CORNER OF SR 237 AND N. FIRST STREET HOMEWOOD SUITES HOTEL	0	37	0	11	25	0	0	0	0	0	0	9
NSJ LEGACY	0	40	15	10	27	3	3	3	0	113	1	5
NORTH SAN JOSE												
PD13-012 (3-09684) Office/Industrial NW CORNER OF SR237 AND N. FIRST STREET SOUTH BAY	0	236	0	43	59	0	0	0	0	0	0	88
PD13-039 (3-18698) Office/Industrial NW CORNER OF NORTHECH PKWY AND DISK DR TRAMMEL CROW (R&D)	0	0	0	0	0	0	0	0	0	0	0	0
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	0	156	0	18	24	0	0	0	0	0	0	58
PDC16-013 (3-06800) Retail/Commercial N. FIRST ST. BETWEEN GOLD STREET AND SR 237 TOP GOLF	0	62	0	11	33	2	4	0	0	0	0	21

TO	TAL: 0	531	15	93	168	5	7	3	0	113	1	181

	LEFT	THRU	RIGHT
NORTH	93	168	5
EAST	113	1	181
SOUTH	0	531	15
WEST	7	3	0

PM PROJECT TRIPS

											10/28	72021
<pre>Intersection of : N 1st St & Lamplighter M</pre> Traffix Node Number : 3027	IHP Acces	S										
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
H14-011 (3-18810) Retail/Commercial NW CORNER OF SR 237 AND N. FIRST STREET HOMEWOOD SUITES HOTEL	0	42	0	12	28	0	0	0	0	0	0	11
NSJ LEGACY	1	143	36	4	17	1	0	0	2	72	1	3
NORTH SAN JOSE												
PD13-012 (3-09684) Office/Industrial NW CORNER OF SR237 AND N. FIRST STREET SOUTH BAY	0	36	0	170	233	0	0	0	0	0	0	10
PD13-039 (3-18698) Office/Industrial NW CORNER OF NORTHECH PKWY AND DISK DR TRAMMEL CROW (R&D)	0	0	0	0	0	0	0	0	0	0	0	0
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	0	29	0	101	138	0	0	0	0	0	0	11
PDC16-013 (3-06800) Retail/Commercial N. FIRST ST. BETWEEN GOLD STREET AND SR 237 TOP GOLF	0	129	0	49	137	9	9	0	0	0	0	48

TOTAL:	1	379	36	553	10	9	0	2	72	1	83

	LEFT	THRU	RIGHT
NORTH	336	553	10
EAST	72	1	83
SOUTH	1	379	36
WEST	9	0	2

AM PROJECT TRIPS

Intersection of : N 1st St & Nortech Py												
Traffix Node Number : 3994												
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
NSJ LEGACY	0	0	0	0	0	0	0	0	0	0	0	0
NORTH SAN JOSE												
PD13-012 (3-09684) Office/Industrial NW CORNER OF SR237 AND N. FIRST STREET SOUTH BAY	496	0	0	0	0	0	0	0	122	0	0	0
PD13-039 (3-18698) Office/Industrial NW CORNER OF NORTHECH PKWY AND DISK DR TRAMMEL CROW (R&D)	0	0	0	0	0	0	0	0	0	0	0	0
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	0	0	512	0	0	0	0	0	0	80	0	0
PDC16-013 (3-06800) Retail/Commercial N. FIRST ST. BETWEEN GOLD STREET AND SR 237 TOP GOLF	0	109	0	2	56	0	0	0	0	0	0	3
TOTAL	: 496	109	512	2	56	0	0	0	122	80	0	3

	LEFT	THRU	RIGHT
NORTH	2	56	0
EAST	80	0	3
SOUTH	496	109	512
WEST	0	0	122

PM PROJECT TRIPS

Intersection of : N 1st St & Nortech Py												
Traffix Node Number: 3994												
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
NSJ LEGACY	0	0	0	0	0	0	0	0	0	0	0	0
NORTH SAN JOSE												
PD13-012 (3-09684) Office/Industrial NW CORNER OF SR237 AND N. FIRST STREET SOUTH BAY	55	0	0	0	0	0	0	0	490	0	0	0
PD13-039 (3-18698) Office/Industrial NW CORNER OF NORTHECH PKWY AND DISK DR TRAMMEL CROW (R&D)	0	0	0	0	0	0	0	0	0	0	0	0
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	0	0	95	0	0	0	0	0	0	456	0	0
PDC16-013 (3-06800) Retail/Commercial N. FIRST ST. BETWEEN GOLD STREET AND SR 237 TOP GOLF	0	232	0	3	246	0	0	0	0	0	0	3
TOTAL	: 55	232	95	3	246	0	0	0	490	456	0	3

	LEFT	THRU	RIGHT
NORTH	3	246	0
EAST	456	0	3
SOUTH	55	232	95
WEST	0	0	490

Appendix C Volume Summary

Intersection Name: First Street and SR 237 (S)

Peak Hour: AM
Count Date: 10/12/16

						Move	ments						
	No	rth Appro	ach	Eas	st Appro	ach	So	uth Approa	ach	We	st Appro	ach	Int.
Scenario:	RT	TH	LT	RT	ŤĤ	LT	RT	TH	LT	RT	TH	LT	Total
Counts	5	247	106	142	2	716	271	993	11	13	16	22	2,544
Existing Conditions (with 1% compound	6	260	112	150	3	753	285	1044	12	14	17	24	2680
growth if older than 2 years)													
ATI	5	168	93	181	1	113	15	531	0	0	3	7	1,117
Remove Partial Midpoint Trips from ATI ¹	0	-24	-18	-58	0	0	0	-156	0	0	0	0	-256
Midpoint (995ksf) ¹	0	49	36	116	0	0	0	312	0	0	0	0	513
Remove 614.809 ksf R&D from ATI ²	0	-59	-43	-88	0	0	0	-236	0	0	0	0	-426
368.702 ksf of R&D ²	0	35	26	53	0	0	0	142	0	0	0	0	256
246.107 ksf of R&D ²	0	24	17	35	0	0	0	95	0	0	0	0	171
70% of Existing 427ksf ³	0	29	21	43	0	0	0	115	0	0	0	0	208
Total Approved Trips	5	222	132	282	1	113	15	803	0	0	3	7	1,583

Notes:

Based only field observation conducted in 2018, only approximately 30% of the two buildings were occupied, thus, 70% of traffic associated with these two buildings were added back to approved trips.

Background Conditions	11	482	244	432	4	866	300	1,847	12	14	20	31	4,263
246.107 ksf of R&D (Credit)	0	-24	-17	-35	0	0	0	-95	0	0	0	0	-171
Proposed Project	0	17	15	40	0	0	0	98	0	0	0	0	170
Passenger Car Equivalent for Proposed Trucks	0	2	4	4	0	0	0	2	0	0	0	0	12
Net Project Trips	0	-5	2	9	0	0	0	5	0	0	0	0	11
Background Plus Project Conditions	11	477	246	441	4	866	300	1,852	12	14	20	31	4,274

3026

Intersection Name: First Street and SR 237 (N)

Peak Hour: AM
Count Date: 10/7/15

						Move	ments						
	No	rth Appro	ach	Eas	st Approa	ach	So	uth Appro	ach	We	st Appro	ach	Int.
Scenario:	RT	TH	LT	RT	ŤĤ	LT	RT	TH	LT	RT	TH	LT	Total
Counts	116	278	1	93	1	91	0	522	949	0	0	0	2,051
Existing Conditions (with 1% compound	124	296	2	99	2	97	0	555	1008	0	0	0	2183
growth if older than 2 years)													
ATI	48	223	0	335	0	21	0	674	4	0	0	0	1,305
Remove Partial Midpoint Trips from ATI ²	-9	-42	0	-113	0	0	0	-214	0	0	0	0	-378
Midpoint (995ksf) ²	18	85	0	227	0	0	0	428	0	0	0	0	758
Remove 614.809 ksf R&D from ATI ³	-22	-102	0	-172	0	0	0	-324	0	0	0	0	-620
368.702 ksf of R&D ³	13	61	0	103	0	0	0	195	0	0	0	0	372
246.107 ksf of R&D ³	9	41	0	69	0	0	0	130	0	0	0	0	249
70% of Existing 427ksf ⁴	11	50	0	84	0	0	0	158	0	0	0	0	303
Total Approved Trips	68	316	0	533	0	21	0	1,047	4	0	0	0	1,989

Notes:

Background Conditions	192	612	2	632	2	118	0	1,602	1,012	0	0	0	4,172
246.107 ksf of R&D (Credit)	-9	-41	0	-69	0	0	0	-130	0	0	0	0	-249
Proposed Project	9	31	0	74	0	0	Ö	137	0	0	0	0	251
Passenger Car Equivalent for Proposed Trucks	4	6	0	4	0	0	0	6	0	0	0	0	20
Net Project Trips	4	-4	0	9	0	0	0	13	0	0	0	0	22
Background Plus Project Conditions	196	608	2	641	2	118	0	1,615	1,012	0	0	0	4,194

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

Intersection Name: First Street and Nortech Parkway

Peak Hour: AM
Count Date: 11/1/18

						Move	ments						
	No	rth Appro	ach	Ea	st Appro	ach	Sou	uth Appro	ach	We	st Appro	ach	Int.
Scenario:	RT	TĤ	LT	RT	ŤĤ	LT	RT	TĤ	LT	RT	TH	LT	Total
Counts	1	284	27	10	1	85	243	290	6	0	2	4	953
Existing Conditions (with 1% compound	2	293	28	11	2	88	251	299	7	0	3	5	989
growth if older than 2 years)													
ATI	0	56	2	3	0	80	512	109	496	122	0	0	1,380
Remove Partial Midpoint Trips from ATI ³	0	0	0	0	0	-80	-512	0	0	0	0	0	-592
Midpoint (995ksf) ³	0	10	76	11	0	93	590	66	0	0	0	0	846
Remove 614.809 ksf R&D from ATI ⁴	0	0	0	0	0	0	0	0	-496	-122	0	0	-618
368.702 ksf of R&D ⁴	17	17	0	0	23	23	6	4	75	19	6	4	194
246.107 ksf of R&D ⁴	7	15	2	0	30	0	0	0	199	35	5	6	299
70% of Existing 427ksf ⁵	0	14	14	4	0	6	24	4	0	0	0	0	66
Total Approved Trips	24	112	94	18	53	122	620	183	274	54	11	10	1,575

Notes:

Based only field observation conducted in 2018, only approximately 30% of the two buildings were occupied, thus, 70% of traffic associated with these two buildings were added back to approved trips.

Background Conditions	26	405	122	29	55	210	871	482	281	54	14	15	2,564
246.107 ksf of R&D (Credit)	-7	-15	-2	0	-30	0	0	0	-199	-35	-5	-6	-299
Proposed Project	9	25	2	8	23	0	0	50	161	15	2	2	297
Passenger Car Equivalent for Proposed Trucks	0	10	0	0	0	0	0	0	10	0	0	0	20
Net Project Trips	2	20	0	8	-7	0	0	50	-28	-20	-3	-4	18
Background Plus Project Conditions	28	425	122	37	48	210	871	532	253	34	11	11	2,582

399

Intersection Name: First Street and Tony P. Santos Street

Peak Hour: AM
Count Date: 11/1/18

						Move	ments						
	No	rth Appro	ach	Eas	st Appro	ach	So	uth Approa	ach	We	st Appro	ach	Int.
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Counts	0	236	13	21	0	44	92	240	0	0	0	0	646
Existing Conditions (with 1% compound	0	244	14	22	0	46	95	248	0	0	0	0	669
growth if older than 2 years)													,
ATI	0	58	0	0	0	0	0	112	0	0	0	0	170
Remove Partial Midpoint Trips from ATI ⁴	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint (995ksf) ⁴	0	86	0	0	0	0	0	77	0	0	0	0	163
Remove 614.809 ksf R&D from ATI ⁵	0	0	0	0	0	0	0	0	0	0	0	0	0
368.702 ksf of R&D ⁵	0	34	0	0	0	0	0	9	0	0	0	0	43
246.107 ksf of R&D ⁵	0	24	0	0	0	0	0	6	0	0	0	0	30
70% of Existing 427ksf ⁶	0	28	0	0	0	0	0	7	0	0	0	0	35
Total Approved Trips	0	230	0	0	0	0	0	211	0	0	0	0	441

Notes:

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

Background Conditions	0	474	14	22	0	46	95	459	0	0	0	0	1,110
246.107 ksf of R&D (Credit)	0	-24	0	0	0	0	0	-6	0	0	0	0	-30
Proposed Project	9	25	0	0	0	0	0	2	58	12	0	1	107
Passenger Car Equivalent for Proposed Trucks	0	10	0	0	0	0	0	0	0	0	0	0	10
Net Project Trips	9	11	0	0	0	0	0	-4	58	12	0	1	87
Background Plus Project Conditions	9	485	14	22	0	46	95	455	58	12	0	1	1,197

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

Intersection Name: First Street and SR 237 (S)

Peak Hour: PM Count Date: 11/1/18

						Move	ments						
	No	rth Appro	ach	Eas	st Appro	ach	So	uth Approa	ach	We	st Appro	ach	Int.
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Counts	21	783	317	18	5	435	302	580	23	9	11	3	2,507
Existing Conditions (with 1% compound	22	807	327	19	6	449	312	598	24	10	12	4	2590
growth if older than 2 years)													
ATI	10	553	336	83	1	72	36	379	1	2	0	9	1,482
Remove Partial Midpoint Trips from ATI ¹	0	-138	-101	-11	0	0	0	-29	0	0	0	0	-279
Midpoint (995ksf) ¹	0	277	203	22	0	0	0	59	0	0	0	0	561
Remove 614.809 ksf R&D from ATI ²	0	-233	-170	-10	0	0	0	-36	0	0	0	0	-449
368.702 ksf of R&D ²	0	140	102	6	0	0	0	15	0	0	0	0	263
246.107 ksf of R&D ²	0	93	68	4	0	0	0	11	0	0	0	0	176
70% of Existing 427ksf ³	0	113	83	5	0	0	0	13	0	0	0	0	214
Total Approved Trips	10	805	521	99	1	72	36	412	1	2	0	9	1,968

Notes:

Based only field observation conducted in 2018, only approximately 30% of the two buildings were occupied, thus, 70% of traffic associated with these two buildings were added back to approved trips.

Background Conditions	32	1,612	848	118	7	521	348	1,010	25	12	12	13	4,558
246.107 ksf of R&D (Credit)	0	-93	-68	-4	0	0	0	-11	0	0	0	0	-176
Proposed Project	0	83	64	8	0	0	0	12	0	0	0	0	167
Passenger Car Equivalent for Proposed Trucks	0	2	4	4	0	0	0	2	0	0	0	0	12
Net Project Trips	0	-8	0	8	0	0	0	3	0	0	0	0	3
Background Plus Project Conditions	32	1,604	848	126	7	521	348	1,013	25	12	12	13	4,561

3026

Intersection Name: First Street and SR 237 (N)

Peak Hour: PM Count Date: 11/1/18

						Move	ments						
	No	rth Approa	ach	Eas	st Appro	ach	So	uth Appro	ach	We	est Appro	ach	Int.
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
·													
Counts	108	801	0	99	4	313	0	149	501	0	0	0	1,975
Existing Conditions (with 1% compound	112	826	0	102	5	323	0	154	517	0	0	0	2039
growth if older than 2 years)													
ATI	200	885	0	107	0	8	0	318	15	0	0	0	1,533
Remove Partial Midpoint Trips from ATI ²	-51	-240	0	-21	0	0	0	-40	0	0	0	0	-352
Midpoint (995ksf) ²	103	480	0	43	0	0	0	81	0	0	0	0	707
Remove 614.809 ksf R&D from ATI ³	-87	-403	0	-19	0	0	0	-36	0	0	0	0	-545
368.702 ksf of R&D ³	52	242	0	11	0	0	0	21	0	0	0	0	326
246.107 ksf of R&D ³	35	161	0	8	0	0	0	14	0	0	0	0	218
70% of Existing 427ksf ⁴	42	196	0	9	0	0	0	18	0	0	0	0	265
Total Approved Trips	294	1,321	0	138	0	8	0	376	15	0	0	0	2,152

Notes:

Background Conditions	406	2,147	0	240	5	331	0	530	532	0	0	0	4,191
246.107 ksf of R&D (Credit)	-35	-161	0	-8	0	0	0	-14	0	0	0	0	-218
Proposed Project	34	147	0	11	0	Ö	0	20	0	0	0	Ö	212
Passenger Car Equivalent for Proposed Trucks	4	6	0	4	0	0	0	6	0	0	0	0	20
Net Project Trips	3	-8	0	7	0	0	0	12	0	0	0	0	14
Background Plus Project Conditions	409	2,139	0	247	5	331	0	542	532	0	0	0	4,205

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

Intersection Name: First Street and Nortech Parkway

Peak Hour: PM Count Date: 11/1/18

						Move	ments						
	No	rth Appro	ach	Eas	st Appro	ach	So	uth Appro	ach	We	st Appro	ach	Int.
Scenario:	RT	TH	LT	RT	ŤĤ	LT	RT	TH	LT	RT	TH	LT	Total
Counts	1	634	9	26	0	171	50	164	1	0	0	0	1,056
Existing Conditions (with 1% compound	2	654	10	27	0	177	52	169	2	0	0	0	1093
growth if older than 2 years)													
ATI	0	246	3	3	0	456	95	232	55	490	0	0	1,580
Remove Partial Midpoint Trips from ATI ³	0	0	0	0	0	-456	-95	0	0	0	0	0	-551
Midpoint (995ksf) ³	0	58	14	60	0	524	112	12	0	0	0	0	780
Remove 614.809 ksf R&D from ATI ⁴	0	0	0	0	0	0	0	0	-55	-490	0	0	-545
368.702 ksf of R&D ⁴	2	2	0	0	2	2	22	17	8	73	22	17	167
246.107 ksf of R&D ⁴	1	59	9	0	3	0	0	0	22	137	21	22	274
70% of Existing 427ksf ⁵	0	2	2	14	0	24	3	14	0	0	0	0	59
Total Approved Trips	3	367	28	77	5	550	137	275	30	210	43	39	1,764

Notes:

3

Based only field observation conducted in 2018, only approximately 30% of the two buildings were occupied, thus, 70% of traffic associated with these two buildings were added back to approved trips.

Background Conditions	5	1,021	38	104	5	727	189	444	32	210	43	39	2,857
246.107 ksf of R&D (Credit)	-1	-59	-9	0	-3	0	0	0	-22	-137	-21	-22	-274
Proposed Project	1	96	13	1	2	0	0	5	26	86	13	12	255
Passenger Car Equivalent for Proposed Trucks	0	10	0	0	0	0	0	0	10	0	0	0	20
Net Project Trips	0	47	4	1	-1	0	0	5	14	-51	-8	-10	1
Background Plus Project Conditions	5	1,068	42	105	4	727	189	449	46	159	35	29	2,858

399

Intersection Name: First Street and Tony P. Santos Street

Peak Hour: PM
Count Date: 11/1/18

						Move	ments						
	No	rth Appro	ach	Eas	st Appro	ach	So	uth Approa	ach	We	st Appro	ach	Int.
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Counts	0	668	13	6	0	16	19	154	0	0	0	0	876
Existing Conditions (with 1% compound	0	689	14	7	0	17	20	159	0	0	0	0	906
growth if older than 2 years)													
ATI	0	249	0	0	0	0	0	235	0	0	0	0	484
Remove Partial Midpoint Trips from ATI ⁴	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint (995ksf) ⁴	0	72	0	0	0	0	0	72	0	0	0	0	144
Remove 614.809 ksf R&D from ATI ⁵	0	0	0	0	0	0	0	0	0	0	0	0	0
368.702 ksf of R&D ⁵	0	4	0	0	0	0	0	34	0	0	0	0	38
246.107 ksf of R&D ⁵	0	68	0	0	0	0	0	22	0	0	0	0	90
70% of Existing 427ksf ⁶	0	3	0	0	0	0	0	27	0	0	0	0	30
Total Approved Trips	0	396	0	0	0	0	0	390	0	0	0	0	786

Notes:

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

Background Conditions	0	1,085	14	7	0	17	20	549	0	0	0	0	1,692
246.107 ksf of R&D (Credit)	0	-68	0	0	0	0	0	-22	0	0	0	0	-90
Proposed Project	1	41	0	0	0	0	0	12	6	69	0	8	137
Passenger Car Equivalent for Proposed Trucks	0	10	0	0	0	0	0	0	0	0	0	0	10
Net Project Trips	1	-17	0	0	0	0	0	-10	6	69	0	8	57
Background Plus Project Conditions	1	1,068	14	7	0	17	20	539	6	69	0	8	1,749

¹Midpoint was not constructed when the counts used in this analysis were collected (2018 or earlier). Therefore, 100% of Midpoint trips were added back to approved trips.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

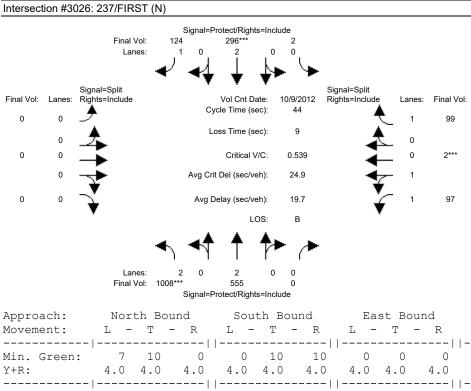
³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

²Breakdown the 614.809 ksf of R&D approved trips into the project site (246.107 ksf) and the constructed but unoccupied portion as of 2018 (368.702 ksf).

³The two existing buildings on the east side of North First Street at Cursor Court are part of the original Cisco entitlement.

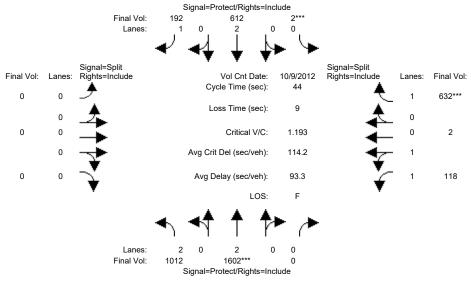
Appendix DIntersection Level of Service Calculations

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



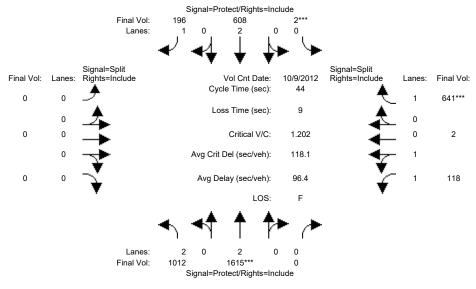
Approach:									und - R		est Bo - T	
Movement:		- T ·	– K ––––I		- T ·	– K ––––l						
		10			10			0			10	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0		4.0				
Volume Module												
Base Vol:	1008	555	0	2	296	124	0	0	0	97	2	99
_		1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00
Initial Bse:		555	0	2	296	124	0	0	0	97	2	99
	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:				0		0		0		0	0	0
Initial Fut:				2		124	0	0	0	97		99
User Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Adj: PHF Volume:		555	1.00	1.00	296	1.00 124	1.00	1.00	1.00	97	1.00	1.00 99
Reduct Vol:		333	0			124	0	0	0	97	0	99
Reduced Vol:		-	0	2	-	124	0	0	0	97	-	99
PCE Adi:				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:						124			0		2	
									-			
Saturation Fl												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00		0.95		0.92	0.92	1.00	0.92	0.93	0.95	0.92
Lanes:	2.00	2.00	0.00	0.01	1.99	1.00	0.00	0.00	0.00	1.96	0.04	1.00
Final Sat.:				25		1750	0	0	0		72	1750
Capacity Anal	_											
Vol/Sat:				0.08		0.07	0.00	0.00	0.00	0.03	0.03	0.06
Crit Moves:					****						****	
Green/Cycle:				0.15		0.23		0.00	0.00		0.23	0.23
Volume/Cap:			0.00	0.54		0.31	0.00		0.00		0.12	0.25
Delay/Veh:			0.0	18.4		14.6	0.0	0.0	0.0		13.6	14.3
User DelAdj:			1.00			1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:						14.6	0.0	0.0	0.0		13.6	14.3
LOS by Move: HCM2kAvqQ:	10	A 2	A 0	B 2	B 2	B 1	A 0		A 0	B 1	B 1	B 1
Note: Queue			-		_	_	•		U	1	Τ.	1
Note. Queue 1	-ebor	ceu is	CIIC II	mimer	OI Ca.	ra her	Tane	•				

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



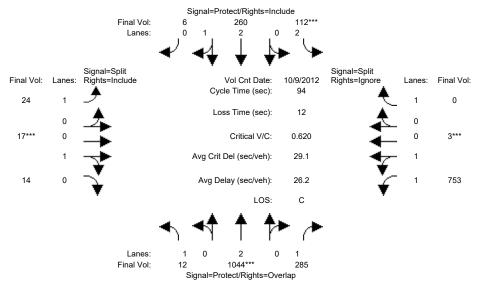
Approach: Movement:	L -	- T ·	- R	L -	- T	- R	L -	- Т	und - R	L -	- T	- R
Min. Green: Y+R:	7	10 4.0		0	10 4.0	10	0	0 4.0	0		10	10 4.0
Volume Module Base Vol: Growth Adj: Initial Bse: Added Vol:	1008 1.00	Count 555		9 Oct			0	0 1.00 0	0 1.00 0	97	2 1.00 2 0	99 1.00 99 0
PasserByVol: Initial Fut: User Adj:	1012 1.00	1602 1.00	0 0 1.00		316 612 1.00	68 192 1.00		0 0 1.00	0 0 1.00		0 2 1.00	533 632 1.00
PHF Volume:	0	1602 0	1.00	1.00 2 0 2	1.00 612 0 612	1.00 192 0 192	1.00	1.00	1.00	1.00 118 0 118	1.00 2 0 2	1.00 632 0 632
PCE Adj: MLF Adj: FinalVolume:	1012	1.00 1602	1.00 1.00 0	1.00	1.00 1.00 612	1.00 1.00 192	1.00	1.00 1.00 0	1.00 1.00 0	1.00 118	1.00 1.00 2	1.00 1.00 632
Saturation F. Sat/Lane: Adjustment: Lanes: Final Sat.:	low Mo 1900 0.83 2.00 3150	1900 1.00 2.00 3800	1900 0.92 0.00	1900 0.95 0.01 12	1900 0.97 1.99 3688	1900 0.92 1.00 1750	1900 0.92 0.00	1900 1.00 0.00	1900 0.92 0.00	1900 0.93 1.97 3491	1900 0.95 0.03 59	1900 0.92 1.00 1750
0110 110 100 .	lysis 0.32	Module 0.42 ****	e:		0.17		0.00	0.00	0.00		0.03	0.36
Green/Cycle: Volume/Cap: Delay/Veh: User DelAdj: AdjDel/Veh: LOS by Move:	1.21 122.0 1.00 122.0 F	1.19 109 1.00 109 F	1.00 0.0 A	123.6 1.00 123.6 F	0.73 19.0 1.00 19.0 B	0.23 0.48 15.7 1.00 15.7	0.00 0.0 1.00 0.0 A		0.00 0.00 0.0 1.00 0.0 A	0.11 11.1 1.00 11.1 B	1.00 11.1 B	0.30 1.19 119.5 1.00 119.5
HCM2kAvgQ: Note: Queue		26 ted is	0 the n	11 number	4 of ca	2 rs per	0 lane	0	0	1	1	27

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



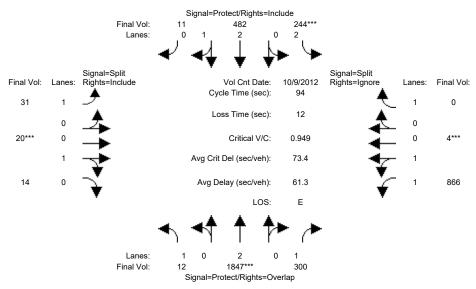
Approach: Movement:	L ·	- T	- R	L -	- T	- R	L -	- Т	- R	L -	- T	- R
Min. Green: Y+R:	7 4.0	10 4.0	0 4.0	0 4.0	10 4.0	10 4.0	0 4.0	0 4.0	0 4.0	10 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	1012	1602	0	2	612	192	0	0	0	118	2	632
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1012	1602	0	2	612	192	0	0	0	118	2	632
Added Vol:	0	137	0	0	31	9	0	0	0	0	0	74
PasserByVol:	0	-124	0	0	-35	- 5	0	0	0	0	0	-65
Initial Fut:	1012	1615	0	2	608	196	0	0	0	118	2	641
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:	1012	1615	0	2	608	196	0	0	0	118	2	641
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1012	1615	0	2	608	196	0	0	0	118	2	641
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
FinalVolume:			0		608	196	0	0	0	118	2	641
Saturation F	low M	odule:										
Sat/Lane:		1900	1900	1900		1900		1900	1900		1900	1900
Adjustment:			0.92	0.95		0.92		1.00	0.92		0.95	0.92
Lanes:			0.00	0.01		1.00		0.00	0.00		0.03	1.00
Final Sat.:			0		3688	1750	0	0	0	3491		1750
Capacity Anal	_											
Vol/Sat:			0.00	0.16	0.16	0.11	0.00	0.00	0.00	0.03	0.03	
Crit Moves:		***		****								****
Green/Cycle:			0.00	0.14		0.23		0.00	0.00		0.30	
Volume/Cap:			0.00	1.20		0.49	0.00		0.00		0.11	1.20
Delay/Veh:				127.6		15.8	0.0	0.0	0.0			123.1
User DelAdj:			1.00		1.00	1.00	1.00		1.00		1.00	1.00
AdjDel/Veh: 1				127.6		15.8	0.0	0.0	0.0			123.1
LOS by Move:			A	F	В	В	A	A	A	В	В	F
HCM2kAvgQ:			0	, 11	4	3	0	0	0	1	1	28
Note: Queue	repor	ted is	the n	number	of ca	rs per	lane.	•				

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



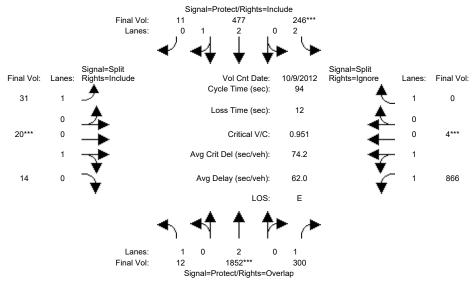
Approach: Movement:	L ·	- T ·	- R	L -	- T	- R	L ·	- T	- R	L -	- T	- R
Min. Green:		10			10			10			10	
Y+R:		4.0				4.0			4.0		4.0	
Volume Module Base Vol:		1044	285	9 001	260	<< /:·	40-8: 24	40AM 17		753	3	150
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:			285	112	260	6	24	17	14	753	3	150
	0		0	0	0		0	0	0	0	0	0
PasserByVol:				0			0		0	0	0	0
Initial Fut:			285	112		6	24		14	753	3	150
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.00
PHF Adj:			1.00		1.00	1.00		1.00	1.00		1.00	0.00
PHF Volume:	12	1044	285	112	260	6	24	17	14	753	3	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			285	112	260	6	24	17	14	753	3	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:				112		_	24			753		0
Saturation Fi									4000			
Sat/Lane:		1900	1900			1900		1900	1900		1900	1900
Adjustment:			0.92			0.95		0.95	0.95		0.95	0.92
	1.00		1.00			0.07		0.55	0.45		0.01	1.00
Final Sat.:			1750			126	1750		813	3536	14	1750
Capacity Anal												
Vol/Sat:	-			0 04	0 05	0.05	0 01	0 02	0.02	0 21	0.21	0.00
Crit Moves:			0.10	****	0.00	0.00	0.01	****	0.02	0.21	****	0.00
Green/Cycle:			0.69	0.07	0.27	0.27	0.11	0.11	0.11	0.30	0.30	0.00
Volume/Cap:			0.24		0.17	0.17		0.16	0.16		0.71	0.00
Delay/Veh:			5.4	43.3	26.1	26.1	38.4	38.6	38.6	31.3	31.3	0.0
User DelAdj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.0	25.7	5.4	43.3	26.1	26.1	38.4	38.6	38.6	31.3	31.3	0.0
LOS by Move:	С	С	A	D	С	С	D	D	D	С	С	A
HCM2kAvgQ:	0	13	3	2	2	2	1	1	1	12	12	0
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 (AM)



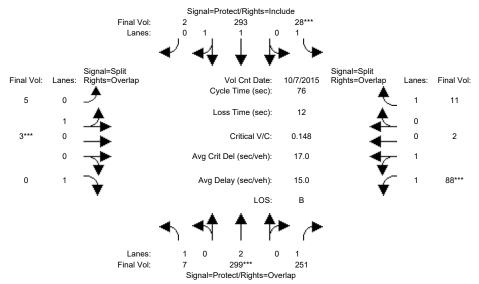
Approach: Movement:											est Bo - T	
		10			10			10			10	
Y+R:		4.0				4.0			4.0		4.0	
Volume Module									'			'
Base Vol:	12	1044	285	112	260	6	24	17	14	753	3	150
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	1044	285	112	260	6	24	17	14	753	3	150
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	803	15	132	222	5	7	3	0	113	1	282
Initial Fut:	12	1847	300	244		11	31	20	14	866	4	432
User Adj:	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	12	1847	300	244	482	11	31	20	14	866	4	0
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			300	244	482	11	31	20	14	866	4	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:			300	244	482	11	31	20	14	866	4	0
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	0.98	0.95	0.92	0.95	0.95	0.93	0.95	0.92
Lanes:	1.00	2.00	1.00	2.00	2.93	0.07	1.00	0.59	0.41	1.99	0.01	1.00
Final Sat.:	1750	3800	1750	3150	5475	125	1750	1059	741	3534	16	1750
	1											
Capacity Anal												
Vol/Sat:			0.17		0.09	0.09	0.02		0.02	0.25	0.25	0.00
Crit Moves:		****		****				****			****	
Green/Cycle:	0.22			0.07	0.31	0.31	0.11	0.11	0.11		0.23	0.00
Volume/Cap:	0.03		0.25	1.04		0.28	0.17	0.18	0.18	1.06	1.06	0.00
Delay/Veh:				113.2		24.3	38.6	38.7	38.7	83.7	83.7	0.0
User DelAdj:						1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:							38.6	38.7	38.7		83.7	0.0
LOS by Move:				F		С	D	D	D	F	F	A
HCM2kAvgQ:			_	6			1		1	22	22	0
Note: Queue	report	ted is	the r	number	of ca	rs per	lane	•				

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



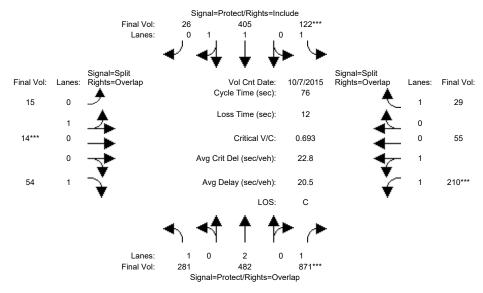
Approach: Movement:											est Bo - T	
movement:												
		10			10						10	•
Y+R:		4.0			4.0				4.0		4.0	
Volume Module	e: >>	Count	Date:	9 Oct	2012	<< 7:	40-8:4	10AM	·			•
Base Vol:	12	1847	300	244	482	11	31	20	14	866	4	432
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	1847	300	244	482	11	31	20	14	866	4	432
Added Vol:	0	98	0	15	17	0	0	0	0	0	0	40
PasserByVol:	0	-93	0	-13			0	0	0	0	0	-31
Initial Fut:	12	1852	300	246	477	11	31	20	14	866	4	441
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
	12		300	246	477	11	31	20	14	866	4	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	1852	300	246	477	11	31	20	14	866	4	0
PCE Adj:			1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:			1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.00
FinalVolume:				246			31		14	866		0
	'											
Saturation Fl												
Sat/Lane:		1900	1900			1900		1900			1900	1900
_	0.92		0.92	0.83		0.95		0.95	0.95		0.95	0.92
	1.00		1.00	2.00		0.07		0.59			0.01	1.00
Final Sat.:			1750			126		1059	741	3534		1750
Capacity Anal				0 00	0 00	0 00	0 00	0 00	0 00	0 0 5	0 0 5	0 00
		0.49	0.17	0.08 ****	0.09	0.09	0.02	0.02 ****		0.25	0.25	0.00
Crit Moves:			0 60		0 01	0 01	0 11			0 00		0 00
Green/Cycle:			0.69			0.31		0.11			0.23	0.00
Volume/Cap:			0.25	1.05		0.28		0.18	0.18		1.06	0.00
Delay/Veh:				115.6		24.3		38.7	38.7		84.4	0.0
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:	28.8	64.5	5.5	112.6		24.3		38.7	38.7			0.0
LOS by Move:						C	D	D 1		F		A
HCM2kAvgQ:			3	, 6			1		1	22	22	0
Note: Queue	report	ted is	the r	number	oi ca	rs per	ıane	•				

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



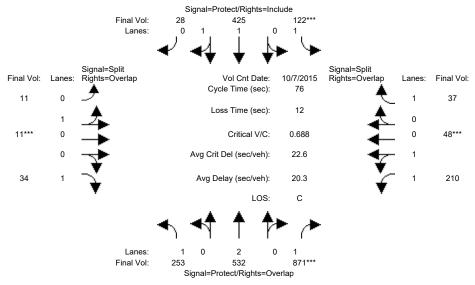
Approach:	No	rth Bo	und	SOI	1+h Bo	und	F:	et Bo	und	Wast B	ound
Movement:		- T			- T			- T		L - T	
Min. Green:	7	10	10	7	10	10	10	10		10 10	10
Y+R:		4.0			4.0			4.0			
				•							
Volume Module											
Base Vol:	7		251	28	293	2	5	3	0	88 2	
Growth Adj:			1.00		1.00	1.00		1.00	1.00	1.00 1.00	
Initial Bse:			251	28	293	2	5	3	0	88 2	
Added Vol:	0		0	0	0	0	0	0	0	0 0	-
PasserByVol:	0		0	0	0	0	0	0	0	0 0	-
Initial Fut:			251	28		2	5	3	0	88 2	
User Adj:		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	
	7		251	28	293	2	5	3	0	88 2	
Reduct Vol:	0		0	0	0	0	0	-	0	0 0	-
Reduced Vol:			251	28	293	2	5		0	88 2	
PCE Adj:	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:						2	. 5		0	88 2	
Saturation Fi				1000	1000	1000	1000	1 0 0 0	1000	1000 1000	1000
Sat/Lane:		1900			1900	1900		1900	1900	1900 1900	
Adjustment: Lanes:				0.92		0.95		0.95	0.92	0.93 0.95	
			1.00 1750			25		0.37	1.00 1750	1.96 0.04 3471 79	
Final Sat.:								675			
Capacity Anal											
Vol/Sat:	-			0.02	0 08	0.08	0 00	0.00	0.00	0.03 0.03	0.01
Crit Moves:			0.11	****	0.00	0.00	0.00	****	0.00	****	0.01
Green/Cycle:			0.62		0.33	0.33	0 13	0.13	0.00	0.15 0.15	0.24
Volume/Cap:				0.17		0.24		0.03	0.00	0.13 0.13	
Delay/Veh:						18.7		28.8	0.0	28.3 28.3	
User DelAdj:	1 00	1 00	1 00	1.00		1.00		1.00	1.00	1.00 1.00	
AdjDel/Veh:			6.7					28.8	0.0	28.3 28.3	
LOS by Move:				02.1 C	В	В	20.0 C	20.0 C	0.0 A	C C	
-	0			1	3	3	0			1 1	
Note: Queue				_			-		9		J
	- 2501		3110 11		5 ± 5 u	POT		-			

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



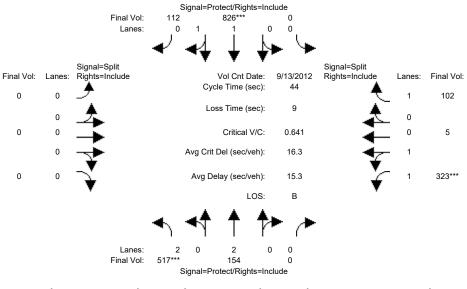
Approach: Movement:	L ·	- T	- R	L -	- T	- R	L -	- Т	- R		- R
Min. Green: Y+R:	7 4.0	10 4.0	10 4.0	7 4.0	10 4.0	10 4.0	10 4.0	10 4.0	10	10 10 4.0 4.0	10 4.0
Volume Module											
Base Vol:	7	299	251	28	293	2	5	3	0	88 2	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Initial Bse:	7	299	251	28	293	2	5	3	0	88 2	11
Added Vol:	0	0	0	0	0	0	0	0	0	0 0	0
PasserByVol:	274	183	620	94	112	24	10	11	54	122 53	18
Initial Fut:	281	482	871	122	405	26	15	14	54	210 55	29
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:	281	482	871	122	405	26	15	14	54	210 55	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0 0	0
Reduced Vol:	281	482	871	122	405	26	15	14	54	210 55	29
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:	281	482	871	122	405	26	15	14	54	210 55	29
Saturation F	low Mo	odule:									
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900 1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.98	0.95		0.95	0.92	0.93 0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	0.52	0.48	1.00	1.59 0.41	1.00
Final Sat.:		3800	1750		3477	223	931	869	1750	2813 737	1750
Capacity Ana	_										
Vol/Sat:	0.16	0.13	0.50		0.12	0.12	0.02	0.02	0.03	0.07 0.07	0.02
Crit Moves:			****	****				****		***	
Green/Cycle:			0.62		0.26	0.26		0.13	0.45	0.13 0.13	0.22
Volume/Cap:			0.81		0.45	0.45		0.12	0.07	0.57 0.57	0.07
Delay/Veh:		11.6	15.6		23.8	23.8		29.4	11.9	32.6 32.6	23.3
User DelAdj:			1.00		1.00	1.00		1.00	1.00	1.00 1.00	1.00
AdjDel/Veh:			15.6		23.8	23.8		29.4	11.9	32.6 32.6	23.3
LOS by Move:		В	В	D	C	C	С	С	В	C C	С
HCM2kAvgQ:	5	3	15	. 5	5	5	. 1	1	1	4 4	1
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•			

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



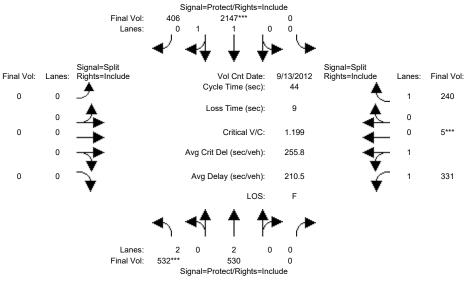
Approach: Movement:											est Bo - T	
		10				10				10		
Y+R:		4.0				4.0						
Volume Module									,			
Base Vol:	281	482	871	122	405	26	15	14	54	210	55	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	281	482		122		26			54	210	55	29
Added Vol:	161	50	0	2	25	9	15 2	2	15	0	23	8
PasserByVol:		0	0	-2	-5	-7	-6	- 5	-35	0	-30	0
Initial Fut:		532		122	425	28	11		34	210	48	37
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:	253	532	871	122	425	28	11	11	34	210	48	37
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			871	122		28	11	11	34	210	48	37
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:			871	122	425	28	11	11	34	210	48	37
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92			0.92	0.98	0.95	0.95	0.95	0.92	0.93	0.95	0.92
Lanes:	1.00	2.00	1.00	1.00	1.87	0.13	0.50	0.50	1.00	1.63	0.37	1.00
Final Sat.:			1750			229		900	1750		660	1750
Capacity Anal												
Vol/Sat:					0.12	0.12	0.01		0.02	0.07	0.07	0.02
			****	****				****			****	
Green/Cycle:						0.28		0.13	0.43		0.13	0.22
Volume/Cap:			0.81		0.44	0.44		0.09	0.04		0.55	0.09
Delay/Veh:			15.6	51.5		23.0		29.2	12.4		32.3	23.5
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:	22.3	11.7	15.6	51.5		23.0		29.2	12.4		32.3	23.5
LOS by Move:						С		С		С		С
HCM2kAvgQ:				5		5			0	4	4	1
Note: Queue	repor	ted is	the n	umber	of ca	rs per	lane	•				

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



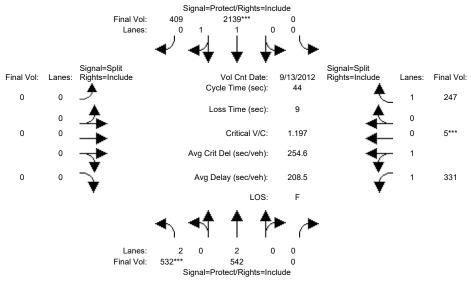
Approach: Movement:	L ·	- T ·	- R	L -	- T	- R	L -	- T	- R	L -	- Т	- R
	7 4.0	10 4.0	0 4.0	0 4.0	10 4.0	10 4.0	0 4.0	0 4.0	0 4.0	10 4.0	10 4.0	10 4.0
Volume Module												
Base Vol:	517	154	0	0	826	112	0	0	0	323	5	102
	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:		154	0	0	826	112	0	0	0	323	5	102
	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:			0	0	826	112	0	0	0	323	5	102
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:	517	154	0	0	826	112	0	0	0	323	5	102
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	517	154	0	0	826	112	0	0	0	323	5	102
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:				0		112		0	0		5	102
Saturation Fl												
Sat/Lane:		1900		1900		1900		1900	1900		1900	1900
_	0.83			0.92		0.95		1.00	0.92		0.95	0.92
Lanes:			0.00	0.00		0.25		0.00	0.00		0.03	1.00
Final Sat.:			•		3258	442	0	0	0	3496	54	1750
Capacity Anal	_			0 00	0 0 5	0 0 5	0 00	0 00	0 00	0 00	0 00	0 00
Vol/Sat:	0.16 ****			0.00	0.25	0.25	0.00	0.00	0.00	0.09 ****	0.09	0.06
CIIC MOVES.		0 57		0 00		0 24	0 00	0 00	0 00		0 00	0 00
Green/Cycle:				0.00		0.34		0.00	0.00		0.23	0.23
<pre>Volume/Cap: Delay/Veh:</pre>			0.00	0.00		0.74 14.9	0.0	0.00	0.00		0.41	14.3
User DelAdi:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				0.0		14.9	0.0	0.0	0.0		14.8	14.3
LOS by Move:				0.0 A		14.9 B	0.0 A		0.0 A	14.0 B	14.0 B	14.3 B
-	4		0	0	6	6	0		0	2		1
Note: Queue			-	-	-		-	-	0	۷	2	Τ.
noce. gacae i	CPOT	CCU 15	C11C 11	and C L	01 00	TO POI	± 011C	•				

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



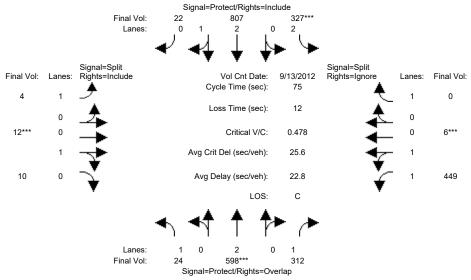
Approach: Movement:											est Bo - T	
		10						0			10	
Y+R:	4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module												
Base Vol:	517	154	0	0	826		0	0	0	323	5	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	517	154	0	0	826	112	0	0	0	323	5	102
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:			0	0	1321	294	0	0	0	8	0	138
Initial Fut:			0		2147	406	0	0	0	331	5	240
	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:	532	530	0	0	2147	406	0	0	0	331	5	240
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	532	530	0	0	2147	406	0	0	0	331	5	240
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:			0	0	2147	406	0	0	0	331	5	240
Saturation Fi	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.93	0.95	0.92
Lanes:	2.00	2.00	0.00	0.00	1.67	0.33	0.00	0.00	0.00	1.97	0.03	1.00
Final Sat.:			0	0	3111	588	0	0	0	3497	53	1750
Capacity Anal												
Vol/Sat:		0.14	0.00	0.00		0.69	0.00	0.00	0.00	0.09	0.09	0.14
Crit Moves:	****				****						****	
Green/Cycle:	0.16	0.57	0.00	0.00	0.41	0.41	0.00	0.00	0.00		0.23	0.23
Volume/Cap:	1.06	0.25	0.00	0.00	1.69	1.69	0.00	0.00	0.00	0.42	0.42	0.60
Delay/Veh:	76.0					325.0	0.0	0.0	0.0		14.9	17.8
User DelAdj:				1.00				1.00	1.00		1.00	1.00
AdjDel/Veh:							0.0	0.0	0.0		14.9	17.8
LOS by Move:	E	А		A			A		A	В		В
HCM2kAvgQ:			0	0	84	84	-	-	0	3	3	4
Note: Queue	report	ted is	the n	umber	of ca	ars per	lane	•				

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



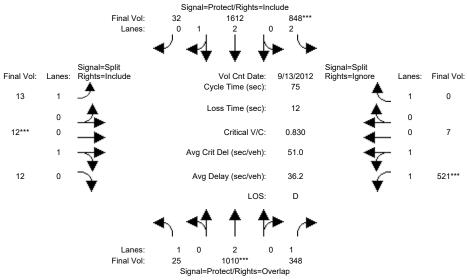
Approach:												
Movement:		- T ·				- R		- T			-	- R
		10					0		0		10	10
Y+R:		4.0			4.0			4.0	4.0	4.0		4.0
Volume Module												
Base Vol:	532	530	0		2147	406	0	0	0	331	5	240
Growth Adj:	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	532	530	0	0	2147	406	0	0	0	331	5	240
Added Vol:	0	20	0	0	147	34	0	0	0	0	0	11
PasserByVol:			0		-155	-31	0	0	0	0	0	-4
Initial Fut:	532	542	0	0	2139	409	0	0	0	331	5	247
_	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
PHF Volume:		542	0		2139	409	0	0	0	331	5	247
	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			0		2139	409	0	0	0	331	5	
PCE Adj:				1.00				1.00	1.00		1.00	1.00
MLF Adj:				1.00				1.00	1.00	1.00		1.00
FinalVolume:			-			409	0	0	0	331	5	247
Saturation Fi												
Sat/Lane:		1900		1900	1900	1900	1900	1900	1900	1900	1900	1900
,	0.83			0.92		0.95		1.00	0.92	0.93		0.92
Lanes:				0.00				0.00	0.00	1.97		1.00
Final Sat.:	3150	3800	0	0	3106	594	0	0	0	3497	53	1750
Capacity Anal	-											
Vol/Sat:		0.14	0.00	0.00		0.69	0.00	0.00	0.00	0.09	0.09	0.14
OTIC HOVED.	****				****						****	
Green/Cycle:					0.41			0.00	0.00		0.23	0.23
Volume/Cap:			0.00	0.00		1.68		0.00	0.00		0.42	0.62
Delay/Veh:						323.5	0.0	0.0	0.0		14.9	18.3
User DelAdj:			1.00	1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				0.0		323.5	0.0	0.0	0.0		14.9	18.3
LOS by Move:				A		F	A		A	В		В
_	7		0 +ha n	0	83	83	0	-	0	3	3	4
Note: Queue	report	Lea IS	the n	unber	OT C	ars ber	Tane	•				

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



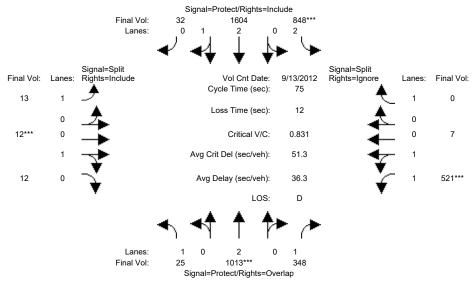
Approach:	Noi	rth Boı	und	Soi	ıth Bo	ound	Εá	ast Bo	und	We	est Bo	und
Movement:		- т -				- R		- T		L -		- R
Min. Green:		10	10	7				 10		10		10
Y+R:		4.0	4.0		4.0	4.0		4.0		4.0		4.0
				•								
Volume Module							:00-6					
Base Vol:	24	598	312		807	22	4	12	10	449	6	19
_	1.00		1.00	1.00		1.00		1.00	1.00	1.00		1.00
Initial Bse:		598	312	327	807	22	4	12	10	449	6	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:			312	327	807	22	4		10	449	6	19
_	1.00		1.00	1.00		1.00		1.00	1.00		1.00	0.00
_	1.00		1.00	1.00		1.00		1.00	1.00	1.00		0.00
PHF Volume:	24	598	312	327	807	22	4	12	10	449	6	0
Reduct Vol:	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			312	327	807	22	4		10	449	6	0
PCE Adj:			1.00	1.00		1.00		1.00	1.00		1.00	0.00
_	1.00		1.00	1.00		1.00		1.00	1.00	1.00	1.00	0.00
FinalVolume:				327		22		12	10	449	6	0
Saturation Fl			1000	1000	1000	1 0 0 0	1 0 0 0	1 0 0 0	1000	1000	1000	1000
Sat/Lane:			1900		1900	1900		1900	1900		1900	1900
_	0.92		0.92	0.83		0.95	0.92		0.95	0.93		0.92
	1.00		1.00	2.00		0.08		0.55	0.45	1.97		1.00
Final Sat.:			1750		5451	149		982	818	3503	47	1750
Capacity Anal	'											
	0.01		0.18	0.10	0 15	0.15	0 00	0.01	0.01	0 13	0.13	0.00
	0.01		0.10	****	0.15	0.10	0.00	****	0.01	0.13	****	0.00
Green/Cycle:			0 52	0 19	0.29	0.29	0 13	0.13	0.13	0 23	0.23	0.00
Volume/Cap:			0.34	0.55		0.51		0.09	0.09		0.55	0.00
Delay/Veh:			10.8	28.7		22.4		28.7	28.7	26.1		0.0
User DelAdj:			1.00	1.00		1.00	1.00		1.00	1.00		1.00
AdjDel/Veh:			10.8		22.4	22.4		28.7	28.7	26.1		0.0
LOS by Move:			В	20.7 C	C	22.1 C	20.5 C	20.7 C	20.7 C	20.1 C	20.1 C	0.0 A
_	0	6	4	4	5	5	0			6	6	0
Note: Queue 1			_	_			-		-	Ü	J	3
	-					-						

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



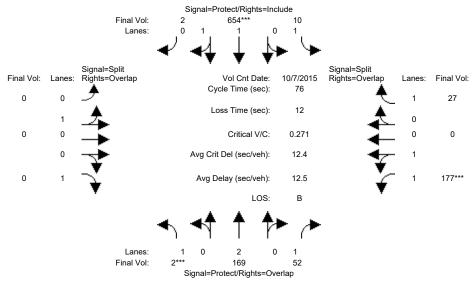
Approach:	No.	rth Boi	ind	Soi	ıth Bo	und	E.	ast Bo	und	We	est Bo	und
Movement:		- T				- R		- T				- R
Min. Green: Y+R:		10 4.0	4.0		10 4.0			10 4.0	10 4.0	4.0	10 4.0	10 4.0
1+K.												
Volume Module									ı	1		1
Base Vol:	24	598	312		807	22	4	12	10	449	6	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	598	312	327	807	22	4	12	10	449	6	19
Added Vol:	0		0	0		0	0		0	0	0	0
PasserByVol:	1	412	36	521	805	10	9		2	72	1	99
Initial Fut:				848		32	13		12	521	7	118
_	1.00		1.00		1.00	1.00		1.00	1.00		1.00	0.00
PHF Adj:			1.00		1.00	1.00		1.00	1.00		1.00	0.00
PHF Volume:		1010	348		1612	32	13	12	12	521	7	0
	0		0	0	0	0	0	0	0	0	0	0
Reduced Vol:			348		1612 1.00	32 1.00	13	12 1.00	12 1.00	521	7	0
PCE Adj: MLF Adj:					1.00			1.00	1.00		1.00	
FinalVolume:				848		32	1.00		12	521	7	0.00
												-
Saturation Fl				1		ı	1		ı	1		1
Sat/Lane:		1900		1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:				0.83		0.95		0.95	0.95		0.95	0.92
Lanes:	1.00	2.00	1.00	2.00	2.94	0.06	1.00	0.50	0.50	1.97	0.03	1.00
Final Sat.:	1750	3800	1750	3150	5491	109	1750	900	900	3503	47	1750
Capacity Anal	-											
Vol/Sat:			0.20		0.29	0.29	0.01	0.01	0.01		0.15	0.00
Crit Moves:				****				****		****		
Green/Cycle:					0.42			0.13	0.13		0.15	0.00
Volume/Cap:				0.97		0.70		0.10	0.10		0.97	0.00
Delay/Veh:				49.4		18.8		28.7	28.7		61.9	0.0
User DelAdj:				1.00		1.00		1.00	1.00		1.00	1.00
AdjDel/Veh:				49.4 D	18.8 B	18.8 B	28.5 C	28.7 C	28.7 C	61.9 E	61.9 E	0.0 A
LOS by Move: HCM2kAvqQ:	1		Б 6	ם 11	10	В 10	0		1	11	11	A 0
Note: Queue							-		1	т.т	тт	U
Note. Queue	LCPOI	ccu is	CIIC II	anibel	or ca	ro ber	Tane	•				

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



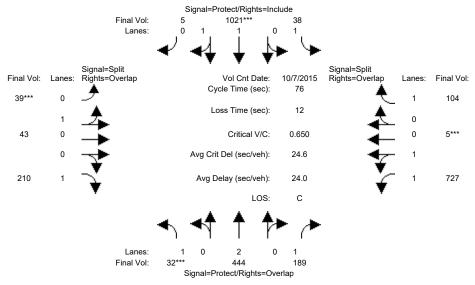
Approach: North Bo Movement: L - T								st Bo T	
Min. Green: 7 10		10					10		
Y+R: 4.0 4.0		4.0						4.0	
Volume Module: >> Count							•		
Base Vol: 25 1010		1612	32	13		12	521	7	118
Growth Adj: 1.00 1.00	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		1612	32	13	12	12	521	7	118
Added Vol: 0 12	0 64	83	0	0	0	0	0	0	8
PasserByVol: 0 -9	0 -64			0		0	0	0	0
Initial Fut: 25 1013	348 848	1604	32	13	12	12	521	7	126
User Adj: 1.00 1.00	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj: 1.00 1.00		1.00	1.00	1.00		1.00	1.00	1.00	0.00
PHF Volume: 25 1013		1604	32	13	12	12	521	7	0
	0 0		0	0	0	0	0	0	0
			32	13	12	12			0
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: 25 1013		1604				12			0
	1 1								
Saturation Flow Module:									
Sat/Lane: 1900 1900			1900		1900	1900	1900		
			0.95		0.95	0.95	0.93		0.92
			0.06		0.50	0.50	1.97		1.00
			110			900	3503		1750
Vol/Sat: 0.01 0.27		0.29	0.20	0 01	0 01	0.01	0.15	0 15	0.00
Crit Moves: ****	****		0.29	0.01	****	0.01	****	0.13	0.00
Green/Cycle: 0.13 0.28	0 43 0 28	0.42	0.42	0 13	0.13	0.13	0.15	0 15	0.00
Volume/Cap: 0.11 0.97		0.70	0.70		0.10	0.10	0.13		0.00
-		18.8	18.8		28.7	28.7	62.2		0.0
<u> </u>			1.00		1.00	1.00	1.00		1.00
AdjDel/Veh: 28.7 47.4			18.8		28.7	28.7	62.2		0.0
=	B D				C C	C	E		A
HCM2kAvqQ: 1 14	6 11			0		1		11	0
Note: Queue reported is									

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



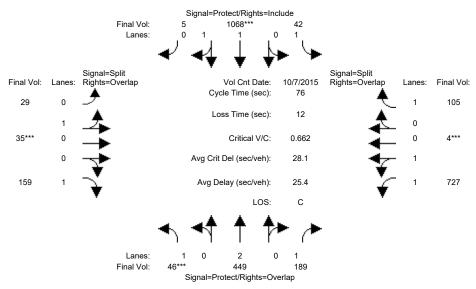
		North Bound South Bound East Bound L - T - R L - T - R											
movement.													
		10			10			10		10			
Y+R:		4.0			4.0				4.0				
Volume Module				•					'			1	
Base Vol:	2	169	52	10	654	2	0	0	0	177	0	27	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	2	169	52	10	654	2	0	0	0	177	0	27	
Added Vol:			0	0	0	0	0	0	0	0	0	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	2	169	52	10	654	2	0	0	0	177	0	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:			52	10	654	2	0	0	0	177	0	27	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:			52	10	654	2	0	0	0	177	0	27	
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		1.00	
FinalVolume:						2	-		0	177		27	
Saturation F													
Sat/Lane:			1900		1900	1900		1900	1900	1900		1900	
Adjustment:			0.92	0.92		0.95		0.95	0.92	0.93		0.92	
Lanes:			1.00			0.01		1.00	1.00	2.00		1.00	
Final Sat.:			1750				0		1750	3550		1750	
Capacity Ana				0 01	0 10	0 10	0 00	0 00	0 00	0 05	0 00	0 00	
Vol/Sat:		0.04	0.03	0.01	****	0.18	0.00	0.00	0.00	0.05	0.00	0.02	
Crit Moves:		0 40	0 50	0 00		0 50	0 00	0 00	0 00		0 00	0 44	
Green/Cycle:				0.28		0.59		0.00	0.00	0.16		0.44	
Volume/Cap:			0.05	0.02		0.30		0.00	0.00	0.30		0.03	
Delay/Veh:			7.5			8.0	0.0	0.0	0.0	28.2	0.0	12.0	
User DelAdj:			1.00	1.00		1.00	0.0	1.00	1.00	1.00		1.00 12.0	
AdjDel/Veh: LOS by Move:			7.5 A		8.U A		0.0 A			28.2 C		12.U B	
		в 1	A 1	0	A 4		A 0			2		В 0	
-					_	_	-	-	U	2	U	U	
Note: Queue	rebor.	rea is	the n	uiliber	or ca	rs ber	Tane	•					

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



	North Bound L - T - R									West Bound L - T - R			
													
		10			10			10			10		
Y+R:		4.0				4.0			4.0				
Volume Module													
Base Vol:	2	169	52	10	654	2	0		0	177	0	27	
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:	2	169	52	10	654	2	0	0	0	177	0	27	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
PasserByVol:	30		137	28	367	3	39	43	210	550	5	77	
Initial Fut:	32	444	189	38	1021	5	39	43	210	727	5	104	
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	
	32	444	189		1021	5	39	43	210	727	5	104	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:			189	38	1021	5	39	43	210	727	5	104	
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	
FinalVolume:				38		5	39		210	727		104	
Saturation F													
Sat/Lane:				1900		1900		1900	1900		1900	1900	
Adjustment:				0.92		0.95		0.95	0.92	0.93		0.92	
Lanes:			1.00			0.01		0.52	1.00	1.99		1.00	
Final Sat.:			1750			18		944	1750	3526		1750	
Capacity Anal													
Vol/Sat:		0.12	0.11	0.02	0.28	0.28		0.05	0.12	0.21	0.21	0.06	
CIIC MOVES.	****				****		****				****		
Green/Cycle:				0.20		0.39		0.06	0.16		0.29	0.49	
Volume/Cap:			0.19	0.11		0.71		0.71	0.77		0.71	0.12	
Delay/Veh:			7.7		21.0	21.0		52.7	42.9		26.2	10.5	
User DelAdj:			1.00	1.00		1.00		1.00	1.00	1.00		1.00	
AdjDel/Veh:		22.2		25.0		21.0		52.7	42.9	26.2		10.5	
LOS by Move:				С		С	D	D		С		В	
HCM2kAvgQ:				. 1	12	12	4		7	10	10	1	
Note: Queue	report	ted is	the n	umber	of car	rs per	lane	•					

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

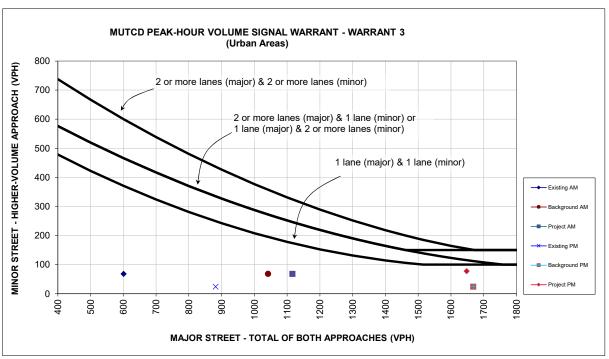


Approach: Movement:											est Bo	
		10				10				10		
Y+R:		4.0							4.0		4.0	
Volume Module				•					'	'		'
Base Vol:	32	444	189		1021	5	39		210	727	5	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	32	444	189	38	1021	5	39	43	210	727	5	104
Added Vol:	26	5	0	13	96	1	12	13	86	0	2	1
PasserByVol:	-12		0	-9	-49	-1	-22		-137	0	-3	0
Initial Fut:				42		5	29	35	159	727	4	
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:	46	449	189	42	1068	5	29	35	159	727	4	105
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:			189	42	1068	5	29	35	159	727	4	105
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:	46	449	189	42	1068	5	29	35	159	727	4	105
Saturation F	low Mo	odule:										
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:				0.92		0.95		0.95	0.92	0.93		0.92
Lanes:			1.00			0.01		0.55	1.00	1.99		1.00
Final Sat.:			1750			17		984	1750	3531		1750
Capacity Anal												
Vol/Sat:		0.12	0.11	0.02		0.29	0.04		0.09	0.21	0.21	0.06
CIIC MOVES.	****							****			****	
Green/Cycle:				0.19		0.36		0.13	0.22	0.26		0.44
Volume/Cap:			0.21			0.80		0.27	0.41	0.80		0.14
Delay/Veh:			9.8			25.4		30.3	25.9	31.6		12.6
User DelAdj:				1.00		1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:		23.5	9.8	25.9	25.4	25.4		30.3	25.9	31.6		12.6
LOS by Move:		С	A			С		С	С	С		В
HCM2kAvgQ:				, 1		14			4	11	11	2
Note: Queue	repor	ted is	the n	umber	of car	rs per	lane	•				

Appendix E Signal Warrant Checks

Second Harvest Food Bank Distribution

4 . North First Street and Tony P. Santos Street



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.

			roach ines 2 or More	Existing AM	Background AM	Project AM
Major Street - Both Approaches	First Street	X		601	1042	1116
Minor Street - Highest Approach	Tony P. Santos Street	X		68	68	68
Maximum warrant threshold for minor street volum	ne			370	195	173
Difference between warrant threshold & minor stre	eet volume			302	127	105
		Warra	nt Met?	No	No	No
			•			

			roach ines 2 or More	Existing PM	Background PM	Project PM
Major Street - Both Approaches	First Street	X		882	1668	1648
Minor Street - Highest Approach	Tony P. Santos Street	X		24	24	77
Maximum warrant threshold for minor street volum	ne			249	100	100
Difference between warrant threshold & minor stre			225	76	23	
		Warra	nt Met?	No	No	No

Appendix F Queue Length Calculations

First/Nortech Northbound Left

Northbound Left AM **Background Conditions**

1

First/Nortech

First/Nortech Northbound Left

5.9

10

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

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

Background Plus Project Conditions Avg. Queue Per Lane in Veh= Percentile = 95%

5.3

9

Number of Number of Number of Individual Cumulative Queued Individual Cumulative Queued Individual Cumulative Queued Probability Probability Vehicles Probability Probability Vehicles Probability Probability Vehicles 0.9048 0.9048 0.0027 0.0027 0.0050 0.0050 n 0 n 0.0905 0.9953 0.0162 0.0189 0.0265 0.0314 1 1 1 0.0045 0.9998 2 0.0477 0.0666 2 0.0701 0.1016 2 1.0000 3 0.1604 3 3 0.0002 0.0938 0.1239 0.2254 0.0000 1.0000 4 0.1383 0.2987 4 0.1641 0.3895 4 0.0000 1.0000 5 0.1632 0.4619 5 0.1740 0.5635 5 1.0000 6 6 0.1537 0.7171 6 0.0000 0.1605 0.6224 0.0000 1.0000 7 0.1353 0.7576 7 0.1163 0.8335 7 8 0.8574 8 8 0.0000 1.0000 0.0998 0.0771 0.9106 9 9 9 0.0000 1.0000 0.0654 0.9228 0.0454 0.9559 0.0000 1.0000 10 0.0386 0.9614 10 0.0241 0.9800 10 0.0000 1.0000 0.0207 0.9821 11 0.0116 0.9916 11 11 0.0000 1.0000 12 0.0102 0.9922 12 0.0051 0.9967 12 1 0000 0.0046 0.9969 13 13 0.0000 13 0.0021 0.9988 0.0000 1.0000 14 0.0019 0.9988 14 0.0008 0.9996 14 15 8000.0 15 15 0.0000 1.0000 0.9996 0.0003 0.9999 0.0000 1.0000 16 0.0003 0.9999 16 0.0001 1.0000 16 0.0000 1.0000 17 0.0001 1.0000 17 0.0000 1.0000 17 0.0000 1.0000 18 0.0000 1 0000 18 0.0000 1 0000 18 1.0000 19 1.0000 19 1.0000 19 0.0000 0.0000 0.0000 1.0000 1.0000 20 1.0000 20 0.0000 20 0.0000 0.0000 0.0000 1.0000 21 0.0000 1.0000 21 0.0000 1.0000 21 0.0000 1.0000 22 0.0000 1.0000 22 0.0000 1.0000 22 1.0000 23 1.0000 23 23 0.0000 0.0000 0.0000 1.0000 0.0000 1.0000 24 0.0000 1.0000 24 0.0000 1.0000 24 25 25 25 0.0000 1.0000 0.0000 1.0000 0.0000 1.0000 1.0000 1.0000 0.0000 1.0000 26 0.0000 26 0.0000 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 1.0000 1.0000 0.0000 30 0.0000 30 0.0000 1.0000 30 0.0000 1.0000 31 0.0000 1.0000 31 0.0000 1.0000 31 1.0000 1.0000 32 32 0.0000 32 0.0000 0.0000 1.0000 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 35 1.0000 35 35 0.0000 1.0000 0.0000 0.0000 1.0000 1.0000 0.0000 1.0000 36 0.0000 1.0000 0.0000 36 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 1.0000 1.0000 1.0000 41 0.0000 41 0.0000 41 0.0000 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 45 45 0.0000 1.0000 45 0.0000 1.0000 0.0000 1.0000 0.0000 1.0000 46 0.0000 1.0000 46 0.0000 1.0000 46 1.0000 47 47 0.0000 47 0.0000 1.0000 0.0000 1.0000 0.0000 1.0000 48 0.0000 1.0000 48 0.0000 1.0000 48 0.0000 1.0000 49 0.0000 1.0000 49 0.0000 1.0000 49 0.0000 1.0000 50 0.0000 1.0000 50 0.0000 1.0000 50 0.0000 1.0000 51 0.0000 1.0000 51 0.0000 1.0000 51 1.0000 1.0000 52 52 0.0000 52 0.0000 0.0000 1.0000 1.0000 1.0000 53 0.0000 53 0.0000 0.0000 1.0000 53 54 54 54 0.0000 1.0000 0.0000 1.0000 0.0000 1.0000 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 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 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 1.0000 0.0000 1.0000 62 62 0.0000 62 0.0000 1.0000 0.0000 1.0000 63 0.0000 1.0000 63 0.0000 1.0000 63 0.0000 64 0.0000 1.0000 64 1.0000 0.0000 1.0000 64 0.0000 1.0000 0.0000 1.0000 0.0000 65 65 1.0000 65

First/Nortech Northbound Left РМ

First/Nortech Northbound Left РМ

First/Nortech Northbound Left

0.7

2

Existing Conditions
Avg. Queue Per Lane in Veh=

0.0

Percentile = 95%

Background Conditions
Avg. Queue Per Lane in Veh=
Percentile = 95% 0

Background Plus Project Conditions Avg. Queue Per Lane in Veh= Percentile = 95%

1.0

3

		Number of			Number of			1	Number of
Individual	Cumulative	Queued	Individual	Cumulative	Queued		Individual	Cumulative	Queued
Probability	Probability	Vehicles	Probability	Probability	Vehicles		Probability	Probability	Vehicles
,	,		,	,			1	•	
#NUM!	#NUM!	0	0.4966	0.4966	0		0.3679	0.3679	0
0.0000	#NUM!	1	0.3476	0.8442	1		0.3679	0.7358	1
0.0000	#NUM!	2	0.1217	0.9659	2		0.1839	0.9197	2
0.0000	#NUM!	3	0.0284	0.9942	3		0.0613	0.9810	3
0.0000	#NUM!	4	0.0050	0.9992	4		0.0153	0.9963	4
0.0000	#NUM!	5	0.0007	0.9999	5		0.0031	0.9994	5
0.0000	#NUM!	6	0.0001	1.0000	6		0.0005	0.9999	6
0.0000	#NUM!	7	0.0000	1.0000	7		0.0001	1.0000	7
0.0000	#NUM!	8	0.0000	1.0000	8		0.0000	1.0000	8
0.0000	#NUM!	9	0.0000	1.0000	9		0.0000	1.0000	9
0.0000	#NUM!	10	0.0000	1.0000	10		0.0000	1.0000	10
0.0000	#NUM!	11	0.0000	1.0000	11		0.0000	1.0000	11
0.0000	#NUM!	12	0.0000	1.0000	12		0.0000	1.0000	12
0.0000	#NUM!	13	0.0000	1.0000	13		0.0000	1.0000	13
0.0000	#NUM!	14	0.0000	1.0000	14		0.0000	1.0000	14
0.0000	#NUM!	15	0.0000	1.0000	15		0.0000	1.0000	15
0.0000	#NUM!	16	0.0000	1.0000	16		0.0000	1.0000	16
0.0000	#NUM!	17	0.0000	1.0000	17 18	l	0.0000	1.0000	17
0.0000	#NUM!	18	0.0000	1.0000	18	l	0.0000	1.0000	18
0.0000	#NUM!	19 20	0.0000	1.0000	19 20	l	0.0000	1.0000	19 20
0.0000	#NUM!	20	0.0000	1.0000	20	l	0.0000	1.0000	20
0.0000	#NUM!	21 22	0.0000 0.0000	1.0000	21 22	l	0.0000	1.0000	21 22
0.0000 0.0000	#NUM! #NUM!	22	0.0000	1.0000 1.0000	22		0.0000 0.0000	1.0000 1.0000	22
0.0000	#NUM! #NUM!	23 24	0.0000	1.0000	23 24		0.0000	1.0000	23 24
0.0000	#NUM! #NUM!	24 25	0.0000	1.0000	2 4 25		0.0000	1.0000	24 25
0.0000	#NUM!	26 26	0.0000	1.0000	26 26		0.0000	1.0000	26
0.0000	#NUM!	27 27	0.0000	1.0000	27 27		0.0000	1.0000	27
0.0000	#NUM!	28	0.0000	1.0000	28		0.0000	1.0000	28
0.0000	#NUM!	29	0.0000	1.0000	29		0.0000	1.0000	29
0.0000	#NUM!	30	0.0000	1.0000	30		0.0000	1.0000	30
0.0000	#NUM!	31	0.0000	1.0000	31		0.0000	1.0000	31
0.0000	#NUM!	32	0.0000	1.0000	32		0.0000	1.0000	32
0.0000	#NUM!	33	0.0000	1.0000	33		0.0000	1.0000	33
0.0000	#NUM!	34	0.0000	1.0000	34		0.0000	1.0000	34
0.0000	#NUM!	35	0.0000	1.0000	35		0.0000	1.0000	35
0.0000	#NUM!	36	0.0000	1.0000	36		0.0000	1.0000	36
0.0000	#NUM!	37	0.0000	1.0000	37		0.0000	1.0000	37
0.0000	#NUM!	38	0.0000	1.0000	38		0.0000	1.0000	38
0.0000	#NUM!	39	0.0000	1.0000	39		0.0000	1.0000	39
0.0000	#NUM!	40	0.0000	1.0000	40		0.0000	1.0000	40
0.0000	#NUM!	41	0.0000	1.0000	41		0.0000	1.0000	41
0.0000	#NUM!	42	0.0000	1.0000	42		0.0000	1.0000	42
0.0000	#NUM!	43	0.0000	1.0000	43	l	0.0000	1.0000	43
0.0000	#NUM!	44	0.0000	1.0000	44	l	0.0000	1.0000	44
0.0000	#NUM!	45	0.0000	1.0000	45	l	0.0000	1.0000	45
0.0000	#NUM!	46	0.0000	1.0000	46		0.0000	1.0000	46
0.0000	#NUM!	47	0.0000	1.0000	47	l	0.0000	1.0000	47
0.0000	#NUM!	48	0.0000	1.0000	48	l	0.0000	1.0000	48
0.0000	#NUM!	49	0.0000	1.0000	49	l	0.0000	1.0000	49
0.0000	#NUM!	50	0.0000	1.0000	50		0.0000	1.0000	50
0.0000	#NUM!	51 50	0.0000	1.0000	51		0.0000	1.0000	51
0.0000	#NUM!	52 50	0.0000	1.0000	52	l	0.0000	1.0000	52
0.0000	#NUM!	53 54	0.0000	1.0000	53	l	0.0000	1.0000	53
0.0000	#NUM!	54	0.0000	1.0000	54		0.0000	1.0000	54
0.0000	#NUM!	55 56	0.0000	1.0000	55 56		0.0000	1.0000	55 56
0.0000	#NUM!	56	0.0000 0.0000	1.0000 1.0000	56	l	0.0000 0.0000	1.0000	56
0.0000	#NUM!	57			57 50	l		1.0000	57
0.0000	#NUM!	58 50	0.0000	1.0000	58 50		0.0000	1.0000	58 59
0.0000 0.0000	#NUM! #NUM!	59 60	0.0000 0.0000	1.0000 1.0000	59 60		0.0000 0.0000	1.0000 1.0000	60
0.0000	#NUM! #NUM!	60 61	0.0000	1.0000	60 61	l	0.0000	1.0000	61
0.0000	#NUM! #NUM!	62	0.0000	1.0000	62		0.0000	1.0000	62
0.0000	#NUM! #NUM!	62 63	0.0000	1.0000	63		0.0000	1.0000	63
0.0000	#NUM!	64	0.0000	1.0000	64		0.0000	1.0000	64
0.0000	#NUM!	65	0.0000	1.0000	65	l	0.0000	1.0000	65
0.0000	,,		 3.3000			ı	3.0000		