Motorists on the Auburn Boulevard (via Sylvan Corners) route would incur delays at the traffic signals at Sylvan Road and Carriage Drive, while motorists on the alternative route would incur delays at six stop signs. Thus, the majority of project trips to/from the north on Auburn Boulevard (toward Roseville) are expected to use the arterial street system, as opposed to local neighborhood streets. However, Raintree Drive and Carriage Drive would likely be used to access the project site by residents of the adjacent neighborhood, Mesa Verde High School students, and a limited number of "cut-through" trips.

The a.m. and p.m. peak hour project trips for each scenario were assigned to the adjacent roadway network based on the trip distribution percentages, permitted driveway turning movements, and results of the travel time surveys.

Existing Plus Project Conditions

Project trips for each scenario were added to existing traffic volumes to determine "existing plus project (Scenario 1 – 385 ksf Shopping Center)" and "existing plus project (Scenario 2 – 450 ksf Shopping Center)" conditions. Both scenarios assume the same land uses in the southern sub-area. The resulting traffic volume forecasts at each study intersection are contained in Appendix D.

Table 4.4-7 summarizes the a.m. peak hour, p.m. peak hour, and daily traffic volume forecasts (both directions) on key roadways in the vicinity of the project site under existing plus project conditions for each scenario. These forecasts reflect a slight redistribution of existing traffic resulting from the extension of Fountain Square Drive to Stock Ranch Road.

Table 4.4-7
Traffic Volume Forecasts – Existing Plus Project Conditions

Roadway Segment	Traffic Volume (Both Directions)								
	A.M. Peak Hour			P.M. Peak Hour			Daily		
	Exist.	Exist. + Proj (Sc. 1)	Exist + Proj (Sc. 2)	Exist.	Exist. + Proj (Sc. 1)	Exist + Proj (Sc. 2)	Exist.	Exist. + Proj (Sc. 1)	Exist + Proj (Sc. 2)
Auburn Boulevard – Van Maren Ln. to Raintree Dr.	2,010	2,110	2,130	2,150	2,610	2,650	22,600	25,700	25,900
Auburn Boulevard – Raintree Dr. to Sylvan Rd	2,050	2,220	2,240	2,270	3,000	3,080	23,500	28,400	28,900
Sylvan Road – Auburn Blvd. to Greenback Ln	1,910	2,070	2,080	2,400	2,870	2,900	24,300	27,900	28,700
Greenback Lane – west of Fountain Square Drive	2,870	3,000	3,000	3,780	3,960	3,960	42,400	44,300	44,300
Greenback Lane – east of Fountain Square Drive	2,940	2,990	2,990	3,900	3,990	3,990	43,600	44,500	44,500
Stock Ranch Road	110	410	410	170	1,020	1,020	1,700	9,400	9,400
Fountain Square Drive	300	420	420	550	640	640	5,000	6,200	6,200
Raintree Drive	140	150	150	180	200	200	1,900	2,100	2,100
Carriage Drive	260	270	270	250	280	280	3,300	3,500	3,500

Source: Fehr & Peers Associates, 2000.

Buildout of the land uses in the southern sub-area are projected to increase traffic levels on Stock Ranch Road west of Sylvan Road from 1,700 vehicles per day (vpd) to 9,400 vpd. This volume of traffic can be adequately served by the existing three-lane (one lane in each direction with a center turn lane) facility.

Scenario 1 would increase traffic volumes on Auburn Boulevard east of the project site by nearly 5,000 vpd. Substantial increases would also occur on Auburn Boulevard west of the project site (3,100 vpd), Sylvan Road (3,600 vpd), and Greenback Lane west of Fountain Square Drive (1,900 vpd). Traffic volumes on Auburn Boulevard along the project's frontage under Scenario 2 would increase by approximately 500 vpd over the projections under Scenario 1.

Levels of Service

Each study intersection was analyzed during the a.m. and p.m. peak hour for each land use scenario (see Appendix D for level of service calculations). The results are summarized in **Table 4.4-8**. To facilitate comparisons of traffic operations without and with the project, no new roadway improvements were assumed in place for the analysis.

Table 4.4-8 shows that implementation of the project would increase delays and worsen levels of service at most study intersections including: Auburn Boulevard/Sylvan Road, Auburn Boulevard/Carriage Drive, Greenback Lane/Fountain Square Drive, Greenback Lane/San Juan Avenue, and Sylvan Road/Stock Ranch Road.

Table 4.4-8
Peak Hour Intersection Levels of Service – Existing Plus Project Conditions

		A.M. (P.M.) Peak Hour					
		Existing Conditions		Existing Plus Project (Scenario 1) [1]		Existing Plus Project (Scenario 2) [2]	
Intersection	Control	Delay (sec/veh)	Level of Service	Delay (sec/veh)	Level of Service	Delay (sec/veh)	Level of Service
Auburn Boulevard/ Van Maren Lane	Traffic Signal	31.0 (29.0)	D (D)	31.8 (31.0)	D (D)	31.9 (31.5)	D (D)
Auburn Boulevard/ Sylvan Road	Traffic Signal	25.2 (34.3)	D (D)	27.0 (49.0)	D (E)	27.2 (50.1)	D (E)
Auburn Boulevard/ Carriage Drive	Traffic Signal	14.8 (11.3)	B (B)	21.5 (20.9)	C (C)	22.8 (24.5)	C (C)
Auburn Blvd./Proj. Dwy./Raintree Dr.	Traffic Signal [3]	2.3 (1.1)	A (A)	15.6 (24.6)	C (C)	15.6 (25.4)	C (D)
Auburn Boulevard/ San Tomas Drive	Two-Way Stop	5.9 (7.8)	B (B)	10.8 (> 45)	C (F)	11.4 (> 45)	C (F)
Greenback Lane/ Fountain Square Dr.	Traffic Signal	21.2 (23.8)	C (C)	22.0 (30.0)	C (D)	22.0 (30.0)	C (D)
Greenback Lane/ San Juan Avenue	Traffic Signal	24.2 (29.3)	C (D)	25.5 (37.9)	D (D)	25.5 (38.6)	D (D)
Sylvan Road/Stock Ranch Road	Traffic Signal	10.9 (11.2)	B (B)	12.6 (19.6)	B (C)	12.6 (19.7)	B (C)
Stock Ranch Road/ Fountain Square Dr.	All-Way Stop	Not Applicable		2.2 (2.3)	A (A)	2.2 (2.3)	A (A)

Source: Fehr & Peers Associates, 2000.

Notes: [1] Scenario 1 assumes 385,000 square foot shopping center in Auburn Commerce District.

[2] Scenario 2 assumes 450,000 square foot shopping center in Auburn Commerce District.

[3] Side-street stop-control under existing conditions and signalized under existing plus project conditions.

The signalized Auburn Boulevard/Raintree Drive/Central Project Driveway intersection would operate at LOS C during the p.m. peak hour under Scenario 1 and at LOS D during the p.m. peak hour under Scenario 2. Operations at the unsignalized Auburn Boulevard/San Tomas Drive intersection would worsen to LOS F during the p.m. peak hour with each project alternative due to the substantial decrease in available gaps for side-street traffic.

Signal Warrant Analysis

The addition of project traffic furthers the need for a traffic signal at the Auburn Boulevard/San Tomas Drive intersection.

Existing Conditions

Intersection Impacts – Scenario 1 (385,000 sq. ft.)

Impact 4.4.1 The proposed project would result in significant impacts to LOS at four intersections assuming Scenario 1 is developed. A significant unavoidable impact would occur at Greenback Lane/San Juan Avenue. *Note: Impacts can be reduced to acceptable levels through the implementation of mitigation measures.*

The City of Citrus Heights has programmed and plans to construct improvements at the Auburn Boulevard/Sylvan Road/Old Auburn Road intersection that would fully mitigate the project's impact. Therefore, no project-specific mitigation is required.

Scenario 1 project: Significant impacts would occur at the following intersections as a result of the

(a) Auburn Boulevard/Sylvan Road – operations would worsen from LOS D to E and the average delay would increase by more than five seconds per vehicle during the p.m. peak hour.

The City of Citrus Heights 2000-2005 Capital Improvement Program (CIP) includes substantial expenditures to upgrade the Auburn Boulevard/Sylvan Road/Old Auburn Road intersection. Planned improvements include realigning the intersection approaches, undergrounding overhead utilities, improving storm drainage and pavement quality, installing state-of-the-art traffic signal equipment, and providing enhanced landscaping, street lighting, and signing. The improvements, which are estimated to cost nearly $4.6 million are fully funded and expected to be completed in 2002-2003.

According to the preliminary intersection improvement plans, the eastbound and westbound approaches will be widened to include dual left-turn lanes, which would increase the intersection's capacity. With these improvements in place, operations at the intersection would improve from LOS E to D during the p.m. peak hour under existing plus project (Scenario 1) conditions. The resulting average delay per vehicle would be within five seconds of the existing average delay at the intersection.

(b) Auburn Boulevard/San Tomas Drive – operations would worsen from LOS B to F during the p.m. peak hour.

The City maintains a prioritized list (based on traffic volumes, accidents, driver confusion, etc.) of intersections for future traffic signals. According to City staff, the Auburn Boulevard/San Tomas Drive intersection is on the list, but not among the highest priority intersections. Implementation of the project accelerates the need for a traffic signal at this intersection. Mitigation Measure 4.4.1a addresses this impact.

(c) Greenback Lane/Fountain Square Drive – operations would worsen from LOS C to D during the p.m. peak hour.

Project impacts at this intersection would be fully mitigated by the concurrent widening of Greenback Lane between Dewey Drive and San Juan Avenue. Therefore, no project-specific mitigation is required.

The on going widening of Greenback Lane will result in a third through-lane on the eastbound and westbound Greenback Lane approaches to the Greenback Lane/Fountain Square Drive intersection. These improvements would restore operations to LOS C during the p.m. peak hour under existing plus project (Scenarios 1 & 2) conditions.

(d) Greenback Lane/San Juan Avenue – operations would worsen from LOS C to D during the a.m. peak hour and the average delay would increase by more than five seconds per vehicle during the p.m. peak hour, where operations are already at LOS D.

The City's CIP includes nearly $1.9 million for intelligent traffic signal systems (signal controller upgrades fiber optic communications, signal interconnect, real-time monitoring), which will allow the City to optimize traffic signal timings to improve traffic flow and enhance traffic safety.

Although the Greenback Lane/San Juan Avenue intersection will benefit from the advanced traffic signal control technologies the City plans to implement on major travel corridors, operations are not expected to be improved to LOS C or better. Therefore, additional approach lanes would be necessary to fully mitigate the project's impact at this intersection. It is unlikely that any additional approach lanes could be constructed without requiring additional right-of-way. Since no feasible mitigation measures are available, this impact is considered **significant and unavoidable**.

MM 4.4.1a Auburn Boulevard/San Tomas Drive - Install a traffic signal at the Auburn Boulevard/San Tomas Drive intersection to improve operations to LOS B during the a.m. and p.m. peak hours under existing plus project (Scenario 1) conditions. The resulting spacing between this intersection and the adjacent signalized intersections would be adequate to facilitate progression of traffic through the Auburn Boulevard corridor.

Responsibility for Implementation: Applicant
Responsibility for Monitoring: City of Citrus Heights

Timing: Prior to issuance of any Certificate of Occupancy in the Auburn Commerce District.

Intersection Impacts – Scenario 2 (450,000 sq. ft.)

Impact 4.4.2 The proposed project would result in significant impacts to LOS at five intersections assuming Scenario 2 is developed. A significant unavoidable impact would occur at the Auburn Boulevard/Raintree Drive/Central Project Driveway intersection and the Greenback Lane/San Juan Avenue intersection. *Note: This impact can be mitigated to an acceptable level at Auburn Boulevard/Sylvan Road, Auburn Boulevard/San Tomas Drive and Greenback Lane/Fountain Square Drive intersections. See discussion below.*

Scenario 2 project: Significant impacts would occur at the following intersections as a result of the project:

(a) Auburn Boulevard/Sylvan Road – operations would worsen from LOS D to E and the average delay would increase by more than five seconds per vehicle during the p.m. peak hour.

With the planned improvements (in the City's CIP) at the Auburn Boulevard/Sylvan Road/Old Auburn Road intersection in place, p.m. peak hour operations would remain at LOS E and average delay would still exceed the existing delay by more than five seconds. To fully mitigate the project's impact at this intersection, a second left-turn lane on the northbound approach would be necessary. This additional lane would improve operations to LOS C during the a.m. and p.m. peak hours under Scenario 2.

(b) Auburn Boulevard/San Tomas Drive – operations would worsen from LOS B to F during the p.m. peak hour.

Refer to discussion under Scenario 1, above, for Auburn Boulevard/San Tomas Drive and MM 4.4.1.

(c) Greenback Lane/Fountain Square Drive – operations would worsen from LOS C to D during the p.m. peak hour.

Refer to discussion under Scenario 1, above, for Greenback Lane/Fountain Square Drive.

(d) Greenback Lane/San Juan Avenue – operations would worsen from LOS C to D during the a.m. peak hour and the average delay would increase by more than five seconds per vehicle during the p.m. peak hour, where operations are already at LOS D.

Refer to discussion under Scenario 1, above, for Greenback Lane/San Juan Avenue.

(e) Auburn Boulevard/Raintree Drive/Central Project Driveway – operations would worsen to LOS D during the p.m. peak hour.

A second westbound, left-turn lane at this intersection would restore operations to LOS C during the p.m. peak hour. However, additional right-of-way would likely be required on the south side of Auburn Boulevard to the east and/or west of the project site to provide the necessary transition lengths for the eastbound through-lanes. Trees located within the right-of-way may require removal to accommodate the additional left-turn lane. However, due to the uncertainty of being able to acquire the necessary right-of-way, the impact at Auburn Boulevard/Raintree Drive/Central Project Driveway is considered **significant and unavoidable**.

MM 4.4.2a Auburn Boulevard/Sylvan Road - Install a second left-turn lane on the northbound approach to the Auburn Boulevard/Sylvan Road/Old Auburn Road intersection.

Responsibility for Implementation:	Applicant to pay/City to install
Responsibility for Monitoring:	City of Citrus Heights
Timing:	As part of the City's planned intersection improvements

MM 4.4.2b Auburn Boulevard/Raintree Drive/Central Project Driveway. The project applicant should install a second west-bound left turn land at the Auburn Boulevard/Raintree Drive/Central Project Driveway intersection prior to the issuance of any building Certificate of Occupancy in the Auburn Commerce District.

Responsibility for Implementation:	Applicant
Responsibility for Monitoring:	City of Citrus Heights
Timing:	Prior to the issuance of any Certificate of Occupancy in the Auburn Commerce District

Neighborhood Traffic Impacts – Scenario 1 (385,000 sq. ft.) and Scenario 2 (450,000 sq. ft.)

Impact 4.4.3 Both scenarios would result in increased traffic on Carriage Drive, which already exceeds the City's threshold of 3,000 vehicles per day for local streets. This is considered a significant and unavoidable impact.

The project applicant should implement a traffic monitoring program to measure daily and peak hour traffic levels and "cut-through" traffic on Carriage Drive and Raintree Drive before the project opens and at several intervals (to be determined by the City) after the project opens. Should a significant increase in either total or "cut-through" traffic be observed, the project applicant should work with City staff to identify "traffic calming" measures that would reduce or eliminate the increase.

The project applicant should ensure the availability of funds to implement the necessary traffic calming measures through either a direct deposit to the City, the issuance of a bond, or other financial mechanisms acceptable to the City. The cost to design and install the traffic calming measures is not expected to exceed $100,000. Any monies not needed for traffic calming measures would be refunded to the project applicant.

MM 4.4.3a Implement a traffic-monitoring program to ensure the availability of funds to construct the needed "traffic calming" measures.

Responsibility for Implementation:	Applicant to pay
Responsibility for Monitoring:	City of Citrus Heights
Timing:	Prior to the issuance of Certificate of Occupancy in the Auburn Commerce District

Implementation of MM 4.4.3a would lessen the significance of Impact 4.4.3, but not to a less-than-significant level since it is unknown whether measures will be available to reduce traffic levels on Carriage Drive to "no project" levels. Therefore, Impact 4.4.3 is **considered significant and unavoidable**.

Queuing Problems at Main Project Access on Auburn Boulevard – Scenario 1 (385,000 sq. ft.)

Impact 4.4.4 Development of Scenario 1 would increase traffic queuing in the westbound left-turn lane at the Auburn Boulevard/Raintree Drive/Central Project Driveway Intersection. *This impact is less than significant, and does not require mitigation.*

The 95th percentile vehicle queue (i.e., the length of queue that would be exceeded less than five percent of the time during the peak hour) in the westbound left-turn lane at the signalized Auburn Boulevard/Raintree Drive/Central Project Driveway intersection is estimated to be about 350 feet, which is the amount of storage to be provided. Thus, no queuing problems are expected and this impact is considered to be **less-than-significant**.

Queuing Problems at Main Project Access on Auburn Boulevard – Scenario 2 (450,000)

Impact 4.4.5 Development of Scenario 2 would increase traffic queuing in the westbound left-turn lane at the Auburn Boulevard/Raintree Drive/Central Project Driveway intersection beyond available storage capacity. This is considered a significant unavoidable impact. *Note: This impact would remain significant following implementation of mitigation measures. See discussion below.*

Vehicle queues in the westbound left-turn lane at the signalized Auburn Boulevard/Raintree Drive/Central Project Driveway intersection is estimated to be 410 feet. This queue would exceed the available storage and result in spillbacks into the adjacent through lane. Thus, this impact is considered to be significant.

MM 4.4.5a Implement MM 4.4.2b - Implementation of this mitigation measure would provide two westbound left-turn lanes, which would be sufficient to accommodate the 410-foot vehicle storage requirement.

While MM 4.4.2b would provide additional turn lanes, since additional right-of-way would be needed to accommodate these lanes, this impact would remain **significant and unavoidable**.

Operational Problems at Auburn Boulevard/Raintree Drive - Scenario 1 (385,000 sq. ft.) and Scenario 2 (450,000 sq. ft.)

Impact 4.4.6 Queued vehicles on Raintree Drive resulting from development of 385,000 square feet or 450,000 square feet of shopping center uses could interfere with turning movements into and out of the adjacent frontage road that parallels Auburn Boulevard. This is considered a significant impact. *Note: This impact can be mitigated to an acceptable level. See discussion below.*

Both scenarios include the installation of a traffic signal at the Auburn Boulevard/Raintree Drive/Central Project Driveway intersection. The resulting traffic operations with the traffic signal would increase delays and queuing on the Raintree Drive approach to the intersection. This is considered a significant impact requiring the following mitigation.

MM 4.4.6a Install the following "Phase I" roadway improvements on Raintree Drive (see **Figure 4.4-6**):

- Install "Do Not Block Intersection" pavement markings at the Raintree Drive/Frontage Road intersection.

If motorists do not comply with the intersection markings and if queuing or operational problems occur, the project applicant, at the direction of City staff, should install the following "Phase II" roadway improvements on Raintree Drive and Auburn Boulevard (see **Figure 4.4-6**):

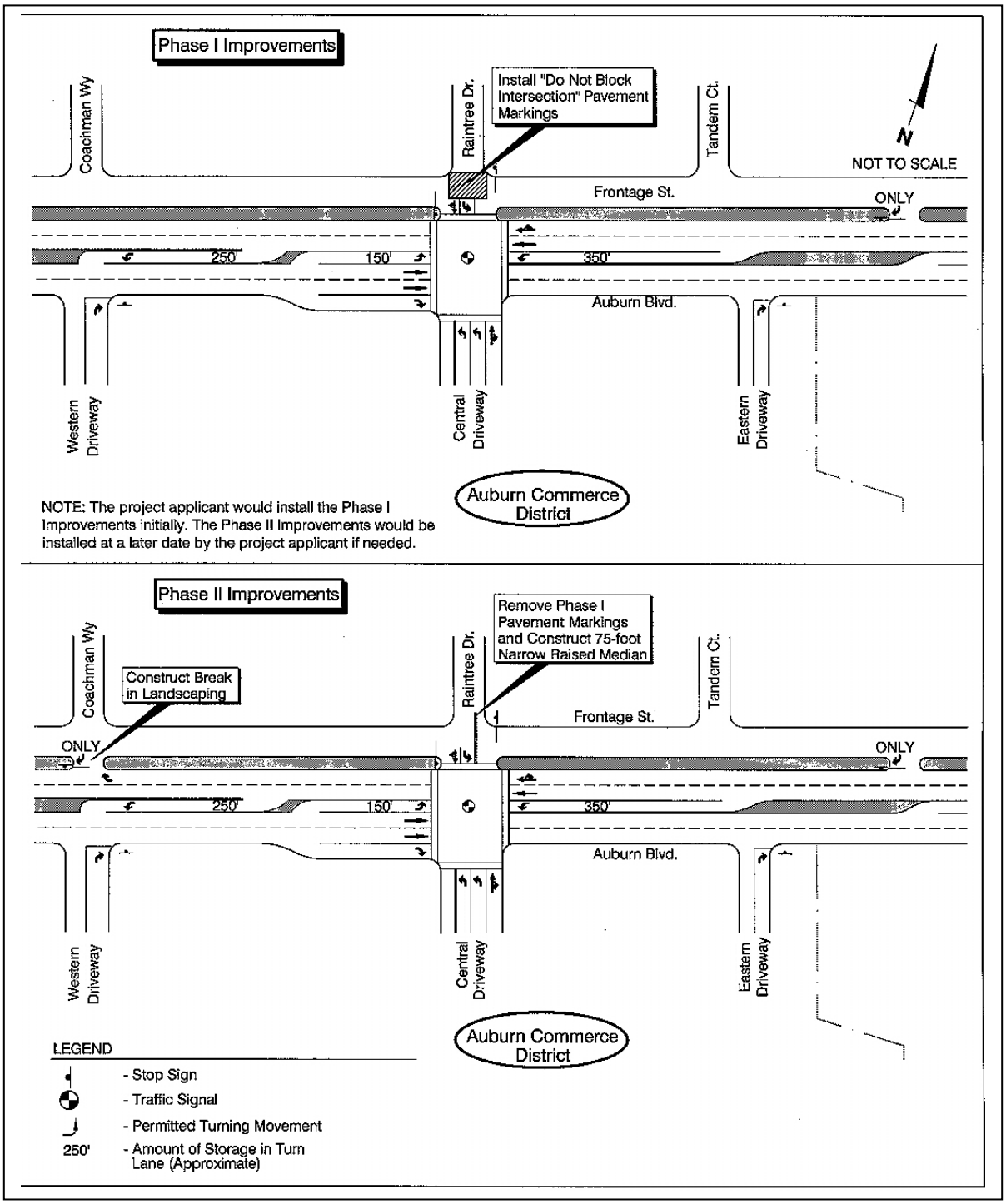
- Remove the "Do Not Block Intersection" pavement markings and construct a narrow raised median on Raintree Drive that extends approximately 75 feet back from the stopbar at the Auburn Boulevard/Raintree Drive intersection to physically prohibit left-turn movements at the frontage road intersection; and

- Construct a right-turn only vehicular access in the landscaped area on Auburn Boulevard at Coachman Way.

Implementation of Mitigation Measure 4.4.6a would reduce the significance of Impact 4.4.6 to a **less-than-significant** level.

Responsibility for Implementation:	Applicant
Responsibility for Monitoring:	City of Citrus Heights
Timing:	Prior to the issuance of any Certificate of Occupancy for Phase I in the Auburn Commerce District

Figure 4.4-6 Recommended Improvements on Raintree Drive



Source: Fehr & Peers Associates, Inc. 2000

Impacts to Transit System - Scenario 1 (385,000 sq. ft.) and Scenario 2 (450,000 sq. ft.)

Impact 4.4.7 Development of either Scenario 1 or 2 would increase the demand for transit service in the study area. However, neither scenario would interfere with existing or planned transit services in the area. This impact is considered less-than-significant and does not require mitigation.

The Stock Ranch Draft Guide for Development (EIP Associates, August 2000) indicates that transit shelters would be provided to serve the retail uses in the Auburn Commerce District. The project applicant should work with the City of Citrus Heights and Sacramento Regional Transit to identify appropriate locations for these transit facilities along the project's frontages on Auburn Boulevard and Sylvan Road.

Impacts to Bicycle/Pedestrian System - Scenario 1 (385,000 sq. ft.) and Scenario 2 (450,000 sq. ft.)

Impact 4.4.8 Development of either Scenario 1 or Scenario 2 would not interfere with existing or planned bicycle or pedestrian facilities in the area. This impact is considered less-than-significant and does not require mitigation.

The Stock Ranch Draft Guide for Development describes the pedestrian and bicycle facilities that would be provided on-site. Pedestrian trails would be provided in open space areas and across Arcade Creek via a bicycle/pedestrian bridge. A continuous pedestrian/bicycle facility would link the bridge and the transit shelter on Auburn Boulevard. In addition, a nine-foot wide concrete bicycle/pedestrian path would be constructed along the project's frontage on Auburn Boulevard.

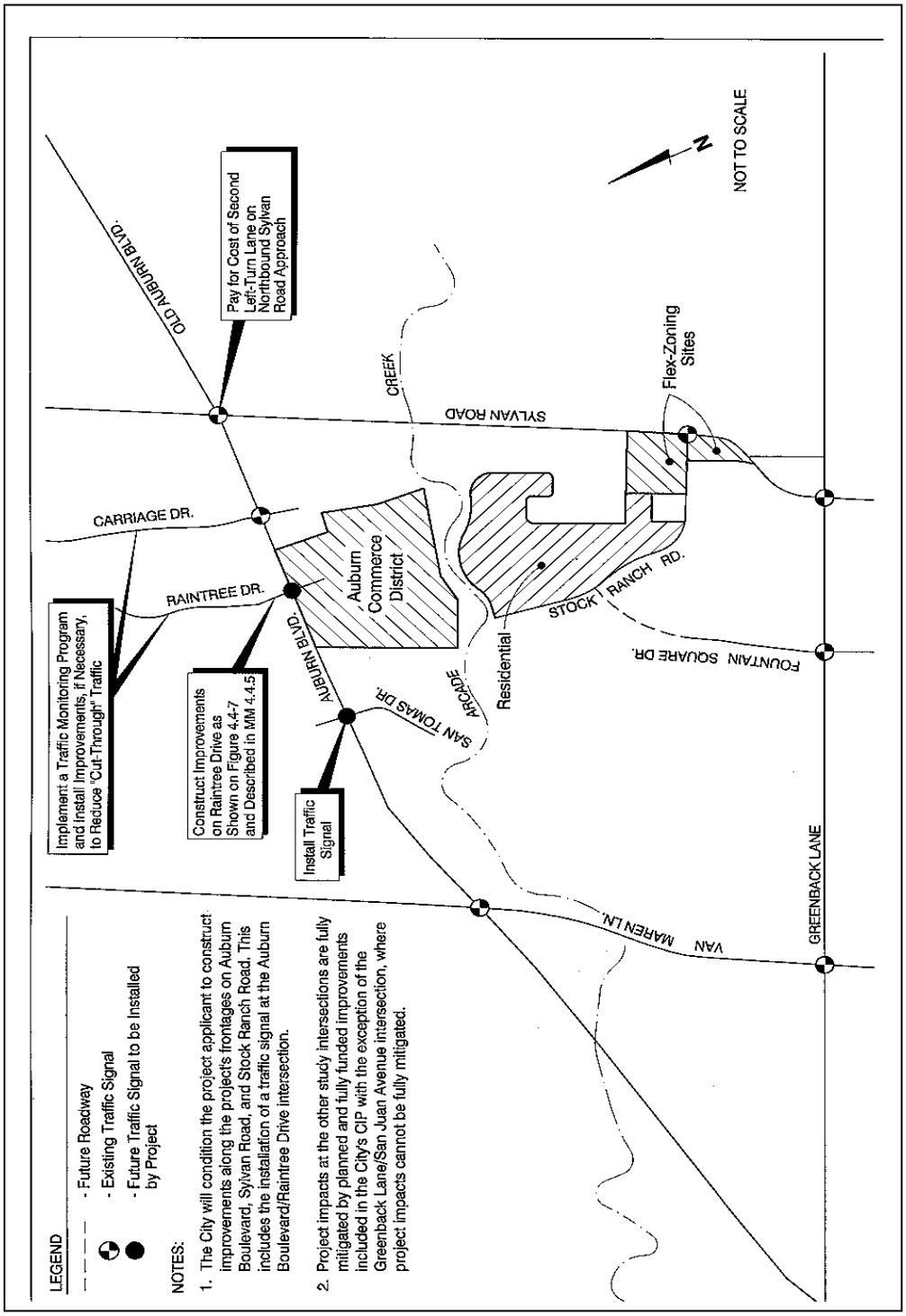
Figure 4.4-7 and **Figure 4.4-8** illustrate the project-specific mitigation measures recommended for Scenario 1 (385 ksf Shopping Center in Auburn Commerce District) and Scenario 2 (450 ksf Shopping Center in Auburn Commerce District), respectively.

4.4.6 CUMULATIVE IMPACTS

Cumulative Plus Project Conditions

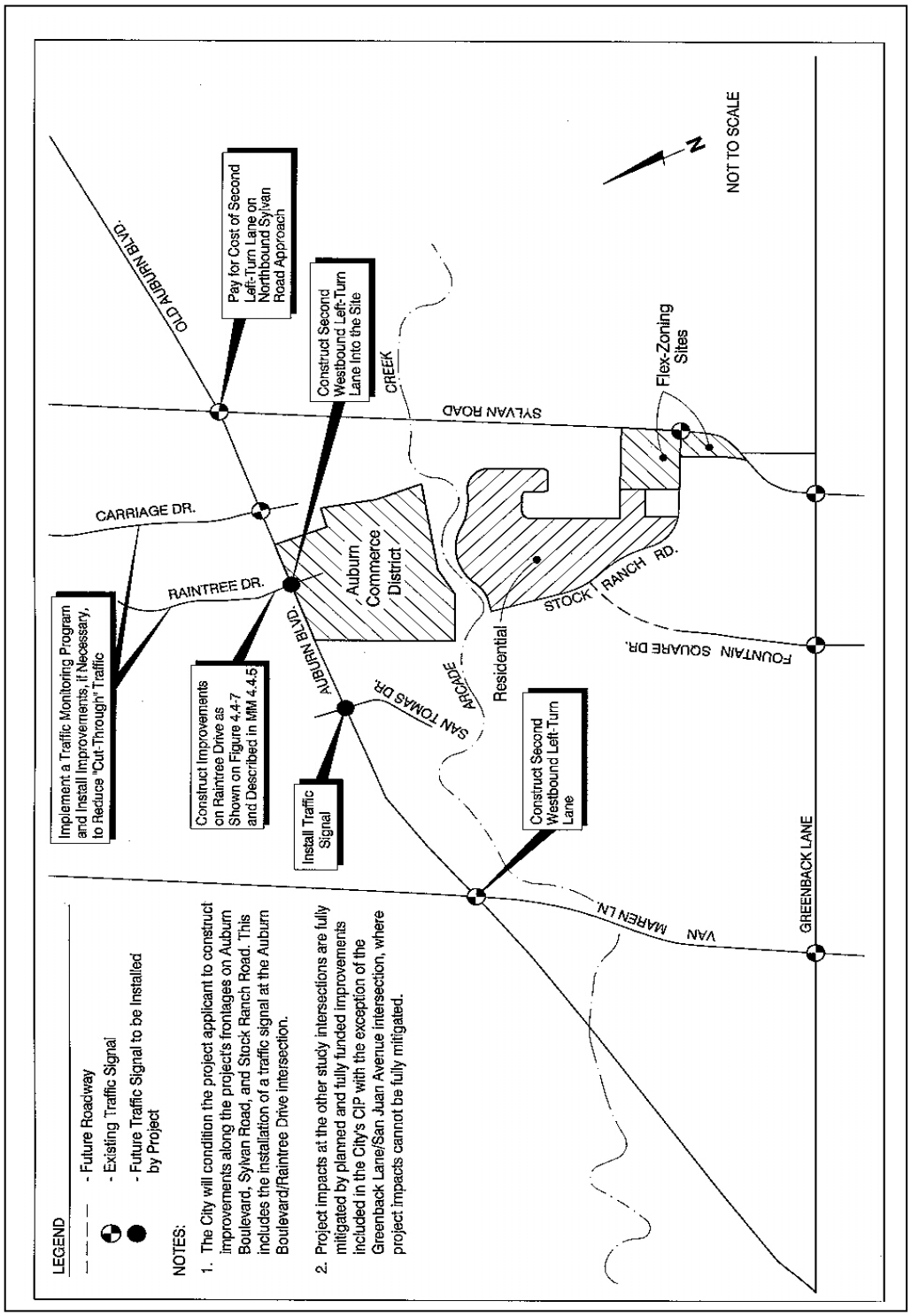
Fehr & Peers Associates used the version of the SACMET 2022 Travel Demand Model that reflects the City's General Plan land use and roadway network assumptions to perform the cumulative analysis. The land uses representing Stock Ranch were removed from the model and the model was then run. The expected increase in traffic between the base year (1997) and cumulative (2022) models was added to the existing traffic volumes to represent "cumulative without project" conditions. **Figure 4.4-9** displays the a.m. and p.m. peak hour traffic forecasts at the study intersections for this condition.

Figure 4.4-7: Project-Specific Mitigation Measures for Scenario 1 (385,000 sq. ft. Shopping Center)



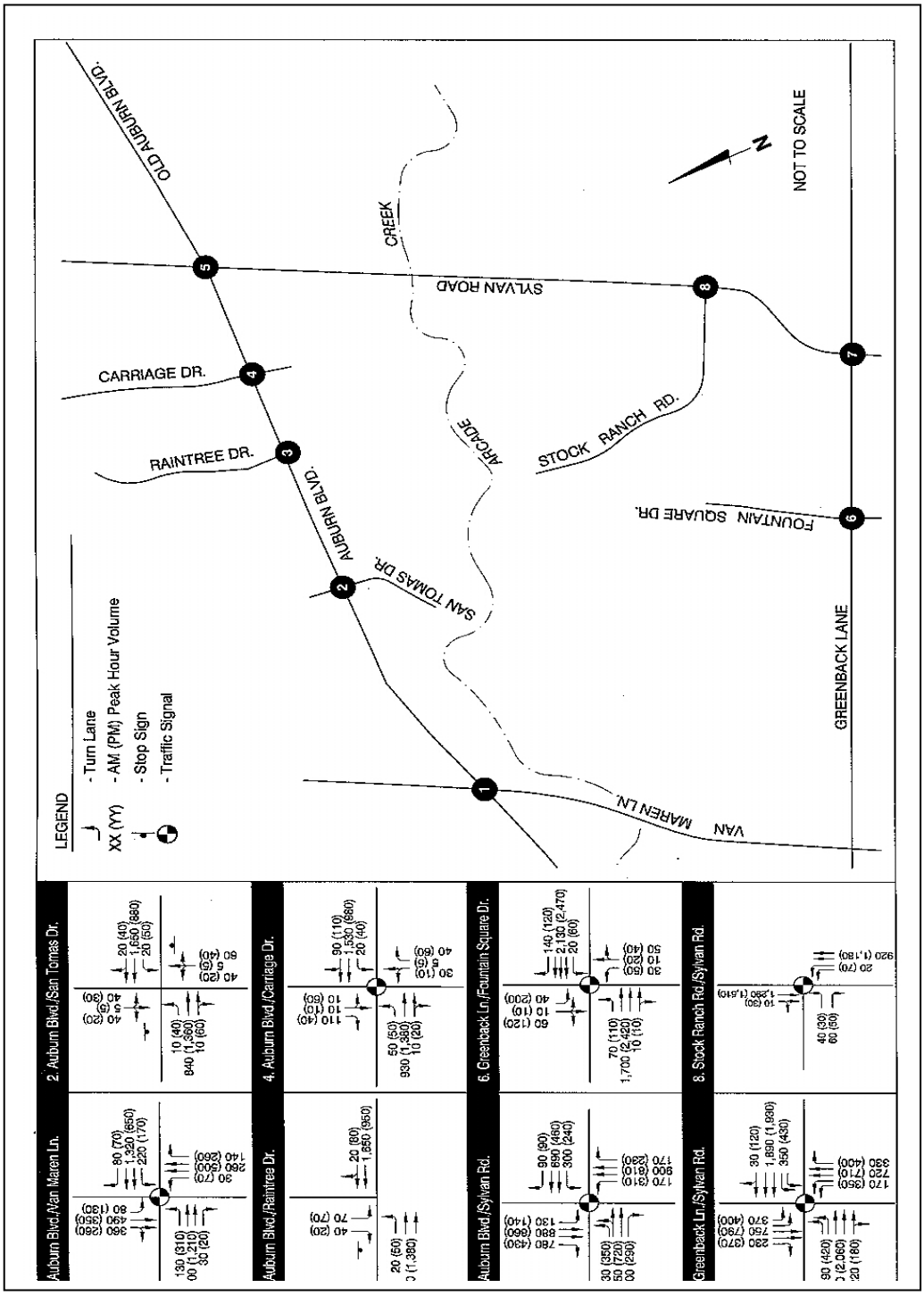
Source: Fehr & Peers Associates, Inc. 2000

Figure 4.4-8: Project-Specific Mitigation Measures for Scenario 2 (450,000 sq. ft. Shopping Center)



Source: Fehr & Peers Associates, Inc. 2000

Figure 4.9-9:Peak Hour Traffic Volumes & Lane Configurations–Cumulative No Project Conditions



Source: Fehr & Peers Associates, Inc. 2000

No new roadway improvements were assumed within the study area under cumulative conditions with the exception of the on-going Greenback Lane widening project, which will add a third through lane on the Greenback Lane approaches to Fountain Square Drive.

Levels of Service. Each study intersection was analyzed during the a.m. and p.m. peak hours under cumulative conditions with each land use scenario (see **Appendix D** for level of service calculations). The results are summarized in **Table 4.4-10**.

Three study intersections are projected to operate at LOS E or worse under "cumulative no project" conditions. Each project land use scenario exacerbates unacceptable operations at these intersections and degrades the level of service at two other study intersections.

Intersection Impacts – Scenario 1 (385,000 sq. ft.)

Impact 4.4.9 The proposed project result in significant impacts at three intersections under cumulative conditions for Scenario 1. A significant unavoidable impact would occur at Greenback Lane/San Juan Avenue. *Note: This impact can be mitigated to an acceptable level at two intersections. However, impacts at the Greenback Lane/San Juan Avenue intersection would remain significant and unavoidable. See discussion below.*

Scenario 1 Significant impacts would occur at the following intersections as a consequence of the project:

(a) Auburn Boulevard/Sylvan Road – operations would worsen from LOS D to E during the a.m. peak hour and from LOS E to F during the p.m. peak hour (with average delays increasing by more than five seconds per vehicle).

Development of Scenario 1 would result in extended delays at the Auburn Boulevard/Sylvan Road intersection. An additional left turn lane is needed on the northbound approach to the Auburn Boulevard/Sylvan Road/Old Auburn Road intersection to restore operations to LOS D during the a.m. and p.m. peak hours under cumulative with project (Scenario 1) conditions.

(b) Auburn Boulevard/San Tomas Drive – project traffic would exacerbate LOS F operations during the a.m. and p.m. peak hours (average delay would increase by more than five seconds per vehicle).

Development of Scenario 1 would result in extended delays at the Auburn Boulevard/San Tomas Drive intersection. A traffic signal is needed at this intersection to improve operations to LOS B during the a.m. and p.m. peak hours under cumulative with project (Scenario 1) conditions.

(c) Greenback Lane/San Juan Avenue – project traffic would worsen operations from LOS D to E during the a.m. peak hour and exacerbate LOS F operations during the p.m. peak hour (average delay would increase by more than five seconds per vehicle).

No feasible mitigation measures are available to reduce delay times at the intersection of Greenback Lane and San Juan Avenue. Therefore, this impact is **considered significant and unavoidable**.

Table 4.4-9
Traffic Volume Forecasts – Cumulative Conditions

Roadway Segment	Traffic Volume (Both Directions)								
	A.M. Peak Hour			P.M. Peak Hour			Daily		
	Cum. No Proj.	Cum. + Proj (Sc. 1)	Cum + Proj (Sc. 2)	Cum. No Proj.	Cum. + Proj (Sc. 1)	Cum + Proj (Sc. 2)	Cum. No Proj.	Cum. + Proj (Sc. 1)	Cum + Proj (Sc. 2)
Auburn Boulevard – Van Maren Ln. to Raintree Dr.	2,590	2,690	2,710	2,380	2,840	2,880	24,000	27,100	27,300
Auburn Boulevard – Raintree Dr. to Sylvan Rd	2,660	2,830	2,850	2,480	3,210	3,290	24,900	29,800	30,300
Sylvan Road – Auburn Blvd. to Greenback Ln	2,260	2,420	2,430	2,750	3,220	3,250	26,800	30,400	31,200
Greenback Lane – west of Fountain Square Drive	4,000	4,130	4,130	5,180	5,360	5,360	58,500	60,400	60,400
Greenback Lane – east of Fountain Square Drive	4,080	4,130	4,130	5,310	5,400	5,400	59,800	60,700	60,700
Stock Ranch Road	120	420	420	180	1,030	1,030	1,800	9,500	9,500
Fountain Square Drive	320	440	440	570	660	660	5,200	6,400	6,400
Raintree Drive	150	160	160	190	210	210	2,000	2,200	2,200
Carriage Drive	270	280	280	260	290	290	3,500	3,700	3,700

Note: Traffic volumes projected on some minor streets (e.g., Carriage Drive, Stock Ranch Road) under "cumulative no project" have increased over existing conditions due to rounding.
Source: Fehr & Peers Associates, 2000

MM 4.4.9a Construct a second left-turn lane on the northbound approach to the Auburn Boulevard/Sylvan Road/Old Auburn Road intersection in addition to the City's planned CIP improvements.

Responsibility for Implementation: Applicant to pay fair share for construction.
Responsibility for Monitoring: City of Citrus Heights to construct additional lane.
Timing: Prior to the issuance of any Certificate of Occupancy.

MM 4.4.9b Implement Mitigation Measure 4.4.2a

Implementation of these mitigation measures would lessen the project's (Scenario 1) impacts to less-than-significant levels at all intersections except the Greenback Lane/San Juan Avenue intersection, which would remain a **significant and unavoidable impact**.

Table 4.4-10
Peak Hour Intersection Levels of Service – Cumulative Conditions

Intersection	Control	A.M. (P.M.) Peak Hour					
		Cumulative No Project Conditions		Cumulative Plus Project (Scenario 1) [1]		Cumulative Plus Project (Scenario 2)[2]	
		Delay (sec/veh)	Level of Service	Delay (sec/veh)	Level of Service	Delay (sec/veh)	Level of Service
Auburn Boulevard/ Van Maren Lane	Traffic Signal	36.2 (32.5)	D (D)	37.7 (36.8)	D (D)	38.3 (37.9)	D (D)
Auburn Boulevard/ Sylvan Road	Traffic Signal	37.5 (45.7)	D (E)	42.4 (> 60)	E (F)	42.7 (> 60)	E (F)
Auburn Boulevard/ Carriage Drive	Traffic Signal	17.1 (11.6)	C (B)	22.1 (22.3)	C (C)	23.3 (23.4)	C (C)
Auburn Blvd./Proj. Dwy./Raintree Dr.	Traffic Signal [3]	9.2 (2.0)	B (A)	20.3 (24.6)	C (C)	20.4 (26.8)	C (D)
Auburn Boulevard/ San Tomas Drive	Two-Way Stop	> 45 (> 45)	F (F)	> 45 (> 45)	F (F)	> 45 (> 45)	F (F)
Greenback Lane/ Fountain Square Dr.	Traffic Signal	19.7 (23.9)	C (C)	20.4 (24.6)	C (C)	21.1 (24.6)	C (C)
Greenback Lane/ San Juan Avenue	Traffic Signal	35.0 (> 60)	D (F)	42.3 (> 60)	E (F)	42.3 (> 60)	E (F)
Sylvan Road/Stock Ranch Road	Traffic Signal	11.7 (17.1)	B (C)	13.4 (22.8)	B (C)	13.4 (24.1)	B (C)
Stock Ranch Road/ Fountain Square Dr.	All-Way Stop	Not Applicable		2.2 (2.3)	A (A)	2.2 (2.3)	A (A)

Source: Fehr & Peers Associates, 2000.

Notes: [1] Scenario 1 assumes 385,000 square foot shopping center in Auburn Commerce District.

[2] Scenario 2 assumes 450,000 square foot shopping center in Auburn Commerce District.

[3] Side-street stop-control under cumulative project conditions and signalized under cumulative plus project conditions.

Intersection Impacts – Scenario 2 (450,000 sq. ft.)

Impact 4.4.10 The proposed project would result in significant impacts at five intersections under cumulative conditions for Scenario 2. A significant unavoidable impact would occur at the intersections of Greenback Lane/San Juan Avenue and Auburn Boulevard/Raintree Drive/Central Project Driveway. *Note: This impact can be mitigated to an acceptable level at the intersections of Auburn Boulevard/Sylvan Road, Auburn Boulevard/San Tomas Drive and Auburn Boulevard/Van Maren Lane. See discussion below.*

Scenario 2 Significant impacts and mitigation measures identified for the intersections of Auburn Boulevard/Sylvan Road, Auburn Boulevard/San Tomas Drive and Greenback Lane/San Juan Avenue would be identical to those identified under Scenario 1, above. Impacts at Greenback Lane and San Juan Avenue would **be significant and unavoidable**.

(a) Auburn Boulevard/Van Maren Lane – project traffic would worsen LOS D operations during the p.m. peak hour (average delay would increase by more than five seconds per vehicle).

Development of Scenario 2 would result in extended delays at the Auburn Boulevard/Van Maren Lane intersection. A second westbound left-turn lane is needed at this intersection in order to reduce average vehicle delays to within five seconds of "No project" levels.

(b) Auburn Boulevard/Raintree Drive/Central Project Driveway – operations would worsen to LOS D during the p.m. peak hour.

Development of Scenario 2 would worsen conditions at the Auburn Boulevard/Raintree Drive/Central Project Driveway. A second westbound left-turn lane at this intersection would restore operations at the intersection to LOS C during the a.m. and p.m. peak hours.

MM 4.4.10a Construct a second westbound left-turn lane at the Auburn Boulevard/Van Maren Lane intersection.

Responsibility for Implementation:	Applicant
Responsibility for Monitoring:	City of Citrus Heights to construct additional lane
Timing:	Based on traffic volumes, delay or level of service triggers developed by applicant and City staff

Because the feasibility of acquiring the right-of-way necessary to accommodate a second westbound turn land is unknown, this impact would remain significant and unavoidable.

MM 4.4.10b Implement Mitigation Measure 4.4.2b.

This improvement would restore operations at the intersection to LOS C during the a.m. and p.m. peak hours.

Implementation of these mitigation measures would lessen the project's (Scenario 2) impacts to **less-than-significant** levels at Auburn Boulevard/Sylvan Road, Auburn Boulevard/San Tomas Drive and Auburn Boulevard/Van Maren Lane intersections. However, impacts to the intersections of Greenback Lane/San Juan Avenue and Auburn Boulevard/Raintree Drive would remain a **significant and unavoidable impact**.

4.4 TRANSPORTATION AND CIRCULATION

REFERENCES

1. *Highway Capacity Manual – Special Report 209,* Transportation Research Board, 1994.
2. *Traffic Manual,* Caltrans, 1995.
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4. Sacramento Regional Transit Website (www.sacrt.com).
5. *Trip Generation,* Institute of Transportation Engineers, 1997.
6. *Trip Generation Handbook,* Institute of Transportation Engineers, 1998.
7. *City of Citrus Heights 2000-2005 Capital Improvement and Maintenance Program,* June 2000.
8. *Greenback Lane Widening Project Draft EIR,* PMC, April 1999.
9. *Stock Ranch Draft Guide for Development,* EIP Associates, August 2000.
10. *Guide to the Environmental Quality Act (CEQA)*, Remy, Thomas, Moose, Manley, 1999.

PERSONAL COMMUNICATIONS

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3. Tescher, Elwood and Beavers, Rhett, EIP Associates.
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