

4.11 TRAFFIC AND TRANSPORTATION

This section establishes the relevant setting and describes the transportation impacts of the proposed Wal-Mart Distribution Center. This section outlines assumptions, methodology, and analysis conducted to determine the traffic impacts of the proposed project, as well as any impacts to transit, bicycle, and pedestrian facilities.

4.11.1 ENVIRONMENTAL SETTING

SOURCES OF INFORMATION

This EIR section is based in large part on a traffic impact analysis conducted by DKS Associates. The DKS traffic impact study is included in full as Appendix E of this EIR. The transportation analysis also is based on data provided by the City of Merced, the County of Merced, data collection from WILTEC in October, 2008, and a traffic impact analysis prepared for Carter & Burgess, Inc. by kdANDERSON Transportation Engineers in June, 2005.

Summary of Traffic Impact Study

Following is a summary of the conclusions of the traffic impact study (Appendix E):

The purpose of the traffic impact study was to determine the potential transportation impacts of the proposed Wal-Mart Distribution Center located in the City of Merced. The proposed project consists of approximately 1.1 million square feet of warehouse, a 37,000 square foot office and support facility, a 17,000 square foot truck maintenance building and a 1,600 square foot fire pump house. It is estimated that the Wal-Mart Distribution Center would generate approximately 2,400 net new daily trips with 143 net new AM peak hour trips (87 inbound, 56 outbound) and 328 net new PM peak hour trips (45 inbound, 283 outbound trips).

The report analyzes the traffic conditions of intersection and roadway segments during the weekday A.M. and P.M. peak hours. The operation of these intersections and roadway segments was evaluated for the following scenarios: Existing Condition, 2010 Background Condition, 2010 Background with Project Condition, 2030 Cumulative No Project Condition and 2030 Cumulative with Project Condition.

It should be noted that under the 2010 Background and 2010 Background with Project Conditions, Campus Parkway was assumed to be constructed between Mission Interchange and Childs Avenue. It was assumed that the corridor would be extended north from Childs Avenue and completed by year 2030 and serve as a main corridor that would carry traffic to the area north of Merced. The traffic travel patterns within the area would, therefore, be different between 2010 Project Condition and 2030 Cumulative Condition.

Based on the analysis results and the threshold criteria, the proposed project would result in one significant transportation impact to the study intersections under the 2030 Cumulative with Project Condition PM peak period due to the development of the Wal-Mart Distribution Center. Additionally, one significant transportation impact to the roadway segment of SR 140 between Santa Fe Avenue and Kibby Road under the 2030 Cumulative with Project Condition PM peak period due to the development of the distribution center.

Existing Condition

Under the Existing Condition, all study intersections and all roadway segments operate at acceptable Level of Services (LOS D or better) during the AM and PM peak hours.

2010 Background Condition

During the AM peak hour, one intersection, SR 140 at Baker Drive, would operate at LOS E. The intersections of Childs Avenue at SR 99 northbound off-ramp would operate at LOS F. The other intersections would continue to operate at acceptable LOS (LOS D or better). During the PM peak hour, four intersections, SR 140 at Baker Drive, Childs Avenue at SR 99 southbound off-ramp, Childs Avenue at SR 99 northbound off-ramp and Childs Avenue at Parsons Avenue would operate at deficient LOS (LOS F). All other intersections would continue to operate at acceptable LOS (LOS D or better). All study roadway segments would continue to operate at an acceptable LOS under 2010 Background Conditions during the AM and PM peak hours.

2030 Cumulative Condition

During the AM peak hour, six intersections, SR 140 at Parsons Avenue, SR 140 at Baker Drive, SR 140 at Kibby Road, Childs Avenue at SR 99 southbound off-ramp, Childs Avenue at SR 99 northbound off-ramp, and Mission Avenue at Coffee Street would operate at LOS F. Childs Avenue and Parsons Avenue would operate at LOS E while all other intersections would continue to operate at acceptable LOS (LOS D or better). During the PM peak hour, five intersections, SR 140 at Baker Drive, SR 140 at Kibby Road, Childs Avenue at SR 99 southbound off-ramp, Childs Avenue at SR 99 northbound off-ramp, and Mission Avenue and Coffee Street would all operated at LOS F. Two intersections, Childs Avenue and Parsons Avenue and Mission Avenue at SR 99 southbound off-ramp, would operate at LOS E. All other intersections would continue to operate at acceptable LOS (LOS D or better). The roadway segment of SR 140 between Santa Fe Avenue and Kibby Road would deteriorate from LOS D under 2010 Background Conditions to operate at LOS E under the 2030 Cumulative Conditions during the AM peak hour, but would continue to operate at acceptable LOS (LOS D) during the PM peak hour.

A Caltrans Peak Hour Signal Warrant analysis was performed at all unsignalized intersections. Based on the signal warrant analysis, the intersection of Childs Avenue and SR 99 northbound off-ramp meets the signal warrant under the Existing Condition PM peak hour. In addition, a signal warrant is also satisfied under the 2010 Background Condition at the intersections of SR 140 at Baker Drive, Childs Avenue at SR 99 southbound off-ramp, and Childs Avenue at SR 99 northbound off-ramp. Under the 2030 Cumulative Condition, the signal warrant would also be met at two other intersections, SR 140 and Kibby Road and Mission Avenue at Coffee Street

One intersection, Mission Avenue at SR 99 northbound off-ramps would experience a significant impact under the 2030 Cumulative with Project scenarios under the PM peak hour. This impact would be mitigated by restriping the northbound and westbound approach would restore the operations to an acceptable LOS of C, fully mitigating this impact resulting no significant impacts for the project.

In addition, mitigation measures have been recommended for six intersections as a means to improve level of service from a deficient level, E or F, to an acceptable level of D or better. For the unsignalized intersections that would operate at a deficient Level of Services (LOS E or F), the installation of a traffic signal control (sometimes with lane additions as well) was recommended as an mitigation measure to improve intersection operation to an acceptable level.

One roadway segment, SR 140 between Santa Fe Avenue and Kibby Road, experienced a significant impact in the 2030 Cumulative with Project scenario for the PM peak hour. This impact would be mitigated by adding on lane in each direction in this segment. With the proposed mitigation, this segment would operated under LOS A, fully mitigating this impact resulting in no significant impacts.

Additionally, one mitigation measure is recommended for the roadway segment of Tower Road between SR 140 and Gerard Avenue. Restriping this segment is necessary since the existing striping has faded. In addition, at the intersections of Tower Road and Gerard Avenue and Tower Road and SR 140, intersection geometry should be improved to provide proper turning radii to accommodate the turning movements of standard trucks.

Note that the cumulative traffic impacts are analyzed in Section 6 “Cumulative and Growth Inducing Impacts.”

PROJECT LOCATION

The project is located toward the southern edge of the City of Merced, approximately three miles from downtown and two miles east of State Route (SR) 99. The project site is bounded by Childs Avenue to the north, Gerard Avenue to the south, Tower Road to the east, and approximately a quarter mile east of the future Campus Parkway.

ROADWAYS IN THE PROJECT VICINITY

Based on the proposed operations on-site, the traffic analysis conducted to support this EIR focused on several area roadways and intersections. Key roadways are described as follows.

SR 99 is oriented northwest and southeast through the City of Merced. It is a major regional freeway that runs parallel with Interstate 5 (I-5) and serves both local and regional traffic. SR 99 connects with I-5 in Red Bluff in the northern portion of the state and again with I-5 in Bakersfield, roughly 160 miles south of Merced. SR 99 carries approximately 63,000 vehicles per day in Merced County. The project site is located approximately two miles east of SR 99.

SR 140 (SR 140/Yosemite Parkway) is a two-lane highway oriented east to west and connecting Merced with Yosemite National Park. SR 140 between SR 99 and Santa Fe Avenue is classified as an urban roadway. SR 140 carries approximately 12,300 vehicles per day between SR 99 and Parsons Avenue. The project site is located approximately ½ mile south of SR 140.

Childs Avenue is a two-lane urban street serving as a minor arterial road in the project area and includes one lane in each direction between SR 59, west of 99, to east of the Specific Urban Development Plan boundary, east of Tower Road.. Childs Avenue is oriented from east to west in the project vicinity, connecting West Avenue (west of SR 99) and Cunningham Road (beyond the City’s eastern boundary). Between SR 99 and Parsons Avenue, Childs Avenue carries approximately 10,700 vehicles per day. The project site is located immediately south of Childs Avenue.

Gerard Avenue is a two-lane urban street serving as a local collector road. Gerard Avenue is oriented east to west, extending from west of SR 99 to the unincorporated community of Planada, which is roughly 10 miles east of Merced. Gerard Avenue carries approximately 3,900 vehicles per day between Parsons Avenue and Coffee Street. The project site is located north of and adjacent to Gerard Avenue.

Mission Avenue is designated as a “Divided Arterial” and is an urban street serving as a local collector road and includes two lanes in each direction. Mission Avenue runs in the east-west direction starting west of SR 140 and ends at Coffee Street. It carries a traffic volume of approximately 1,800 vehicles per day between SR 99 and Coffee Street. The project site is located approximately one and a half mile north and east of Mission Avenue. The interchange at Mission Avenue and SR 99 and extension of Mission Avenue to Coffee Street opened in summer 2008.

Parsons Avenue is a two-lane urban street serving as a minor arterial road from Childs Avenue north to Old Lake Road. It is a collector road from Childs Avenue south to Coffee Road. A “collector” is described in the *Merced Vision 2015 General Plan* (Merced General Plan) (City of Merced 1997) as a residential street that collects traffic from and distributes traffic onto the local streets in a neighborhood. Collector roads, in terms of traffic volumes and design speed, are typically between arterials and local roadways. For more information, please refer to the *Merced Vision 2015 General Plan*, Chapter 4, “Transportation and Circulation.” Parsons Avenue is oriented north to south between SR 140 and SR 99. The road has a northwest to southeast orientation from SR 99 to Gerard

Avenue. Parsons Avenue carries approximately 4,600 vehicles per day between Childs Avenue and Gerard Avenue. The project site is located roughly 1½ miles east of Parsons Avenue.

Coffee Street is a two-lane urban street serving as a local collector road. Coffee Street is oriented north to south connecting Baker Drive to the north with Gerard Avenue to the south. Coffee Street then picks up again at South Parsons Avenue and continues south. The road carries approximately 2,000 vehicles per day between Childs Avenue and Gerard Avenue. The project site is located roughly one mile east of Coffee Street.

Kibby Road is a two-lane urban street serving as a local collector road. Kibby Road is oriented from north to south, connecting Childs Avenue on the south with East Yosemite Avenue on the north, roughly three miles north of the proposed project site. This road carries approximately 1,400 vehicles per day. Kibby Road ends at Childs Avenue directly adjacent to the proposed project site.

Tower Road is a two-lane rural street having a north to south orientation. The road connects to SR 140 on the north and to Gerard Avenue on the south. Tower Road currently carries approximately 200 vehicles per day. The project site is located west of and adjacent to Tower Road.

Baker Drive is a two-lane urban street serving as a local road. Baker Drive is oriented east to west, connecting SR 140 on the west and Coffee Street on the east. The road carries approximately 1,000 vehicles per day. The project site is located roughly 0.7 mile east of Baker Drive.

Campus Parkway will be constructed in phases as funding becomes available. Construction of the first phase will begin in 2009 and be completed in 2010 and includes:

1. Two through lanes in each direction from Coffee Street to Gerard Avenue.
2. A reduction to one through lane in each direction from Gerard Avenue to Childs Avenue.
3. The intersection of Campus Parkway and Gerard Avenue will be signalized with dual left turn pockets from all approaches. Both westbound left turn pockets are being designed to accommodate STAA vehicles.
4. The intersection of Campus Parkway and Childs Avenue will be an unsignalized three-way approach intersection in the 2010 condition and a four-way approach signalized intersection in the 2030 condition.

The segment of Campus Parkway between the Mission Avenue/SR 99 interchange and Childs Avenue is expected to be operational by mid-2010. Construction of subsequent phases has not yet been scheduled. Design has begun on the remaining portions of Campus Parkway from Childs Avenue to Yosemite Avenue. At this point, there is insufficient information to confirm whether or not later phases of Campus Parkway will be completed by mid-2010. (Pers. Com, Steve Rough, Merced County Public Works)

SR 152 was not included in the traffic analysis since trucks traveling to/from SR 152 would access the site via SR 99.

TRANSIT, PEDESTRIAN, AND BICYCLE FACILITIES IN THE PROJECT VICINITY

The Transit Joint Powers Authority of Merced County (The BUS) has jurisdiction over public transit in the County of Merced. Currently, there are no bus routes that operate within the vicinity of the project site. The closest bus route is Route 5, East-West City Shuttle. East-West City Shuttle provides weekday service between Merced Municipal Airport and Pioneer Elementary School between 9:30 a.m. and 5:45 p.m. at 45-minute intervals.

Pedestrian and bicycle activity is relatively light in the vicinity of the proposed project. There are no pedestrian sidewalks or bicycle facilities provided along the roadway segments adjacent to the project site.

SCHOOLS IN THE STUDY AREA

The proposed project site is located within the Weaver Union Elementary School District for elementary and Merced Union High School District for high schools.

Elementary and Middle Schools

Pioneer Elementary School (Grades K–3) is located at the southwest corner of the Coffee Street and Gerard Avenue. Regular school days begin at 8:30 a.m. and end at 2:30 p.m. The campus is open from 8:00 a.m. to 4:00 p.m. Vehicular access to the site is provided via Gerard Avenue with a designated area for parent pick-up/drop-off and visitor parking lot. A secondary entrance is provided via Coffee Street with designated areas for school bus pick-up/drop-off and staff parking and visitor parking for school related events.

Based on information received from school staff, several on-street parking activities including curbside and double parking occur along Gerard Avenue and Coffee Street during the after school pick-up period of 2:00 to 3:00 p.m.

Weaver Elementary School (Grades 4–8) is located at the northeast corner of Coffee Street and Childs Avenue. Regular school days begin at 8:30 a.m. and end at 3:30 p.m. The campus is open from 8:00 a.m. to 4:30 p.m. Vehicular access to the site is provided via Childs Avenue with a designated area for parent pick-up/drop-off and school staff parking lot. A secondary entrance is provided via Coffee Street with designated areas for school bus pick-up/drop-off.

Based on information received from school staff, several on-street parking activities including curbside and double parking occur along Childs Avenue and Coffee Street.

High Schools

Golden Valley High School (Grades 9–12) is located at the northeast corner of Parsons Avenue and Childs Avenue. Regular school days begin at 8:00 a.m. and end at 3:00 p.m. The campus is open from 7:00 a.m. to 4:00 p.m. Vehicular access to the site is provided via Childs Avenue and Parsons Avenue. Vehicular accesses are provided from Parsons Avenue with designated areas for parent pick-up/drop-off, school bus pick-up/drop-off and student parking lot. The visitor and school staff parking lot is provided via Childs Avenue.

STUDY AREA AND SCENARIOS

The following intersections and roadway segments were evaluated to determine the traffic conditions during the weekday a.m. and p.m. peak hours. The selection of the study intersections and roadway segments was based on traffic activities around the study area roadway network and the anticipated increase in traffic volumes due to the project, as well as the travel patterns of the project trips. The first phase, from the Mission Avenue interchange to Childs Avenue, of Campus Parkway is anticipated to begin construction in July 2008 and be built by July 2009. It is anticipated this new roadway would connect a new SR 99 interchange at Mission Avenue with Childs Avenue, near the proposed project site. The intersections of Childs Avenue at Campus Parkway and Gerard Avenue at Campus Parkway were analyzed only under the future scenarios. For more information on the study area, scenarios analyzed, and methodology, please refer to Traffic Study, included as Appendix E of this EIR.

Study Intersections

- ▶ SR 140 (Yosemite Parkway)/Parsons Avenue
- ▶ SR 140/Baker Drive
- ▶ SR 140/Kibby Road
- ▶ Childs Avenue/SR 99 Southbound Off-Ramp
- ▶ Childs Avenue/SR 99 Northbound Off-Ramp

- ▶ Childs Avenue/Parsons Avenue
- ▶ Childs Avenue/Coffee Street
- ▶ Childs Avenue/Kibby Road
- ▶ Childs Avenue/Tower Road
- ▶ Gerard Avenue/Coffee Street
- ▶ Gerard Avenue/Tower Road
- ▶ Mission Avenue/SR 99 Southbound Off-Ramp
- ▶ Mission Avenue/SR 99 Northbound Off-Ramp
- ▶ Mission Avenue/Coffee Street
- ▶ Childs Avenue/Campus Parkway
- ▶ Gerard Avenue/Campus Parkway

Roadway and Freeway Segments

- ▶ SR 99 between SR 140 and Mission Avenue
- ▶ SR 140 between SR 99 and Parsons Avenue
- ▶ SR 140 between Parsons Avenue and Santa Fe Avenue
- ▶ SR 140 between Santa Fe Avenue and Kibby Road
- ▶ Parsons Avenue between Childs Avenue and SR140
- ▶ Coffee Street between Baker Drive and Childs Avenue
- ▶ Coffee Street between Childs Avenue to Gerard Avenue
- ▶ Gerard Avenue between Parsons Avenue and Coffee Street
- ▶ Gerard Avenue between Coffee Street to project site
- ▶ Kibby Road between SR 140 and Childs Avenue
- ▶ Childs Avenue between SR 99 and Parsons Avenue
- ▶ Childs Avenue between Parsons Avenue and Coffee Street
- ▶ Childs Avenue between Coffee Street and Kibby Road
- ▶ Childs Avenue between Kibby Road and Tower Road
- ▶ Campus Parkway between Coffee Street and Gerard Avenue
- ▶ Campus Parkway between Gerard Avenue and Childs Avenue
- ▶ Campus Parkway between Childs Avenue and SR-140

Intersections and roadway segments were evaluated for the traffic scenarios listed below. These scenarios were selected to be consistent with other traffic studies prepared for the City of Merced, and are typical of a comprehensive traffic analysis. The Background Scenario is a near-term future baseline condition, and the project condition is measured against this condition. This provides an accurate comparison rather than a comparison to the Existing Conditions, since the Background Scenario includes other known approved development that will be built and occupied prior to the proposed project.

- ▶ Existing Condition—Operation analysis based on existing peak-hour volumes and intersection and roadway segment lane geometry.
- ▶ 2010 Background Condition—Based on forecasted 2010 traffic volumes plus net new trips related to approved projects in the vicinity of the proposed project.
- ▶ 2010 Background with Project Condition—2010 Background Condition plus project-generated traffic estimated for the proposed project.
- ▶ 2030 Cumulative No-Project Condition—Based on growth factors estimated from the County of Merced’s Transportation Demand Model plus net-new trips related to approved residential project in the vicinity of the proposed project. 2030 is horizon year in the County’s MCAG model, which is the reason it was used in the traffic analysis. Please refer the Cumulative impacts section of this EIR for more information.

- ▶ 2030 Cumulative with Project Condition—2030 Cumulative No-Project Condition plus project generated traffic estimated for the proposed project. Please refer the Cumulative impacts section of this EIR for more information.

EXISTING LEVEL OF SERVICE

“Level of service” (LOS) is a way of describing the relative amount of traffic congestion along a roadway segment or intersection. Refer to the discussion later in this section or in Appendix E of this EIR for more information regarding level of service.

As shown in Table 4.11-1, under the existing condition, all study intersections and roadway segments operate at acceptable level of services (LOS D or better) during the a.m. and p.m. peak hours.

Intersections

Level of service calculations were performed for the weekday a.m. and p.m. peak hours. The a.m. peak hour is the busiest one-hour between 7:00 and 9:00 a.m. The p.m. peak hour is the highest one-hour traffic volume between 4:00 and 6:00 p.m. Exhibit 4.11-1 illustrates the existing traffic volumes for each study intersection. Table 4.11-1 summarizes the results of the intersection level of service for the existing condition. Based on the LOS results, all study intersections operate at an acceptable LOS D or better. Please refer to Appendix E for more information.

No	Intersection Location	Control	AM Peak Hour		PM Peak Hour	
			Delay ^a	LOS ^b	Delay	LOS
1	SR 140 / Parsons Avenue	Signalized	24.1	C	24.4	C
2	SR 140 / Baker Drive	Unsignalized	1.8		2.3	
	SB Approach		18.8	C	20.7	C
	EB Left		8.9	A	8.2	A
3	SR 140 / Kibby Road	Unsignalized	3.7		2.3	A
	NB Approach		13.7	B	13.1	B
	SB Approach		12.7	B	12.0	B
	EB Left		7.8	A	7.6	A
	WB Left		7.5	A	0.0	A
4	Childs Avenue / SR 99 Southbound Off-Ramp	AWSC ^c	12.3	B	13.0	B
5	Childs Avenue / SR 99 Northbound Off-Ramp	AWSC	18.5	C	18.1	C
6	Childs Avenue / Parsons Avenue	Signalized	33.8	C	32.0	C
7	Childs Avenue / Coffee Street	Signalized	30.4	C	22.8	C
8	Childs Avenue / Kibby Road	Unsignalized	3.2		2.0	
	SB Approach		9.4	A	9.2	A
	EB Left		7.5	A	7.4	A
9	Childs Avenue / Tower Road	Unsignalized	1.2		0.6	
	NB Approach		9.8	B	9.6	A
	SB Approach		9.4	A	9.6	A
	EB Left		7.4	A	7.3	A
	WB Left		0.0	A	0.0	A
10	Gerard Avenue / Coffee Street	AWSC	8.3	A	7.1	A

**Table 4.11-1
Existing Condition Intersection Level of Service Analysis**

No	Intersection Location	Control	AM Peak Hour		PM Peak Hour	
			Delay ^a	LOS ^b	Delay	LOS
11	Gerard Avenue / Tower Road	Unsignalized	6.9		6.9	
	SB Approach		6.5	A	6.9	A
	EB Left		7.1	A	7.0	A
14	Mission Avenue / SR 99 Southbound	Signalized	17.8	B	17.6	B
15	Mission Avenue / SR 99 Northbound	Signalized	24.1	C	18.6	B
16	Mission Avenue / Coffee Street	AWSC	8.1	A	7.8	A

Notes:

¹ Delay is in seconds per vehicle. For signalized intersections, delay is based on average stopped delay. For unsignalized intersections, delay is based at the worst approach for two-way stop controlled intersection.

² LOS = level of service.

³ AWSC = All-way stop control

Source: DKS Associates 2008

Roadway Segments

Eight roadway segments were evaluated for the existing A.M. and P.M. peak hour operating conditions. Table 4.11-2 provides a summary of the roadway segments operational condition under the existing condition. As shown, all roadway segments currently operate at or above LOS D. Please refer to Appendix E for more information.

2010 BACKGROUND LEVELS OF SERVICE

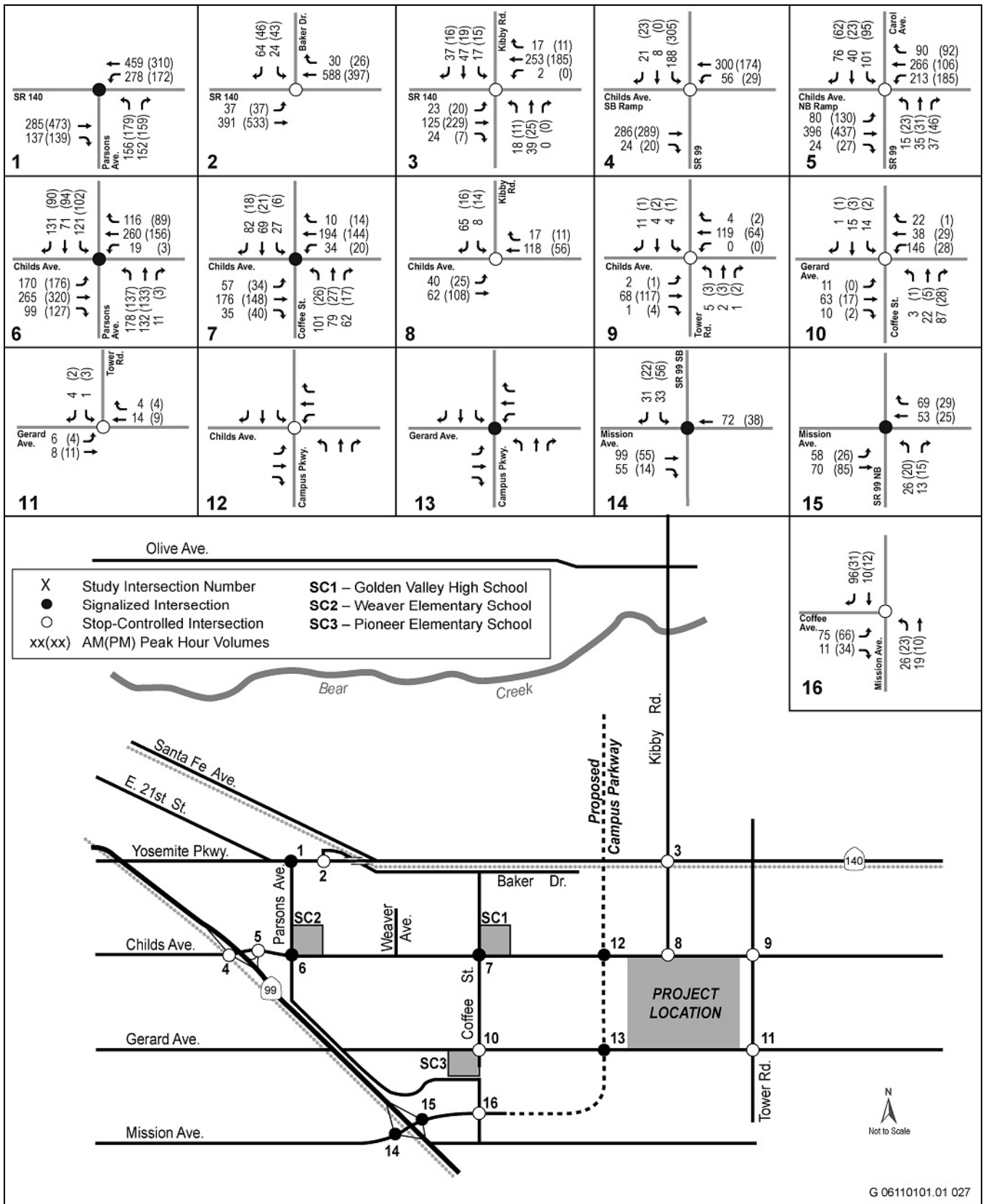
The traffic analysis conducted to support this EIR calculated the levels of service for study area intersections and roadway segments in 2010 without any project traffic. This “background” traffic is compared to level of service *with* project traffic to determine impacts. The impacts of the project are described later in this chapter.

Taking into account anticipated urban development between the present and 2010, during the A.M. peak hour, the intersection of Childs Avenue at northbound off-ramp of SR 99 would operate at LOS F while the intersection of Baker Drive and SR 140 would operate at LOS E. The other study area intersections would continue to operate at acceptable LOS (LOS D or better).

During the P.M. peak hour, the addition of forecasted (non-project) traffic volumes and trips from approved developments would cause three intersections to deteriorate from an acceptable LOS (LOS D or better) to a deficient LOS (LOS E or F) during both peak hours:

- ▶ SR 140 at Baker Drive (LOS F);
- ▶ Childs Avenue at SR 99 southbound off-ramp (LOS F); and
- ▶ Childs Avenue at SR 99 northbound off-ramp (LOS F)

All other intersections would continue to operate at acceptable LOS (LOS D or better). Please refer to Table 4.11-3 for a summary of intersection LOS under 2010 peak-hour conditions. Exhibit 4.11-2 illustrates the 2010 Background Condition traffic volumes for each study intersection. Please refer to Appendix E for more detail.



Source: DKS Associates 2007

Existing Condition Weekday Peak Hour Intersection Volumes

Exhibit 4.11-1

**Table 4.11-2
Existing Condition Roadway Segment-Level of Service Analysis**

Roadway Segment	Type of Facilities	Location	Measure of Effectiveness (MOE)	AM Peak Hour			PM Peak Hour		
				Volume (veh/hr)	MOE ^a	LOS ^b	Volume (veh/hr)	MOE	LOS
1 SR 99	Freeway	from Mission Avenue to SR 140	Density (pc/mi/ln)	422	34.9	A	612	34.5	A
		from SR 140 to Mission Avenue	Density (pc/mi/ln)	615	34.5	A	489	34.8	A
2 SR 140	Urban Class III	from SR 99 to Parsons Avenue	Travel Speed (mi/hr)	737	39.9	A	482	40.0	A
		from Parsons Avenue to SR 99	Travel Speed (mi/hr)	437	40.0	A	632	39.9	A
	Urban Class II	from Parsons Avenue to Santa Fe Avenue	Travel Speed (mi/hr)	422	34.9	A	612	34.5	A
		from Santa Fe Avenue to Parsons Avenue	Travel Speed (mi/hr)	615	34.5	A	489	34.8	A
	Two-lane Highway Class I	between Santa Fe Avenue and Kibby Road	Percent Time-Spent-Following	1,230	68	D	1,176	68	D
3 Parson Avenue	Urban Class III	from Childs Avenue and SR 140	Travel Speed (mi/hr)	418	34.9	A	398	34.9	A
		from SR 140 and Childs Avenue	Travel Speed (mi/hr)	415	34.9	A	311	35.0	A
4 Coffee Street	Urban Class IV	from Baker Drive to Childs Avenue	Travel Speed (mi/hr)	146	30.0	A	75	30.0	A
		From Childs Avenue to Baker Drive	Travel Speed (mi/hr)	178	30.0	A	45	30.0	A
	Urban Class IV	from Childs Avenue to Gerard Avenue	Travel Speed (mi/hr)	242	30.0	A	70	30.0	A
		from Gerard Avenue and Childs Avenue	Travel Speed (mi/hr)	138	30.0	A	81	30.0	A
5 Gerard Avenue	Urban Class III	from Parson Avenue and Coffee Street	Travel Speed (mi/hr)	84	35.0	A	19	35.0	A
		from Coffee Street to Parson Avenue	Travel Speed (mi/hr)	42	35.0	A	31	35.0	A
	Urban Class II	from Coffee Street to Project Site	Travel Speed (mi/hr)	164	40.0	A	47	40.0	A
		from Project Site to Coffee Street	Travel Speed (mi/hr)	206	40.0	A	58	40.0	A

**Table 4.11-2
Existing Condition Roadway Segment-Level of Service Analysis**

Roadway Segment	Type of Facilities	Location	Measure of Effectiveness (MOE)	AM Peak Hour			PM Peak Hour			
				Volume (veh/hr)	MOE ^a	LOS ^b	Volume (veh/hr)	MOE	LOS	
6	Kibby Road	Urban Class II	from SR 140 to Childs Avenue	Travel Speed (mi/hr)	57	45.0	A	36	45.0	A
			from Childs Avenue to SR 140	Travel Speed (mi/hr)	73	45.0	A	30	45.0	A
7	Childs Avenue	Urban Class III	from SR 99 to Parsons Avenue	Travel Speed (mi/hr)	534	34.7	A	623	34.5	A
			from Parsons Avenue to SR 99	Travel Speed (mi/hr)	569	34.6	A	383	34.9	A
		Urban Class III	from Parsons Avenue to Coffee Street	Travel Speed (mi/hr)	397	34.9	A	425	34.9	A
			from Coffee Street to Parsons Avenue	Travel Speed (mi/hr)	395	34.9	A	248	35.0	A
		Urban Class II	from Coffee Street to Kibby Road	Travel Speed (mi/hr)	295	40.0	A	405	40.0	A
			from Kibby Road to Coffee Street	Travel Speed (mi/hr)	238	40.0	A	370	40.0	A
		Urban Class II	from Kibby Road to Tower Road	Travel Speed (mi/hr)	112	40.0	A	179	40.0	A
			from Tower Road to Kibby Road	Travel Speed (mi/hr)	160	40.0	A	133	40.0	A
8	Campus Parkway	Urban Class III	from Coffee Street to Gerard Ave	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a
			from Gerard Avenue to Coffee Street	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a
		Urban Class III	from Gerard Avenue to Childs Avenue	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a
			from Childs Avenue to Gerard Avenue	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a
		Urban Class III	from Childs Avenue to SR 140	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a
			from SR 140 to Childs Avenue	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a

Notes: a. MOE= Measures of Effectiveness. For freeway facilities, MOE is measured in density (passenger cars per mile per lane). For urban facilities, MOE is measured in travel speed (miles per hour). For two-lane highway facilities, MOE is measured in percent time-spent following (percent).
b. LOS = Level of Service is based on Transportation Research Board, Highway Capacity Manual 2000.
Source: DKS Associates 2008

**Table 4.11-3
2010 Background Condition Intersection-Level of Service Analysis**

No	Intersection Location	Control	AM Peak Hour		PM Peak Hour	
			Delay ^a	LOS ^b	Delay	LOS
1	SR 140 / Parsons Avenue	Signalized	27.5	C	47.9	D
2	SR 140 / Baker Drive	Unsignalized	9.4		13.9	
	SB Approach		40.2	E	>50.0	F
	EB Left		9.2	A	9.2	A
3	SR 140 / Kibby Road	Unsignalized	5.2		4.7	
	NB Approach		12.2	B	13.4	B
	SB Approach		14.3	B	16.3	C
	EB Left		7.8	A	7.7	A
	WB Left		7.6	A	7.9	A
4	Childs Avenue / SR 99 Southbound Off-Ramp	AWSC ^d	22.0	C	>50.0	F
5	Childs Avenue / SR 99 Northbound Off-Ramp	AWSC	>50.0 ^c	F	>50.0	F
6	Childs Avenue / Parsons Avenue	Signalized	46.4	D	43.1	D
7	Childs Avenue / Coffee Street	Signalized	36.9	D	33.1	C
8	Childs Avenue / Kibby Road	Unsignalized	4.2		4.2	
	SB Approach		9.9	A	10.1	B
	EB Left		7.8	A	7.6	A
9	Childs Avenue / Tower Road	Unsignalized	1.1		0.6	
	NB Approach		10.3	B	10.4	B
	SB Approach		9.7	A	9.5	A
	EB Left		7.5	A	7.5	A
	WB Left		0.0	A	0.0	A
10	Gerard Avenue / Coffee Street	AWSC	9.7	A	8.4	A
11	Gerard Avenue / Tower Road	Unsignalized	6.9		6.9	
	SB Approach		6.5	A	6.9	A
	EB Left		7.1	A	7.0	A
12	Childs Avenue / Campus Parkway	AWSC	7.6	A	7.4	A
13	Gerard Avenue / Campus Parkway	Signalized	23.4	C	23.3	C
14	Mission Avenue / SR 99 Southbound	Signalized	18.3	B	13.6	B
15	Mission Avenue / SR 99 Northbound	Signalized	29.8	C	28.5	C
16	Mission Avenue / Coffee Street	Signalized	26.6	C	33.3	C

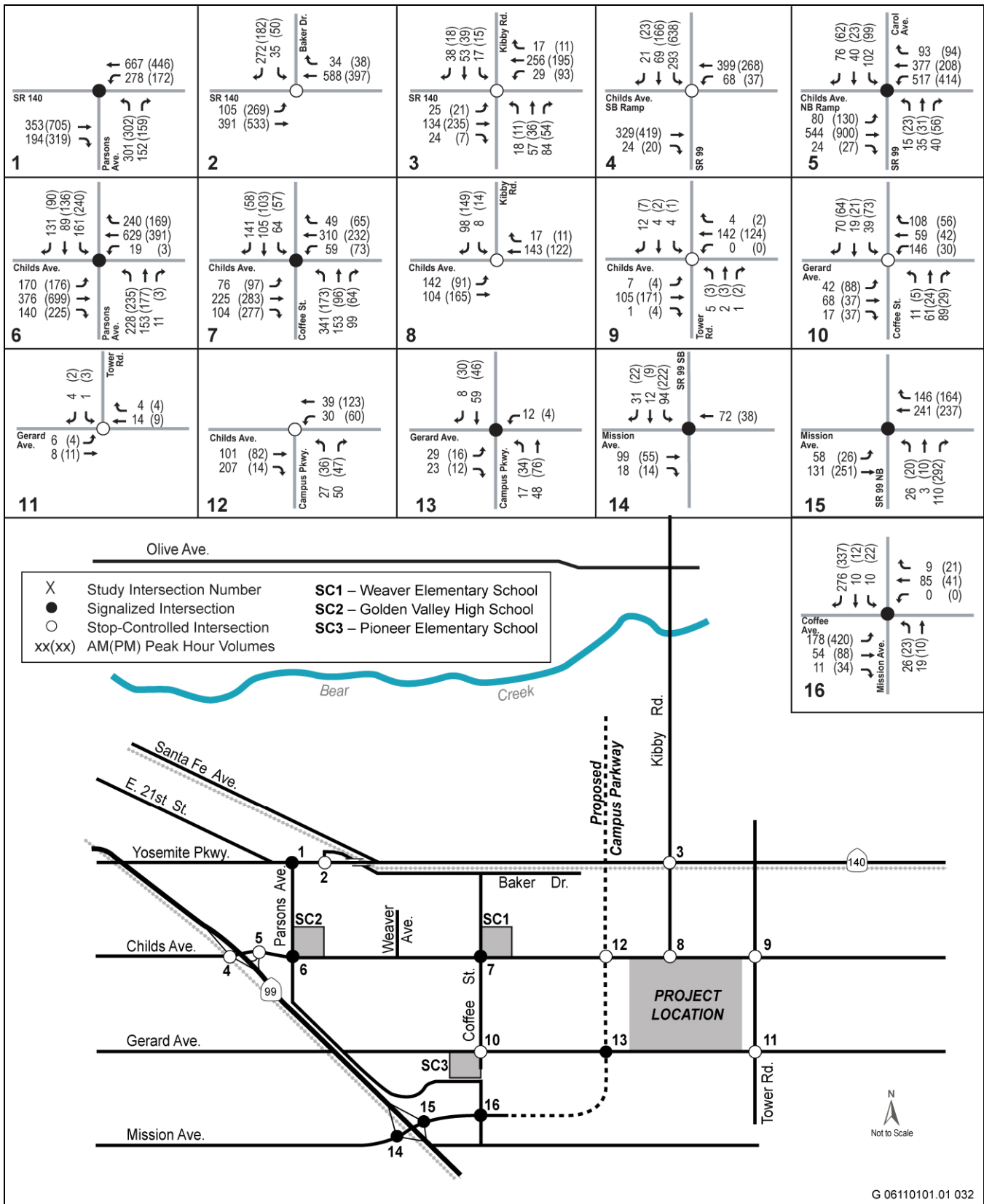
Notes: ^a Delay is in seconds per vehicle. For signalized intersections, delay is based on average stopped delay. For unsignalized intersections, delay is based at the worst approach for two-way stop controlled intersection.

^b LOS = Level of Service

^c For unsignalized intersections, delays >50 are beyond the upper limits of LOS delay estimation equations under the HCM 2000 methodologies.

^d AWSC = All-way stop control

Source: DKS Associates 2008



Source: DKS Associates

2010 Background Conditions Weekday Peak Hour Intersection Volumes

Exhibit 4.11-2

Background Traffic

The 2010 background condition includes the existing traffic volumes plus the addition of net-new trips expected to be generated by the approved projects within the study area.

The trip generation for the approved projects in the study area was determined based on the standard trip rates published in the Institute of Transportation Engineers (ITE), Trip Generation, 7th Edition, 2003 for weekday conditions, as summarized in Table 4.11-4.

Tables 4.11-5 and 4.11-6 provide a summary of the trip distribution estimates of the approved projects within the study area.

Roadway Improvement Assumptions

The following roadway improvements have been funded, are under construction, and were assumed to be implemented before the anticipated completion date of the distribution center, and thus were included in this analysis:

- ▶ Campus Parkway Phase 1 Project. The completion of this phase will connect the SR 99-Mission Interchange with Childs Avenue.
- ▶ The intersection of Mission Avenue and Coffee Street will change from all-way stop-controlled to signalized-controlled as a measure to accommodate the construction of Campus Parkway and other approved projects near the intersection.
- ▶ Signalization of Gerard Avenue/Campus Parkway intersection. According to the Campus Parkway design plan provided by Merced County, each of the intersection approaches will consist of two through lanes, two left-turn lanes and one right-turn lane in each approach. Campus Parkway will be a four-lane roadway north of Gerard Avenue and will end at Childs Avenue.
- ▶ The intersection of Childs Avenue and Campus Parkway will be four-way, stop controlled intersection.

4.11.2 REGULATORY SETTING

Key relevant regulatory and policy guidance is described below.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

There are no specific federal regulations pertaining to transportation impacts of the proposed project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Department of Transportation level of service standards and methodologies are used in the analysis conducted to support this EIR. There are no other specific state regulations for transportation impacts related to this project. For State highway facilities, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS, in accordance with the Caltrans Guide for the Preparation of Traffic Impact Studies.

**Table 4.11-4
Trip Generation of Approved Projects¹**

Approved Projects	Land Use	Size	Unit	Daily Trip ²	A.M. Trip			P.M. Trip			
					Total	Inbound	Outbound	Total	Inbound	Outbound	
1	Makinson	Residential	18	Units	172	14	4	10	18	11	7
2	Sierra Vista Subdivision	Residential	224	Units	2,144	168	42	126	226	142	84
3	Renaissance II	Residential	158	Units	1,512	119	30	89	160	101	59
4	Renaissance I	Residential	166	Units	1,589	125	31	94	168	106	62
5	Tuscany East	Residential	47	Units	450	35	9	26	47	30	17
6	Hartley Crossing	Residential	28	Units	268	21	5	16	28	18	10
7	Coffee Street Annexation	Residential	292	Units	2,794	219	55	164	295	186	109
8	Crossing at River Oaks	Residential	280	Units	2,680	210	53	157	283	178	105
9	Sand Castle	Residential	334	Units	3,196	251	63	188	337	212	125
10	Matthew Homes Condos	Residential (Condo)	296	Units	1,615	130	22	108	154	103	51
11	Alfarata Ranch #2	Residential	12	Units	106	9	2	7	12	8	4
12	Steiner Development										
	Parcel A	Gas Station/Store	12	Fuel Pump	977	60	30	30	80	40	40
		Restaurant	4,000	sf ³	509	46	24	22	44	27	17
		Hotel/Motel	128,000	sf	1,599	128	47	81	133	72	61
		Retail	4,000	sf	177	-	-	-	11	5	6
	Parcel B	Gas Station/Store	12	Fuel Pump	977	60	30	30	80	40	40
		Restaurant	8,000	sf	1,017	92	48	44	87	53	34
		Retail	145,030	sf	6,428	-	-	-	393	173	220
	Parcel C	Retail	11,950	sf	530	-	-	-	32	14	18
	Total				28,740	1,678	493	1,185	2,576	1,511	1,065

Notes:

¹ The project descriptions were provided by the City of Merced

² Trip generations were determined based on ITE Land Use 210 (Single-Family Detached Housing) for Residential Land Use, Land Use 230 (Residential Condominium/Townhouse) for Residential (Condo), Land Use 814 (Special Retail Center) for Retail, Land Use 945 (Gasoline/Service Station with Convenience Market) for Gasoline/Store, Land Use 932 (High-Turnover [Sitdown] Restaurant) for Restaurant, and Land Use 320 (Motel) for Hotel/Motel.

³ Square feet

Table 4.11-5 Approved Residential Projects – Trip Distribution Assumptions	
Original/Destination	Distribution Percentage
State Route (SR) 99 North	14.0
SR 99 South	14.0
SR 140 East	10.0
SR 140 West	25.0
16th Street North	25.0
Kibby Road north	2.0
Childs Avenue East	2.0
Childs Avenue West	8.0
Total	100.0
Source: Traffic Impact Analysis for Merced Distribution Center prepared by KdANDERSON Transportation Engineering in June 2005, based on MCAG Travel Forecast Model data.	

Table 4.11.6 Approved Commercial Development Projects – Trip Distribution Assumptions	
Original/Destination	Distribution Percentage
State Route (SR) 99 North	30
SR 99 South	30
North Merced	20
Childs Avenue West	10
Childs Avenue East	10
Total	100.0
Source: General Plan Amendment #00-01 for Steiner Development Expanded Initial Study #00-05	

LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Merced Vision 2015 General Plan

The Merced General Plan has several policies that pertain to the project and transportation impacts. Campus Parkway, as is described in this EIR, was identified in Merced’s General Plan as an arterial roadway—at that time called “Eastern Beltway.” Childs Avenue is also designated as an arterial roadway. In the project vicinity, SR 99 and SR 140 are both designated as State Highways in Chapter 4 of the *Merced Vision 2015 General Plan*. A grade-separated railroad crossing is identified for Campus Parkway along SR 140 near the proposed project site. The Mission Avenue/SR 99 interchange is identified in the Merced General Plan.

The minimum standard for traffic congestion provided in the Merced General Plan is LOS D during peak traffic periods.

Several goals, policies, and implementation strategies related to transportation and circulation are spelled out in Chapter 4 of the *Merced Vision 2015 General Plan*, starting on page 4-41. Designing streets consistent with circulation function and affected land uses, coordination with other relevant agencies, designing major roads to maximize efficiency, minimizing unnecessary travel demand on major streets, and minimizing adverse impacts on the environment from road systems are among the policies presented here. Travel demand measures for major employers, such as the proposed project are described starting on page 4-40 of Chapter 4 with additional information on page 4-49 and thereafter.

Bikeways

The Merced and Atwater Bicycle Plan (Merced County Association of Governments 2003) incorporates concepts from the County and City bikeway plans. *The MCAG plan* (<http://www.mercedrides.com/BIKE/images/maps/merced/mercebike.pdf>) identifies the Campus Parkway alignment for Class I/II bikeway improvements, near the project site.

City of Merced Standards and Municipal Code

Mitigation Fees

As per the City of Merced Standards and the Municipal Code requirements, Wal-Mart will be required to comply with the following:

- ▶ Full right-of-way dedication and street improvements around the perimeter of the site, including Gerard Avenue, Childs Avenue, and Tower Road
- ▶ The City of Merced's Public Facilities Impact Fees (PFIF) (in 2009 dollars but will increase over time with annual adjustments each January, etc.), which are calculated at a 2009 rate of \$3,812 per every 1,000 square feet of building area for a Light Industrial use, of which \$2,900 per 1,000 square feet are set aside for traffic signals and roadway improvements (the rest covers fire, police, and parks/bikeways);
- ▶ The Regional Transportation Impact Fees (RTIF), which are calculated at a September 2008 of \$1,409 per each 1,000 square feet of building area, and are also subject to annual increases in July of each year;
- ▶ The special fee for a traffic signal at Highway 140 and Kibby Road spelled out in Section 3.06 of the Development Agreement for Lyons Investments (dated October 19, 1998) to which this property is a part. Section 3.06 reads as follows:

"In lieu of having to install a traffic signal at Highway 140 and Kibby Road, Owner agrees to pay the City the sum of Three Hundred and Fifty Thousand Dollars (\$350,000), increased by percent change in the All Urban Consumers Index, U.S. City Average (USCA), as supplied by the Bureau of Labor Statistics (base index of _____) and payable at building permit at \$0.125 per square feet of building. For example, for 10,000 square feet of construction, Owner would pay \$1,250 adjusted by multiplying \$1,250 by current quarter CPI (USCA divided by the base index. The funds collected shall be used for the signal at Highway 140 and Kibby Road and/or arterial roads, Eastern Beltway [now known as Campus Parkway], or collection streets within the vicinity of the Property."

4.11.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Based on the City of Merced's *General Plan*, an acceptable operating level of service (LOS) is defined at LOS D or better at all intersections and roadway segments.

A traffic impact would be considered significant if the project would:

- ▶ Cause an increase in traffic congestion resulting in intersection or roadway segment level of service (LOS) E or worse. For unsignalized intersections, the need for a traffic signal is to be determined based on the Manual of Uniform Traffic Control Devices Supplement to the California Traffic Manual traffic signal warrants,
- ▶ Cause an increase in the total intersection volumes or roadway segment volumes by more than five percent at an intersection or segment that is already operating at Level of Service E or F under the background condition,

- ▶ Cause an increase in traffic congestion that would exceed a level of service standard established in the countywide Congestion Management Plan or Caltrans for designated roads or highways,
- ▶ Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment),
- ▶ Block or fail to provide adequate emergency access,
- ▶ Result in inadequate parking capacity that would cause substantial vehicle stacking or otherwise compromise safety or,
- ▶ Conflict with adopted policies, plans, or programs supporting alternative transportation

As part of the project conditions, the City of Merced would abandon the Kibby Road right-of-way between Childs Avenue and Gerard Avenue to make way for the proposed project. As a result, Kibby Road would function in the street network as it would under existing conditions.

Intersection Level of Service

The analysis of intersection LOS was conducted using the *Traffix* analysis program. The analysis uses procedures from the 2000 Transportation Research Board *Highway Capacity Manual* (HCM) method for signalized intersections. The correlation between average stopped delay and level of service for both signalized and unsignalized intersections is shown in Table 4.11-7.

Table 4.11-7 Signalized and Unsignalized Intersection LOS Thresholds			
Level of Service	Vehicle Delay (seconds/vehicle)		Description
	Signalized Intersections	Unsignalized Intersections ^a	
A	Delay ≤ 10.0	Delay ≤ 10.0	Free Flow/Insignificant Delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.
B	10 < Delay ≤ 20.0	10.0 < Delay ≤ 15.0	Stable Operation/Minimal Delays: An occasional approach phase is fully utilized. Many drivers design to feel somewhat restricted within platoon of vehicles.
C	20.0 < Delay ≤ 35.0	15.0 < Delay ≤ 25.0	Stable Operation/Acceptable Delays: Major approach phases fully utilized. Most drivers feel somewhat restricted.
D	35.0 < Delay ≤ 55.0	25.0 < Delay ≤ 35.0	Approaching Unstable/Tolerable Delays: Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.
E	55.0 < Delay ≤ 80.0	35.0 < Delay ≤ 50.0	Unstable Operation/Significant Delays: Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues from upstream from intersection.
F	Delay > 80.0	Delay > 50.0	Forced flow/Excessive Delays: Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections.

Note: For a two-way stop controlled intersection, the level of service is based on the delay at the worst approach.
Source: Transportation Research Board, Special Report 209, Highway Capacity Manual 2000, Chapters 16, Exhibit 16-2 and Chapter 17, Exhibit 17-2

Roadway Segment Level of Service

Roadway segment analysis was conducted using Highway Capacity Software (HCS 2000). The analysis uses procedures from the 2000 Transportation Research Board *Highway Capacity Manual* (HCM) methods. Three types of roadway facilities and Measures of Effectiveness (MOE) were used to determine LOS, as described below (the type of MOE depends on the class of roadway being analyzed).

Two-lane highway: an undivided roadway with two lanes, one in each direction. Passing slower traffic requires use of the opposing lane. The MOE used to determine LOS is the percentage of percent time vehicles spent following the vehicle ahead and average travel speed (Table 4.11-8).

Table 4.11-8 Two-Lane Highway LOS Standard				
Two-Lane Highway Class		Class I		Class II
Level of Service	Percent Time-Spent -Following	Average Travel Speed (mph)		Percent Time-Spent -Following
A	≤ 35	> 55		≤ 40
B	< 35-50	> 50-55		> 40-55
C	< 50-65	> 45-50		> 55-70
D	< 65-80	> 40-45		> 70-85
E	> 80	≤ 40		> 85
F	The flow rate exceeds the segment capacity			

Source: Transportation Research Board, Highway Capacity Manual 2000, Chapter 20, Exhibit 20-2 and Exhibit 20-4

Urban Street: a roadway serving as collector street and local arterial. Traffic flow on an urban street is occasionally interrupted by control at the intersections. The MOE used to determine LOS is the average through-vehicle travel speed for the segment (Table 4.11-9).

Table 4.11-9 Urban Street LOS Thresholds				
Urban Street Class	Class I	Class II	Class III	Class IV
Range of Free-Flow Speed	55 to 45 mph	45 to 35 mph	35 to 30 mph	35 to 25 mph
Typical	50 mph	40 mph	35 mph	30 mph
Level of Service	Average Travel Speed (mph)			
A	> 42	> 35	> 30	> 25
B	> 34-42	> 28-35	> 24-30	> 19-25
C	> 27-34	> 22-28	> 18-24	> 13-19
D	> 21-27	> 17-22	> 14-18	> 9-13
E	> 16-21	> 13-17	> 10-14	> 7-9
F	≤ 16	≤ 13	≤ 10	≤ 7

Source: Transportation Research Board, Highway Capacity Manual 2000, Chapter 15, Exhibit 15-2

Freeway Segment: a divided highway with full control of access and without signalized or stop-controlled at-grade intersections. The MOE used to determine LOS is the density, in terms of passenger cars per mile per lane (Table 4.11-10).

Table 4.11-10 Basic Freeway LOS Standard	
Level of Service	Density Range (passenger car/mile/lane)
A	0–11
B	> 11–18
C	> 18–26
D	> 26–35
E	> 35–45
F	>45

Source: Transportation Research Board, Highway Capacity Manual 2000, Chapter 23

IMPACT ANALYSIS

The following describes the traffic and transportation impacts of the proposed project. For additional detail, please refer to Appendix D.

Trip Generation

Trip generation for the proposed project was based on the number of the employees anticipated on-site, as well as anticipated heavy truck operations, described in Section 3.0 “Project Description”. According to the information provided by the project proponent, the proposed project would involve approximately 1,200 employees (Table 4.11-11) at full operations.

Table 4.11-11 Employees by Title and Division	
Title/Division	Number of Employees
Drivers in Transportation	150
Transportation Employees	64
Employees in Other Departments	986
Total Employees	1,200

Source: Wal-Mart Stores, Inc. 2007

The trip generation estimate also takes into consideration the number of heavy vehicle (also referred to herein as tractor trailers or semi-trailers) trips that would be part of the project. For this purposes of traffic impact assessment, heavy vehicles were converted to passenger-car-equivalents (PCE’s) using a ratio of four vehicle trips per one truck trip. DKS’ research of materials published by the FHWA on vehicle characteristics of passenger cars and semi-trailers supports a conservative ratio of four vehicle trips per one truck trip. This reflects the fact that heavy vehicles contribute more to traffic congestion than do passenger vehicles. Table 4.11-12 summarizes the trip generation for the proposed project.

As shown, the project would generate 2,399 daily trips, with 143 occurring during the morning peak hour and 328 occurring during the afternoon peak-hour. Some of those trips include heavy truck trips. Converting heavy truck trips to the equivalent of four passenger vehicle trips, the project generates 4,328 daily trips, with 323 occurring during the morning peak hour and 460 occurring during the afternoon peak hour.

Table 4.11-12 Proposed Project trip Generation									
Direction	Daily Trips			A.M. Peak Hour			P.M. Peak Hour		
	Trucks	Auto	Total	Trucks	Auto	Total	Trucks	Auto	Total
Expressed as Vehicles									
Inbound	365	846	1,211	32	55	87	20	25	45
Outbound	278	910	1,188	28	28	56	24	259	283
Total	643	1756	2,399	60	83	143	44	284	328
Passenger Car Equivalent									
Inbound	1,460	846	2,306	128	55	183	80	25	105
Outbound	1,112	910	2,022	112	28	140	96	259	355
Total	2,572	1,756	4,328	240	83	323	176	284	460
Source: Data compiled by DKS Associates in 2007									

Trip Distribution

The direction of approach and departure for project trips of the proposed Wal-Mart Distribution Center were estimated based on regional distribution of residences in Merced County and around the study area. Based on prevailing traffic patterns, roadway capacity, and consultation with the City of Merced and Wal-Mart Stores, Inc., SR 99, SR 140 and SR 152 were designated as the major routes that would service the proposed project site.

The project truck trips having their origins or destinations on SR 99 and SR 152 (90% of the truck trips) would be assumed to access the project site via the Mission interchange and Campus Parkway. The other 10% of truck trips from and to SR 140 West would be assumed to continue on SR 140 and use Tower Road. Also the City has designated truck routes (per Chapter 10.40.010 of the City of Merced Municipal Code). Of the streets listed above, only Parsons Avenue between Yosemite Parkway and Childs Avenue is a designated truck route. Coffee Street, Childs Avenue and Gerard Avenue are not designated truck routes.

Table 4.11-13 Proposed Project Trip Distribution Origin/Destination Assumption		
Direction	Percentage of Total Traffic (%)	
	Autos	Trucks
North Via State Route 99	40.0	31.0
East via SR 140	10.0	-
West via SR 140	3.0	10.0
West via SR 152	-	27.0
South via SR 99	20.0	32.0
North via E 16th Street	5.0	-

Table 4.11-13 Proposed Project Trip Distribution Origin/Destination Assumption		
Direction	Percentage of Total Traffic (%)	
	Autos	Trucks
North on Santa Fe/E 21 st	5.0	-
North on Kibby Road	10.0	-
East on Childs Avenue	2.0	-
West on Childs Avenue	5.0	-
Total	100.0	100.0

Source: Data compiled by DKS Associates in 2007

IMPACT 4.11-1 **Effects on Level of Service.** *Implementation of the project would not cause study intersections and roadway segments to exceed level of service standards. For intersections and roadway segments that already exceed level of service standards, the project would not contribute more than 5% of the total volume. This impact is considered less than significant.*

Level of Service (LOS) impacts are analyzed for both intersections and roadway segments, as presented below.

Intersections

The study intersections that operate at an acceptable LOS (LOS D or better) under the 2010 Background Condition without the project would continue to operate at acceptable LOS under the 2010 Background with Project Condition. The addition of traffic generated by the proposed project would not result in any significant changes to intersection levels during either of the peak hours analyzed.

For the intersections that operate at unacceptable LOS (LOS E or F) under the 2010 Background Condition, the proposed project would not contribute more than 5% of the intersection total volume. Therefore, the proposed project would not result in any significant impact at the intersections. Intersection operational levels of service along with their associated delays are summarized in Table 4.11-14. Appendix D includes the detailed calculation level of service analysis sheets, including the weekday A.M. and P.M. peak hours.

Table 4.11-14 2010 Background with Project Condition Intersection Level of Service Analysis										
No	Intersection Location	Control	AM Peak Hour				PM Peak Hour			
			Delay ^a	LOS ^b	% Vol Incr ^c	Project Impact	Delay	LOS	% Vol Incr ^c	Project Impact
1	SR 140 / Parsons Avenue	Signalized	27.8	C		No	49.9	D		No
2	SR 140 / Baker Drive	Unsignalized	10.0		1.8	No	15.3		1.7	No
	SB Approach		43.2	E			>50.0	F		
	EB Left		9.2	A			9.2	A		
3	SR 140 / Kibby Road	Unsignalized	5.2			No	4.5			No
	NB Approach		12.5	B			13.9	B		
	SB Approach		15.2	C			17.4	C		
	EB Left		7.9	A			7.8	A		
	WB Left		7.6	A			7.9	A		

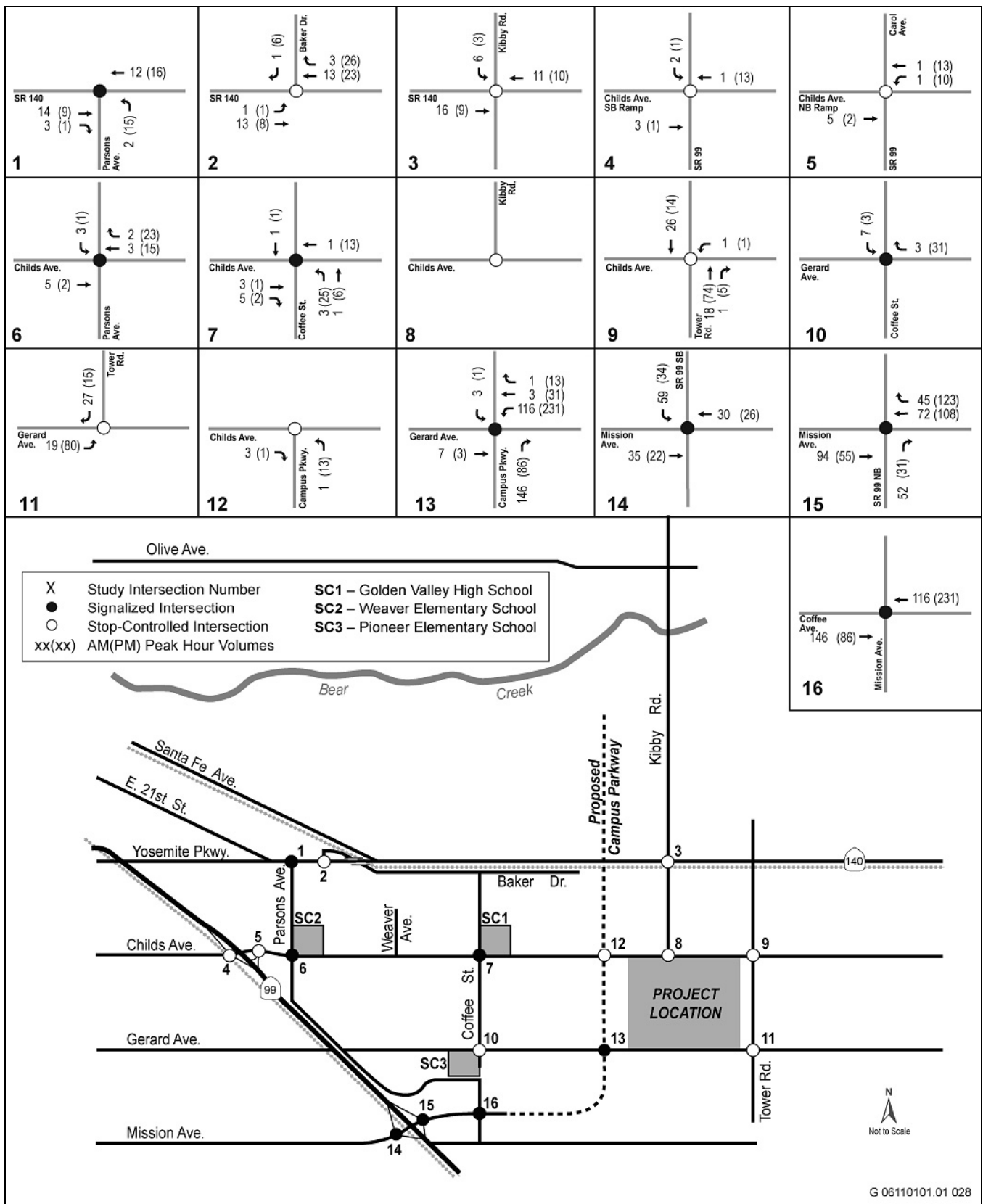
**Table 4.11-14
2010 Background with Project Condition Intersection Level of Service Analysis**

No	Intersection Location	Control	AM Peak Hour				PM Peak Hour			
			Delay ^a	LOS ^b	% Vol Incr ^c	Project Impact	Delay	LOS	% Vol Incr ^c	Project Impact
4	Childs Avenue / SR 99 Southbound Off-Ramp	AWSC ^e	22.3	C		No	>50.0	F	1.0	No
5	Childs Avenue / SR 99 Northbound Off-Ramp	AWSC	>50.0 ^d	F	0.4	No	>50.0	F	1.2	No
6	Childs Avenue / Parsons Avenue	Signalized	46.6	D		No	43.3	D		No
7	Childs Avenue / Coffee Street	Signalized	37.1	D		No	34.2	C		No
8	Childs Avenue / Kibby Road	Unsignalized	4.2			No	4.2			No
	SB Approach		9.9	A	10.1		B			
	EB Left		7.8	A	7.6		A			
9	Childs Avenue / Tower Road	Unsignalized	2.5			No	3.1			No
	NB Approach		10.7	B	11.7		B			
	SB Approach		10.5	B	10.6		B			
	EB Left		7.5	A	7.5		A			
	WB Left		7.4	A	7.5		A			
10	Gerard Avenue / Coffee Street	AWSC	9.8	A		No	8.5	A		No
11	Gerard Avenue / Tower Road	Unsignalized	6.9			No	7.4			No
	SB Approach		6.5	A	6.7		A			
	EB Left		7.3	A	7.6		A			
12	Childs Avenue / Campus Parkway	AWSC	7.6	A		No	8.1	A		No
13	Gerard Avenue / Campus Parkway	Signalized	30.6	C		No	34.9	C		No
14	Mission Ave / SR 99 Southbound Off-Ramp	Signalized	19.2	B		No	15.3	B		No
15	Mission Ave / SR 99 Northbound Off-Ramp	Signalized	27.9	C		No	34.6	C		No
16	Mission Ave / Coffee Street	Signalized	28.8	C		No	33.4	C		No

Notes: ^a Delay is in seconds per vehicle. For signalized intersections, delay is based on average stopped delay. For unsignalized intersections, delay is based at the worst approach for two-way stop controlled intersection.
^b LOS = Level of Service
^c % Vol Incr = percent increase in the intersection traffic volumes due to the project trips. Percent increase is reported only at any of the intersections that would already operate at an unacceptable LOS without the project.
^d For unsignalized intersections, delays >50 are beyond the upper limits of LOS delay estimation equations under the HCM 2000 methodologies.
^e AWSC = All-way stop control

Source: DKS Associates

Exhibit 4.11-2 illustrates the morning and afternoon peak-hour project trips at each of the study intersections. Exhibit 4.11-3 illustrates the total 2010 background with project condition traffic volumes at each of the study intersections for the A.M. and P.M. peak hours.

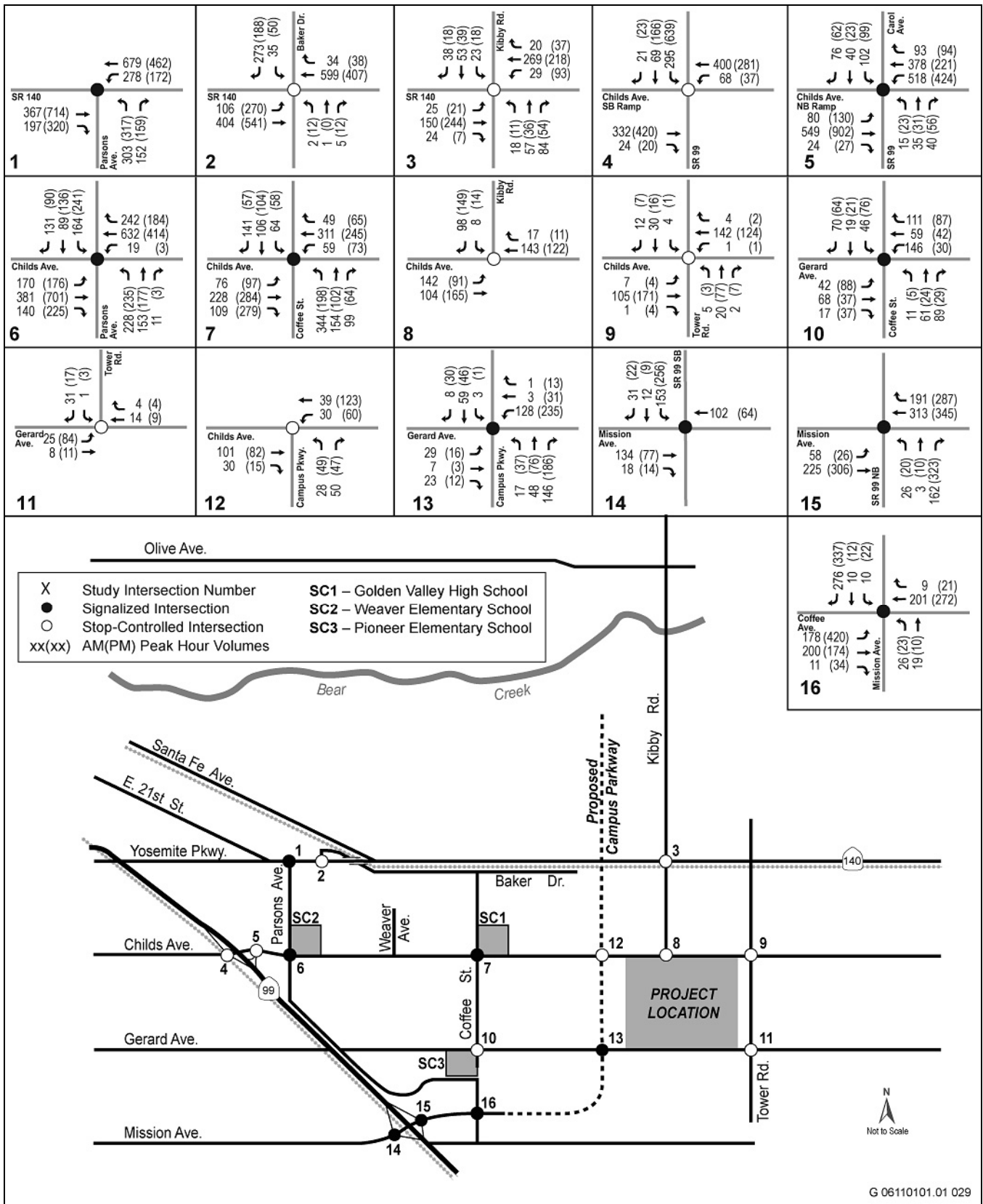


Source: DKS Associates 2007

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2010 Project Trips

Exhibit 4.11-2



Source: DKS Associates 2007

2010 Project Plus Background Trips

Exhibit 4.11-3

Roadway Segments

All study roadway segments would continue to operate at an acceptable LOS D or better under 2010 Background with Project Conditions during the A.M. and P.M. peak hours (Table 4.11-15). Please refer to Appendix E for more detail.

Mitigation Measure

No mitigation is required.

IMPACT 4.11-2 **Design Feature Hazards, Vehicle Stacking, and Parking Capacity.** *Implementation of the project would include truck traffic using roadways in the project vicinity, tractor trailer trucks that could potentially park in the project vicinity, and truck operations on streets where school buses operate. The impact is **potentially significant**.*

Based on the particular operational characteristics of the proposed project, the traffic analysis supporting this EIR included an analysis of turning radii, truck parking, and nearby school operations relative to the project. A description of that analysis follows.

A truck turning radii analysis was conducted to evaluate the potential affect of proposed project trucks at the intersection of Gerard Avenue and Campus Parkway and also at the new Mission Interchange at SR 99. As noted earlier, project trucks would access the project site via SR 99 at Campus Parkway and SR 140 at Tower Road. Intersection layouts were provided by the California Department of Transportation, District 10, the County of Merced, and also the City of Merced. Following the Surface Transportation Assistance Act (STAA) truck turning radii standard, turning paths of a standard semi-trailer truck were simulated at different approaches. Based on computer analysis of typical turns, the intersections in question provide adequate space for turning movements. Refer to Appendix D for more information.

Based on the designated truck routes to and from the proposed Wal-Mart Distribution Center and school bus routes, school buses and proposed project trucks would share SR 140 between SR 99 and Tower Road and a segment of Mission Avenue between SR 99/Mission Avenue Interchange and Coffee Street.

No tractor trailer traffic is expected to travel past any of the three schools located near the intersections of Childs/Coffee, Gerard/Coffee, and Parsons/Childs based on the trip distribution assumptions described above and the lack of City truck route designations. However, there is a potential for trucks to stray from their expected routes occasionally. This could result in trucks passing through residential areas and past schools. This is a **potentially significant** impact that requires mitigation.

The Golden Valley High School Bus Route 20 runs between the north end of the City of Merced and the school between 6:00 A.m. and 8:05 a.m., and again between 3:05 p.m. and 5:10 p.m. on school days. The bus travels along SR 140 between Parsons Avenue and Kibby Road for a short period between 6:15 a.m. and 6:25 a.m. and between 4:00 p.m. and 4:05 p.m.

The Pioneer Elementary School Bus Route 8 runs between the school and SR 140 at Arboleda Drive from 2:00 p.m. to 3:18 p.m. The bus travels on the SR 140 segment between Kibby Road and Tower Road for a short period between 3:18 p.m. and 4:00 p.m.

The Golden Valley High School Bus Route 24 runs between the south end of the City of Merced and the school between 5:50 a.m. and 8:05 a.m. and between 2:45 p.m. and 5:15 p.m. The bus travels on the Mission Avenue segment between SR 99/Mission Avenue Interchange and Coffee Street for a short period between 6:40 a.m. and 6:50 a.m.

Table 4.11-15 2010 Background With Project Condition Roadway Segment-Level of Service Analysis										
Roadway Segment	Type of Facilities	Location	Measure of Effectiveness (MOE)	AM Peak Hour			PM Peak Hour			
				Volume (veh/hr)	MOE ^a	LOS ^b	Volume (veh/hr)	MOE	LOS	
1	SR 99	Freeway	from Mission Avenue to SR 140	Density (pc/mi/ln)	1,758	18.6	C	1,905	20.1	C
			from SR 140 to Mission Avenue	Density (pc/mi/ln)	1,632	17.2	B	2,723	28.7	D
2	SR 140	Urban Class III	from SR 99 to Parsons Avenue	Travel Speed (mi/hr)	564	34.6	A	1,034	31.3	A
			from Parsons Avenue to SR 99	Travel Speed (mi/hr)	982	32.0	A	779	33.7	A
		Urban Class II	from Parsons Avenue to Santa Fe Avenue	Travel Speed (mi/hr)	957	39.5	A	634	39.9	A
			from Santa Fe Avenue to Parsons Avenue	Travel Speed (mi/hr)	519	40.0	A	873	39.7	A
		Two-lane Highway Class I	between Santa Fe Avenue and Kibby Road	Percent Time-Spent-Following	1,272	69.2	D	1,215	67.5	D
3	Parson Avenue	Urban Class III	from Childs Avenue and SR 140	Travel Speed (mi/hr)	683	34.2	A	400	34.9	A
			from SR 140 and Childs Avenue	Travel Speed (mi/hr)	565	34.6	A	537	34.7	A
4	Coffee Street	Urban Class IV	from Baker Drive to Childs Avenue	Travel Speed (mi/hr)	475	34.8	A	492	34.8	A
			from Childs Avenue to Baker Drive	Travel Speed (mi/hr)	279	29.9	A	264	29.9	A
		Urban Class IV	from Childs Avenue to Gerard Avenue	Travel Speed (mi/hr)	311	29.9	A	219	30.0	A
			from Gerard Avenue and Childs Avenue	Travel Speed (mi/hr)	597	28.7	A	364	29.8	A
5	Gerard Avenue	Urban Class III	from Parson Avenue and Coffee Street	Travel Speed (mi/hr)	274	29.9	A	456	29.5	A
			from Coffee Street to Parson Avenue	Travel Speed (mi/hr)	127	35.0	A	162	35.0	A
		Urban Class II	from Coffee Street to Project Site	Travel Speed (mi/hr)	140	35.0	A	111	35.0	A
			from Project Site to Coffee Street	Travel Speed (mi/hr)	203	40.0	A	142	40.0	A

**Table 4.11-15
2010 Background With Project Condition Roadway Segment-Level of Service Analysis**

Roadway Segment	Type of Facilities	Location	Measure of Effectiveness (MOE)	AM Peak Hour			PM Peak Hour		
				Volume (veh/hr)	MOE ^a	LOS ^b	Volume (veh/hr)	MOE	LOS
6 Kibby Road	Urban Class II	from SR 140 to Childs Avenue	Travel Speed (mi/hr)	159	45.0	A	101	45.0	A
		from Childs Avenue to SR 140	Travel Speed (mi/hr)	106	45.0	A	163	45.0	A
7 Childs Avenue	Urban Class III	from SR 99 to Parsons Avenue	Travel Speed (mi/hr)	691	34.2	A	1,102	30.4	A
		from Parsons Avenue to SR 99	Travel Speed (mi/hr)	991	31.9	A	739	34.0	A
	Urban Class III	from Parsons Avenue to Coffee Street	Travel Speed (mi/hr)	556	34.7	A	945	32.4	A
		from Coffee Street to Parsons Avenue	Travel Speed (mi/hr)	893	32.9	A	328	35.0	A
	Urban Class II	from Coffee Street to Kibby Road	Travel Speed (mi/hr)	391	40.0	A	406	40.0	A
		from Kibby Road to Coffee Street	Travel Speed (mi/hr)	419	40.0	A	383	40.0	A
	Urban Class II	from Kibby Road to Tower Road	Travel Speed (mi/hr)	112	40.0	A	179	40.0	A
		from Tower Road to Kibby Road	Travel Speed (mi/hr)	160	40.0	A	133	40.0	A
8 Campus Pkwy	Urban Class III	from Coffee Street to Gerard Avenue	Travel Speed (mi/hr)	211	35.0	A	196	35.0	A
		from Gerard Avenue to Coffee Street	Travel Speed (mi/hr)	210	35.0	A	293	35.0	A
	Urban Class III	from Gerard Avenue to Childs Avenue	Travel Speed (mi/hr)	78	35.0	A	105	35.0	A
		from Childs Avenue to Gerard Avenue	Travel Speed (mi/hr)	70	35.0	A	77	35.0	A
	Urban Class III	from Childs Avenue to SR 140	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a
		from SR 140 to Childs Avenue	Travel Speed (mi/hr)	n/a	n/a	n/a	n/a	n/a	n/a

Notes: ^a MOE= Measures of Effectiveness. For freeway facilities, MOE is measured in density (passenger cars per mile per lane). For urban facilities, MOE is measured in travel speed (miles per hour). For two-lane highway facilities, MOE is measured in percent time-spent following (percent).
^b LOS = Level of Service is based on Transportation Research Board, Highway Capacity Manual 2000.
Source: DKS Associates 2008

The Weaver Elementary School Bus Route 8 runs between the school and Bear Creek Drive at Arboleda Drive from 3:40 p.m. to 4:28 p.m. The bus travels on the SR 140 segment between Kibby Road and Tower Road for a short period between 4:25 p.m. and 4:28 p.m.

The Traffic Report identifies the common roadway segments that would accommodate both school buses and Wal-Mart trucks. It is not unusual for trucks and cars and buses to share roadways that are designed to acceptable standards. There is no threshold for identifying when an impact would occur. Accordingly, it is not anticipated that the overlap or mixing of school buses and tractor trailer traffic would itself create any adverse physical environmental impact.

Employee parking would be accommodated on-site. Parking demand generated by the project was estimated based on the parking demand at an existing Wal-Mart Distribution Center in Apple Valley, San Bernardino County. The proposed project would employ the same number of employees as the Wal-Mart Distribution Center in Apple Valley. It is assumed, therefore, that the parking demand for both distribution centers would be similar. Table 4.11-16 compares parking demand from the Apple Valley Distribution Center for the largest shift to the parking supply proposed as a part of the project. As shown, the proposed parking supply would more than meet demand during the largest shift. As also shown, the proposed parking would more than satisfy the minimum off-street parking requirements from the City of Merced Municipal Code. The impact related to employee parking is *less than significant*.

Merchandise trucks would arrive on-site for deliveries during the 24-hour operation of the distribution center. If the delivery trucks arrive prior to a scheduled pick-up or delivery time (or if the entry gate is closed), there may be a tendency for these truck drivers to either park along local streets in the vicinity or travel on local streets until access to the distribution center is available. Truck traffic on local streets that are not designated truck routes, and parking and idling in the project vicinity could create not only traffic problems, but could create also noise and air quality problems. The impact of tractor trailer trucks not being allowed to wait on site is a *potentially-significant* impact that requires mitigation.

Table 4.11-16 Parking Analysis the Wal-Mart Distribution Center				
Parking Area	Parking Demand ¹ (spaces)	Parking Supply ² (spaces)	The City of Merced Code Requirement ³	
			Rate	Requirement (Spaces)
Employee/Visitor	380	850	One for each two employees and one for each vehicle used to conduct business.	180 ^d
Truck/Trailer Parking	1,227	1,600		1,227 ^e
Non-Truck Parking	138	200		138 ^e
Loading Dock	189	300		189 ^e
Total	1,934	2,950	-	1,734
Note:				
¹ Parking demand based on parking demand surveyed conducted at Wal-Mart Distribution Center in Apple Valley.				
² Parking Supply is based on the information provided by Wal-Mart Stores, Inc.				
³ City of Merced Municipal Code Title 20. Zoning, Industrial use-Warehouse (20.58.150).				
⁴ The required spaces were estimated based on the largest shift of 359 employees at the proposed project.				
⁵ Assumed the surveyed demand represents the number of vehicle activities.				
Source: Compiled by DKS Associates in August 2006				

Mitigation Measure 4.11-2a: Accommodate All Delivery Truck Parking On-Site. The project design shall incorporate a designated on-site waiting area within the site between Gerard Road and the truck gate that is located further within the site. This area shall be large enough to accommodate at least 20 inbound delivery trucks. It is recommended that the access roadway be designed to have a temporary parking area located between Gerard Avenue and the truck entrance gate. The parking area shall be paved and marked as a designated waiting area for

delivery trucks, and shall not impede access to the site. The holding area(s) shall be located in the interior of the project site and be more than 1,000 feet from all off-site residences, which is a distance threshold identified in the Noise Analysis of this EIR. If the waiting area(s) are located closer than 1,000 feet to off-site residences then sound barrier(s) shall be implemented into the design to ensure that on-site truck idling would not result in an exceedence of the nighttime standard of 45 A-weighted decibels energy-equivalent noise level established by the Merced General Plan (Table N-5).

Wal-Mart shall instruct all delivery truck drivers not to park, stand, wait, or stay overnight along local roadways. In order to minimize noise and vehicle emissions, idling in the waiting area shall be limited by Wal-Mart to 5 minutes, as required by 13 CCR Chapter 10, Section 2485.

Mitigation Measure 4.11-2b: Manage Truck Traffic on Local Streets. To reduce hazards on local roadways associated with truck traffic during *construction operations*, Wal-Mart Stores East LP shall ensure that its primary construction contractor implements the following measures:

- a. *Develop and implement a construction truck traffic safety plan in coordination with the City of Merced, County of Merced, and Caltrans.* The construction contractor shall develop a plan for traffic safety assurance for the County roadways in the project vicinity. The contractor shall submit the plan to the City Development Services Department for approval before the initiation of construction-related activity that could adversely affect traffic on City, County, and State roadways. The plan(s) may call for the following elements, based on the requirements of each agency:
 - ▶ posting warnings about the potential presence of slow-moving construction vehicles;
 - ▶ using traffic control personnel when appropriate;
 - ▶ scheduling truck trips outside of peak morning and evening traffic periods to the extent feasible;
 - ▶ placing and maintaining barriers and installing traffic control devices necessary for safety, as specified in Caltrans's *Manual of Traffic Controls for Construction and Maintenance Works Zones* and in accordance with City and County requirements; and
 - ▶ maintaining routes for passage of emergency response vehicles through roadways affected by construction activities.

The contractor shall train construction personnel in appropriate safety measures as described in the plan(s), and shall implement the adopted plan(s).

- b. *Minimize the accumulation of mud and dirt on local roadways.* All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The construction contractor shall sweep the paved roadways (water sweeper with reclaimed water recommended) at the end of each day if substantial volumes of soil material have been carried onto adjacent paved, public roads from the project sites.

To reduce hazards on local roadways associated with truck traffic during *ongoing operations*, Wal-Mart Stores East LP shall ensure implement the following measures:

- c. *Develop and implement a truck route plan.* Tractor trailers approaching and departing from the distribution center shall be limited to the following roadways from SR 99 and SR 140: Campus Parkway, Mission Avenue west of Campus Parkway, Gerard Avenue east of Campus Parkway, and Tower Road. Wal-Mart shall regularly and routinely instruct its employees, contract truck drivers, and vendors of these roadway limitations.

Implementing Mitigation Measures 4.11-2a and 4.11-2b would reduce the potential impact related to truck traffic hazards to a *less-than-significant* level.

IMPACT 4.11-3 **Emergency Access Impacts.** *The project shows two access points to the site, both along Gerard Avenue. Emergency service providers may require additional access to a site this large with the operations as proposed. The impact is **potentially significant**.*

The proposed project site shows an entrance for employees and another entrance to the project site for delivery trucks. Both entrances are along Gerard Avenue. Blockage of Gerard Avenue at the Coffee Street intersection could impede access to the site, resulting in an emergency responder delay. Also, emergency responders may require a point of access to and from the project site that does not have the potential to be blocked by delivery trucks and employee vehicles. The impact is *potentially significant*.

Mitigation Measure 4.11-3: Provide Emergency Access Gate and Driveway. The project applicant shall modify the site plan to show a third point of ingress and egress on Childs Avenue that is gated and available only for emergency purposes. The emergency access driveway on-site shall be of a width and design acceptable to the City and shall provide unimpeded access to all structures on the site.

Implementation of this mitigation measure would ensure that emergency responders have adequate access to serve the project site in the event of a fire, medical emergency, an issue involving law enforcement, or other occurrence. Implementation of this mitigation measure reduces impacts to a *less-than-significant* level.

IMPACT 4.11-4 **Construction Traffic and Parking.** *Implementation of the project would involve use of roadways in the vicinity of the project by construction employees and for moving construction equipment on- and off-site. While roadways in the vicinity are capable of accommodating construction traffic and streets abutting the site are capable of accommodating construction worker vehicles, construction vehicles entering and leaving the site could create impacts on local roadways. The impact is **potentially significant**.*

Construction period trip generation estimates were based on the size of the building area to be constructed on the site. Using a factor of 0.42 trips per day per 1,000 square feet of industrial construction, the estimated number of vehicle trips would be 486 per day (based on 1,155,600 square feet of total building area to be constructed). It was assumed that all construction workers would work the same eight hour shift. This is a typical assumption based on construction trip behavior at large construction sites in the Central Valley, which have conditions limiting time periods of construction activity. It was also assumed that truck trips would be evenly spaced throughout the day such that ten percent of truck trips would arrive or depart during each hour of construction activity. The project description, however, does not identify a location for construction worker parking. While it is likely that a temporary construction worker parking lot would be constructed on the site, streets abutting the project site are capable of accommodating the vehicles of construction workers. Nonetheless, construction vehicles, such as tractor trailers carrying grading equipment, could create impacts on local streets and traffic. This is a *potentially-significant* impact that requires mitigation.

Mitigation Measure

Mitigation Measure 4.11-2b would ensure that impacts are reduced to a *less-than-significant* level.

IMPACT 4.11-5 **Transit, Pedestrian, and Bicycle Impacts.** *The project could increase demand for public transit in the project site vicinity and affect existing and future pedestrian and bicycle access in the project vicinity. The impact is **potentially significant**.*

Route 5, “East-West City Shuttle,” runs within the project study area on Parsons Avenue between Childs Avenue and SR 140 and on SR 140 between Parsons Avenue and Santa Fe Avenue. The Parsons Avenue segment would

serve as a potential route for the project auto trips, while the SR 140 segment would serve both the project auto and truck trips. The increase in the traffic volumes on these roadway segments, however, would be relatively low and, therefore, is not expected to cause in a significant impact to the transit service.

The substantial truck traffic in the project vicinity could have an impact on existing and future bicycle and pedestrian access in the vicinity. Currently, there is little pedestrian and bicycle travel in the vicinity of the project. However, due to the approved residential projects located west of the project site, an increase in pedestrian and bicycle activities is anticipated, especially on Gerard Avenue and the future Campus Parkway. The project site is east of such future residential activity, on the edge of the City. The project would be required to improve, or contribute to street improvements in accord with the mitigation measures identified in this EIR for cumulative impacts. The City would require that street improvements are in compliance with standards, codes, and policy, including pedestrian and bicycle facilities and planned travelways. However, children traveling to school on foot or on bicycle could be especially vulnerable to vehicular conflicts. This could be a *potentially significant* impact.

Mitigation Measure 4.11-4: Update Safe Routes to School Plan. The City shall ensure that the Safe Routes to School Plans are appropriately updated such that school bus and pedestrian routes in the vicinity of the Wal-Mart are revised as appropriate to avoid potential conflicts taking into account the project's potential increase in truck traffic and potential truck routes.

Updating the Safe Route to School Plans would help minimize potential conflicts between school and Wal-Mart traffic, as well as compliance with existing policy, regulations, and street standards, enforced through routine project entitlement by City staff and implementation of Mitigation Measure 4.11-2b, would ensure a *less-than-significant* impact.