



Memorandum

Date: November 27, 2013
To: Tom Jodry, Trammell Crow Company
From: Gary Black & Robert Del Rio
Subject: Midpoint Supplemental Traffic Study

Introduction

This memo presents an evaluation of consistency with the traffic analysis and Environmental Impact Reports (EIR) completed for the approved Cisco Alviso site and North San Jose Development Policy (NSJDP) for a proposed change in project description on the former Cisco Alviso site, now referred to within this study as Midpoint. A traffic study was completed for the Cisco project in 1999. That project was approved for up to 2.325 million square feet of R&D space and included two phases of development. The first phase was up to 1.6 million square feet. The first phase mitigation has been completed, and 1.04 million square feet of R&D space has been built or approved. The Midpoint project would put the site over 1.6 million square feet. The Cisco EIR identified additional traffic mitigation for the development over 1.6 million square feet.

This evaluation includes an estimate of trip generation for the current project description. In addition, intersection level of service analysis based on current City of San Jose methodology, standards, and current traffic conditions in the North San Jose area were reviewed to ensure that the proposed change in project description and update of analysis methodologies result in the identification of improvements that are consistent with those identified in the NSJDP.

Comparison of Proposed and Approved Project Trip Generation

The approved Cisco project consisted of 2.325 million square feet of R&D space. The proposed Midpoint project is comparable to the approved Cisco project in that it is proposing to build commercial development generating employment opportunities. The only difference is that some of the space would be used for manufacturing rather than R&D. Since the Cisco approval, there has been one R&D project built with 427,000 square feet and another R&D project approved with 614,000 square feet, for a total of 1.04 million square feet. The Midpoint project proposes to develop the remainder of the Cisco site with 415,000 square feet of R&D space and 579,920 square feet of manufacturing space for a total of 994,920 square feet. This would bring the total on the Cisco site to just over 2 million square feet, which is within the total approved size.

The magnitude of traffic generated by the proposed Midpoint project was estimated by applying to the size of the development the applicable trip generation rates recommended by the City of San Jose *Traffic Impact Analysis Handbook: Volume 1 – Methodologies and Requirements*, 2009. Based on the recommended rates and the size of the project, it is estimated that the proposed project would generate 962 AM peak-hour trips (831 inbound trips and 131 outbound trips) and 896 PM peak-hour trips (158 inbound trips and 738 outbound trips). The project trip generation estimates are presented in Table 1.

Although the current proposed project varies somewhat from the previous approval, developing the site with the currently proposed mix of land uses would generate fewer trips than the R&D space that could be built on the site in accordance with the Cisco approval (see Table 1). Therefore, the proposed project is consistent with the Cisco EIR.

Intersection Level of Service Analysis

The evaluation of intersection level of service includes a re-evaluation of intersection level of service at each of the City of San Jose study intersections included as part of the original Cisco traffic study that were projected to operate at LOS D or worse conditions utilizing current methodologies and volume data. Any of the original study intersections operating at LOS C or better would not be significantly affected by the project since the project would not add a sufficient amount of traffic to cause the degradation of levels of service at any intersection by two letter grades, and the proposed project results in the addition of less traffic to the roadway system than the approved land uses for the project site. The purpose of the re-evaluation is to determine the effect of the proposed Midpoint project on the roadway system, as would be completed for any other newly proposed development project, and evaluate its consistency with the NSJDP EIR improvement plans.

The Cisco EIR traffic study was completed using the old Golden Triangle procedures, which looked at average levels of service across all intersections. San Jose has ceased the use of the Golden Triangle procedures. Transportation planning for North San Jose is currently following the North San Jose Development Policy, which had its own EIR completed in 2005 and established a traffic impact fee.

The intersection level of service analysis is based on new existing traffic counts collected in 2012 and 2013 at each of the intersections, Background conditions include updated approved project data maintained by the City of San Jose. The updated level of service analysis results indicate that the addition of project traffic associated with the proposed Midpoint project would result in a significant impact at the following two intersections (see Table 2):

Montague Expressway and North First Street
Montague Expressway and O'Toole/McCarthy Boulevard

Each of the intersections is projected to operate at an unacceptable LOS F under background conditions and the added trips as a result of the project would cause the average critical delay to increase by more than four seconds and the v/c ratio to increase by more than one percent (0.01). Based on City of San Jose level of service impact criteria, this constitutes a significant impact. A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

The intersection of Montague Expressway and North First Street was not identified to be impacted within the NSJDP EIR. However, the intersection is part of the planned Montague widening project that is being funded by the NSJDP Traffic Impact Fee (TIF) and identified as a Phase 1 improvement. Montague Expressway will be widened within North San Jose from six to eight lanes between North First Street and I-880. The project will also include the improvement of the I-880 interchange to a partial cloverleaf interchange and intersection improvement at River Oaks/Plumeria and McCandless/Trade Zone. The Montague widening will mitigate the identified project impact at the intersection.

The Montague Expressway and O'Toole/McCarthy Boulevard intersection was shown to be significantly impacted in the NSJDP EIR. A square-loop interchange was identified as a "Project Improvement" in the NSJDP EIR and is planned to be implemented as part of the NSJDP Phase 3 development. However, this updated analysis indicates that the addition of a separate right-turn lane from O'Toole Avenue to eastbound Montague Expressway will mitigate the identified Midpoint project impact at the intersection. Therefore, it is recommended that the separate right-turn lane be required of the proposed Midpoint project.

Comparison of Mitigation

The 2009 traffic report for the proposed Cisco R&D project concluded that the following mitigation measures would be required for the 725,000 sf of Phase 2 development: double left turn lanes on Tasman Drive at North First Street, a third southbound through lane on North First Street from Rio Robles to Montague, and a third southbound through lane on Zanker from Trimble to Brokaw. However, the updated analysis based on current traffic counts indicates that each of the three intersections is projected to operate at LOS D conditions with the addition of project traffic. Therefore, the proposed Midpoint project would not result in significant

impacts to the intersections and the previously identified mitigation measures are not necessary. In addition the previously identified improvements are not consistent with those planned as part of the NSJDP.

Truck Traffic

In response to concerns of residents along Grand Avenue in Alviso, the City of San Jose staff requested that the effects of truck traffic associated with the proposed project be reviewed.

Based on information provided by project staff, it is estimated that up to 220 daily truck trips may be generated by the two proposed manufacturing buildings on the project site. Operations at the manufacturing buildings will occur between 6:00 am and 12:00am. Therefore, it is estimated that an average of 12 truck trips per hour will be generated by the proposed manufacturing buildings.

It is expected that the majority of truck traffic would originate from and be bound for SR 237. The truck travel routes as identified in the attached figure will consist of the use of North First Street, Nortech Parkway, and Disk Drive. The project does not propose to locate driveways that would serve truck traffic along Grand Avenue. In addition, it is recommended that "No Truck Traffic on Grand Avenue" signs be placed along Disk Drive and Los Esteros Road. Based on the identified truck routes, the additional truck traffic estimated to be generated by the proposed manufacturing buildings on the project site will not result in an increase in truck traffic along Grand Avenue.

Though project truck traffic would result in a slight increase in truck traffic volumes along North First Street, Nortech Parkway, and Disk Drive, the increase would not cause significant impacts to traffic flow along those streets.

Conclusions

The proposed Midpoint project is consistent with the approved project that was analyzed in the 1999 Cisco EIR. However, since the time of the Cisco EIR, San Jose has adopted the North San Jose Development Policy, which had a completed EIR in 2005. The NSJDP includes much more extensive improvements to the transportation system than were included in the Cisco EIR. The improvements are designed to provide an adequate transportation system for buildout of the NSJDP, including the Cisco project (and by extension the Midpoint project). Since the NSJ EIR is more recent than the Cisco EIR and covers a more extensive level of development, it can be considered to have supplanted the Cisco EIR.

The results of the analysis for the proposed Midpoint project and comparison to the NSJDP EIR show that the identified impacts and mitigation measures are consistent with those identified in the NSJDP EIR. Therefore, it can be concluded that the transportation network included in the NSJDP would support the Midpoint project. The NSJDP network is being paid for with an adopted traffic impact fee. Therefore, it would be appropriate for the Midpoint project to pay the NSJ impact fee, even though the Midpoint project technically is not within the NSJDP boundary.

The fees are based on the North San Jose Area Development Policy (NSJADP), dated and adopted in June 2005 (Revised in April 2009). The appropriate fee should be calculated based on the amount of additional PM peak hour trips as a result of the proposed Midpoint development beyond the 1.6 million square feet of R&D space approved for Phase 1 of the project site. The existing and approved Phase 1 R&D space on the project site plus the Midpoint project would result in a total of 1,980 PM peak hour trips. The approved 1.6 million square feet of R&D space would generate 1,664 PM peak hour trips. Therefore, the fee should be based on the net additional 316 PM peak hour trips, which is the increase beyond the 1.6 million square feet that already has been mitigated.

The payment of the NSJ impact fee would cover the square loop interchange at Montague Expressway and O'Toole Avenue that is a planned Phase 3 NSJ improvement. However, rather than wait for the interchange to be completed, the project should mitigate its impact at the intersection with the addition of a separate northbound right-turn lane.

**Table 1
Midpoint Trip Generation Estimates Comparison**

Land Use	Size	Daily Trip Rates	Daily Trips	AM Peak Hour						PM Peak Hour						
				Pk-Hr Factor	Splits		Trips		Pk-Hr Factor	Splits		Trips				
					In	Out	In	Out		Total	In	Out	In	Out	Total	
Approved Project Plan																
R & D buildings ¹	1,284,000 s.f.	8.00	10,272	15%	83%	17%	1,279	262	1,541	13%	15%	85%	200	1,135	1,335	
Proposed Project Plan																
Four R&D buildings ¹	415,000 s.f.	8.00	3,320	15%	83%	17%	413	85	498	13%	15%	85%	65	367	432	
Two Manufacturing buildings ²	579,920 s.f.	4.00	2,320	20%	90%	10%	418	46	464	20%	20%	80%	93	371	464	
Total Proposed Trips	994,920 s.f.		5,640				831	131	962				158	738	896	
North San Jose Impact Fee Trip Calculation																
Existing, Approved Phase 1, Midpoint																
Proposed Midpoint	994,920 s.f.		5,640				831	131	962				158	738	896	
Two Existing R&D buildings ¹	427,530 s.f.	8.00	3,420	15%	83%	17%	426	87	513	13%	15%	85%	67	378	445	
Approved Phase 1	614,809 s.f.	8.00	4,918	15%	83%	17%	612	126	738	13%	15%	85%	96	543	639	
	2,037,259		13,978				1,869	344	2,213				321	1,659	1,980	
Approved Phase 1																
R & D buildings ¹	1,600,000 s.f.	8.00	12,800	15%	83%	17%	1,594	326	1,920	13%	15%	85%	250	1,414	1,664	
trips (Proposed + Phase 1 Existing & Approved - Approved Phase 1)			1,178				275	18	293				71	245	316	
Notes:																
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¹ Trip Generation rates based on R&D land use from San Jose TIA Handbook																
² Trip Generation rates based on General Manufacturing land use from San Jose TIA Handbook																
Source: City of San Jose Traffic Impact Analysis Handbook, August 2009																

Table 2
Intersection Levels of Service Analysis Summary

Study Number	Intersection	Peak Hour	Count Date	Existing		Background		Project Conditions				With Improvements		Comments	
				Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg. Delay	LOS		
1	237/FIRST (N) *	AM	10/09/12	12.0	B	19.4	B	18.4	B	-8.7	0.401				
		PM	09/13/12	19.3	B	23.7	C	46.2	D	25.9	0.179				
2	237/FIRST (S) *	AM	10/09/12	23.9	C	28.7	C	41.3	D	12.3	0.111				
		PM	09/13/12	20.9	C	25.9	C	29.8	C	7.2	0.095				
3	FIRST/HEADQUARTERS	AM	11/19/13	36.6	D	37.2	D	38.8	D	0.5	0.050				
		PM	11/19/13	43.5	D	45.5	D	45.7	D	2.9	0.047				
4	FIRST/TASMAN	AM	11/19/13	34.2	C	35.6	D	36.2	D	1.8	0.073				
		PM	11/19/13	37.8	D	42.1	D	43.1	D	1.9	0.053				
5	FIRST/RIO ROBLES	AM	11/19/13	33.1	C	33.2	C	32.3	C	0.6	0.010				
		PM	11/19/13	42.5	D	45.5	D	47.8	D	4.0	0.053				
6	FIRST/TRIMBLE *	AM	10/09/12	41.9	D	47.9	D	48.9	D	0.3	0.007				
		PM	09/12/12	42.5	D	45.1	D	45.7	D	0.6	0.021				
7	FIRST/CHARCOT	AM	11/19/13	39.2	D	44.0	D	44.3	D	0.6	0.007				
		PM	11/19/13	36.4	D	39.5	D	39.5	D	0.0	0.003				
8	237/ZANKER (N) *	AM	10/09/12	9.7	A	12.2	B	12.5	B	0.2	0.053				
		PM	09/13/12	12.1	B	15.8	B	16.8	B	1.2	0.054				
9	237/ZANKER (S) *	AM	10/09/12	21.0	C	22.4	C	22.5	C	0.3	0.013				
		PM	09/13/12	12.6	B	15.2	B	15.7	B	0.9	0.036				
10	ZANKER/CHARCOT	AM	11/19/13	35.2	D	46.0	D	46.4	D	0.5	0.007				
		PM	11/19/13	36.3	D	54.2	D	54.9	D	1.1	0.005				
11	ZANKER/TASMAN	AM	11/19/13	36.1	D	39.5	D	40.0	D	0.9	0.017				
		PM	11/19/13	40.3	D	42.6	D	42.8	D	0.3	0.013				
12	TRIMBLE/ZANKER *	AM	10/09/12	38.6	D	41.9	D	42.0	D	0.3	0.006				
		PM	09/12/12	37.5	D	41.3	D	41.5	D	0.2	0.006				
13	BROKAW/ZANKER *	AM	10/09/12	35.2	D	43.3	D	43.6	D	0.5	0.007				
		PM	09/12/12	42.1	D	48.3	D	48.4	D	0.3	0.003				
14	DE LA CRUZ/TRIMBLE *	AM	10/09/12	26.8	C	25.5	C	25.5	C	0.0	0.004				
		PM	09/12/12	30.4	C	29.8	C	29.9	C	0.2	0.010				
15	ORCHARD/TRIMBLE	AM	11/19/13	34.2	C	32.8	C	32.6	C	0.0	0.000				
		PM	11/19/13	37.6	D	44.9	D	44.8	D	0.2	0.009				
16	MONTAGUE EXPWY/FIRST STREET *	AM	11/19/13	49.3	D	72.5	E	83.5	F	20.5	0.052	54.3	D	Planned widening of Montague Expwy. from 6 to 8 lanes. Included as part of NSJ TIF improvements (Phase 1)	
		PM	09/05/12	65.4	E	100.8	F	109.4	F	15.5	0.047	87.6	F		
17	MONTAGUE EXPWY/ZANKER ROAD *	AM	11/19/13	41.9	D	49.7	D	49.9	D	0.1	0.003				
		PM	09/05/12	54.3	D	107.2	F	109.5	F	3.7	0.007				
18	MONTAGUE EXPWY/TRIMBLE RD *	AM	11/19/13	26.9	C	30.8	C	30.7	C	0.0	0.000				
		PM	09/05/12	42.7	D	70.9	E	71.1	E	0.2	0.002				
19	MONTAGUE EXPWY/McCARTHY-OTOOL *	AM	11/19/13	35.2	D	42.0	D	42.2	D	0.3	0.003	32.4	C	Addition of a separate northbound right-turn lane	
		PM	09/05/12	91.3	F	102.2	F	103.3	F	16.5	0.026	91.0	F		
20	MONTAGUE EXPWY/MAIN ST *	AM	11/19/13	65.7	E	81.2	F	83.6	F	3.8	0.010				
		PM	09/05/12	52.6	D	66.5	E	67.3	E	1.2	0.004				
21	MONTAGUE EXPWY/TRADE ZONE BLVD *	AM	05/01/12	36.2	D	38.3	D	38.6	D	0.4	0.006				
		PM	09/05/12	76.1	E	90.8	F	91.2	F	0.1	0.004				

* Denotes CMP Intersections
 Bold indicates unacceptable LOS.
 Boxed and bold indicate significant impact.

Figure 1
Identified Truck Routes

