4.8 TRANSPORTATION AND CIRCULATION

4.8 TRANSPORTATION AND CIRCULATION

This section analyzes the potential transportation and circulation anticipated future impacts resulting from future development of the proposed project site. The anticipated future impacts to the roadway, transit, rail, bicycle, and pedestrian systems are analyzed for existing and year 2025 conditions.

This section is organized into two main sections: 1) environmental setting, which is the baseline condition upon which anticipated future impacts are evaluated, and 2) anticipated future impacts and mitigation measures including significance criteria, which are the thresholds used to evaluate the significance of anticipated future impacts.

Several agencies and stakeholders provided comments on the NOP regarding the transportation impact analysis. The comments related to the scope and analysis methodologies to be used in the study, and analysis of alternative travel modes; these comments are summarized in Table 1-1. The City considered the comments provided on the NOP and presented during the public scoping meeting. The comments received from YSAQMD and Caltrans have been addressed in this section of the EIR. The City Engineering and Community Development departments also considered the City of Davis' request for traffic analyses for roadways in and around Davis. The City of Dixon determined that the proposed project and future site development would not be expected to significantly affect roadways in and around Davis.

SETTING

Existing Facilities

The project site is located in the northeast quadrant of the Interstate 80/North First Street/Currey Road interchange. Key roadways are described below.

Interstate 80 is a six- to eight-lane interstate freeway that extends in a generally east-west direction through Solano and Yolo counties. In the City of Dixon, Interstate 80 has interchanges at Pedrick Road, North First Street (State Route 113)/Currey Road, Pitt School Road, and West A Street. The freeway includes six lanes from west of Midway Road to east of Pedrick Road through the Dixon area. It widens to eight lanes beginning approximately 0.5 mile west of the Kidwell Road interchange near the Yolo County line. Interstate 80 has a posted speed limit of 65 miles per hour (mph) within the study area.

North First Street/State Route (SR) 113 begins at Interstate 80 and extends south into downtown Dixon and beyond. For study purposes and to be consistent with the posted street names, this roadway is referred to as "North First Street" from Interstate 80 to West A Street, "South First Street" from West A Street to the south City limits, and "SR 113" beyond the south City limits. North First Street consists of two lanes in each direction from

Interstate 80 south to Adams Street where it narrows to one lane in each direction through downtown. Traffic signals were recently installed at Dorset Drive, Vaughn Road/Lincoln Street, Regency Parkway/Industrial Way, Stratford Avenue, and A Street. North First Street has posted speed limits that range from 25 to 40 mph. SR 113, south of the City limits, is a two-lane conventional highway with a posted speed limit of 55 mph. Although not designed to current standards, the Interstate 80/North First Street/Currey Road interchange allows for generally "free-flow" movements between Interstate 80, North First Street, and Currey Road.

Pedrick Road is a two-lane rural minor arterial street that begins in Yolo County north of Interstate 80 and extends southeast of the project site to East A Street and beyond. Pedrick Road provides access to various agricultural operations and is used by farm equipment. It has a posted speed limit of 55 mph in the vicinity of the project site. The Interstate 80/Pedrick Road interchange has a two-lane overcrossing with loop on-ramps and diagonal off-ramps connecting to Interstate 80.

Currey Road begins at Interstate 80 and extends north to Sievers Road and beyond. Currey Road has one lane in each direction. Its intersections at Milk Farm Road and Sievers Road have side-street stop control (Currey Road is uncontrolled at both intersections). It has a posted speed limit of 45 mph.

Transit System

Readi-Ride Transit Service is a public dial-a-ride transit system that provides curb-to-curb transit service within the Dixon city limits. It operates from 7:00 AM to 6:00 PM and fares range from $1.00 to $1.50 per trip. Fixed-route bus operations are not currently provided within the City limits. Fairfield/Suisun Transit Route 30 provides service from Fairfield and Suisun through Dixon to UC Davis and Sacramento. It travels each way five times each weekday. The stop in Dixon is at the Market Lane Park and Ride lot (Market Lane near Pitt School Road).

Rail System

At-grade crossings of the Union Pacific Railroad (UPRR) tracks are located on North First Street, Vaughn Road, and Pedrick Road to the south and southeast of the project site south of Interstate 80. All crossings have crossing gates and operative crossing lights. The UPRR tracks are used for both passenger and freight trains. Information relating to the frequency, size, and speeds of freight trains is not readily available. However, field observations reveal that long, moderate-speed trains often create lengthy waits at crossings. The waits can cause substantial delays and congestion, particularly at the crossings in downtown. The Capitol Corridor provides passenger rail service between San Jose and Auburn

(Amtrak, 2005). The trains, which use the UPRR tracks, currently stop in Davis and Suisun/Fairfield, with a stop also planned in downtown Dixon in the future. On weekdays, twelve westbound and twelve eastbound trips are made daily. Capitol Corridor train crossings are normally very short given the train's considerable speed and limited length.

It is estimated that between 30 and 40 trains use the UPRR tracks through Dixon on an average weekday.

Bicycle and Pedestrian System

Bicycle and pedestrian facilities are provided in selected locations within the site vicinity. South of the project site, Class II bike lanes (on-street lanes with appropriate signing and striping) exist on North First Street and Dorset Drive. Portions of Vaughn Road have shoulders of sufficient width for bicycle travel. Sidewalks exist on one or both sides of North First Street, Dorset Drive, and Vaughn Road. The signalized intersections on North First Street have crosswalks with push-button pedestrian actuation. Facilities designated for bicyclists and pedestrians are not provided on Currey Road or Pedrick Road.

The final phase of a bikeway connecting Davis and Dixon was completed in late 2004. Continuous Class II bike lanes are provided on portions of North First Street and Vaughn Road along a route between Old Davis Road in south Davis and North First Street in downtown Dixon.

Level of Service Analysis

The operation of the roadway system is typically described in terms of level of service (LOS). LOS is a quantitative measure of transportation system operations, with LOS A representing free-flow conditions and LOS F representing gridlock conditions. For signalized intersections, the LOS is based on the average control delay per vehicle for all vehicles passing through the intersection. For two-way stop-controlled intersections, the LOS is reported for the entire intersection as well as the minor-street movement with the greatest delay. The LOS is reported at four-way stop intersections based on the average delay of all vehicles passing through the intersection. For the freeway mainline and ramp junctions, the LOS is based on vehicle density measured by the number of passenger cars per mile per lane during the peak hour. Table 4.8-1 shows the average control delay and vehicle density ranges for each LOS category for the different facilities.

All analyses were conducted in accordance with methodologies described in the *Highway Capacity Manual (*Transportation Research Board, 2000). Based on guidelines set forth in the City's *Engineering Design Standards and Construction Specifications* (Dixon, 2003), a peak

hour factor of 1.0, to reflect hourly traffic conditions, was assumed at all unsignalized intersections for future site development conditions.

TABLE 4.8-1: **Level of Service Definitions**

Level of Service	Average Control Delay (seconds per vehicle)		Density (passenger cars per mile per lane per hour)	
	Signalized Intersections	Unsignalized Intersections	Freeway Mainline	Freeway Ramps
A	≤ 10	≤ 10	≤ 11	≤ 10
B	> 10 to 20	> 10 to 15	> 11 to 18	> 10 to 20
C	> 20 to 35	> 15 to 25	> 18 to 26	> 20 to 28
D	> 35 to 55	> 25 to 35	> 26 to 35	> 28 to 35
E	> 55 to 80	> 35 to 50	> 35 to 45	> 35 to 43
F	> 80	> 50	> 45	> 43

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

The peak hour volume warrant for a traffic signal (as described in the *Manual of Uniform Traffic Control Devices*, FHWA, 2003) was evaluated at unsignalized intersections. It should be noted that the peak hour signal warrant analysis is not the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely on the warrants, since the installation of signals can lead to certain types of collisions.

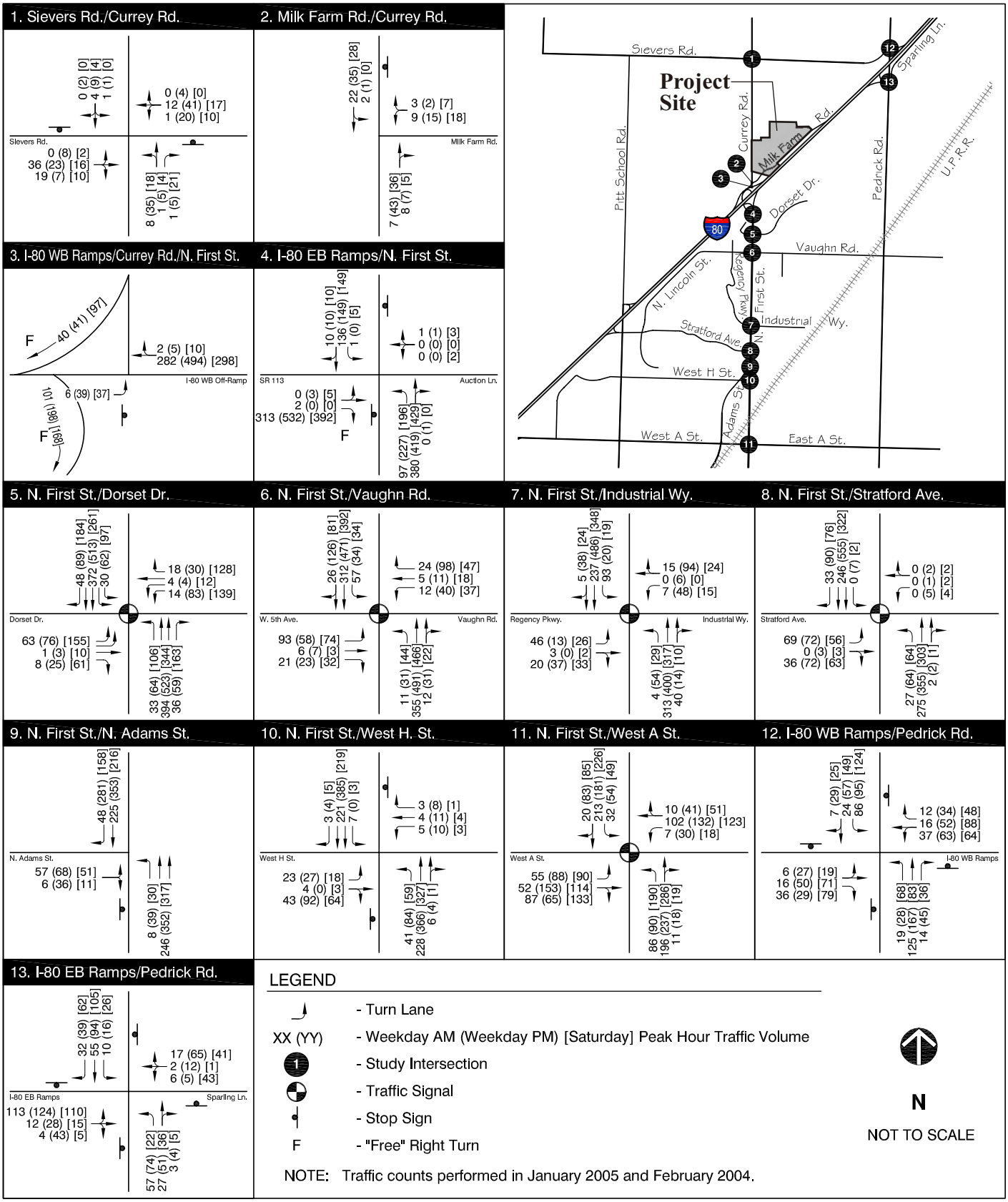
Traffic Study Intersections

Figure 4.8-1 shows the location of the study intersections, existing AM and PM peak hour intersection turning movement volumes, and the lane configurations and traffic control devices at each intersection. These intersections were chosen because they are either located on roadways that are anticipated to experience significant use after site development, or have otherwise been identified as an important node in the City's circulation system.

For existing conditions, the anticipated future impacts of the proposed project were analyzed for weekday morning (AM) peak hour, evening (PM) peak hour, and Saturday peak hour conditions. Traffic counts were conducted in February 2004 and January 2005 to determine peak periods. The weekday AM peak hour varied, while the PM peak hour occurred from 4:30 to 5:30 PM at most locations. Saturday afternoon peak traffic volumes

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS- EXISTING CONDITIONS

Figure 4.8-1



Milk Farm
Dixon, California

Source: FEHR & Peers, Transportation Consultants, 2005.

BASELINE

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were from 12:00 to 1:00 PM. No unusual traffic or weather conditions were observed during any of the count periods. Traffic counts were not conducted during holiday periods so as to avoid collecting "atypical" traffic data.

Truck Traffic

Vehicle classification counts were performed at selected locations within the study area to determine the proportion of heavy vehicles (defined as having three or more axles) in the traffic stream. The proportion of traffic on Interstate 80 consisting of trucks ranged from 3.0 to 5.5 percent during the weekday PM peak hour.

Truck traffic on North First Street and Pedrick Road ranged from five to eight percent during the weekday PM peak hour. The notable exception was northbound Pedrick Road approaching Interstate 80, where trucks represented 12 percent of traffic during the weekday PM peak hour.

Many of the agricultural and industrial businesses along Pedrick Road were operating significantly below peak conditions at the time of the winter traffic counts. Inquiries were made with numerous agricultural and industrial businesses (including Valley Farm Transport, Anderson Truss, BasaLite, Campbells, Dixon Truck & Tractor, Cardinal Health, Rinker Materials, AR Ready Mix, Mike Lowrie Trucking, and Hanson Roof Tile) to develop comparisons of the levels of truck traffic at the time the counts were performed versus the levels of truck traffic during peak summer months.

The inquiry results indicated that the number of truckloads per day increases from a combined 150 during the winter months to about 900 during peak summer months. To account for peak summer traffic conditions, the levels of truck traffic (and total traffic) observed during the winter counts on Pedrick Road and North First Street were increased in accordance with the anticipated increase in truckloads. The existing traffic volumes reflect these adjustments. The technical calculations presented later in this section explicitly account for the effects of truck traffic on freeway and intersection operations.

Traffic Study Scenarios

Study area traffic operations were analyzed under four land use scenarios, which include the following development assumptions:

- Existing Conditions. This scenario includes existing residential and non-residential development in the City.

- Existing Plus Project Conditions. This scenario represents existing conditions plus the addition of the anticipated future site development scenario.

- Cumulative (year 2025) Conditions. This scenario reflects buildout of the residential component of the City in accordance with the current General Plan and 2025 market levels of non-residential land absorption (with the exception of the NQSP, which was assumed to be fully developed). In addition, the Dixon Downs project was assumed to be developed based on the most recent application submitted to the City.

- Cumulative (year 2025) Plus Project Conditions. This scenario represents cumulative (year 2025) conditions plus the addition of the future project development.

Existing Traffic Conditions

The following discussion summarizes existing conditions of intersections and Interstate 80 mainline and ramp operations.

The traffic volumes, lane configurations, and traffic control devices shown on Figure 4.8-1 were used to calculate the existing LOS at each study intersection. Table 4.8-2 summarizes the average delay and LOS at each intersection for each peak hour. (All technical calculations and traffic signal warrant spreadsheets are available for review at the City of Dixon Community Development Department.

TABLE 4.8-2: **Intersection Levels of Service, Existing Conditions**

			Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
	Intersection	Control	Average Delay[1]	LOS	Average Delay[1]	LOS	Average Delay[1]	LOS
1	Sievers Road/ Currey Road	Side-street stop	1.7 (9.3)	A (A)	4.7 (9.6)	A (A)	4.9 (9.4)	A (A)
2	Milk Farm Road/ Currey Road	Side-street stop	2.3 (8.7)	A (A)	1.5 (8.9)	A (A)	2.4 (8.8)	A (A)
3	I -80 WB Ramps/ Currey Road/N. First Street	Side-street stop	0.2 (10.8)	A (B)	1.0 (13.3)	A (B)	1.2 (11.3)	A (B)
4	I -80 EB Ramps/ North First Street	Side-street stop	1.3 (16.0)	A (C)	2.4 (24.7)	A (C)	2.3 (23.5)	A (C)
5	North First Street/ Dorset Drive	Traffic signal	13.0	B	14.1	B	19.7	B

	Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
			Average Delay[1]	LOS	Average Delay[1]	LOS	Average Delay[1]	LOS
6	North First Street/ Vaughn Road	Traffic signal	16.8	B	17.6	B	14.9	B
7	North First Street/ Industrial Way	Traffic signal	14.8	B	15.9	B	13.0	B
8	North First Street/ Stratford Street	Traffic signal	10.7	B	14.2	B	15.1	B
9	North First Street/ North Adams Street	Side-street stop	1.3 (11.2)	A (B)	1.6 (14.0)	A (B)	1.2 (11.7)	A (B)
10	North First Street/ West H Street	Side-street stop	2.2 (12.7)	A (B)	2.8 (18.9)	A (C)	2.2 (15.0)	A (C)
11	North First Street/ West A Street	Traffic signal	23.9	C	29.0	C	29.6	C
12	I-80 WB Ramps/ Pedrick Road	All-way stop	8.6	A	9.7	A	9.9	A
13	I-80 EB Ramps/ Pedrick Road	All-way stop	8.3	A	9.0	A	8.6	A

Source: Fehr & Peers, 2005.

[1] Average control delay (in seconds per vehicle) of all vehicles at signalized and all-way stop-controlled intersections. At side-street stop-controlled intersections, average control delay reported for entire intersection and side-street movement with greatest delay (shown in parentheses).

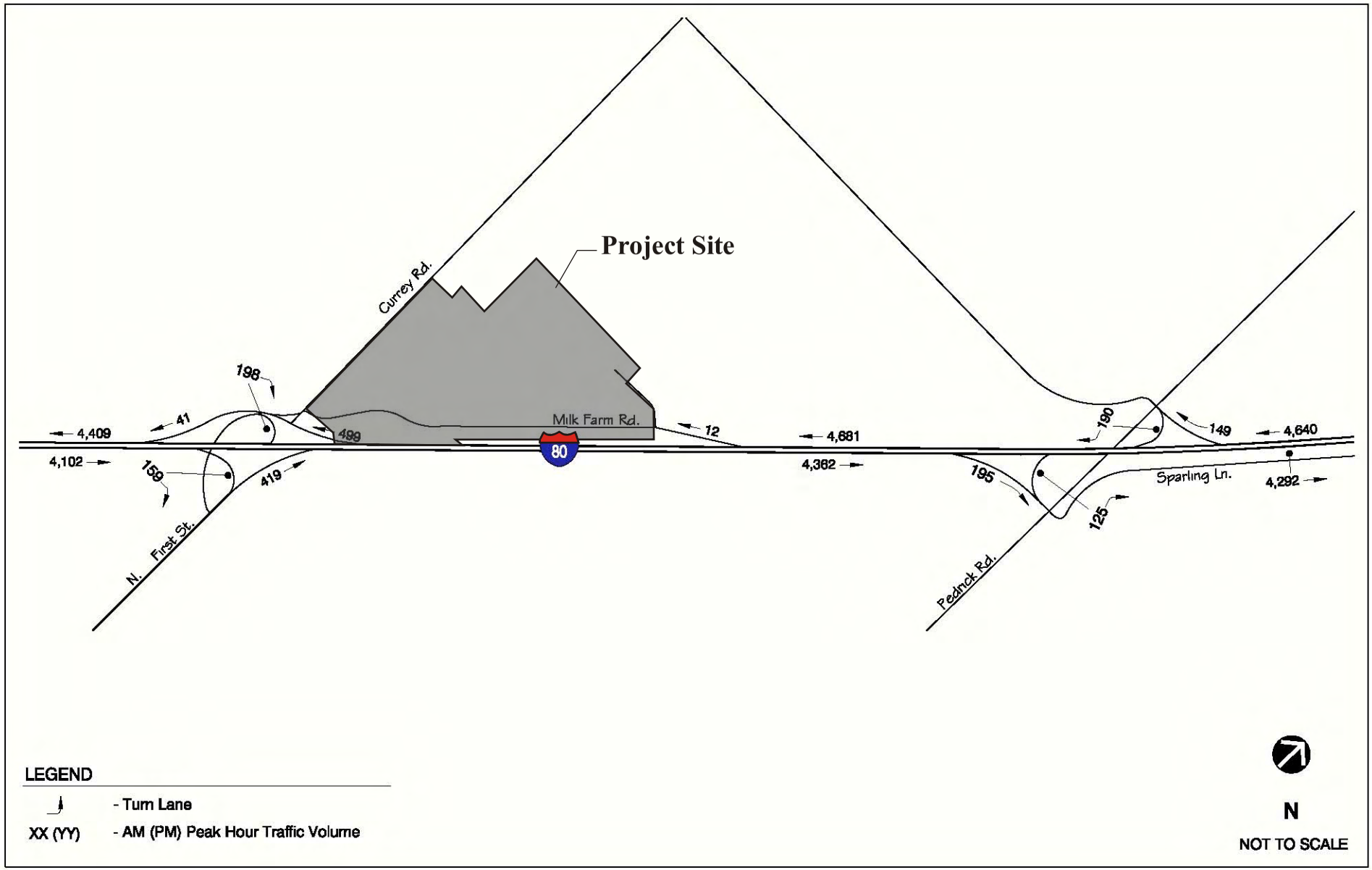
All existing operations during the weekday AM and PM peak hours, and Saturday peak hour, are at LOS C or better at the five signalized intersections and the two all-way stop intersections (Table 4.8-2). All six side-street stop-controlled intersections operate at LOS A overall, and at LOS B or C for the stop-controlled movement with the greatest delay. None of the unsignalized intersections shown on Figure 4.8-1 satisfies the peak hour traffic volume warrant for installation of a traffic signal.

Freeway Operations

Table 4.8-3 displays the existing LOS for each direction of Interstate 80 between Pitt School Road and Kidwell Road for existing weekday PM peak hour conditions. Figure 4.8-2 shows existing weekday PM peak hour traffic volumes on Interstate 80.

I-80 WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES-EXISTING CONDITIONS

Figure 4.8-2



Milk Farm
Dixon, California

Source: FEHR & Peers, Transportation Consultants, 2005.

Y1263-B0.00017.Fig4.8-2.cdr-5/3/05

BASELINE

Table 4.8-4 displays the existing LOS at the Interstate 80 on- and off-ramp junctions (i.e., merge and diverge areas) at the North First Street/Currey Road and Pedrick Road interchanges for weekday PM peak hour conditions. The ramp junctions (i.e., ramp merge and diverge areas) at the Interstate 80/Pedrick Road and Interstate 80/North First Street interchanges each operate at LOS D or better during each of the peak hours.

TABLE 4.8-3: **Interstate 80 Mainline Levels of Service, Existing Conditions**

Freeway Mainline Segment	Weekday PM Peak Hour [1] (Density [2] (Level of Service)
Interstate 80 eastbound between Pitt School Road and North First Street	22.7 (C)
Interstate 80 eastbound between North First Street and Pedrick Road	24.3 (C)
Interstate 80 eastbound between Pedrick Road and Kidwell Road	23.9 (C)
Interstate 80 westbound between Currey Road and Pitt School Road	24.0 (C)
Interstate 80 westbound between Pedrick Road and Currey Road	25.8 (C)
Interstate 80 westbound between Kidwell Road and Pedrick Road	25.5 (C)

Source: Fehr & Peers, 2005.

[1] Weekday and Sunday PM peak hours occur between 4 and 6 PM.
[2] Density expressed as number of passenger cars per mile per lane per hour.

TABLE 4.8-4: **Interstate 80 Ramp Junction Levels of Service, Existing Conditions**

Freeway Ramps Junctions	Weekday PM Peak Hour [1] Density [2] (Level of Service)
North First Street/Interstate 80 eastbound off-ramp	27.5 (C)
North First Street/Interstate 80 eastbound on-ramp	25.0 (C)
Currey Road/Interstate 80 westbound off-ramp	31.2 (D)
Currey Road/Interstate 80 westbound loop on-ramp	24.2 (C)
Currey Road/Interstate 80 westbound on-ramp	23.3 (C)
Pedrick Road/Interstate 80 eastbound off-ramp	29.2 (D)
Pedrick Road/Interstate 80 eastbound on-ramp	23.9 (C)
Pedrick Road/Interstate 80 westbound off-ramp	30.3 (D)
Pedrick Road/Interstate 80 westbound on-ramp	25.8 (C)

Source: Fehr & Peers, 2005.

[1] Weekday PM peak hour occurs between 4 and 6 PM.
[2] Density expressed as number of passenger cars per mile per lane per hour.

REGULATORY FRAMEWORK

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

Federal

There are no federal policies relating to transportation that are directly applicable to the proposed project.

State

Policies of the California Department of Transportation (Caltrans) are applicable to the project and future site development, and to the extent relevant, are incorporated into the standards of significance to be used to evaluate the significance of the anticipated future impacts.

Regional

The Solano Transportation Authority (STA) is the Congestion Management Agency of Solano County. It is responsible for county-wide transportation planning, coordination, financing of priority projects, and programming of federal, state, and regional transportation funds. Its goals and objectives are to: document transportation needs from both local and county-wide perspectives; provide safety and operational improvements; preserve the transportation system; reduce congestion and maintain mobility; improve commute options to the Bay Area and Sacramento regions; promote transit, including intercity bus, rail, and ferries; promote alternative modes, such as carpooling, vanpooling, and bicycling; and encourage Transportation for Livable Communities projects. One of the objectives in STA's *Arterials, Highways, and Freeway Element* (2002) is to encourage member jurisdictions and Caltrans to maintain LOS E or better conditions during the AM and PM peak hours on roadways of countywide significance.

City of Dixon

The City's General Plan (Dixon, 1993) contains the policies in the Transportation and Circulation Element:

Dixon General Plan Policies	Project Consistency
TRANSPORTATION AND CIRCULATION ELEMENT	
1: The City shall ensure that Dixon's existing and proposed street configuration and highway network maintains traffic operations at Level of Service "C" or better, while acknowledging that this objective may be difficult to achieve in those locations where traffic currently operates at Levels of Service below "C" for limited periods of time. Achieving this policy will require a variety of traffic improvements, including: • Improving existing arterials; • Construction of arterials and collector streets in newly developing areas; and • Intersection improvements.	This EIR has proposed mitigation measures for City roadways that would be impacted by future site development; however, some impacts may not be reduced to a level of less than significant unless additional funding mechanisms are in place. It is possible that the project would not be consistent with this policy.
3: The City shall encourage the continued development and expansion of local public bus/van transit systems, if it can be demonstrated that the service can be financially supported. New development should be designed to maximum access and use of public transit where feasible.	The conceptual site plan and environmental commitments by the applicant are consistent with this policy.
4: The City shall support cycling as a transportation mode which promotes personal health, recreation and enjoyment while minimizing energy consumption and air pollution. The City shall improve and expand existing bikeway facilities in accordance with the Bikeways Master Plan, and shall provide connections to newly developed areas, where feasible.	The conceptual site plan and environmental commitments by the applicant are consistent with this policy.

According to the Dixon Engineering Department staff, the City is contemplating a change in their LOS policy that would permit LOS D conditions throughout the City, and LOS E conditions at certain intersections. At the time of this EIR, the revised LOS policy has not been adopted by the City Council. Thus, the LOS policy from the existing General Plan (Policy 1, above) was used for this study.

IMPACTS AND MITIGATION MEASURES

Significance Criteria

The following standards of significance were used to determine the significance of project impacts on the roadway, transit, rail, and bicycle/pedestrian systems. A significant impact would occur if implementation of the project:

- Causes the existing (or future year) level of service at a City of Dixon intersection (including those located on North First Street) to worsen from LOS C or better to LOS D or worse.
- Causes the average delay at a City of Dixon intersection (including those located on North First Street) that is already (or projected to be) operating at LOS D or worse to increase by more than five seconds.
- Causes an Interstate 80 mainline segment, ramp junction, or ramp terminal intersection to worsen from LOS D or better to LOS E or F.
- Adds more than ten vehicles to an Interstate 80 mainline segment, ramp junction, or ramp terminal intersection that is already (or projected to be) operating at LOS E or F.
- Causes a substantial reduction in safety on a public street due to a design feature (e.g., sharp curve) or incompatible use (e.g., farm equipment).
- Results in unmet transit demand in the project vicinity.
- Adversely affects service times for the Dixon Readi-Ride Transit Service.
- Causes a substantial increase in potential conflicts between trains and motorists at an at-grade railroad crossing.
- Disrupts or interferes with existing or planned bicycle or pedestrian facilities.
- Results in a change in air traffic patterns.
- Results in inadequate emergency access.
- Results in inadequate parking capacity.
- Conflicts with adopted policies, plans, or programs supporting alternative transportation.

The sources referenced to develop these standards include Appendix G of the *CEQA Guidelines* (2004), *City of Dixon General Plan (1993), City of Dixon Engineering Design Standards and Construction Specifications* (2003), *Interstate 80 Transportation Concept Report* (Caltrans, 2001), and *State Route 113 Transportation Concept Report* (Caltrans, 2000).

Caltrans staff was contacted to identify an appropriate LOS standard for Interstate 80 in Solano County. The Transportation Concept Report for this segment was out of date and a recommended LOS standard was not provided. LOS D was selected as the operating standard for the segment of Interstate 80 in Solano County because it is bracketed by STA's objective of achieving LOS E or better on roadways of county-wide significance, and the Caltrans' objective of maintaining a target LOS at the transition between C and D when such a target can be achieved (as described in the *Guide for the Preparation of Traffic Impact Studies*, Caltrans, 2002).

Impacts Determined to Be Less than Significant

- **Result in a change in air traffic patterns**.

The project site is not near an existing airport and will not affect airport operations.

- **Substantially increase hazards due to a design feature**.

Future site development does not propose any design changes to existing roadway design or uses that would increase safety hazards.

- **Result in inadequate emergency access**.

Future site development would result in access from an existing road (Currey Road) and the Interstate 80 interchange and would have adequate emergency access for police, fire, and emergency medical services from the City of Dixon, following recommended mitigation.

- **Result in inadequate parking capacity**.

The project does not include any specific development application and parking ratios, thus parking capacity must be analyzed in a subsequent environmental document.

- **Conflict with adopted policies, plans, or programs supporting alternative transportation**.

The project and future site development does not conflict with any adopted Dixon General Plan policies regarding alternative transportation.

Impacts Determined to Be Potentially Significant

- Cause a substantial increase in traffic in relation to existing traffic load and capacity of the street system; or
- Exceed, either individually or cumulatively, a LOS standard.

Impact Assessment

This section discusses the methodology used to develop traffic volume forecasts under existing and cumulative conditions with the addition of future development conditions and identifies anticipated future impacts and mitigation measures.

Trip Generation

Information contained in *Trip Generation*, 7th Edition (Institute of Transportation Engineers, 2003) was used to prepare the trip generation for the anticipated future commercial uses of the project site. Trip generation for a possible conference facility was estimated by assuming a 300-person conference facility with 25 percent of attendees staying at an adjacent hotel and 75 percent of attendees departing the site during the weekday PM peak hour. Assuming an average vehicle occupancy of 1.3 persons per vehicle, 110 outbound trips and 40 inbound trips would be generated by a possible conference facility. For the Highway Commercial area, it was assumed that there would be: 1) 380,000 square feet of specialty retail with a trip generation rate of 42.94 trips per 1,000 square feet; 2) one 16,000-square foot high-turnover restaurant with a trip generation rate of 127.15 trips per 1,000 square feet; 3) one 4,000-square foot fast food restaurant with 496.12 trips per 1,000 square feet; and 4) one 20,000-square foot service station (with 12 fueling positions) with a convenience market with 162.78 trips per fueling position.

A portion of trips estimated to be generated by future site development would be "pass-by" or "diverted" trips. A "pass-by" trip is made by a motorist already on the adjacent roadway (i.e., Milk Farm Road) that enters the project site en route to a different final destination. A "diverted" trip is made by a motorist already on a parallel or nearby street that changes his/her travel route to access the project site. Diverted trips would originate initially from Interstate 80 and North First Street, primarily.

The percentage of trips that are pass-by and diverted would depend on the amount of traffic from which these trips can be taken. Under existing conditions, no pass-by traffic can be reasonably assumed (because Milk Farm Road and Currey Road serve relatively low traffic volumes). However, Interstate 80 and North First Street carry adequate levels of traffic to support diverted trip percentages as specified in the *Trip Generation Handbook* (ITE, 2000). The assignment of future project trips accounts for diverted trips from these roadways.

A relatively small percentage of trips, five percent, were assumed to be internal to the project site after development (e.g., a trip from the retail uses to the hotel conference center) during the weekday PM peak hour and Saturday peak hour. This is a typical percentage for the mix of uses presented in the conceptual site development plan and is supported by data from the *Trip Generation Handbook.*

Table 4.8-5 displays the expected weekday AM and PM peak hour and Saturday peak hour trip generation assuming a mix of uses presented in the conceptual site development plan. The actual distribution of on-site uses would be developed in the future as part of actual site development proposals.

TABLE 4.8-5: **Trip Generation for Possible Future Land Uses**

Item	Land Use	Quantity	ITE Category	Trip Rates [1]			Trips								
							Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
								Directional Distribution			Directional Distribution			Directional Distribution	
				Weekday AM Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Total	In	Out	Total	In	Out	Total	In	Out
Hotel Conference Center															
1	Hotel	70 rooms	ITE 310	0.56	0.59	0.72	39	24	15	41	22	19	50	28	22
2	Conference Center	20 ksf	N/A				40	40		110		110	110		110
3	Restaurant	5 ksf	N/A												
4	Wellness Facility/Spa	20 ksf	N/A												
Highway Commercial															
5	Specialty Retail	380 ksf	ITE 820	0.92	3.98	5.42	349	213	136	1,511	725	786	2,061	1,072	989
6	Restaurants	16 ksf	ITE 932	11.52	10.92	20	184	96	88	175	107	68	320	202	118
		4 ksf	ITE 934	53.11	34.64	59.2	212	108	104	139	72	67	237	121	116
7	Auto Service	12 positions	ITE 945	10.06	13.38	13.38	121	60	60	161	80	80	161	80	80
	Internal Trips			5%			47	27	20	107	50	57	147	75	72
	Diverted/Pass-by Trips			30% for retail, 50% for gas station, 30% for restaurant			270	148	122	596	296	301	822	436	387
	New Trips						629	367	262	1,433	660	773	1,969	992	977

Source: Fehr & Peers, 2005

[1] Fitted-curve equation used to develop trip generation rate for ITE land use code 820. Trip generation for all other land use codes are based on average rates.

Trip Distribution and Assignment

The distribution of trips to/from the project site was developed by considering the regional population distribution, traffic congestion, travel time, the presence of competing regional shopping attractions, such as the Vacaville Factory Outlets and Westfield Shoppingtown Mall in Fairfield, and the proximity to Dixon residents. Figure 4.8-3 displays the expected distribution of trips generated by assumed future site development. All assumptions related to future site development trip generation, distribution, and assignment were reviewed and approved by the City prior to their use in the impact analysis.

Vehicle trip generation by anticipated future site development was assigned through the study intersections using the expected trip distribution shown on Figure 4.8-3 for existing and cumulative conditions.

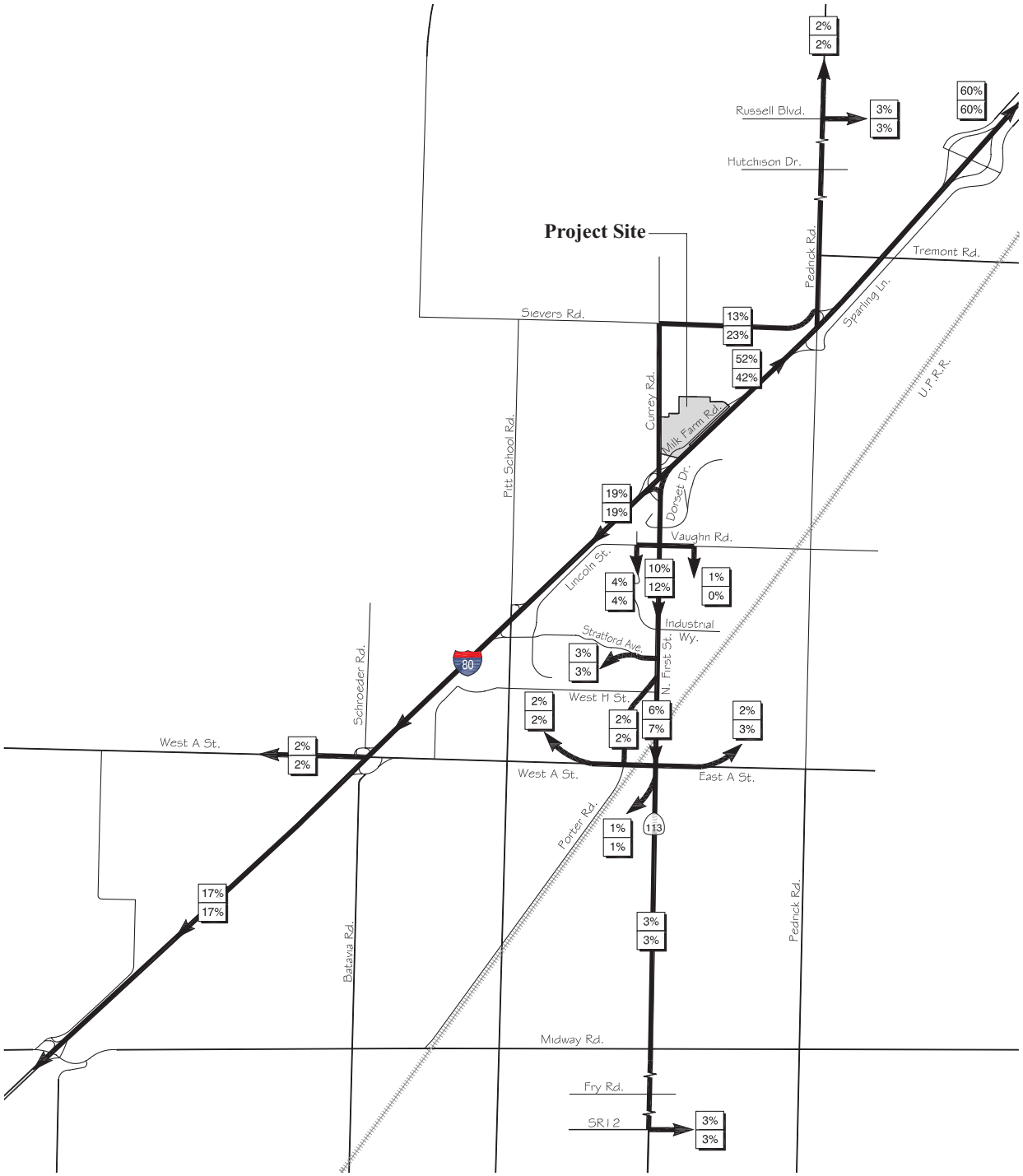
Existing Plus Anticipated Future Project Impacts

As outlined above, future project-only trips were added to the existing traffic volumes to yield "existing plus future project" conditions for each scenario. Figure 4.8-4 shows the "existing plus future project" volumes at each study intersection for each scenario. Figure 4.8-5 shows the resulting "existing plus future project" volumes on Interstate 80 for weekday PM peak hour conditions. Operations were reanalyzed at the study intersections, Interstate 80 mainline segments, and Interstate 80 ramp junctions with the addition of traffic from anticipated future site development. Tables 4.8-6 through 4.8-8 summarize the results. All technical calculations for the "existing plus future project" analyses are available for review at the City of Dixon Community Development Department.

Future Year 2025 (Cumulative)

Traffic operations were analyzed at the study area intersections under future year 2025 (cumulative) conditions without and with the addition of future site development. Traffic forecasts were developed using the City of Dixon Travel Demand Model. This model was calibrated to year 2001 travel conditions, and produces traffic forecasts for five-year increments through year 2025 with specific land use absorption and planned roadway improvements. The future year 2025 (cumulative) traffic model assumes:

- buildout of the residential component of the City in accordance with the current General Plan;
- 2025 market levels of non-residential land absorption except for the NQSP (which was assumed to be fully developed);
- Phase 1 and 2 of the Dixon Downs project.



LEGEND

15% / 15% - Distribution Percentage Under Weekday Conditions / - Distribution Percentage Under Saturday Conditions

N

NOT TO SCALE

Milk Farm
Dixon, California

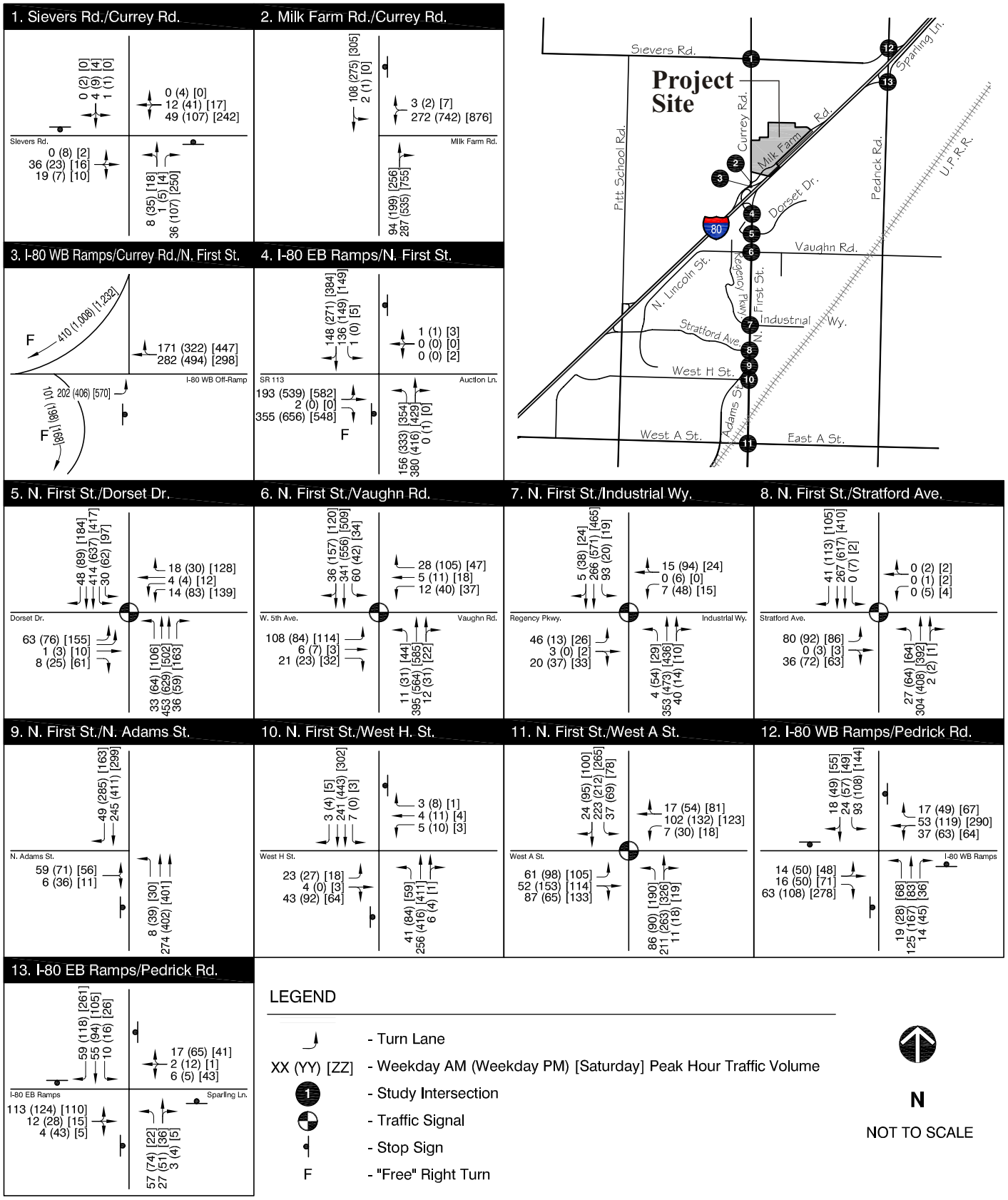
Source: FEHR & Peers, Transportation Consultants, 2005.

Y1263-B0.00017.Fig4.8-3.cdr-5/5/05

BASELINE

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS- EXISTING PLUS FUTURE PROJECT CONDITIONS

Figure 4.8-4



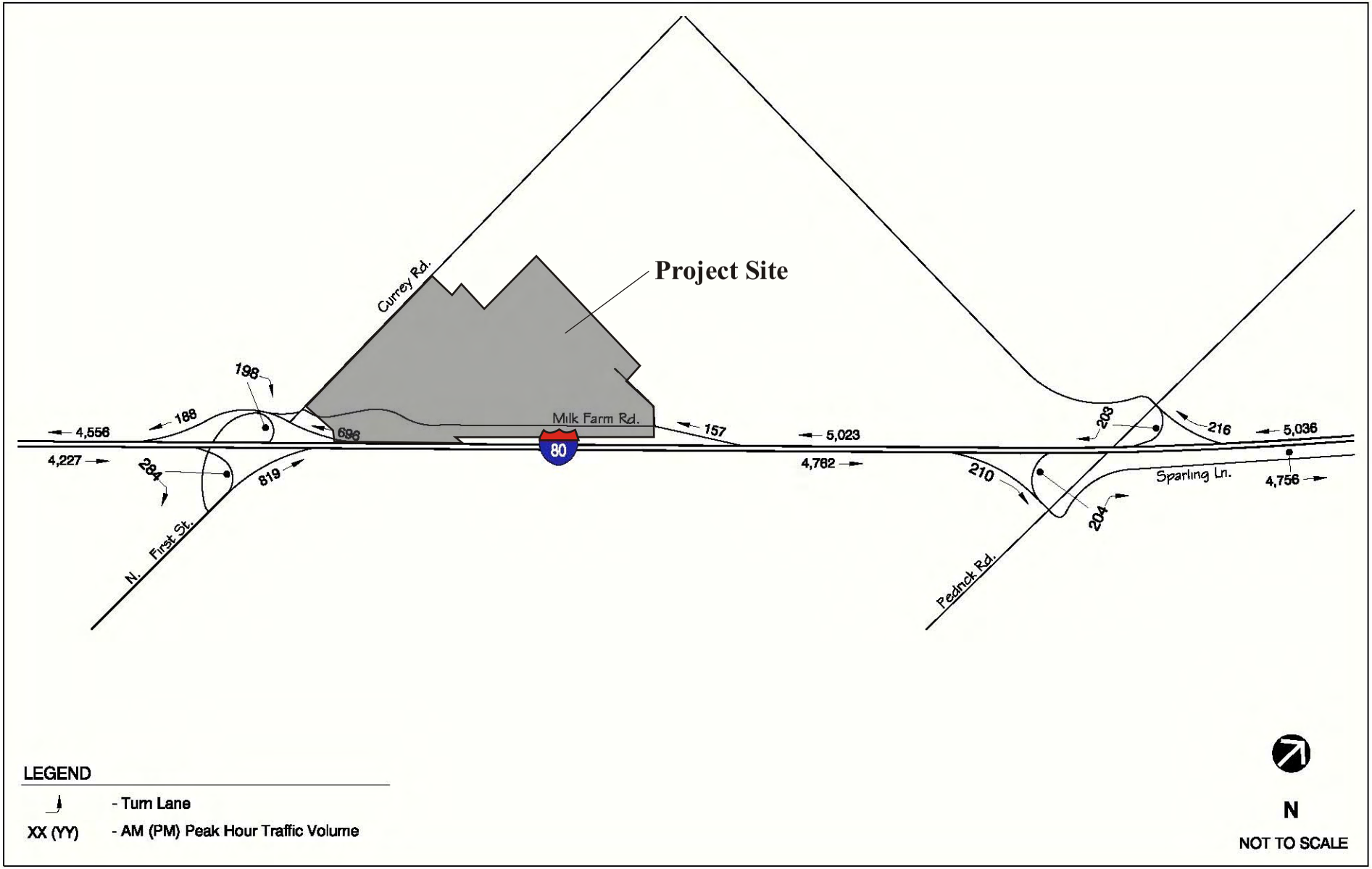
Milk Farm
Dixon, California

Source: FEHR & Peers, Transportation Consultants, 2005.

Y1263-B0.00017.Fig4.8-4.cdr-5/5/05

I-80 WEEKDAY PM PEAK
EXISTING PLUS FUTURE PROJECT CONDITIONS

Figure 4.8-5



Milk Farm
Dixon, California

Source: FEHR & Peers, Transportation Consultants, 2005.

Y1263-B0.00017.Fig4.8-5.cdr-5/3/05

BASELINE

TABLE 4.8-6: **Intersection Levels of Service, Existing Plus Future Project Conditions**

	Intersection	Control	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
			Average Delay [1]	LOS	Average Delay [1]	LOS	Average Delay[1]	LOS
1	Sievers Road/Currey Road	Side-street stop	4.9 (10.1)	A (B)	6.8 (11.1)	A (B)	8.2 (14.7)	A (B)
2	Milk Farm Road/Currey Road	Side-street stop	5.3 (14.6)	A (B)	>50 (>50)	F (F)	>50 (>50)	F (F)
3	I -80 westbound ramps/Currey Road/North First Street	Side-street stop	5.2 (16.9)	A (C)	>50 (>50)	F (F)	>50 (>50)	F (F)
4	I -80 eastbound ramps/North First Street	Side-street stop	14.6 (>50)	B (F)	>50 (>50)	F (F)	>50 (>50)	F (F)
5	North First Street/Dorset Drive	Traffic signal	13.1	B	14.4	B	20.0	B
6	North First Street/Vaughn Road	Traffic signal	17.3	B	18.4	B	15.8	B
7	North First Street/Industrial Way	Traffic signal	15.0	B	16.4	B	16.4	B
8	North First Street/Stratford Street	Traffic signal	10.9	B	14.4	B	16.5	B
9	North First Street/North Adams Street	Side-street stop	1.3 (11.5)	A (B)	1.6 (15.4)	A (C)	1.2 (13.2)	A (B)
10	North First Street/West H Street	Side-street stop	2.1 (13.2)	A (B)	2.7 (21.4)	A (C)	1.9 (17.8)	A (C)
11	North First Street/West A Street	Traffic signal	24.3	C	32.2	C	34.4	C
12	I-80 westbound ramps/Pedrick Road	All-way stop	8.9	A	10.8	B	15.0	C

Source: Fehr & Peers, 2005.

[1] Average control delay (in seconds per vehicle) of all vehicles at signalized and all-way stop-controlled intersections. At side-street stop-controlled intersections, average control delay reported for entire intersection and side-street movement with greatest delay (shown in parentheses).

TABLE 4.8-7: **Interstate 80 Mainline Levels of Service, Existing Plus Future Project Conditions**

Freeway Mainline Segment	Weekday PM Peak Hour [1] (Density [2] (Level of Service)	
	Existing	Existing Plus Project
Interstate 80 eastbound between Pitt School Road and North First Street	22.7 (C)	23.4 (C)
Interstate 80 eastbound between North First Street and Pedrick Road	24.3 (C)	26.7 (D)
Interstate 80 eastbound between Pedrick Road and Kidwell Road	23.9 (C)	26.7 (D)
Interstate 80 westbound between Currey Road and Pitt School Road	24.0 (C)	25.0 (C)
Interstate 80 westbound between Pedrick Road and Currey Road	25.8 (C)	28.0 (D)
Interstate 80 westbound between Kidwell Road and Pedrick Road	25.5 (C)	28.1(D)

Source: Fehr & Peers, 2005.

[1] Weekday and Sunday PM peak hours occur between 4 and 6 PM
[2] Density expressed as number of passenger cars per mile per lane per hour.

TABLE 4.8-8: **Interstate 80 Ramp Junction Levels of Service, Existing Plus Future Project Conditions**

Freeway Ramp Junctions	Weekday PM Peak Hour [1] Density [2] (Level of Service)	
	Existing	Existing Plus Project
North First Street/Interstate 80 eastbound off-ramp	27.5 (C)	28.4 (D)
North First Street/Interstate 80 eastbound on-ramp	25.0 (C)	28.4 (D)
Currey Road/Interstate 80 westbound off-ramp	31.2 (D)	32.5 (D)
Currey Road/Interstate 80 westbound loop on-ramp	24.2 (C)	24.2 (C)
Currey Road/Interstate 80 westbound on-ramp	23.3 (C)	24.8 (C)
Pedrick Road/Interstate 80 eastbound off-ramp	29.2 (D)	31.1 (D)
Pedrick Road/Interstate 80 eastbound on-ramp	23.9 (C)	26.6 (C)
Pedrick Road/Interstate 80 westbound off-ramp	30.3 (D)	32.2 (D)
Pedrick Road/Interstate 80 westbound on-ramp	25.8 (C)	27.6 (C)

Source: Fehr & Peers, 2005.

[1] Weekday PM peak hour occurs between 4 and 6 PM
[2] Density expressed as number of passenger cars per mile per lane per hour.

Within the NQSP, the circulation system for year 2025 was modified based on the proposed system for the Dixon Downs project.

The widening of Interstate 80 to eight lanes through the study area was not assumed by 2025 given the budgetary constraints associated with construction. The 2004 State Transportation Improvement Program allocated $9 million for right-of-way acquisition and engineering, but no funding for construction. The widening is listed in the *2001 Regional Transportation Plan* (Metropolitan Transportation Commission) as a partially funded improvement. Due to the lack of an identified full funding source, the widening of Interstate 80 to eight lanes through the study area was not assumed by 2025.

The *I-80/I-680/I-780 Major Investment and Corridor Study* (Korve Engineering, 2004) evaluated the widening of Interstate 80 to four lanes in each direction between Meridian Road and Kidwell Road from cost, environmental, and prioritization perspectives. It was included as a recommended long-term project; however, 25 mid-term projects, which would likely be implemented prior to the long-term projects, were also identified. Thus, there are quite a few projects in the area competing for the limited funds that are available.

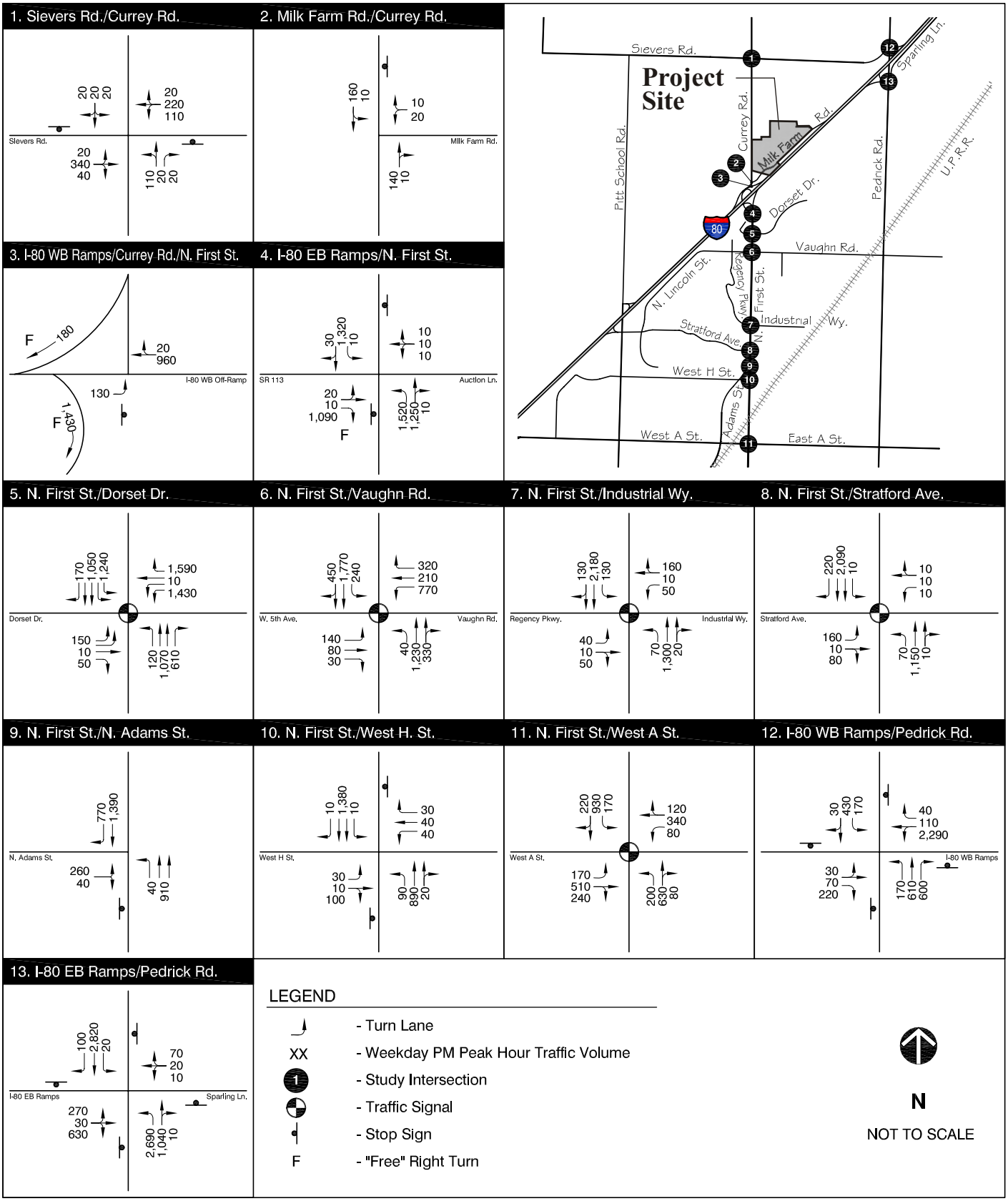
Future year 2025 (cumulative) conditions do not include the evaluation of Saturday peak hour conditions due to the difficulty associated with developing reasonable traffic forecasts for this time period. The City of Dixon traffic model produces traffic forecasts for Saturday conditions. Although such forecasts may be developed by applying a growth rate to the existing counts based on the expected increase in weekday PM peak hour or daily traffic, this approach generally works best in areas that are near or at buildout (fully developed) conditions. Such an approach would not work well within the study area because the vast majority of the NQSP has yet to be developed.

Figures 4.8-6 and 4.8-7 show future year 2025 (cumulative) PM peak hour traffic forecasts without and with the addition of future site development, respectively. These figures also display the assumed lane configurations at each intersection. Future project trips, in accordance with expected trip generation from future site development, distribution, and assignment characteristics, were added to future year 2025 (cumulative) background traffic. Tables 4.8-9 and 4.8-10 show the results of the intersection operations analysis under future year 2025 (cumulative) conditions without and with future site development, respectively.

As shown in Table 4.8-9, most of the study intersections are expected to operate at LOS D or worse during weekday PM peak hour under future year 2025 (cumulative) conditions, except for the Milk Farm Road/Currey Road intersection.

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS- CUMULATIVE NO FUTURE PROJECT CONDITIONS

Figure 4.8-6



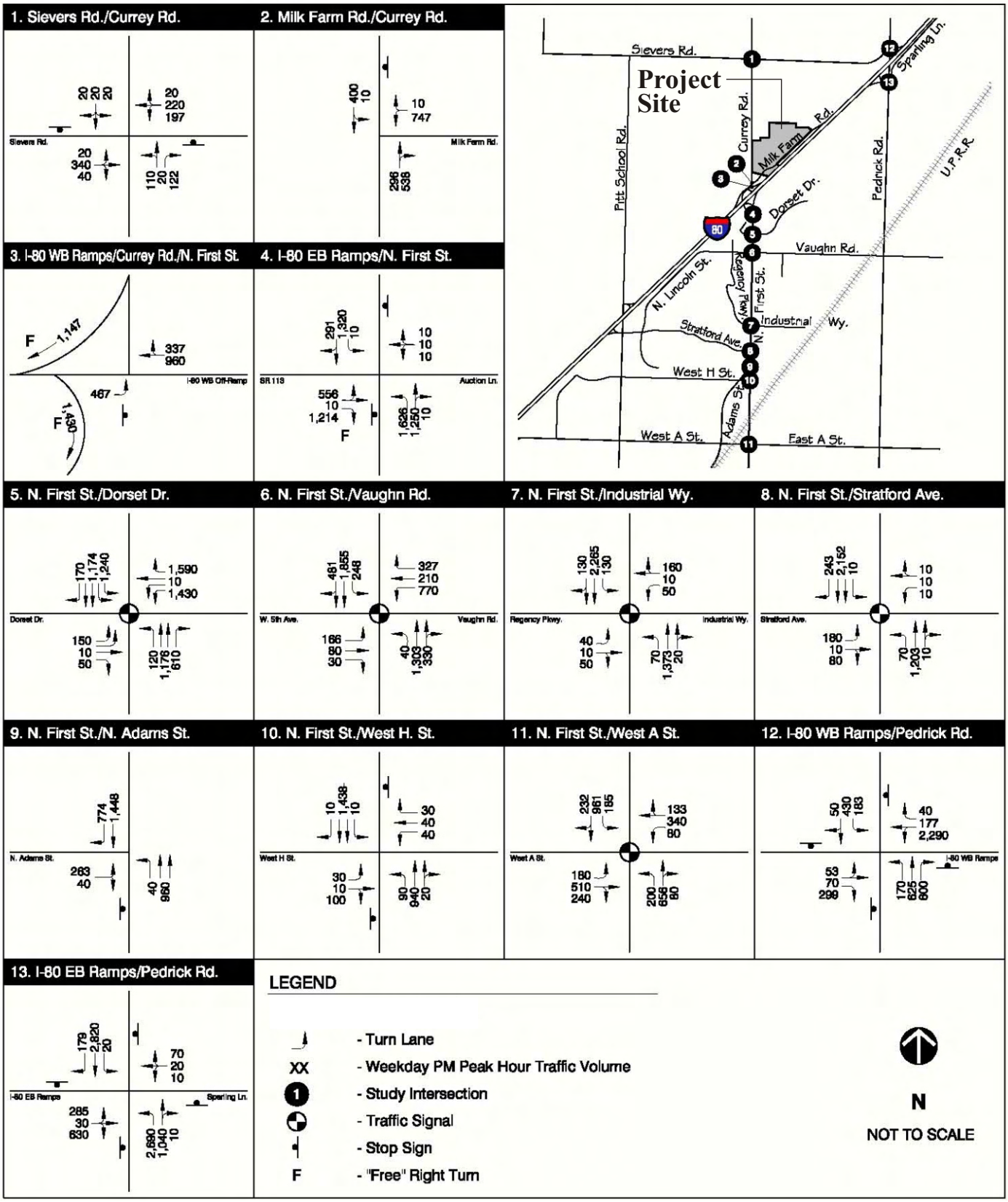
Milk Farm
Dixon, California

Source: FEHR & Peers, Transportation Consultants, 2005.

Y1263-B0.00017.Fig4.8-6.cdr-5/5/05

PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS- CUMULATIVE PLUS FUTURE PROJECT CONDITIONS

Figure 4.8-7



Milk Farm
Dixon, California

Source: FEHR & Peers, Transportation Consultants, 2005.

BASELINE

Y1263-B0.00017.Fig4.8-7.cdr-5/5/05

TABLE 4.8-9: **Intersection Levels of Service, Cumulative Conditions**

	Intersection	Control	Weekday PM Peak Hour	
			Average Delay [1]	LOS
1	Sievers Road/Currey Road	Side-street stop	7.7 (34.8)	A (D)
2	Milk Farm Road/Currey Road	Side-street stop	1.1 (10.1)	A (B)
3	I -80 WB ramps/Currey Road/North First Street	Side-street stop	4.0 (34.1)	A (D)
4	I -80 EB ramps/North First Street	Side-street stop	>50 (>50)	F (F)
5	North First Street/Dorset Drive	Traffic signal	>80	F
6	North First Street/Vaughn Road	Traffic signal	>80	F
7	North First Street/Industrial Way	Traffic signal	36.4	D
8	North First Street/Stratford Street	Traffic signal	23.0	C
9	North First Street/North Adams Street	Side-street stop	>50 (>50)	F (F)
10	North First Street/West H Street	Side-street stop	>50 (>50)	F (F)
11	North First Street/West A Street	Traffic signal	>80	F
12	I-80 WB ramps/Pedrick Road	All-way stop	>50	F

Source: Fehr & Peers, 2005.

[1] Average control delay (in seconds per vehicle) of all vehicles at signalized and all-way stop-controlled intersections. At side-street stop-controlled intersections, average control delay reported for entire intersection and side-street movement with greatest delay (shown in parentheses).

TABLE 4.8-10: **Intersection Levels of Service, Cumulative Plus Future Project Conditions**

	Intersection	Control	Weekday PM Peak Hour	
			Average Delay [1]	LOS
1	Sievers Road/Currey Road	Side-street stop	13.9 (48.9)	B (E)
2	Milk Farm Road/Currey Road	Side-street stop	>50 (>50)	F (F)
3	I -80 WB Ramps/Currey Road/North First Street	Side-street stop	7.6 (>50)	A (F)
4	I -80 EB Ramps/North First Street	Side-street stop	>50 (>50)	F (F)
5	North First Street/Dorset Drive	Traffic signal	>80	F
6	North First Street/Vaughn Road	Traffic signal	>80	F
7	North First Street/Industrial Way	Traffic signal	43.9	D
8	North First Street/Stratford Street	Traffic signal	26.1	C
9	North First Street/North Adams Street	Side-street stop	>50 (>50)	F (F)
10	North First Street/West H Street	Side-street stop	>50 (>50)	F (F)
11	North First Street/West A Street	Traffic signal	>80	F
12	I-80 WB Ramps/Pedrick Road	All-way stop	>50	F

Source: Fehr & Peers, 2005.

[1] Average control delay (in seconds per vehicle) of all vehicles at signalized and all-way stop-controlled intersections. At side-street stop-controlled intersections, average control delay reported for entire intersection and side-street movement with greatest delay (shown in parentheses).

Freeway Operations

According to data from the 1984 and 2003 editions of *Traffic Volumes on California State Highways* (Caltrans, 1985, 2004), peak hour traffic on Interstate 80 directly east of Pedrick Road increased by an average of two percent per year over this 19-year period. If this compound growth rate were to continue through 2025, then the future year 2025 (cumulative) forecasts would be approximately 52 percent greater than current volumes.

The future year 2025 (cumulative) forecasts from the City of Dixon Travel Demand Model for Interstate 80 directly east of Pedrick Road reveal a higher growth rate of about 3.5 percent per year. This rate appears reasonable given the planned development of the Southwest Specific Plan, NQSP, and Dixon Downs, all of which would add traffic to Interstate 80. Buildout of the NQSP alone is estimated to generate nearly 10,000 external peak hour trips, according to the *City of Dixon Northeast Quadrant Specific Plan Final EIR* (Dixon, 1995a).

If the less aggressive two percent per year growth rate is assumed, based on the historical growth rate between 1984 and 2003, then the segment of Interstate 80 east of Pedrick Road would carry approximately 7,030 vehicles in the westbound direction and 6,500 vehicles in the eastbound direction during the weekday PM peak hour in 2025. Due to the lack of identified funding to widen Interstate 80, it is assumed to remain six lanes in 2025. The *Highway Capacity Manual* indicates that a mixed-use freeway lane has an ideal capacity of 2,200 to 2,400 passenger cars per hour per lane depending on the free-flow speed. Assuming a practical capacity of 2,200 vehicles per hour per lane after accounting for adjustments (lateral clearance, heavy vehicles, driver population, etc.), each direction of Interstate 80 would have a capacity of 6,600 vehicles per hour. Thus, the westbound direction of Interstate 80 would be at overcapacity and the eastbound direction would be at capacity. Both directions would be over capacity if the higher growth estimates from the City of Dixon Travel Demand Model were used.

Since the mainline segments of Interstate 80 are expected to be at or over capacity (LOS F) by 2025, the interchange ramp merge and diverge areas would also operate at LOS F during the PM peak hour.

Parking

The conceptual site development plan for future site uses does not include building design and parking ratios; thus, parking capacity must be analyzed in a subsequent environmental document.

Anticipated Future Impact 4.8-1

The addition of anticipated future project traffic at the Sievers Road/Currey Road intersection would increase delay for the northbound shared through/left-turn movement by more than five seconds and result in unacceptable LOS E conditions. This is a potentially significant impact.

The northbound shared through/left-turn movement at the Sievers Road/Currey Road intersection would operate at unacceptable LOS D conditions under future year 2025 (cumulative) conditions. The addition of anticipated future traffic would cause delay for this movement to increase by more than five seconds. The average LOS for all vehicles traveling through the intersections during the PM peak hour would be LOS B. The addition of anticipated future traffic would result in unacceptable operations at the Sievers Road/Currey Road intersection under future year 2025 (cumulative) plus future project conditions.

Anticipated Future Mitigation Measure 4.8-1

Prior to site development, the applicant shall pay a fair share of the cost toward installing a traffic signal and the addition of a separate left-turn lane on the westbound approach. With this improvement, the westbound approach would have a separate left-turn lane and shared through/right-turn lane. Installation of a traffic signal would be warranted based on weekday PM peak hour traffic volumes under future year 2025 (cumulative) plus future project conditions.

The Sievers Road/Currey Road intersection is north of the project site in unincorporated Solano County. It is assumed that the County would concur with this improvement, and would cooperate with its implementation. Implementation of the mitigation measure above would provide LOS C operation at the Sievers Road/Currey Road intersection and would reduce this anticipated future impact to a less-than-significant level.

Anticipated Future Impact 4.8-2

The addition of future project traffic at the Milk Farm Road/Currey Road intersection would cause LOS F conditions under the existing plus future project conditions. This is considered a potentially significant impact.

Future traffic associated with site development would cause LOS F conditions at the Milk Farm Road/Currey Road intersection under the existing plus future project conditions. As analyzed, LOS F conditions at the Milk Farm Road/Currey Road intersection are due to

delay on the westbound approach. Specifically, vehicles making a westbound left turn would experience LOS F conditions.

Anticipated Future Mitigation Measure 4.8-2

Prior to site development, the applicant shall realign Milk Farm Road (north of its current location), install a traffic signal, and provide a separate left-turn lane and a shared left-/right-turn lane on the westbound approach. Intersection spacing between the Interstate 80 westbound ramps intersection and Milk Farm Road should be coordinated with the City of Dixon Engineering Department. Installation of a traffic signal would be warranted based on weekday PM peak hour traffic volumes under existing plus project conditions.

Implementation of the mitigation measure above would provide LOS C operation at the Milk Farm Road/Currey Road intersection, and reduce this anticipated future impact to a less-than-significant level under existing conditions.

Anticipated Future Impact 4.8-3

The addition of project traffic at the Interstate 80 westbound ramps/Currey Road/North First Street following site development would cause LOS F under existing plus future project conditions. This is a potentially significant impact.

Future project traffic following site development would cause LOS F conditions at the Interstate 80 westbound ramps/Currey Road/North First Street intersection under the existing plus future project conditions

Anticipated Future Mitigation Measure 4.8-3

Prior to site development, the applicant shall install a traffic signal at the Interstate 80/North First Street/Currey Road interchange. Installation of a traffic signal would be warranted based on weekday PM peak hour traffic volumes under existing plus future project conditions. This improvement is needed not only to improve the intersection LOS but to also maintain reasonable vehicle queues on the eastbound approach.

Implementation of this mitigation measure would provide LOS C and would reduce this anticipated future impact to a less-than-significant level under existing conditions.

Anticipated Future Impact 4.8-4

The addition of project traffic at the Interstate 80 eastbound ramps/North First Street intersection would cause LOS F conditions under existing plus project conditions. This is a potentially significant impact.

Project traffic would cause LOS F conditions at the Interstate 80 eastbound ramps/North First Street intersection under existing plus project conditions.

Anticipated Future Mitigation Measure 4.8-4

Prior to site development, the applicant shall install a traffic signal and provide an additional separate left-turn lane on the eastbound approach. With this improvement, the eastbound approach would have a separate left-turn lane, a shared left-turn/through lane, and a right-turn lane.

Implementation of this mitigation measure would provide LOS C and would reduce this anticipated future impact to a less-than-significant level under existing conditions.

Anticipated Future Impact 4.8-5

The addition of anticipated future project traffic at five intersections near the Interstate 80/Currey Road/North First Street interchange would either cause LOS F conditions or add more than five seconds of delay to existing LOS F conditions under cumulative conditions. The affected intersections include Interstate 80 eastbound ramps/North First Street, westbound ramps/Currey Road/North First Street, North First Street/Dorset Drive, North First Street/Vaughn Road, and North First Street/Industrial Way. This is a significant unavoidable adverse impact.

The addition of anticipated future traffic from site development would cause LOS F conditions at the two ramp intersections of the Interstate 80/Currey Road/North First Street interchange under the future year 2025 (cumulative) plus project conditions. Although it is not designed to current Caltrans standards, the existing Interstate 80/North First Street/Currey Road interchange allows for generally free-flow movements between Interstate 80, North First Street, and Currey Road.

At the Interstate 80 westbound ramps/Currey Road/North First Street intersection, the eastbound left-turn movement is stop-controlled. Vehicles making this movement are traveling from northbound North First Street to northbound Currey Road. Under future year 2025 (cumulative) plus future project conditions, the addition of anticipated future project traffic would cause the delay for this movement to increase by more than five seconds at an intersection that would already be at LOS F.

At the eastbound ramps, the eastbound left-turn movement is also stop-controlled. Vehicles making this movement are traveling from southbound North First Street to eastbound Interstate 80. The addition of anticipated future project traffic would cause the

delay for this movement to increase by more than five seconds at an intersection that would already be at LOS F.

The addition of anticipated future project traffic would also add more than five seconds of delay to unacceptable LOS F conditions under year 2025 (cumulative) plus future project conditions at three city intersections on North First Street, south of the interchange.

At the North First Street/Dorset Drive intersection, anticipated future site traffic would add about 230 total vehicles to the northbound and southbound approaches, which represents an increase of about three percent compared to future year 2025 (cumulative) conditions.

At the North First Street/Vaughn Road intersection, anticipated future site traffic would add about 230 total vehicles to the intersection with the majority of the added traffic occurring on the northbound and southbound approaches, which represents an increase of about four percent compared to future year 2025 (cumulative) conditions.

At the North First Street/Industrial Way intersection, anticipated future site traffic would add about 160 total vehicles to the northbound and southbound approaches, which represents an increase of about four percent compared to future year 2025 (cumulative) conditions.

Anticipated Future Mitigation Measure 4.8-5

The City shall consider amending the City's Capital Improvements Program (CIP) to include improvements at the Interstate 80/North First Street/Currey Road interchange. Specific improvements, other than a traffic signal, have not been identified as part of this study. Additional improvements would be determined in consultation with Caltrans during the Project Study Report/Project Report (PSR/PR) process. If the City includes these improvements in the CIP, prior to the approval of any component of site development, the applicant shall pay a fair share through the City's CIP toward the cost of future improvements at the Interstate 80/North First Street/Currey Road interchange. The three additional City intersections along North First Street should be included in the Caltrans programming studies due to the close spacing between Dorset Drive, Vaughn Road, and Industrial Way, and the Interstate 80/North First Street/Currey Road interchange.

Under the mitigation measure above, if the City amends the CIP to include improvements at the Interstate 80/North First Street/Currey Road interchange, which have been identified in a Caltrans PSR/PR, and the applicant pays a fair share of these improvements through the City's CIP, then the anticipated future site development's cumulative impact to the five intersections would be reduced to a less-than-significant level.

However, if the City does not include these improvements, or if it is uncertain whether these improvements could be fully funded if they were added to the City's CIP, this anticipated future impact would be considered unmitigated under future year 2025 (cumulative) conditions. Because of this uncertainty, the cumulative impact of anticipated future site development to the five intersections is considered significant unavoidable and adverse.

Anticipated Future Impact 4.8-6

The addition of anticipated future site development traffic at the North First Street/North Adams Street intersection would add more than five seconds of delay to LOS F under cumulative plus future project conditions. This is a potentially significant impact.

The addition of anticipated future project traffic would add more than five seconds of delay to unacceptable LOS F conditions under future year 2025 (cumulative) plus future project conditions. Future site development would add about 120 total vehicles to the intersection with a majority of the increase occurring on the northbound and southbound approaches at the North First Street/North Adams Street intersection. This traffic represents an increase of about four percent compared to future year 2025 (cumulative) conditions.

> ***Anticipated Future Mitigation Measure 4.8-6***
>
> *Prior to site development, the applicant shall pay a fair share cost (estimated to be four percent) through the City's CIP toward the cost of limiting access at the North First Street/North Adams Street intersection to left-in/right-in/right-out access only (this would require median treatments on North First Street) and toward the installation of a traffic signal at the North First Street/West H Street intersection, to accommodate the displaced eastbound left-turn movements from North Adams Street. Access improvements should be coordinated with adjacent property owners.*

This improvement would require eliminating future access at the intersection, which could potentially affect access to adjacent businesses. Potential future impacts of implementing this measure would require study and mitigation in a subsequent environmental document. If this improvement could be implemented without significant impacts to adjacent businesses, then the cumulative impacts of future site development at this intersection could be mitigated to a less-than-significant level.

Anticipated Future Impact 4.8-7

The addition of anticipated future project traffic at the North First Street/West H Street intersection would add more than five seconds of delay to LOS F conditions. This is a potentially significant impact.

Anticipated future project traffic would add more than five seconds of delay to unacceptable LOS F conditions under future year 2025 (cumulative) plus future project conditions. Future site development would add about 110 total vehicles to the northbound and southbound approaches at the North First Street/West H Street intersection, which represents an increase of about four percent compared to year 2025 (cumulative) conditions.

Anticipated Future Mitigation Measure 4.8-7

Prior to site development, the applicant shall pay a fair share (estimated to be four percent) through the City's CIP toward the installation of a traffic signal at the North First Street/West H Street intersection.

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

Anticipated Future Impact 4.8-8

The addition of anticipated future site traffic at the North First Street/West A Street intersection would add more than five seconds of delay to LOS F conditions. This is a potentially significant impact.

Traffic associated with anticipated future site development would add more than five seconds of delay to unacceptable LOS F conditions under future year 2025 (cumulative) plus project conditions. The future traffic would add about 110 vehicles to the intersection with a majority of the increase occurring on the northbound and southbound approaches at the North First Street/West A Street intersection, which represents an increase of about three percent compared to future year 2025 (cumulative) conditions.

Anticipated Future Mitigation Measure 4.8-8

Further improvements beyond those recently completed as part of the traffic signal installation and intersection modification improvements are warranted at this intersection under year 2025 (cumulative) plus future project conditions. However, due to right-of-way constraints, the City may not wish to implement additional improvements at this intersection to not conflict with economic development goals for the downtown Dixon area.

Prior to site development, the applicant shall implement Transportation Demand Management (TDM) strategies to reduce the number of single-occupant vehicle trips generated by future site development during the weekday PM peak hour conditions. Examples of TDM strategies include: preferential parking (or other incentives) for carpools/vanpools; improved transit service, such as contributions to Readi-Ride operations (refer to Mitigation Measure 4.8-10) and underwriting the costs of a shuttle bus; and other strategies to encourage employees to use public transit.

The effects of TDM strategies are difficult to quantify. While some level of reduced single-occupant vehicle trips would likely be achieved, it is unlikely that the reduction would be sufficient to offset any of the identified impacts. Therefore, this impact would be considered significant and unavoidable under future year 2025 (cumulative) conditions.

Anticipated Future Impact 4.8-9

The addition of anticipated future traffic from site development at the Interstate 80 eastbound ramps and westbound ramps/Pedrick Road intersections would add more than five seconds of delay to LOS F conditions under year 2025 (cumulative) plus project conditions. This is a significant unavoidable adverse impact.

Anticipated future traffic associated with site development would add more than five seconds of delay to unacceptable LOS F conditions at these two intersections under future year 2025 (cumulative) plus future project conditions. Future site traffic would add about 220 vehicles to the eastbound and westbound approaches (total of both approaches) at the Interstate 80 westbound ramps/Pedrick Road intersection, which represents an increase of about five percent compared to year 2025 (cumulative) conditions.

At the eastbound ramp intersection, the traffic from future site development would add about 80 vehicles to the southbound right-turn (southbound Pedrick Road to Interstate 80 eastbound on-ramp), which represents an increase of about one percent compared to future year 2025 (cumulative) conditions. Although this movement is technically a free uncontrolled movement, vehicle queues in the southbound through lane would prevent vehicles making the southbound right-turn from entering the entrance ramp.

Anticipated Future Mitigation Measure 4.8-9

The City shall consider amending the City's Capital Improvements Program (CIP) to include improvements at the Interstate 80/Pedrick Road interchange. Specific improvements have not been identified as part of this study. Additional improvements would be determined in consultation with Caltrans during the Project Study Report/Project Report (PSR/PR) process. If the City includes these improvements in the CIP, prior to the approval

of any component of future site development, the applicant shall pay a fair share through the City's CIP toward the cost of future improvements at the Interstate 80/Pedrick Road interchange.

Under the mitigation measure above, if the City amends the CIP to include improvements at the Interstate 80/Pedrick Road interchange, which have been identified in a Caltrans PSR/PR, and the applicant pays a fair share of these improvements through the City's CIP, then the cumulative future impact to the two ramp intersections would be reduced to a less-than-significant level.

However, if the City does not include these improvements, or if it is uncertain whether these improvements could be fully funded if they were added to the City's CIP, this anticipated future impact would be unmitigated under future year 2025 (cumulative) conditions. Because of this uncertainty, the cumulative impact of future site development to the two intersections is considered significant unavoidable and adverse.

Anticipated Future Impact 4.8-10

Anticipated future site development would result in unmet transit demand in the project site vicinity and have the potential to adversely affect service times of the Dixon Readi-Ride Transit Service. This is a potentially significant impact.

Since the project site is not currently served by transit, future site development would result in an unmet demand for transit. Dixon Readi-Ride currently provides curb-to-curb, dial-up transit service within the Dixon city limits. However, service is not provided after 6:00 PM on weekdays or on weekends.

Expanded transit service (both in terms of hours of operation and number of busses in circulation) would be necessary to accommodate the unmet transit demand and mitigate adverse effects on existing transit service. Readi-Ride Transit Service may need to operate on weekends to accommodate Dixon residents who wish to travel to and from the project site following site development. Hours of operation on weekdays may also need to be expanded to provide service to the potential restaurants and shops on the site that are open beyond 6:00 PM. The overall demand for curb-to-curb transit service may also increase, which could adversely affect service times if additional buses were not placed into service.

Anticipated Future Mitigation Measure 4.8-10

The project applicant shall meet and confer in good faith with the City and Readi-Ride Transit Service to identify the extent to which transit service should be expanded to serve the project site prior to site development. The parties shall determine an equitable funding

arrangement to implement the expanded service, and prior to the approval of any component of the proposed project, the applicant shall pay a fair share of the cost of the expanded transit service.

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

Anticipated Future Impact 4.8-11

Future site development would increase the number of vehicles that cross existing at-grade railroad tracks. This is a significant unavoidable adverse impact.

Anticipated future site development would add traffic to the segments of North First Street and West A Street that have at-grade crossings of the UPRR tracks. The amount of traffic added by future site development at the crossings on North First Street and West A Street does not constitute a significant increase in traffic. This is evidenced by operations at the North First Street/West H Street and North First Street/West A Street intersections under existing conditions. However, the addition of future site traffic would exacerbate LOS F conditions under year 2025 (cumulative) conditions and would be considered a significant increase.

Transportation Policy 7 of the Dixon General Plan (1993) states that "*the City shall pursue the construction of grade separated rail crossings within the Planning area.*" The General Plan map shows the general locations of grade-separations to be at Pedrick Road north of Vaughn Road, Jackson Street in downtown,[1] and Parkway Boulevard in the south part of the City. The Railroad Grade Separation/New Alignment Feasibility Study and Financing Plan – Phase III Implementation Plan (Parsons Brinckerhoff, 1995) evaluated two preferred alternatives for the grade-separation of the North First Street at-grade crossing. The estimated cost of the alternatives ranged from $8 to $9 million (in 1994 dollars).

The City of Dixon Five-Year Capital Improvement Program (Dixon, 2004d) shows $9.5 million earmarked for the Parkway Boulevard grade-separation. The North First Street grade-separation is not included in the Capital Improvement Program (CIP). Construction of this grade-separation would be a regional improvement that would be of city-wide benefit. If the City chooses to prioritize this improvement, it could include it in subsequent updates of its CIP.

[1] This is pedestrian only.

Anticipated Future Mitigation Measure 4.8-11

The City shall consider amending the City's Capital Improvements Program (CIP) to include the grade-separated rail crossings at North First Street and H Street. Specific improvements have not been identified as part of this study. Additional improvements would be determined in consultation with the railroad and regulatory agencies. If the City includes these improvements in the CIP, prior to the approval of any component of future site development, the applicant shall pay a fair share through the City's CIP toward the cost of the grade separation.

Under the mitigation measure above, if the City amends the CIP to include the grade separation at North First Street, and the applicant pays a fair share of these improvements through the City's CIP, then the cumulative impact from future site development to the rail crossing interchange would be reduced to a less-than-significant level.

If the City does not include these improvements, or if it is uncertain whether the grade separation could be fully funded if it were added to the City's CIP, this impact would be considered significant unavoidable and adverse under future year 2025 (cumulative) conditions.

Anticipated Future Impact 4.8-12

Anticipated future site development would add more than ten vehicles during the weekday PM peak hour on the Interstate 80 mainline freeway and at on- and off-ramp junctions under year 2025 (cumulative) conditions, which would exacerbate unacceptable LOS F operations. This is a significant unavoidable adverse impact.

During peak hours, future site development is expected to add more than ten vehicles to each on- and off-ramp at both the Interstate 80/North First Street/Currey Road and the Interstate 80/Pedrick Road interchanges, and to the eastbound and westbound mainline volumes of Interstate 80. The project applicant is willing to provide future additional right-of-way for improvements to the Interstate 80/North First Street/Currey Road interchange, including the Interstate 80/Milk Farm Road off-ramp. However, a funding mechanism is not in place that would enable the applicant to make a fair share contribution toward the cost of widening (or other improvements to) to the mainline Interstate 80 prior to future site development. The City of Dixon should coordinate with Solano Transportation Agency and Caltrans to establish a mechanism for funding mainline improvements on Interstate 80, such as a regional traffic impact fee (RTIF), or similar, program.

Anticipated Future Mitigation Measure 4.8-12

The applicant shall agree to pay a fair share fee toward improvements on the Interstate 80 mainline facilities through a future regional traffic impact fee, or similar program, if such a program is adopted prior to future site development.

An RTIF or similar program is not available and the certainty that such a program will be adopted in the future cannot be guaranteed. Therefore, this anticipated future impact is considered significant, adverse, and unavoidable, unless such a fee is initiated prior to site development.