4.2 CIRCULATION AND PARKING

INTRODUCTION

This section of the EIR analyzes transportation impacts that would result from the implementation of the proposed B and 3rd Streets Visioning Process. Potential impacts to the surrounding roadway network and bicycle, pedestrian, and transit systems are evaluated, as well as parking impacts. Mitigation measures are suggested to reduce or eliminate potential significant impacts of the project.

SETTING

Description of Local Environment

The project area and surrounding roadway network are shown on Figure 4.2-1. The key intersections in the transportation analysis project study area are also shown on this figure.

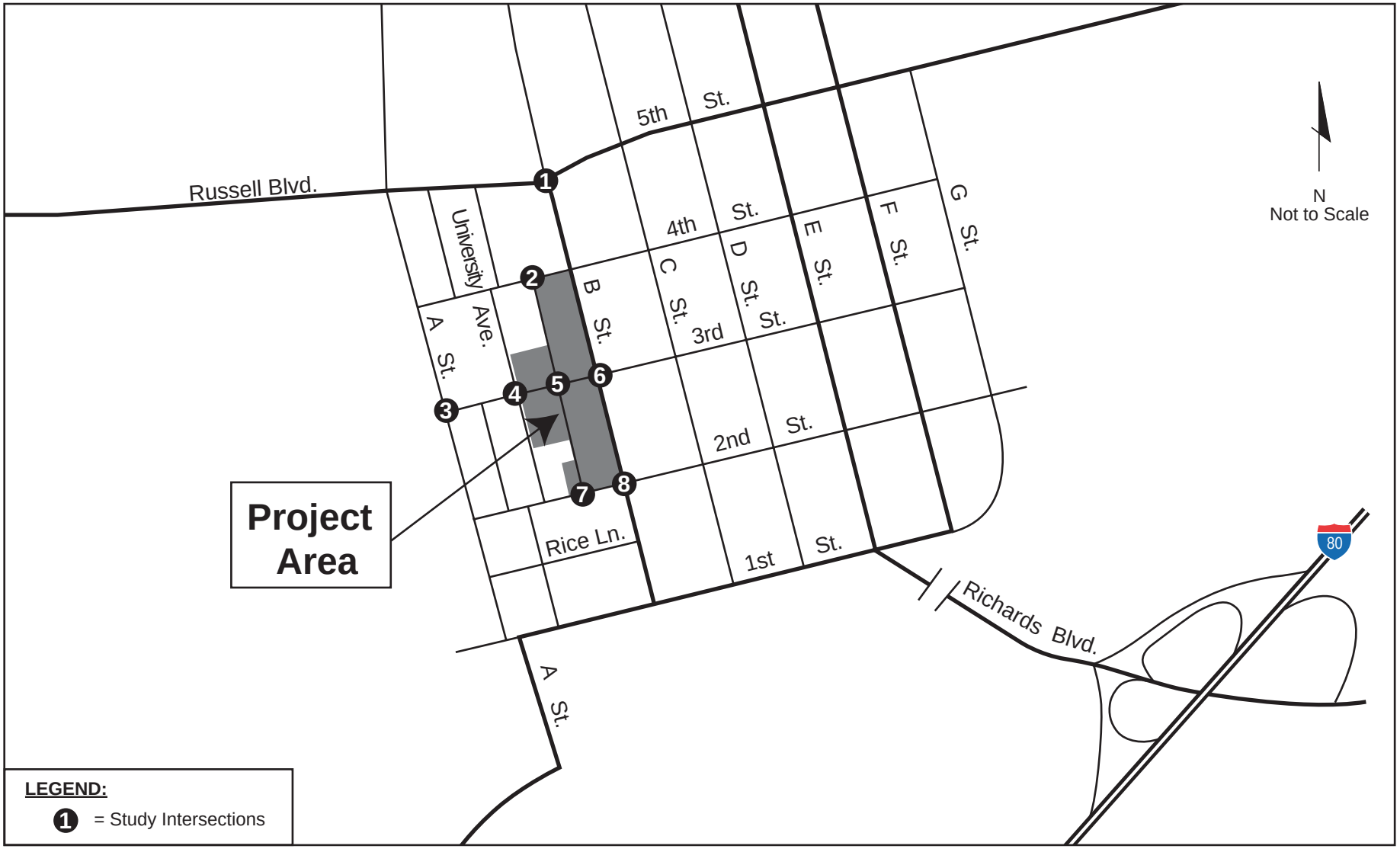
Existing Roadway Network

The primary access routes to the project site are A Street, University Avenue, B Street, 5th Street, 4th Street, 3rd Street, 2nd Street, and 1st Street. Descriptions of these roads and other local roads in the vicinity of the project are provided below.

A Street is a one-lane, one-way northbound street that runs along the University of California, Davis (UC Davis) campus. There is a bicycle lane (northbound) along A Street as well as a two-way bicycle path from 3rd Street to 5th Street. On-street parking is provided on the east side of the street, and about six spaces on the west side, just south of 3rd Street. Sidewalks are also provided on the east side of A Street.

University Avenue is a one-lane, one-way southbound street with a posted 25 miles per hour (mph) speed limit. There are no bicycle lanes. On-street parking is provided on the west side of the street, and limited by the provisions of the "W" parking permit district (described in the parking discussion below). Sidewalks are provided on both sides of the street.

B Street is a two-lane, north-south street with a posted 25 mph speed limit. Left turn lanes are provided at intersections, and a northbound turn lane between 4th Street and 5th Street. Bicycle lanes, sidewalks, limited on-street parking (no parking on east side of street from 3rd to 5th Streets, west side from 4th to 5th Streets and in vicinity of intersections), and bus stops are located along B Street. Segments with no parking include the east side of the street from 3rd Street to 5th Street, the west side of the street from 4th Street to 5th Street, and near intersections.



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PROJECT SITE AND STUDY INTERSECTION LOCATIONS

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2263-4.2-1

FIGURE 4.2-1

Fifth Street is a four-lane, east-west street with a posted 30 mph speed limit. Sidewalks and bus stops are located along 5th Street. There is no on-street parking.

Fourth Street is a two-lane, east-west street with sidewalks and on-street parking.

Third Street is a two-lane, east-west street with sidewalks. On-street parking is provided on the north side of the street, from A Street to B Street. Bollards are located at University Avenue positioned to allow only left turns to prevent east-west through traffic. Bicycle lanes are provided on sections of the north side of 3rd Street east of B Street, but not within the project area.

Second Street is a two-lane, east-west street with sidewalks and on-street parking on the north side only, from A to B, the majority limited by the provisions of the "W" permit district.

First Street is a two-lane, east-west street with sidewalks. Bicycle lanes are provided between A and B Streets, and a bicycle path on the south side, east of B Street.

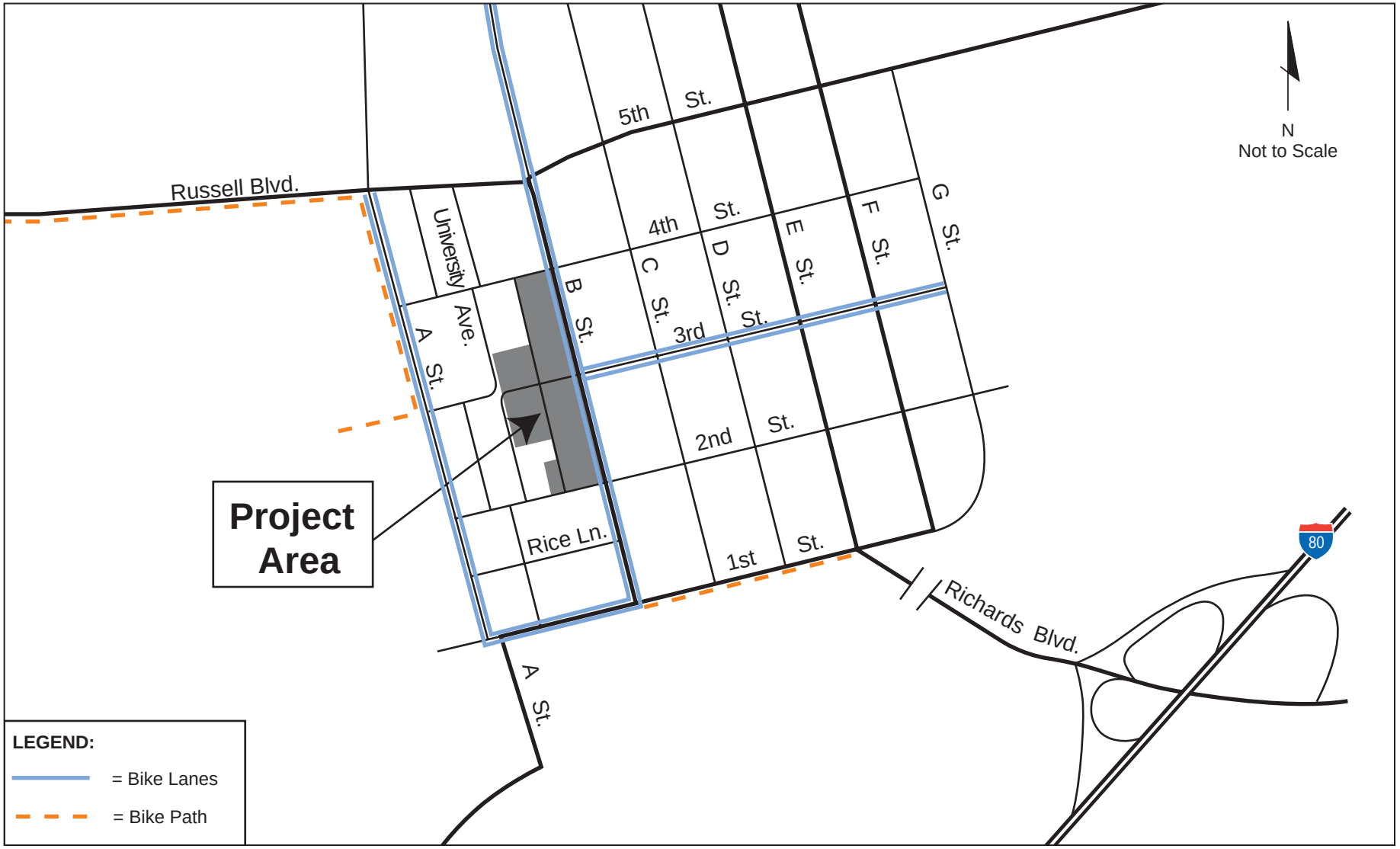
There is an *unnamed alley* running north-south between University Avenue and B Street, that extends from 2nd Street to 4th Street. The alley is a legal public right-of-way 13-feet in width that provides access to a number of residences and retail spaces within the project area. The alley is a legal parcel of land with a constant width and alignment between blocks. Parking is available adjacent to the alley but outside of the right-of-way; however, it is reserved for tenants and customers of the adjacent properties. Some unregulated parking occurs within or partially within the alley right-of-way, although this is not legal parking. The effective width of the alley varies along its length due to the different building setbacks, trees, parked vehicles, and varying edge of pavement.

Existing Pedestrian and Bicycle Facilities

The surrounding area provides good access for cyclists and pedestrians. Figure 4.2-2 shows the existing bicycle lanes and bicycle paths in the area. 3rd Street from A Street into the downtown has a high volume of pedestrian and bicycle activity. This can be attributed to students and University employees traveling between the downtown area and bus stops along B Street and the UC Davis campus.

Existing Transit System

Transit services to the project area are provided by Yolobus and the student-run Unitrans. Bus lines near the project vicinity are presented on Figure 4.2-3.



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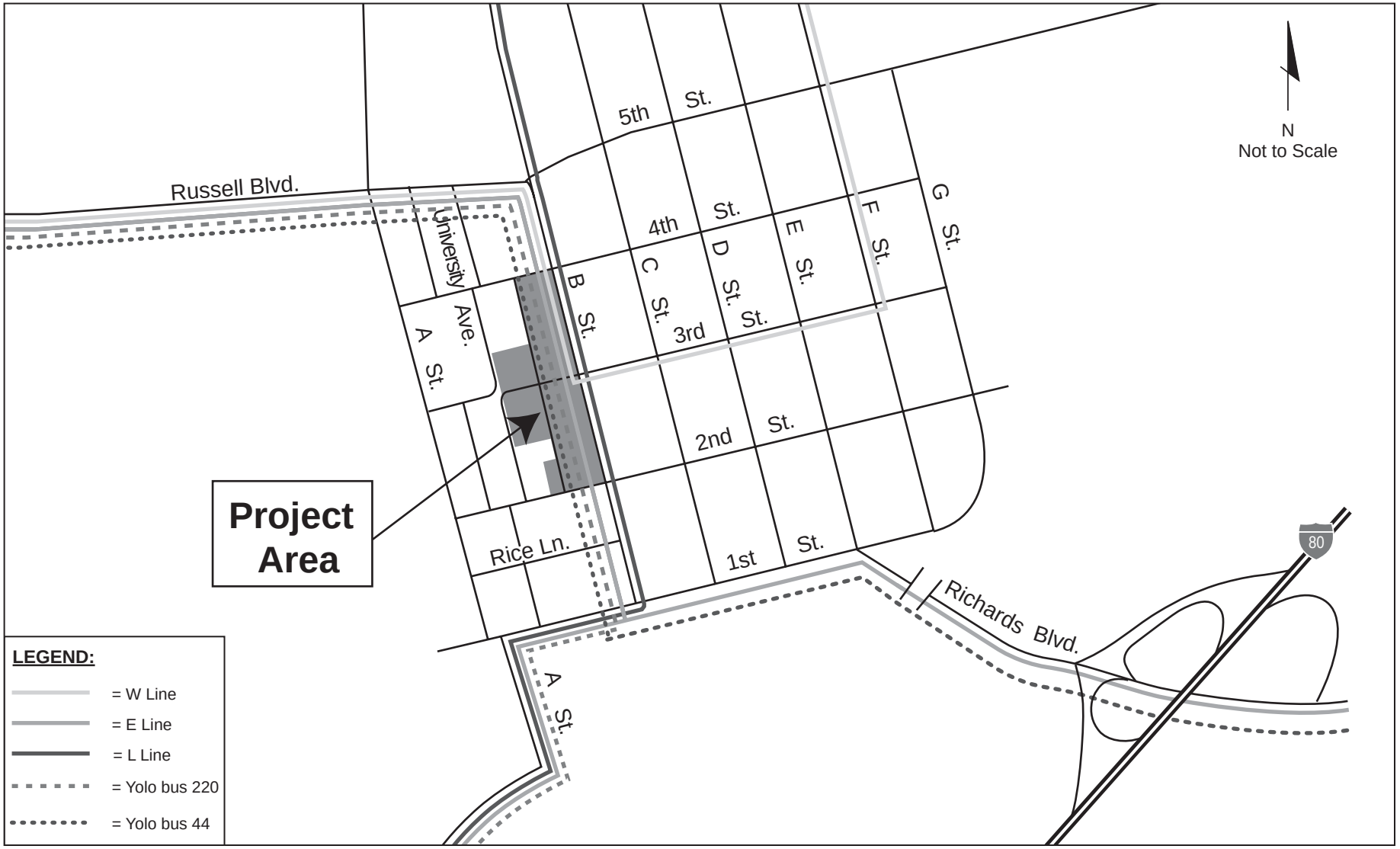
EXISTING BICYCLE FACILITIES

FIGURE 4.2-2



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EXISTING BUS ROUTES

FIGURE 4.2-3

Yolobus

Yolobus is run by the Yolo County Transportation District, which operates local and inter-city bus service year-round in Yolo County and neighboring areas. Yolobus serves Davis, West Sacramento, Winters, Woodland, downtown Sacramento, Sacramento International Airport, Cache Creek Casino, Esparto, Madison, and Knights Landing. Fares are $1.50 ($0.75 student/$0.60 senior) for regular routes and $2.00 ($1.00 student/senior) for express routes. Three Yolobus routes (43 Reverse, 44, and 220) serve the project vicinity:

- *Route 42A/B* provides service between Davis and Sacramento International Airport, with stops in West Sacramento and Woodland. The route runs on 5th Street in the project vicinity. The route operates from 5:00 AM to midnight, with hourly headways.

- *Route 43 Reverse* services Davis and Sacramento. Route 43 Reverse buses run along B Street with a bus stop just north of 3rd Street. Service is provided between approximately 6:00 AM to 8:30 AM and 4:00 PM to 6:30 PM Monday through Friday, with 30-minute to 1-hour headways.

- *Route 44* services Davis and Sacramento. Route 44 buses run along B Street with bus stops just north of 3rd Street. Service is provided between approximately 6:00 AM to 8:30 AM and 4:00 PM to 7:00 PM Monday through Friday, with 30-minute to 1-hour headways.

- *Route 220* services Davis, Winters, and Vacaville. Route 220 buses run along B Street with bus stops just north of 3rd Street. Service is provided between approximately 7:00 AM to 5:00 PM Monday through Friday and between 8:00 AM to 4:30 PM on Saturdays. Four circuits are made in each direction during that time, two in the morning and two in the afternoon.

Unitrans

Unitrans is a student-run public bus system that serves UC Davis and the City of Davis. Buses run more frequently during the UC Davis academic year when ridership is higher, and less frequently during the summer and other academic breaks. Fares are $1.00, and many types of prepaid discounted tickets and passes are available. One special fare category is UC Davis undergraduate students, who can show a valid ID and ride free because a portion of their quarterly ASUCD fees go to Unitrans. Seniors (60+) and City employees may also ride free with an ID card.

Three routes (E, L, and W) serve the project area:

- *Route E* runs along 5th Street and B Street along the edge of the project area. The E “Downtown/F Street/J Street” line has bus stops in both directions on B Street just north of 3rd Street. The route operates from 7:00 AM to midnight, with 30-minute headways.

- *Route L* runs along B Street in the project vicinity. The L "8th Street/Chestnut/Fremont Circle" line has bus stops in both directions on B Street just north of 3rd Street. The route operates from 7:00 AM to midnight, with 20 to 40-minute headways.

- *Route W* runs along B Street, 5th Street, and 1st Street in the project vicinity. The W "Cowell/Lillard/Drummond" line has bus stops in both directions on B Street just north of 3rd Street. The route operates from 7:00 AM to midnight, with ten to 20-minute headways. According to Unitrans, the W Line will most likely be re-routed during Summer 2006 and will no longer be using B Street.

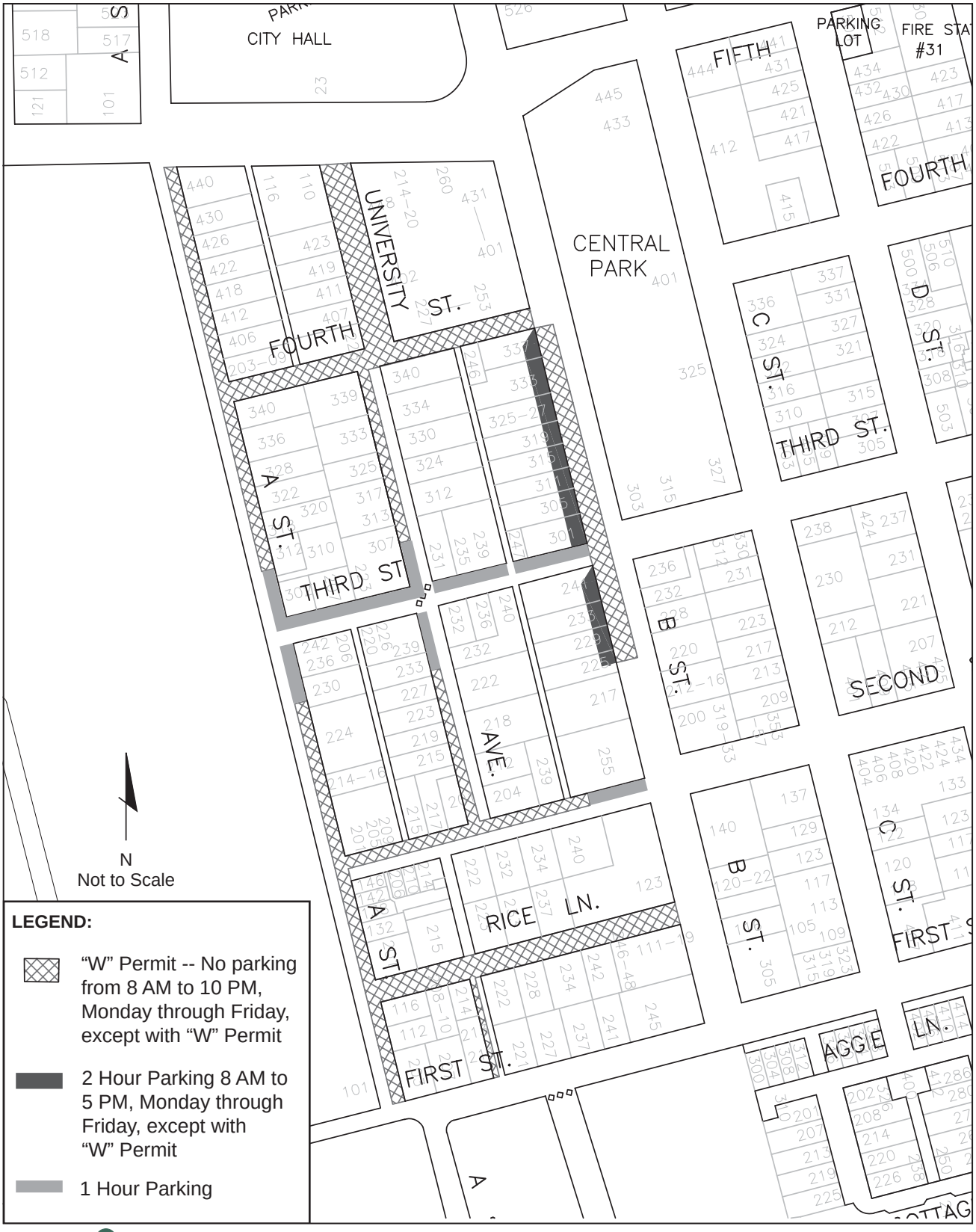
Existing Parking Conditions

Both on-street and off-street parking is currently provided within the project vicinity. A majority of the on-street parking is reserved for those with a "W" permit, which is available to residents and businesses west of B Street. Within the "W" permit zone, parking is prohibited from 8:00 AM to 10:00 PM, Monday through Friday, for vehicles without a "W" Permit. One-hour parking is allowed in the on-street parking spaces that are not subject to the "W" permit restrictions. The majority of one-hour, on-street parking is located along 3rd Street. The permit parking areas and one-hour parking areas are shown on Figure 4.2-4. There is street frontage throughout the City on which parking is prohibited at all time.

Off-street parking is provided in some surface lots (Baker's Square and at the corner of the alley and 2nd Street) and off of the alleys that run through the project area. The surface lots are reserved for businesses in the area, with posted "Customer Parking Only" signs. Parking off of the alleys is restricted to tenants of residential units along the alley.

Parking supply and occupancy surveys were conducted during the mid-day (11:00 AM to 1:00 PM) and evening (7:00 PM to 9:00 PM) periods, to determine the number of parking spaces and occupancies of those spaces within the study area. Figure 4.2-5 and Figure 4.2-6 present the parking survey results for mid-day and evening conditions, respectively. There are 87 on-street spaces (excluding alley spaces) within the blocks bounded by 2nd Street, 4th Street, B Street, and University Avenue. There are 130 off-street parking spaces, including 56 commercial spaces in the lots at the northwest corner of B/3rd Streets, the northwest corner of B/2nd Streets, and the alley lot north of 2nd Street. Approximately 74 residential spaces are located along the alley. This is an estimate of the actual effective parking supply, as not all parking spaces are clearly striped.

During the mid-day survey, the on-street occupancy (number of parked vehicles/number of spaces provided) on the various block faces varied from 55 percent to 90 percent. In total, 26 of the 87 on-street spaces were vacant. For the off-street parking, occupancy of the various individual commercial lots ranged from about 60 percent to 100 percent occupied (a total of 16 vacant spaces), and the alley residential parking was 69 percent occupied overall (23 spaces vacant). Overall, there were 65 vacant spaces observed during the mid-day count in the survey area.



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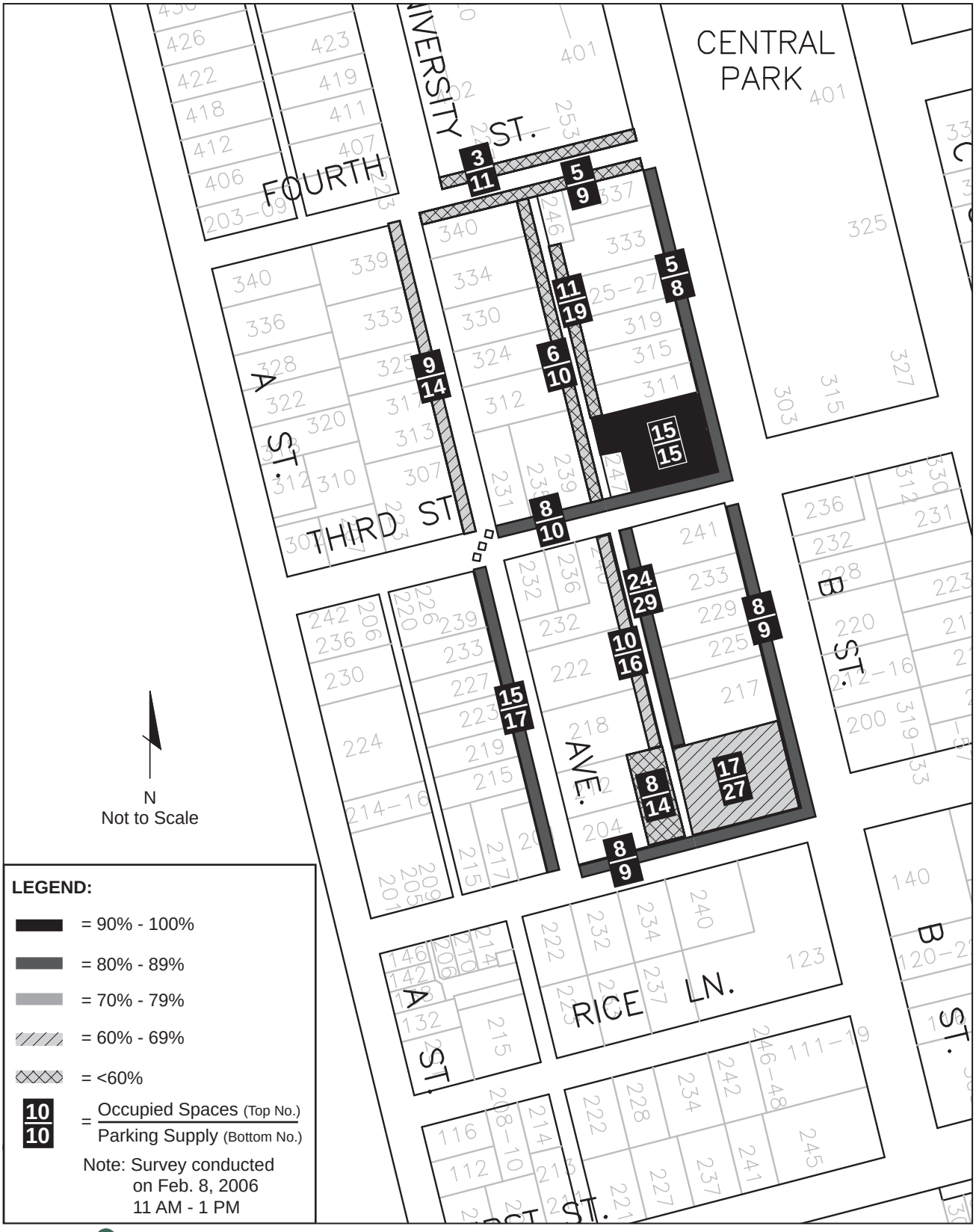
ON-STREET PARKING RESTRICTIONS

FIGURE 4.2-4



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MID-DAY STUDY AREA PARKING SUPPLY AND OCCUPANCY

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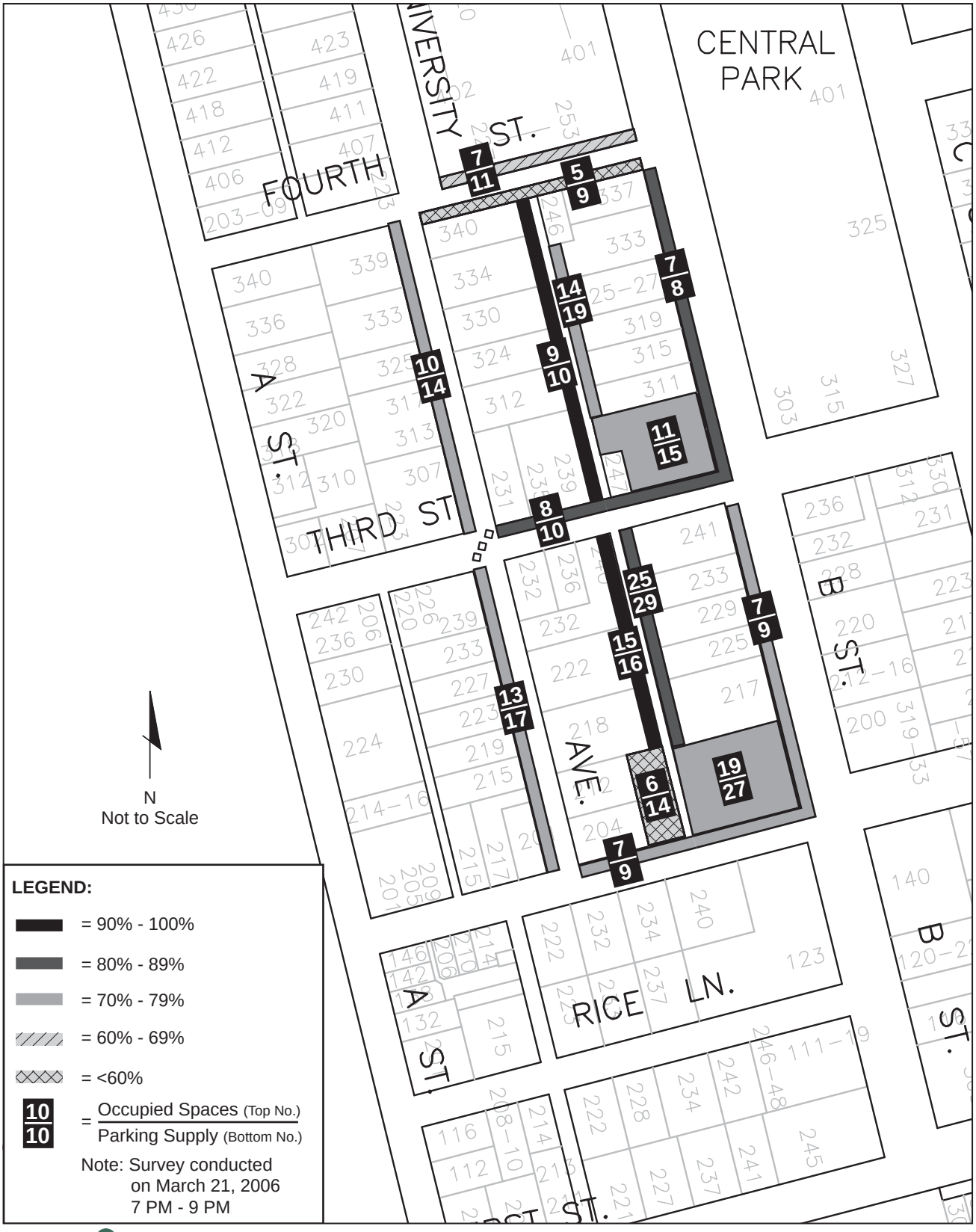
FIGURE 4.2-5



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EVENING STUDY AREA PARKING SUPPLY AND OCCUPANCY

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2263-4.2-6

FIGURE 4.2-6

During the evening survey, the on-street occupancy on each block varied from 50 percent to 85 percent, with 23 total vacant spaces. For the off-street parking, occupancy of the various individual commercial lots ranged from about 40 percent to 70 percent occupied (a total of 20 vacant spaces), and the alley residential parking was 85 percent occupied overall (11 spaces vacant). Overall, there were 44 vacant spaces observed during the evening count.

Study Intersections

In general, the operational characteristics of a roadway network are defined by the operations of key intersections within the network. Intersections are typically considered to be the critical analysis locations, because conflicting traffic movements at intersections impose capacity constraints on the overall roadway network.

The following eight study intersections were selected in consultation with City staff as locations to include in the transportation analysis:

1. B Street / 5th Street (signalized)
2. Alley / 4th Street (unsignalized)
3. A Street / 3rd Street (unsignalized)
4. University / 3rd Street (unsignalized)
5. Alley / 3rd Street (unsignalized)
6. B Street / 3rd Street (signalized)
7. Alley / 2nd Street (unsignalized)
8. B Street / 2nd Street (unsignalized)

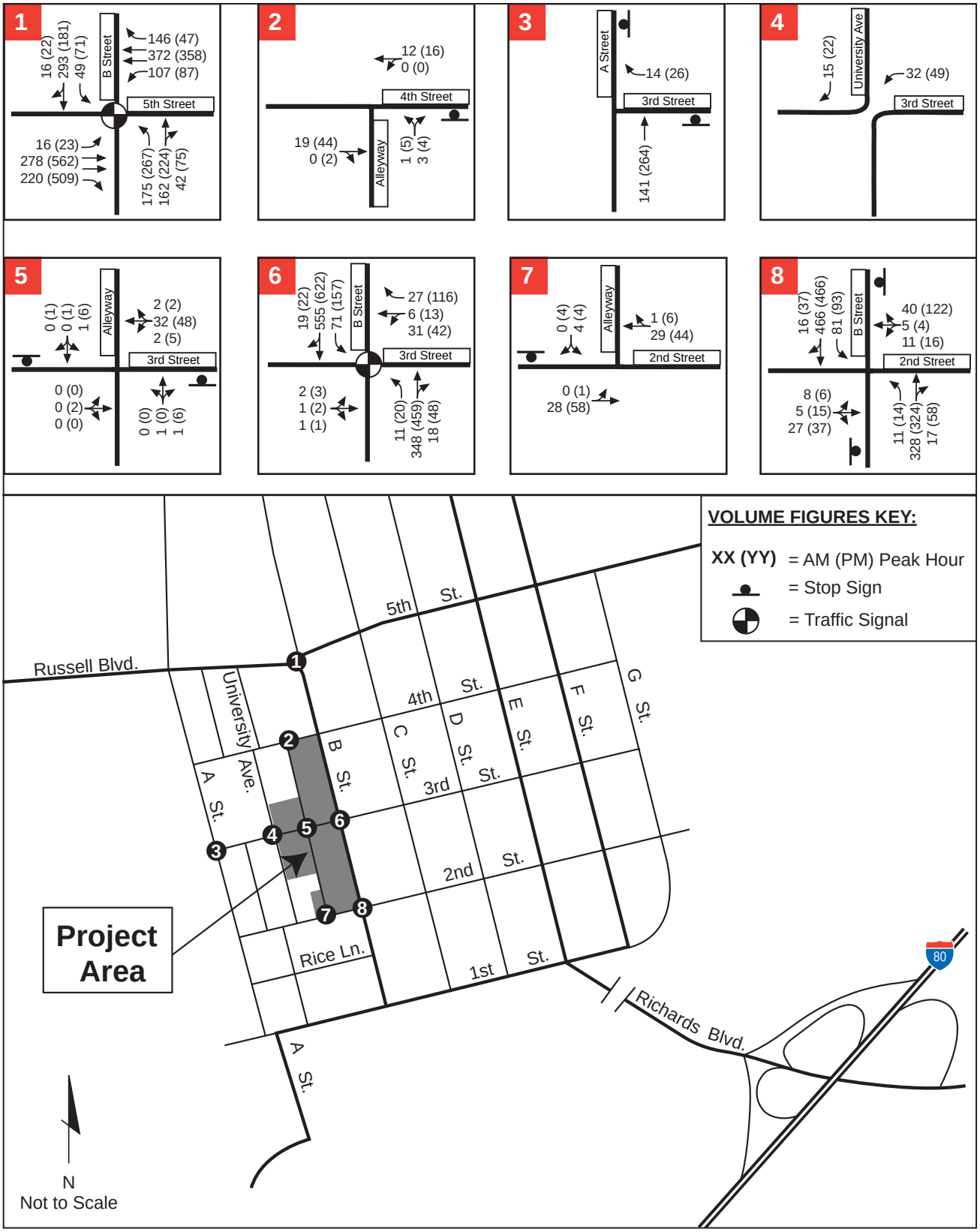
The intersections of B Street / 4th Street and B Street / 1st Street were considered in a preliminary list of study intersections. However, both of these intersections operate at LOS C or better under existing conditions, and are not projected to experience a level of traffic growth in the future that would substantially affect the LOS, based on the City of Davis Travel Demand Model and project traffic projections. Therefore these two intersections were not included in the EIR traffic analysis.

Existing Traffic Conditions Analysis

The following discussion summarizes the methods used to analyze the existing operating conditions of the study intersections and presents the results of the analysis.

Existing Traffic Volumes

Traffic operations at the study intersections were analyzed for the weekday morning (AM) and evening (PM) peak hours. Peak traffic volumes usually occur during the morning and evening commute periods between 7:00 AM and 9:00 AM and 4:00 PM and 6:00 PM, respectively. Existing intersection vehicle turning movement counts were conducted in December 2005 and in February 2006 when local schools and UC Davis were in session. The individual peak hour volumes at each intersection are used in this analysis. Figure 4.2-7 presents the existing AM and PM peak-hour turning movement volumes at the study intersections.



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EXISTING CONDITIONS
INTERSECTION LANE GEOMETRIES AND PEAK HOUR VOLUMES

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2263-4.2-7

FIGURE 4.2-7

Intersection Level of Service Method

The operations of roadway facilities are described using the level of service concept. Level of service (LOS) is a qualitative description of traffic flow from the vehicle driver's perspective based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, as the best operating conditions, to LOS F, as the worst operating conditions. LOS E represents "at capacity" operations. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

Signalized Intersections Analysis

The peak hour operations of the signalized study intersections were evaluated using the method in Chapter 16 of the *2000 Highway Capacity Manual (HCM)* (Transportation Research Board). This method correlates the LOS to the average control delay experienced by drivers at the intersection in seconds per vehicle. Control delay refers to the total delay experienced by drivers as a result of the traffic control device, i.e. the signal. It includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for the signalized intersections is correlated to a level of service designation as presented in Table 4.2-1.

Table 4.2-1
Signalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual,* Transportation Research Board, 2000.

Unsignalized Intersections Analysis

For unsignalized (four-way stop-controlled and side-street stop-controlled) intersections, the level of service calculations were conducted using the method in Chapter 17 of the *2000 Highway Capacity Manual*. The LOS rating is based on the average control delay expressed in seconds per vehicle. At all-way stop-controlled intersections, LOS is based on the average delay experienced on all approaches. At side-street stop-controlled intersections, level of service is calculated for the stopped movements and the left-turn movements from the major street. Typically the movement (or lane if more than one movement occurs in a lane) with the worst LOS rating is reported. Table 4.2-2 summarizes the relationship between delay and LOS for unsignalized intersections.

Table 4.2-2
Unsignalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Per Vehicle (Seconds)
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual,* Transportation Research Board, 2000.

Intersection Level of Service Standard

The City of Davis generally strives to maintain a LOS E or better standard for both signalized and unsignalized intersections. This is measured by the intersection average LOS for both signalized and all-way stop controlled intersections, and by the worst-case movement for side-street stop controlled intersections. The precise level-of-service standard for the City is provided in the Mobility Chapter of the General Plan (Policy MOB 1.1).

Existing Intersection Levels of Service

The existing lane configurations and the peak hour turning movement volumes were used to calculate the levels of service for the study intersections during the AM and PM peak hours. The results of the LOS analysis for existing conditions are presented in Table 4.2-3.

The results of the analysis indicate that under existing conditions, all study intersections operate at an acceptable level of service during the AM and PM peak hours.

Table 4.2-3
Existing Intersection Levels of Service

Intersection		Control	Peak Hour	Existing	
				Delay[1]	LOS
1	B Street / 5th Street	Signal	AM	44	D
			PM	31	C
2	Alley / 4th Street	Side Street Stop	AM	9	A
			PM	9	A
3	A Street / 3rd Street	All-Way Stop	AM	8	A
			PM	9	A
4	University / 3rd Street	Side Street Stop	AM	9	A
			PM	9	A
5	Alley / 3rd Street	Side Street Stop	AM	9	A
			PM	9	A
6	B Street / 3rd Street	Signal	AM	5	A
			PM	7	A
7	Alley / 2nd Street	Side Street Stop	AM	9	A
			PM	9	A
8	B Street / 2nd Street	Side Street Stop	AM	20	C
			PM	23	C

Notes:
1. Delay and LOS for the worst movement are reported for side street stop-controlled intersections; intersection average delay and LOS are reported signalized and all-way stop intersections.

Source: Fehr & Peers, March 2006

Second Street and B Street Intersection Signal Warrant

The 2nd Street and B Street intersection is noted as a location where a traffic signal would be permitted per CASP Automobile Policy 4, Implementation B. Therefore, this intersection was investigated to determine if a signal is currently warranted at this side-street stop-controlled intersection under existing conditions. The intersection currently operates at LOS C. The *Manual on Uniform Traffic Control Devices* (MUTCD) contains several 'warrants' that can be assessed to determine whether signals should be installed. The warrants are based on measurable factors such as the peak hour volumes, daily volumes, accident records, etc. In addition to the warrants, other factors, such as signal spacing and accident histories, should be reviewed prior to making the decision to install signals. The peak hour volume signal warrant was investigated and was not met for this intersection with existing traffic volumes. A review of the intersection accident history from January 1, 2004 to September 1, 2005 showed only four reported accidents. Two of the four were rear-end accidents, one was a broadside accident, and the other was a vehicle hitting an object. Three of the accidents (two

rear-end accidents and one vehicle hitting object accident) are of the type not usually susceptible to correction by a traffic signal.

Consistency with Applicable Policies, Plans, and Regulations

Existing transportation polices, laws, and regulations that would apply to the proposed project are summarized below. This information provides a context for the impact discussion related to the project's consistency with applicable regulatory conditions.

City of Davis General Plan

Goal MOB 1. Provide attractive streets designed to serve a broad spectrum of travel modes as well as automobiles.

Policy MOB 1.1 Provide and maintain a roadway network to meet the needs of vehicular traffic in Davis.

Standard MOB 1.1c Unless preempted by the County Congestion Management Plan, Level of Service 'E' for automobiles is sufficient for arterials and collectors (both intersection and segment operations) during peak traffic hours (e.g. rush hour). Level of Service 'D' for automobiles is sufficient for arterials, collectors and major intersections during non-peak traffic hours. (See Glossary and Definitions for definition of "Major Intersections). Neighborhood plans or corridor plans can allow for a level of service at peak times of 'F' if approved by the City Council. LOS 'F' is acceptable during peak hours in the Core Area.

Standard MOB 1.1d Davis streets shall have no more than four through automobile lanes, plus a single left-hand turning lane, even if this requirement reduces level of service, Additional turning lanes may be added for safety or design considerations.

Standard MOB 1.1e Class II bicycle lanes shall be provided along all collector and arterial streets. Class I bicycle lanes may also be provided where appropriate except where physically infeasible.

Policy MOB 1.2 As part of the initial project review for any new project, the City Engineer may determine that a project-specific traffic study shall be prepared. Studies shall identify impacted roadway segments and intersections and recommend mitigation measures designed to reduce these impacts to acceptable levels.

Policy MOB 1.3 Encourage the use of alternative transportation modes.

Action MOB 1.3b Provide convenient bicycle and pedestrian access between areas where cars are prohibited.

Policy MOB 1.4 Create a network of street and bicycle facilities that provides for multiple routes between various origins and destinations.

Standard MOB 1.4a Davis should develop a connected street pattern with multiple route options for bicycle and pedestrian travel in new and developed areas.

Action MOB 1.4c Implement traffic calming measures where feasible to minimize the impact of the use of residential streets by vehicular through traffic…Other measures, such as roundabouts, may also be employed.

Action MOB 1.4d Develop guidelines for traffic calming strategies that include, but are not limited to, modified intersection designs, narrow streets, tight turning radii, sidewalk bulb outs, parking bays, textured paving, and parkways between sidewalks and streets.

Goal MOB 2. Balance the needs to provide adequate parking in residential and commercial developments with the desire to limit automobile travel.

Policy MOB 2.1 Use parking as a transportation system management technique.

Standard MOB 2.1a Developments which support transit or include shared parking beyond routine requirements shall have reduced parking requirements.

Standard MOB 2.1b On-street parking on Greenstreets with bicycle lanes is discouraged in order to allow a narrower cross-section.

Action MOB 2.1c Utilize the 1996 Downtown Parking Study and subsequent updates as the basis for Core Area parking improvements.

Action MOB 2.1d Review city parking standards for residential and non-residential uses, with priority on non-residential uses, to recognize the utilization of transit and other modes and reflect shared parking opportunities.

Goal MOB 3. Increase walking and the use of non-polluting forms of transportation, including bicycles.

Policy MOB 3.1 Develop a continuous trails and bicycleway network for both recreation and transportation that serves the Core, neighborhoods, employment centers, schools and other institutions, minimizes conflicts between pedestrians, bicyclists, equestrians, and automobiles, and that minimizes impacts on wildlife. Greenbelts and Greenstreets should serve as the backbone of much of this network.

Standard MOB 3.1a There shall be no removal of existing bicycle lanes to add through traffic lanes.

Action MOB 3.1b Enhance the safety, accessibility and coverage of the existing bicycle network, especially in the vicinity of UC Davis, schools and recreation areas.

Action MOB 3.1f Implement an on-going program to identify and eliminate hazardous conditions to cyclists and conflicts between cyclists and other transportation modes.

Policy MOB 3.2 Continue to build transportation improvements specifically targeted at bicycles.

Action MOB 3.2c Strengthen the Campus-to-Core bicycle linkage along 3rd Street.

Policy MOB 3.3 Provide pedestrian and bicycle amenities.

Action MOB 3.3d Prepare and implement bicycle parking standards for new developments.

Policy MOB 3.4 Attempt to provide safe and convenient pedestrian access to all areas of the city.

Action MOB 3.4b Implement an ongoing program to identify and eliminate hazardous conditions to pedestrians.

Action MOB 3.4c Maintain and repair sidewalks to make them as safe as possible for pedestrians.

Goal MOB 4. Reduce automobile use by improving transit service and encouraging transit use.

Policy MOB 4.1 Facilitate the provision of convenient, frequent, dependable and efficient scheduled transit and demand responsive transit for Davis residents.

Standards MOB 4.1a The greatest concentration of transit routes should be near high density developments.

Action MOB 4.1b Implement the Davis portion of the Yolo County Transit Plan.

Action MOB 4.1c Improve transit line coverage, frequency and seasonal regularity throughout the city and to adjacent cities, with particular emphasis on service to the core, employment centers, social services and institutions.

Action MOB 4.1f Expand, improve and publicize the multi-modal transportation center in the Core Area.

Action MOB 4.1g Work towards establishing neighborhood transit stops.

Action MOB 4.1h Provide bus schedules, maps, attractive shelters and clocks at transit stops.

Policy MOB 4.3 Require new development designs that maximize transit potential.

Standard MOB 4.3a New developments adjacent to arterial streets or transit routes shall include bus loading zones, shelters and other amenities which make transit attractive.

Standard MOB 4.3b All arterial and collector streets shall be designed to accommodate buses.

Standard MOB 4.3c New developments shall provide unconstrained access to bus stops for pedestrians and bicyclists.

Goal MOB 5 Develop alternative transportation solutions which will help alleviate peak hour congestion and improve air quality.

Policy MOB 5.1 Develop and maintain a trip-reduction program designed to achieve a 10-percent reduction by 2010 in motor vehicle trips per capita relative to 1987 levels, or higher if so required by the US Environmental Protection Agency, the California Air Resources Board or the Yolo-Solano Air Quality Management District.

Standard MOB 5.1a Developers of new business and residential real estate shall provide transportation improvements to offset trip increases caused by their developments. Developers shall mitigate significant adverse traffic impacts upon existing neighborhoods to reduce the impacts to less-than-significant levels, unless the city finds that full mitigations would be incompatible with the neighborhood.

Action MOB 5.1f Provide incentives to promote ridesharing among Davis residents.

Action MOB 5.1g Implement financial and parking incentives to encourage drivers to use alternative transportation, including bicycles, electric vehicles, transit systems and ridesharing.

Action MOB 5.1h Encourage existing parking lot owners to allow transit riders and ride sharers to park in their parking lots.

Goal MOB 6. Increase safety of and decrease noise and air pollution from transportation throughout the city.

Policy MOB 6.1 Safety and noise concerns should take priority over traffic flow in roadway planning.

Standard MOB 6.1a Design street patterns to minimize emergency vehicle response times.

Standard MOB 6.1d Respond to requests for neighborhood-specific traffic-calming and safety-enhancing measures which are proposed and backed by neighborhood residents.

Goal MOB 7. Address transportation policy-making in a balanced, objective way.

Policy MOB 7.2 Gather in-depth quantitative and qualitative information on the travel behavior of Davis residents to provide a reliable empirical foundation to plan solutions to transportation-related problems, and to monitor the effectiveness of transportation programs and policies and their effects on residents' mobility.

Standard MOB 7.2a Predictions of traffic impacts of new development shall be based on traffic trends observed over the previous three to five years.

Standard MOB 7.2b Bicycle and pedestrian flow, air pollution and vehicle fuel consumption shall be considered when analyzing and setting traffic lights and designing transportation systems.

Core Area Specific Plan (CASP)

The CASP contains a comprehensive set of policies relating to the Core Area transportation and parking systems. The policies most directly applicable to the project are listed below. Associated implementation measures are provided in the CASP.

Bicycles Policy 2: East-west bicycle traffic shall be routed to 3rd and 8th Streets

Parking Policy 1: Avoid creating public parking structures as long as viable alternatives exist.

Parking Policy 2: Future large-scale parking structures shall be located at the periphery of the Downtown Core (Retail Stores) area and designed, whenever possible, to provide retail frontage along sidewalks.

Parking Policy 3: Increase the availability of on-street parking spaces for short-term visitors to the Core Area.

Parking Policy 7: In-lieu fees for parking shall be set at a level that reflects the true cost of providing substitute underground or structure parking. In-lieu fees should be spent within ten years of collection.

Parking Policy 8: Fully utilize curbside parking potential in the Core Area.

Miscellaneous Policy 2: Improve pedestrian access between UC Davis and the Core Area.

Core Area Specific Plan EIR

The CASP EIR addressed impacts that would occur as a result of build-out in the Core Area under the provisions of the Core Area Specific Plan. This EIR contains two project-specific impacts related to transportation and parking, one of which applies to the project area. The impact and recommended mitigation measures are shown below.

Project Impact 4.5-1: Development of the Core Area will increase the demand for off-street parking. This is considered to be a significant and unavoidable impact.

Project Mitigation Measure 4.5-1a: As a requirement for providing expanded development within the Core Area, the downtown merchants through the Chamber of Commerce and the Davis Downtown Business Association (DBBA) under the guidance of the City of Davis Community Development and Public Works Departments, shall expand the existing Transportation Demand Management (TDM) program to include all new developments, their tenants and employees. The TDM program shall work with existing efforts to expand the use of public transit, bicycle transportation and shared parking opportunities.

The City shall consider revising the parking district boundaries and restrictions, parking rates and in-lieu fee structures within the Core Area to provide a more uniform set of standards which are more directly related to the actual parking requirements of the land uses that the spaces serve. A more uniform set of parking management requirements may be developed for the entire Core Area, not just select portions of the downtown district.

Project Mitigation 4.5-1b: The City should complete the Downtown Parking Study, and develop a plan to implement the actions recommended in that report. This is anticipated to include parking structures at one or more locations, and/or revised parking ratios as identified in Table 4.5-9.

Implementation of this mitigation measure may reduce the above impact but not to acceptable levels. The parking demand within the core level after implementation of this mitigation could reduce by 15 to 20 percent. The parking demand impacts would remain significant and unavoidable.

The Downtown Parking Study was completed in June 1996. Increasing and better managing the Core Area parking supply continues to be a focus of concern for the City and University. The City and the University are committed to working together to address parking issues as noted below.

Traditional Davis Downtown and Residential Design Guidelines

Part 2 of these guidelines address design issues for the Downtown Core Commercial, Mixed-Use, and Special Character areas, which include the project area. The following guidelines apply to the project area.

- *Mixed-Use Design Guidelines: Site Design*

  Site Design Guideline 3: Design and locate new driveways, parking areas and utilities in a way that minimizes their visual impact.

  Guideline 3.A: Access parking from an alley where feasible, and maintain traditional parking patterns

  Guideline 3.B: Parking in the rear is preferred; however, it may be necessary to allow access from the street in some circumstances.

  Guideline 3.C: An exception in the required number of parking spaces may be considered in order to preserve a feature of public significance.

- *Mixed-Use Character Area: Core Transition West*

  Guideline D: Parking should be considered and incorporated as part of an overall parking plan for the downtown

- *Special Character Area: 3rd Street*

Guideline D: Parking is not permitted in front of a building.

Pertinent Planning Processes Underway

New Downtown Parking Structure

The City of Davis Redevelopment Agency is exploring the feasibility of constructing a mixed-use project with 545 public parking spaces in the core area. The project would replacing existing development and a 119 space parking lot located on the block bordered by 3rd, 4th, E and F Streets in the core area.

Downtown-Campus Connections (Concepts and Implementation Plan, *March 2006)*

The City and UC Davis co-sponsored this plan to identify different options for improving the safety, convenience and attractiveness of circulation between Downtown Davis and the University. Elements studied included improved bicycle and pedestrian connections, and campus gateways, particularly on the 3rd Street corridor, at 1st and A Street and possible new shuttle service between Downtown and the Mondavi Performing Arts Center and other possible campus locations.

Downtown/UCD Shuttle

UC Davis Unitrans will be a recipient of a grant from Caltrans to study the feasibility of establishing a new shuttle system between the University and other high priority community locations, including the Downtown.

Core Area Parking Management

The Davis Downtown Business Association has a Parking Management Committee, which includes City and UC Davis representatives with a focus to increase and continually refine management of the Downtown parking supply. Institution of 20 minute parking at Street corners, provision of longer term employee permit parking in upper levels of parking structures, creation of permit parking districts, support for a new shuttle system, new parking structure, enforcement of parking limits and consideration of possible parking meters in selected areas are examples of their efforts.

IMPACTS AND MITIGATIONS MEASURES

The standards of significance, methods of analysis, and traffic impacts and mitigation measures are summarized below for the proposed project.

Standards of Significance

A project results in a significant impact if it causes an increase in traffic that is substantial and adverse in relation to the traffic load and capacity of the existing street system. This standard of significance relates to automobile traffic only and does not address the potential effects on other travel modes including transit, bicycle, and

pedestrian facilities. In order to evaluate a broad range of travel characteristics, the following standards of significance apply to the transportation impacts discussed in this Draft EIR.

Traffic System

According to General Plan Standard MOB 1.1c, operations during the peak hours of LOS E or better are considered acceptable. A set of significance criteria has been developed that are consistent with this standard. These standards were used in the Covell Village EIR and the 2nd Street Crossings EIR. However, it is important to note that this General Plan policy also allows for LOS F at peak times in neighborhood and corridor plans if approved by the City Council. The Council has determined that LOS F is acceptable during peak hours in the Core Area, as part of the actions taken approving the CASP. The Council has also determined through the General Plan that Davis streets are to have no more than four through automobile lanes (Standard MOB 1.1d).

For the purposes of this EIR the project would have a significant impact if it would:

1. For signalized intersections, cause overall intersection operations to deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F);

2. For unsignalized intersections: 1) cause the worst-case movement (or average of all movements for all-way stop-controlled intersections) to deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F); and, 2) meet Caltrans peak hour signal warrant ;

3. For signalized intersections, exacerbate unacceptable (LOS F) operations by increasing an intersection's average control delay by five seconds or more;

4. For unsignalized intersections that operate unacceptably (LOS F) and meet Caltrans' peak hour signal warrant without the project, exacerbate operations by increasing the overall intersection's volume by more than one percent;

5. For unsignalized intersections that operate unacceptably but do not meet Caltrans' peak hour signal warrant without the project, add sufficient volume to meet the peak hour signal warrant.

The terms "control delay" and "signal warrant" are defined earlier in the Existing Traffic Conditions Analysis section.

Alternative Modes

Project impacts are considered significant if:

1. The project conflicts with existing, planned, or known possible future transit, bicycle, and/or pedestrian facilities and services;
2. The project conflicts with or creates demand for public transit services above that which is provided, or planned, and which results in a substantial adverse impact on the capacity of the transit system.

Other

Project impacts are considered significant if:

1. Estimated parking demand exceeds parking supply provided both off-street and on-street (available unoccupied spaces), within the project area;
2. The project does not provide for adequate emergency vehicle access and circulation.

Project-Specific Analysis

The impact analysis considers the roadway, transit, bicycle, and pedestrian components of the transportation system. The specific methods of analysis for roadway system impacts are described, followed by the resulting impacts. The Cumulative Impacts section follows the Project Impacts section. A copy of the full output of the traffic modeling performed for this project is available for review in a separately bound volume entitled *Technical Appendices* available through the Community Development Department.

Project Traffic Impact Analysis

Traffic projections for the project are estimated using a three-step process: 1) trip generation; 2) trip distribution; and, 3) trip assignment. In the first step, the amount of traffic added to the surrounding roadway system is estimated. In the second step, the directional pattern for approach and departure of each trip is determined. In the third step, the trips are assigned to specific street segments and intersection turning movements.

Trip Generation

Trip generation was estimated for two alternatives, the proposed project and the Alternative 1 (No Project) build-out of the project area. The proposed project trip generation assumes that the project will contain the following uses:

- 96 additional multi-family units
- 25,770 square feet of new commercial and office space
- 17 fewer single-family units

Alternative 1 (No Project) represents build-out of the project area under current Specific Plan land use designations and zoning standards. This alternative assumes:

- 5 additional accessory dwelling units
- 11,698 square feet of new commercial and office space, with 9,400 resulting from adaptive reuse of six residential structures

Trip generation was estimated by applying daily trip generation rates from the current Davis Travel Demand Model, and using peak hour percentages from the Institute of Transportation Engineers (ITE) *Trip Generation* (7th Edition) to derive peak hour trips. Table 4.2-4 presents daily, AM peak hour, and PM peak hour net trip generation estimates and trip rates for the proposed project. Table 4.2-5 presents daily, AM peak

hour, and PM peak hour net trip generation estimates and trip rates for Alternative 1 (No Project).

The project is estimated to generate 58 net new AM peak hour trips (23 inbound/35 outbound), and 171 net new PM peak hour trips (88 inbound/83 outbound). A total daily trip generation of 1,932 trips due to the project is estimated.

Table 4.2-4
Proposed Project
Net Trip Generation Estimates

Land Use	Size	Units	Daily	AM Peak Hour[4]			PM Peak Hour [4]		
				In	Out	Total	In	Out	Total
Multi-family [1]	96	d.u.	578	9	37	46	34	18	52
Single Family [2]	-17	d.u.	-207	-5	-14	-19	-13	-8	-21
Retail/Office [3]	25.80	ksf	1,561	19	12	31	67	73	140
Net New Trips			**1,932**	**23**	**35**	**58**	**88**	**83**	**171**

Notes: d.u. = dwelling units, ksf =1,000 square feet
1. Davis Model Apartment rate = 5.961 daily trips / d.u.
2. Davis Model Single Family rate = 12.189 daily trips / d.u.
3. Davis Model Central Business District rate = 60.5 daily trips / 1,000 sq.
4. AM and PM inbound/outbound splits based on *Trip Generation* (7th Edition), ITE, 2003

Sources: *Davis Travel Demand Model Report,* prepared for the City of Davis, March 2003
Trip Generation (7th Edition), ITE, 2003

Table 4.2-5
Alternative 1 (No Project)
Net Trip Generation Estimates

Land Use	Size	Units	Daily	AM Peak Hour [3]			PM Peak Hour[3]		
				In	Out	Total	In	Out	Total
Multi-family [1]	8	d.u.	48	1	3	4	2	2	4
Retail/Office [2]	11.70	ksf	708	8	6	14	31	33	64
Net New Trips			**756**	**9**	**9**	**18**	**33**	**35**	**68**

Notes: d.u. = dwelling units, ksf =1,000 square feet
1. Davis Model Apartment rate = 5.961 daily trips / d.u.
2. Davis Model Central Business District rate = 60.5 daily trips / 1,000 sq.
3. AM and PM inbound/outbound splits based on *Trip Generation* (7th Edition), ITE, 2003

Sources: *Davis Travel Demand Model Report,* prepared for the City of Davis, March 2003
Trip Generation (7th Edition), ITE, 2003

Alternative 1 (No Project) is estimated to generate 18 net new AM peak hour trips (nine inbound/nine outbound), and 68 net new PM peak hour trips (33 inbound/ 35 outbound). A total daily trip generation of 756 trips due to Alternative 1 (No Project) build-out is estimated.

Table 4.2-6 compares the Alternative 1 (No Project) and project trip generation estimates. The project generates 40 more AM peak hour trips and 104 more PM peak hour trips than the Alternative 1 (No Project) case.

Table 4.2-6
Trip Generation Comparison
Project versus Alternative 1 (No Project)

Scenario	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Project	1,932	23	35	58	88	83	171
Alternative 1 (No Project)	756	9	9	18	33	35	68
Difference	**1,176**	**14**	**26**	**40**	**55**	**48**	**103**

Sources: Fehr & Peers, March 2006

Trip Distribution

The directions of approach and departure for the primary project trips are based on a distribution pattern developed using the Davis Travel Demand Model. This method considers roadway capacity, trip type, and the locations of major attractions and sources of trip productions. The trip distribution pattern is presented on Figures 4.2-8 and 4.2-9 for inbound and outbound traffic respectively, and is summarized below:

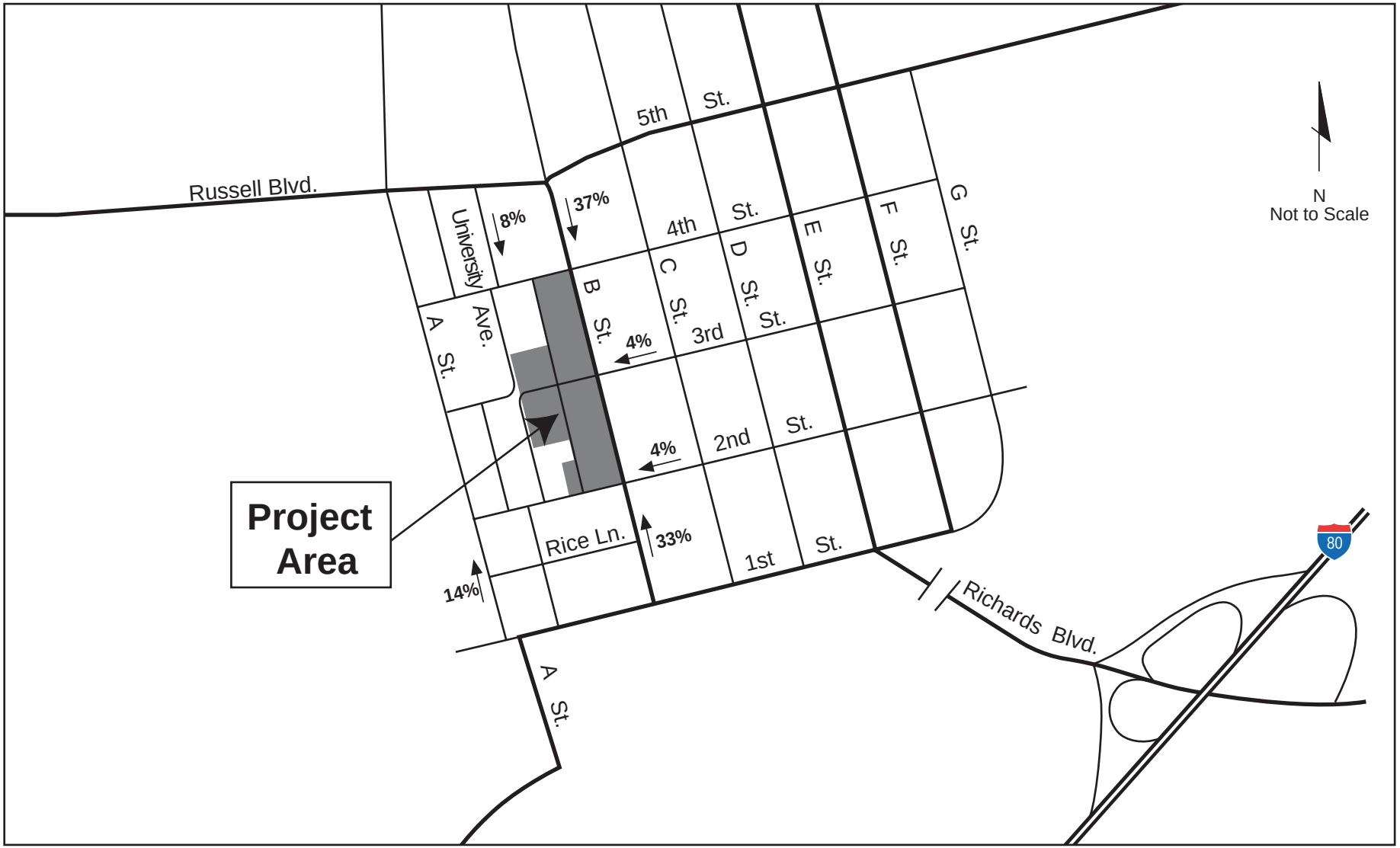
Inbound traffic

- 37 percent of the project traffic is approaching from the north on B Street;
- 8 percent of the project traffic is approaching from the north on University Avenue;
- 33 percent of the project traffic is approaching from the south on B Street;
- 14 percent of the project traffic is approaching from the south on A Street;
- 4 percent of the project traffic is approaching from the east on 3rd Street;
- 4 percent of the project traffic is approaching from the east on 2nd Street;

Outbound traffic

- 37 percent of the project traffic is departing to the north on B Street;
- 22 percent of the project traffic is departing to the north on A Street;
- 33 percent of the project traffic is departing to the south on B Street;
- 4 percent of the project traffic is departing to the east on 3rd Street;
- 4 percent of the project traffic is departing to the east on 2nd Street;

The trip distribution represents travel patterns for near-term project conditions. Trip distribution under Cumulative Conditions varies slightly (due to land use changes) and is described in the Cumulative Impacts section.



B and 3rd Streets Visioning Process

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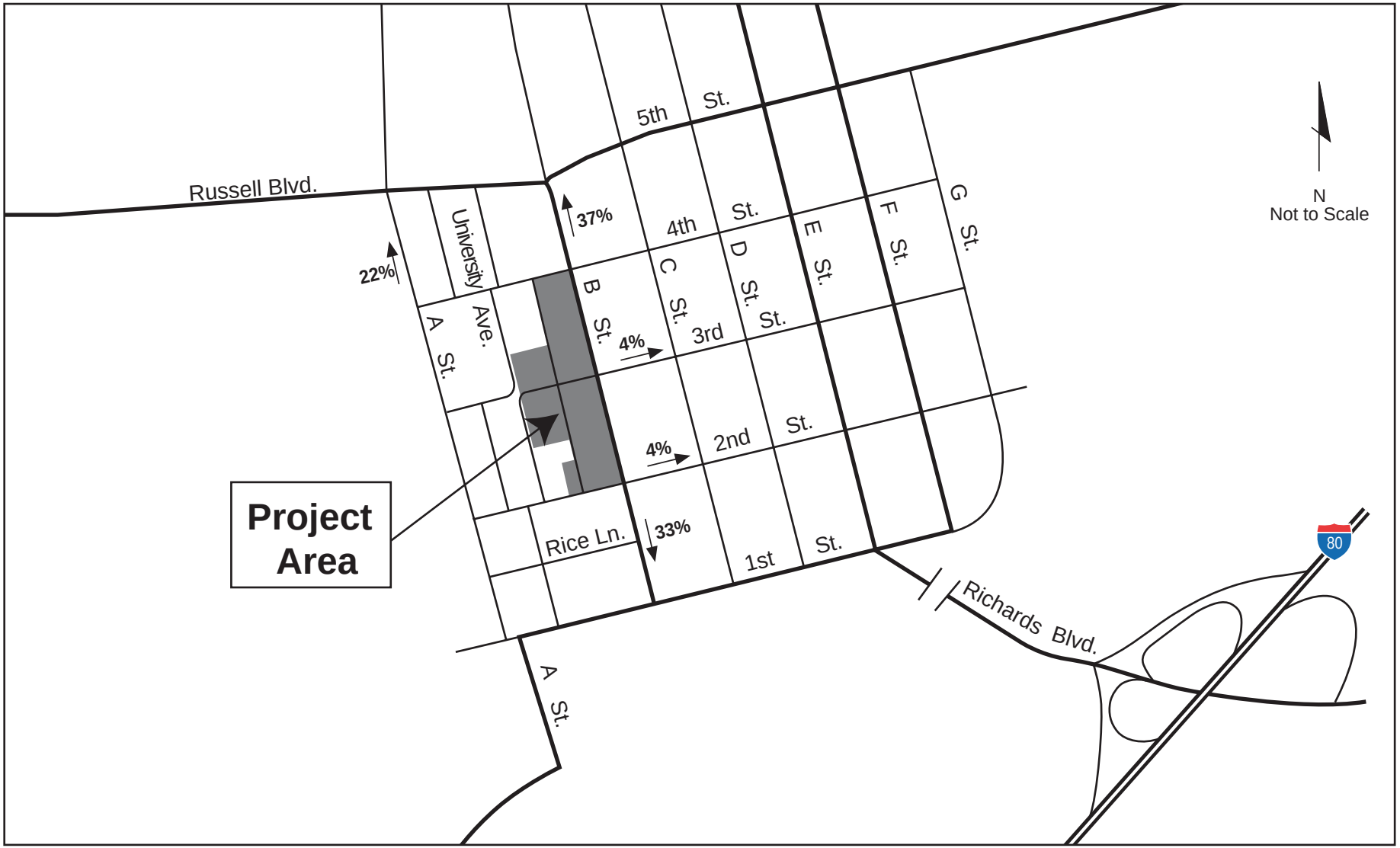
NEAR TERM TRIP DISTRIBUTIONS - INBOUND

March 2006
2263-4.2-8

FIGURE 4.2-8



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NEAR TERM TRIP DISTRIBUTIONS - OUTBOUND

March 2006
2263-4.2-9

FIGURE 4.2-9

Project trips were assigned to the roadway network as shown on Figure 4.2-10. Trips assignment under Cumulative Conditions differ due to changing distribution patterns.

The project trip assignment was combined with existing intersection turning movement volumes to develop Existing With Project intersection turning movement volumes, which are presented in Figure 4.2-11. A similar process was followed for the Alternative 1 (No Project) case, and the Existing With No Project turning movement volumes are shown in Figure 4.2-12.

Impact 4.2-1

The project will increase traffic volumes at the intersections in the study area, but will not cause an unacceptable LOS at any of the intersections studied. This is considered a *less-than-significant* impact.

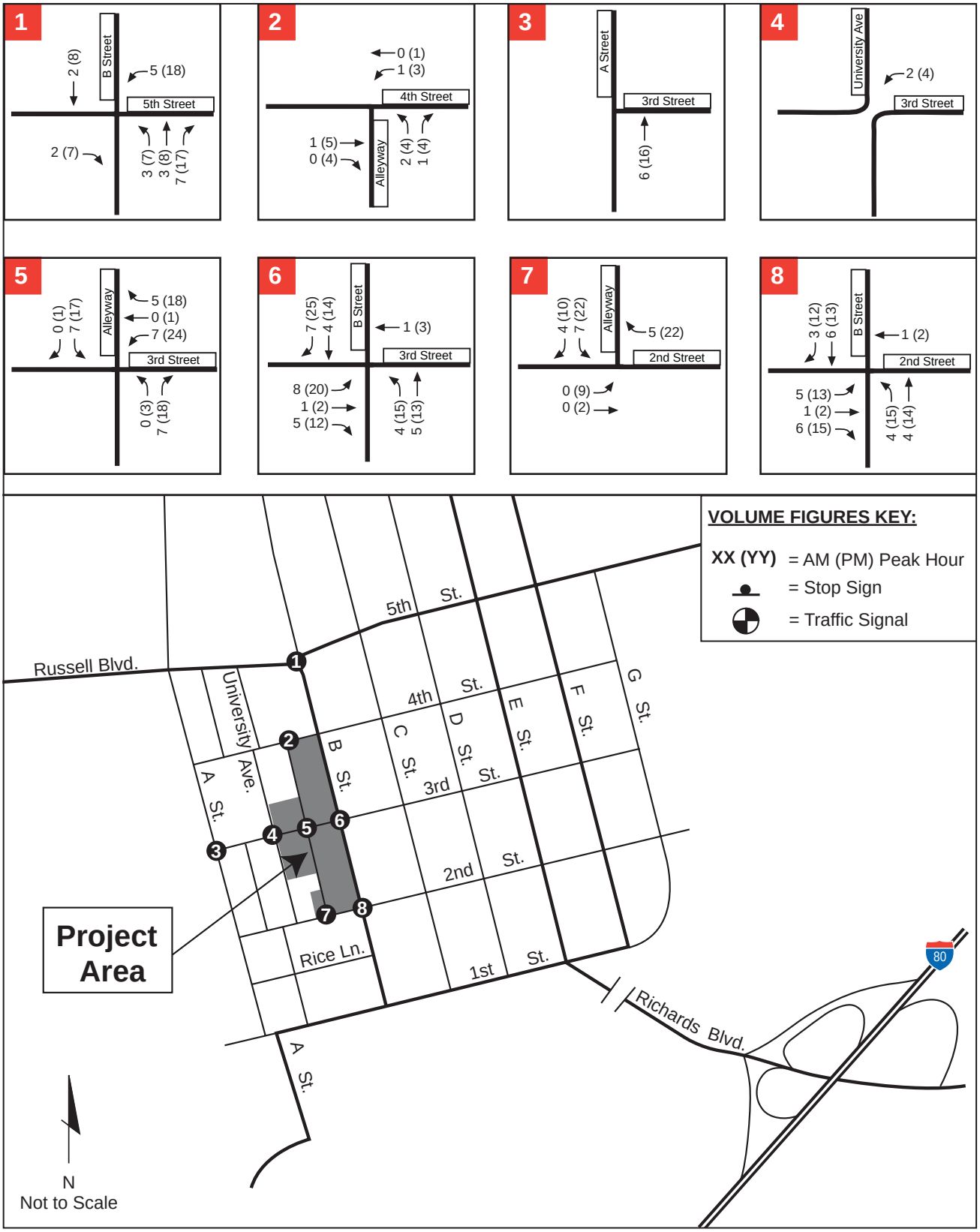
Table 4.2-7 shows the intersection service levels with the Alternative 1 (No Project) build-out trip generation and the project trip generation. All intersections operate acceptably at LOS E or better under both scenarios.

Although the project does not cause any study intersection to exceed the acceptable level of service, the eastbound shared left-through-right movement at 2nd Street and B Street would degrade from LOS D in the Alternative 1 (No Project) case to LOS E (still acceptable) in the With Project case.

Both the Alternative 1 (No Project) and project development levels add traffic to the streets in the study area, including the alleys. Reviewing the PM peak hour volumes (the higher-volume period in the study area), the Alternative 1 (No Project) case adds about 25 to 30 peak hour trips to the segments of B Street, 3rd Street, and 2nd Street immediately adjacent to the project area. On the alleys, the Alternative 1 (No Project) traffic varies from about ten added trips (at the north end near 4th Street) to 50 added trips (at the south end near 2nd Street). By comparison, the project adds about 60 to 80 peak hour trips to the adjacent roadways, and about 30 to 90 PM peak hour trips to the alleys, north to south respectively. Note that, due to the various loading points along the alleys, and the various trip distribution origins/destinations, the increased traffic load would be spread among the intersections at 2nd, 3rd and 4th Streets, and no one section of the alleys would see the full project traffic generation.

The proposed project will increase traffic volumes throughout the project area. All study intersections, however, will continue to operate at acceptable levels of service with the project. No mitigation is required. However, it is recommended that the City of Davis continue to monitor the intersection of B Street and 2nd Street, consistent with its ongoing practices, to ensure that the need for a signal at this intersection is periodically reviewed.

Mitigation Measure: None required.



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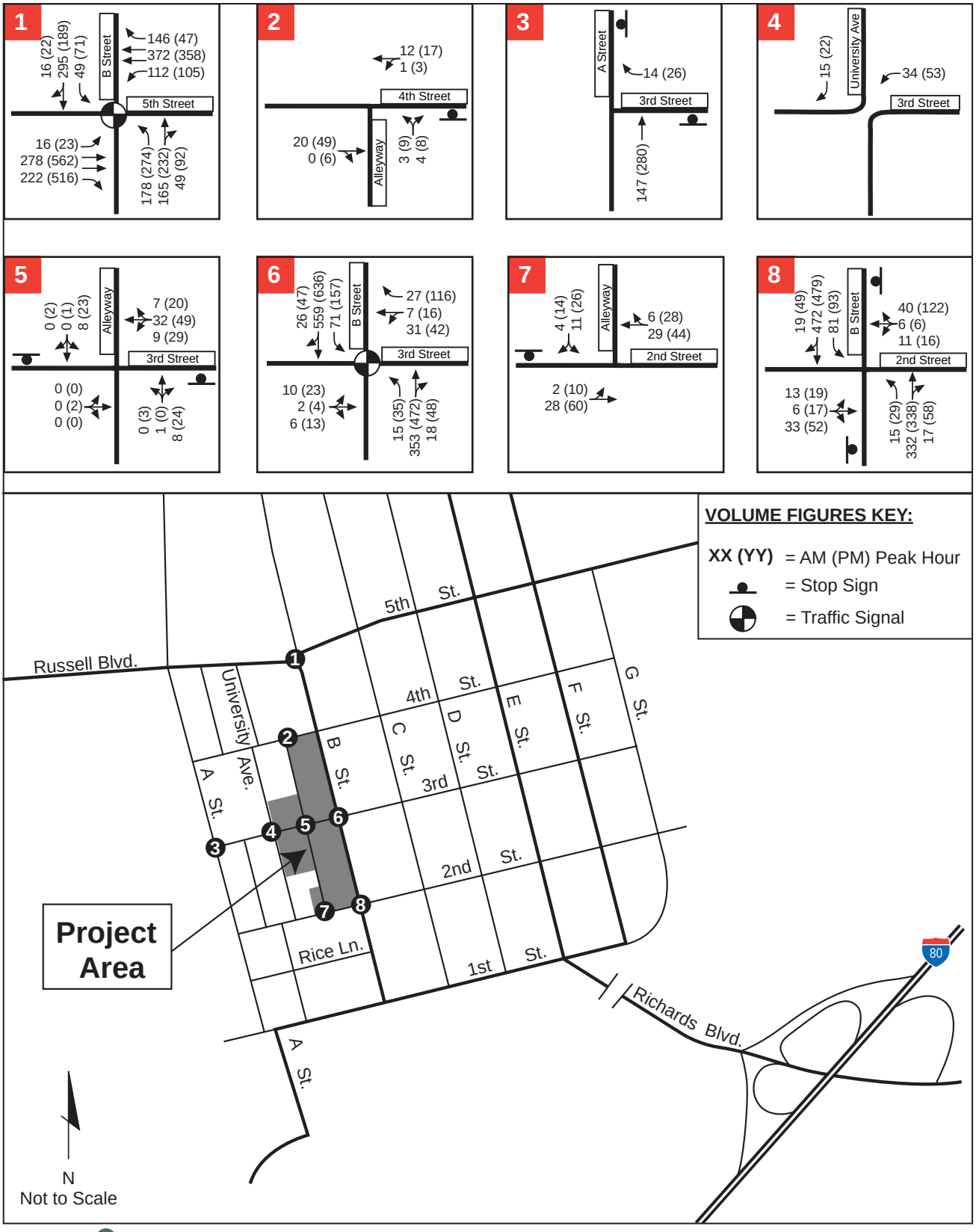
PROJECT TRIP ASSIGNMENT

FIGURE 4.2-10



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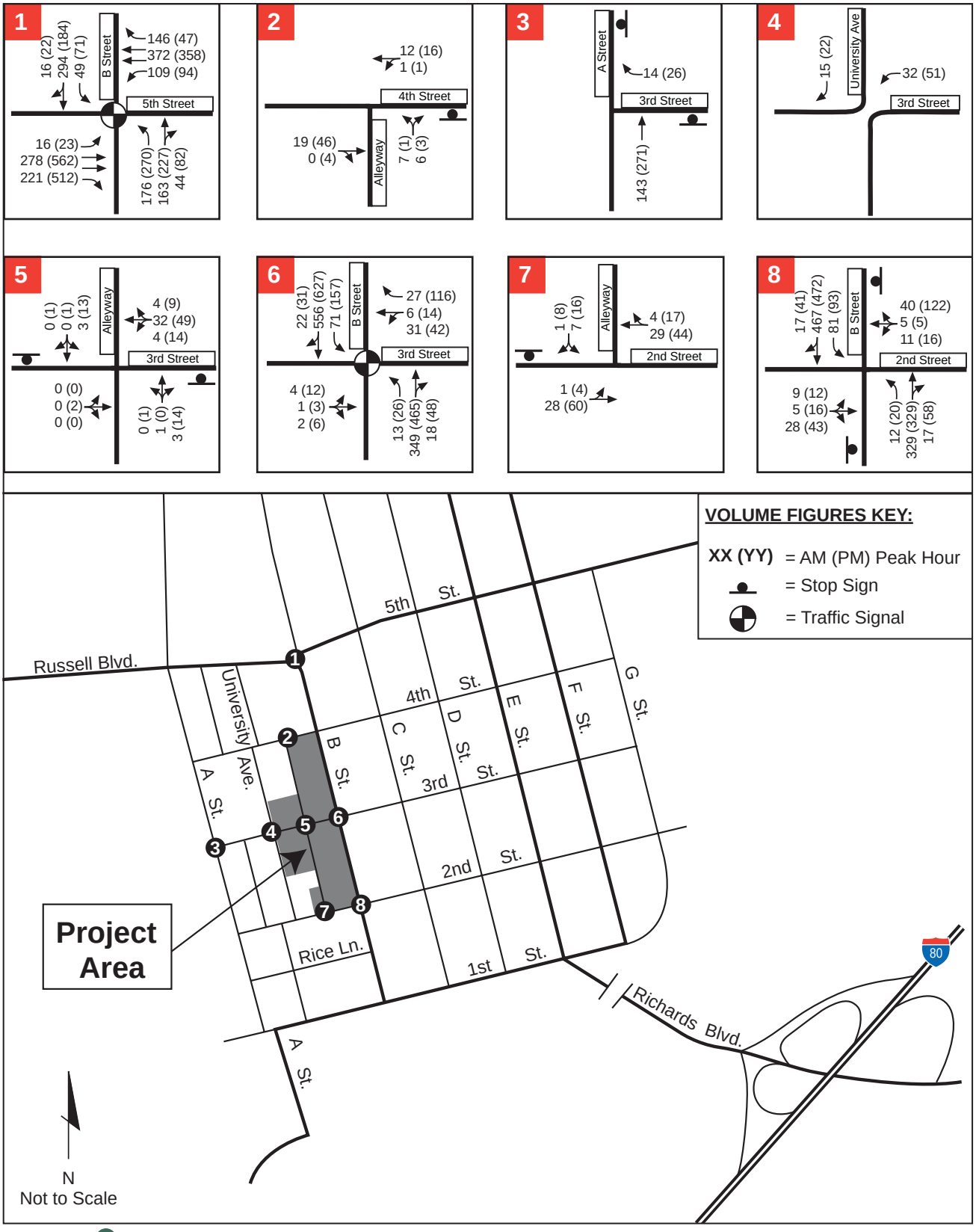
EXISTING PLUS PROJECT VOLUMES

FIGURE 4.2-11



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EXISTING PLUS NO PROJECT VOLUMES

March 2006
2263-4.2-12

FIGURE 4.2-12

Table 4.2-7
Existing With Project Intersection Levels of Service

Intersection		Control	Peak Hour	Existing		Existing With No Project Build-out		Existing With Project	
				Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1	B Street / 5th Street	Signal	AM	44	D	44	D	47	D
			PM	31	C	32	C	34	C
2	Alley / 4th Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	9	A	9	A
3	A Street / 3rd Street	All-Way Stop	AM	8	A	8	A	8	A
			PM	9	A	9	A	10	A
4	University / 3rd Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	9	A	9	A
5	Alley / 3rd Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	10	A	11	B
6	B Street / 3rd Street	Signal	AM	5	A	5	A	5	A
			PM	7	A	7	A	8	A
7	Alley / 2nd Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	9	A	9	A
8	B Street / 2nd Street	Side Street Stop	AM	20	C	20	C	23	C
			PM	23	C	28	D	36	E

Notes: **Bold** face indicates unacceptable operations.
1. Delay and LOS for the worst movement are reported for side street stops; intersection average delay and LOS are reported for all-way stops and signalized intersections.

Source: Fehr & Peers, March 2006

Impact 4.2-2

The project may increase traffic volumes along the alley to levels requiring modification of the existing alley improvements to adequately accommodate passing vehicles and vehicle maneuvers. This is considered a *significant* impact.

As a part of the project, the alleys would serve as the direct vehicle access for most of the new development within the project site. However, the project also includes the option for much of the parking requirement to be satisfied via in-lieu fees rather than provision of required parking on-site. The in-lieu payments would fund alternatives to automobile transportation or potentially a portion of a new off-street parking lot or structure serving the greater area. Since the in-lieu method is an option and not a requirement, the actual number of new parking spaces off the alley, and therefore new trips to be served by the alley, is not fixed.

The number of trips on the alley is also based on standard ITE trip generation rates that may not fully take into account a unique project location or a refinement of specific use

types. The project location between the University and Downtown should serve to reduce daily trips generated by residents who work or study at the University or Downtown by some factor. In addition the project proposes limiting office uses to those primarily providing intellectual or creativity-based products and services that are not reliant on substantial client/customer site access in order to be successful.

One premise of locating higher density housing in close proximity to transit services and high employment / service areas is that there will be less of a need for car use and therefore a lower generation of automobile trips

Alley Impact with In-Lieu Parking Fee Program and Reduced Traffic

If in-lieu fees for parking are utilized for the development proposed in the plan, additional traffic in the alley may be substantially reduced due to the reduction of on-site parking that would be accessed off the alley. The net increase in physical parking supply if all in-lieu options are used is 65 new spaces, as opposed to 141 new spaces if no in-lieu options are used. Taking into account the relative trip generation of commercial as compared to residential uses, and the mix of residential and commercial parking spaces proposed for in-lieu options, the net new traffic volume on the alley may be less than half that shown in the analysis below.

This is important to note as the amount of commercial space and residential densities assumed for the project also rely on approval of an in-lieu parking fee program rather than requiring parking spaces. Without this provision the amount of development feasible on the sites would be reduced, with a commensurate reduction in traffic impacts. Project trips on the alley will be generated from the access point of parking. The majority of trips assumed for the project will be generated from multifamily dwelling units served by parking lots located off the alleys near 2nd Street and 3rd Street. Given the greater difficulties making left turns from 2nd Street and 4th Street onto B Street it is expected that the majority of new trips will occur on the portions of the alleys closest to 3rd Street. The alley segment between 2nd Street and 3rd Street already supports the parking serving the existing higher traffic generating apartment and commercial development on B Street.

Mitigation Measure 4.2-2(a): The City will require that the in-lieu parking fee program outlined in the proposed project be applied to new commercial development projects. The City will ensure that a minimum 20-foot wide right-of-way be obtained as properties within the project area are developed, or by acquisition as necessary. The alley should be improved to a minimum of 16-feet clear horizontal distance to ensure that two vehicles can pass safely. The interim improvements (between now and when full improvements are triggered) for this alternative, for redeveloped property, will include at a minimum, maintaining the existing paved width plus approximately two-feet clear distance on each side to provide a total of 16-feet clear wherever practicable.

In addition the alley design will address drainage and pavement edge treatment, parking orientation and setback from the pavement edge, and building setback from the edge of right-of-way. Owners of property within the project area may also be required to make repairs to the existing alley pavement current with the redevelopment of their property, but prior to the alley being reconstructed to its final design. The City may require an entire block of the alley to be improved in conjunction with a particular development project, if the

City Engineer determines that such improvements are required. The City Engineer may determine appropriate modifications to the alley design to minimize impacts to properties adjacent to the alley that are not part of the development project, in order to maintain mature trees or accommodate utilities. New development within the project area using the alley for access would be required to pay a proportionate share of the alley improvements as a condition of development.

Implementation of this mitigation measure would reduce this impact to a less-than-significant level.

Alley Impact with Full Parking Provision and Associated Traffic

The traffic analysis described under Impact 4.2-1 assumes a worst-case condition where all potential vehicle trips are generated and each trip is assumed to use the adjacent alley. Based on this analysis, and assuming a ten percent peak-hour-to-daily ratio for traffic volumes, it is estimated that daily traffic on the alleys would be about 250 vehicles between 3rd Street and 4th Street, and 450 vehicles between 2nd Street and 3rd Street, if parking were provided with access from the alley. These traffic levels are slightly above the design volume standard for alleys, 200 vehicles per day. To accommodate the increased likelihood of vehicles needing to pass each other, and to provide for emergency vehicle access, the alley would need to be widened beyond the current 13-foot right-of-way. According to the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric of Highways and Streets, 2004*, a roadway with an average daily traffic of 400 to 1,500 vehicles per day should have a minimum width of 20 feet. This width could be effectively provided with a 16-foot improved travel way and two feet of horizontal clear distance on each side. Additional right-of-way would need to be dedicated to accommodate the twenty-foot right-of-way width. Due to utility poles, existing trees and structures, the width at some points along the alley may be somewhat less, but the ability for two cars to pass, when necessary, would not be significantly compromised.

Along with the provision of an appropriate improved travel way width, the City should implement alley improvements similar to its local roadway facilities, modified as necessary to maintain the alley's function as a shared use and local neighborhood space. The design should provide the appropriate drainage, pavement edge treatment, parking orientation relative to the roadway, building and parking structure setbacks, and other features deemed appropriate by the City Engineer.

Mitigation Measure 4.2-2(b): If no in-lieu parking fee program is implemented, the City will develop a design for the alley, to be implemented along with the development of individual project sites, that provides for the estimated traffic volume. The City will ensure that a minimum 20-foot right-of-way be obtained as properties within the project area are developed, or by acquisition as necessary. The alley improvements will include a minimum paved travel width of 16-feet plus two-feet clear horizontal distance on each side. In addition the alley design will address drainage and pavement edge treatment, parking orientation and setback from the pavement edge, and building setback from the edge of right-of-way. The City may require an entire block of the alley to be upgraded in conjunction with a particular development project, if the City Engineer determines that the parking provision and associated traffic growth with that project warrant such

improvements. The City Engineer may determine appropriate modifications to the alley design to minimize impacts to properties adjacent to the alley that are not part of the development project in order to maintain mature trees or accommodate utilities. New development within the project area using the alleys for access would be required to pay a proportionate share of the alley improvements as a condition of development.

Implementation of this mitigation measure would reduce this impact to a less-than-significant level.

Impact 4.2-3

The proposed project will increase transit use in the project area, but will not cause current transit routes to exceed capacity. This is considered a *less-than-significant* impact.

The proposed project does not plan to improve or take away any of the existing transit facilities near the project area. People originating from residential land uses within the study area who are destined for UC Davis would presumably walk or bicycle there rather than taking the bus. People originating from the study area who are destined for other parts of town would be riding the bus in the off-peak direction (away from the campus in during the AM peak period, toward the campus during the PM peak period), where there is plenty of capacity during the AM and PM peak hours.

The retail and office land uses, however, could add trips to the transit system in the peak direction due to people who are using transit to get to B Street and 3rd Street along with all the people destined to or from UC Davis. To estimate the potential increase in transit trips in the peak direction, the mode split for Davis journey-to-work trips from the 2000 Census was used. The mode split data indicates that approximately 70 percent of work trips are made in single occupant vehicles or carpools, and about seven percent of the trips are made by public transportation. The remaining percentage of trips are made by bicycling, walking, or by those who work at home. The proposed project, with compatible commercial and residential uses in close proximity to each other and to the downtown and University, should provide even greater opportunities to walk, bicycle, and take public transportation for the new residents, employees and customers. The transit use was estimated using the census rates, however.

From the estimated trip generation of the proposed project, during the AM peak hour the retail and office land uses generate 19 trips inbound and during the PM peak hour generates 73 trips outbound. This would correspond to approximately two transit trips inbound during the AM peak hour and seven transit trips outbound during the PM peak hour. Table 4.2-8 presents the capacity, existing riders, and increase demand for the E Line and L Line which travel along B Street. To be conservative, it was assumed that all transit riders would take one line or the other.

As Table 4.2-8 indicates, the increase in ridership would not exceed capacities on the current E and L lines that run along B Street.

Table 4.2-8
Transit Ridership

Bus Line	Capacity	AM Peak Direction (Inbound)			PM Peak Direction (Outbound)		
		Existing Riders[1]	Added Riders[2]	Total Riders	Existing Riders[1]	Added Riders[2]	Total Riders
E Line	90	83	2	85	59	7	66
L Line	75	67	2	69	46	7	53

Notes:
1. Average number of riders during the peak direction peak riders.
2. Assumes all new transit riders will take either the E Line or L Line.

Source: Unitrans Assistant General Manager

Current loadings in peak directions will still provide sufficient capacity for transit trips generated by the project. No mitigation is required.

Mitigation Measure: None required.

Impact 4.2-4

The proposed project would increase pedestrian and bicycle usage of alleys, creating the potential for conflict with vehicles using the alleys. This is considered a *less-than-significant* impact.

The proposed set of mixed land uses, as well as the proximity to the UC Davis campus, will increase pedestrian and bicycle activity along the alleys and the surrounding street network. This increased activity in the alleys will occur at the same time that vehicular levels are also projected to increase. The increase in pedestrian and bicycle volumes generated is consistent with CASP Miscellaneous Policy 2 to improve pedestrian access between UC Davis and the Core Area and with General Plan Goal MOB 3 to increase walking and the use of non-polluting forms of transportation including bicycles, and is therefore, considered to be less that significant. Mitigation Measure 4.2-2 addresses alley design and safety.

Mitigation Measure: None required.

Impact 4.2-5

The parking demand generated by the new development proposed by the project may exceed the parking spaces provided by those developments. This is considered a *significant* impact.

<u>Parking Provision with the Project</u>

Along with the land use and zoning changes proposed by the project, three changes to parking requirements for new developments are included. They are:

1. New commercial development (retail, office, or mixed retail/office) would provide parking at a uniform minimum rate of one space per 500 square feet, rather than the various differentiated commercial parking rates allowed in the City Zoning Code. The current payment of in-lieu fees to meet the commercial parking requirement would be extended to include the mixed-use "Retail With Office" district within the project area as is currently allowed in the Core Commercial and Mixed-Use zones.

2. New residential development on the B Street Transitional parcels would provide parking at higher rates as follows: one space for studio and one-bedroom units, two spaces for two and three-bedroom units, and one additional space for each bedroom over three bedrooms.

3. New residential development within mixed-use developments on 3rd Street would provide parking at the following rates (spaces after the first space may be allowed to be satisfied via in-lieu fee): one space for studio and one bedroom units; 1.5 spaces for two-bedroom units; two spaces for three-bedroom units; and one additional space for each bedroom over three bedrooms.

Table 7.4-4 in Appendix 7.4 identifies the estimated parking that would result from these changes for the project case. The four project alternatives are also shown, along with an estimate of the existing required and actual parking spaces within the project area.

Table 4.2-9 shows the estimated new parking space totals that would result for the Alternative 1 (No Project) and the project. It also shows the net change from required parking for existing uses and estimated actual existing spaces. The existing actual parking numbers derive from the transportation consultant survey of the streets bounding the project area (B Street, University Avenue, 2nd, 3rd and 4th Streets, and the alley), along with City staff's assessment of the off-street residential parking provided. The actual residential off-street parking was determined to be about 22 spaces higher than would be assessed per the code. As many of these spaces may not meet the standard dimensions and/or location requirements (many too short or narrow, or too many tandem spaces), the parking required for the existing or proposed uses on each parcel was used for purposes of analysis.

As shown in Table 4.2-9, the total off-street parking supply with the project is 173 spaces. An additional 76 spaces that would otherwise be required could be satisfied via in-lieu payments that would fund alternative mode enhancements or off-site parking. The total off-street parking, including the in-lieu amount, is 249 spaces. The proposed project off-street parking represents a net change of 61 spaces (not counting the equivalent spaces associated with the in-lieu fees) and 137 spaces (counting the in-lieu fee payments as equivalent spaces). With the in-lieu parking included, the project's parking provision would meet the parking demand, as defined by City Code. However, since the in-lieu fees do not immediately result in physical parking spaces near new development on parcels within the project area, the potential for un-served parking demand to extend to the areas surrounding the project area would exist. This potential displaced parking demand could be as high as the 76 in-lieu spaces allowed by the project.

Table 4.2-9
Project Parking Supply

Parking Type	Existing	Alt. 1 No Project		Project	
		Total	Net Change from Existing	Total	Net Change from Existing
On-Street Parking					
Parking Spaces	87	87	0	87	0
Off-Street Parking					
Commercial	55	73	18	5	(50)
Residential	57	62	5	168	111
Subtotal	112	135	23	173	61
In-lieu Commercial	0	0	0	62	62
In-lieu Residential	0	0	0	14	14
Subtotal	0	0	0	76	76
Total Off-street	112	135	23	249	137

Source: City of Davis and Fehr & Peers, May 2006

Alternative 1 (No Project) has lower development levels, and contains none of the parking regulation changes noted above. Alternative 1 provides 135 off-street spaces, a net change from existing of 23 spaces. No payment of fees in-lieu of parking would be allowed under this alternative. The provided spaces would be expected to satisfy development demand, as defined by current City code.

It is noted that the mid-day and evening parking surveys showed 26 and 23 vacant spaces, respectively, on the streets surrounding the project area (excluding the alley). These spaces were located on blocks restricted to either one-hour parking and/or vehicles displaying a residential W permit. These spaces could be considered as potential offsets for the displaced parking demand that could occur if the off-site parking facilities and/or transportation programs funded by in-lieu fees do not fully address the parking demand of new developments.

Project Consistency with Existing and Ongoing Planning Efforts

The limited new parking provision with the Project is consistent with the goals and policies in the CASP and the Traditional Davis Downtown and Residential Neighborhood Design Guidelines, summarized earlier under “Setting”. The CASP recognizes that parking demand in the greater downtown area is generated by residents, commercial employees and patrons, and the University of California campus, and that joint efforts are needed to adequately balance the need for parking with the needs of transit users, bicyclists and pedestrians, and the desire to minimize traffic congestion. Since many of the residential

and commercial tenants/owners in the project vicinity are University affiliates, and some of the new developments in the project may similarly be occupied by University affiliates, it is reasonable to expect that University parking supplies could potentially serve those tenants/owners.

The University recognizes the importance of managing its own automobile travel demand and corresponding parking needs. The 2003 UC Davis Long Range Development Plan (LRDP), which defines the University's expected growth through 2015/16, identifies student growth of 5,130 students from the 2001/2 academic year to 2015/16, and 4,000 faculty and staff over the same period. In 2005/06 there were an estimated 21,432 students and 11, 491 faculty and staff commuting to the central campus of UCD resulting in an estimated 13, 707 vehicle trips, (6, 079 by students and 7,628 by faculty and staff).

The University has recently finished construction of a new 1,574-space parking structure (with a net gain of 1,100 spaces) in the west campus area, intended to facilitate commuters entering UCD from the west via Hutchinson, and lessen traffic on City streets. The University does not currently have plans to construct additional parking structures on the east side of campus.

The campus has a comprehensive array of services and programs in place to minimize the need to drive to campus, and is committed to maintaining and improving the non-auto mode use by students, faculty and staff. Currently, the commute mode breakdown for all UC affiliates combined is about 40 percent drive alone, two percent carpool/vanpool, 38 percent bicycle, 17 percent transit, and three percent walk. Percentages for those living in Davis are higher, with 85 percent of the students and 49 percent of faculty and staff riding bicycles, walking or using transit.

Within the last year, the University has begun talks with the City to undertake a joint parking study to address parking issues within the community. In addition, the University has completed a Draft Alternative Transportation and Parking Investment Study, aimed at determining the optimum mix of travel demand management measures and new parking provision to efficiently serve the travel needs of University faculty, staff, students and visitors. Key findings of the University's study are summarized below:

- The University has the potential to significantly reduce future parking demand by implementing expanded TDM strategies; development of the West Village (reducing on-campus parking demand by 2,200 spaces); and implementation of a recommended package of programs (the "preferred" package).

- The recommended package of programs includes:
  - Expansion of the unlimited access Unitrans pass program to all UCD students
  - Partial parking fee equalization
  - Supporting strategies to promote alternative transportation
  - Strategies to improve transit service, including supporting strategies such as Intelligent Transportation Systems
  - Restricting first- and second-year students from bringing cars to campus
  - Increasing parking fees

- With these programs, the net new parking demand associated with the LRDP growth would be just 535 spaces.

Information cited in this Draft study (page 41) confirms that higher density residential developments result in reduced average daily trips per household. The results of this study also show the potential benefits of TDM programs.

Mitigation Measure 4.2-5(a): Consistent with the CASP policies and the Traditional Davis Downtown and Residential Design Guidelines, the City shall use any in-lieu fees collected from new developments in the project area to fund some or all of the following efforts aimed at serving the travel demand in the project area while minimizing parking on-site or on adjacent neighborhood streets:

1. *Coordinate with UC Davis staff to provide parking on campus for any project developments that will house University functions.*
2. *Provide a local car-share program, in conjunction with the University, the Yolo TMA, and other interested agencies, to reduce the need for individual car ownership by project residents and residents of the greater project vicinity.*
3. *Consider Redevelopment Agency participation in combination with in-lieu fees to develop a consolidated parking facility.*
4. *Consider creating a new Central Park parking district that could provide parking in a series of smaller lots or in a centralized parking structure or lot at a location such as the redeveloped School District site at the north end of Central Park.*
5. *Consider reducing parking time limits and installing parking meters on 3rd Street to maximize the use of on-street parking for commercial uses.*
6. *Work with the University to prepare a joint transportation and parking study for the neighborhood west of the campus, potentially including the entire Core Area.*

Implementation of this mitigation measure would reduce this impact but not to a less-than-significant level. The impact remains significant and unavoidable.

Impact 4.2-6

The project will add to the cumulative traffic growth at intersections in the area, but will not cause an unacceptable LOS or trigger signal warrant at any of the intersections studied. This is considered a *less-than-significant* impact.

Cumulative Conditions Traffic Impact Analysis

A Cumulative Conditions analysis was performed to identify potential project impacts in 2015. Year 2015 is the analysis year forecasted by the City of Davis' Travel Demand Model. The 2015 model incorporates full build-out of the Davis General Plan (which has a 2010 planning horizon), extrapolated residential growth within the City for an additional five years to 2015, and full build-out of the UC Davis 2003 Long Range Development Plan.

Cumulative Trip Distribution

The trip distribution patterns under cumulative conditions are presented on Figures 4.2-13 and 4.2-14 for inbound and outbound traffic, and are summarized below:

Cumulative Inbound traffic

- 30 percent of the project traffic is from the north on B Street;
- 8 percent of the project traffic is from the north on University;
- 39 percent of the project traffic is from the south on B Street;
- 15 percent of the project traffic is from the south on A Street;
- 4 percent of the project traffic is from the east on 3rd Street;
- 4 percent of the project traffic is from the east on 2nd Street;

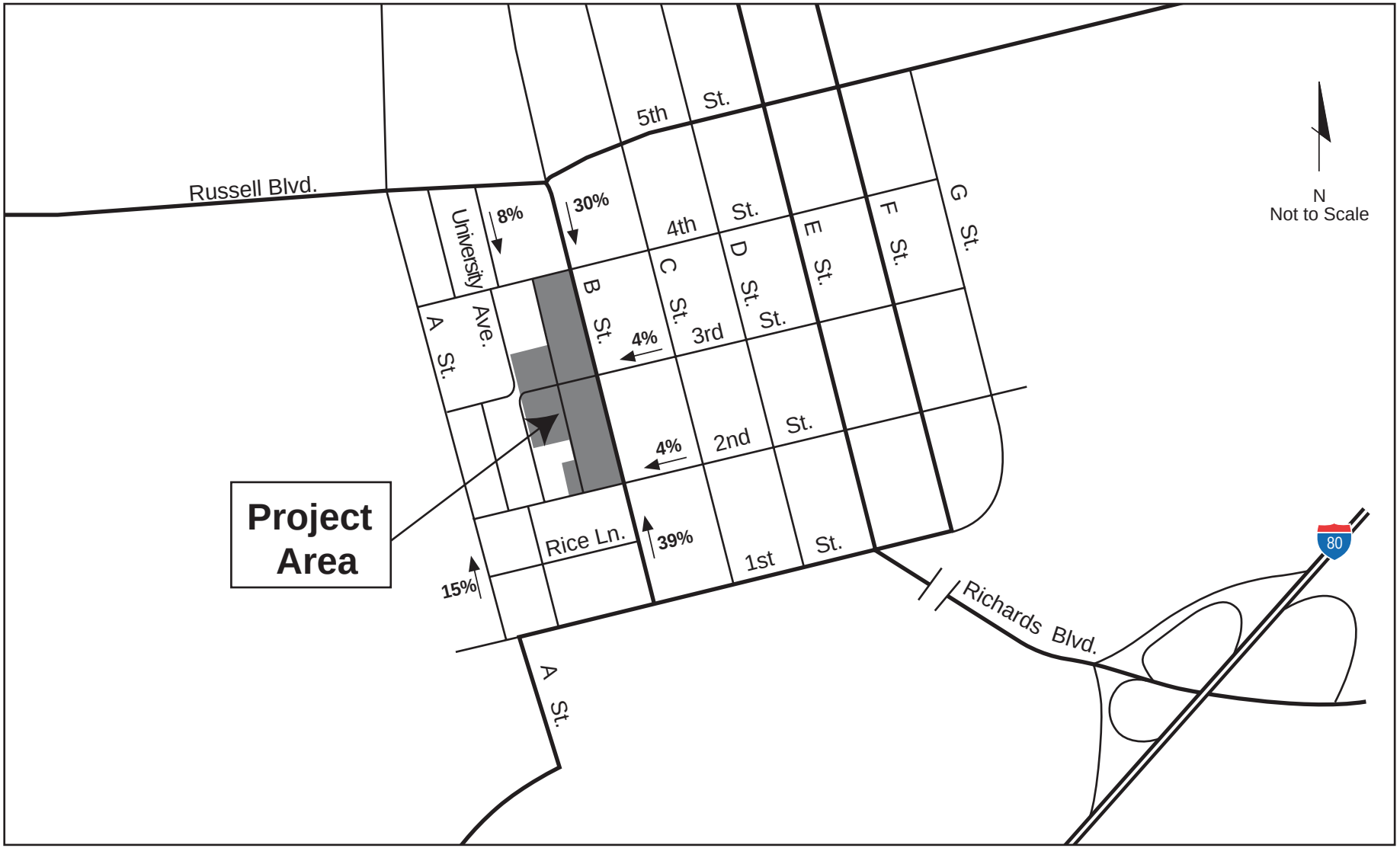
Cumulative Outbound traffic

- 30 percent of the project traffic is distributed to the north on B Street;
- 23 percent of the project traffic is distributed to the north on A Street;
- 39 percent of the project traffic is distributed to the south on B Street;
- 4 percent of the project traffic is distributed to the east on 3rd Street;
- 4 percent of the project traffic is distributed to the east on 2nd Street;

The distributions vary slightly from near-term conditions due to new developments under Cumulative Conditions.

Cumulative No Project Intersection Volumes

Volumes under this scenario were developed by “furnessing” roadway segment forecasts and existing volumes to produce background cumulative intersection volumes. Furnessing is a process that involves extracting AM and PM link (roadway segment) volumes for the existing year and the cumulative (2015) year from the Davis Travel Demand Model and applying the change in link volumes to the existing turning movements at each intersection. Trips generated by the added development in the project area under Alternative 1, No Project build-out conditions were then manually added to the network to develop the Cumulative No Project turning movement volumes.



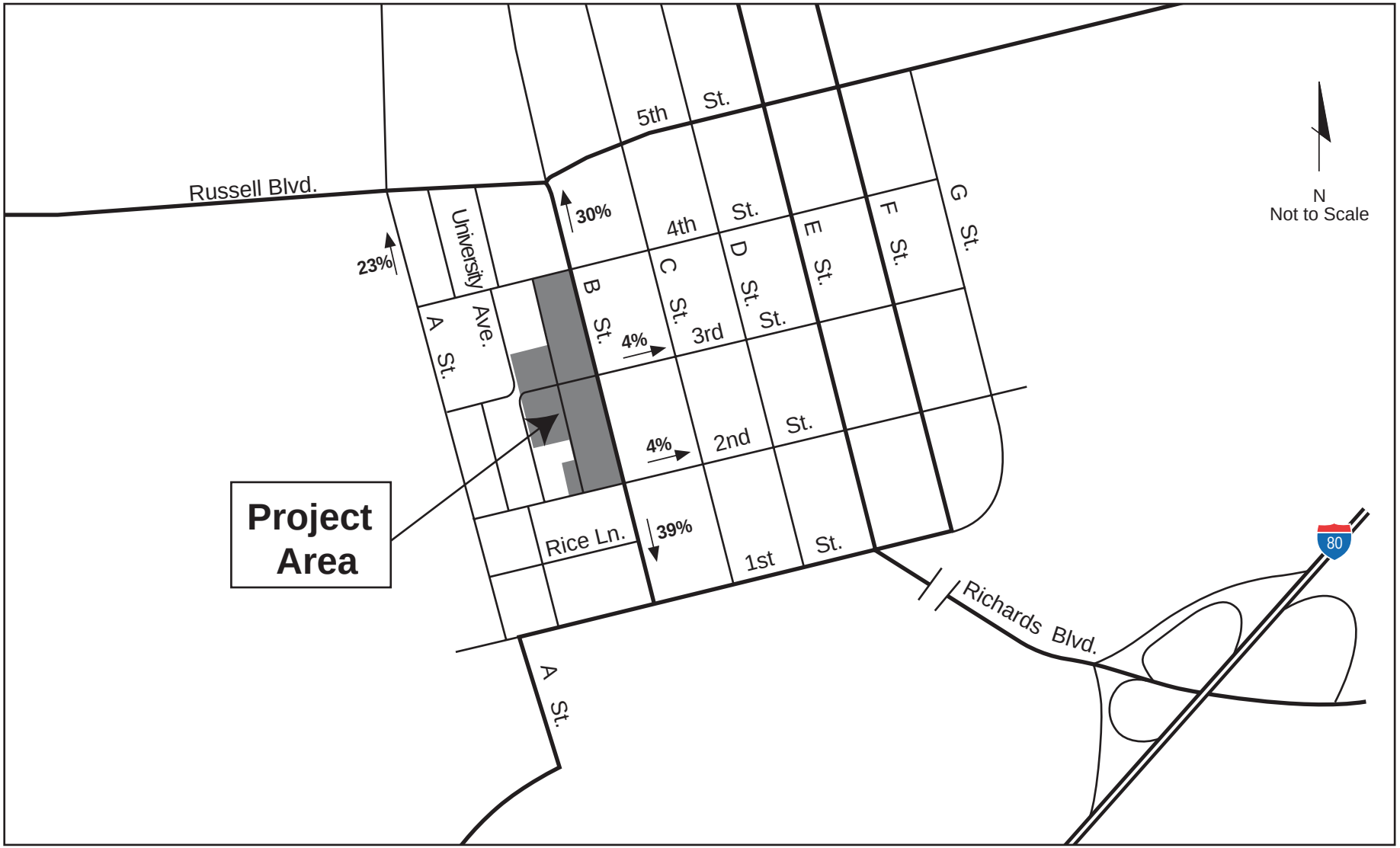
B and 3rd Streets Visioning Process

FEHR & PEERS
TRANSPORTATION CONSULTANTS

PROJECT TRIP DISTRIBUTION FOR CUMULATIVE ANALYSIS - INBOUND

March 2006
2263-4.2-13

FIGURE 4.2-13



B and 3rd Streets Visioning Process

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PROJECT TRIP DISTRIBUTION FOR CUMULATIVE ANALYSIS - OUTBOUND

March 2006
2263-4.2-14

FIGURE 4.2-14

The Cumulative No Project turning movement volumes are presented in Figure 4.2-15.

Cumulative No Project Intersection Levels of Service

Levels of service were calculated for the study intersections using the cumulative traffic volumes illustrated on Figure 4.2-15. Table 4.2-10 presents the LOS results under Cumulative No Project conditions. The results indicate the study intersections will continue to operate under acceptable conditions.

Table 4.2-10
Cumulative No Project Intersection Levels of Service

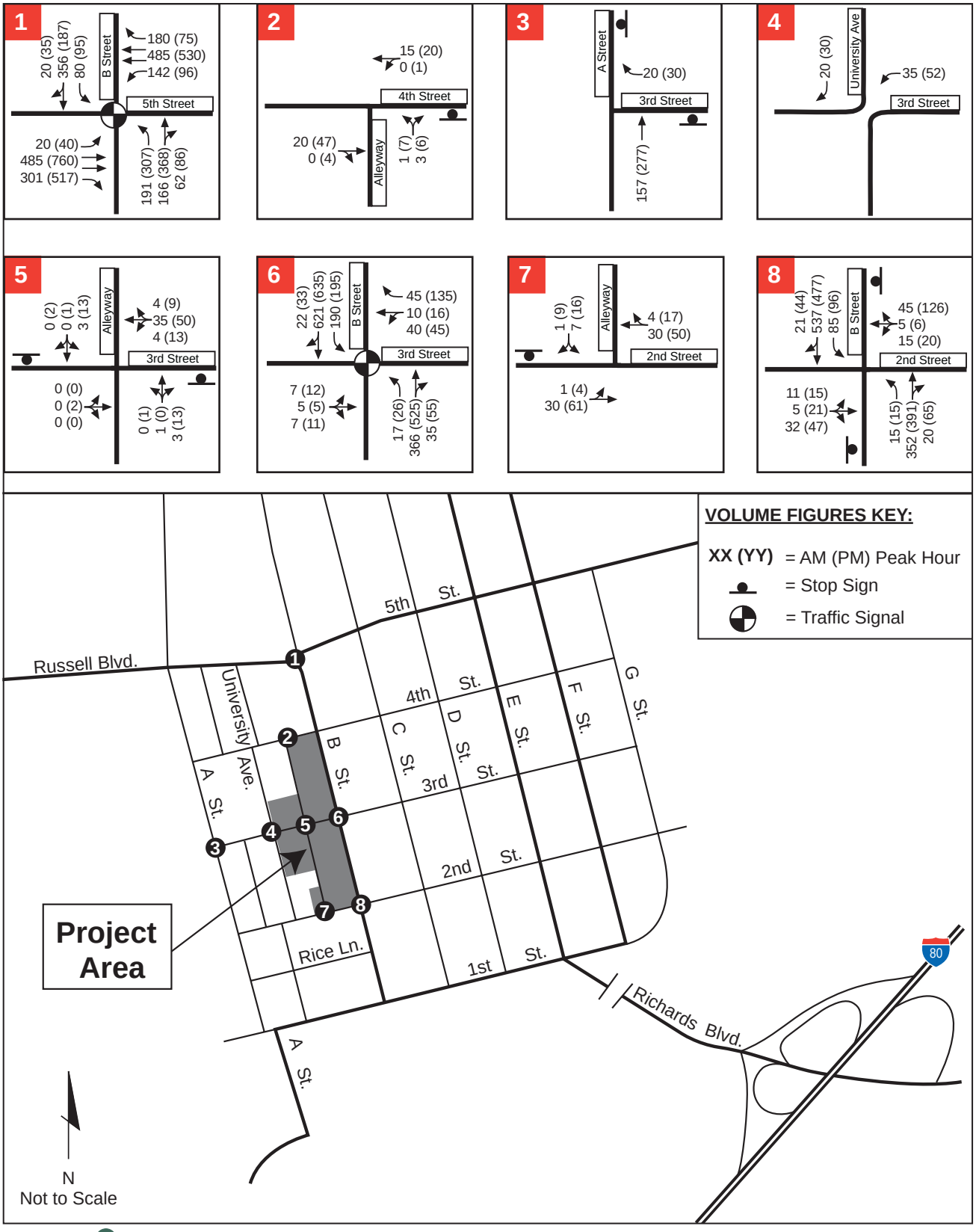
Intersection		Control	Peak Hour	Existing		Existing With Project		Cumulative No Project	
				Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1	B Street / 5th Street	Signal	AM	44	D	47	D	64	E
			PM	31	C	34	C	37	D
2	Alley / 4th Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	9	A	9	A
3	A Street / 3rd Street	All-Way Stop	AM	8	A	8	A	8	A
			PM	9	A	10	A	10	A
4	University / 3rd Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	9	A	9	A
5	Alley / 3rd Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	11	B	9	A
6	B Street / 3rd Street	Signal	AM	5	A	5	A	6	A
			PM	7	A	8	A	8	A
7	Alley / 2nd Street	Side Street Stop	AM	9	A	9	A	9	A
			PM	9	A	9	A	9	A
8	B Street / 2nd Street	Side Street Stop	AM	20	C	23	C	26	D
			PM	23	C	36	E	38	E

Notes: **Bold** face indicates unacceptable operations.
1. Delay and LOS for the worst movement are reported for side street stops; intersection average delay and LOS are reported for all-way stops and signalized intersections.

Source: Fehr & Peers, March 2006

Cumulative (Year 2015) With Project Conditions

The Cumulative With Project condition adds project-related traffic to the Cumulative No Project condition to determine the project's contribution to cumulative effects.



B and 3rd Streets Visioning Process

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March 2006
2263-4.2-15

CUMULATIVE - NO PROJECT VOLUMES

FIGURE 4.2-15

Cumulative With Project Intersection Volumes

To develop volumes under the Cumulative With Project scenario, traffic from the proposed project (as shown on Figure 4.2-16) was added to the Cumulative No Project volumes (does not include the No Build-out alternative volumes). The Cumulative With Project volumes are presented on Figure 4.2-17.

Cumulative With Project Intersection Levels of Service

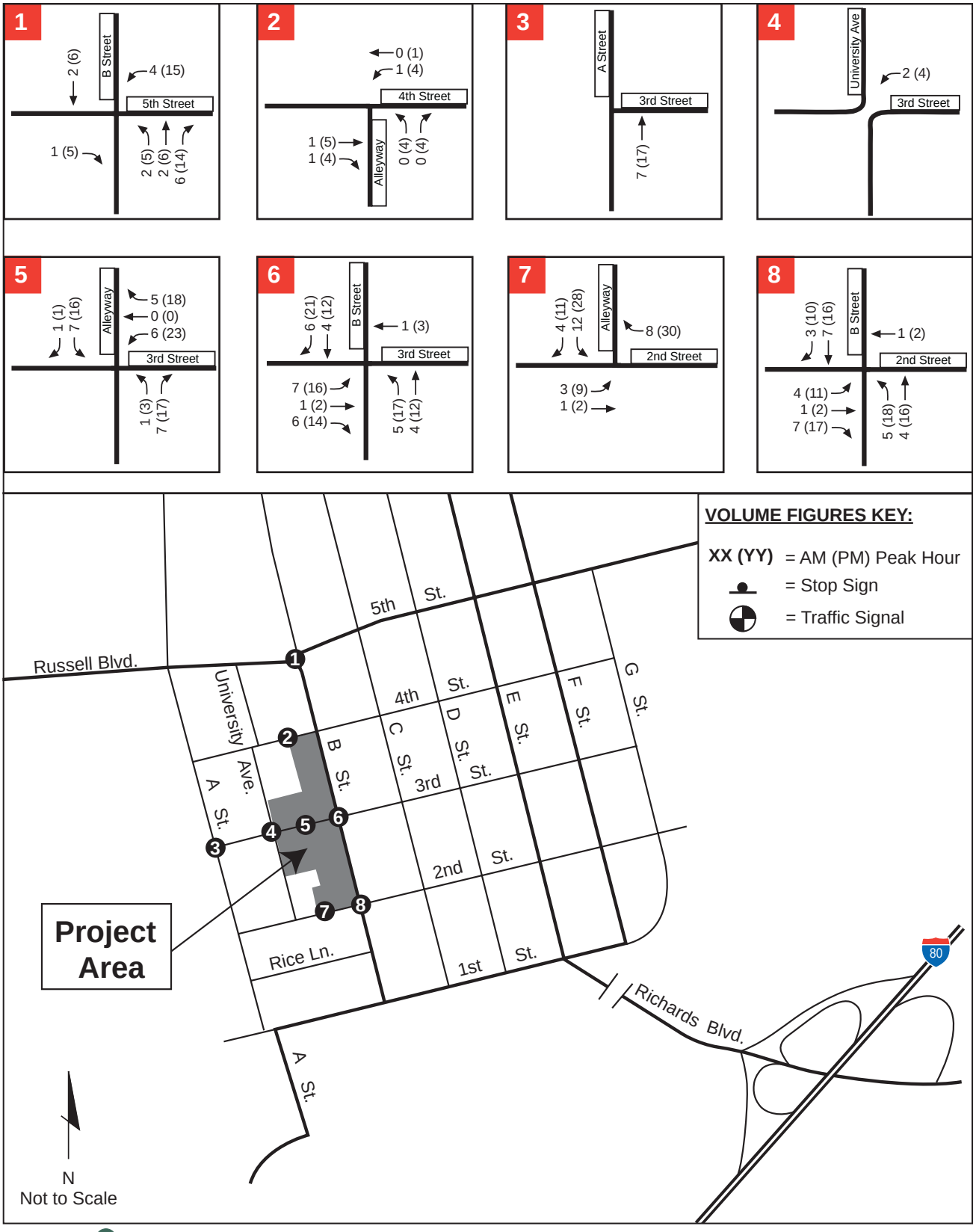
The Cumulative With Project service levels are presented in Table 4.2-11. The results indicate the study intersections will continue to operate acceptably except at the B Street / 2nd Street intersection. During the PM peak hour the worst movement at this intersection would operate at LOS F.

One way to reduce the delays (and improve levels of service) for the controlled movements at unsignalized intersections is to install traffic signals. However, it should be noted that traffic signals will also increase delays for the movements that would otherwise be unimpeded, such as the through movements on B Street. The *Manual on Uniform Traffic Control Devices* (MUTCD) contains several warrants that can be assessed to determine whether signals should be installed. In addition to the warrants, other factors, such as signal spacing and accident histories, should be reviewed prior to making the decision to install signals. Since this study only projects peak hour volumes, the peak hour volume warrant was investigated. The projected peak-hour volumes at the intersection of B Street and 2nd Street do not meet the peak hour warrant. Therefore the impact is less than significant at this intersection.

As noted in the Existing With Project discussion, the City should continue to monitor the B Street/2nd Street intersection to determine if a signal may be warranted in future.

No mitigation is required. However, it is recommended that the City of Davis continue to monitor the intersection of B Street and 2nd Street, consistent with its ongoing practices, to ensure that the need for a signal at this intersection is periodically reviewed.

Mitigation Measure: None required.



B and 3rd Streets Visioning Process

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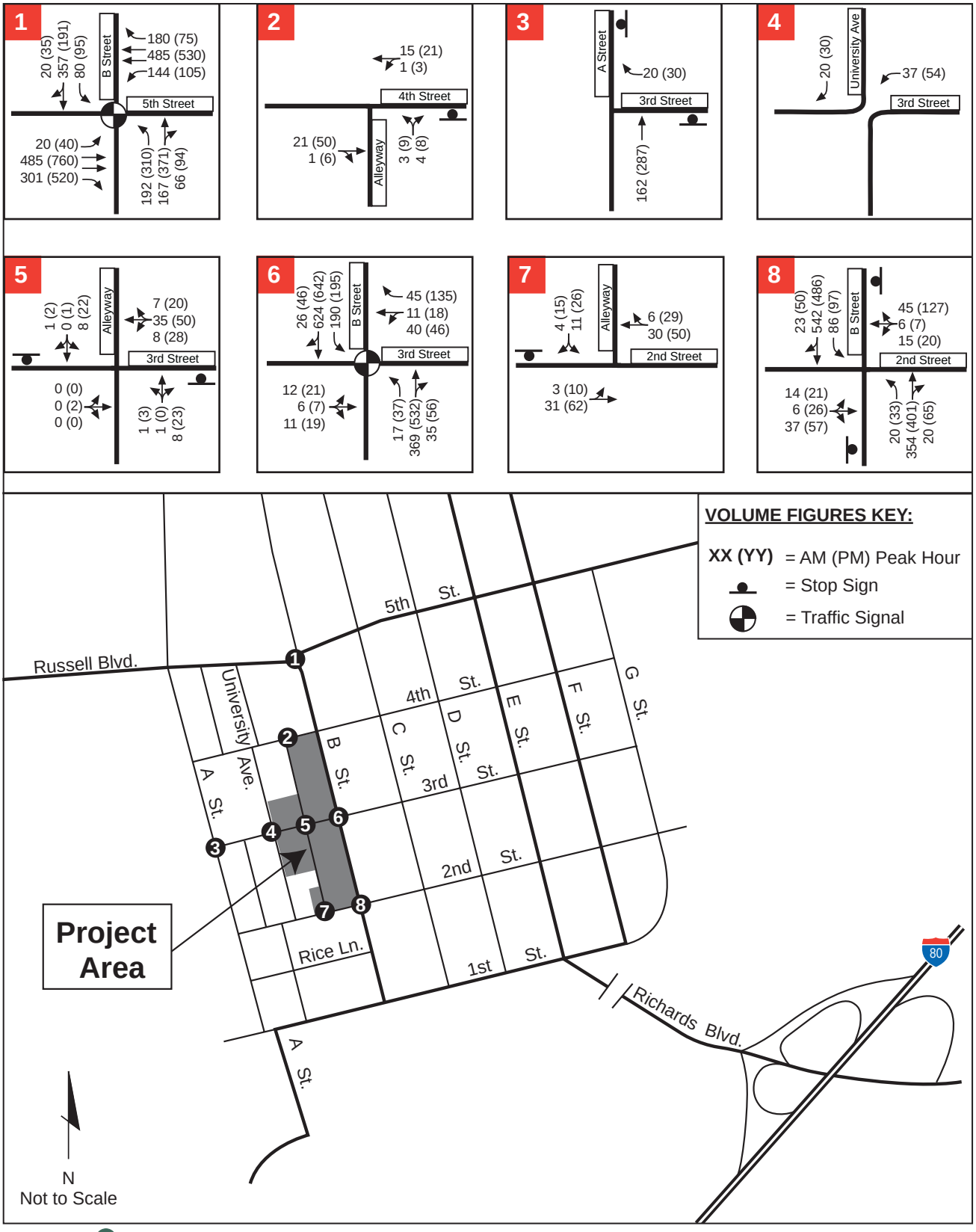
PROJECT TRIP ASSIGNMENT FOR CUMULATIVE ANALYSIS

March 2006
2263-4.2-16

FIGURE 4.2-16



B and 3rd Streets Visioning Process

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CUMULATIVE PLUS PROJECT VOLUMES

March 2006
2263-4.2-17

FIGURE 4.2-17

Table 4.2-11
Cumulative With Project Intersection Levels of Service

Intersection		Control	Peak Hour	Existing		Existing With Project		Cumulative No Project		Cumulative With Project	
				Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1	B Street / 5th Street	Signal	AM	44	D	47	D	64	E	65	E
			PM	31	C	34	C	37	D	39	D
2	Alley / 4th Street	Side Street Stop	AM	9	A	9	A	9	A	9	A
			PM	9	A	9	A	9	A	9	A
3	A Street / 3rd Street	All-Way Stop	AM	8	A	8	A	8	A	8	A
			PM	9	A	10	A	10	A	10	A
4	University / 3rd Street	Side Street Stop	AM	9	A	9	A	9	A	9	A
			PM	9	A	9	A	9	A	9	A
5	Alley / 3rd Street	Side Street Stop	AM	9	A	9	A	9	A	9	A
			PM	9	A	11	B	9	A	11	B
6	B Street / 3rd Street	Signal	AM	5	A	5	A	6	A	7	A
			PM	7	A	8	A	8	A	8	A
7	Alley / 2nd Street	Side Street Stop	AM	9	A	9	A	9	A	9	A
			PM	9	A	9	A	9	A	10	A
8	B Street / 2nd Street	Side Street Stop	AM	20	C	23	C	26	D	28	D
			PM	23	C	36	E	38	E	**52**	**F**

Notes: **Bold** face indicates unacceptable operations.
1. Delay and LOS for the worst movement are reported for side street stops; intersection average delay and LOS are reported for all-way stops and signalized intersections.

Source: Fehr & Peers, March 2006