

## 4.2 TRAFFIC AND CIRCULATION

This section summarizes the results of the traffic report prepared by LSA Associates, Inc. (LSA) for the proposed project (March 2007). A technical review of the traffic report was conducted by the traffic engineering firm, DKS Associates, for the City. This analysis examines the traffic impacts expected to result from the addition of vehicle traffic generated by the proposed project to baseline conditions consisting of existing conditions as altered by approved projects in the study area. "Approved projects," in this context, are land use and infrastructure projects, including a new interchange at Interstate 80 and Sierra College Boulevard (under construction at the time this Draft EIR was released), that have received all discretionary approvals requiring environmental review. Potential mitigation measures for facilities significantly affected by the project are also identified in this analysis.

### 4.2.1 EXISTING SETTING

#### STUDY AREA

The study area for the traffic analysis was developed in consultation with the City and is based on input received on the project's Notice of Preparation. Arterial street intersections that were most likely to be affected by travel to and from the project were included in the study area. Existing travel patterns in the project area that the project could affect were considered, including intersections located north of the Rocklin city limits within the Town of Loomis. Segments of I-80 and SR-65 were included in the study area at the request of Caltrans.

Of the 21 study area intersections, 12 are located within 0.5 mile from direct access to an interstate freeway. The City's level of service criteria for intersections located within 0.5 mile from direct access to an interstate freeway is LOS D, while the threshold for other intersections within the City is LOS C. (See City of Rocklin General Plan Circulation Element Policy 13.)

Levels of service are analyzed at the following study area intersections for the a.m., p.m., and Saturday peak hours for each development scenario. The traffic analysis took into consideration the 24-hour operations of the proposed project. Intersections within 0.5 mile from a freeway access location (where the LOS D standard would apply) are noted with an asterisk (\*). The jurisdiction of intersections located outside of the City of Rocklin is indicated in parentheses after the intersection name.

- ▶ Pacific Street/Rocklin Road
- ▶ Granite Drive/Rocklin Road\*
- ▶ I-80 westbound ramp/Rocklin Road\*
- ▶ I-80 eastbound ramp/Rocklin Road\*
- ▶ Dominguez Road (Del Mar Avenue)/Pacific Street
- ▶ Granite Drive/Dominguez Road
- ▶ Sierra College Boulevard/Taylor Road\* (Loomis)
- ▶ Sierra College Boulevard/Brace Road\* (Loomis)
- ▶ Sierra College Boulevard/Granite Drive\*
- ▶ Sierra College Boulevard/I-80 Westbound Ramp\*
- ▶ Sierra College Boulevard/I-80 Eastbound Ramp\*
- ▶ Sierra College Boulevard/Dominguez Road\* (Future Intersection)
- ▶ Sierra College Boulevard/Rocklin Road
- ▶ Horseshoe Bar Road/Taylor Road\* (Loomis)
- ▶ Horseshoe Bar Road/I-80 Westbound Ramp\* (Loomis)
- ▶ Horseshoe Bar Road/I-80 Eastbound Ramp\* (Loomis)
- ▶ Barton Road/Brace Road (Loomis)
- ▶ Barton Road/Rocklin Road (Loomis)
- ▶ Sierra College Boulevard/King Road (Loomis)
- ▶ Sierra College Boulevard/English Colony Way (Placer County)
- ▶ Taylor Road/King Road (Loomis)

The following roadway segments were included in the study area. Roadway segments located within 0.5 mile of direct access to an interstate freeway, where LOS D is considered satisfactory, are noted with an asterisk (\*).

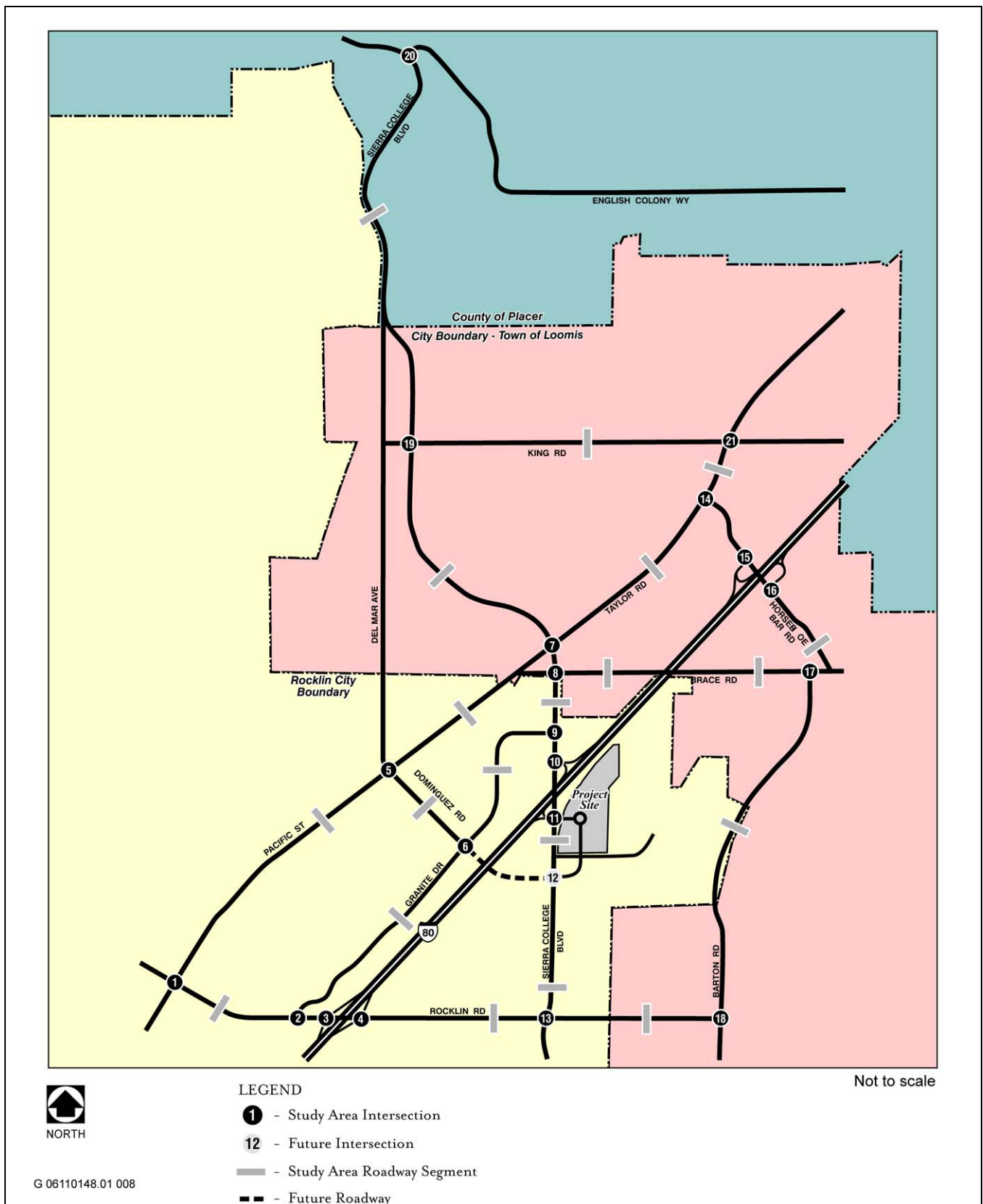
- ▶ Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- ▶ Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- ▶ Pacific Street between Sierra College Boulevard and Dominguez Road
- ▶ Pacific Street between Dominguez Road and Rocklin Road
- ▶ Rocklin Road between Pacific Street and Granite Drive \*
- ▶ Rocklin Road between I-80 and Sierra College Boulevard \*
- ▶ Rocklin Road between Sierra College Boulevard and Barton Road (Loomis)
- ▶ Barton Road between Rocklin Road and Brace Road (Loomis)
- ▶ Horseshoe Bar Road between I-80 and Brace Road \* (Loomis)
- ▶ Brace Road between I-80 and Barton Road (Loomis)
- ▶ Brace Road between I-80 and Sierra College Boulevard (Loomis)
- ▶ Sierra College Boulevard between English Colony Way and King Road (Placer County)
- ▶ Sierra College Boulevard between King Road and Taylor Road (Loomis)
- ▶ Sierra College Boulevard between Taylor Road and I-80 \*
- ▶ Sierra College Boulevard between I-80 and Dominguez Road \*
- ▶ Sierra College Boulevard between Dominguez Road and Rocklin Road
- ▶ Granite Drive between Dominguez Road and Sierra College Boulevard
- ▶ Granite Drive between Dominguez Road and Rocklin Road
- ▶ Dominguez Road between Taylor Road and Granite Drive
- ▶ King Road between Sierra College Boulevard and Taylor Road (Loomis)

In addition to the analysis of daily capacities, an analysis of the a.m. and p.m. peak-hour directional volumes, for both weekdays and Saturdays, is included for roadway segments to determine if a segment is forecast to operate beyond the LOS C or D threshold. The a.m. and p.m. peak-hour volume/capacity ratios were evaluated based on per-lane capacity of 1,650 vehicles per hour, consistent with the 2000 Highway Capacity Manual (HCM) methodology. The location of the study intersections and study roadway segments is illustrated in Exhibit 4.2-1.

## ROADWAY NETWORK

The existing intersection geometrics and traffic control at study area intersections are illustrated in Exhibit 4.2-2. The roadways that would provide access to the project are described below:

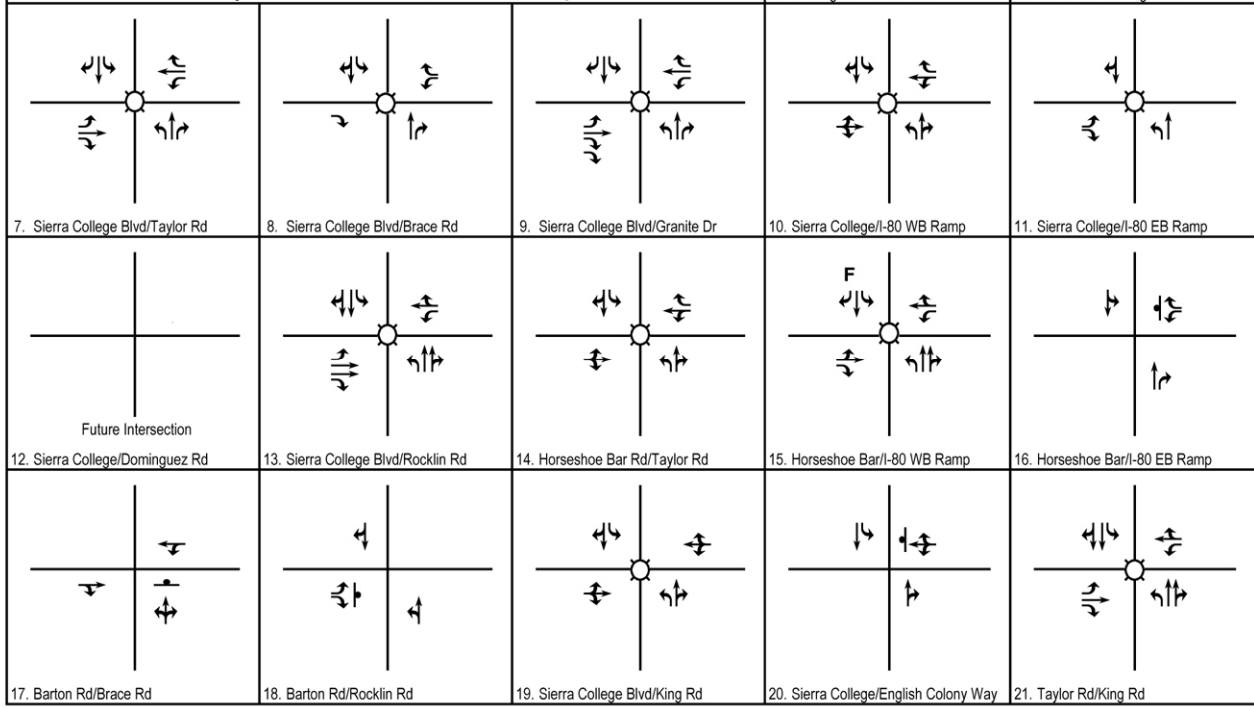
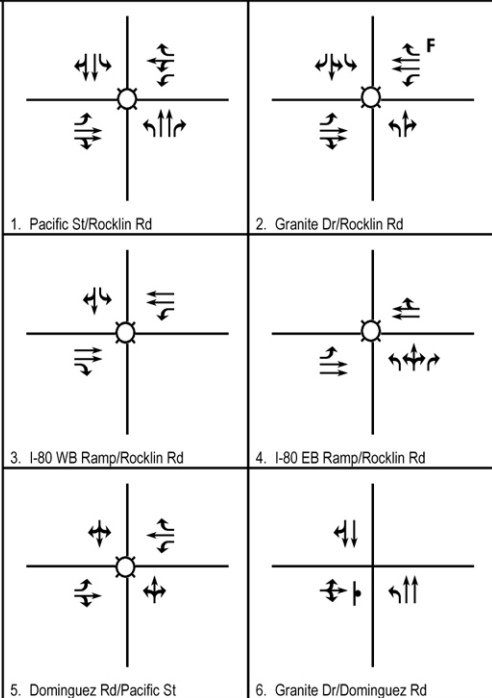
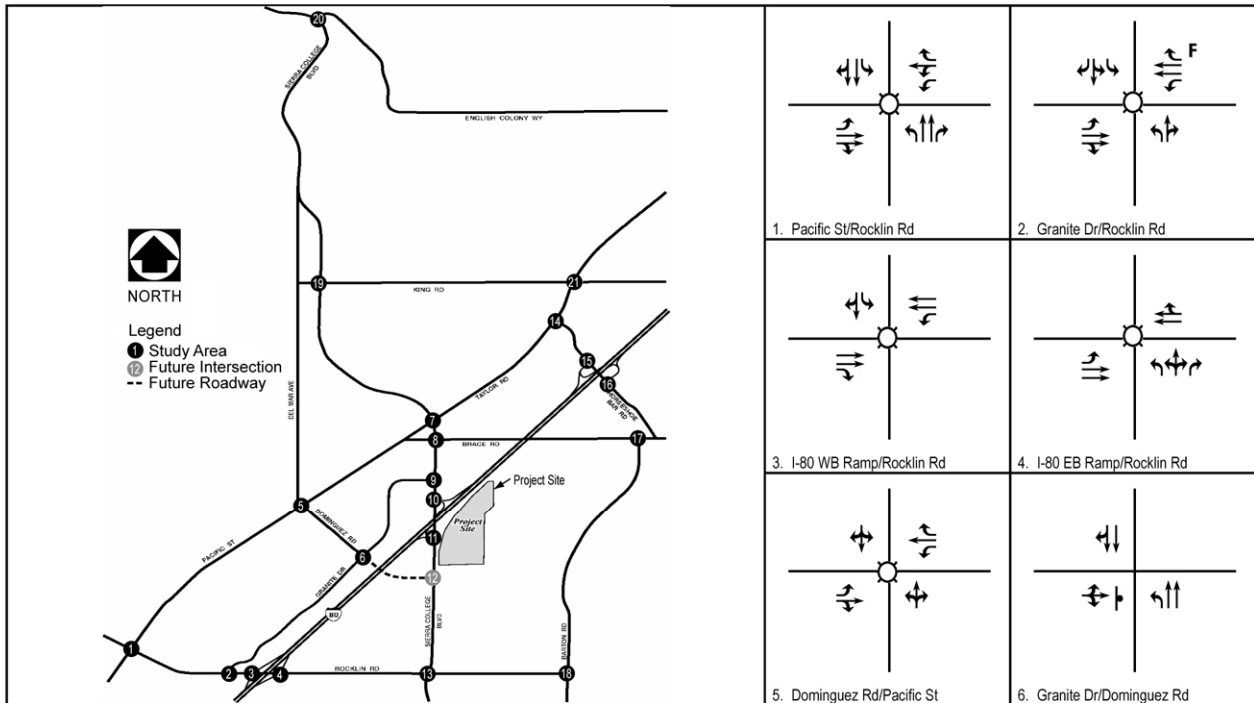
- ▶ **Interstate 80 (I-80).** I-80 is an interstate highway providing inter-regional access in the vicinity of the project. Throughout the study area, I-80 generally travels in a southwest to northeast direction. Interchanges along I-80 near the project site are provided at Rocklin Road, Sierra College Boulevard, and Horseshoe Bar Road. Direct access to the project site would be provided from the I-80 eastbound ramps at Sierra College Boulevard.
- ▶ **State Route 65 (SR-65).** SR-65 provides regional access near the vicinity of the project. SR-65 runs generally northwest from I-80 and joins SR-70 near the town of Marysville. Near the I-80 connector, SR-65 is a four-lane expressway with interchanges at N. Harding Boulevard/Stanford Ranch Road, Pleasant Grove Boulevard, and Blue Oaks Boulevard.
- ▶ **Pacific Street.** Pacific Street is a two-lane roadway located northwesterly of Granite Drive, a four-lane roadway from the southern City limits to Sierra Meadows Drive, and a two-lane roadway north of Sierra Meadows Drive. Pacific Street is classified as an Arterial in the City General Plan Circulation Element and is classified as a Truck Route by the City. This roadway provides travel throughout the entire City limits. Pacific Street becomes Taylor Road east of Sierra College Boulevard.



Source: LSA 2007

**Study Intersections and Roadway Segments**

**Exhibit 4.2-1**



Legend  
 ○ Signal  
 — Stop Sign  
 F Free Right Turn

G 06110148.01 009

Source: LSA 2007

**Existing Geometrics and Traffic Control**

**Exhibit 4.2-2**

- ▶ **Granite Drive.** Granite Drive is a four-lane southwest-northeast roadway located west of I-80. Granite Drive is classified as an Arterial in the City General Plan Circulation Element. Granite Drive runs from Rocklin Road in the south and terminates at Sierra College Boulevard just north of the project site. Granite Drive is classified as a Truck Route from Dominguez Road to Sierra College Boulevard.
- ▶ **Sierra College Boulevard.** Sierra College Boulevard is a north-south roadway that forms the western boundary of the project site. This roadway is classified as an Arterial roadway with an ultimate six-lane cross-section in the City's General Plan Circulation Element. Sierra College Boulevard is designated as a Truck Route by the City. Within the study area, Sierra College Boulevard is a two-lane roadway north of Rocklin Road and a four-lane roadway immediately south of Rocklin Road. Access to the project would be provided via three locations on Sierra College Boulevard.
- ▶ **Rocklin Road.** Rocklin Road is an east-west roadway located south of the project site. West of Sierra College Boulevard, Rocklin Road is a four-lane roadway. Immediately east of Sierra College Boulevard, there are two eastbound and one westbound travel lanes. Farther east, Rocklin Road becomes a two-lane roadway and terminates at Barton Road.
- ▶ **Dominguez Road.** Dominguez Road is classified as a Collector roadway on the City's General Plan. North of Pacific Street, Dominguez Road becomes Del Mar Avenue. Dominguez Road/Del Mar Avenue is currently a two-lane undivided roadway. Currently, Dominguez Road terminates at Granite Drive, west of I-80. Dominguez Road is planned to be extended across I-80 and would become the west leg of the southern project driveway. The Dominguez Road extension is included in the City's Traffic Impact Fee and Capital Improvement Program.
- ▶ **Brace Road.** Brace Road is a two-lane east-west roadway located north of the project site. This roadway is located within the City of Loomis.
- ▶ **Horseshoe Bar Road.** This roadway is located within the City of Loomis and provides access to I-80. Horseshoe Bar Road is a two-lane roadway running in a northwest-southeast direction and is located north of the project site.

## EXISTING TRAFFIC VOLUMES

Existing traffic counts at the 21 study intersections were collected in October 2006 (a.m. and p.m. peak hours) and September 2006 (Saturday peak hour). The traffic counts are provided in Appendix C (identified as Appendix A within Appendix C). With the exception of the Saturday peak hour, these counts were taken during a nonholiday period when schools were in session and therefore include the traffic generated by Sierra College and all schools within the study area. The existing a.m. and p.m. peak-hour and Saturday peak-hour traffic volumes are illustrated in Exhibits 4.2-3 and 4.2-4.

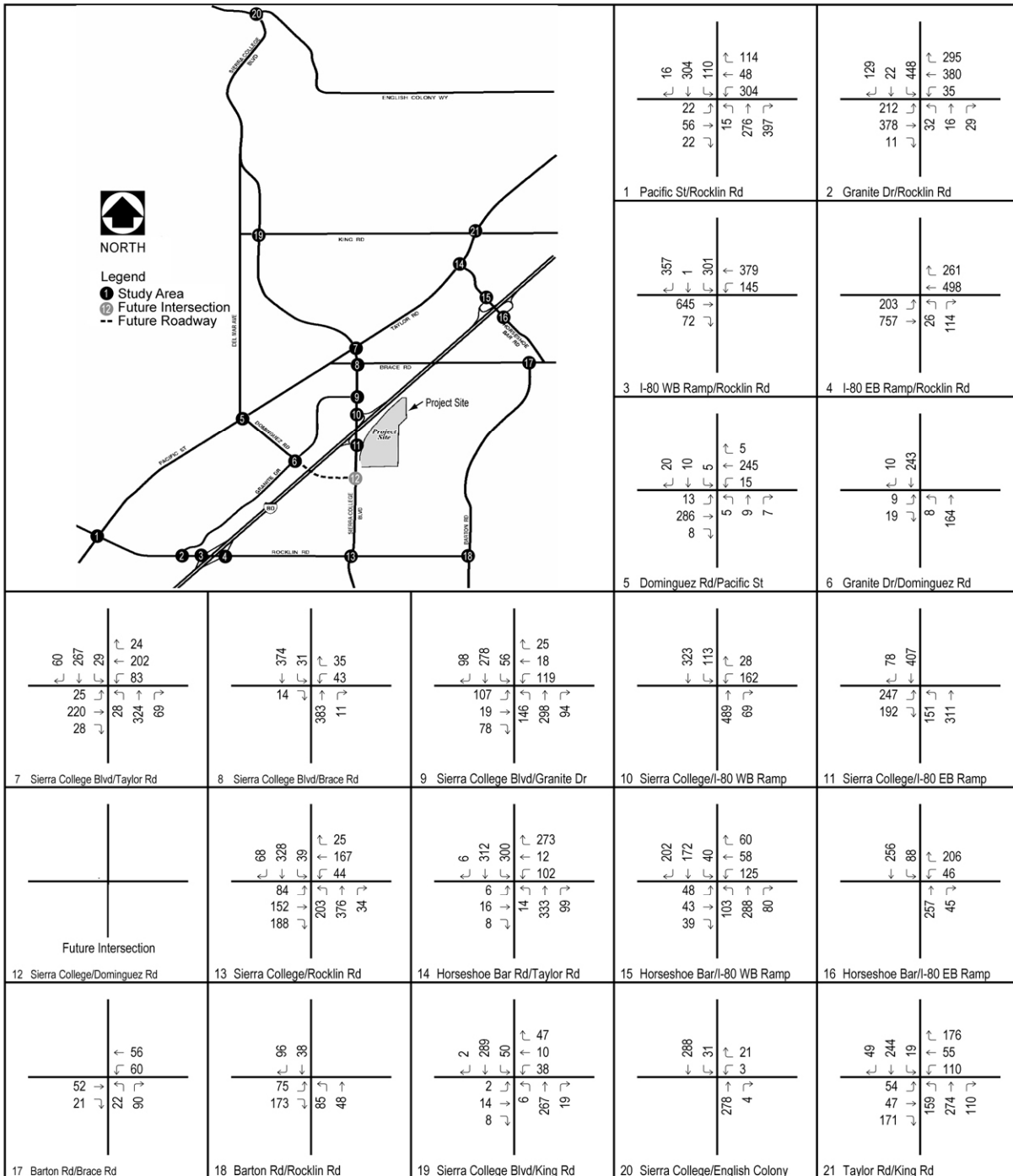
## EXISTING LEVELS OF SERVICE

Levels of service at study area intersections and roadway segments were calculated for the existing conditions and are summarized in Tables 4.2-1 and 4.2-2. The existing LOS worksheets are provided in Appendix C (identified as Appendix B within Appendix C).

As shown in Table 4.2-1, the following two intersections are operating at an unsatisfactory LOS in the existing condition.

- ▶ Sierra College Boulevard/I-80 eastbound ramp
- ▶ Taylor Road/Horseshoe Bar Road





G 06110148.01 011

Source: LSA 2007

**Existing Saturday Peak Hour Traffic Volumes**

**Exhibit 4.2-4**

**Table 4.2-1  
Existing Peak Hour Intersection Levels of Service**

Intersection		Existing Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street <sup>1</sup>	0.734	C	0.709	C	0.453	A
2	Rocklin Road/Granite Drive	0.389	A	0.637	B	0.452	A
3	Rocklin Road/I-80 Westbound Ramps	0.663	B	0.834	D	0.534	A
4	Rocklin Road/I-80 Eastbound Ramps	0.716	C	0.757	C	0.433	A
5	Dominguez Road/Pacific Street <sup>1</sup>	0.391	A	0.454	A	0.230	A
6	Dominguez Road/Granite Drive <sup>1</sup>	11.7 sec	B	11.9 sec	B	9.9 sec	A
7	Sierra College Boulevard/Taylor Road (Loomis)	0.614	B	0.728	C	0.423	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.440	A	0.522	A	0.295	A
9	Sierra College Boulevard/Granite Drive	0.521	A	0.534	A	0.384	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.740	C	0.747	C	0.575	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.892	D	0.970	E	0.639	B
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road <sup>1</sup>	0.591	A	0.660	B	0.443	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.837	D	0.998	E	0.626	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.392	A	0.369	A	0.310	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.0 sec	C	12.1 sec	B
17	Barton Road/Brace Road <sup>1</sup> (Loomis)	16.1 sec	C	15.0 sec	C	9.5 sec	A
18	Barton Road/Rocklin Road <sup>1</sup> (Loomis)	15.6 sec	C	10.9 sec	B	10.2 sec	B
19	Sierra College Boulevard/King Road 1 (Loomis)	0.390	A	0.465	A	0.301	A
20	Sierra College Boulevard/English Colony Way <sup>1</sup> (Placer County)	10.9 sec	B	13.4 sec	B	10.5 sec	B
21	Taylor Road/King Road <sup>1</sup> (Loomis)	0.600	A	0.602	B	0.407	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

<sup>1</sup> LOS C required for these intersections. LOS D acceptable for all other intersections.

Exceeds level of service criteria

As shown in Table 4.2-2, all but three roadway segments currently operate with satisfactory LOS, per applicable guidelines. The following roadway segments are currently operating at unsatisfactory LOS:

- ▶ Taylor Road between King Road and Horseshoe Bar Road
- ▶ Sierra College Boulevard between Taylor Road and I-80
- ▶ Sierra College Boulevard between Dominguez Road and Rocklin Road



**4.2-2  
Existing Daily Roadway Segment Level of Service Summary**

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	17,060	1.14	F	11,370	0.76	C
	Horseshoe Bar Road and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	10,673	0.71	B	3,500	0.23	A
Pacific Street	Sierra College Boulevard and Dominguez Road <sup>1</sup>	Two-lane Collector	15,000	11,578	0.77	C	5,880	0.39	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	15,889	0.53	A	6,820	0.23	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	21,211	0.71	B	11,040	0.37	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	9,989	0.33	A	13,090	0.44	A
	Sierra College Boulevard and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	5,176	0.35	A	4,060	0.27	A
Barton Road	Rocklin Road and Brace Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	3,354	0.22	A	2,040	0.14	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,101	0.41	A	6,460	0.43	A
Brace Road	I-80 and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	4,006	0.27	A	1,940	0.13	A
	I-80 and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road <sup>1</sup> (Placer County)	Two-lane Collector	15,000	9,600	0.64	B	6,570	0.44	A
	King Road and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	10,560	0.70	B	7,080	0.47	A
	Taylor Road and I-80	Two-lane Collector	15,000	17,566	1.17	F	8,610	0.57	A
	I-80 and Dominguez Road	Two-lane Collector	15,000	13,275	0.88	D	10,400	0.69	B
	Dominguez Road and Rocklin Road <sup>1</sup>	Two-lane Collector	15,000	13,275	0.88	D	10,840	0.72	C
Granite Drive	Dominguez Road and Sierra College Boulevard <sup>1</sup>	Four-lane Undivided Arterial	30,000	6,178	0.21	A	4,350	0.15	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	8,258	0.28	A	7,850	0.26	A
Dominguez Road	Taylor Road and Granite Drive <sup>1</sup>	Two-lane Collector	15,000	2,382	0.16	A	510	0.03	A
King Road	Sierra College Boulevard and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:  
<sup>1</sup> LOS C required for these segments. LOS D acceptable for all other segments.

Exceeds level of service criteria

## EXISTING SIERRA COLLEGE BOULEVARD/I-80 INTERCHANGE RECONSTRUCTION PROJECT

The construction of the Sierra College Boulevard/I-80 interchange reconstruction project is underway and it is anticipated that it will be completed prior to the opening of the proposed project. The interchange reconstruction project is currently anticipated to be completed in the summer or fall of 2008. Although this interchange reconstruction project is not part of the proposed project, it will directly affect access to the project site. The Sierra College Boulevard/I-80 interchange project includes the following improvements:

- ▶ Reconstruct the I-80 eastbound off-ramp/Sierra College Boulevard intersection approximately 269 feet south of its present location from centerline to centerline. Provide for a separate westbound right turn with direct connector to the eastbound on-ramp.
- ▶ Reconstruct the I-80 westbound off-ramp/Sierra College Boulevard intersection approximately 230 feet north of its present location from centerline to centerline.
- ▶ Intersections would be signalized and would operate in multi-phases.
- ▶ Provide a third northbound through lane on the Sierra College Boulevard segment between the I-80 westbound off-ramp intersection and Granite Drive. With this improvement, the northbound approach at the Sierra College Boulevard/Granite Drive intersection would have one left-turn lane, two through lanes, and one shared through-right turn lane.
- ▶ Provide an exclusive eastbound right-turn lane at the I-80 eastbound off-ramp approach to Sierra College Boulevard. With this improvement, the eastbound off-ramp approach at the Sierra College Boulevard/I-80 eastbound ramps intersection would have two left-turn lanes, two through lanes, and one right-turn lane.
- ▶ Reconstruct the Sierra College Boulevard overcrossing of I-80 to provide for a new 5-lane overcrossing structure (two southbound lanes and three northbound lanes).
- ▶ Widen the inside shoulders on I-80 (both directions of travel) at the new overcrossing to provide 9.8-foot shoulders to the Type 50E Barrier facing the new structure's median columns. This improvement requires shifting the freeway mainline 2.7 feet away from the inside shoulders (both directions of travel) and widening the mainline on the outside for a distance of approximately 1,312 feet.
- ▶ Reconstruct both the eastbound and westbound hook on-ramps to I-80 so the ramps would be a free right turn configuration.
- ▶ Construct new eastbound and new westbound Sierra College Boulevard direct connecting on-ramps to I-80. Relocate the park-and-ride lot. (See *Sierra College Boulevard/Interstate 80 Interchange Improvement Project Draft EIS/EA*, pp. v, xxvii.)

The main access into the proposed project will be constructed as part of the Sierra College Boulevard interchange project and dedicated as a City right-of-way. Following completion of the interchange reconstruction, three access locations would be available for the proposed project from Sierra College Boulevard. The northernmost project access would form the east leg of the Interstate 80 eastbound/Sierra College Boulevard ramp currently under construction. This access would provide the main entrance to the project site. The middle access would provide right turns into and out of the project only from the southern boundary road. The southernmost access point would align with the future extension of Dominguez Road over Interstate 80. This southernmost road is being constructed as an access roadway for the approved Croftwood Subdivision development located southeast of the project site and west of Barton Road. The proposed project would connect to this access roadway, which is to be constructed as part of the Croftwood Subdivision project improvements. This access roadway is planned to be completed prior to project implementation.

## 4.2.2 REGULATORY SETTING

### CITY OF ROCKLIN GENERAL PLAN

The Circulation Element of the City of Rocklin General Plan (1991) includes the following relevant goal and policies related to traffic and circulation.

**Goal:** To provide and maintain a safe and efficient system of streets, highways, and public transportation to meet community needs and promote sound land use.

- ▶ **Policy 1.** To maintain existing streets in a safe condition and require that new streets be built to City standards.
- ▶ **Policy 2.** To ensure that streets and highways will be available to serve new development by requiring detailed traffic studies as a part of all major development proposals.
- ▶ **Policy 6.** To promote pedestrian convenience through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers.
- ▶ **Policy 7.** To require landscaping and tree planting along major new streets and highways, and along existing streets as appropriate.
- ▶ **Policy 8.** To encourage a variety of building sites, building types, and land use treatments along major streets and highways.
- ▶ **Policy 10.** To promote the use of public transit through development conditions requiring park-and-ride lots, bus turnouts and passenger shelters along major streets.
- ▶ **Policy 11.** To enforce the transportation system management requirements of the existing ridesharing ordinance.
- ▶ **Policy 13.** To maintain a minimum traffic level of service “C” for all streets and intersections, except for intersections located within ½ mile from direct access to an interstate freeway where a level of service “D” will be acceptable. Exceptions may be made for peak hour traffic where not all movements exceed the acceptable level of service.

### CITY OF ROCKLIN CAPITAL IMPROVEMENT PROGRAM

The City’s Traffic Impact Fee and Capital Improvement Program (CIP) defines the roadway and intersection improvements needed to maintain the Level of Service (LOS) policy adopted in the City’s General Plan. (See Rocklin General Plan Circulation Element, Policy 13.) The City regularly monitors traffic on City streets to include in the City’s CIP those improvements needed to maintain an acceptable LOS through the use of traffic fees and other financing mechanisms. The City updated its CIP and traffic impact fees in 2005, and extended the horizon year for the CIP from 2020 to 2025.

On May 22, 2007, the Rocklin City Council adopted Resolution No. 2007-126, increasing the Citywide traffic impact fee based on increased construction costs for all developments within the City. In conjunction with this fee increase, the City also updated its CIP. The updated CIP includes the following improvements in the vicinity of the proposed project:

- ▶ Widen Rocklin Road to 4-lanes from the Loomis Town limits to east of Sierra College Boulevard;
- ▶ Widen Rocklin Road to 6-lanes (add 2 lanes) from west of Sierra College Boulevard to I-80 eastbound ramps;

- ▶ Widen Rocklin Road to 6-lanes from I-80 westbound ramps to west of Granite Drive;
- ▶ Widen Sierra College Boulevard to 6-lanes (add 2 lanes) from Nightwatch Drive to Aguilar Tributary;
- ▶ Construct a 2-lane extension with bridge over I-80 on Dominguez Road from Granite Drive to Sierra College Boulevard; and
- ▶ Reconstruct the Rocklin Road/I-80 interchange.

## **SOUTH PLACER REGIONAL TRANSPORTATION AUTHORITY**

In January 2002, the cities of Rocklin, Roseville, Lincoln, the County of Placer, and the Placer County Transportation and Planning Agency entered into a Joint Powers Authority (JPA) known as the South Placer Regional Transportation Authority (SPRTA). The JPA was formed for the purpose of implementing a regional transportation and air quality mitigation fee to fund specified regional transportation projects (SPRTA 2007). These improvements include:

- ▶ Sierra College Boulevard from SR-193 to the south Placer County line;
- ▶ SR-65 Lincoln Bypass;
- ▶ Douglas Boulevard/Interstate 80 Interchange;
- ▶ Placer Parkway; and
- ▶ Transit Passenger Rail Improvements (Raney Planning & Management, Inc. 2006).

The estimated completion date for the above projects will be established after the JPA board of directors establishes their respective priorities. In general, the improvements are expected to be made during the next several years, but the timing of these roadway and transit system projects is ultimately dependent on the collection of the fees necessary to fund them (Raney Planning & Management, Inc. 2006).

Because Sierra College Boulevard would serve as a primary transportation link to the Rocklin Crossings project, the improvements related to this roadway included in the JPA are described below:

Sierra College Boulevard is a major north-south arterial that provides a link from State Route 193 in Lincoln to Interstate 80 in Rocklin and on to the Sacramento County line. Sierra College Boulevard traverses Lincoln, unincorporated Placer County, Loomis, Rocklin, and Roseville. The improvements to Sierra College Boulevard would consist of widening the roadway to four or six lanes from State Route 193 to the Sacramento County line, excluding improvements to the interchange at Interstate 80, which will be funded by a combination of Rocklin and state funds.

The Sierra College Boulevard segments to be funded or credited by the fee program include:

- ▶ Segment 1 - from State Route 193 to the northern city limits of the City of Rocklin. This segment would consist of a four-lane facility.
- ▶ Segment 2a - from the northern city limits of the City of Rocklin to the northern boundary of the Town of Loomis. This facility would also be built to four lanes.
- ▶ Segment 5 - Interstate 80 to Rocklin Road. This segment would consist of six lanes.
- ▶ Segment 6 - Rocklin Road to the southern city limits of the City of Rocklin. This segment would consist of six lanes (Raney Planning & Management, Inc. 2006).

The creation of SPRTA resulted in the establishment of an impact fee schedule for new development in the participating jurisdictions. In the past, the primary source of funding for regional transportation projects in Placer

County has been the State Transportation Improvement Program (STIP), which typically falls short of financing current project needs throughout the county. In addition, several jurisdictions in Placer County currently have some form of development fees for local transportation projects, but the County has not had a mechanism to fund large scale or multi-jurisdictional projects. Therefore, with the creation of SPRTA and a list of transportation improvements identified in the JPA, as well as the regional transportation impact fee schedule, the necessary funding for construction of regional improvements (including improvements to Sierra College Boulevard) has been ensured (Raney Planning & Management, Inc. 2006).

### **4.2.3 IMPACTS AND MITIGATION MEASURES**

#### **METHOD OF ANALYSIS**

The traffic impact analysis is based on intersection levels of service for the following scenarios:

- ▶ Existing
- ▶ Existing plus Project
- ▶ Existing plus Approved Projects (Baseline)
- ▶ Existing plus Approved Projects (Baseline) plus Project

The traffic analysis described below includes the a.m. and p.m. peak hour analysis required by the City. Although typically not required by the City, the traffic analysis evaluates the project's potential impact for a Saturday peak hour scenario. This analysis was performed to determine whether the proposed project would have impacts during the Saturday peak hour that were more significant than those identified for the weekday a.m. and p.m. peak hour scenarios. Based on this analysis, there were no instances where traffic impacts during the Saturday peak hour exceeded the traffic impacts identified for the weekday a.m. and p.m. peak hour scenarios, and as such, any mitigation measures required for the weekday a.m. and p.m. peak hour impacts would also mitigate Saturday peak hour impacts.

#### **Intersection LOS Methodology**

*Traffix* computer software was utilized to determine the levels of service (LOS) at signalized and unsignalized study area intersections based on the Circular 212 "Critical Movement Analysis" (CMA) planning methodology and HCM 2000 Methodology, respectively. This methodology is approved by the City and is consistent with the method used for previous traffic impact analyses prepared for projects in the City.

The CMA methodology compares the amount of traffic an intersection is able to process (capacity) to the level of traffic during peak hours (volume). The resulting volume-to-capacity ratio (v/c) is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. The CMA methodology provides a planning level assessment of the traffic volume at an intersection and is used by many cities and agencies within California for the purposes of traffic impact analysis. In addition to the City of Rocklin, some of the cities and agencies that utilize the Circular 212 CMA methodology include West Sacramento, Fairfield, Roseville, Union City, San Carlos, the Contra Costa Transportation Authority, and the City/County Associations of Governments of San Mateo County. In addition, a number of agencies throughout the state utilize the Intersection Capacity Utilization (ICU) methodology, which is similar to the Circular 212 CMA methodology but does not take into account the effects of signal phasing on the LOS. Utilization of a methodology that calculates v/c ratio has proven to be an accurate method of disclosing traffic impacts of development projects.

LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, and signal phasing on roadway and intersection operations. LOS criteria for signalized intersections are presented below.

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained, no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods due to the congestion. In the extreme case, speed can drop to zero.

The relationship between LOS and the volume/capacity ratio for signalized intersections is as follows:

Level of Service	Volume to Capacity (CMA Methodology)
A	< 0.600
B	0.610–0.700
C	0.710–0.800
D	0.810–0.900
E	0.910–1.000
F	> 1.000

Because the CMA methodology does not provide an accurate representation of the LOS of an unsignalized intersection, the 2000 Highway Capacity Manual (HCM) methodology has been used to determine intersection levels of service at unsignalized intersections. For the unsignalized HCM methodology, the LOS is presented in terms of total intersection delay (at four-way stop intersections) and approach delay of the major and minor streets (at two-way stop intersections) in seconds per vehicle. The relationship of delay and LOS at unsignalized intersections is summarized below.

Level of Service	Unsignalized Intersection Delay per Vehicle (sec)
A	<10.0
B	>10.0 and <15.0
C	>15.0 and <25.0
D	>25.0 and <35.0
E	>35.0 and <50.0
F	>50.0

The HCM methodology has also been used to determine LOS at the Caltrans controlled signalized I-80/Sierra College Boulevard freeway ramp intersections with Sierra College Boulevard. The HCM method is used by Caltrans for intersections it controls. The HCM analysis at the interchange ramp intersections is provided for purposes of comparison to the LOS analysis presented in the Caltrans Environmental Document and supporting focused interchange Traffic Study conducted in January 2003.

## Roadway Level of Service Methodology

Roadway segment analysis in the project area was also conducted as part of this traffic study. To identify the project's impact on the operating condition of a roadway segment, an LOS ranking scale was used. The LOS is based on average daily traffic (ADT) roadway segment threshold capacities as presented below.

LOS	Roadway Segment Capacities: Two-Way Average Daily Traffic Volumes						
	Two-Lane Collector	Four-Lane Undivided Arterial	Four-Lane Divided Arterial	Four-Lane Restricted Access Arterial	Six-Lane Divided Arterial	Six-Lane Restricted Access Arterial	Four-Lane Freeway
A	9,000	18,000	20,250	21,600	30,315	30,315	37,600
B	10,700	21,300	23,625	25,200	36,000	36,000	52,800
C	12,000	24,000	27,000	28,800	40,500	40,500	68,000
D	13,500	27,000	30,375	32,400	45,560	45,560	76,000
E	15,000	30,000	33,750	36,000	50,525	50,525	80,000

The LOS E capacity shown in the above table represents an approximation of the number of vehicles that the roadway can comfortably carry on a daily basis before it is considered to be at capacity. If the ADT on a roadway segment exceeds the LOS E capacity, then the daily LOS of the roadway is considered to be LOS F. It is important to note that an ADT capacity must assume several critical characteristics of traffic, including the percentage of daily traffic in the peak hour and the directional split within that peak hour. Actual characteristics of a specific roadway can significantly influence the daily capacity as described below. To calculate the daily LOS for each roadway segment, the ADT on each segment was divided by the capacity of the segment (the LOS E capacity as shown in the above table) to determine the daily v/c ratio for each roadway. The v/c ratio was compared to the values in the table below to determine the daily LOS for each roadway segment.

Level of Service	Volume to Capacity Ratio
A	< 0.600
B	0.610–0.700
C	0.710–0.800
D	0.810–0.900
E	0.910–1.000
F	> 1.000

The daily LOS, as described above, is a planning-level threshold that is generally used to determine the overall cross-sections of roadways within a circulation network. While it can provide an indication of whether the existing or forecast volume might result in unsatisfactory operation of the roadway, it does not provide an accurate representation of the actual operation of the roadway, especially during the peak hours of the day. For purposes of this project impact analysis, the daily capacity was first examined to determine whether the roadway might exceed its theoretical daily capacity. If the roadway volume exceeded the daily capacity (v/c greater than 1.00), then the peak-hour v/c ratio was calculated. If the peak-hour capacity is also exceeded, the roadway segment is considered to be operating at an unsatisfactory LOS. Although the roadway segment may seem to be operating with unsatisfactory LOS when the daily volume is examined, it is not considered unsatisfactory LOS if the peak-hour traffic volumes does not exceed the capacity. This is because traffic along a roadway segment will be greatest during the peak commute hours. As a result, if traffic operations are satisfactory during the peak hour, when traffic volumes are highest, then the segment will also operate at satisfactory LOS during the remaining off-peak hours of the day.

## THRESHOLDS OF SIGNIFICANCE

Policy 13 of the City of Rocklin General Plan Circulation Element states that the City strives “to maintain a minimum traffic level of service “C” for all streets and intersections, except for intersections located within ½ mile from direct access to an interstate freeway where a level of service “D” will be acceptable.” Policy 13 further provides that “[e]xceptions may be made for peak hour traffic where not all movements exceed the acceptable level of service.” Mitigation is required for any intersection or roadway segment where project traffic causes the intersection to deteriorate from satisfactory to unsatisfactory operation.

Based on the City’s significance threshold, if an intersection or roadway segment is already operating at an unsatisfactory level of service, an increase of 5 percent (addition of 0.05) to the v/c ratio would constitute a significant project impact. An increase of 0.05 in the v/c ratio would be considered a measurable worsening of the intersection or roadway operations and therefore would constitute a significant project impact. If an unsignalized intersection is already operating at unsatisfactory LOS D (LOS E within 0.5 mile of freeway access), then the addition of more than 5 percent of the total traffic at the intersection would be considered a significant project impact. The City has determined, based on the expert opinions of the City’s traffic consultants and the City’s traffic engineering staff, that a 5 percent threshold is appropriate in determining that a measurable adverse change has occurred to an intersection. This threshold applies even where project traffic will be added to existing or projected conditions that are already unacceptable or are projected to be unacceptable under cumulative conditions even without the project.

The City does not subscribe to the notion that, where existing conditions or projected cumulative condition are already bad or will be bad even without the project, *any* additional traffic from the project represents a significant impact or a cumulatively considerable contribution to a significant cumulative impact. The City’s rejection of this notion reflects the nature of traffic impacts, compared with other categories of environmental impact, which often involve public health or ecological concerns. Worsened congestion might cause irritation or inconvenience to people, but not any adverse effects on public health or ecosystems. Thus, while the addition of relatively small amounts of air pollution in a polluted air basin might worsen the adverse health effects of air pollution, no similar health effects result from additional congestion. Similarly, while the loss of relatively small amounts of the habitat of an endangered or threatened species might cause ecological consequences of note, worsened congestion has no such consequences to biological resources. In fact, “mitigation” for traffic impacts often has its own adverse consequences on biological resources (i.e., road widenings often wipe out habitat areas). In short, the City does not believe that a “one car” threshold of significance for impacts on already-congested transportation facilities is either practical or desirable from a policy standpoint. Nor is such an approach mandated by CEQA or CEQA case law. While the 0.05 threshold, by allowing small amounts of traffic without triggering additional mitigation, might require drivers to endure minor additional delays during peak periods, this purely human inconvenience is not, in the City’s view, a “significant effect on the environment.”

The Town of Loomis General Plan Circulation Element (2001) includes the following level of service policy:

In order to minimize congestion, maintain Level of Service C on all roads and intersections within the Town of Loomis. Level of Service D may be allowed in conjunction with development approved within the Town as an exception to this standard, at the intersections of King and Taylor, Horseshoe Bar Road and Taylor, Horseshoe Bar Road and Interstate 80, Sierra College and Brace Road, and Webb and Taylor, when:

1. The deficiency is substantially caused by “through” traffic, which neither begins nor ends in Loomis, and is primarily generated by non-residents; or
2. The deficiency will be temporary (less than three years), and a fully-funded plan is in place to provide the improvements needed to remedy the substandard condition.



The Environmental Impact Report prepared for the Town of Loomis General Plan further clarifies these thresholds by identifying an increase of 5 percent (addition of 0.05) to the v/c ratio for roadway segments as a significant project impact.

The Town of Loomis was contacted to clarify the significance criteria that should be applied to intersections that currently operate in excess of the Town's LOS C threshold. Town staff requested that the same significance criteria be applied to Loomis intersections as applied in the City of Rocklin. Therefore, consistent with the Town's approach for roadway segments and the City of Rocklin's intersection significance thresholds, if an intersection in the Town of Loomis is already operating at an unsatisfactory level of service, an increase of 5 percent (addition of 0.05) or more to the v/c ratio would constitute a significant project impact.

The California Department of Transportation assumes that project traffic increases that cause the freeway level of service to deteriorate beyond LOS E are significant.

Based on Appendix G of the CEQA Guidelines, the City has determined that a project would result in a significant effect on the environment if it would:

- ▶ Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- ▶ Exceed, either individually or cumulatively, a level of service (LOS) standard established by the City, the Town of Loomis, or the California Department of Transportation;
- ▶ Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;
- ▶ Result in inadequate emergency access;
- ▶ Result in inadequate parking capacity; or
- ▶ Conflict with adopted policies, plans, or program supporting alternative transportation (e.g., bus turnouts, bicycle racks).

## **PROJECT TRIP GENERATION AND DISTRIBUTION**

An estimation of the number of vehicle trips was generated for the site using the trip rates from the Institute of Transportation Engineers (ITE) Trip Generation, 7th Edition, and the article, "Trip Generation Characteristics of Free-Standing Discount Superstores," ITE Journal, August 2006. The project trip generation is shown in Table 4.2-3. As indicated in the table, the project is forecast to generate 18,788 daily trips, 617 a.m. peak-hour trips, 1,914 p.m. peak-hour trips, and 2,280 Saturday peak-hour trips.

As explained above, although Trip Generation, 7th Edition, is the industry-recognized source of trip generation information, this study departs from the approach employed in the ITE manual in one respect because of a study conducted of trips generated by superstores, the results of which were published in the August 2006 ITE Journal. This article proposes a higher trip generation rate for superstores than the one used in the ITE manual. Due to existence of an ongoing debate in some quarters about trip generation rates associated with Wal-Mart Supercenters, this analysis employs a conservative approach that assumes the higher trip generation rate in the ITE Journal article. This approach was taken even though the high trip generation rate posited by the ITE Journal article is based on very conservative assumptions and factors that may not apply to the proposed project.

**Table 4.2-3  
Rocklin Crossings Trip Generation**

Land Use	Size	Units	ADT	A.M. Peak Hour			P.M. Peak Hour			Saturday		
				In	Out	Total	In	Out	Total	In	Out	Total
Discount Superstore	231.353	TSF										
Trip Rate <sup>1</sup>			49.21	0.94	0.90	1.84	2.75	2.75	5.50	2.56	2.45	5.01
Trip Generation			11,385	217	209	426	636	636	1,272	591	568	1,159
Home Improvement Store <sup>2</sup>	141.038	TSF										
Trip Rate <sup>3</sup>			29.80	0.65	0.55	1.20	1.15	1.30	2.45	2.86	2.54	5.40
Trip Generation			3,065	67	57	123	118	134	252	294	261	555
Shopping Center	171.109	TSF										
Trip Rate <sup>4,5</sup>			37.55	0.49	0.31	0.80	1.69	1.83	3.52	2.49	2.30	4.79
Trip Generation			6,425	83	53	136	289	313	602	426	393	819
Total Site Gross Trips			20,875	367	318	685	1,044	1,083	2,127	1,311	1,222	2,533
Total Site Pass-by Trips <sup>6</sup>	10.0%		-2088	-37	-32	-69	-104	-108	-213	-131	-122	-253
Total Site Trip Generation	543.500	TSF	18,788	330	287	617	939	975	1,914	1,180	1,100	2,280

Note: volumes shown rounded to nearest integer  
1 Trip generation based on rates documented in Trip Generation Characteristics of Free-Standing Discount Superstores, ITE Journal, August 2006.  
2 Trip generation of Home Improvement Store does not include garden center (34,760 sq. ft) and vestibules (3,411 sq. ft) per description of land use in ITE Trip Generation (7th Edition).  
3 Trip generation based on rates for Land Use 862 - Home Improvement Superstore from ITE Trip Generation (7th Edition)  
4 Average rate derived from total site generation (543.5 TSF) using fitted curve equations for Land Use 820 - Shopping Center from ITE Trip Generation (7th Edition)  
5 ADT:  $\ln(T) = 0.65 \ln(X) + 5.83$ ; AM:  $\ln(T) = 0.60 \ln(X) + 2.29$ ; PM:  $\ln(T) = 0.66 \ln(X) + 3.40$ ; Saturday:  $\ln(T) = 0.63 \ln(T) + 6.23$   
6 Pass-by trip percentages from ITE Trip Generation Handbook, 2004 vary between 28% and 48% for various land uses.  
However, a 10% estimate has been used as a conservative average pass-by trip reduction rate for the entire retail center.  
TSF = Thousand square feet

Specifically, the ITE Journal article focused on a small sample of five Wal-Mart Supercenters in Texas and Oklahoma, and found that p.m. trip generation for the five stores ranges from 4.16 to 6.67, with an average of 5.5 trips per 1,000 square feet (compared to the Trip Generation p.m. peak-hour trip generation rate of 3.87 per thousand square feet employed in the ITE manual). There are at least three reasons why this result may not be immediately applicable to the proposed project. First, the sample stores are located in Texas and Oklahoma and do not necessarily reflect conditions in Northern California. Demographics, proximity to the stores, and other factors assumed in the ITE Journal Study have not been demonstrated to be the same as in Northern California. In contrast, information contained in Trip Generation, 7th edition, is comprised of a blend of locations throughout the U.S., including California. Second, the survey data are incomplete and did not include information regarding a.m. peak or daily trip characteristics. Third, the average rate of the sample stores has not been officially accepted by ITE as the rate that should be applied to discount supercenters from now on; and given the small sample size used for the ITE Journal article, the rate recommended in the article may not be widely accepted as reliable until additional survey information becomes available. If the five-store Texas/Oklahoma data were officially accepted and incorporated into the existing ITE manual data for Free Standing Discount Superstore, the data would be added to the existing data points from the previous field studies, with a new average derived from the augmented data set. The resulting average might well yield a trip generation rate considerably lower than the article found to occur in Texas and Oklahoma.

It should be noted that the trip rates contained in Trip Generation, 7th Edition, for Home Improvement Store include the vehicle trips generated by an adjacent garden center. Calculation of trip generation involves taking the product of the trip generation rate (from ITE) and the square footage of the Home Improvement Store building only, not including the garden center. As noted in the description of the land use code for Home Improvement Store, the garden center should not be included in the building's overall gross floor area for the purpose of calculating the vehicle trip generation. The vehicle trip generation shown in Table 4.2-3 for the home

improvement store is based on the floor area without the garden center. However, trips generated by the garden center are still included in the trip generation because they are inherent in the trip rate per thousand square feet.

For further clarification the ITE trip rate are calculated as follows:

- ▶ All trips coming into and out of the Home Improvement Store and the garden center are counted.
- ▶ These trips are then divided by the building square footage (in thousand square feet) only, deducting the garden center.
- ▶ The resultant trips per thousand square feet are the trip generation factors; while the factor is only applied to the building square footage, it does reflect the trips generated by the garden center.

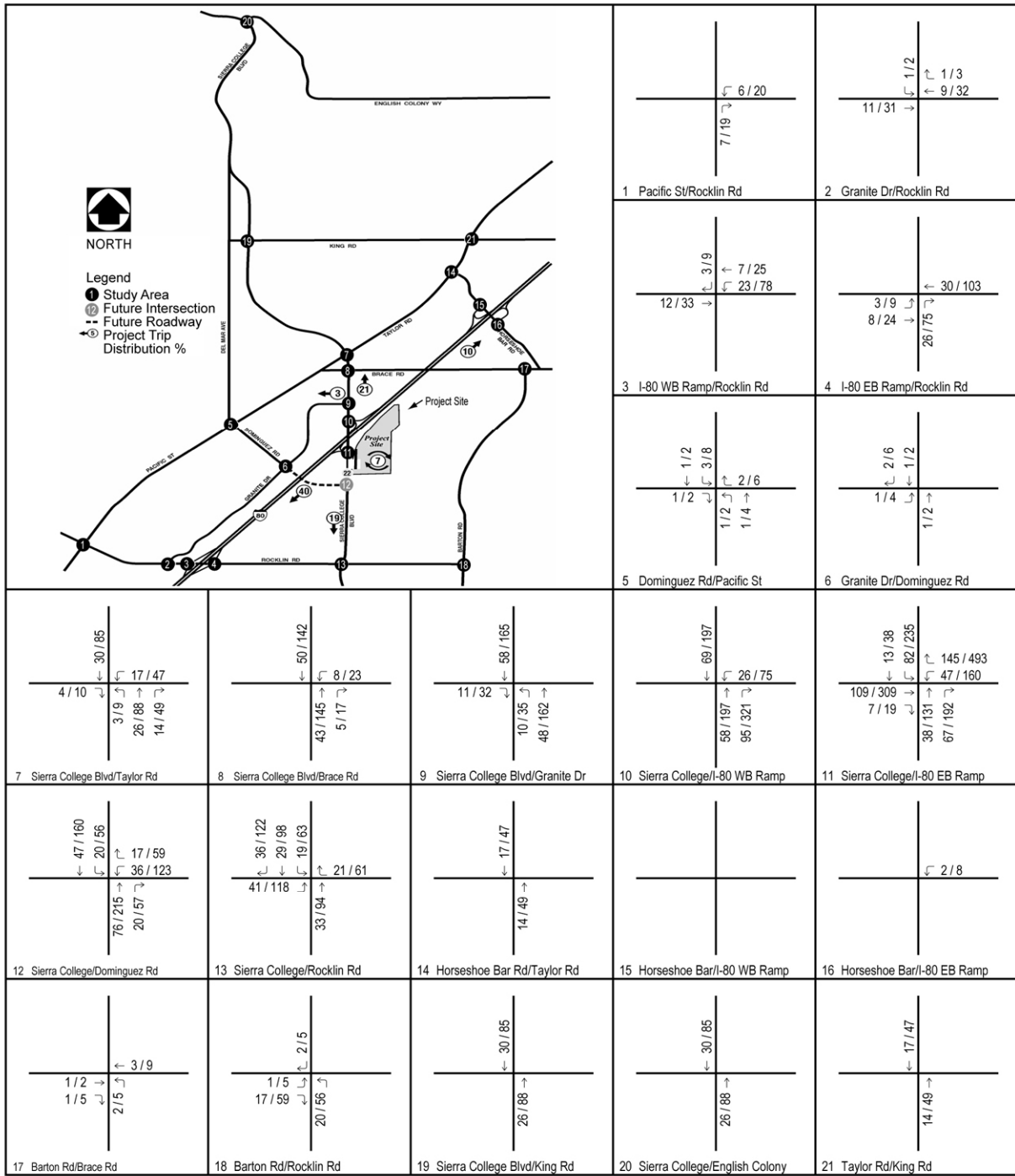
Many of the trips generated by a retail shopping center such as the proposed project would be pass-by trips, or trips whose primary destination is not the shopping center. These would include trips such as a work-to-home trip that stops at a retail center on the way. These trips would not be new trips generated by the project; rather, they are trips that are already on the roadway network that would make a stopover at the proposed shopping center. ITE's Trip Generation Handbook (2004) provides estimates of pass-by trip percentages for various types of land uses. The Trip Generation Handbook estimates pass-by trips to vary between 28 percent and 48 percent for the land uses shown in Table 4.2-3. Rather than apply the more aggressive trip reduction of 28 to 48 percent, a conservative estimate of 10 percent average pass-by trip reduction rate was applied to the trips generated by the entire retail center.

Project trips were distributed throughout the study area using the City's traffic analysis model. The select zone model assignments for the proposed project were used to obtain the trip distribution. The regional trip distribution percentages from the traffic model and the resulting project trips at each intersection are illustrated in Exhibits 4.2-5 and 4.2-6. It should be noted that the distribution percentages shown in the Exhibits are the generalized distribution for illustration only and do not reflect all project trips that may be destined within the study area. This interaction between land uses in the study area is reflected in the actual trip assignment volumes.

## **EXISTING PLUS PROJECT**

Traffic volumes generated by the proposed project were added to the existing traffic volumes and LOS were calculated for the existing plus project scenario. For purposes of making significance determinations, the EIR relies on the existing plus approved projects scenario. Because construction of the project would follow construction of other previously approved projects in the study area, the existing plus project conditions are not the real-world physical condition that the project would affect. However, an existing plus project condition has nevertheless been analyzed for disclosure purposes. The existing plus project weekday and Saturday peak-hour traffic volumes are illustrated in Exhibits 4.2-7 and 4.2-8. The LOS for study area intersections and roadway segments in the existing plus project scenario is shown in Tables 4.2-4 and 4.2-5. The existing plus project LOS worksheets are provided in Appendix C (identified as Appendix C within Appendix C). The short-term geometrics and traffic control for project scenarios are illustrated in Exhibit 4.2-9.

As shown in Table 4.2-4, the two intersections, Sierra College Boulevard/I-80 Eastbound Ramp and Taylor Road/Horseshoe Bar Road, that operate at LOS E in the existing condition would operate at LOS A and LOS F, respectively, with the addition of project traffic. The project would add more than 0.05 in the v/c ratio to the intersection of Sierra College Boulevard/I-80 Eastbound Ramp. However, as previously discussed, the City has initiated construction on a project to improve the I-80/Sierra College Boulevard interchange, which would mitigate this unsatisfactory LOS. The Rocklin Crossings project would be subject to the City's Traffic Fee and thus would contribute its fair share towards mitigating this impact. The intersection of Taylor Road/Horseshoe Bar Road is forecast to operate at LOS F (v/c = 1.029) in the existing plus project condition. The project would have a significant impact on the intersection of Taylor Road/Horseshoe Bar Road in the existing plus project condition.



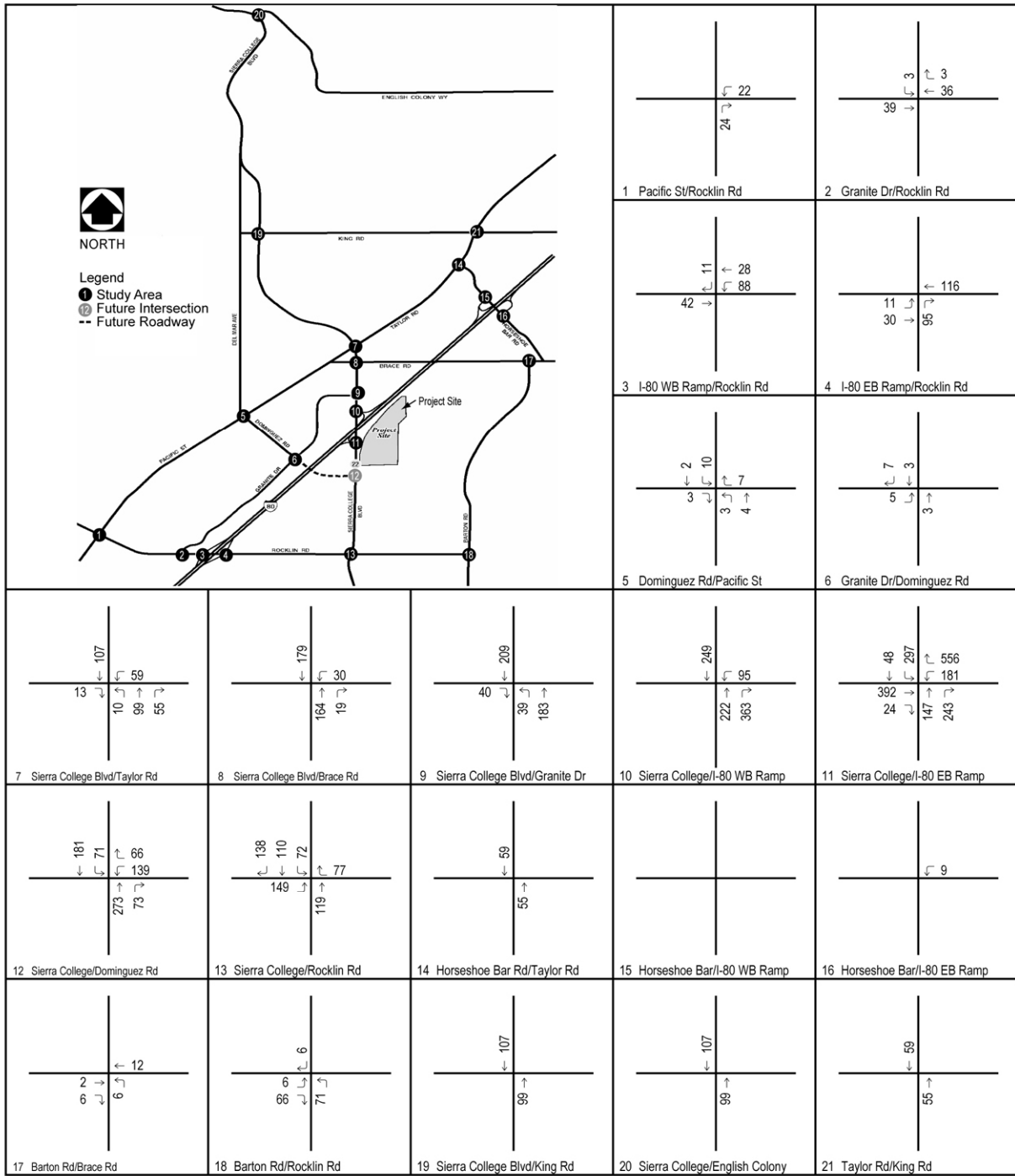
123 / 456 AM / PM Peak Hour Volume

G 06110148.01 012

Source: LSA 2007

**Project Trip Distribution and Peak Hour Project Trips**

**Exhibit 4.2-5**

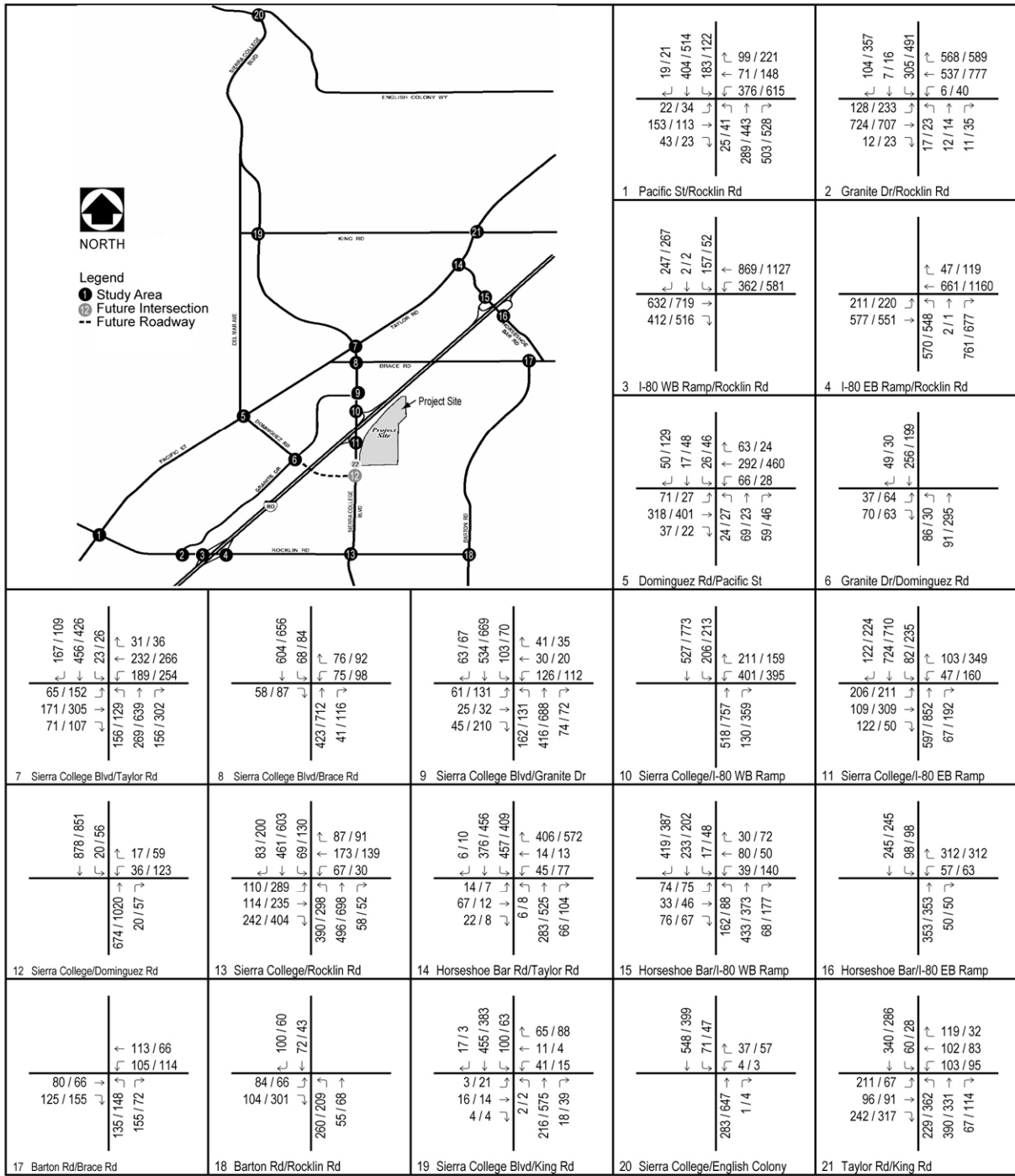


G 06110148.01 013

Source: LSA 2007

**Saturday Peak Hour Project Trips**

**Exhibit 4.2-6**

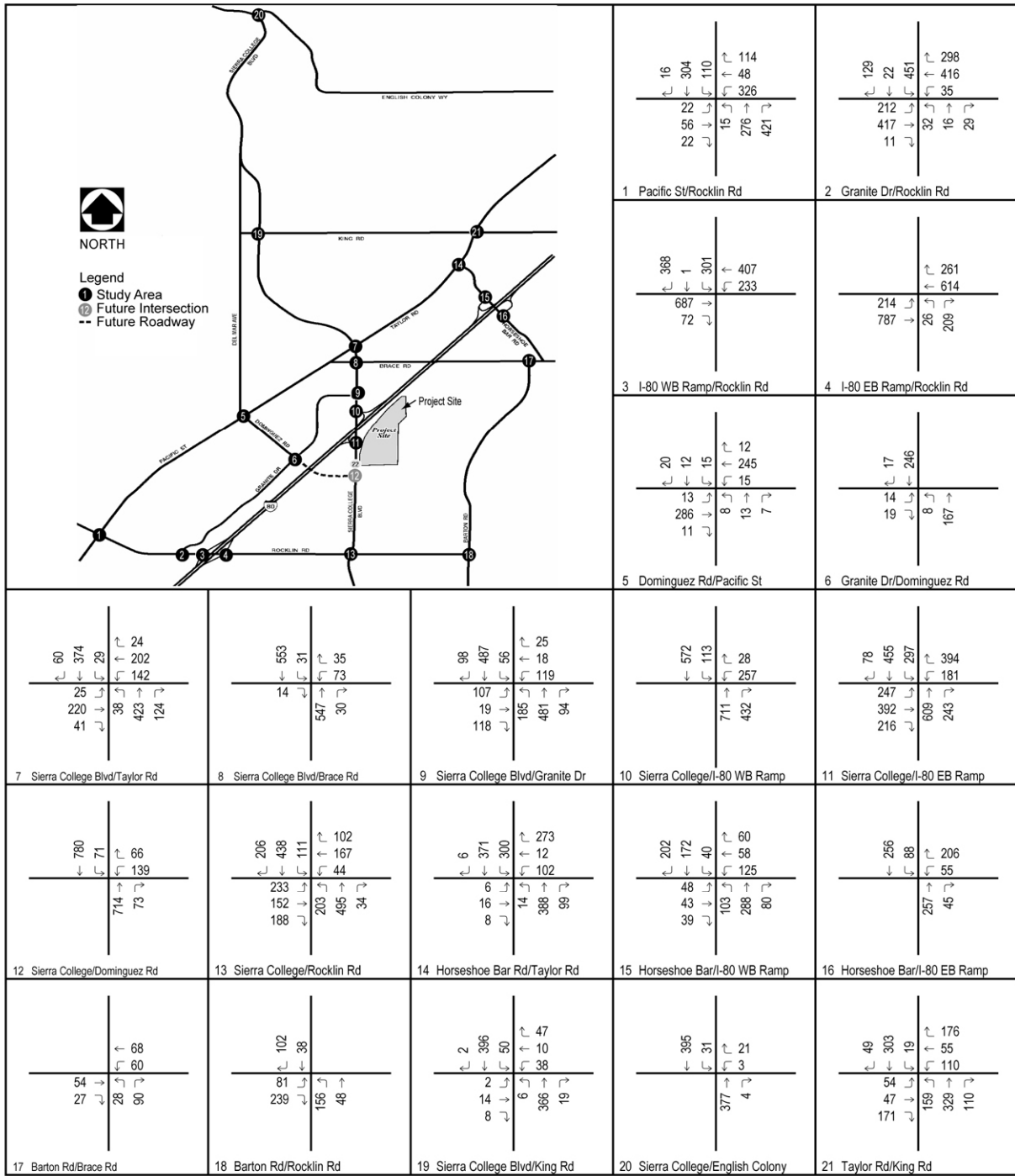


G 06110148.01 014

Source: LSA 2007

**Existing Plus Project Peak Hour Traffic Volumes**

**Exhibit 4.2-7**



G 06110148.01 015

Source: LSA 2007

**Existing Plus Project Saturday Peak Hour Traffic Volumes**

**Exhibit 4.2-8**

**Table 4.2-4  
Existing Plus Project Peak Hour Intersection Level of Service Summary**

Intersection		Existing Condition						Existing Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street <sup>1</sup>	0.734	C	0.709	C	0.453	A	0.741	C	0.728	C	0.475	A
2	Rocklin Road/Granite Drive	0.389	A	0.637	B	0.452	A	0.392	A	0.648	B	0.465	A
3	Rocklin Road/I-80 Westbound Ramps	0.663	B	0.834	D	0.534	A	0.680	B	0.891	D	0.614	B
4	Rocklin Road/I-80 Eastbound Ramps	0.716	C	0.757	C	0.433	A	0.729	C	0.815	D	0.504	A
5	Dominguez Road/Pacific Street 1	0.391	A	0.454	A	0.230	A	0.395	A	0.462	A	0.242	A
6	Dominguez Road/Granite Drive <sup>1</sup>	11.7 sec	B	11.9 sec	B	9.9 sec	A	11.8 sec	B	12.1 sec	B	10.2 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.614	B	0.728	C	0.423	A	0.647	B	0.818	D	0.525	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.440	A	0.522	A	0.295	A	0.477	A	0.630	B	0.416	A
9	Sierra College Boulevard/Granite Drive	0.521	A	0.534	A	0.384	A	0.566	A	0.681	B	0.561	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.740	C	0.747	C	0.575	A	0.320	A	0.360	A	0.254	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.892	D	0.970	E	0.639	B	0.402	A	0.574	A	0.736	C
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road <sup>1</sup>	0.591	A	0.660	B	0.443	A	0.650	B	0.786	C	0.672	B
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.837	D	0.998	E	0.626	B	0.846	D	1.029	F	0.660	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.392	A	0.369	A	0.310	A	0.392	A	0.369	A	0.310	A




**Table 4.2-4  
Existing Plus Project Peak Hour Intersection Level of Service Summary**

Intersection		Existing Condition						Existing Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.0 sec	C	12.1 sec	B	16.4 sec	C	16.1 sec	C	12.3 sec	B
17	Barton Road/Brace Road <sup>1</sup> (Loomis)	16.1 sec	C	15.0 sec	C	9.5 sec	A	16.4 sec	C	15.5 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road <sup>1</sup> (Loomis)	15.6 sec	C	10.9 sec	B	10.2 sec	B	16.3 sec	C	11.8 sec	B	11.1 sec	B
19	Sierra College Boulevard/King Road <sup>1</sup> (Loomis)	0.390	A	0.465	A	0.301	A	0.410	A	0.521	A	0.366	A
20	Sierra College Boulevard/English Colony Way <sup>1</sup> (Placer County)	10.9 sec	B	13.4 sec	B	10.5 sec	B	11.2 sec	B	14.8 sec	B	11.5 sec	B
21	Taylor Road/King Road <sup>1</sup> (Loomis)	0.600	A	0.602	B	0.407	A	0.606	B	0.618	B	0.428	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

<sup>1</sup> LOS C required for these intersections. LOS D acceptable for all other intersections.

 (Shade) = Significant Impact

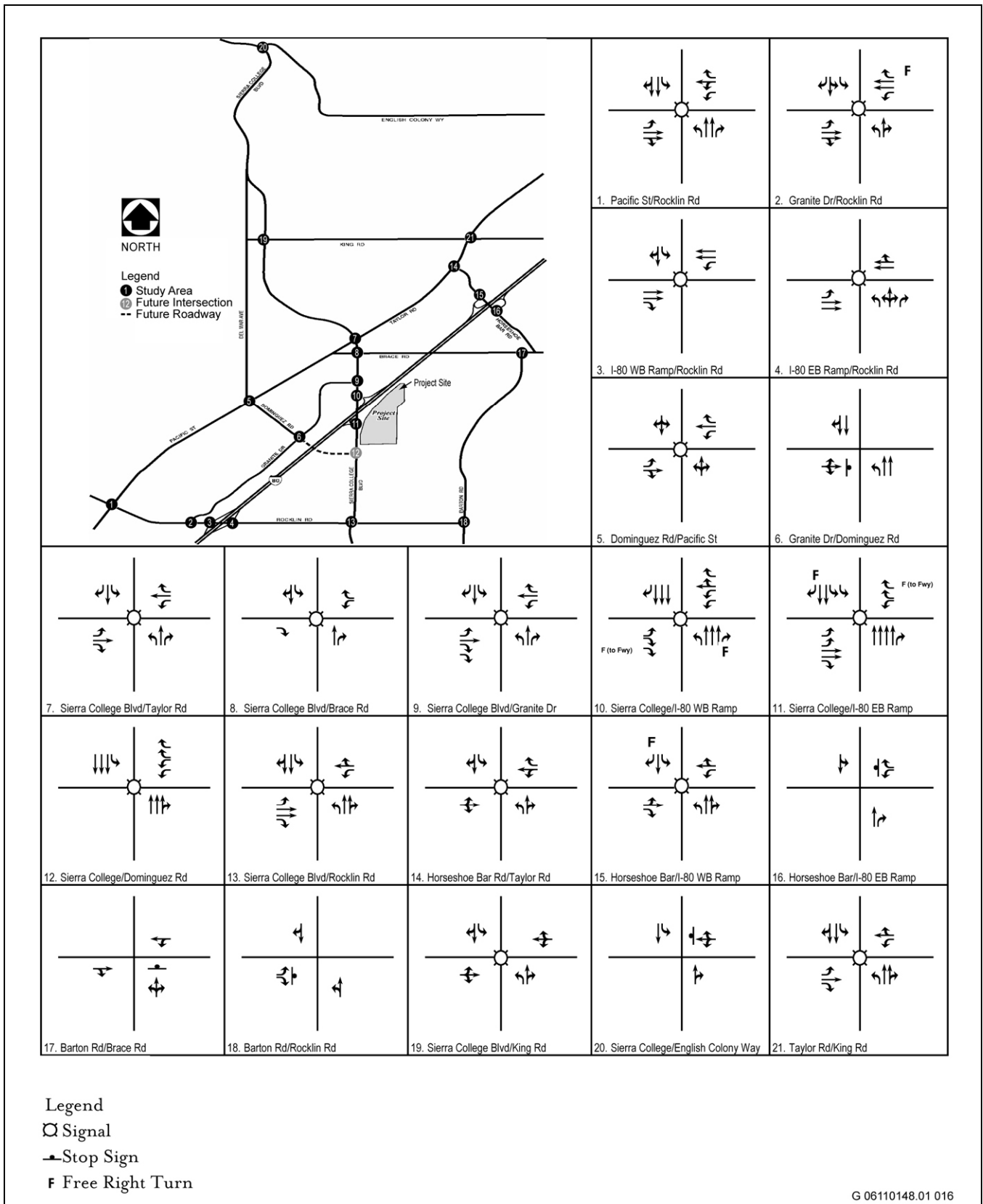
 Exceeds level of service criteria

**Table 4.2-5  
Existing Plus Project Daily Roadway Segment Level of Service Summary**

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	18,020	1.20	F	12,510	0.83	D
	Horseshoe Bar Road and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	11,253	0.75	C	4,150	0.28	A
Pacific Street	Sierra College Boulevard and Dominguez Road <sup>1</sup>	Two-lane Collector	15,000	12,088	0.81	D	6,460	0.43	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	16,169	0.54	A	7,140	0.24	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane	30,000	21,541	0.72	C	11,460	0.38	A

**Table 4.2-5  
Existing Plus Project Daily Roadway Segment Level of Service Summary**

Roadway	Segment	Configuration	Capacity	Weekday			Saturday				
				Volume	V/C	LOS	Volume	V/C	LOS		
		Undivided Arterial									
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	11,649	0.39	A	14,970	0.50	A		
	Sierra College Boulevard and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	6,396	0.43	A	5,440	0.36	A		
Barton Road	Rocklin Road and Brace Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	3,944	0.26	A	2,700	0.18	A		
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,151	0.41	A	6,520	0.43	A		
Brace Road	I-80 and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	4,116	0.27	A	2,080	0.14	A		
	I-80 and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A		
Sierra College Boulevard	English Colony Way and King Road <sup>1</sup> (Placer County)	Two-lane Collector	15,000	11,330	0.76	C	8,630	0.58	A		
	King Road and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	12,860	0.86	D	9,860	0.66	B		
	Taylor Road and I-80	Two-lane Collector	15,000	20,986	1.40	F	12,740	0.85	D		
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	22,345	0.74	C	20,630	0.69	B		
	Dominguez Road and Rocklin Road <sup>1</sup>	Two-lane Collector	15,000	16,995	1.13	F	15,330	1.02	F		
Granite Drive	Dominguez Road and Sierra College Boulevard <sup>1</sup>	Four-lane Undivided Arterial	30,000	6,198	0.21	A	4,380	0.15	A		
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	8,318	0.28	A	7,930	0.26	A		
Dominguez Road	Taylor Road and Granite Drive <sup>1</sup>	Two-lane Collector	15,000	2,482	0.17	A	620	0.04	A		
King Road	Sierra College Boulevard and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A		
Notes: <sup>1</sup> LOS C required for these segments. LOS D acceptable for all other segments. Exceeds level of service criteria											
<table border="1"> <tr> <td style="width: 20px; height: 20px; border: 1px solid black;"></td> <td>Exceeds level of service criteria</td> </tr> </table>											Exceeds level of service criteria
	Exceeds level of service criteria										



Source: LSA 2007

**Short-Term Geometrics and Traffic Control**

**Exhibit 4.2-9**

As shown in Table 4.2-5, most of the study area roadway segments are forecast to operate within their daily roadway capacities in the existing plus project condition except for the following five segments:

- ▶ Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- ▶ Pacific Street between Sierra College Boulevard and Dominguez Road
- ▶ Sierra College Boulevard between King Road and Taylor Road
- ▶ Sierra College Boulevard between Taylor Road and I-80
- ▶ Sierra College Boulevard between Dominguez Road and Rocklin Road

A directional peak-hour roadway segment analysis was prepared for these five segments and is shown in Table 4.2-6. In a.m., p.m. and Saturday peak hours, the five affected roadway segments would operate at LOS A or B. Because the roadway segments would operate with satisfactory LOS during the peak hour of roadway traffic, they are not significantly affected by the project.

<b>Table 4.2-6 Existing plus Project Peak Hour Roadway Segment Level of Service Summary</b>									
Roadway	Segment	Capacity	Existing			Existing + Project			
			Volume	V/C	LOS	Volume	V/C	LOS	
<b>Taylor Road</b>	<b>King Rd and Horseshoe Bar Rd (Loomis)</b>								
	A.M. Peak Hour Northbound	1,650	426	0.26	A	443	0.27	A	
	A.M. Peak Hour Southbound	1,650	706	0.43	A	720	0.44	A	
	Total A.M. Peak Hour	3,300	1,132	0.34	A	1,163	0.35	A	
	P.M Peak Hour Northbound	1,650	494	0.30	A	541	0.33	A	
	P.M Peak Hour Southbound	1,650	588	0.36	A	637	0.39	A	
	Total P.M. Peak Hour	3,300	1,082	0.33	A	1,178	0.36	A	
	SAT Peak Hour Northbound	1,650	422	0.26	A	481	0.29	A	
	SAT Peak Hour Southbound	1,650	504	0.31	A	559	0.34	A	
	Total SAT Peak Hour	3,300	926	0.28	A	1,040	0.32	A	
<b>Pacific Street</b>	<b>Sierra College Blvd and Dominguez Rd</b>								
	A.M. Peak Hour Northbound	1,650	435	0.26	A	452	0.27	A	
	A.M. Peak Hour Southbound	1,650	425	0.26	A	426	0.26	A	
	Total A.M. Peak Hour	3,300	860	0.26	A	878	0.27	A	
	P.M Peak Hour Northbound	1,650	614	0.37	A	616	0.37	A	
	P.M Peak Hour Southbound	1,650	584	0.35	A	633	0.38	A	
	Total P.M. Peak Hour	3,300	1,198	0.36	A	1,249	0.38	A	
<b>Pacific Street</b>	SAT Peak Hour Northbound	1,650	309	0.19	A	368	0.22	A	
<i>continued</i>	SAT Peak Hour Southbound	1,650	318	0.19	A	373	0.23	A	
	Total SAT Peak Hour	3,300	627	0.19	A	741	0.22	A	

**Table 4.2-6  
Existing plus Project Peak Hour Roadway Segment Level of Service Summary**

Roadway	Segment	Capacity	Existing			Existing + Project		
			Volume	V/C	LOS	Volume	V/C	LOS
<b>Sierra College Boulevard</b>	<b>King Rd and Taylor Rd (Loomis)</b>							
	A.M. Peak Hour Northbound	1,650	665	0.40	A	716	0.43	A
	A.M. Peak Hour Southbound	1,650	538	0.33	A	581	0.35	A
	Total A.M. Peak Hour	3,300	1,203	0.36	A	1,297	0.39	A
	P.M Peak Hour Northbound	1,650	645	0.39	A	787	0.48	A
	P.M Peak Hour Southbound	1,650	924	0.56	A	1,070	0.65	B
	Total P.M. Peak Hour	3,300	1,569	0.48	A	1,857	0.56	A
	SAT Peak Hour Northbound	1,650	378	0.23	A	557	0.34	A
	SAT Peak Hour Southbound	1,650	421	0.26	A	585	0.35	A
Total SAT Peak Hour	3,300	799	0.24	A	1,142	0.35	A	
<b>Sierra College Boulevard</b>	<b>Taylor Rd and I-80</b>							
	A.M. Peak Hour Northbound	1,650	594	0.36	A	705	0.43	A
	A.M. Peak Hour Southbound	1,650	636	0.39	A	652	0.40	A
	Total A.M. Peak Hour	3,300	1,230	0.37	A	1,357	0.41	A
	P.M Peak Hour Northbound	1,650	794	0.48	A	991	0.60	A
	P.M Peak Hour Southbound	1,650	694	0.42	A	891	0.54	A
	Total P.M. Peak Hour	3,300	1,488	0.45	A	1,882	0.57	A
	SAT Peak Hour Northbound	1,650	475	0.29	A	760	0.46	A
	SAT Peak Hour Southbound	1,650	538	0.33	A	724	0.44	A
Total SAT Peak Hour	3,300	1,013	0.31	A	1,484	0.45	A	
<b>Sierra College Boulevard</b>	<b>Dominguez Rd and Rocklin Rd</b>							
	A.M. Peak Hour Northbound	1,650	831	0.50	A	944	0.57	A
	A.M. Peak Hour Southbound	1,650	911	0.55	A	770	0.47	A
	Total A.M. Peak Hour	3,300	1,742	0.53	A	1,714	0.52	A
	P.M Peak Hour Northbound	1,650	939	0.57	A	1,037	0.63	A
	P.M Peak Hour Southbound	1,650	954	0.58	A	1,079	0.65	A
	Total P.M. Peak Hour	3,300	1,893	0.57	A	2,116	0.64	A
	SAT Peak Hour Northbound	1,650	599	0.36	A	851	0.52	A
	SAT Peak Hour Southbound	1,650	613	0.37	A	780	0.47	A
Total SAT Peak Hour	3,300	1,212	0.37	A	1,631	0.49	A	
These numbers come from the Traffix Link Volume Report Total Link Volume.								

## **EXISTING PLUS APPROVED PROJECTS (BASELINE)**

### **Existing plus Approved Projects (Baseline) Traffic Volumes**

To identify traffic conditions that could be expected at the time of project opening, an existing plus approved projects (baseline) scenario was developed. The City provided a list of approved projects in the vicinity of the project. The approved projects include interchange improvements at I-80 and Sierra College Boulevard, as the interchange improvements have been approved, are fully funded and are under construction. The approved projects do not include the proposed Dominguez Road extension. The approved projects list is provided in Appendix C (identified as Appendix D within Appendix C). Traffic volumes for approved projects were determined by applying the trip generation rates from the ITE Trip Generation, 7th Edition, to the approved land uses. Vehicle trips from approved projects were distributed to the study area intersections based on the location of the approved projects in relation to other land uses and local and regional transportation networks. The locations of the approved projects and trip distribution are illustrated in Exhibit 4.2-10. The approved projects and their respective trip generation are shown in Table 4.2-7.

### **EXISTING PLUS APPROVED PROJECTS (BASELINE) LEVELS OF SERVICE**

Traffic from the approved projects was added to the existing traffic counts and LOS were calculated for the existing plus approved projects scenario. Existing plus approved projects weekday peak-hour and Saturday traffic volumes are illustrated in Exhibits 4.2-11 and 4.2-12. The LOS for study area intersections and roadway segments in the existing plus approved projects scenario are shown in Tables 4.2-8 and 4.2-9. The existing plus approved projects LOS worksheets are provided in Appendix C (identified as Appendix E within Appendix C).

As shown in Table 4.2-8, the following five intersections are operating at an unsatisfactory LOS in the existing plus approved projects condition:

- ▶ Rocklin Road/Pacific Street
- ▶ Rocklin Road/I-80 westbound ramps
- ▶ Rocklin Road/I-80 eastbound ramps
- ▶ Sierra College Boulevard/Rocklin Road
- ▶ Taylor Road/Horseshoe Bar Road (Loomis)

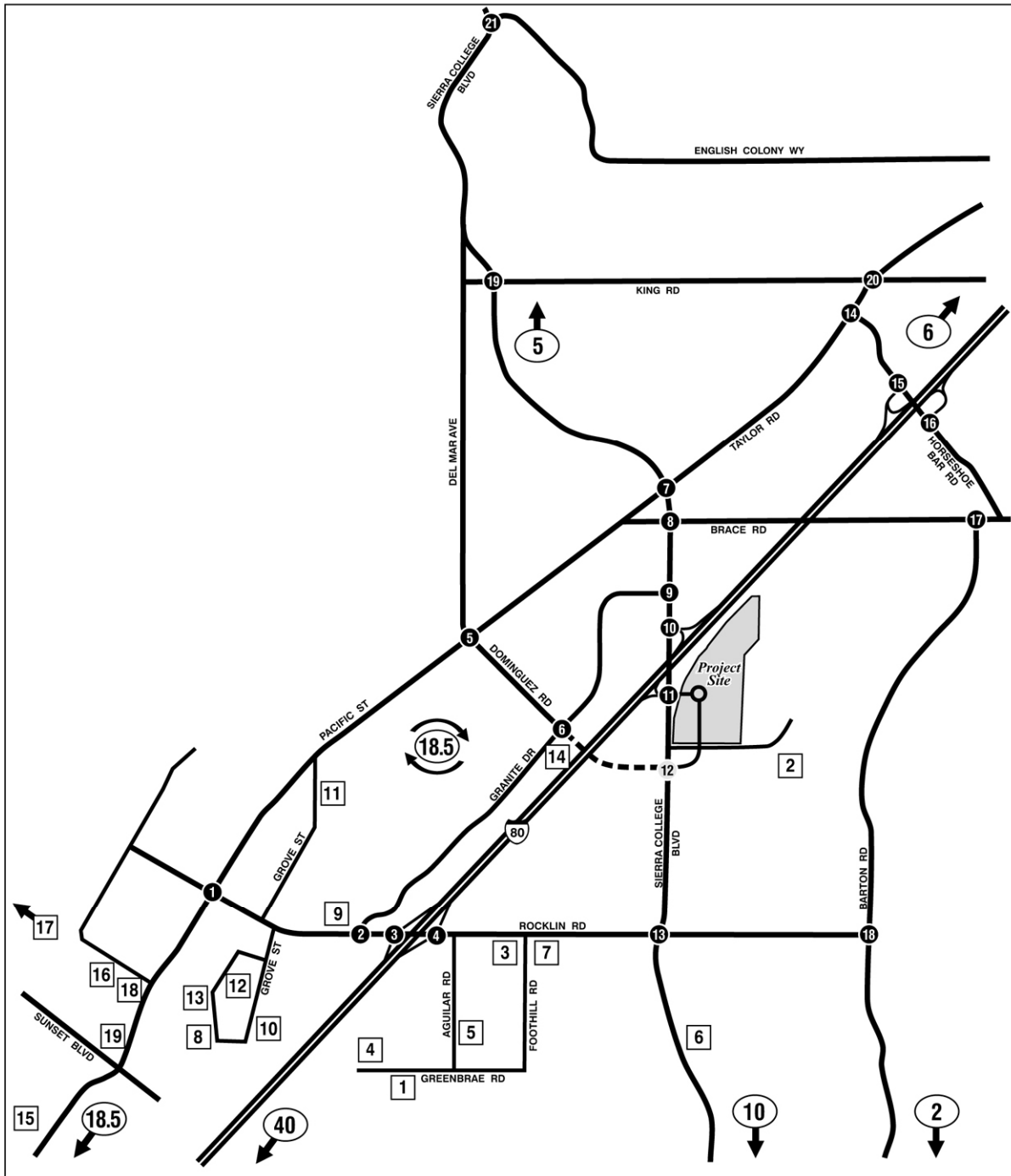
As shown in Table 4.2-9, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following three segments:

- ▶ Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- ▶ Sierra College Boulevard between Taylor Road and I-80
- ▶ Sierra College Boulevard between Dominguez Road and Rocklin Road

These segments would exceed the threshold of daily capacity in the existing plus approved projects (baseline) scenario. However, in the a.m., p.m. and Saturday peak hours, all affected segments are forecast to operate with satisfactory v/c ratios, as shown in Table 4.2-10.

### **EXISTING PLUS APPROVED PROJECTS (BASELINE) PLUS PROJECT**

Traffic volumes generated by the proposed project were added to the existing plus approved projects (baseline) traffic volumes and LOS were calculated for the existing plus approved projects (baseline) plus project scenario. The existing plus approved projects (baseline) plus project weekday and Saturday peak-hour traffic volumes are illustrated in Exhibits 4.2-13 and 4.2-14. The LOS for study area intersections and roadway segments in the existing plus approved projects plus project scenario are shown in Tables 4.2-11 and 4.2-12. The existing plus approved projects plus project LOS worksheets are provided in Appendix C (identified as Appendix F within Appendix C). The LOS for the existing plus approved projects (baseline) plus project condition assumes the reconstruction of the I-80/Sierra College Boulevard interchange (Exhibit 4.2-9), as the interchange improvements have been approved, are fully funded and are under construction.



LEGEND

- - Study Area Intersection
- 12 - Future Intersection
- - - Future Roadway
- 10 - Approved Projects\*
- XX - Trip Distribution Percentage
- 18.5 - Internal Trips

\*Refer to Table G for Project Identification

G 06110148.01 017

Source: LSA 2007

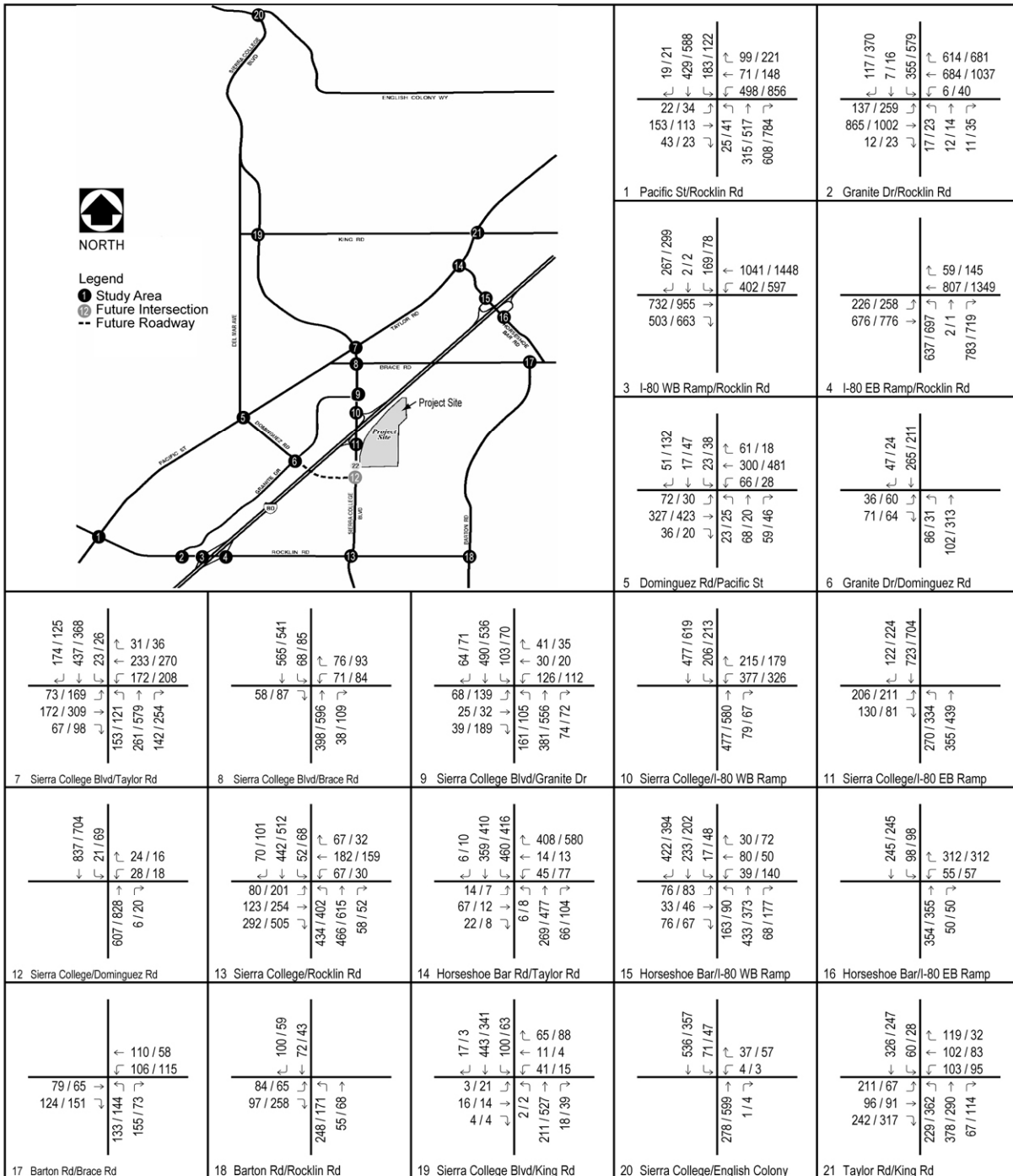
**Location of Approved Projects**

**Exhibit 4.2-10**

**Table 4.2-7  
Trip Generation of Approved Projects**

No.	Project No.	Description	Landuse (ITE Code)	Size		AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
						In	Out	Total	In	Out	Total	In	Out	Total
<b>Southeast Rocklin (Map Sheet 8)</b>														
2	1	Granite Lake Estates	Single Family Detached Housing (210)	119	du	23	70	93	79	46	125	60	51	112
19	2	Croftwood, Unit 1	Single Family Detached Housing (210)	156	du	30	89	119	101	59	160	79	67	147
22	3	Rocklin Sierra Plaza	Shopping Center (820)	31.60	ksf	78	30	108	140	153	293	82	75	157
29	4	Bender Insurance Office Building	Bender Insurance Office Building	14.75	ksf	10	31	41	60	35	95	3	3	6
37	5	Bramblewood Estates	Single Family Detached Housing (210)	2	du	3	8	11	2	1	3	1	1	2
38	6	Sunrise Assisted Living	Sunrise Assisted Living	48	ksf	6	3	9	7	7	14	12	14	26
43	7	Rocklin Executive Office Park	Office Park (710)	21	ksf	27	27	54	51	51	102	5	4	9
2	8	Villages	Single Family Detached Housing (210)	65	du	14	41	55	46	27	73	33	28	61
56	9	Granite Business Center	General Office Building (710)	16.60	ksf	39	6	45	17	80	97	4	3	7
59	10	Rocklin Mobile Home Park Addition	Mobile Home Park (240)	21	du	4	14	18	9	5	14	6	5	11
60	11	Holy Cross Lutheran Church	Church (560)	40.63	ksf	16	13	29	14	13	27	102	42	144
65	12	Winding Lane Estates	Single Family Detached Housing (210)	26	du	7	21	28	20	12	32	13	11	24
69	13	Samoylovich Estates	Single Family Detached Housing (210)	4	du	7	5	12	3	3	6	2	2	4
76	14	Granite Drive Retail/Office	Office (710)	22	ksf	14	42	56	65	38	103	5	4	9
51	15	Rocklin 94	Residential Condominium (230)	94	du	8	41	49	38	19	57	24	20	44
3	16	Colish Subdivision	Single Family Detached Housing (210)	8	du	4	11	15	7	4	11	4	3	8
7	17	Community Covenant Church	Church (560)	11.78	ksf	1	0	1	1	0	1	30	12	42
28	18	Rocklin Retail Center	Shopping Center (820)	19.5	ksf	36	23	59	102	111	213	50	47	97
37	19	Pacific Center Retail Center	Shopping Center (820)	32.2	ksf	48	31	79	142	154	296	83	77	160
<b>Total</b>						<b>375</b>	<b>506</b>	<b>881</b>	<b>904</b>	<b>818</b>	<b>1,722</b>	<b>598</b>	<b>470</b>	<b>1,068</b>



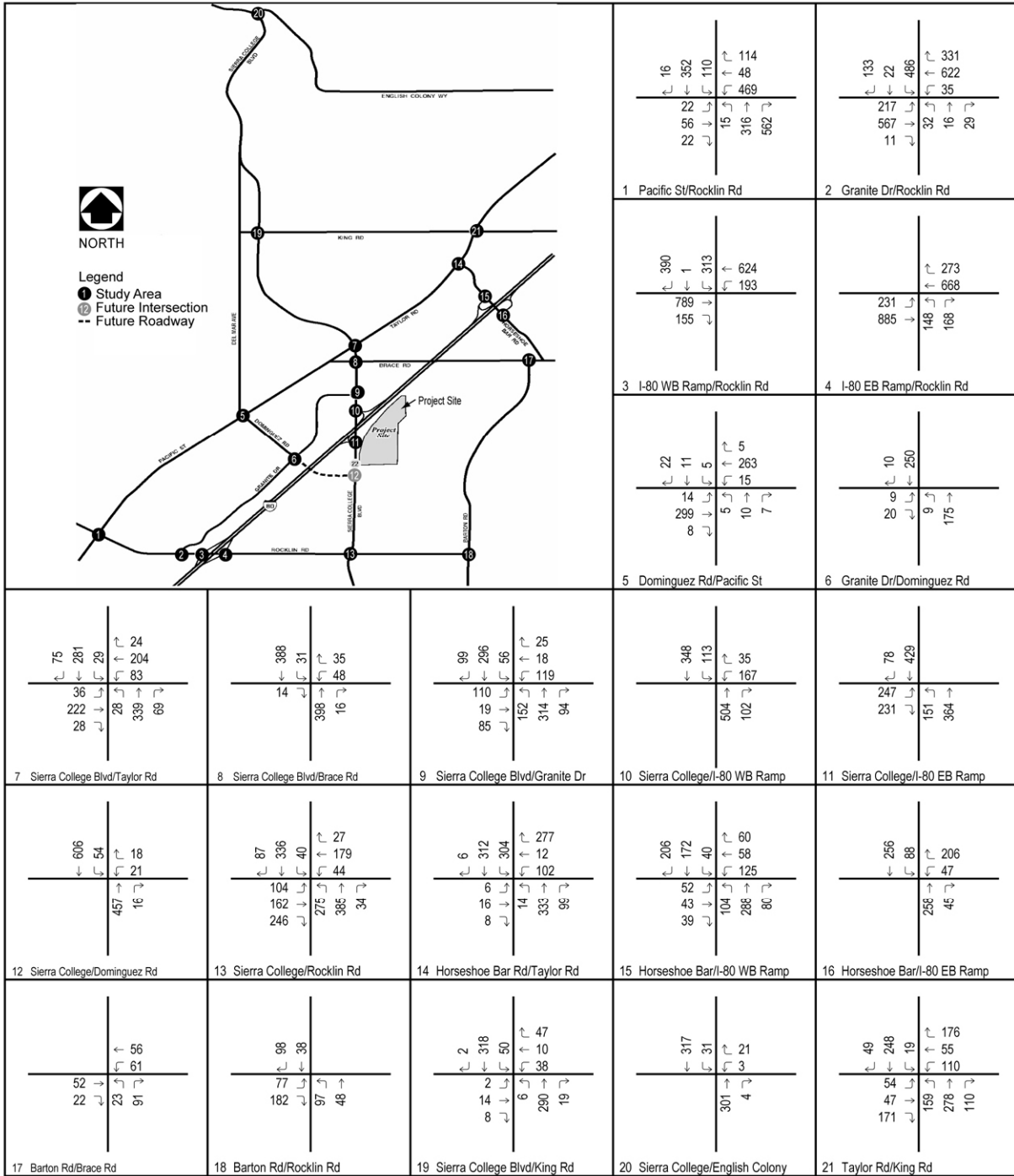


G 06110148.01 018

Source: LSA 2007

**Existing Plus Approved Projects (Baseline) Peak Hour Traffic Volumes**

**Exhibit 4.2-11**



G 06110148.01 019

Source: LSA 2007

**Existing Plus Approved Projects (Baseline) Saturday Peak Hour Traffic Volumes**

**Exhibit 4.2-12**

**Table 4.2-8  
Existing Plus Approved Projects (Baseline) Condition Intersection Level of Service Summary**

Intersection	Existing Plus Approved Condition					
	AM Peak Hour		PM Peak Hour		Saturday	
	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1 Rocklin Road/Pacific Street <sup>1</sup>	0.866	D	0.978	E	0.610	B
2 Rocklin Road/Granite Drive	0.465	A	0.757	C	0.547	A
3 Rocklin Road/I-80 Westbound Ramps	0.780	C	1.018	F	0.633	B
4 Rocklin Road/I-80 Eastbound Ramps	0.823	D	0.946	E	0.549	A
5 Dominguez Road/Pacific Street <sup>1</sup>	0.397	A	0.472	A	0.241	A
6 Dominguez Road/Granite Drive <sup>1</sup>	11.8 sec	B	12.2 sec	B	9.9 sec	A
7 Sierra College Boulevard/Taylor Road (Loomis)	0.622	B	0.750	C	0.434	A
8 Sierra College Boulevard/Brace Road (Loomis)	0.449	A	0.547	A	0.307	A
9 Sierra College Boulevard/Granite Drive	0.536	A	0.568	A	0.402	A
10 Sierra College Boulevard/I-80 Westbound Ramps	0.299	A	0.301	A	0.179	A
11 Sierra College Boulevard/I-80 Eastbound Ramps	0.335	A	0.315	A	0.323	A
12 Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-
13 Sierra College Boulevard/Rocklin Road <sup>1</sup>	0.661	B	0.802	D	0.521	A
14 Taylor Road/Horseshoe Bar Road (Loomis)	0.840	D	1.008	F	0.631	B
15 Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A
16 Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.1 sec	C	12.2 sec	B
17 Barton Road/Brace Road <sup>1</sup> (Loomis)	16.2 sec	C	15.2 sec	C	9.5 sec	A
18 Barton Road/Rocklin Road <sup>1</sup> (Loomis)	15.9 sec	C	11.2 sec	B	10.3 sec	B
19 Sierra College Boulevard/King Road <sup>1</sup> (Loomis)	0.402	A	0.490	A	0.316	A
20 Sierra College Boulevard/English Colony Way <sup>1</sup> (Placer County)	11.1 sec	B	14.0 sec	B	10.7 sec	B
21 Taylor Road/King Road 1 (Loomis)	0.601	B	0.604	B	0.409	A

Notes:  
 ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.  
<sup>1</sup> LOS C required for these intersections. LOS D acceptable for all other intersections.

Exceeds level of service criteria

**Table 4.2-9  
Existing Plus Approved Projects (Baseline) Daily Roadway Segment Level of Service Summary**

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	17,150	1.14	F	11,410	0.76	C
	Horseshoe Bar Road and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	10,973	0.73	C	3,710	0.25	A
Pacific Street	Sierra College Boulevard and Dominguez Road <sup>1</sup>	Two-lane Collector	15,000	11,868	0.79	C	6,100	0.41	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	19,459	0.65	B	9,080	0.30	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	25,371	0.85	D	13,310	0.44	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	14,599	0.49	A	16,120	0.54	A
	Sierra College Boulevard and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	6,646	0.44	A	5,090	0.34	A
Barton Road	Rocklin Road and Brace Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	3,514	0.23	A	2,130	0.14	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,141	0.41	A	6,490	0.43	A
Brace Road	I-80 and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	4,046	0.27	A	1,960	0.13	A
	I-80 and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road <sup>1</sup> (Placer County)	Two-lane Collector	15,000	10,430	0.70	B	7,090	0.47	A
	King Road and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	11,250	0.75	C	7,450	0.50	A
	Taylor Road and I-80	Two-lane Collector	15,000	18,296	1.22	F	9,010	0.60	B
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	14,105	0.47	A	11,210	0.37	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Two-lane Collector	15,000	14,745	0.98	E	11,840	0.79	C
Granite Drive	Dominguez Road and Sierra College Boulevard <sup>1</sup>	Four-lane Undivided Arterial	30,000	6,328	0.21	A	4,430	0.15	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	8,458	0.28	A	7,960	0.27	A
Dominguez Road	Taylor Road and Granite Drive <sup>1</sup>	Two-lane Collector	15,000	2,422	0.16	A	530	0.04	A
King Road	Sierra College Boulevard and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

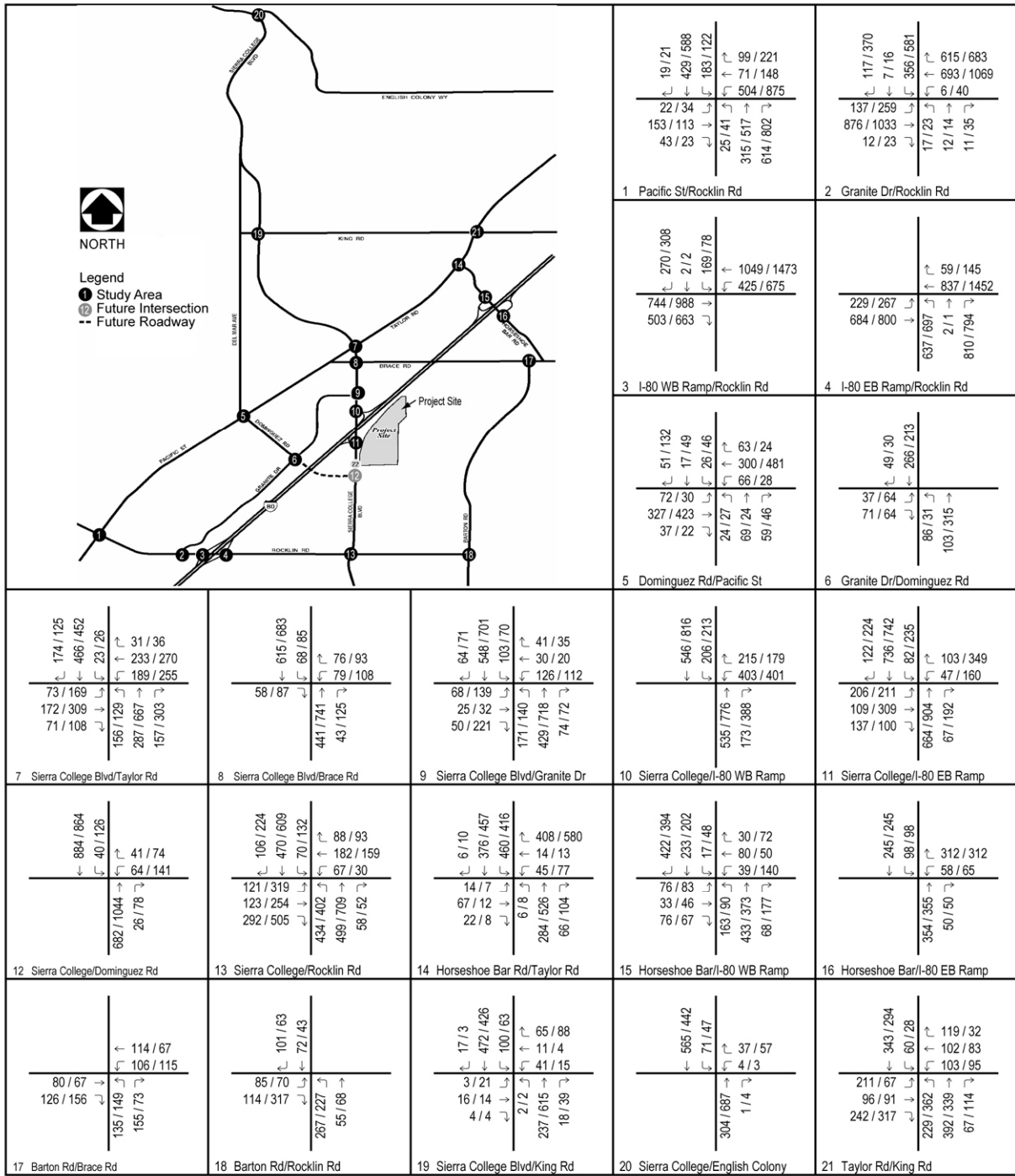
<sup>1</sup> LOS C required for these intersections. LOS D acceptable for all other intersections.

Exceeds level of service criteria

**Table 4.2-10**

**Existing Plus Approved Projects (Baseline) Peak Hour Roadway Segment Level of Service Summary**

Roadway	Segment	Capacity	Existing + Approved			Existing + Approved + Project		
			Volume	V/C	LOS	Volume	V/C	LOS
<b>Taylor Road</b>	<b>King Rd and Horseshoe Bar Rd (Loomis)</b>							
	A.M. Peak Hour Northbound	1,650	426	0.26	A	443	0.27	A
	A.M. Peak Hour Southbound	1,650	708	0.43	A	722	0.44	A
	Total A.M. Peak Hour	3,300	1,134	0.34	A	1,165	0.35	A
	P.M Peak Hour Northbound	1,650	495	0.30	A	638	0.39	A
	P.M Peak Hour Southbound	1,650	589	0.36	A	542	0.33	A
	Total P.M. Peak Hour	3,300	1,084	0.33	A	1,180	0.36	A
	SAT Peak Hour Northbound	1,650	422	0.26	A	482	0.29	A
	SAT Peak Hour Southbound	1,650	508	0.31	A	563	0.34	A
	Total SAT Peak Hour	3,300	930	0.28	A	1,045	0.32	A
<b>Sierra College Boulevard</b>	<b>Taylor Rd and I-80</b>							
	A.M. Peak Hour Northbound	1,650	655	0.40	A	724	0.44	A
	A.M. Peak Hour Southbound	1,650	616	0.37	A	674	0.41	A
	Total A.M. Peak Hour	3,300	1,271	0.39	A	1,398	0.42	A
	P.M Peak Hour Northbound	1,650	837	0.51	A	1,034	0.63	B
	P.M Peak Hour Southbound	1,650	733	0.44	A	930	0.56	A
	Total P.M. Peak Hour	3,300	1,570	0.48	A	1,964	0.60	A
	SAT Peak Hour Northbound	1,650	500	0.30	A	749	0.45	A
	SAT Peak Hour Southbound	1,650	560	0.34	A	783	0.47	A
	Total SAT Peak Hour	3,300	1,060	0.32	A	1,532	0.46	A
<b>Sierra College Boulevard</b>	<b>Dominguez Rd and Rocklin Rd</b>							
	A.M. Peak Hour Northbound	1,650	865	0.52	A	924	0.56	A
	A.M. Peak Hour Southbound	1,650	958	0.58	A	991	0.60	A
	Total A.M. Peak Hour	3,300	1,823	0.55	A	1,915	0.58	A
	P.M Peak Hour Northbound	1,650	1,047	0.63	B	1,144	0.69	B
	P.M Peak Hour Southbound	1,650	1,069	0.65	B	1,163	0.70	C
	Total P.M. Peak Hour	3,300	2,116	0.64	B	2,307	0.70	B
	SAT Peak Hour Northbound	1,650	660	0.40	A	482	0.29	A
	SAT Peak Hour Southbound	1,650	694	0.42	A	501	0.30	A
	Total SAT Peak Hour	3,300	1,354	0.41	A	983	0.30	A



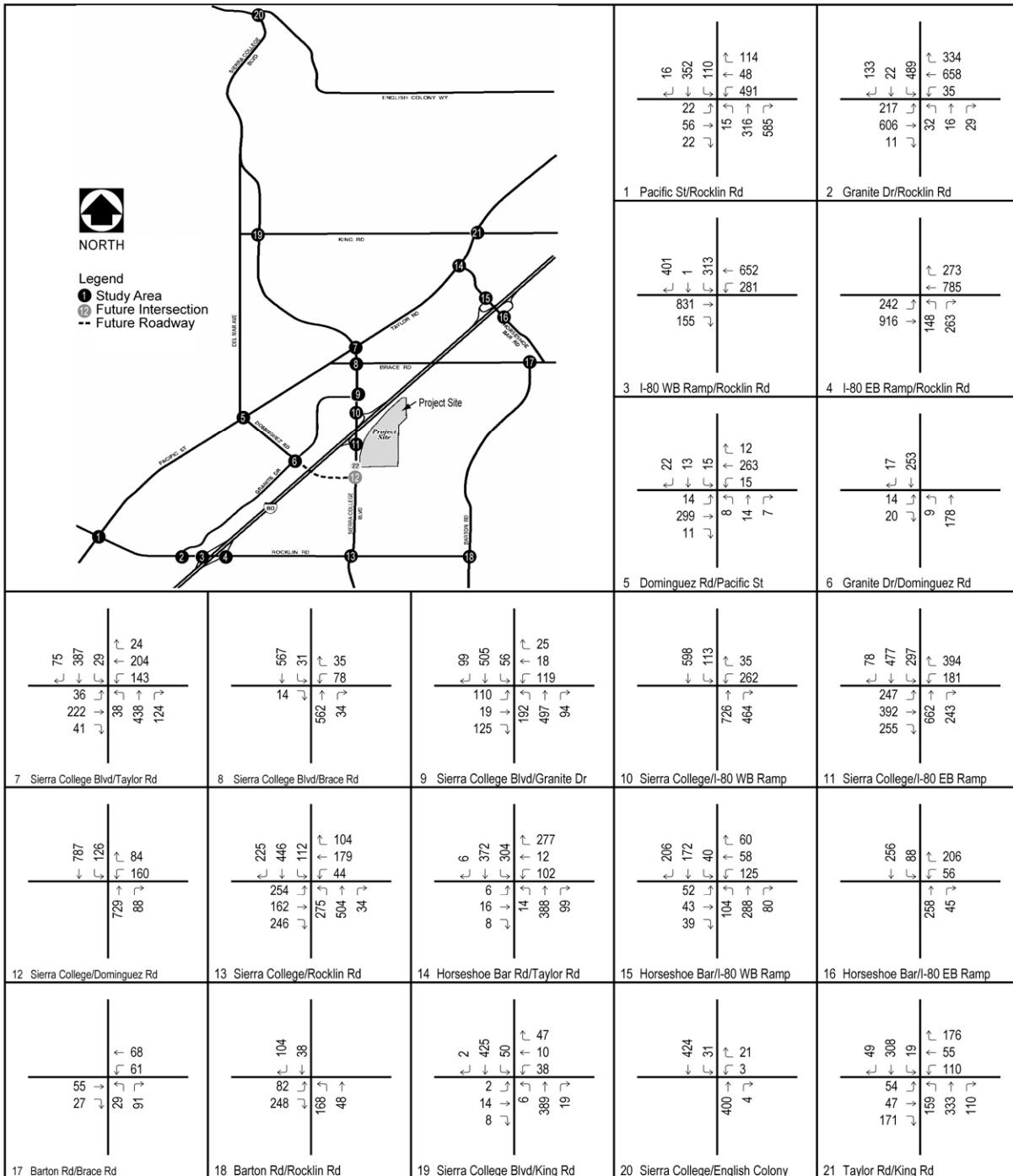
123 / 456 AM / PM Peak Hour Volume

G 06110148.01 020

Source: LSA 2007

**Existing Plus Approved Projects (Baseline)  
Plus Project Peak Hour Traffic Volumes**

**Exhibit 4.2-13**



G 06110148.01 021

Source: LSA 2007

**Existing Plus Approved Projects (Baseline)  
 Plus Project Saturday Peak Hour Traffic Volumes**

**Exhibit 4.2-14**

As shown in Table 4.2-11, the following five intersections are forecast to operate at unsatisfactory LOS in the existing plus approved projects (baseline) plus project scenario:

- ▶ Rocklin Road/Pacific Street
- ▶ Rocklin Road/I-80 westbound ramps
- ▶ Rocklin Road/I-80 eastbound ramps
- ▶ Sierra College Boulevard/Rocklin Road
- ▶ Taylor Road/Horseshoe Bar Road (Loomis)

**Table 4.2-11  
Existing Plus Approved Projects (Baseline) Plus Project Condition  
Intersection Level of Service Summary**

Intersection		Existing Plus Approved Condition						Existing Plus Approved Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/ Pacific Street <sup>1</sup>	0.866	D	0.978	E	0.610	B	0.872	D	0.997	E <sup>2</sup>	0.632	B
2	Rocklin Road/ Granite Drive	0.465	A	0.757	C	0.547	A	0.469	A	0.767	C	0.559	A
3	Rocklin Road/I-80 Westbound Ramps	0.780	C	1.018	F	0.633	B	0.797	C	1.075	F	0.711	C
4	Rocklin Road/I-80 Eastbound Ramps	0.823	D	0.946	E	0.549	A	0.843	D	1.000	F	0.619	B
5	Dominguez Road/Pacific Street <sup>1</sup>	0.397	A	0.472	A	0.241	A	0.401	A	0.479	A	0.253	A
6	Dominguez Road/Granite Drive <sup>1</sup>	11.8 sec	B	12.2 sec	B	9.9 sec	A	11.9 sec	B	12.4 sec	B	10.3 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.622	B	0.750	C	0.434	A	0.655	B	0.840	D	0.537	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.449	A	0.547	A	0.307	A	0.487	A	0.655	B	0.429	A
9	Sierra College Boulevard/Granite Drive	0.536	A	0.568	A	0.402	A	0.583	A	0.713	C	0.580	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.299	A	0.301	A	0.179	A	0.325	A	0.372	A	0.267	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.335	A	0.315	A	0.323	A	0.414	A	0.589	A	0.764	C
12	Sierra College Boulevard/Domingu ez Road	-	-	-	-	-	-	-	-	-	-	-	-



**Table 4.2-11  
Existing Plus Approved Projects (Baseline) Plus Project Condition  
Intersection Level of Service Summary**


Intersection		Existing Plus Approved Condition						Existing Plus Approved Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
13	Sierra College Boulevard/Rocklin Road <sup>1</sup>	0.661	B	0.802	D	0.521	A	0.701	C	0.896	D	0.751	C
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.840	D	1.008	F	0.631	B	0.850	D	1.040	F <sup>2</sup>	0.665	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.1 sec	C	12.2 sec	B	16.5 sec	C	16.2 sec	C	12.3 sec	B
17	Barton Road/Brace Road <sup>1</sup> (Loomis)	16.2 sec	C	15.2 sec	C	9.5 sec	A	16.5 sec	C	15.7 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road <sup>1</sup> (Loomis)	15.9 sec	C	11.2 sec	B	10.3 sec	B	16.5 sec	C	12.2 sec	B	11.3 sec	B
19	Sierra College Boulevard/King Road <sup>1</sup> (Loomis)	0.402	A	0.490	A	0.316	A	0.422	A	0.546	A	0.381	A
20	Sierra College Boulevard/English Colony Way <sup>1</sup> (Placer County)	11.1 sec	B	14.0 sec	B	10.7 sec	B	11.4 sec	B	15.6 sec	C	11.8 sec	B
21	Taylor Road/King Road <sup>1</sup> (Loomis)	0.601	B	0.604	B	0.409	A	0.607	B	0.620	B	0.429	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

<sup>1</sup> LOS C required for these intersections. LOS D acceptable for all other intersections.

<sup>2</sup> Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.

 (Shade) = Significant Impact

 Exceeds level of service criteria

As shown in Table 4.2-12, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following six roadway segments:

- ▶ Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- ▶ Pacific Street between Sierra College Boulevard and Dominguez Road
- ▶ Sierra College Boulevard between English Colony Way and King Road (Placer County)
- ▶ Sierra College Boulevard between King Road and Taylor Road (Loomis)
- ▶ Sierra College Boulevard between Taylor Road and I-80
- ▶ Sierra College Boulevard between Dominguez Road and Rocklin Road

Similar to the previous scenarios, these segments will exceed the threshold of daily capacity in the existing plus approved projects (baseline) plus project scenario. However, in the a.m., p.m. and Saturday peak hours, the traffic on all six roadway segments are forecast to operate with satisfactory v/c ratios in the peak hours with project conditions. Therefore, the project does not cause a significant impact on the roadway segments.

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	18,110	1.21	F	12,550	0.84	D
	Horseshoe Bar Road and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	11,553	0.77	C	4,360	0.29	A
Pacific Street	Sierra College Boulevard and Dominguez Road <sup>1</sup>	Two-lane Collector	15,000	12,378	0.83	D	6,680	0.45	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	19,739	0.66	B	9,400	0.31	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	25,701	0.86	D	13,730	0.46	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	16,259	0.54	A	18,000	0.60	B
	Sierra College Boulevard and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	7,866	0.52	A	6,470	0.43	A
Barton Road	Rocklin Road and Brace Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	4,104	0.27	A	2,790	0.19	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,191	0.41	A	6,550	0.44	A
Brace Road	I-80 and Barton Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	4,156	0.28	A	2,100	0.14	A
	I-80 and Sierra College Boulevard <sup>1</sup> (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A

**Table 4.2-12  
Existing Plus Approved Projects (Baseline) Plus Project -  
Daily Roadway Segment Level of Service Summary**

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Sierra College Boulevard	English Colony Way and King Road <sup>1</sup> (Placer County)	Two-lane Collector	15,000	12,160	0.81	D	9,150	0.61	B
	King Road and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	13,550	0.90	E	10,230	0.68	B
	Taylor Road and I-80	Two-lane Collector	15,000	21,716	1.45	F	13,140	0.88	D
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	23,175	0.77	C	21,440	0.71	C
	Dominguez Road and Rocklin Road <sup>1</sup>	Two-lane Collector	15,000	18,465	1.23	F	16,330	1.09	F
Granite Drive	Dominguez Road and Sierra College Boulevard <sup>1</sup>	Four-lane Undivided Arterial	30,000	6,348	0.21	A	4,460	0.15	A
	Dominguez Road and Rocklin Road <sup>1</sup>	Four-lane Undivided Arterial	30,000	8,518	0.28	A	8,040	0.27	A
Dominguez Road	Taylor Road and Granite Drive <sup>1</sup>	Two-lane Collector	15,000	2,522	0.17	A	640	0.04	A
King Road	Sierra College Boulevard and Taylor Road <sup>1</sup> (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A
Notes: ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections. <sup>1</sup> LOS C required for these intersections. LOS D acceptable for all other intersections. <input type="checkbox"/> Exceeds level of service criteria									

**IMPACTS AND MITIGATION MEASURES**

**IMPACT 4.2-1** **Rocklin Road/I-80 Westbound Ramps.** *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered **significant**.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection. For the existing plus approved condition, this intersection operates at an LOS F with a volume/capacity ratio of 1.018 during the p.m. peak hour. The project would further degrade the volume/capacity ratio by more than 5 percent to 1.075 during the p.m. peak hour. This impact would be considered **significant**.

## Mitigation Measure 4.2-1 Rocklin Road/I-80 Westbound Ramps

- ▶ Prior to the issuance of any building permits for the project, the project applicant shall pay the City's traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of improvements necessitated in part by project impacts, as reflected in a comparison between Exhibit 4.2-2 (Existing Geometrics and Traffic Control) and Exhibit 4.2-15 (Existing Plus Approved Project (Baseline) Plus Project Condition – Mitigations), consistent with the City's CIP and the SPRTA programs.

*Explanation:* The City has previously proposed an improvement at the intersection of Rocklin Road/I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80 westbound on ramp that would mitigate the impact at this location. The City is currently evaluating that option and other design options through a contract with the traffic engineering and planning firm of Omni-Means.

The City of Rocklin 2004 Traffic Impact Fee and Capital Improvement Program Update (May 23, 2007) identifies the Rocklin Road/Interstate 80 interchange for needed improvements. Of the different improvement design options being explored, the CIP conservatively includes the highest design cost, such that all other improvement design options are below the cost identified in the CIP and are assured adequate CIP program funding. The fees for the improvements to the Rocklin Road/I-80 interchange are to be funded in part by the City's impact fees and in part by the South Placer Regional Transportation Authority (SPRTA) fees.

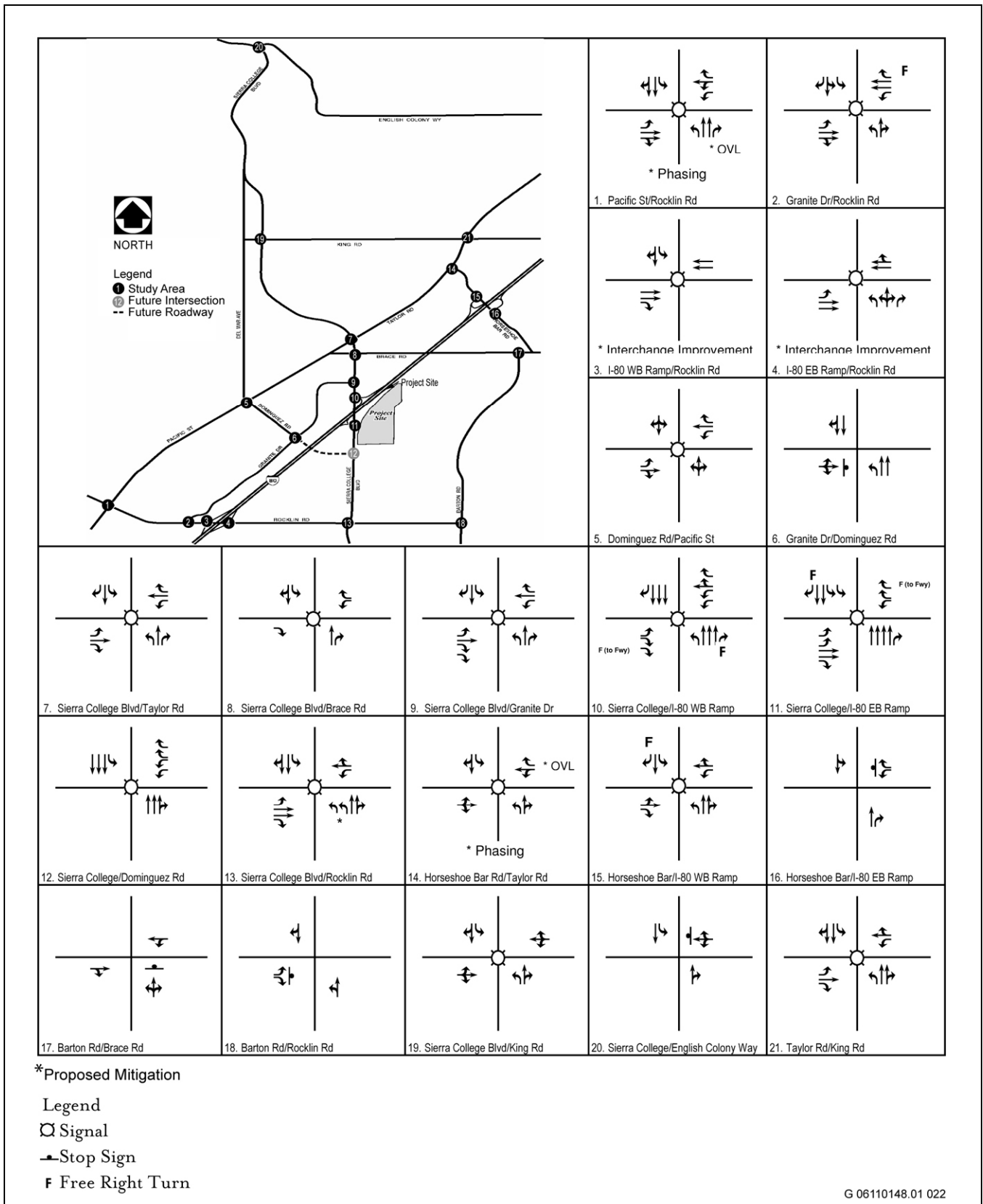
The SPRTA is a Joint Powers Authority (JPA) comprised of the Cities of Lincoln, Rocklin, Roseville and the County of Placer. The SPRTA was formed for the purpose of implementing a regional transportation and air quality mitigation fee to fund specified regional transportation projects. The Placer County Transportation Planning Agency (PCTPA) is designated as the entity to provide administrative, accounting, and staffing support for the SPRTA. PCTPA adopted a Regional Transportation Funding Strategy in August 2000, which included the development of a regional transportation impact fee program and a mechanism to implement the impact fee. The Rocklin Road/Interstate 80 interchange is one of the many improvement projects identified by SPRTA.

The proposed project would be conditioned to contribute its fair share to the cost of circulation improvements via the existing Citywide traffic impact mitigation (TIM) fee program that will be applied as a uniformly applied development policy and standard. The traffic impact mitigation fee program is one of the various methods that the City of Rocklin uses for financing improvements identified in the Capital Improvement Program (CIP). The CIP, which is overseen by the City's Engineering Department, is updated periodically to assure that growth in the City and surrounding jurisdictions does not degrade the Level of Service on the City's roadways. The roadway improvements that are identified in the CIP in response to anticipated growth in population and development in the City are consistent with the City's Circulation Element. The traffic impact fee program collects funds from new development in the City to finance a portion of the roadway improvements that result from traffic generated by new development. Fees are calculated on a citywide basis, differentiated by type of development in relationship to their relative traffic impacts. The intent of the fee is to provide an equitable means of ensuring that future development contributes their fair share of roadway improvements, so that the City's General Plan Circulation policies and quality of life can be maintained.

The proposed mitigations for the existing plus approved projects (baseline) plus project are shown in Exhibit 4.2-15 and the LOS following their implementation are identified in Table 4.2-13. Proposed new features or proposed changes to the phasing of improvements can be identified by comparing the diagrams in Exhibit 4.2-15 to the corresponding diagrams found in Exhibit 4.2-2 (Existing Geometrics and Traffic Control).

### **Level of Significance after Mitigation**

With implementation of the identified mitigation measure, the Rocklin Road/I-80 westbound ramps intersection would operate at an acceptable LOS and this impact would be considered less than significant.



**Existing Plus Approved Projects (Baseline)  
Plus Project Condition - Mitigations**

**Exhibit 4.2-15**


**Table 4.2-13  
Existing Plus Approved Projects (Baseline) Plus Project Condition Peak Hour Intersection Level of  
Service Summary - With Mitigation**


Intersection		Existing Plus Approved Plus Project Condition						Existing Plus Approved Plus Project Condition - With mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS
1	Rocklin Road/Pacific Street <sup>1</sup>	0.872	D	0.997	E	0.632	B	0.872	D	0.997	E	0.632	B
2	Rocklin Road/Granite Drive	0.469	A	0.767	C	0.559	A	0.469	A	0.767	C	0.559	A
3	Rocklin Road/I-80 Westbound Ramps	0.797	C	1.075	F	0.711	C	0.529	A	0.683	B	0.529	A
4	Rocklin Road/I-80 Eastbound Ramps	0.843	D	1.000	F	0.619	B	0.694	B	0.791	C	0.524	A
5	Dominguez Road/Pacific Street <sup>1</sup>	0.401	A	0.479	A	0.253	A	0.401	A	0.479	A	0.253	A
6	Dominguez Road/Granite Drive <sup>1</sup>	11.9 sec	B	12.4 sec	B	10.3 sec	B	11.9 sec	B	12.4 sec	B	10.3 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.655	B	0.840	D	0.537	A	0.655	B	0.840	D	0.537	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.487	A	0.655	B	0.429	A	0.487	A	0.655	B	0.429	A
9	Sierra College Boulevard/Granite Drive	0.583	A	0.713	C	0.580	A	0.583	A	0.713	C	0.580	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.325	A	0.372	A	0.267	A	0.325	A	0.372	A	0.267	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.414	A	0.589	A	0.764	C	0.414	A	0.589	A	0.764	C
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road <sup>1</sup>	0.701	C	0.896	D	0.751	C	0.578	A	0.779	C	0.670	B
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.850	D	1.040	F	0.665	B	0.850	D	1.040	F	0.665	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.5 sec	C	16.2 sec	C	12.3 sec	B	16.5 sec	C	16.2 sec	C	12.3 sec	B

**Table 4.2-13  
Existing Plus Approved Projects (Baseline) Plus Project Condition Peak Hour Intersection Level of Service Summary - With Mitigation**

Intersection		Existing Plus Approved Plus Project Condition						Existing Plus Approved Plus Project Condition - With mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS
17	Barton Road/Brace Road <sup>1</sup> (Loomis)	16.5 sec	C	15.7 sec	C	9.7 sec	A	16.5 sec	C	15.7 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road <sup>1</sup> (Loomis)	16.5 sec	C	12.2 sec	B	11.3 sec	B	16.5 sec	C	12.2 sec	B	11.3 sec	B
19	Sierra College Boulevard/King Road <sup>1</sup> (Loomis)	0.422	A	0.546	A	0.381	A	0.422	A	0.546	A	0.381	A
20	Sierra College Boulevard/English Colony Way <sup>1</sup> (Placer County)	11.4 sec	B	15.6 sec	C	11.8 sec	B	11.4 sec	B	15.6 sec	C	11.8 sec	B
21	Taylor Road/King Road <sup>1</sup> (Loomis)	0.607	B	0.620	B	0.429	A	0.607	B	0.620	B	0.429	A

Notes:  
 ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.  
<sup>1</sup>LOS C required for these intersections. LOS D acceptable for all other intersections.

 (Shade) = Significant Impact

 Mitigated Condition

**IMPACT 4.2-2 Rocklin Road/I-80 Eastbound Ramps.** *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection from LOS E to LOS F during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered **significant**.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection. For the existing plus approved condition, this intersection operates at an LOS E with a volume/capacity ratio of 0.946 during the p.m. peak hour. The project would further degrade the intersection operations to an LOS F with a volume/capacity ratio of 1.000 during the p.m. peak hour.

This degradation in the volume/capacity ratio would be greater than 5 percent. Therefore, this impact would be considered **significant**.

**Mitigation Measure 4.2-2 Rocklin Road/I-80 Eastbound Ramps**

- ▶ Implement Mitigation Measure 4.2-1 described above in order to reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps and improve operations at this intersection to acceptable levels.

*Explanation:* The proposed mitigations for the existing plus approved projects (baseline) plus project are shown in Exhibit 4.2-15 and the LOS following their implementation are identified in Table 4.2-13. Proposed new features

or proposed changes to the phasing of improvements can be identified by comparing the diagrams in Exhibit 4.2-15 to the corresponding diagrams found in Exhibit 4.2-2 (Existing Geometrics and Traffic Control).

### Level of Significance after Mitigation

With implementation of the identified mitigation measure, the Rocklin Road/I-80 eastbound ramps intersection would operate at an acceptable LOS and this impact would be considered less than significant.

**IMPACT 4.2-3** **Sierra College Boulevard/Rocklin Road Intersection.** *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Rocklin Road intersection during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered **significant**.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Rocklin Road intersection. For the existing plus approved condition, this intersection operates at an LOS D with a volume/capacity ratio of 0.802 during the p.m. peak hour. Although the intersection would continue to operate at LOS D with the project, the volume/capacity ratio would be degraded by more than 5 percent to 0.896 during the p.m. peak hour. This impact would be considered **significant**.

### Mitigation Measure 4.2-3 Sierra College Boulevard/Rocklin Road Intersection

- ▶ The project applicant shall build an additional northbound left-turn lane (resulting in dual left-turn lanes) at this intersection. There is an approved, not-yet-built project that is obligated to construct this same improvement, and if that project completes this improvement prior to the proposed project, then this project's obligation to construct the improvement is no longer necessary.

*Explanation:* The proposed mitigations for the existing plus approved projects (baseline) plus project are shown in Exhibit 4.2-15 and the LOS following their implementation are identified in Table 4.2-13. Proposed new features or proposed changes to the phasing of improvements can be identified by comparing the diagrams in Exhibit 4.2-15 to the corresponding diagrams found in Exhibit 4.2-2 (Existing Geometrics and Traffic Control).

### Level of Significance after Mitigation

With the implementation of the identified mitigation measure, the intersection would operate at an acceptable LOS and this impact would be considered less than significant.

**IMPACT 4.2-4** **Rocklin Road/Pacific Street Intersection.** *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Rocklin Road/Pacific Street intersection during the p.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered **less than significant**.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Rocklin Road/Pacific Street intersection. For the existing plus approved projects condition, the Rocklin Road/Pacific Street intersection would operate at an LOS D with a volume/capacity ratio of 0.978 during the p.m. peak hour. The intersection would continue to operate at LOS D with the proposed project and the volume/capacity ratio would be degraded to 0.997, which represents less than a 5 percent decrease. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.



#### Mitigation Measure 4.2-4 Rocklin Road/Pacific Street Intersection

No mitigation is necessary.

#### Level of Significance after Mitigation

The project's impacts on the Rocklin Road/Pacific Street intersection would be considered less than significant.

**IMPACT 4.2-5** Taylor Road/Horseshoe Bar Road (Loomis) Intersection. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road (Loomis) intersection during the p.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered less than significant.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road (Loomis) intersection. For the existing plus approved projects condition, the Taylor Road/Horseshoe Bar Road (Loomis) intersection would operate at an LOS F with a volume/capacity ratio of 1.008 during the p.m. peak hour. The intersection would continue to operate at LOS F with the proposed project and the volume/capacity ratio would be degraded to 1.040, which represents less than a 5 percent decrease. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

#### Mitigation Measure 4.2-5 Taylor Road/Horseshoe Bar Road (Loomis) Intersection

No mitigation is necessary.

#### Level of Significance after Mitigation

The project's impacts on the Taylor Road/Horseshoe Bar Road (Loomis) intersection would be considered less than significant.

**IMPACT 4.2-6** Sierra College Boulevard/Taylor Road (Loomis) Intersection. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Taylor Road (Loomis) intersection during the p.m. peak hour from LOS C to LOS D. Based on the City of Loomis significance threshold, this impact would be considered significant.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Taylor Road (Loomis) intersection. For the existing plus approved condition, this intersection operates at an LOS C with a volume/capacity ratio of 0.750 during the p.m. peak hour. With the addition of project traffic, this intersection would operate at LOS D with a volume/capacity ratio of 0.840 during the p.m. peak hour. This impact would be considered **significant**.

#### Mitigation Measure 4.2-6 Sierra College Boulevard/Taylor Road Intersection (Loomis)

- Prior to the issuance of building permits for the project, the project applicant shall pay the SPRTA fee.

*Explanation:* The SPRTA is a Joint Powers Authority (JPA) comprised of the Cities of Lincoln, Rocklin, Roseville and the County of Placer. The SPRTA was formed for the purpose of implementing a regional transportation and air quality mitigation fee to fund specified regional transportation projects. The Placer County Transportation Planning Agency (PCTPA) is designated as the entity to provide administrative, accounting, and staffing support for the SPRTA. PCTPA adopted a Regional Transportation Funding Strategy in August 2000, which included the development of a regional transportation impact fee program and a mechanism to implement

the impact fee. The Sierra College Boulevard/Taylor Road intersection improvement project, one of the many improvement projects identified by SPRTA, is currently in the final design stage by the City of Rocklin.

### Level of Significance after Mitigation

With the implementation of the identified mitigation measure, the intersection would operate at an acceptable LOS and this impact would be considered less than significant.

**IMPACT 4.2-7 Roadway Segments.** *The proposed project would cause six roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all six roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered **less than significant**.*

As shown in Table 4.2-12, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following six roadway segments:

- ▶ Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- ▶ Pacific Street between Sierra College Boulevard and Dominguez Road
- ▶ Sierra College Boulevard between English Colony Way and King Road (Placer County)
- ▶ Sierra College Boulevard between King Road and Taylor Road (Loomis)
- ▶ Sierra College Boulevard between Taylor Road and I-80
- ▶ Sierra College Boulevard between the future Dominguez Road and Rocklin Road

These segments would exceed the threshold of daily capacity in the existing plus approved projects (baseline) plus project scenario. However, in both the a.m. and p.m. peak hours, the traffic on all six roadway segments is forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions, as shown in Table 4.2-10. Therefore, the project's impacts on roadway segments would be considered **less than significant**.

### Mitigation Measure 4.2-7 Roadway Segments

No mitigation is necessary.

### Level of Significance after Mitigation

The project's impacts on roadway segments would be considered less than significant.

**IMPACT 4.2-8 Entrance Vehicle Stacking.** *The project's main access roadway has adequate length to avoid entrance vehicle stacking. Therefore, the project's effects on entrance vehicle stacking would be considered **less than significant**.*

The main project access driveway on Sierra College Boulevard would form the east leg of the I-80 eastbound off-ramp intersection. The main access drive is approximately 300 feet in length and terminates at a roundabout on the site. Vehicles entering the project could make a right turn into the Village 1 area from the access drive (approximately 250 feet from Sierra College Boulevard); however, left turns would be prohibited along the access drive. To determine whether adequate throat distance is provided to ensure excessive vehicle stacking on the access drive does not occur, the Access Management Manual, published by the Transportation Research Board, was consulted. According to Table 10-8 in the Access Management Manual, the minimum throat length recommended for a driveway with three egress lanes is 200 feet. Approximately 250 feet is provided from Sierra College Boulevard to the first right-turn opportunity into the Village 1 area. This distance would exceed the recommendation in the Access Management Manual. As a result, minimal stacking of vehicles from the internal right turn to Sierra College Boulevard is expected and this impact would be considered **less than significant**.

## Mitigation Measure 4.2-8 Entrance Vehicle Stacking

No mitigation is necessary.

### Level of Significance after Mitigation

The proposed project would not cause excessive entrance vehicle stacking.

**IMPACT**     **Right Turns from Unsignalized Driveway.** *Northbound vehicles exiting from the project's unsignalized driveway would be required to cross two lanes of traffic. Sufficient gaps in the traffic stream would occur along Sierra College Boulevard to allow right turns from the project's unsignalized driveway to the northbound through lanes. Therefore, this impact would be considered **less than significant**.*

The geometrics shown on the project site plan for Sierra College Boulevard and the project driveways include the planned improvements to the I-80/Sierra College Boulevard interchanges as well as the improvements to Sierra College Boulevard along the project frontage. The project site plan includes one unsignalized driveway, located approximately half way between the I-80 eastbound off-ramp and the Dominguez Road extension. The unsignalized driveway would allow right turns in and out only onto Sierra College Boulevard. The northbound Sierra College Boulevard at the driveway location is made up of five lanes. The number 1, 2, and 3 lanes provide northbound through-movement. The number 4 lane provides northbound movement through the I-80 eastbound off-ramp intersection and becomes a “trap” lane onto the I-80 eastbound on-ramp. The number 5 lane is a right-turn-only lane into the proposed project at the Signalized I-80 eastbound off-ramp driveway.

Because of the width of Sierra College Boulevard at the unsignalized driveway, outbound vehicles could have difficulty turning onto the northbound Sierra College Boulevard through lanes, as those vehicles would need to cross both the right-turn lane into the proposed project and the freeway trap lane. To determine whether vehicles would be restricted from turning out of the driveway into the through lanes by heavy northbound through traffic, an operational analysis of this driveway location was prepared using Synchro 7. Synchro 7 allows the user to model the expected traffic operations of a corridor, rather than just a single intersection. The Synchro model is used extensively by the California Department of Transportation to model project impacts on State highway facilities.

The unsignalized driveway was modeled along with the two adjacent signalized intersections to determine whether adequate gaps would be caused by the traffic signals to allow egress from the driveway. The unsignalized operations analysis is provided in Appendix C (identified as Appendix I within Appendix C). The unsignalized LOS worksheets indicate the proportion of time that the westbound right-turn movement is not blocked by vehicles traveling northbound on Sierra College Boulevard as well as the capacity of the right-turn movement considering the total conflicting flow rate. In both the a.m. and p.m. peak hour, the capacity of the right-turn movement exceeds the demand for right turns (890 capacity vs. 193 demand during the a.m. peak hour, and 785 capacity vs. 394 demand during the p.m. peak hour). According to the calculations, the westbound right turn would be unblocked 82 percent of the time during the a.m. peak hour and 72 percent of the time during the p.m. peak hour. As a result, sufficient gaps in the traffic stream would occur along Sierra College Boulevard to allow right turns from the unsignalized driveway to the northbound through lanes and this impact would be considered **less than significant**.

## Mitigation Measure 4.2-9 Right Turns from Unsignalized Driveway

No mitigation is necessary.

## Level of Significance after Mitigation

The project's impacts on northbound vehicles turning right from the project's unsignalized driveway would be considered less than significant.

**IMPACT**      **Bicycle/Pedestrian Circulation Policy Consistency.** *The proposed project would include design components that are intended to allow safe pedestrian/bicycle access and movement to and through the site consistent with City policies. Therefore, this impact would be considered **less than significant**.*

Policy 6 of the Circulation Element of the City of Rocklin General Plan (1991) requires projects to promote pedestrian convenience through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers. The project design is intended to allow safe access and movement to, from and within the site for pedestrians and automobiles. This would be accomplished through the use of designated pedestrian circulation routes/walkways within the proposed parking lots that are articulated with differential landscaping and pavement markings. To provide access to the proposed Rocklin 60 residential subdivision to the east, a pedestrian/bicycle access point would be provided along the site's eastern boundary. These project components would be consistent with Policy 6 of the Circulation Element. Therefore, the proposed project would not be expected to conflict with adopted policies, plans, or program supporting alternative transportation and this impact would be **less than significant**.

### Mitigation Measure 4.2-10 Bicycle/Pedestrian Circulation Policy Consistency

No mitigation is necessary.

## Level of Significance after Mitigation

The project would be consistent with the City's policy regarding bicycle/pedestrian circulation. Therefore, the project's impact on bicycle/pedestrian circulation would be considered less than significant.