3.9 - Transportation and Traffic

This section describes the potential transportation and traffic effects of project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information contained in the March 18, 2013 Traffic Impact Analysis prepared by Urban Crossroads, Inc. The Traffic Impact Analysis is included in this Draft EIR as Appendix H.

3.9.1 - Existing Conditions

Study Area Roadways and Intersections

Exhibit 3.9-1 shows the existing number of through lanes and intersection controls in the study area. The following study area roadways would be directly impacted by project construction and have been included in the traffic evaluation:

- **Beaumont Avenue** is a two-lane undivided roadway. The posted speed limit along Beaumont Avenue ranges between 35-40 miles per hour (mph). Left turn lanes are provided along Beaumont Avenue at the Cherry Valley Boulevard and Brookside Avenue intersections. Freeway access is provided to Interstate (I) 10 via Beaumont Avenue, Cherry Valley Boulevard, and Oak Valley Parkway.
- **Orchard Street** is a two-lane undivided local roadway. Orchard Street provides access primarily to residential areas located east and west of Beaumont Avenue.
- **Vineland Street** is also a two-lane undivided local roadway and provides access primarily to residential areas.
- **Cherry Valley Boulevard** is a three-lane divided roadway west of Beaumont Avenue and a two-lane undivided roadway east of Beaumont Avenue. Cherry Valley Boulevard directly connects to I-10 west of the study area.
- **Brookside Avenue** is a two-lane divided roadway west of Beaumont Avenue and a two-lane undivided east of Beaumont Avenue.

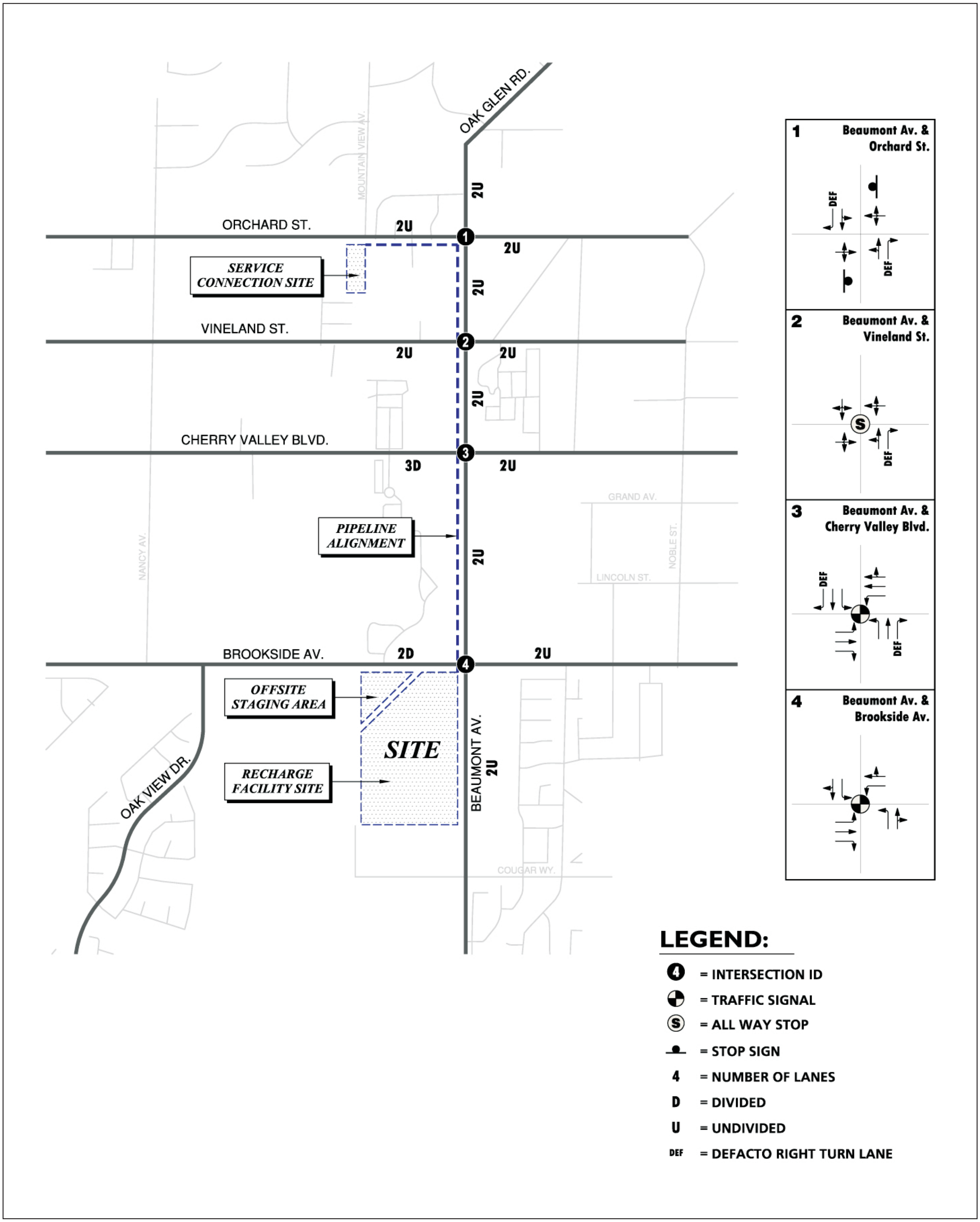
Level of Service

Existing average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3.9-2. Existing ADT volumes are based upon traffic data collected for Urban Crossroads, Inc. or estimated based on peak hour data. The estimated ADT volumes have been calculated by Urban Crossroads, Inc. using the following formula for each intersection leg:

> (AM Peak Hour (Approach + Exit Volume) + PM Peak Hour (Approach + Exit Volume)) / (5.70% + 8.50%) = Daily Leg Volume.

In the above formula, the constants of 5.70% and 8.50% are estimated AM and PM Peak Hour to ADT ratios based on the collected data, resulting in a peak hour to ADT factor of 7.0420. The highest existing ADT volume in the study area is 8,200 vehicles per day (VPD) and occurs on Beaumont Avenue, south of Brookside Avenue. Beaumont Avenue currently carries between 3,900 and 8,200 VPD. Orchard Street, adjacent to the service connection site, carries approximately 1,300 VPD. Brookside Avenue adjacent to the recharge facility site and offsite triangular parcel, carries approximately 2,400 VPD.

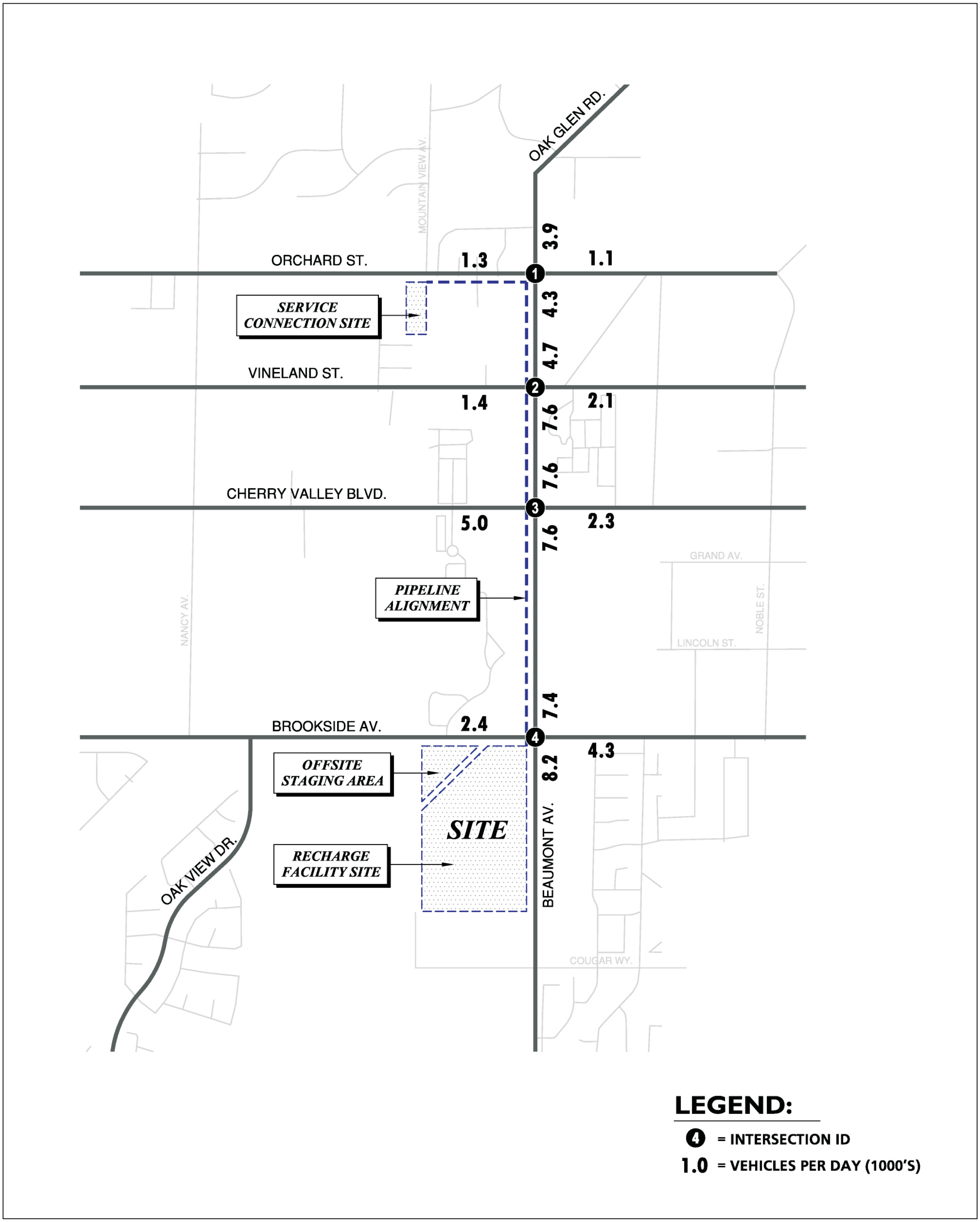
Peak hour roadway segment analysis has been performed for Existing Conditions and is summarized on Table 3.9-1. The peak hour roadway segment traffic volumes have been derived from the peak hour intersection turning movement traffic count data and are shown on Exhibit 3.9-3 and Exhibit 3.9-4 for the AM and PM Peak Hours, respectively. Based on the directional peak hour traffic volumes and number of available travel lanes, all roadway segments currently experience acceptable traffic operations (level of service (LOS) “A” for all analyzed segments).



Source: Urban Crossroads.

Michael Brandman Associates

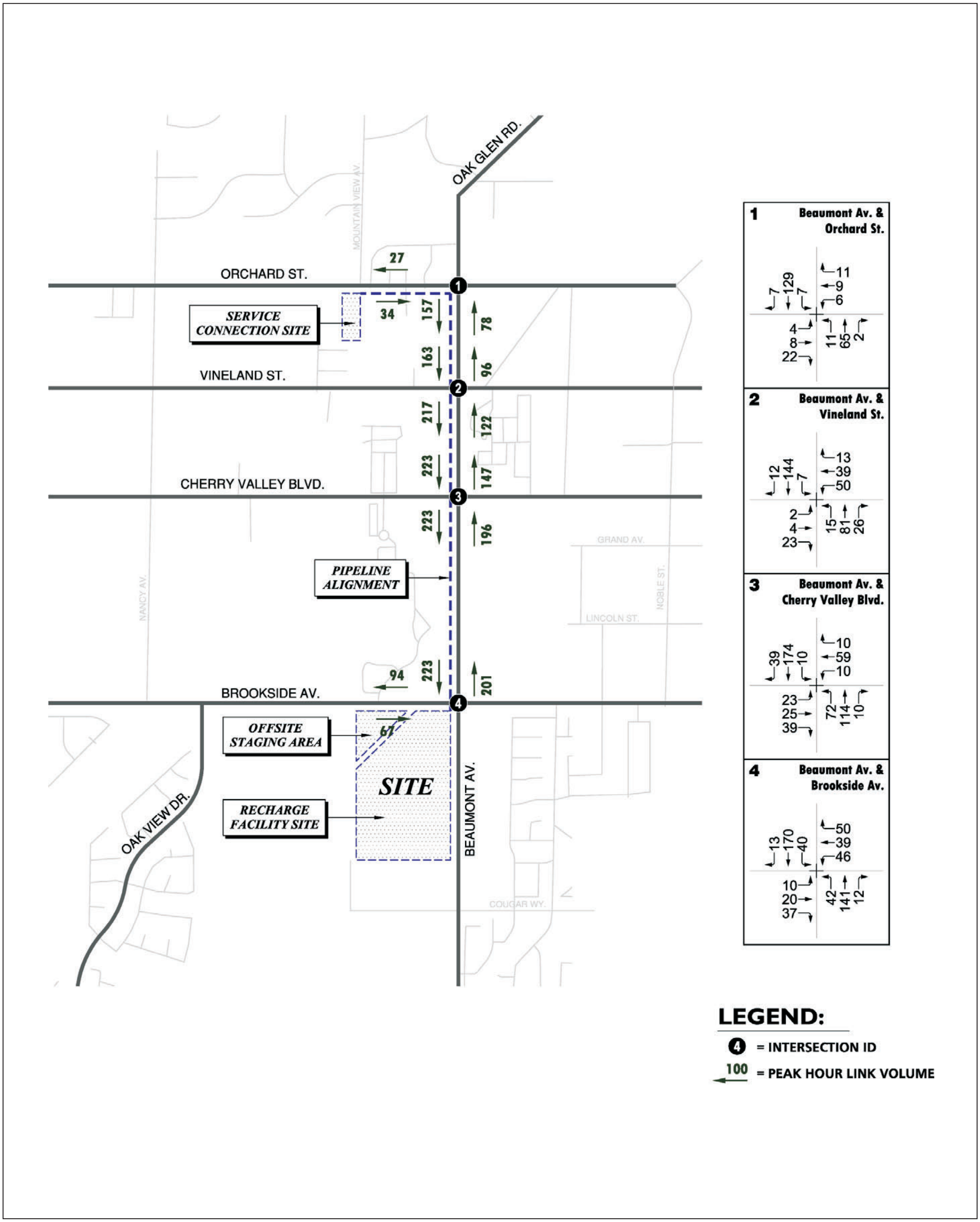
Exhibit 3.9-1
Existing Number of Through Lanes and Intersection Controls



Source: Urban Crossroads.

Michael Brandman Associates

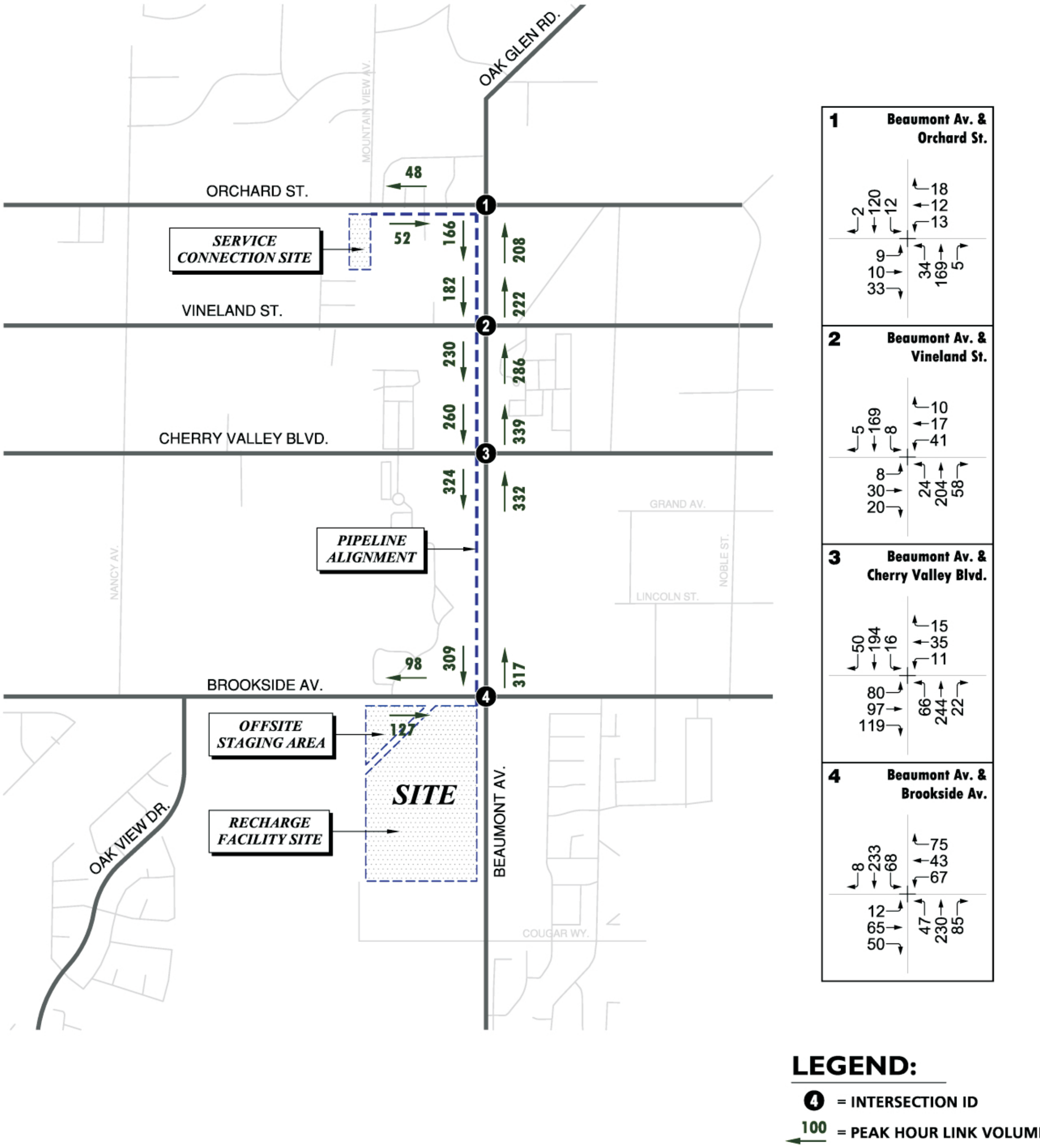
Exhibit 3.9-2
Existing (2012)
Average Daily Traffic (ADT)



Source: Urban Crossroads.

Michael Brandman Associates

Exhibit 3.9-3
Existing (2012)
AM Peak Hour Intersection Volumes



Source: Urban Crossroads.

Michael Brandman Associates

Exhibit 3.9-4
Existing (2012)
PM Peak Hour Intersection Volumes

Table 3.9-1: Existing (2012) Peak Hour Roadway Segment Operations

Roadway	Limits	Direction	# of Lanes	Volume		Capacity (1,900 Vehicles Per Lane)	V/C Ratio		LOS	
				AM	PM		AM	PM	AM	PM
Orchard Street	West of Beaumont Avenue	Eastbound	1	34	52	1,900	0.02	0.03	A	A
		Westbound	1	27	48	1,900	0.01	0.03	A	A
Beaumont Avenue	Between Orchard Street and Vineland Street	Northbound	1	96	222	1,900	0.05	0.12	A	A
		Southbound	1	163	182	1,900	0.09	0.10	A	A
Beaumont Avenue	Between Vineland Street and Cherry Valley Boulevard	Northbound	1	147	339	1,900	0.08	0.18	A	A
		Southbound	1	223	260	1,900	0.12	0.14	A	A
Beaumont Avenue	Between Cherry Valley Boulevard and Brookside Avenue	Northbound	1	201	332	1,900	0.11	0.17	A	A
		Southbound	1	223	324	1,900	0.12	0.17	A	A
Brookside Avenue	West of Beaumont Avenue	Eastbound	1	67	127	1,900	0.04	0.07	A	A
		Westbound	1	94	98	1,900	0.05	0.05	A	A

Source: Urban Crossroads, 2013.

Existing intersection LOS calculations are based upon the existing intersection geometric data and AM and PM Peak Hour turning movement counts. The results of the existing conditions peak hour intersection operations analysis are summarized on Table 3.9-2, along with the existing intersection geometrics and traffic control devices at each analysis location. All of the study area intersections are currently operating at acceptable LOS during both the AM and PM Peak Hours.

Table 3.9-2: Intersection Analysis for Existing Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Beaumont Avenue / Orchard Street	CSS	0.5	0.5	d	0.5	0.5	d	0	1!	0	0	1!	0	10.0	11.8	A	B
2	Beaumont Avenue / Vineland Street	AWS	0.5	0.5	d	0	1!	0	0	1!	0	0	1!	0	8.5	9.3	A	A
3	Beaumont Avenue / Cherry Valley Boulevard	TS	1	1	d	1	1	d	1	1	1	1	2	0	23.9	24.5	C	C
4	Beaumont Avenue / Brookside Avenue	TS	1	1	0	1	1	0	1	1	1	1	1	0	25.4	26.8	C	C

[1] When a right turn is designated, the lane can be either striped or un-striped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left T = Through R = Right 1! = Shared Left-Through-Right Lane d = Defacto Right Turn Lane
[2] Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
[3] CSS = Cross-street Stop AWS = All-Way Stop TS = Traffic Signal
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).
[4] Volume-to-capacity ratio is greater than 1.00; Intersection unstable; Level of Service "F."
Source: Urban Crossroads, 2013.

Analysis Methodology

Traffic operations analysis has been performed to evaluate peak hour traffic operations along roadway segments and at key intersections within the study area. Intersections are the element of the highway system where the greatest conflicting demand for roadway space occurs, and thus, control the overall quality of traffic flow within the system.

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) methodology expresses LOS at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

Since construction activities are anticipated during the summer months only, the intersection LOS analysis is based on traffic count data collected during the peak hours in August 2012 when school was not in session. The following peak hours were selected for traffic analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The City of Beaumont and County of Riverside require signalized intersection operations analysis based on the methodology described in Chapter 16 of the HCM. Intersection LOS operations are based on an intersection’s average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation (Table 3.9-3).

Table 3.9-3: Signalized Intersection LOS Thresholds

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00

Table 3.9-3 (cont.): Signalized Intersection LOS Thresholds

Level of Service	Description	Average Control Delay (Seconds)
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up

For unsignalized intersections, the City of Beaumont and County of Riverside require that the operations of unsignalized intersections be evaluated using the methodology described in Chapter 17 of the HCM. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (Table 3.9-4).

Table 3.9-4: Unsignalized Intersection LOS Thresholds

Level of Service	Description	Average Control Per Vehicle (Seconds)
A	Little or no delays.	0 to 10.00
B	Short traffic delays.	10.01 to 15.00
C	Average traffic delays.	15.01 to 25.00
D	Long traffic delays.	25.01 to 35.00
E	Very long traffic delays.	35.01 to 50.00
F	Extreme traffic delays with intersection capacity	> 50.00

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is calculated as the average of all movements in that lane.

For both the intersection and roadway segment analysis, a saturation flow rate of 1,900 vehicles per hour of green (vphg) per lane (for all types of lanes) was used to evaluate the delay for each study intersection under "Existing Lanes" conditions. 1,900 vphg is the Riverside County default capacity and is cited specifically in the Riverside County Traffic Impact Analysis Preparation Guide. The HCM analysis has been performed using the software package Traffix (Version 8.0).

To account for reduced roadway capacity related to construction activities, a saturation flow rate of 1,500 vphg was used to evaluate each study intersection's delay for each proposed construction configuration. The reduced flow rate of 1,500 vphg represents an approximately 20-percent reduction (from 1,900 vphg) and is a result of lower vehicle speeds within a construction zone. This is consistent with research performed by the Iowa Department of Transportation (DOT) suggesting capacity reductions in the range of around 15 - 25%. Flow rates of 1,400 vphg to 1,600 vphg were identified in the Iowa research effort. The reduced capacity is applied to each roadway lane and intersection approach lane where the lane configuration is affected by construction activities. The reduced capacity was also used to evaluate the potential construction impacts to roadway segments.

The LOS thresholds in terms of roadway segment V/C ratio and corresponding LOS are summarized on Table 3.9-5.

Table 3.9-5: Volume to Capacity Ratio LOS Thresholds

Level of Service	Critical Volume To Capacity Ratio (V/C)
A	0.00 - 0.60
B	0.61 - 0.70
C	0.71 - 0.80
D	0.81 - 0.90
E	0.91 - 1.00
F	>1.00

The definitions of LOS for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.

- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount, which can traverse the point. Queues form behind such locations.

Based on review of LOS standards contained in both the City of Beaumont General Plan and the County of Riverside General Plan, LOS “D” is generally the limit of acceptable LOS.

3.9.2 - Regulatory Setting

Regional Regulations

Approved by Riverside County voters in 1998, Measure A is a half-cent sales tax for transportation improvements. The Riverside County Transportation Commission (RCTC) is charged with ensuring that the over one billion dollars raised by Measure A since 1989 makes a significant difference on most major roadways in the County. Commuter rail, public transit, and commuters have also received benefits. Measure A funds go back to each of three districts: Western Riverside County, the Coachella Valley, and Palo Verde, in proportion to what they contribute. In addition to major highway projects, over half a billion dollars has improved local streets and roads throughout the County. Between 1990 and 2006, cities and county areas in Western Riverside County had received $370.3 million, cities and county areas in the Coachella Valley had received $119.6 million, and cities and county areas in the Palo Verde district had received $14.2 million. In 2002, Measure A was extended by Riverside County voters, with Measure A now continuing to fund transportation improvements through 2039.

Local Regulations

As discussed previously in Section 1 of this Draft EIR, the SGPWA is exempt from local land use policies and ordinances in accordance with California Government Code Sections 53091(d) and 53091(e). Although exempt for the proposed project, SGPWA has chosen to provide a discussion of the local land use policies and ordinances.

City of Beaumont General Plan

The City of Beaumont General Plan contains the following goal and policies that address transportation and traffic.

Circulation Element

Goal 2. The City of Beaumont will ensure the development and maintenance of a local roadway system that will meet both current and future transportation needs.

Policy 10. The City of Beaumont will strive to maintain a minimum Level of Service "C" at intersections during non-peak hours and Level of Service "D" at all intersections during peak hours.

Policy 14. The City of Beaumont will strive to limit the adverse impacts associated with the construction of roadways and the installation of infrastructure improvements.

County of Riverside General Plan

The County of Riverside General Plan contains the following policy that addresses transportation and traffic.

Circulation Element

Policy C 2.1. Maintain the following countywide target Levels of Service:

> LOS "C" along all County maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Urban Expressways, conventional state highways or freeway ramp intersections.
>
> LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities.

3.9.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether transportation and traffic impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (See Traffic Increase, Impact TRANS-1.)

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? (See Congestion Management Program Impact TRANS-2.)

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (See Section 6.16.1, Air Traffic Patterns)

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (See Section 6.16.2, Hazards)

e) Result in inadequate emergency access? (See Section 6.16.3, Emergency Access)

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (See Section 6.16.4, Conflict with Alternative Transportation)

3.9.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Traffic Increase

Impact TRANS-1	**The project could conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.**

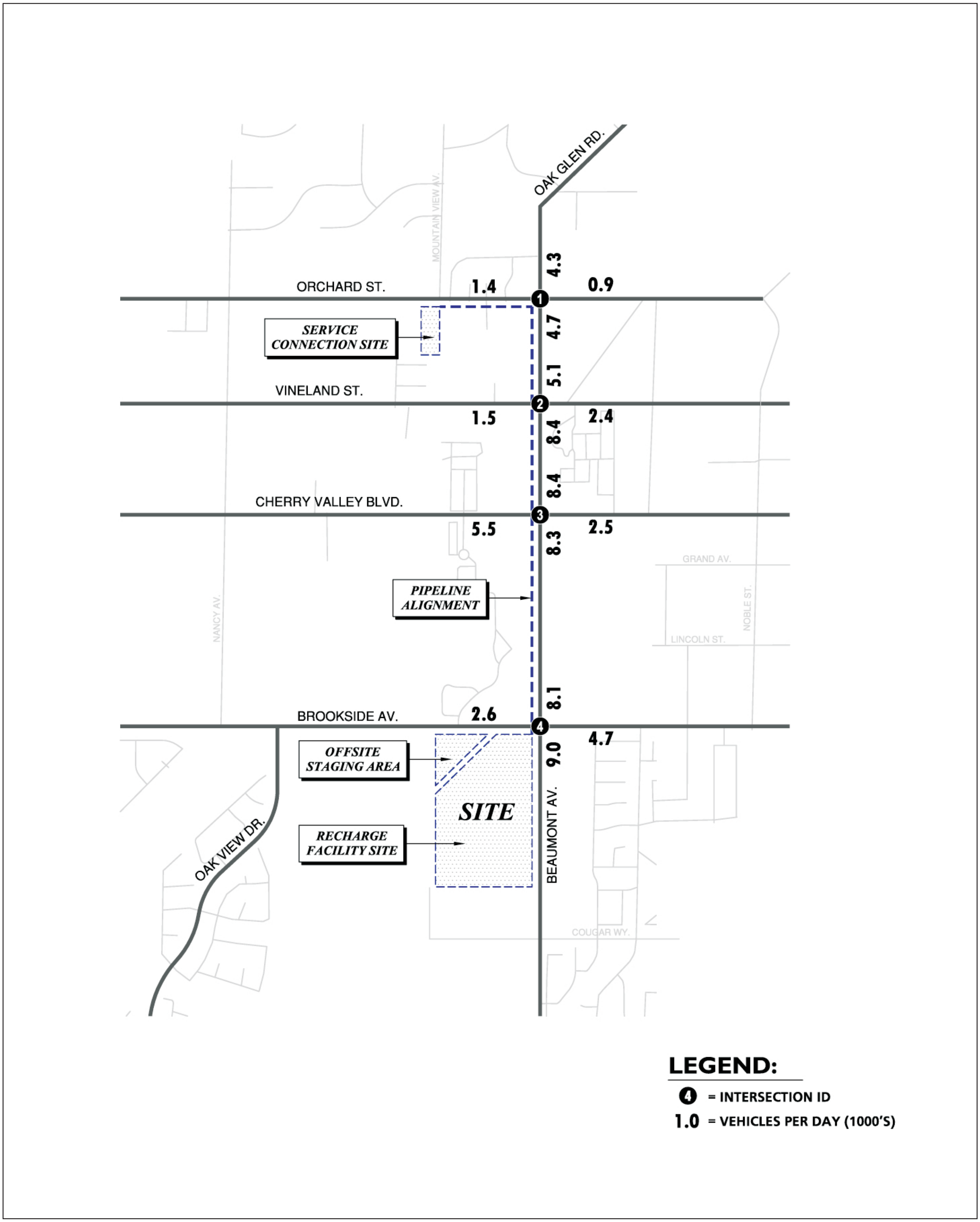
Impact Analysis

Construction of the proposed recharge facility and service connection facility would not result in the export of soil. Thus, construction traffic associated with the recharge facility and service connection facility would be considered nominal. The focus of the following construction traffic evaluation traffic generated during pipeline construction.

Construction of the pipeline is expected to occur in summer 2014. Most of the related cumulative projects that could contribute traffic to the study area are either relatively small (i.e., less than 10 dwelling units) or larger projects located a considerable distance from the study area that would only be partially occupied and/or would only contribute traffic within the study area on a limited basis. Thus, an aggressive ambient background growth factor of 10 percent (5 percent per year for two years) was applied to existing traffic volumes to conservatively account for the related cumulative projects that may contribute trips to the study area during summer 2014.

The ADT volumes that can be expected for Opening Year (2014) with Construction conditions are shown on Exhibit 3.9-5. Similar to Existing Conditions, the highest study area ADT volumes occur on Beaumont Avenue south of Brookside Avenue (9,000 VPD). Exhibit 3.9-6 and Exhibit 3.9-7 show the AM and PM Peak Hours intersection turning movement volumes for Opening Year (2014) with Construction conditions. These peak hour volumes have been used as the basis for the Opening Year (2014) with Construction conditions operations analysis.

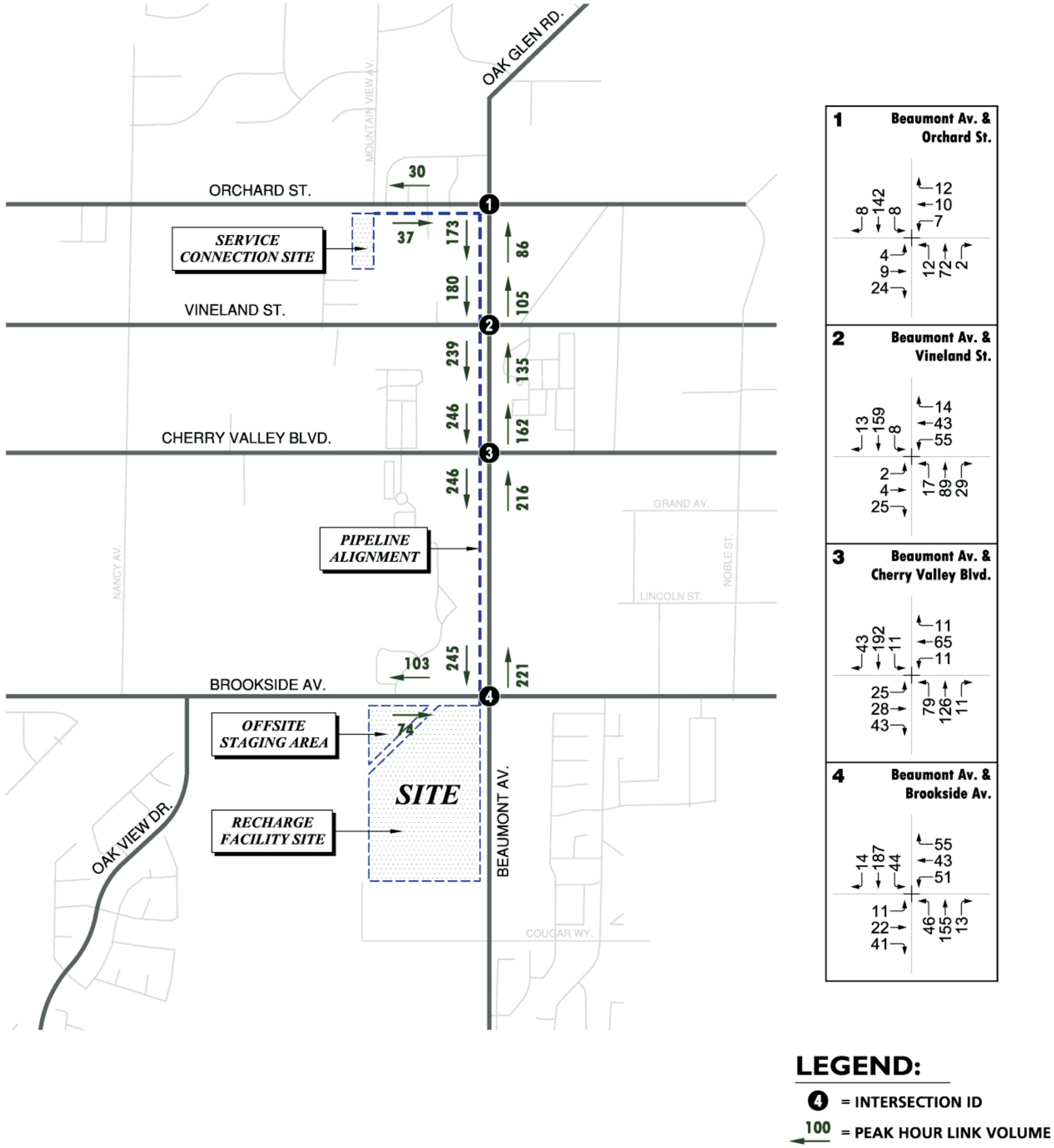
Traffic analysis was initially performed assuming one travel lane in each direction while construction activities occur along the impacted roadway segments. Table 3.9-6summarizes the peak hour roadway segment analysis for Opening Year (2014) with Construction under these conditions. The peak hour roadway segment traffic volumes were derived from the peak hour intersection turning movement traffic count data shown on Exhibit 3.9-6 and Exhibit 3.9-7 for the AM and PM Peak Hours, respectively. Based on the directional peak hour traffic volumes and number of available travel lanes, all roadway segments would continue to experience acceptable peak hour operations during summer 2014, even with the reduced capacity due to pipeline construction (LOS "A" for all segments analyzed).



Source: Urban Crossroads.

Michael Brandman Associates

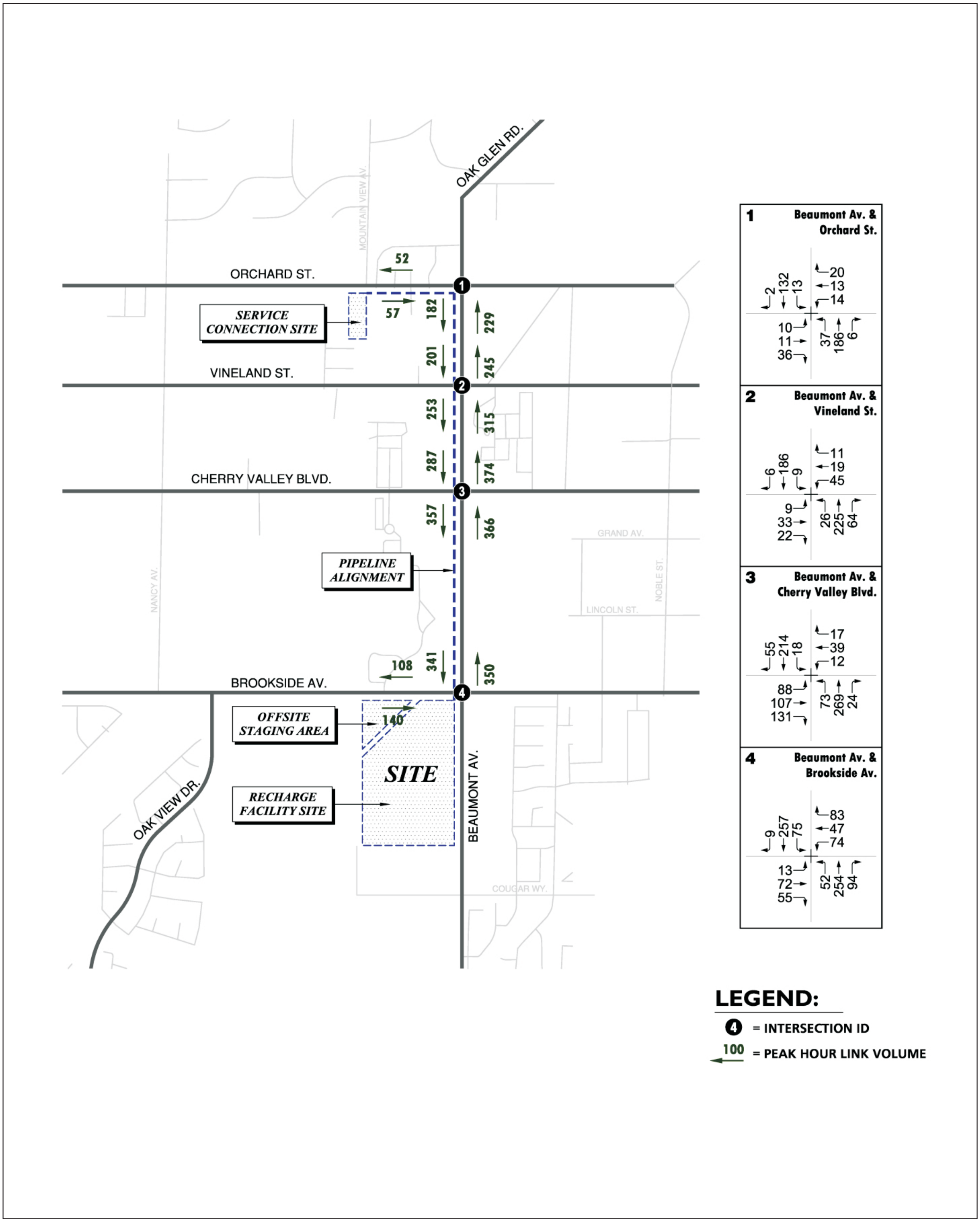
Exhibit 3.9-5
Opening Year (2014) With Construction Average Daily Traffic (ADT)



Source: Urban Crossroads.

Michael Brandman Associates

Exhibit 3.9-6
Opening Year (2014) With Construction AM Peak Hour Intersection Volumes



Source: Urban Crossroads.

Michael Brandman Associates

Exhibit 3.9-7
Opening Year (2014) With Construction PM Peak Hour Intersection Volumes

Table 3.9-6: Opening Year (2014) With Construction Peak Hour Roadway Segment Operations

Roadway	Limits	Direction	# of Lanes	Volume		Capacity (1,500 Vehicles Per Lane)	V/C Ratio		Los	
				AM	PM		AM	PM	AM	PM
Orchard Street	West of Beaumont Avenue	Eastbound	1	37	57	1,500	0.02	0.04	A	A
		Westbound	1	30	52	1,500	0.02	0.03	A	A
Beaumont Avenue	Between Orchard Street and Vineland Street	Northbound	1	105	245	1,500	0.07	0.16	A	A
		Southbound	1	180	201	1,500	0.12	0.13	A	A
Beaumont Avenue	Between Vineland Street and Cherry Valley Boulevard	Northbound	1	162	374	1,500	0.11	0.25	A	A
		Southbound	1	246	287	1,500	0.16	0.19	A	A
Beaumont Avenue	Between Cherry Valley Boulevard and Brookside Avenue	Northbound	1	221	366	1,500	0.15	0.24	A	A
		Southbound	1	245	357	1,500	0.16	0.24	A	A
Brookside Avenue	West of Beaumont Avenue	Eastbound	1	74	140	1,500	0.05	0.09	A	A
		Westbound	1	103	108	1,500	0.07	0.07	A	A
Source: Urban Crossroads, 2013.										

For Opening Year (2014) with Construction conditions, it was assumed that the approach lanes at the study intersections (where pipeline excavation activities are anticipated to occur) with two or more lanes would be reduced to a single shared-lane and all study intersections would operate with an all-way-stop control.

Table 3.9-7 summarizes the LOS associated with the proposed construction plans for Opening Year (2014) with Construction conditions during the AM and PM Peak Hours. All study area intersections would operate at acceptable LOS during both the AM and PM Peak Hours with the assumed lane configurations.

Table 3.9-7: Intersection Analysis for Opening Year (2014) With Construction Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Beaumont Avenue / Orchard Street	**AWS**	0	**1!**	0	0	**1!**	0	0	1!	0	0	1!	0	7.9	9.0	A	A
2	Beaumont Avenue / Vineland Street	AWS	0	**1!**	0	0	1!	0	0	1!	0	0	1!	0	8.6	9.7	A	A
3	Beaumont Avenue / Cherry Valley Boulevard	**AWS**	0	**1!**	0	0	**1!**	0	1	1	1	1	2	0	9.7	12.7	A	B
4	Beaumont Avenue / Brookside Avenue	**AWS**	0	**1!**	0	0	**1!**	0	0	**1!**	0	1	1	0	10.3	15.3	B	C

[1] When a right turn is designated, the lane can be either striped or un-striped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left T = Through R = Right **1!** = Shared Left-Through-Right Lane 1 = With Construction Geometry
[2] Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with all way stop control.
[3] AWS = All-Way Stop
[4] For With Construction Conditions, all-way-stop control is recommended for all the study area intersections and lanes are reduced to a single shared left-through-right turn lane where needed.
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).
CSS = Cross-street Stop AWS = All-Way Stop TS = Traffic Signal
Volume-to-capacity ratio is greater than 1.00; Intersection unstable; Level of Service "F."
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
Source: Urban Crossroads, 2013.

Traffic analysis for the roadway segments was also conducted assuming that reducing the available roadway to a single travel-lane serving both directions of traffic may be necessary. The estimated directional capacity under this construction configuration was estimated at 450 vehicles per hour. Table 3.9-8 summarizes the segment capacity calculations under this configuration. The capacity for each segment that includes a lane closure to a single-lane serving both directions has been reduced from 1,500 vehicles per lane per hour to 450 vehicles per lane per hour to reflect the effects of construction activities on roadway capacity with a single travel-lane for both directions.

Table 3.9-8: Single Travel Lane Segment Capacity Reduction Calculation

Roadway	Limits (%)	PM
Typical Construction Capacity	100	1,500
Northbound / Eastbound	30	450
Southbound / Westbound	30	450
Work Area Clearance Interval	25	380
Start Up Lost Time	15	230
Directional Capacity		**450**
Source: Urban Crossroads, 2013.		

Table 3.9-9 summarizes the peak hour roadway segment analysis for Opening Year (2014) with Construction conditions with a single travel-lane serving both directions. Based on the directional peak hour traffic volumes and number of available travel lanes, all roadway segments would continue to experience acceptable peak hour operations during summer 2014, even with the reduced capacity due to project construction.

Table 3.9-9: Opening Year (2014) With Construction Peak Hour Roadway Segment Operations

Roadway	Limits	Direction	# of Lanes	Volume		Capacity (1,500 Vehicles Per Lane)	V/C Ratio		LOS	
				AM	PM		AM	PM	AM	PM
Orchard Street	West of Beaumont Avenue	Eastbound	1	37	57	450	0.08	0.13	A	A
		Westbound	1	30	52	450	0.07	0.12	A	A
Beaumont Avenue	Between Orchard Street and Vineland Street	Northbound	1	105	245	450	0.23	0.54	A	A
		Southbound	1	180	201	450	0.40	0.45	A	A
Beaumont Avenue	Between Vineland Street and Cherry Valley Boulevard	Northbound	1	162	374	450	0.36	0.83	A	D
		Southbound	1	246	287	450	0.55	0.64	A	B
Beaumont Avenue	Between Cherry Valley Boulevard and Brookside Avenue	Northbound	1	221	366	450	0.49	0.81	A	D
		Southbound	1	245	357	450	0.54	0.79	A	C
Brookside Avenue	West of Beaumont Avenue	Eastbound	1	74	140	450	0.16	0.31	A	A
		Westbound	1	103	108	450	0.23	0.24	A	A
Source: Urban Crossroads, 2013.										

Several additional issues and potential impacts related to project construction were also considered. These issues include the potential impacts of construction workers traveling to and from the project sites, as well as the potential impacts on emergency access, bus routes, pedestrian access, and bicycle circulation.

During project construction, there would be a temporary increase in truck trips and construction worker vehicles in the project area. Construction traffic would use the existing regional and local road network. Construction traffic is anticipated to access the project area primarily via I-10 and adjacent arterials (e.g., Cherry Valley Boulevard and Brookside Avenue).

Construction traffic would consist primarily of passenger cars (or light duty pickup trucks), with occasional movement of heavy equipment to and from the project sites. Construction traffic generally occurs prior to the typical peak hour of adjacent street traffic. In general, all traffic would use the arterial roadway system to access the project sites, and heavy trucks would use designated truck routes.

Based on the amount of construction equipment, number of construction workers, and anticipated hours of arrival and departure, construction traffic would result in a less than significant impact. Even considering the peak of construction traffic activity, less than 50 peak hour trips are anticipated as a result of project construction (or typical operating conditions).

During project construction, the number of travel lanes within the study area would be reduced. However, access to all adjacent commercial, residential, and other land uses would be maintained throughout the construction process. Moreover, pipeline construction would be limited to those hours when acceptable traffic operations can be adequately maintained and managed. Pipeline construction activities could result in potentially significant traffic operation impacts at adjacent intersections. Traffic analysis was performed under the assumption that Mitigation Measures TRANS-1 would be implemented during pipeline construction activities within study area roadways. Therefore, with incorporation of this mitigation measure, impacts associated with the performance of the circulation system would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measure

MM TRANS-1 To reduce potential operational impacts during pipeline construction, the following measures shall be implemented depending on whether the two-traffic lanes scenario or the single-traffic lane scenario is implemented.

Two-Traffic Lanes Scenario

- Temporary "All-Way STOP" signs at each of the currently signalized adjacent intersections shall be required.

Single-Traffic Lanes Scenario

- Temporary "All-Way STOP" signs at each currently signalized adjacent intersection shall be required. In addition, the project contractor shall utilize a "flagman" to direct one-way traffic, ensure adequate traffic flow, and avoid traffic flow conflicts.

Level of Significance After Mitigation

Less than significant.

The implementation of Mitigation Measure TRANS-1 would reduce potential operational impacts during pipeline construction to less than significant. The measure provides temporary traffic controls depending on whether the two-traffic lanes scenario or the single-traffic lane scenario is implemented.

Congestion Management Program

Impact TRANS-2	**The project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.**

Impact Analysis

Every county in California is required to develop a Congestion Management Program (CMP) that looks at the links between land use, transportation, and air quality. As Riverside County's Congestion Management Agency, the Riverside County Transportation Commission (RCTC) prepares and periodically updates the county's CMP to meet federal Congestion Management System guidelines and State CMP legislation. The Southern California Association of Governments (SCAG) is required under federal planning regulations to determine that CMPs within its region are consistent with its Regional Transportation Plan.

According to the current CMP adopted on December 14, 2011, none of the local study area roadways are included as part of the CMP system. The closest regional roadway that is part of the CMP system is I-10. Construction and operation of the project would not result in impacts to I-10, as addressed in the March 2013 TIA. Therefore, impacts associated with the CMP would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.