URBAN CROSSROADS

5411 Avenida Encinas, Suite 100
Carlsbad, CA 92008

Prepared by:

Scott Sato, P.E.
James Santos

Prepared for:

CITY OF LA QUINTA
78-495 Calle Tampico
La Quinta, CA 92253

THE DUNE PALMS/HIGHWAY 111 COMMERCIAL AND RESIDENTIAL DEVELOPMENT TRAFFIC IMPACT ANALYSIS LA QUINTA, CALIFORNIA

July 16, 2009

JN:05468-12
SS:JS:rd

THIS PAGE LEFT INTENTIONALLY BLANK

TABLE OF CONTENTS

THIS PAGE LEFT INTENTIONALLY BLANK

THIS PAGE LEFT INTENTIONALLY BLANK

THIS PAGE LEFT INTENTIONALLY BLANK

LIST OF APPENDICES

THIS PAGE LEFT INTENTIONALLY BLANK

LIST OF EXHIBITS

THIS PAGE LEFT INTENTIONALLY BLANK

THIS PAGE LEFT INTENTIONALLY BLANK

THIS PAGE LEFT INTENTIONALLY BLANK

LIST OF TABLES

THIS PAGE LEFT INTENTIONALLY BLANK

THIS PAGE LEFT INTENTIONALLY BLANK

THIS PAGE LEFT INTENTIONALLY BLANK

THE DUNE PALMS/ HIGHWAY 111 COMMERCIAL AND RESIDENTIAL DEVELOPMENT TRAFFIC IMPACT ANALYSIS LA QUINTA, CALIFORNIA

1.0 EXECUTIVE SUMMARY

A. Purpose of Report and Study Objectives

The purpose of this traffic impact analysis is to evaluate the development of the Dune Palms/ Highway 111 Commercial and Residential Development from a traffic circulation standpoint. The project site is located east of Dune Palms Road and south of Highway 111 in the City of La Quinta.

Urban Crossroads, Inc. prepared this traffic analysis in accordance with the assumptions and other guidance contained in the recently revised City of La Quinta Engineering Bulletin #06-13 (June 2008). Through correspondence with City of La Quinta staff, Urban Crossroads, Inc. has discussed key traffic impact study assumptions to ensure that City requirements and concerns are addressed in the report. The findings and the recommendations in this report adhere to current acceptable engineering practices and reflect our professional engineering judgment.

B. Site Location and Study Area

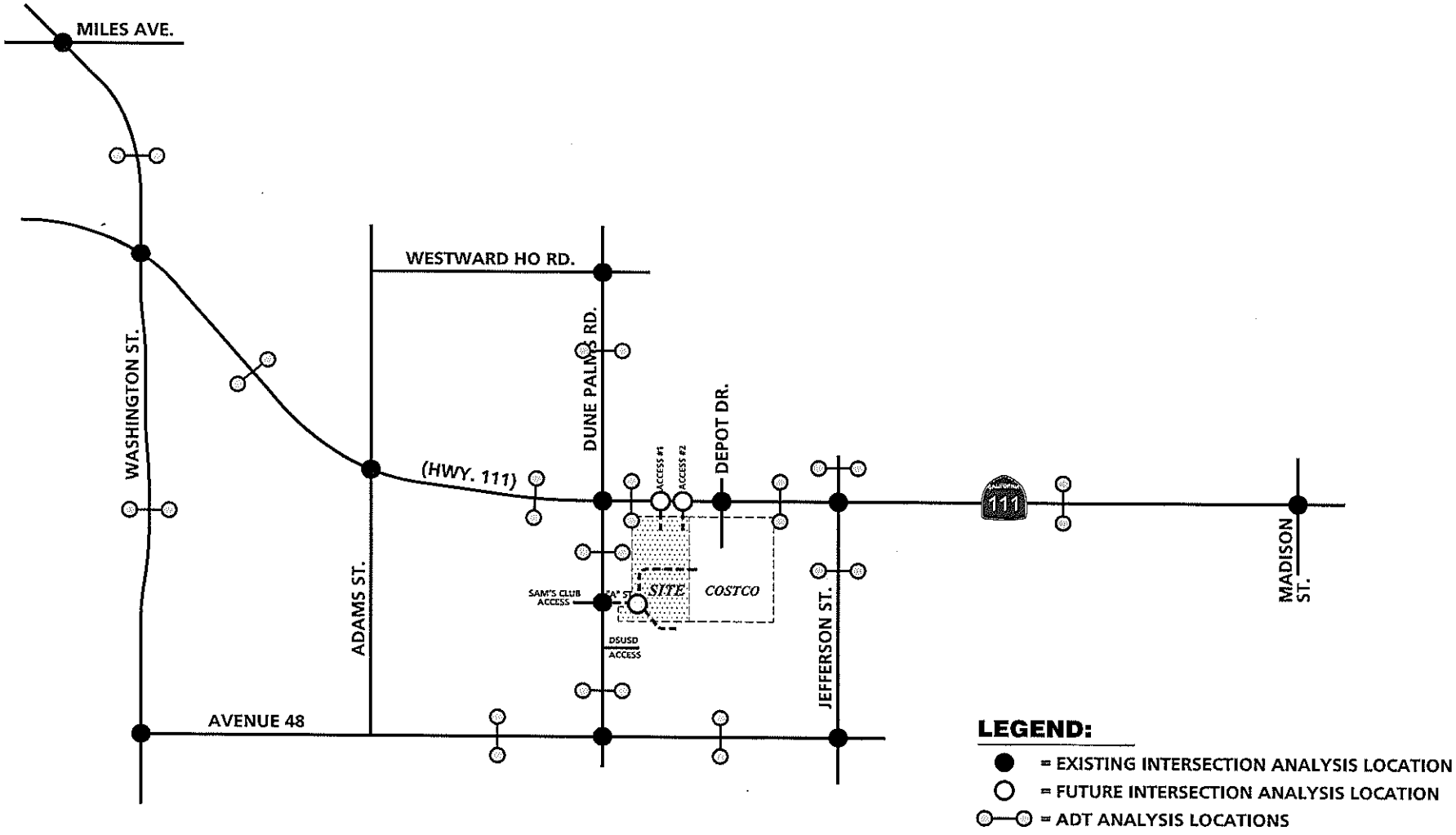
The project site is located east of Dune Palms Road and south of Highway 111 in the City of La Quinta. Exhibit 1-A illustrates the traffic analysis study area.

The project will have access via "A" Street to Dune Palms Road, two right-in/right-out access driveways along Highway 111, and a shared full access at Depot Drive/ Highway 111.

The study intersections and road segments have been evaluated based on professional engineering judgment regarding the most likely geographic area to be impacted by the project's traffic.

EXHIBIT 1-A

LOCATION MAP



C. Development Description

The proposed development project will consist of a total of 82,000 square feet of auto dealership uses and 200 apartment units. For 2011 conditions, approximately 27,000 square feet of the proposed auto dealership will be constructed in conjunction with the 200 apartment units. For 2016 conditions, the remainder of the auto dealership (55,000 square feet) will be constructed. Exhibit 1-B illustrates the proposed site plan.

The project site is projected to generate approximately 2,244 trip-ends per day with 169 vehicles per hour during the AM peak hour and 207 vehicles per hour during the PM peak hour for 2011 conditions. For 2016 conditions, the project is anticipated to generate approximately 4,078 trip-ends per day with 290 vehicles per hour during the AM peak hour and 357 vehicles per hour during the PM peak hour

D. Principal Findings

1. Existing Conditions Intersection Analysis

The intersection analysis for existing conditions represents current peak season intersection level of service operations. For existing conditions, the following study area intersection is currently operating at unacceptable levels of service, given the existing roadway design and adopted standards:

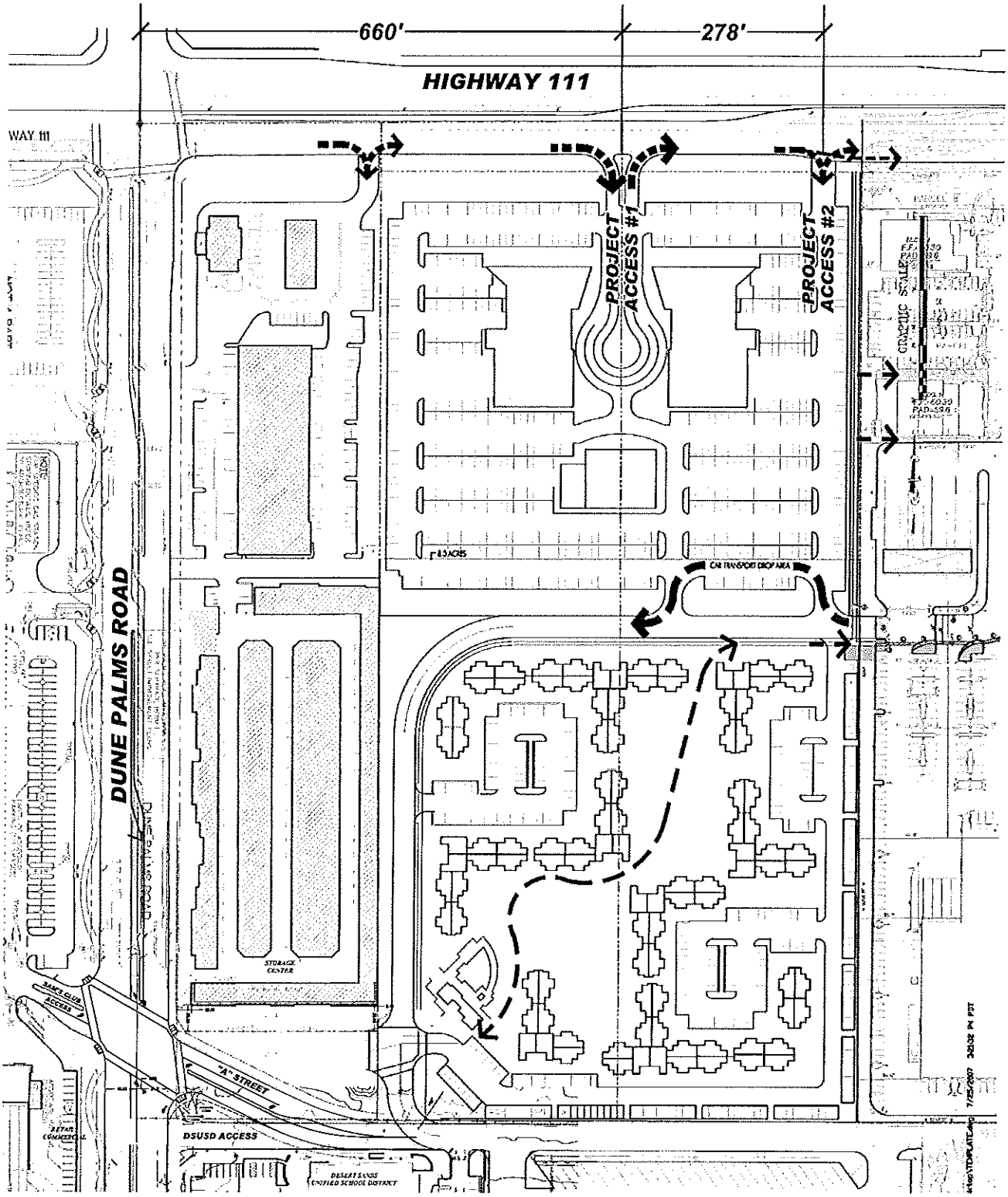
Dune Palms Road (NS) at:

- School District Driveway (EW)

It is important to note that this intersection will be replaced/realigned to the north (directly across from the Sam's Club driveway) and signalized in conjunction with the proposed project. Based on this improvement, the level of service deficiency will be removed in all scenarios.

EXHIBIT 1-B

SITE PLAN



N

2. Existing Conditions Roadway Segment Analysis

The roadway segment analysis for existing conditions illustrates current peak season roadway level of service operations. Roadway segments are analyzed by comparing the existing peak season daily traffic volumes to the acceptable capacity of the particular roadway. A volume to capacity ratio (V/C) is derived from the comparison, which corresponds to a level of service range for road segments. For existing conditions, the following study area roadway segments are currently operating at unacceptable levels of service, with existing or CIP lane configuration:

Highway 111 (EW) between:

- Dune Palms Road and Depot Drive
- Depot Drive and Jefferson Street

3. Potentially Significant Intersection Impact Assessment (2011)

Potentially Significant Project Specific Impact

For Existing plus Ambient plus Cumulative plus Project (2011) traffic conditions, the results of the potentially significant project specific impact assessment indicate that potentially significant project specific impacts are anticipated at the following study area intersection with the implementation of the improvements outlined in the City of La Quinta's CIP program:

Dune Palms Road (NS) at:

- "A" Street (EW)

Improvements at the intersection of Dune Palms Road/ "A" Street include:

- The installation of a traffic signal
- Construct a northbound left turn lane
- Construct a northbound right turn lane with a 250' pocket
- Construct a southbound left turn lane with a 250' pocket

- Construct an eastbound left turn lane
- Construct a westbound left turn lane
- Construct a westbound shared right-thru lane

Exhibit 1-C illustrates the recommended improvements described above in addition to the improvements at the project driveways for E+A+C+P (2011) conditions.

Potentially Significant Cumulative Impact

Even with CIP improvements, potentially significant cumulative impacts are anticipated at the following study area intersection locations:

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Potentially significant cumulative impacts at the intersections of Washington Street/ Highway 111 and Washington Street/ Avenue 48 have been identified. Improvements are required at these two locations. To reduce the potentially significant cumulative impacts to less than significant levels, the project must contribute towards the improvements on a fair share basis. These improvements to off-site intersections are described below and are illustrated on Exhibit 1-C.

Washington Street (NS) at Highway 111 (EW)

- Provide a WB right turn lane with overlap phase

Washington Street (NS) at Avenue 48 (EW)

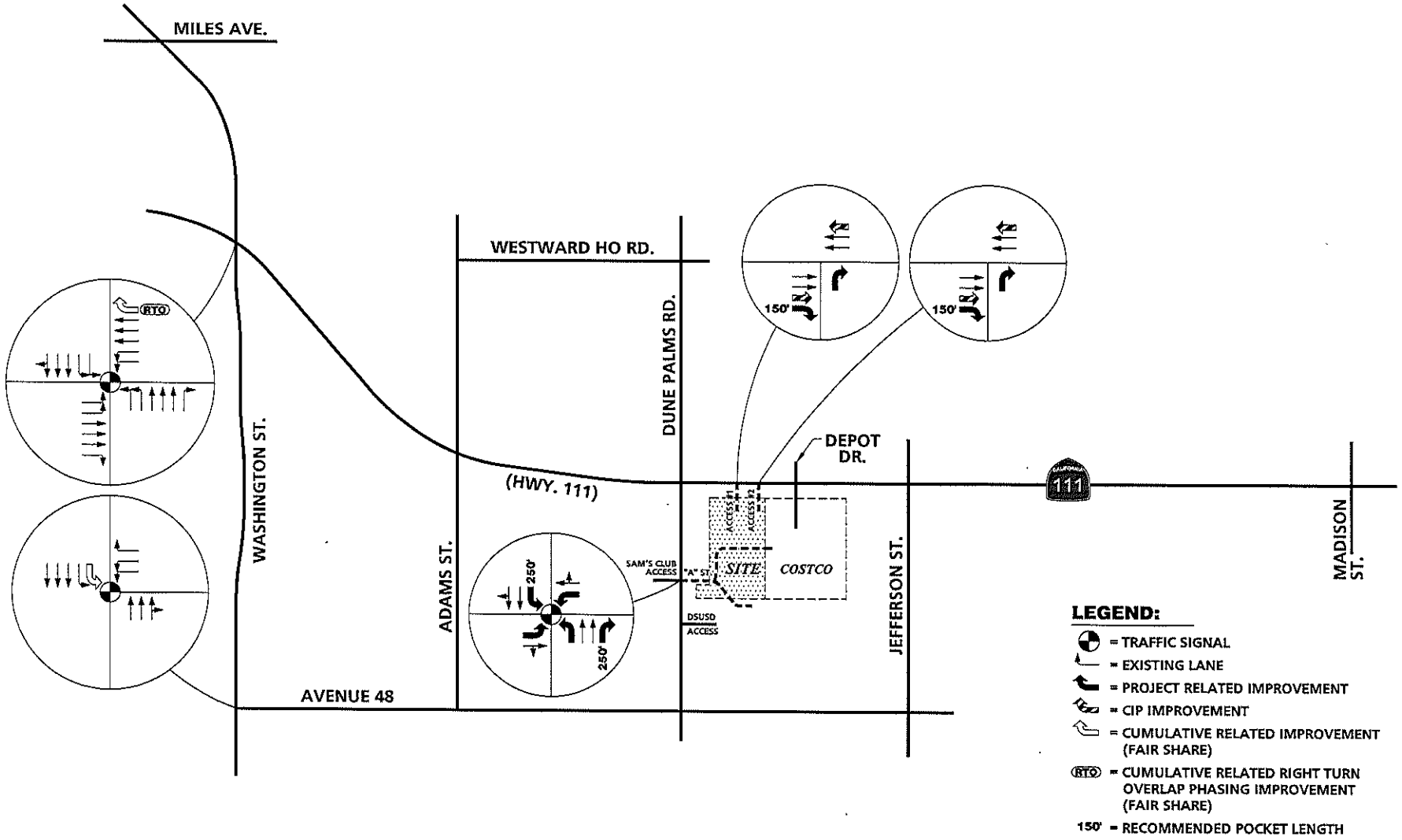
- Construct a 2nd SB left turn lane

4. *Potentially Significant Roadway Segment Impact Assessment (2011)*

Based on the City of La Quinta road segment impact criteria, an impact assessment is required if the roadway segment is operating at LOS "E" or "F" with the City's CIP improvements assumed in place. The level of

EXHIBIT 1-C

RECOMMENDED IMPROVEMENTS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011)



service at the study area road segments for E+A+C+P (2011) indicates that the study area roadways are anticipated to operate at LOS "D" or better with the CIP improvements in place. Therefore, potential significant project specific impacts are not anticipated for either project or cumulative, E+A+C+P (2011) conditions.

5. *Potentially Significant Intersection Impact Assessment (2016)*

Potentially Significant Project Specific Impacts

The potentially significant project specific impact assessment at the study area intersections has been conducted based on the City of La Quinta's significance criteria. The analysis indicates that potentially significant project specific impacts are anticipated at the following study area intersections with CIP improvements:

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- "A" Street (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)

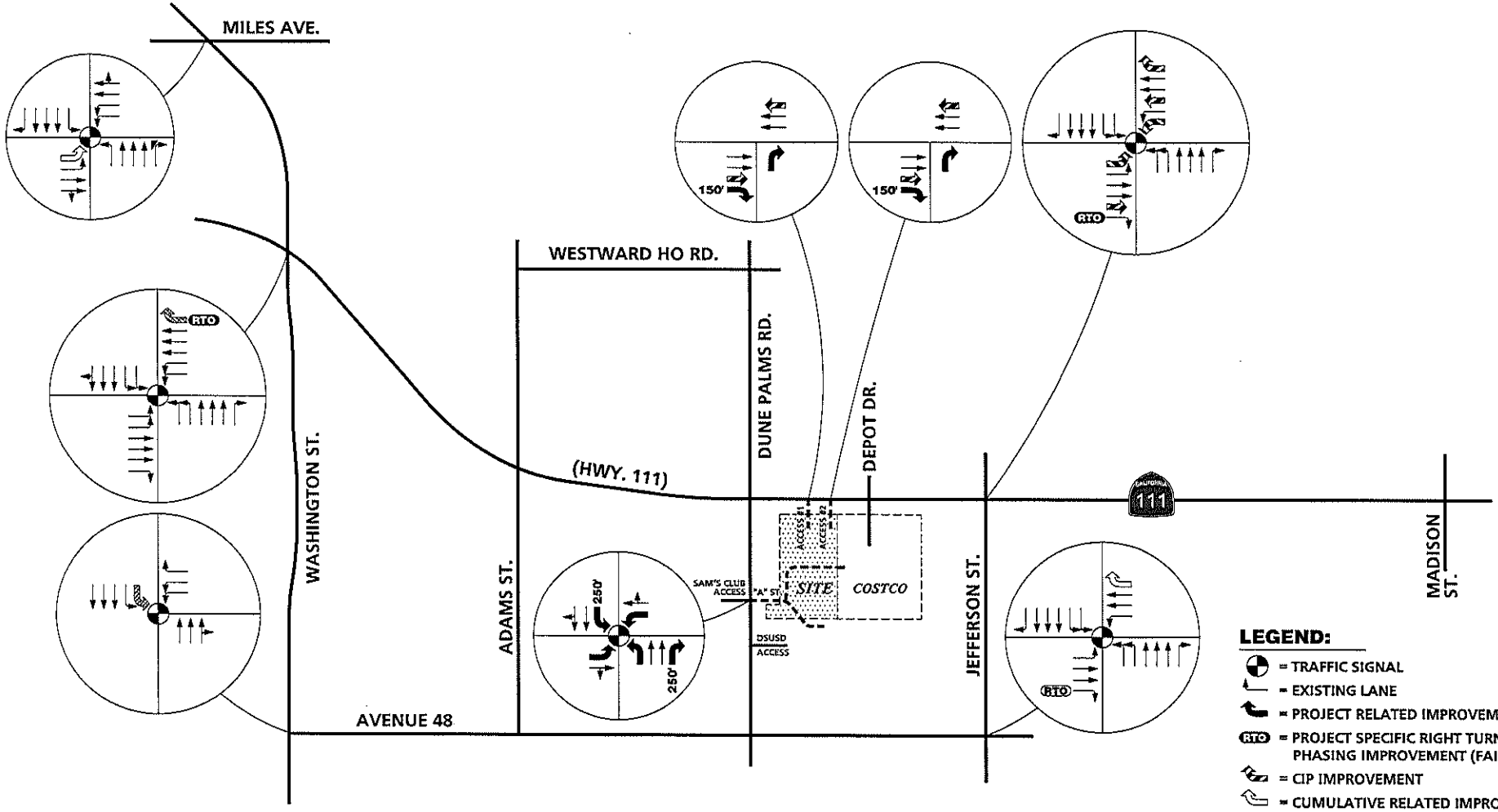
City of La Quinta requires mitigations be proposed for potentially significant project specific impacts at study area intersections. Additional improvements beyond those included in the CIP are anticipated to be needed to mitigate the potentially significant project specific impacts to less than significant levels. These improvements to off-site intersections are described below and are illustrated on Exhibit 1-D.

Washington Street (NS) at Highway 111 (EW)

- Provide a WB right turn lane with overlap phase

EXHIBIT 1-D

RECOMMENDED IMPROVEMENTS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016)



Washington Street (NS) at Avenue 48 (EW)

- Construct a 2nd SB left turn lane

Jefferson Street (NS) at Highway 111 (EW)

- Provide an EB right turn overlap phase

Although the abovementioned intersections with these additional improvements are anticipated to operate at unacceptable levels of service, these improvements are anticipated to reduce the potentially significant project specific impacts by mitigating to at least the non-project E+A+C (2016) conditions V/C. The recommended improvements mitigate the project's impact on intersections projected to operate at worse than LOS"D" for E+A+C+P (2016) conditions.

In addition to identifying potentially significant project specific impacts, the Engineering Bulletin requires a potentially significant cumulative impact assessment. Based on the City of La Quinta's Cumulative Impact Criteria, the results of the analysis indicate that cumulative impacts are anticipated at the following study area intersections (with CIP lane configurations in place):

Washington Street (NS) at:

- Miles Avenue (EW)
- Highway 111 (EW)
- Avenue 48 (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

For the intersections of Washington/ Highway 111, Washington/ Avenue 48, and Jefferson Street/ Highway 111, mitigation measures have been proposed to address potentially significant project specific impacts. These mitigation measures are anticipated to address potentially significant project specific impacts to less than significant levels. The project is

responsible for implementing these improvements by contributing to these improvements on a fair share basis.

Mitigation for Jefferson Street/Highway 111

If the City of Indio either: 1) adopts a reasonable program of actual mitigation that the City of Indio commits itself to implement, or 2) otherwise obtains the balance of the funding needed for improvement to the Jefferson Street/Highway 111 intersection consisting of the addition of an eastbound right-turn overlap phasing, the project sponsor shall be required to pay its fair share into that program, i.e., 3.2% for the improvement. If the City of Indio takes either of these steps, the project sponsor shall be required to pay its fair-share contribution for these improvements to the City of Indio, or to another entity as directed by the City of Indio, prior to obtaining its next building permit for the project. If neither step is taken by the City of Indio, the cumulative impact on these intersections would remain significant and unavoidable.

Potentially Significant Cumulative Impacts

Potentially significant cumulative impacts at the intersections of Washington Street/ Miles Avenue and Jefferson Street/ Avenue 48 have been identified. Improvements are required at these two locations. To reduce the potentially significant cumulative impacts to less than significant levels, the project must contribute towards the improvements on a fair share basis. These improvements to off-site intersections are described below and illustrated previously on Exhibit 1-D.

Washington Street (NS) at Miles Avenue (EW)

- Construct a 2nd EB left turn lane

Jefferson Street (NS) at Avenue 48 (EW)

- Provide an EB right turn overlap phase
- Provide an WB right turn lane

Mitigation for Jefferson Street/Avenue 48

If the City of Indio either: 1) adopts a reasonable program of actual mitigation that the City of Indio commits itself to implement, or 2) otherwise obtains the balance of the funding needed for improvement to the Jefferson/Ave. 48 intersection consisting of the addition of a westbound right-turn lane and an eastbound right-turn overlap phasing, the project sponsor shall be required to pay its fair share into that program, i.e., 2.2% for the improvement. If the City of Indio takes either of these steps, the project sponsor shall be required to pay its fair-share contribution for these improvements to the City of Indio, or to another entity as directed by the City of Indio, prior to obtaining its next building permit for the project. If neither step is taken by the City of Indio, the cumulative impact on these intersections would remain significant and unavoidable.

6. *Potentially Significant Roadway Segment Impact Assessment (2016)*

The results of the potentially significant project specific impact assessment for the study area road segments indicate that potentially significant project specific impacts are anticipated at the following road segments with CIP lane configurations:

Highway 111 (EW) between:

- Washington Street and Adams Street
- Adams Street and Dune Palms Road
- Depot Drive and Jefferson Street

Although project impacts have been identified at the abovementioned road segments along Highway 111, roadway improvements are not feasible since the E+A+C+P (2016) road segment analysis assumes that the road segments along Highway 111 are built to their ultimate six lane configuration. Further widening of Highway 111 will exceed the General Plan roadway classification. Moreover, the location of adjacent development makes the acquisition of additional right of way infeasible. As

TABLE 1-1

SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS FOR INTERSECTIONS AND ROADWAY SEGMENTS [1]

POTENTIALLY SIGNIFICANT IMPACTS AT THE STUDY AREA INTERSECTIONS

	E+A+C+P (2011)				E+A+C+P (2016)			
	POTENTIALLY SIGNIFICANT IMPACT? [2]				POTENTIALLY SIGNIFICANT IMPACT? [2]			
INTERSECTION	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2011) PROJECT RELATED INTERSECTION IMPROVEMENTS	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2016) PROJECT RELATED INTERSECTION IMPROVEMENTS
Washintgton Street (NS) at:								
• Miles Avenue (EW)	NO	NO	N/A	N/A	NO	YES	Fair share (2.8%)*	* Project to contribute towards the construction of a 2nd EB left turn lane on a fair share basis
• Highway 111 (EW)	NO	YES	Fair share (7.9%)	• Provide a WB Right Turn Overlap Phasing*	YES	YES	Fair share (7.9%)*	Same as 2011
• Avenue 48 (EW)	NO	YES	Fair share (4.9%)	• Construct a 2nd SB Left Turn Lane*	YES	YES	Fair share (4.9%)*	Same as 2011
Dune Palms Road (NS) at:								
• "A" Street (EW)	YES	NO	Mitigatable	• Install a Traffic Signal [5]	YES	NO	Mitigatable	Same as 2011
				• Construct a NB Left Turn Lane				Same as 2011
				• Construct a NB Right Turn Lane with a 250' right turn pocket				Same as 2011
				• Construct a SB Left Turn Lane with a 250' left turn pocket				Same as 2011
				• Construct an EB Left Turn Lane				Same as 2011
				• Construct a WB Left Turn Lane				Same as 2011
				• Construct a WB Shared Right-Thru Lane				Same as 2011
Jefferson Street (NS) at:								
• Highway 111 (EW)	NO	NO	N/A	N/A	YES	YES	Fair share (3.2%)*	• Provide an EB Right Turn Overlap Phasing*
• Avenue 48 (EW)	NO	NO	N/A	N/A	NO	YES	Fair share (2.2%)*	• Project to contribute towards the construction of a EB right turn overlap and WB right turn lane in a fair share basis.

POTENTIALLY SIGNIFICANT IMPACTS AT STUDY AREA ROADWAY SEGMENTS

	E+A+C+P (2011)				E+A+C+P (2016)			
	POTENTIALLY SIGNIFICANT IMPACT? [3]				POTENTIALLY SIGNIFICANTIMPACT? [3]			
ROAD SEGMENT	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2011) PROJECT RELATED ROADWAY IMPROVEMENTS	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2016) PROJECT RELATED ROADWAY IMPROVEMENTS
Highway 111 (EW) between:								
• Washington St. and Adams St.	NO	NO	N/A	N/A	YES	NO	Unavoidable Impact	Infeasible [4]
• Adams St. and Dune Palms Rd.	NO	NO	N/A	N/A	YES	NO	Unavoidable Impact	Infeasible [4]
• Depot Dr.and Jefferson St.	NO	NO	N/A	N/A	YES	NO	Unavoidable Impact	Infeasible [4]

* The payment of fair share percentages is based on the specified improvement being adopted into the City's CIP (La Quinta or Indio). Otherwise, the project will be fully responsible for the improvement or the impacts will considered significant and unavoid

[1] Per City of La Quinta Engineering Bulletin, project specific and cumulative impacts must be evaluated. Project are required to mitigate their impacts by mitigation measures.

[2] An intersection is classified as having a project specific impact if the intersection is operating with a LOS E and the project adds 20 per lane peak hour trips to any critical movement. For LOS F, if the project adds 10 per lane peak hour trips to a crit it is considered as a project specific impact. A cumulative impact is assumed to occur if the project adds 25 or more peak hour trips to an intersection projected to operate at worse than LOS D at project buildout.

[3] A roadway segment is classified as having a project specific impact if the project would cause the existing LOS to fall worse than LOS D at project buildout. In addition, a project specific imapct impact is also defined to occur on any road segment that at LOS E or LOS F, if the V/C ratio is increased by 0.02. A cumulative impact is defined to occur if the project would cause the existing LOS to fall to worse than LOS D at buildout. A cumualtive impact is also defined if the studied road segment is opera and the peak hour V/C in the peak direction is increased by 0.05 at City General Plan buildout.

[4] Roadway is anticlapted to operate at LOS "F" at project buildout. Widening the roadway is not feasible since the roadway is built to its ultimate cross-section. Acquiring additional right-of-way will be required beyond its ultimate classification.

[5] For the intersection of Dune Palms Road/ "A" Street, the project is responsible for 50% of the cost of the traffic signal.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T1-1

a result, the project specific impacts at these road segments are unmitigatable.

7. Traffic Signal Warrants

A traffic signal is projected to be warranted at the following study area intersection for Existing Conditions (see Appendix "D"):

Dune Palms Road (NS) at:

- DSUSD Access (EW)

8. Conclusions

Potentially Significant Project Specific Impact Assessment Results

The results of the potentially significant impact assessment identifying project and cumulative impacts for the study area intersections and road segments are summarized in Table 1-1.

9. Recommendations

The recommended improvements indicated in this section should be implemented prior to the first occupancy of the project.

Off-Site Recommended Improvements

It should be noted that at the time of the initial preparation of this study (July 2008), roadway improvements under the City's Capital Improvement Program along Highway 111 were under construction. The CIP improvements assumed in this report have been completed as of late 2008. Additional recommended off-site improvements are required to mitigate potentially significant project specific impacts.

The City of La Quinta requires projects to propose mitigation for potentially significant project specific impacts. As indicated in the results of the Potentially Significant Impact Assessment, intersections and road segments impacted by the project require proposal of mitigation measures to reduce the project's impact by mitigating to at least pre-project E+A+C conditions. Per City of La Quinta, the project is required to pay for its fair share of the cost of improvements. The fair share percent contribution of the proposed project to the intersection of Washington Street/ Highway 111 is 7.9%. For the intersection of Washington Street/ Avenue 48, the project's fair share contribution is 4.9%. At the intersection of Jefferson Street/ Highway 111, the project's fair share is 3.2%. The payment of the project's fair share contribution towards improvements is based on the specified improvements being adopted into the City's CIP. Otherwise, the project may be fully responsible for the improvements to address potentially significant project specific impacts. Table 1-1 summarizes the proposed project related improvements to mitigate the potentially significant project specific impacts to less than significant levels.

Potentially Significant Cumulative Impacts

The proposed project must contribute towards its fair share costs for mitigation of potentially significant cumulatively impacted intersections. The fair share percent contribution of the proposed project to the intersection of Washington Street/ Miles Avenue is 2.8%. For the intersection of Jefferson Street/ Avenue 48, the project's fair share contribution is 2.2%

On-Site Circulation Recommendations

The project is responsible for the construction of site specific improvements. These improvements should be completed prior to the first occupancy of the project (2011). Site-specific circulation and access recommendations are depicted on Exhibit 1-E and are described below:

- Construct Highway 111 at its ultimate half-section width as a six lane Augmented Arterial roadway from the westerly project boundary to the easterly project boundary.

EXHIBIT 1-E

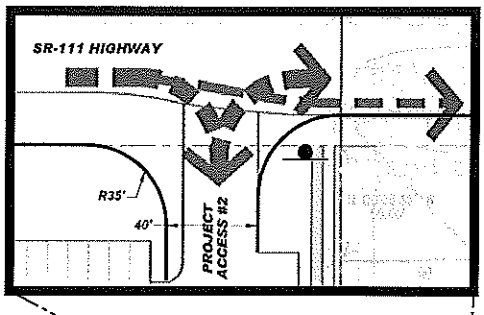
CIRCULATION RECOMMENDATIONS

PROVIDE STOP SIGN CONTROL AT THE INTERSECTIONS OF ALL INTERNAL ROADWAYS AND AT THE PROJECT ACCESS POINTS.

ON-SITE TRAFFIC SIGNING AND STRIPING SHOULD BE IMPLEMENTED IN CONJUNCTION WITH DETAILED CONSTRUCTION PLANS FOR THE PROJECT SITE.

SIGHT DISTANCE AT THE PROJECT ACCESS SHOULD BE REVIEWED WITH RESPECT TO CALTRANS STANDARDS AND THE CITY OF LA QUINTA SIGHT DISTANCE STANDARDS AT THE TIME OF PREPARATION OF FINAL GRADING, LANDSCAPING, AND STREET IMPROVEMENTS PLANS.

CONSTRUCT SR-111 HIGHWAY AT ITS ULTIMATE HALF-SECTION WIDTH AS A 6-LANE MAJOR ROADWAY FROM THE WESTERLY PROJECT BOUNDARY TO THE EASTERLY PROJECT BOUNDARY IN CONJUNCTION WITH DEVELOPMENT.

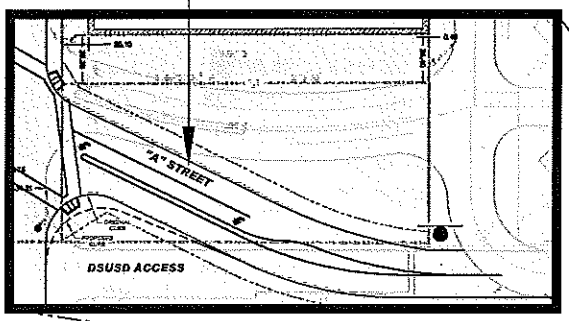


LEGEND:

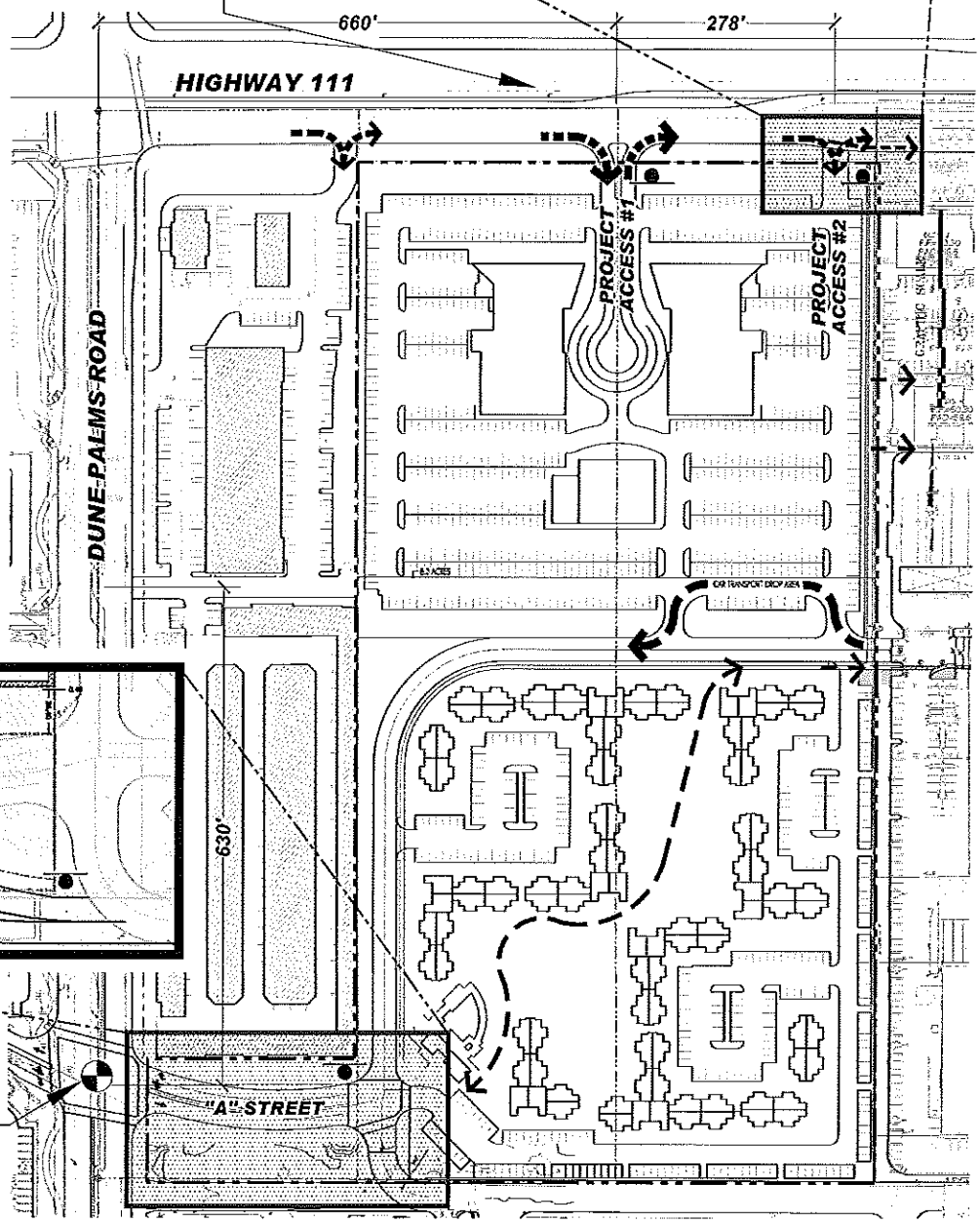
= TRAFFIC SIGNAL

= STOP SIGN

CONSTRUCT "A" STREET AT ITS ULTIMATE FULL-SECTION WIDTH AS A 2-LANE ROADWAY FROM DUNE PALMS ROAD TO THE EASTERLY PROJECT BOUNDARY IN CONJUNCTION WITH DEVELOPMENT.



INSTALL A TRAFFIC SIGNAL AT DUNE PALMS ROAD AND "A" STREET.



N

- Construct "A" Street at its ultimate full-section width as a 2 lane roadway from Dune Palms Road to the easterly project boundary.

- Provide a minimum 225-foot southbound left turn pocket on Dune Palms Road at the "A" Street.

- Provide a minimum 150-foot eastbound right turn pocket/ deceleration lane on Highway 111 at Project Access #1 and Project Access #2.

- Provide a minimum 250-foot northbound right turn pocket/ deceleration lane on Dune Palms Road at "A" Street.

- On-site signing and striping should be implemented in conjunction with detailed construction plans for the project site.

- Provide stop sign control at the intersections of all internal roadways and at the project access points.

- Provide a traffic signal at the intersection of Dune Palms Road/ "A" Street.

Sight distance at the project entrance should be reviewed with respect to standard City of La Quinta sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

The project should also contribute to a citywide roadway and traffic signal improvement program (DIF) through payment of development impact fees to the City of La Quinta.

THIS PAGE LEFT INTENTIONALLY BLANK

2.0 PROPOSED DEVELOPMENT

A. Location

The project site is generally located east of Dune Palms Road and south of Highway 111 in the City of La Quinta. An existing Komar/Costco and other ancillary retail shops are situated east of the project site. A commercial/self storage development and a gas station are located west of the proposed project. The Desert Sands Unified School District administrative facility is located south of the project site.

B. Land Use and Intensity

The proposed development project will consist of a total of 82,000 square feet of auto dealership uses and 200 apartment units. For Phase 1 (2011) conditions, approximately 27,000 square feet of the proposed auto dealership will be constructed in addition to the 200 apartment units. For Phase 2 (2016) conditions, the remainder of the auto dealership (55,000 square feet) will be constructed.

C. Site Plan

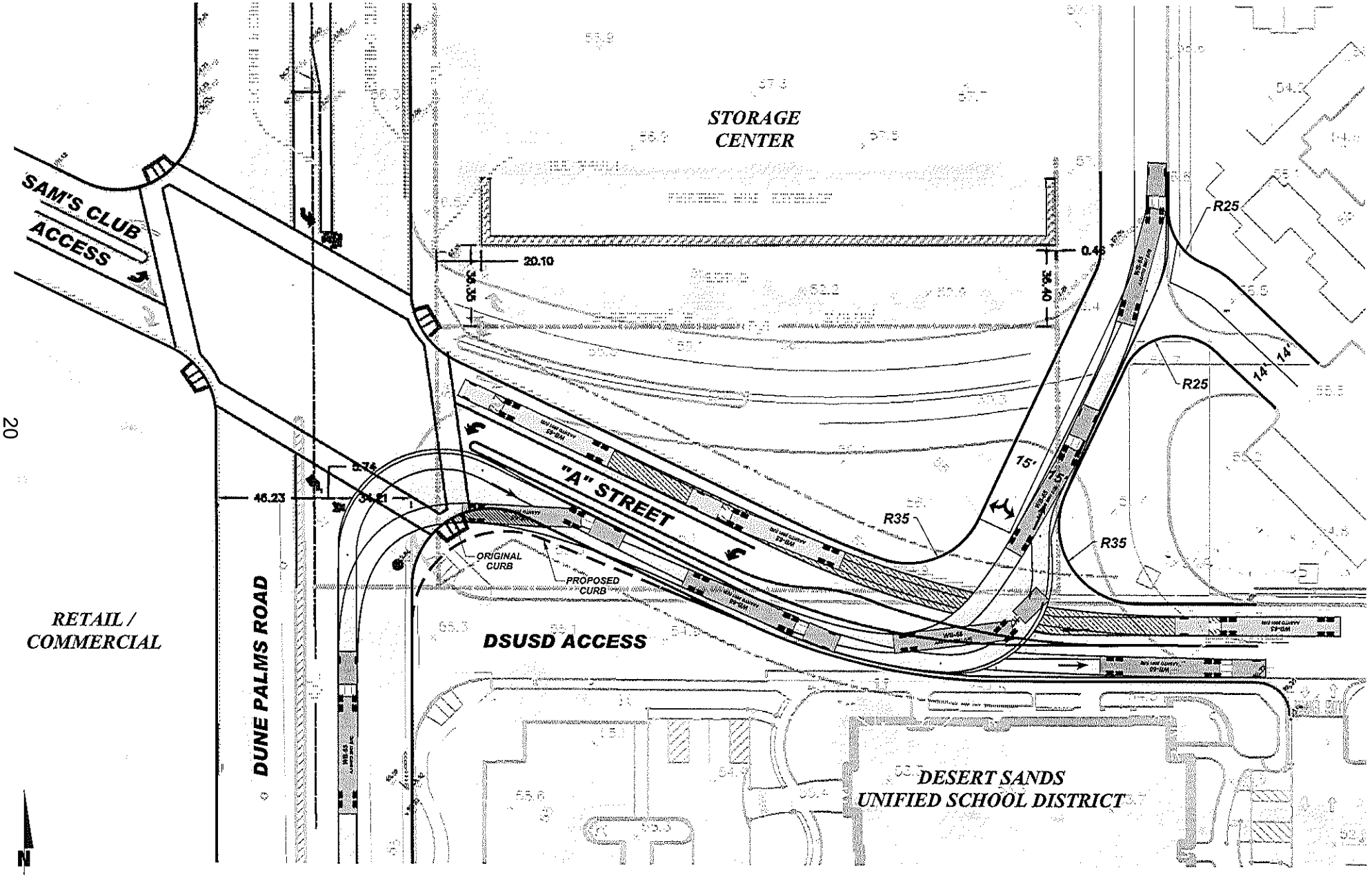
As previously shown on Exhibit 1-B, project is proposing two right-in/ right out access points along Highway 111, a shared access with Komar/Costco (Depot Drive) to the east of the project, and one full access point along Dune Palms Road. The project is proposing to construct "A" Street to intersect Dune Palms Road at a signalized intersection directly across from the existing Sam's Club access. The existing Desert Sands Unified School District (DSUSD) access to Dune Palms Road will be eliminated and some DSUSD functions will have access provided via "A" Street. Exhibit 2-A illustrates the proposed access alignment along Dune Palms Road.

D. Phasing and Timing

The proposed project is anticipated to be constructed in two phases. Phase 1 is proposed to be constructed in 2011 and Phase 2 is anticipated to be constructed in 2016.

EXHIBIT 2-A

CONCEPTUAL STRIPING PLAN



3.0 AREA CONDITIONS

This section of the report discusses existing area conditions at study area intersections and roadway segments, which include existing traffic volumes and lane configurations. Analysis methodologies pursuant to the City of La Quinta Engineering Bulletin #06-13, and the results of the existing conditions intersection and road segments analyses are discussed in this section.

A. Study Area

1. Area of Significant Traffic Impact

Pursuant to discussions with City of La Quinta staff and professional judgment, the study area includes the following intersections:

Washington Street (NS) at:

- Miles Avenue (EW)
- Highway 111 (EW)
- Avenue 48 (EW)

Adams Street (NS) at:

- Highway 111 (EW)

Dune Palms Road (NS) at:

- Westward Ho Road (EW)
- Highway 111 (EW)
- "A" Street (EW) – Future Intersection
- Avenue 48 (EW)

Project Access #1 (NS) at:

- Highway 111 (EW) – Future Intersection

Project Access #2 (NS) at:

- Highway 111 (EW) – Future Intersection

Depot Drive (NS) at:

- Highway 111 (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)
- Avenue 48

Madison Street (NS) at:

- Highway 111 (EW)

Per City of La Quinta Engineering Bulletin #06-13, a sensitivity analysis with an increase of 1 standard deviation trip increase is required at all site access points and adjacent arterial intersections. Based on this criterion, the following intersections are analyzed:

Dune Palms Road (NS) at:

- Highway 111 (EW)
- "A" Street (EW) – Future Intersection
- Avenue 48 (EW)

Project Access #1 (NS) at:

- Highway 111 (EW) – Future Intersection

Project Access #2 (NS) at:

- Highway 111 (EW) – Future Intersection

"A" Street (NS) at:

- School District Driveway (EW) – Future Intersection

Depot Drive (NS) at:

- Highway 111 (EW)

The following roadway segments will be analyzed pursuant to discussions with City of La Quinta Staff:

Washington Street (NS) between:

- Miles Avenue and Highway 111
- Highway 111and Avenue 48

Dune Palms Road (NS) between:

- Westward Ho and Highway 111
- Highway 111 and Avenue 48

Jefferson Street (NS) between:

- Highway 111 and Avenue 48

Highway 111 (EW) between:

- Washington Street and Adams Street
- Adams Street and Dune Palms Road
- Dune Palms Road and Jefferson Street
- Jefferson Street and Madison Street

Highway 111 (EW) between:

- Adams Street and Dune Palms Road
- Dune Palms Road and Jefferson Street

The study intersections and road segments have been evaluated based on professional engineering judgment regarding the most likely geographic area to be impacted by the project's traffic.

B. Study Area Land Use

1. Existing Land Uses

North – Vacant

South – Desert Sands Unified School District

East – Retail/ Commercial (Komar/Costco)

West – Retail/ Commercial

2. Approved Future Development

Area wide growth calculations and traffic from cumulative projects have been added to existing volumes in the vicinity of the site for future traffic conditions. Cumulative project information has been provided by City of La Quinta staff. City of La Quinta staff also contacted the neighboring jurisdictions (Indio and Indian Wells) to solicit cumulative project information to be included in the traffic analysis.

C. Area Roadway System

Exhibit 3-A identifies the existing roadway conditions for study area roadways. The number of through traffic lanes for existing roadways and the existing intersection controls are identified.

The City of La Quinta General Plan Circulation Element is depicted on Exhibit 3-B. Exhibit 3-C illustrates the City of La Quinta General Plan roadway cross-sections.

D. Traffic Volumes and Conditions

Urban Crossroads, Inc. commissioned traffic counts at the study area intersections and road segments in July 2008. However, some road segment daily counts utilized in this study (conducted during January 2008) were derived from CVAG. The City of La Quinta experiences peak hour traffic at atypical times during the day. Hence, measured peak hour traffic levels were conducted during the AM peak hours between 6:30 to 8:30 AM and the PM peak hours between 2:30 to 5:30 PM. Traffic count worksheets are included in Appendix "A".

The Coachella Valley region experience significant seasonal fluctuations in population. During the peak winter and spring seasons, the warm regional climate attracts tourists to the area subsequently increasing traffic volumes on the roadway system. Conversely, a significant reduction in traffic volumes occurs during off-peak summer months. Therefore,

EXHIBIT 3-A

EXISTING NUMBER OF THROUGH LANES INTERSECTION CONTROLS

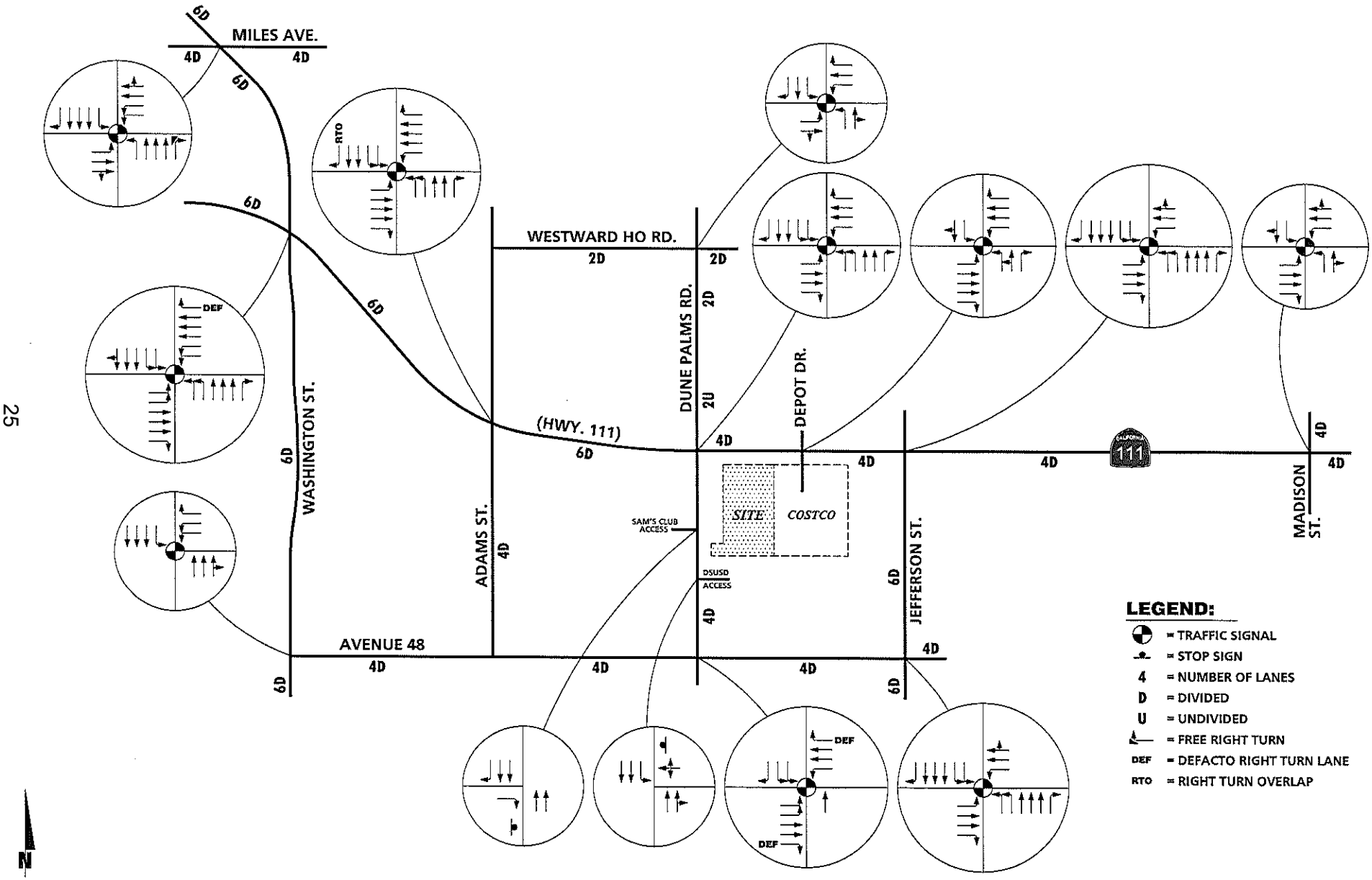
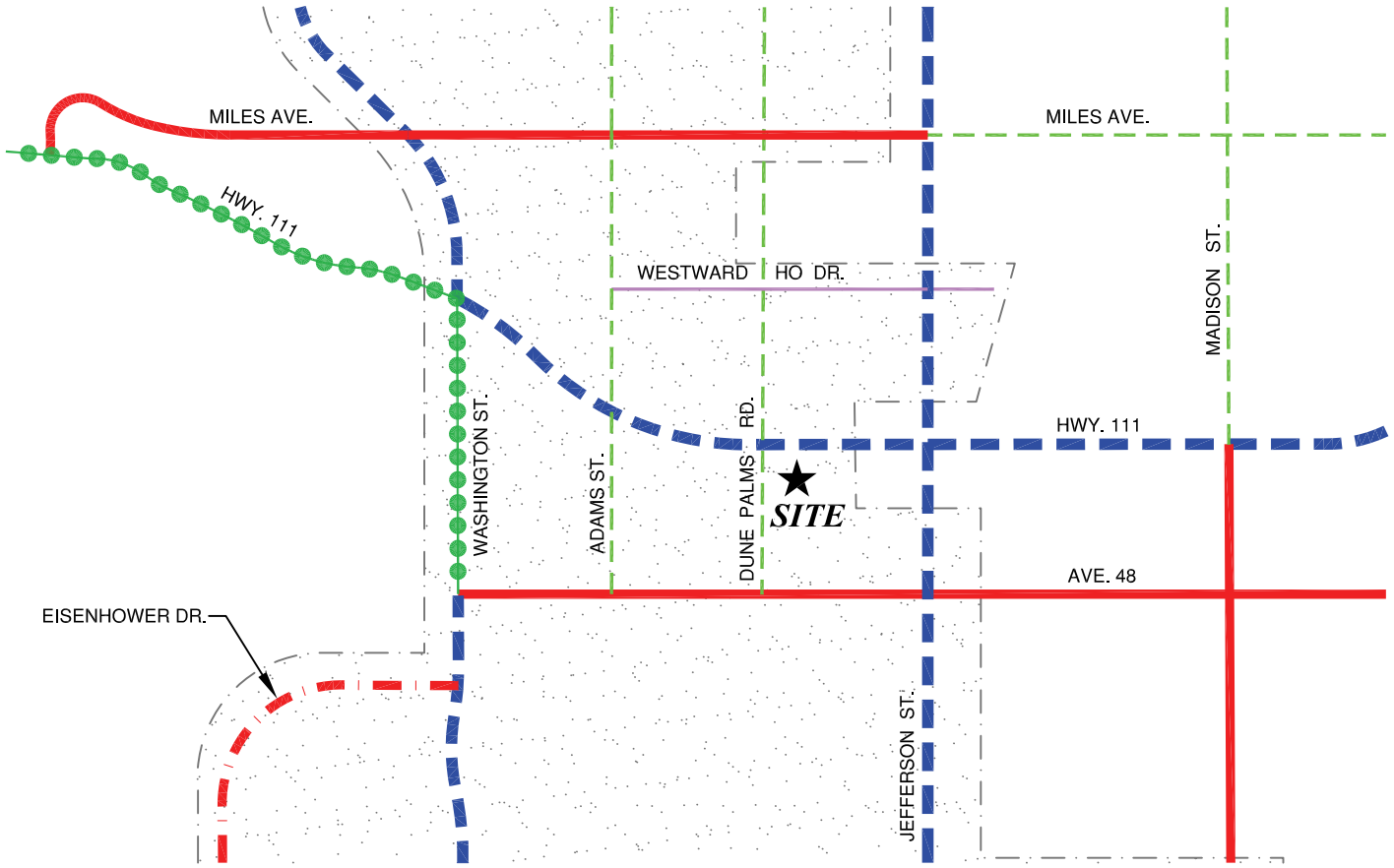


EXHIBIT 3-B

CITY OF LA QUINTA
GENERAL PLAN CIRCULATION ELEMENT



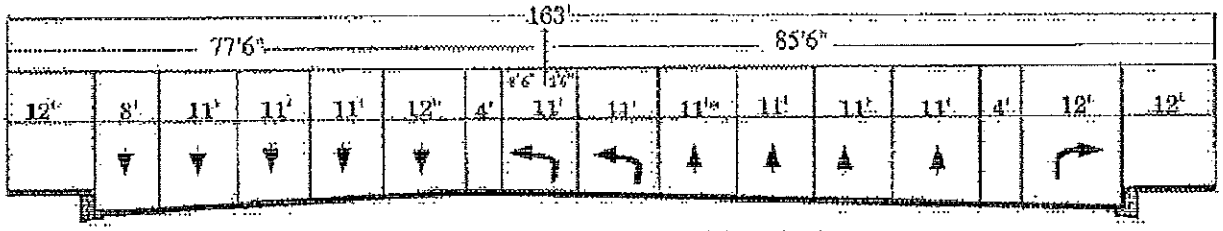
LEGEND:

- = AUGMENTED MAJOR (8D)
- = MAJOR ROADWAY (6D)
- = PRIMARY ROADWAY - A (4D)
- = PRIMARY ROADWAY - B (4D)
- = SECONDARY ROADWAY (4U)
- = COLLECTOR ROADWAY (2U)
- = LA QUINTA GENERAL PLAN BOUNDARY

N

CITY OF LA QUINTA
GENERAL PLAN ROADWAY CROSS-SECTIONS

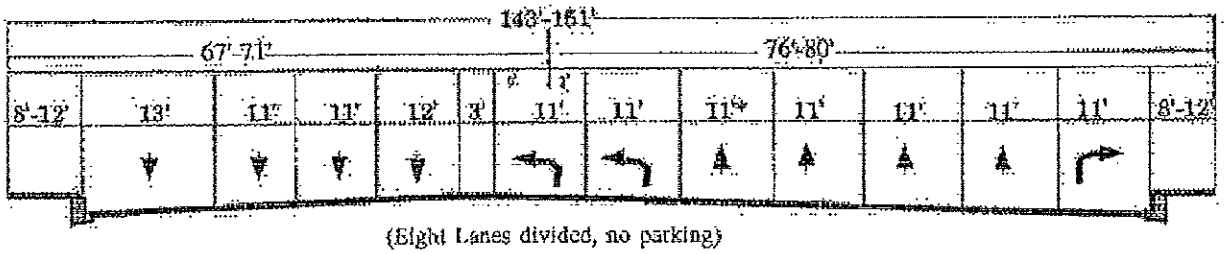
Augmented Major at Dual Left Intersections - State Highway



(Eight Lanes divided, w/breakdown lane)

*Through lane adjacent to turn lane is reduced 1 foot, but returns to standard width on far side of intersection adjacent to median nose.

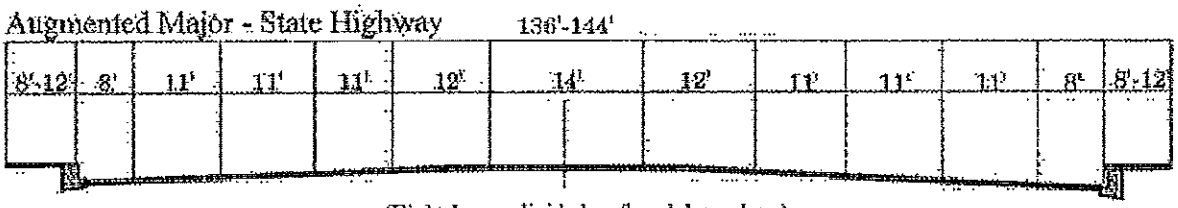
Augmented Major at Dual Left Intersections - City Street



(Eight Lanes divided, no parking)

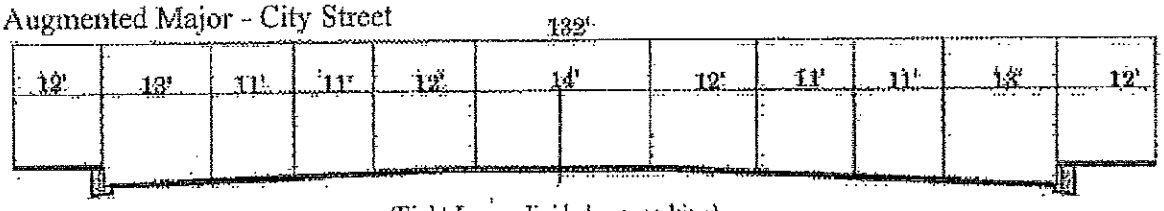
*Through lane adjacent to turn lane is reduced 1 foot, but returns to standard width on far side of intersection adjacent to median nose.

Augmented Major - State Highway



(Eight Lanes divided, w/breakdown lane)

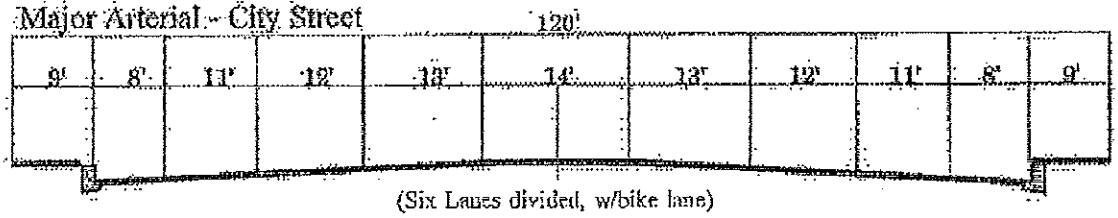
Augmented Major - City Street



(Eight Lanes divided, no parking)

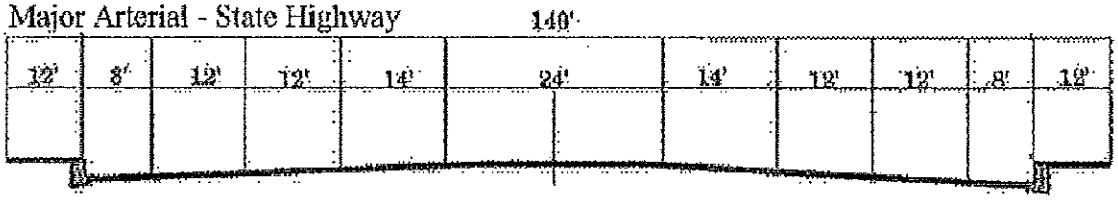
CITY OF LA QUINTA
GENERAL PLAN ROADWAY CROSS-SECTIONS

Major Arterial - City Street



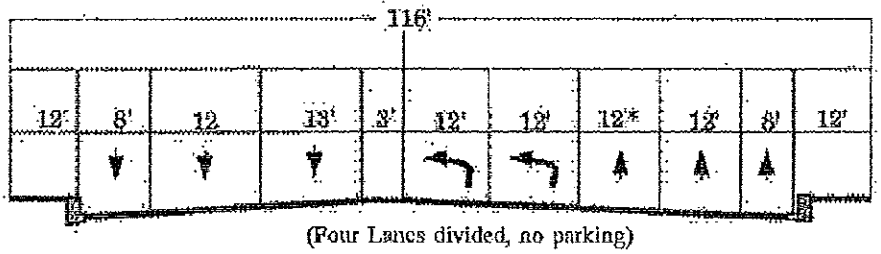
(Six Lanes divided, w/bike lane)

Major Arterial - State Highway



(Six Lanes divided, w/ bike lane)

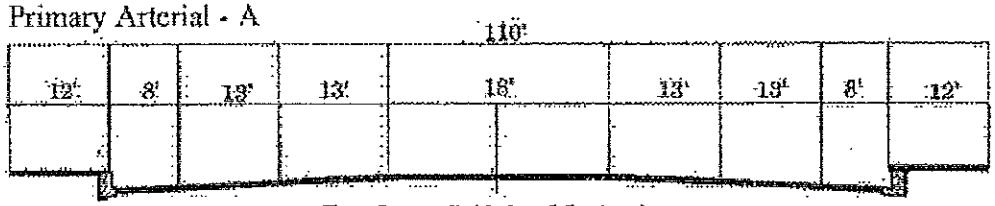
Primary Arterial A at Dual Left Intersections - City Street



(Four Lanes divided, no parking)

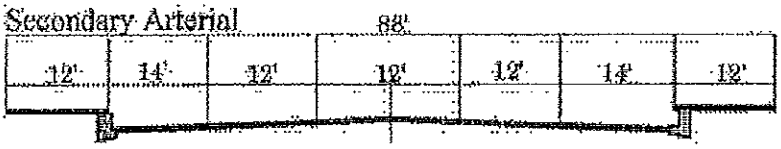
*Through lane adjacent to turn lane is reduced 1 foot, but returns to standard width on far side of intersection adjacent to median nose.

Primary Arterial - A



(Four Lanes divided, w/bike lane)

Secondary Arterial



(Four Lanes undivided, no parking)

a seasonal traffic volume adjustment for traffic counts conducted during the off-peak season is required to reflect peak conditions.

In accordance with the City of La Quinta's traffic study guidelines (Engineering Bulletin #06-13), traffic counts should consider the seasonal population variations within the City of La Quinta. Traffic counts conducted from November 1 to April 15 require no seasonal adjustments. In contrast, traffic counts conducted during the period from May 16 to September 30 should be increased by 40% from measured levels. Since the traffic counts conducted for the study area intersections and road segments were conducted during the off-peak season, a 40% seasonal variation factor has been applied to existing traffic counts. Counts conducted during January 2008 are not subject to the 40% seasonal factor.

Since the timing of the analysis coincides with the off-peak summer school session, traffic counts conducted at the intersection of School District Driveway/ Dune Palms Road do not accurately represent typical traffic volumes at this location. The reduction of regular bus routes and other activities at the Desert Sands Unified School District Office resulted in a decrease in traffic volumes, which is considerably lower compared to traffic volumes during the peak school session.

To account for school traffic at the intersection of School District Driveway/ Dune Palms Road, Urban Crossroads, Inc. contacted the Desert Sands Unified School District Transportation Staff to estimate the site traffic accessing the Desert Sands Unified School District Driveway during the fall-spring school session. Based on discussions with School District staff, the estimated number of vehicular trips entering and exiting the School District Driveway is shown in Table 3-1. Existing traffic volumes entering/exiting the Desert Sands Unified School District office at the intersection of School District Driveway/Dune Palms Road have been replaced with the estimated inbound/ outbound trip generation. In addition, the northbound and southbound through volumes are increased by 40% to account for the seasonal peak conditions.

Based on discussions with the Desert Sands Unified School District, it is estimated that approximately 60% of the outbound traffic assumes a northerly direction towards Highway 111 and 40% of the site traffic travels southbound towards Avenue 48. A reciprocal

TABLE 3-1

SCHOOL DISTRICT TRIP GENERATION*

DESERT SANDS SCHOOL DISTRICT PEAK HOUR TRIP GENERATION**							
	PEAK HOUR						
	AM (6:30-7:30) [4]			PM (4:30-5:30) [5]			
VEHICLE TYPE	IN	OUT	TOTAL	IN	OUT	TOTAL	DAILY
School Bus (Regular Route) [1]	6	68	74 [6]	68	6	74 [6]	268
Passenger Car Equivalence ***	*12*	*136*	*148*	*136*	*12*	*148*	*536*
School Bus (Field Trip) [1]	0	20	20 [7]	20	0	20 [7]	40
Passenger Car Equivalence ***	*0*	*40*	*40*	*40*	*0*	*40*	*80*
Fleet Trucks [2]	48	48	96 [8]	48	48	96 [8]	1150
Vendor Trucks	10	10	20	10	10	20	40
Employees	115	12	127 [9]	12	115	127 [9]	484
Registration/Reception Center [3]	70	7	77	7	70	77	770
TOTAL VEHICLES	**249**	**165**	**414**	**165**	**249**	**414**	**2752**
TOTAL (P.C.E)	**255**	**253**	**508**	**253**	**255**	**508**	**3060**

* Source: *Desert Sands Unified School District Transportaion Department*

** The peak hour represents the highest amount of traffic entering and exiting the site in a typical hour during the AM and PM periods. It is assumed that the remainder of the total site traffic will occur outside the AM/PM peak hour time frame.

*** Passenger Car Equivalence (P.C.E) denotes the number of typical passenger cars to equal the length of an oversived vehicle. For the purpose of this analysis, the characteristics of one school bus is equal to that of two passenger cars.

---

[1] Per discussions with School district staff, approximately 134 one bus way trips occur during the day (regular route). In addition, an average of 20 one way field trip buses occur during the typical school day. The total daily bus trips are divided evenly during the AM and PM peak hours to accurately depict student AM pick-up and PM drop-off.

[2] Per discussions with School District Staff, there are currently 115 fleet trucks averaging 5 trips per day per truck.

[3] Based on discussions with School District staff, a 26,000 square foot Registration/Reception Center will be constructed and generating traffic by Spetember 2008. Since 70 parking stalls are anticipated to accommodate the proposed development, a conservative assumption of 70 inbound trips during the AM peak hour and 70 outbound PM peak hour trips are assumed.

[4] Based on discussions with School Distrcit staff, the majority of the site traffic (buses and fleet trucks) occur during AM Peak hour period of 6:30-7:30.

[5] It is assumed that the PM peak hour at this site is between 4:30-5:30 due to the majority of the inbound bus traffic and the outbound employee traffic occuring during this period.

[6] Based on discussions with School District staff, a total of 74 bus trips are anticpated to occur during the AM peak hour. Of the 74 buses, approximately 68 outbound buses leave the School District office during AM peak hour. A reciprocal assumption for the PM peak hour of 68 inbound buses is anticipated to return to the School District office.

[7] It assumed that field trip buses will leave during the AM peak hour and return during the PM peak hour.

[8] Fleet truck traffic is assumed to constantly enter/exit the site throughout the day.Therefore, fleet truck traffic is assumed to be the same through out the 12 hour operational period of the School District.

[9] Based on discussions with School District staff, the majority of employees work between 8 AM-5 PM. A reciprocal assumption for AM/ PM peak hours are assumed for inbound/ outbound traffic.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]3-1

distribution is assumed for inbound vehicles with approximately 60% of the vehicles from Highway 111 and 40% of the vehicles from Avenue 48 enter the site.

Existing average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-D. Exhibits 3-E and 3-F illustrates the existing AM and PM peak hour intersection traffic volumes with the seasonal variation traffic volume adjustments and the added traffic at the School District Driveway/ Dune Palms Road.

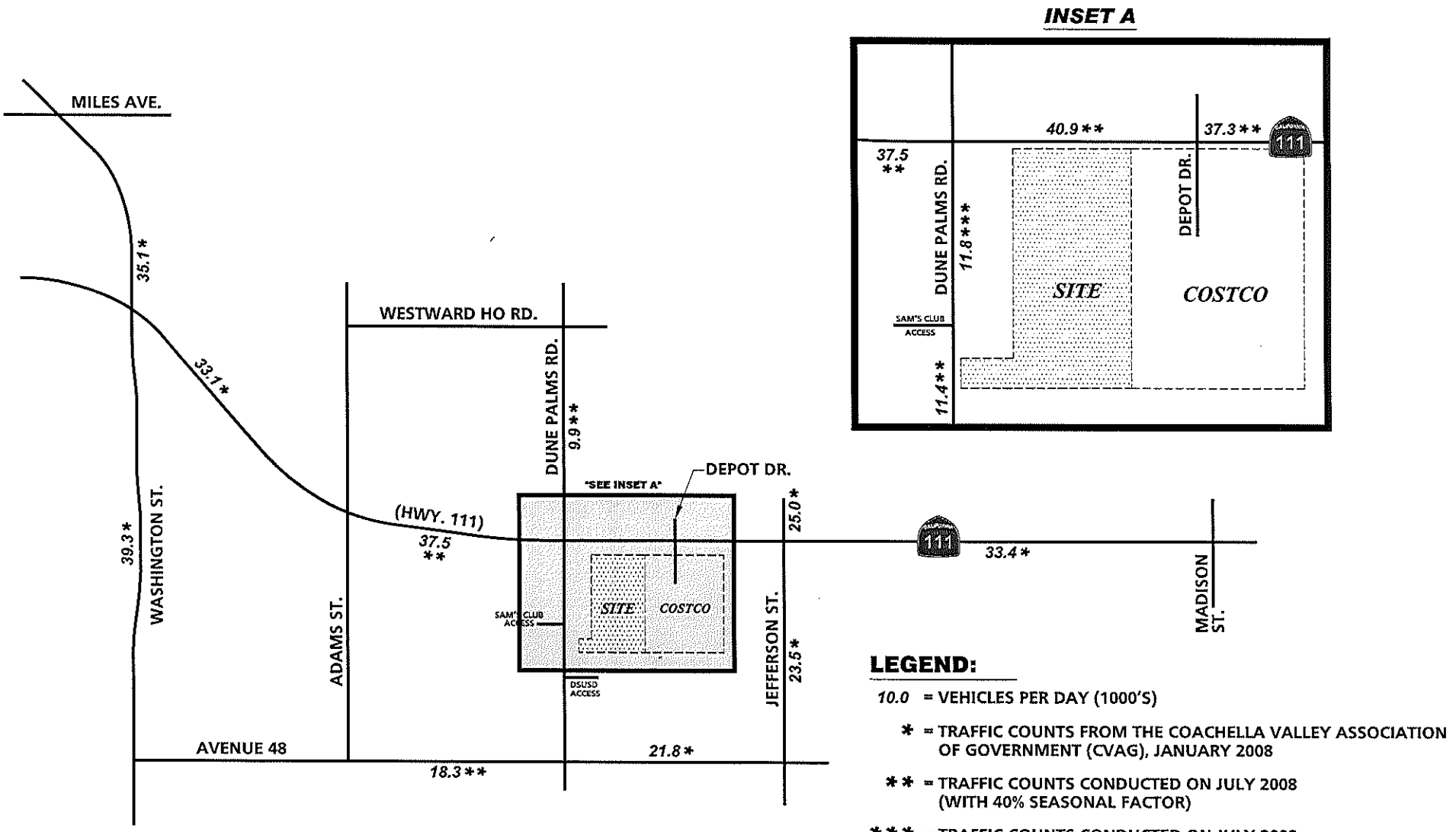
E. Verification of Traffic Counts

To validate the traffic counts utilized in the traffic study, the average daily traffic volumes were compared to other traffic count sources such as empirical counts conducted for Urban Crossroads, Inc, CVAG counts, and CALTRANS historical traffic counts. In some instances, the average daily volumes from previous years were examined for consistency with the applicable growth rates provided by the City of La Quinta. The Coachella Valley Association of Governments (CVAG) annually collects 24 hour peak season counts at various locations in the region. The 2008 traffic data indicates a general decline in traffic volumes along Highway 111 since 2006. However, a 1.0% per year ambient growth is a reasonable growth estimate since historic annual counts before 2006 indicate fluctuations in traffic volumes.

At the time of the collection of traffic counts, roadway improvements along Highway 111, east of Dune Palms Road caused partial road closures and longer than usual delays. Urban Crossroads, Inc. verified the 2008 traffic counts by applying the 40% seasonal factor and comparing the adjusted traffic volumes with traffic counts at two intersections conducted during the peak 2007 winter season. The 2008 adjusted traffic counts were similar to the raw 2007 peak season traffic counts. The results of the comparative analysis between the 2008 adjusted counts and the raw 2007 peak season counts were reviewed with City of La Quinta staff, and determined that the 40% seasonal factor adequately encompass any potential reductions in traffic volumes due to the roadway construction along Highway 111.

EXHIBIT 3-D

EXISTING AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

* = TRAFFIC COUNTS FROM THE COACHELLA VALLEY ASSOCIATION OF GOVERNMENT (CVAG), JANUARY 2008

** = TRAFFIC COUNTS CONDUCTED ON JULY 2008 (WITH 40% SEASONAL FACTOR)

*** = TRAFFIC COUNTS CONDUCTED ON JULY 2008 (WITH 40% SEASONAL FACTOR AND SCHOOL DISTRICT TRIP GENERATION)

EXHIBIT 3-E

EXISTING AM PEAK HOUR INTERSECTION VOLUMES (WITH SEASONAL ADJUSTMENT)

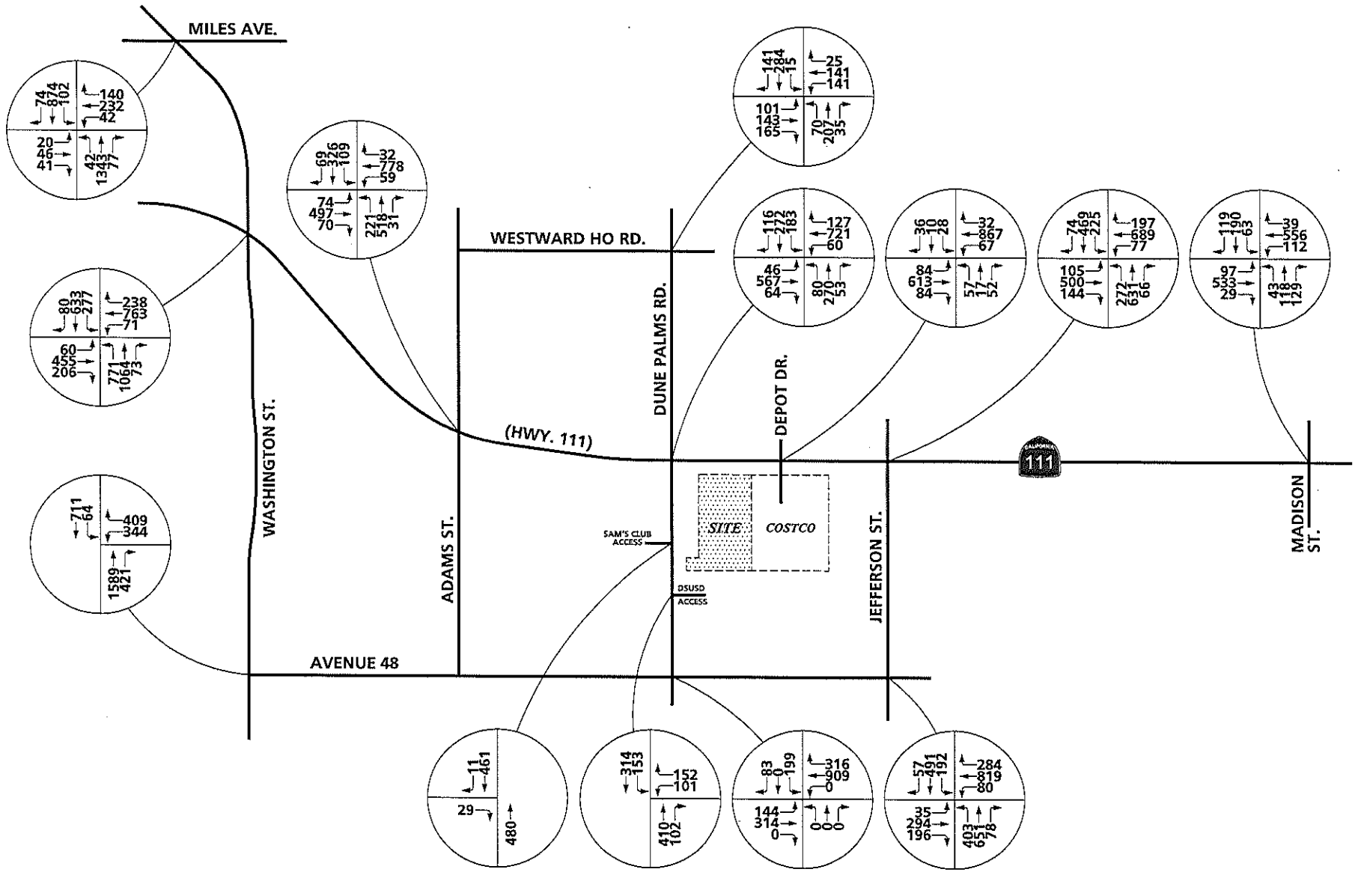
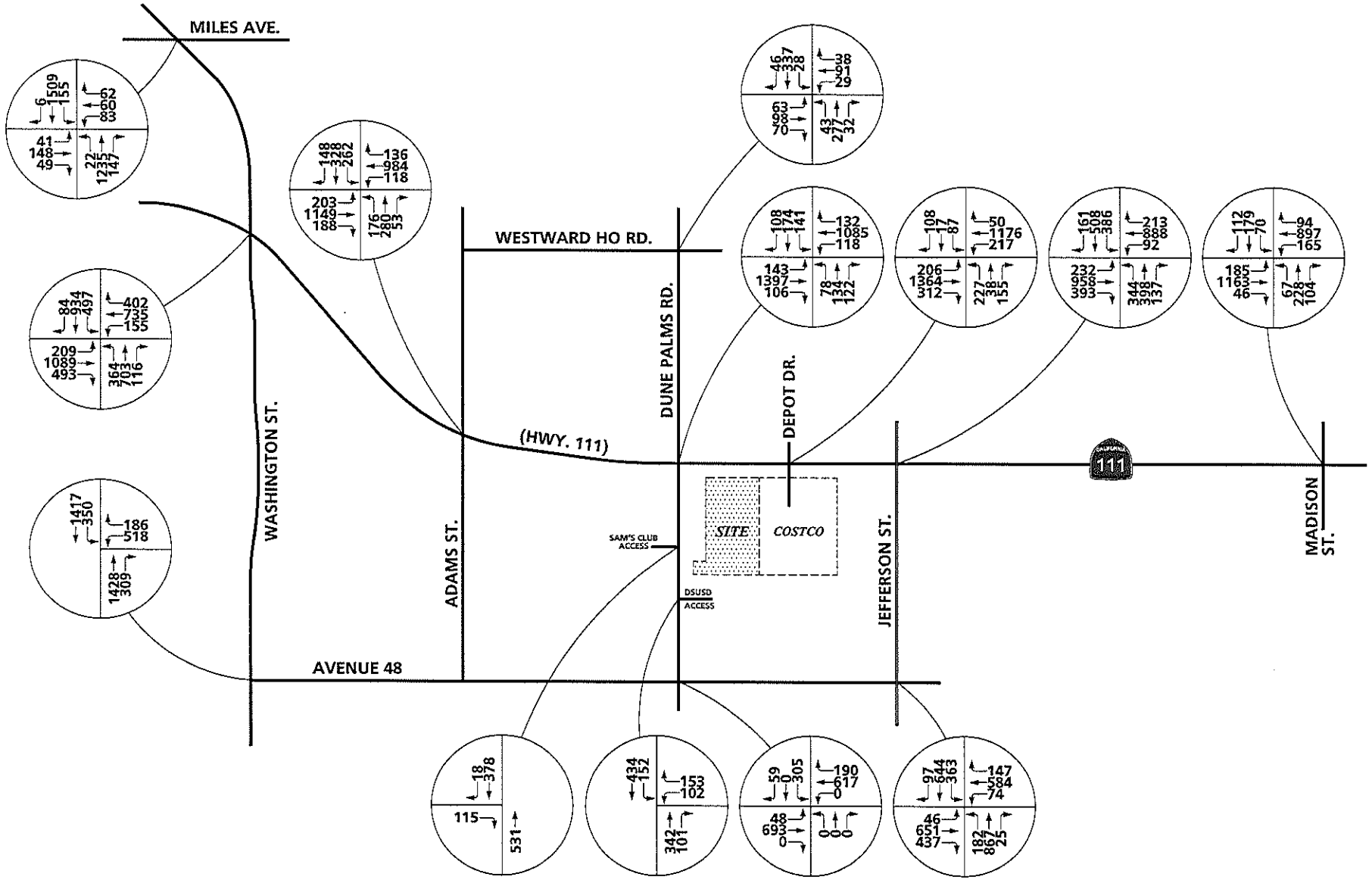


EXHIBIT 3-F

EXISTING PM PEAK HOUR INTERSECTION VOLUMES (WITH SEASONAL ADJUSTMENT)



URBAN CROSSROADS

F. Level of Service Definitions

Per City of La Quinta staff direction, Intersection Capacity Utilization (ICU) methodology is utilized to assess the operation of a signalized intersection. To calculate ICU, the volume of traffic using the intersection is compared with the capacity of the intersection. ICU is usually expressed as a percent, which represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The definitions of level of service 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.

G. Analysis Methodology

The City of La Quinta requires level of service calculations at the study area intersections. The analysis methodology at signalized intersections utilizes the Intersection Capacity Utilization (ICU) methodology, which calculates the intersection's level of service based on the sum of the critical movement volume to the intersection's saturation flow rate. The primary output from an ICU analysis is the intersection's volume and its relation to the capacity.

The following thresholds are used in assigning a letter value to the resulting volume to capacity ratio:

LOS	CRITICAL VOLUME TO CAPACITY RATIO
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

For unsignalized intersections, the 2000 Highway Capacity Manual (HCM) (Transportation Research Board Special Report 209) is utilized to calculate the level of service. The HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service 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. The levels of service determined in this study are determined using the HCM methodology. The levels of service are defined for the various analysis methodologies as follows:

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)
	UNSIGNALIZED
A	0 to 10.00
B	10.01 to 15.00
C	15.01 to 25.00
D	25.01 to 35.00
E	35.01 to 50.00
F	50.01 and up

The traffic progression tool, SYNCHRO, has been used to assess the potential impacts/needs of the existing School District/ Dune Palms Road intersection and the proposed realignment of the Sam's Club Driveway/ Dune Palms Road with the School District Driveway – "A" Street / Dune Palms Road intersections. Developed by Trafficware, SYNCHRO has the capability of modeling and optimizing traffic signal timings. Specific features include analyzing the capacities of coordinated intersections, determining queue lengths, and optimizing splits, cycle lengths, and offsets.

Additional information regarding the ICU and the HCM methodologies are provided in Appendix "B."

H. City of La Quinta Required Intersection Level of Service

Required Level of Service (LOS): The definition of an intersection deficiency has been obtained from the City of La Quinta Engineering Bulletin #06-13. The City of La Quinta General Plan states that peak hour intersection operations of LOS "D" or better are

generally acceptable. Therefore, any intersection operating at LOS "E" or "F", and/ or a volume to capacity ratio greater than 0.90 will be considered deficient.

I. Existing Intersection Level of Service

Existing peak hour traffic operations have been evaluated for study area intersections. Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts conducted for Urban Crossroads, Inc with the aforementioned adjustments to reflect seasonal population variations and school session traffic. The results of the existing conditions analysis are summarized in Table 3-2, along with the existing intersection geometrics and traffic control devices at each analysis location.

For existing conditions, the following study area intersections are currently operating at unacceptable levels of service, with existing roadway design:

Dune Palms Road (NS) at:

- School District Driveway (EW)

Existing Conditions operation analysis worksheets for existing conditions are provided in Appendix "C".

Based on the results of the peak hour signal warrant analysis, a traffic signal warrant appears to currently be warranted at the Dune Palms Road/ School District Driveway intersection (see Appendix "D").

J. City of La Quinta Required Roadway Segment Level of Service

The City of La Quinta General Plan states that road segment operations of LOS "D" or better are generally acceptable. Therefore, any road segment operating at LOS "E" or "F" will be considered deficient. In addition, the maximum allowable volume to capacity ratio is 0.90. Therefore, any roadway segments with a volume to capacity ratio greater than 0.90 is considered unacceptable.

TABLE 3-2

INTERSECTION ANALYSIS FOR EXISTING CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												ICU/DELAY[2] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Washington Street (NS) at:																	
• Miles Avenue (EW)	TS	1	3	1>>	1	3	1	1	2	0	2	2	0	0.56	0.45	A	A
• Highway 111 (EW)	TS	2	3	1	2	3	0	2	3	1	2	3	1	0.66	0.72	B	C
• Avenue 48 (EW)	TS	0	3	0	1	3	0	0	0	0	2	0	1	0.76	0.80	C	D
Adams Street (NS)																	
• Highway 111 (EW)	TS	2	2	1	2	2	1>	1	3	1	1	3	1	0.43	0.52	A	A
Dune Palms Road (NS) at:																	
• Westward Ho Road (EW)	TS	1	1	0	1	1	1	1	1	0	1	1	1	0.87	0.41	D	A
• Highway 111 (EW)	TS	2	2	1	2	2	1	1	2	1	1	2	1	0.51	0.66	A	B
• Sam's Club Driveway (EW)	CSS	0	2	0	1	2	1	0	0	1	0	0	0	10.3	10.2	B	B
• School District Driveway - "A" Street (EW)	CSS	0	2	0	1	2	0	0	0	0	0	1l	0	93.0	--[4]	F	F
• Avenue 48 (EW)	TS	0	1l	0	2	0	1	2	2	1	1	2	1	0.50	0.34	A	A
Depot Drive (NS) at:																	
• Highway 111 (EW)	TS	1.5	0.5	1	1	1	0	1	3	1	1	2	1	0.43	0.67	A	B
Jefferson Street (NS) at:																	
• Highway 111 (EW)	TS	2	3	1	2	3	1	1	2	1	1	2	0	0.63	0.72	B	C
• Avenue 48 (EW)	TS	2	3	1	2	3	1	1	2	1	1	2	0	0.69	0.66	B	B
Madison Street (NS) at:																	
• Highway 111 (EW)	TS	1	1	0	1	1	0	1	2	1	1	2	0	0.51	0.75	A	C

[1] When a right turn is designated, the lane can either be striped or unstriped. 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; 1l = Shared left/thru/right lane; > = Right Turn Overlap Phase; >> Free Right Turn Lane

[2] Per City of La Quinta Engineering Bulletin, the ICU method shall be used to determine signalized intersection level of service. For unsignalized intersections, the intersection delay has been calculated using the HCM methodology.
Delay and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008) and SYNCHRO 7 (2007).
Intersection level of service shown is based on the V/C for intersections with traffic signals. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls] 3-2

Based on the roadway cross-section and classification, the corresponding capacity is used to determine the roadway segment daily LOS. For the purpose of this report, the daily traffic volumes of the roadway segments in the study area were derived from the City of LA Quinta General Plan Circulation Element (March 2002) roadway analysis. Based on the results of the roadway segment analysis in the General Plan Circulation Element, roadway LOS "E" capacities were determined through comparison of the General Plan Buildout ADT volumes and the Buildout V/C ratio to the roadway classification. The roadway capacity thresholds for City of La Quinta roadways are as follows:

TABLE 3-3

CITY OF LA QUINTA ROADWAY SEGMENT CAPACITIES

ROADWAY CLASSIFICATION	ROADWAY LANE CONFIGURATION	LOS"E" CAPACITY VEHICLES PER DAY
Augmented Major	8-Lane Divided	76,000
Major Roadway	6-Lane Divided	57,000
Primary Roadway - A	4-Lane Divided	38,000
Primary Roadway - B	4-Lane Divided	28,000
Secondary Roadway	4-Lane Undivided	14,000
Collector Roadway	2-Lane Undivided	9,000

Source: *City of La Quinta General Plan Circulation Element, March 2002*

K. Existing Roadway Segments Level of Service

The results of the existing conditions roadway segment analysis are summarized in Table 3-4, along with the existing number of lanes, ADT and volume to capacity ratio. For existing conditions, the following study area roadway segments are currently operating at unacceptable levels of service, with existing roadway design:

Highway 111 (EW) between:

- Dune Palms Road and Depot Drive
- Depot Drive and Jefferson Street

TABLE 3-4

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING TRAFFIC CONDITIONS

ROADWAY SEGMENT	GENERAL PLAN ROADWAY CLASSIFICATION [1]	LOS E CAPACITY [2]	EXISTING NUMBER OF LANES	EXISTING ADT [3]	VOLUME / CAPACITY	LOS [4]
Washington Street (NS) between:						
* Miles Avenue and Highway 111	Major (6D)	57,000	6	35,100	0.62	B
* Highway 111 and Avenue 48	Augmented Arterial (8D)	57,000 [5]	6	39,300	0.69	B
Dune Palms Road (NS) between:						
* Westward Ho and Highway 111	Secondary Roadway (4U)	14,000 [5]	2	9,900	0.71	C
* Highway 111 and School District Driveway - "A" Street	Secondary Roadway (4U)	28,000	4	11,800	0.42	A
* School District Driveway - "A" Street and Avenue 48	Secondary Roadway (4U)	28,000	4	11,400	0.41	A
Jefferson Street (NS) between:						
* North of Highway 111	Major (6D)	57,000	6	24,942	0.44	A
* Highway 111 and Avenue 48	Major (6D)	57,000	6	23,500	0.41	A
Highway 111 (EW) between:						
* Washington Street and Adams Street	Major (6D)	57,000	6	33,100	0.58	A
* Adams Street and Dune Palms Road	Major (6D)	57,000	6	37,500	0.66	B
* Dune Palms Road and Depot Drive	Major (6D)	38,000 [5]	4	40,900	1.08	F
* Depot Drive and Jefferson Street	Major (6D)	38,000 [5]	4	37,300	0.98	E
* Jefferson Street and Madison Street	Major (6D)	38,000 [5]	4	33,400	0.88	D
Avenue 48 (EW) between:						
* Adams Street and Dune Palms Road	Primary Roadway - A (4D)	38,000	4	18,300	0.48	A
* Dune Palms Road and Jefferson Street	Primary Roadway - A (4D)	38,000	4	21,800	0.57	A

[1] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[2] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, volume to capacity ratios greater than 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity as applied in the City of La Quinta General Plan Circulation Element (2002).

[3] Average Daily Traffic (ADT) expressed in vehicles per day. Existing ADT values were obtained from empirical data. See Appendix "B".

[4] Level of Service:
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

[5] Some road segments are not built to their ultimate General Plan buildout classification. LOS "E" capacity is based on the current functional roadway classification that closely corresponds City of La Quinta roadway classifications.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 3-4

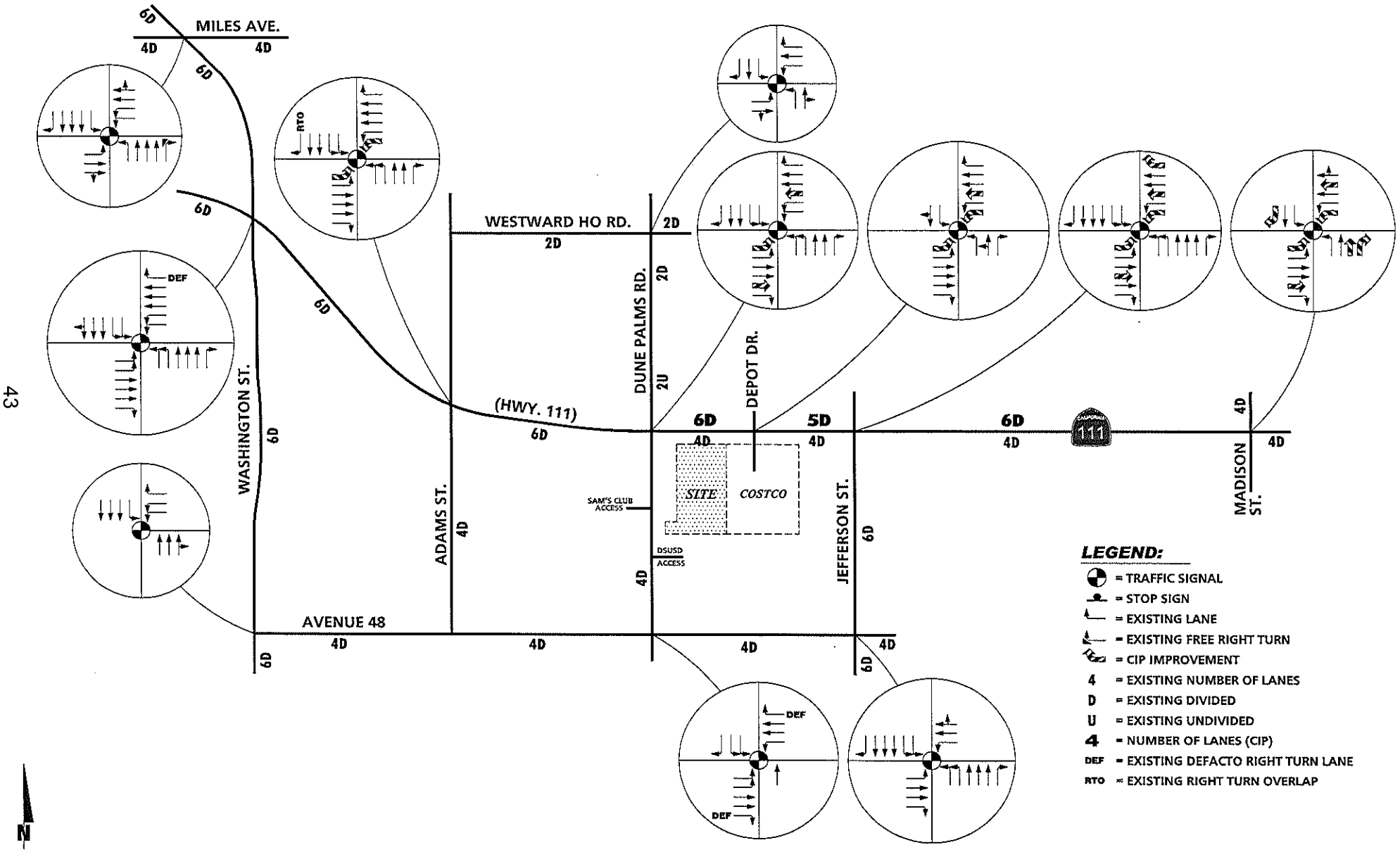
It should be noted at the time of the preparation of this traffic study, roadway improvements along Highway 111 east of Dune Palms Road were in progress. These improvements at Highway 111 included the widening of the roadway from its current 4 lane configuration to a six lane facility, which will improve the existing level of service along Highway 111, east of Dune Palms Road through increasing the capacity of the aforementioned deficient road segments. Exhibit 3-G illustrates the City of La Quinta and City of Indio Capital Improvement Program. Detailed plans of Capital Improvement Program along Highway 111 were provided by City of La Quinta staff and are included in Appendix "E."

L. Transit Service

The study area is currently served by Sun Line Transit Route 70 and Route 111. Route 70 is a north-south transit route serving the general area along Washington Street. Route 111 is an east-west transit route travelling along Highway 111 serving the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta and Indio. Bus stop #552 for Route 111 is located adjacent to the proposed site at the southeast corner of Highway 111 and Depot Drive.

EXHIBIT 3-G

CITY OF LA QUINTA & CITY OF INDIO
CAPITAL IMPROVEMENT PLAN



THIS PAGE LEFT INTENTIONALLY BLANK

4.0 PROJECTED TRAFFIC

A. Site Traffic

1. Trip Generation

Trip generation represents the amount of traffic which is attracted to and produced by a development. The traffic generation for the project is based upon the specific land uses which have been planned for the development. The proposed project will consist of a total of 82,000 square feet of auto dealership uses and 200 apartment units. For 2011 conditions, approximately 27,000 square feet of the proposed auto dealership will be constructed and 200 apartment units. For 2016 conditions, the remainder of the auto dealership land uses will be constructed of approximately 55,000 square feet.

Trip generation rates for this project and other developments are shown in Table 4-1. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE). In accordance with the City of La Quinta's *Engineering Bulletin #06-13,* if the ITE Trip Generation Report provides an equation for calculating trip generation that has a good regression curve fit to the data points (R^2> 0.7), the equation should be utilized in place of the peak hour average rates. In addition, the development's ITE peak hour rate should be utilized as opposed to the peak hour of the adjacent street traffic.

Both daily and peak hour trip generation for the proposed project are shown in Table 4-2. According to the ITE Manual, the R^2 of an Auto Dealership for both the AM/PM peak hours is less than 0.70. Therefore the average rate is utilized to calculate the trip generation. For the apartment component of the project, the R^2 is greater than 0.70. Applying the fitted curve equation to the apartment component yields similar trip generation for the AM peak hour and lower trip generation during the PM peak hour compared to utilizing the average rate. The more conservative average rate has been utilized in calculating the apartment project trip generation.

TABLE 4-1

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	QUANTITY	UNITS[2]	PEAK HOUR TRIP RATES						DAILY
				AM			PM			
				IN	OUT	TOTAL	IN	OUT	TOTAL	
Average Rate										
New Car Sales	841	82	TSF	1.232	0.968	2.2	1.224	1.496	2.72	33.34
Avg. Rate										
Apartments	220	200	DU	0.16	0.3905	0.55	0.409	0.261	0.67	6.72

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 7th Edition, 2003. Rates based on the Average Rate plus 1 standard deviation. The "Peak Hour of the Generator" rates are used based on the City's Engineering Bulletin #06-13.

[2] DU = Dwelling Units
TSF = Thousand Square Feet

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 4-1

TABLE 4-2

TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Phase 1 2011									
New Car Sales	27	TSF	33	26	59	33	40	73	900
Apartments	200	DU	32	78	110	82	52	134	1344
TOTAL			**65**	**104**	**169**	**115**	**92**	**207**	**2,244**
Phase 2 2016									
New Car Sales	82	TSF	101	79	180	100	123	223	2,734
Apartments	200	DU	32	78	110	82	52	134	1,344
TOTAL			**133**	**157**	**290**	**182**	**175**	**357**	**4,078**

[1] DU = Dwelling Units
TSF = Thousand Square Feet

[2] Trip Generation utilized for the Worst-Case Sensitivity Analysis

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 4-2

Based on these assumptions, the proposed phase 1 (2011) is projected to generate a total of approximately 2,244 trip-ends per day with 169 vehicles per hour during the AM peak hour and 207 vehicles per hour during the PM peak hour. For phase 2 (2016) conditions, the proposed project is anticipated to generate a total of approximately 4,078 trip-ends per day with 290 vehicles per hour during the AM peak hour and 357 vehicles per hour during the PM peak hour. The project trip generation is shown in Table 4-2.

Lastly, to account for the variations in the average peak hour rates, the City of La Quinta requires a worst case sensitivity analysis which incorporates one statistical standard deviation for commercial projects (auto dealership). The trip generation for the sensitivity analysis is provided in Appendix "F".

2. Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial and recreational opportunities and the proximity to the regional freeway system. The directional orientation of traffic has been determined by evaluating existing and proposed land uses and the roadway network within the community and existing traffic volumes.

The trip distribution for this study has been based upon near-term conditions, including those highway facilities which are either in place or are planned for the next two years. The trip distribution patterns for the project are depicted on Exhibits 4-A through 4-C. The project trip distribution assumes that U-turns will be made at the intersection of Jefferson Street/ Highway-111 for project traffic exiting Project Access #1 and Project Access #2. This assumption was made because it is highly improbable to assume that the project traffic will execute U-turns at the nearest intersection at Depot Drive/ Highway 111 since vehicles exiting from the project access points would need to maneuver across three lanes of heavily travelled Highway 111 to reach the eastbound left turn pocket at Depot Drive – an unsafe action.

EXHIBIT 4-A

AUTO DEALERSHIP (OUTBOUND) TRIP DISTRIBUTION

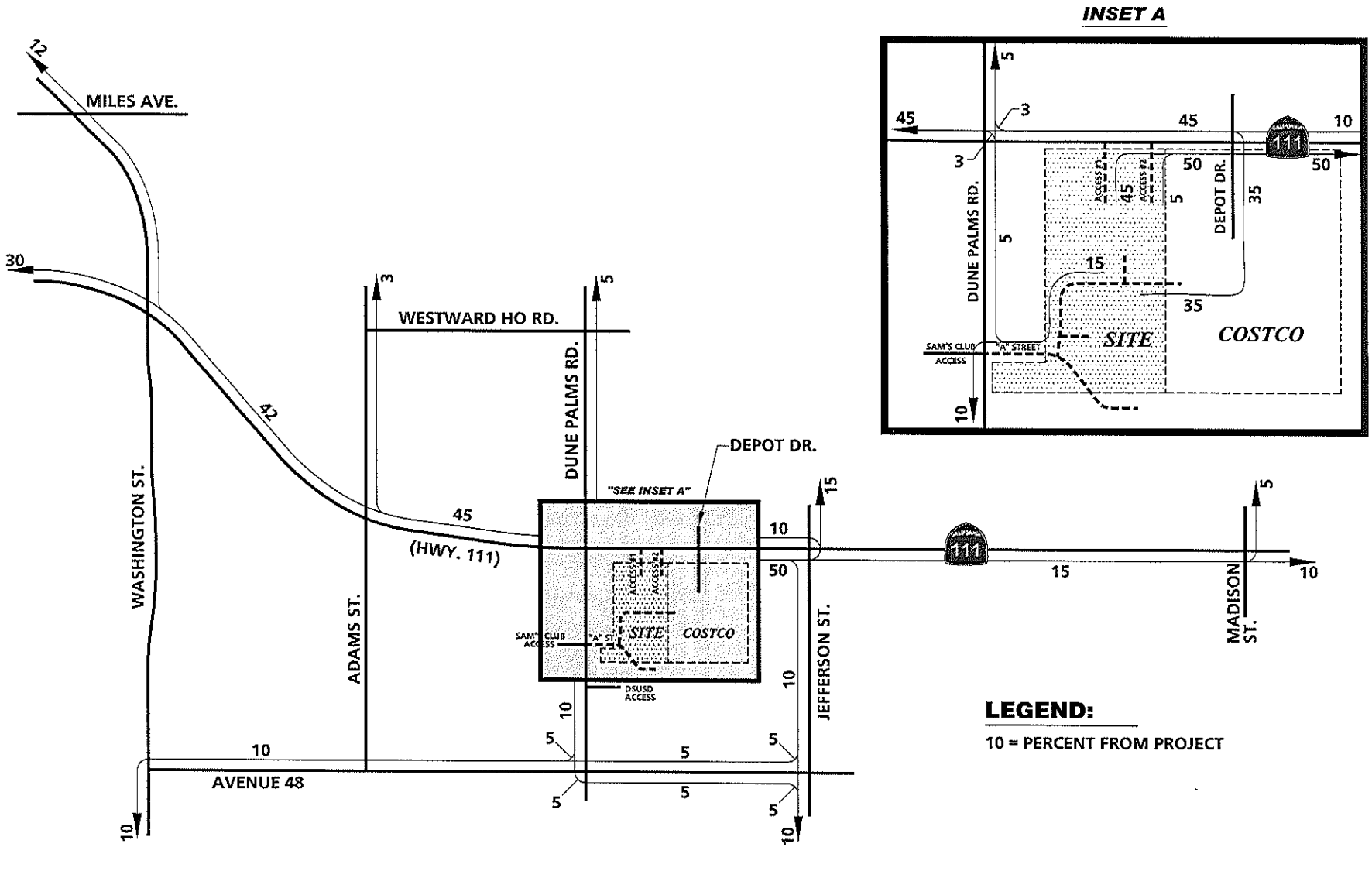


EXHIBIT 4-B

AUTO DEALERSHIP (INBOUND) TRIP DISTRIBUTION

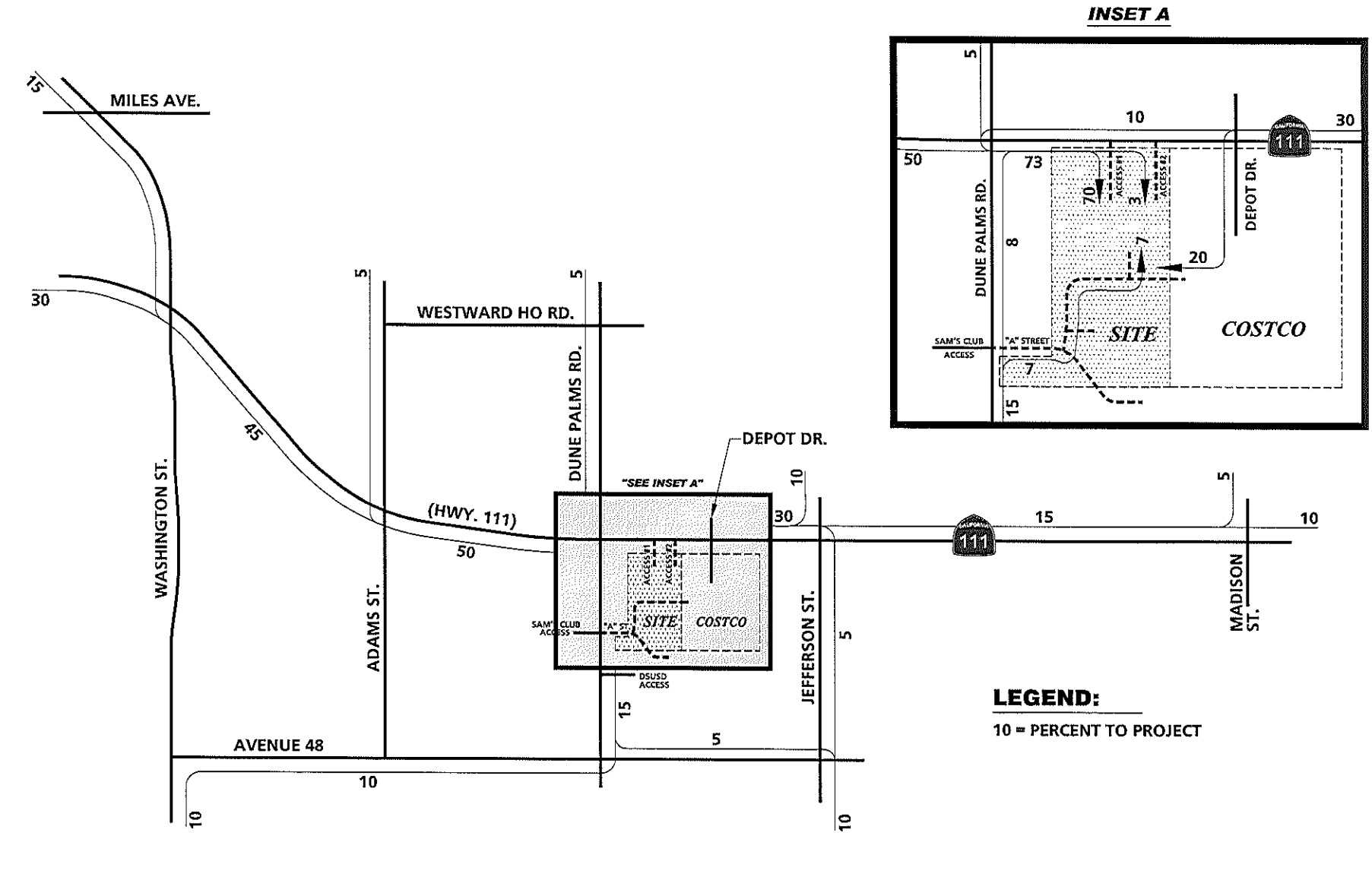
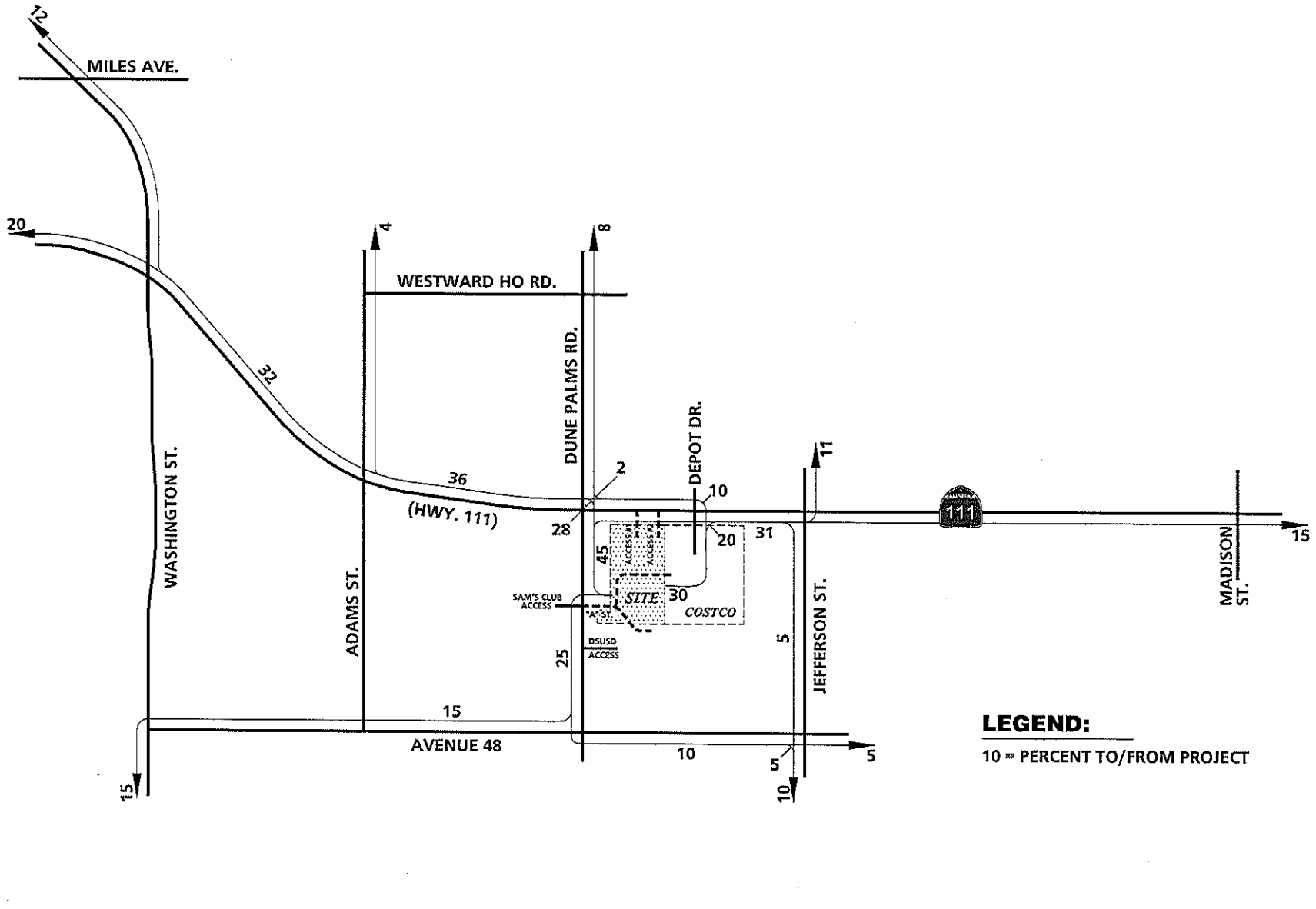


EXHIBIT 4-C

APARTMENT TRIP DISTRIBUTION



3. Modal Split

This traffic study does not assume that project trips will be reduced by transit service within the study area. Therefore, the results in this report represent a conservative condition with respect to vehicular traffic generation.

4. Trip Assignment

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distributions, proposed arterial highway and local street systems. Based on the identified project traffic generation and distributions, project related ADT volumes for 2011 and 2016 conditions are shown on Exhibit 4-D and 4-E, respectively. Project AM and PM peak hour intersection turning movement volumes for 2011 and 2016 are shown on Exhibits 4-F through 4-I.

B. Other Development Traffic

1. Method of Projection

To assess existing plus ambient growth plus cumulative traffic conditions, other development traffic is combined with existing traffic and area-wide growth. Information about other developments which are being processed concurrently in the study area has been provided by City staff.

A review of the historical CVAG count data indicates that some locations are experiencing a decrease in traffic volumes. Therefore, by adding a growth rate and traffic from other cumulative developments to existing traffic volumes ensures a conservative estimate of future traffic conditions.

2. Non-Site Traffic for Study Area

City staff has requested that cumulative projects within ½ mile of the study area to be included in the traffic analysis. These cumulative projects consist of developments that are anticipated to occur in conjunction with the proposed project. They represent developments that do not currently contribute traffic to the

EXHIBIT 4-D

PROJECT ONLY (2011) AVERAGE DAILY TRAFFIC (ADT)

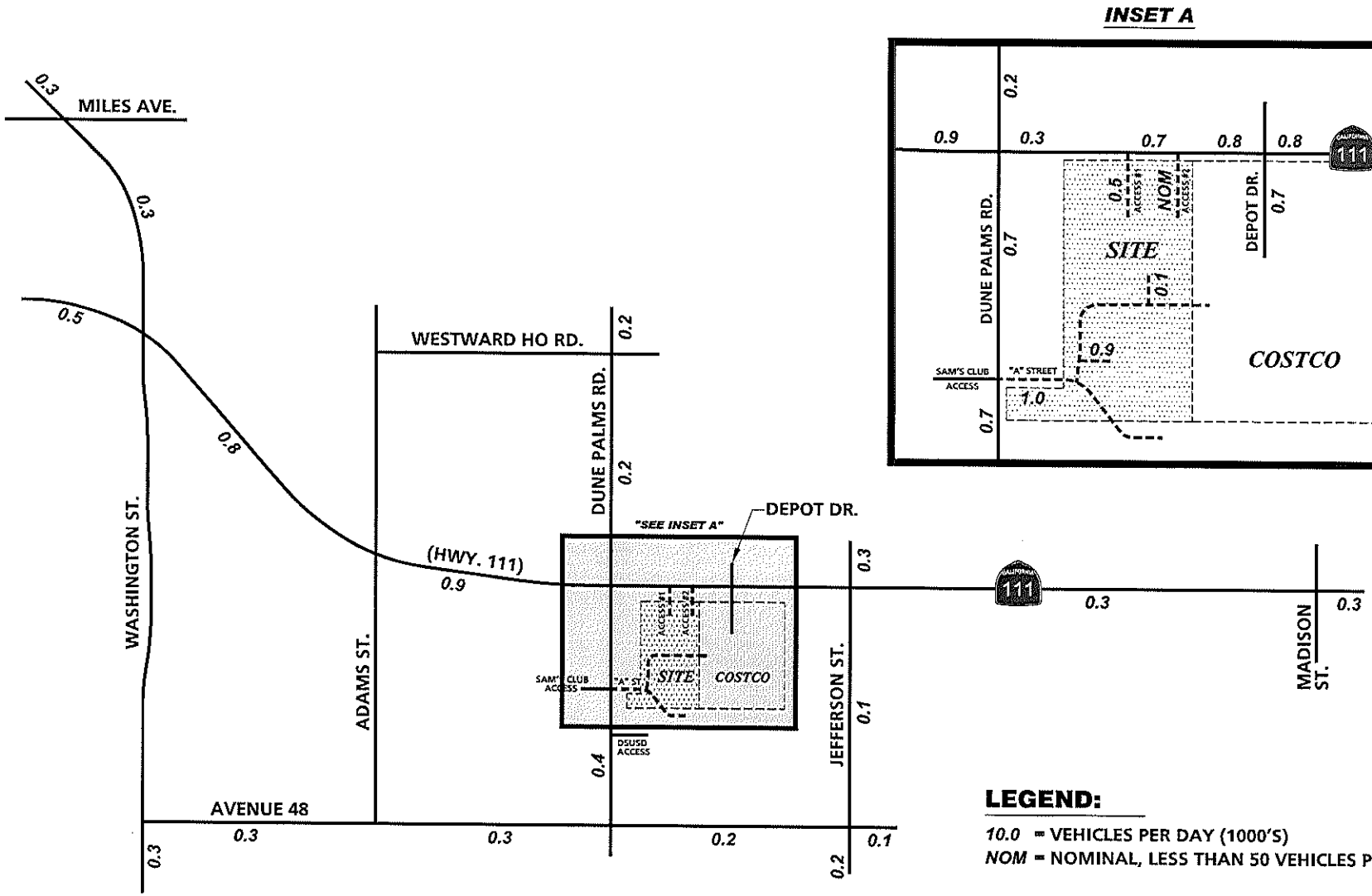


EXHIBIT 4-E

PROJECT ONLY (2016) AVERAGE DAILY TRAFFIC (ADT)

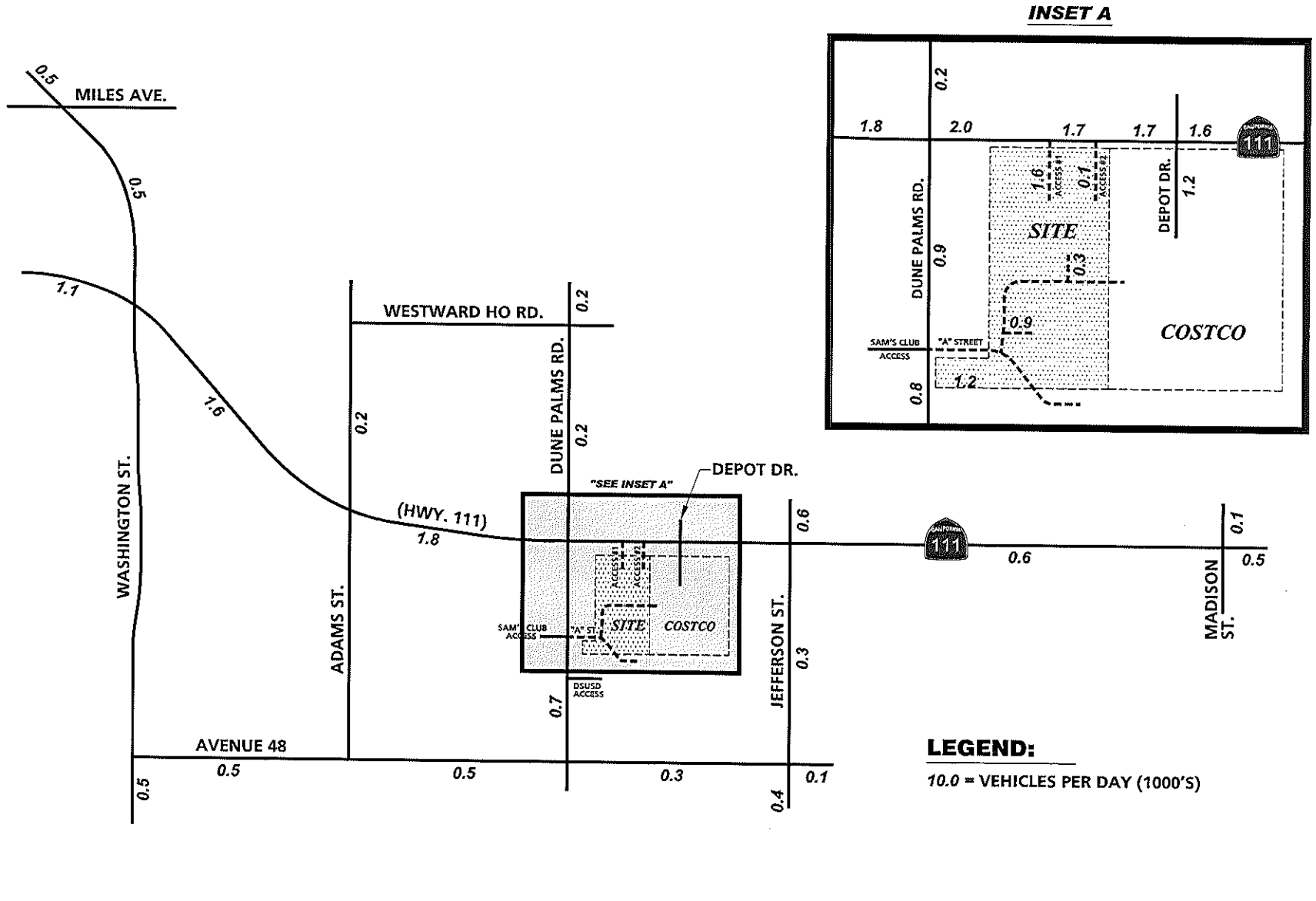


EXHIBIT 4-F

PROJECT ONLY (2011) AM PEAK HOUR INTERSECTION VOLUMES

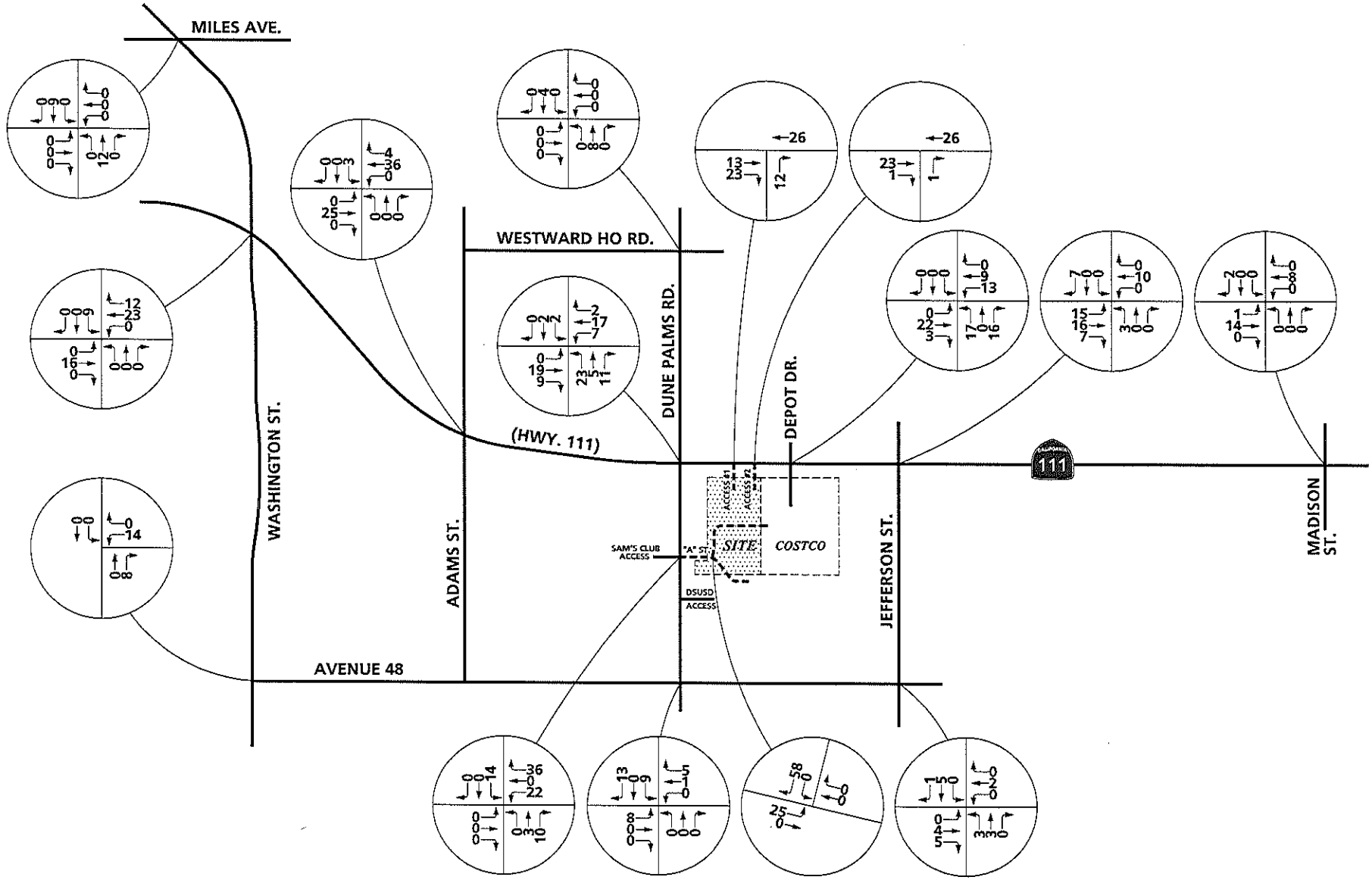


EXHIBIT 4-G

PROJECT ONLY (2011)
PM PEAK HOUR INTERSECTION VOLUMES

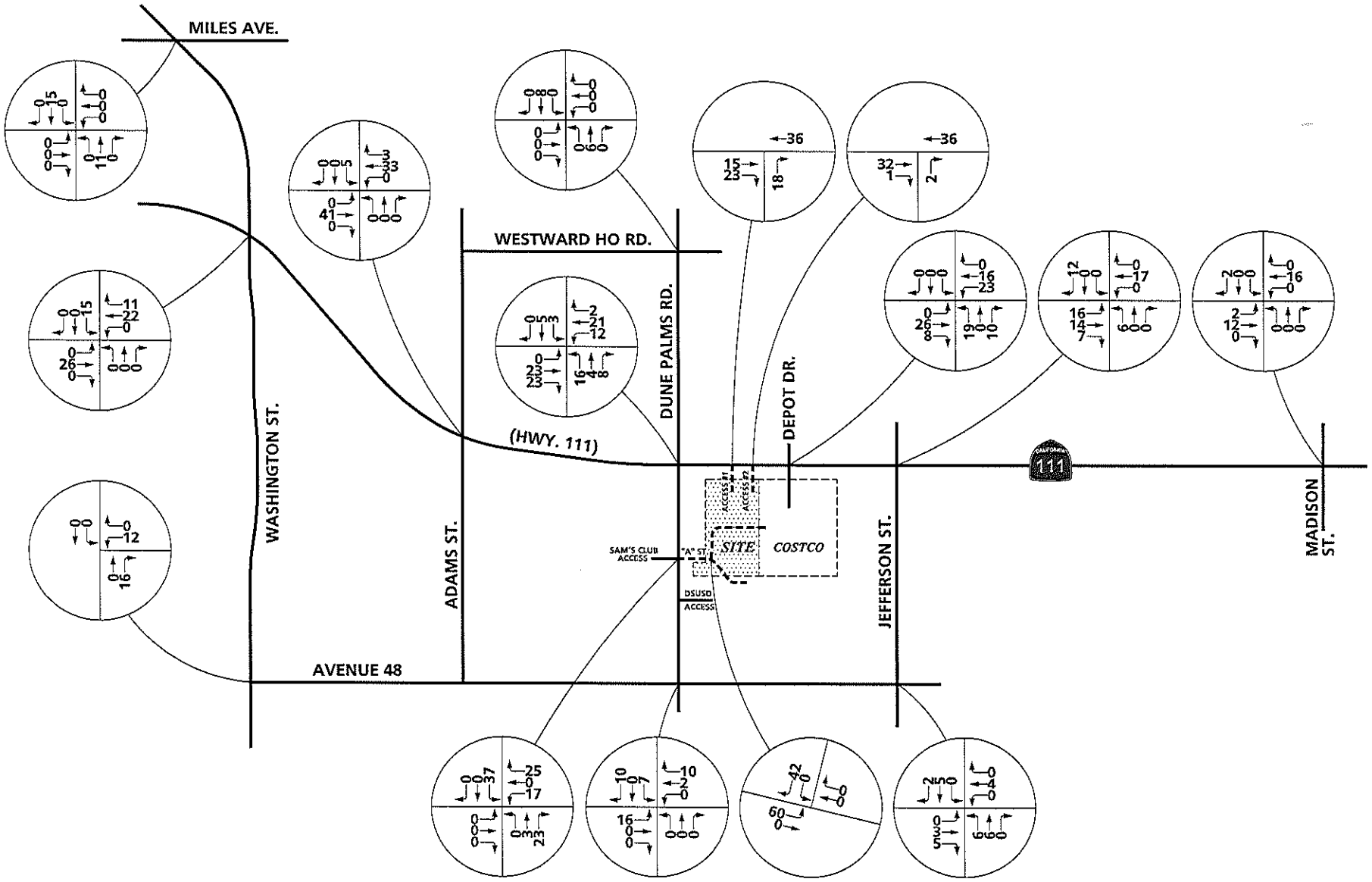


EXHIBIT 4-H

PROJECT ONLY (2016) AM PEAK HOUR INTERSECTION VOLUMES

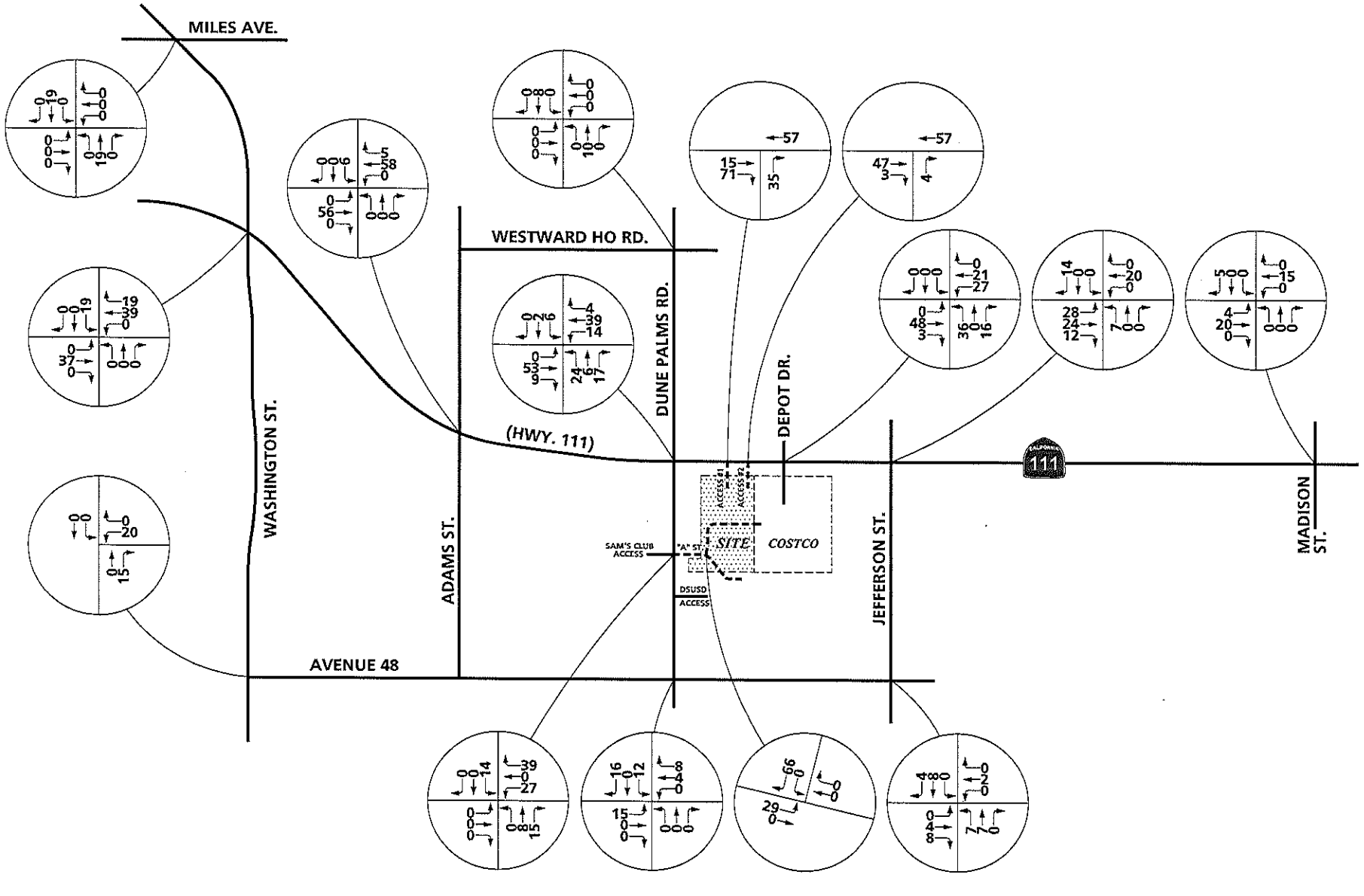
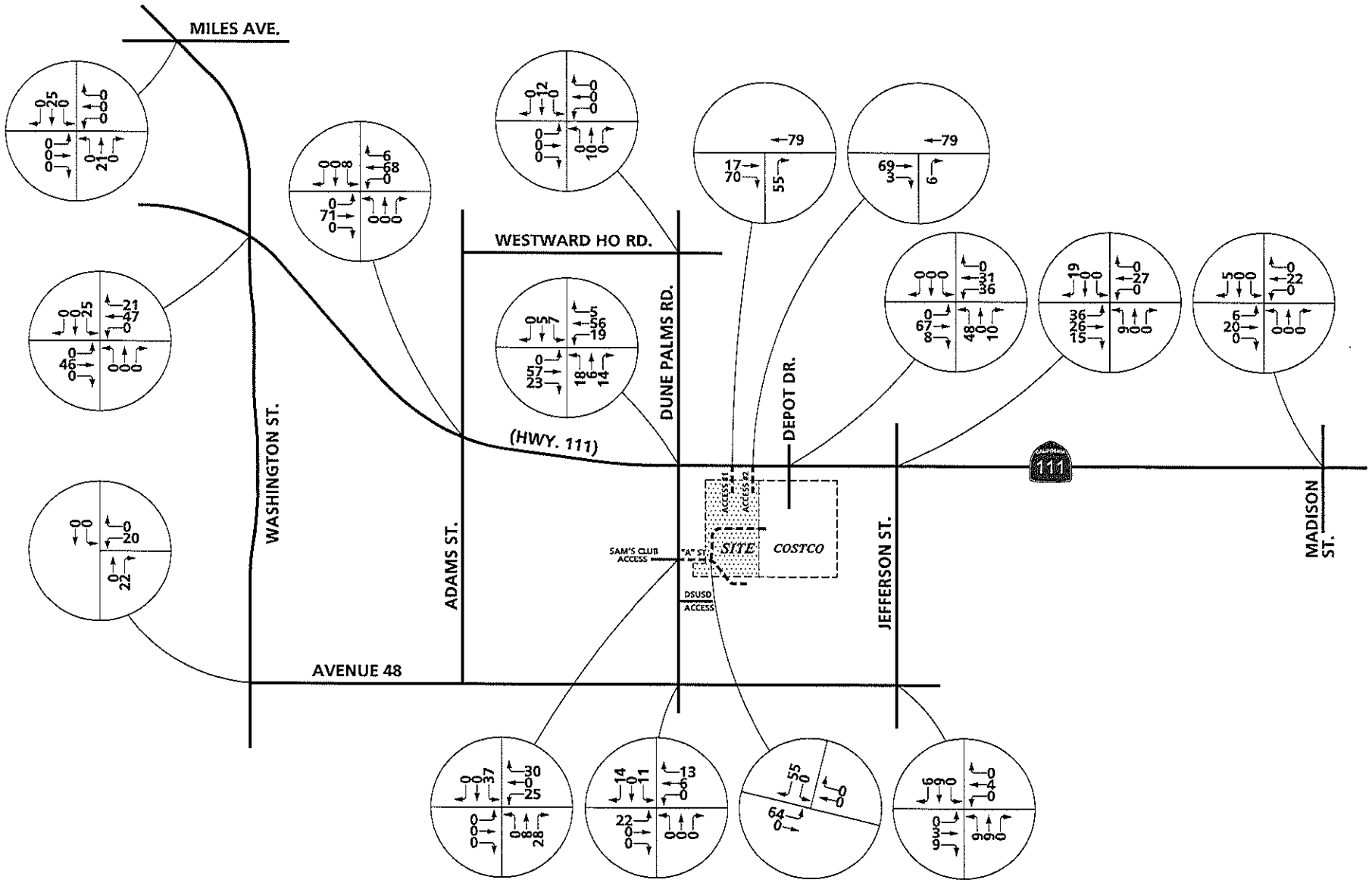


EXHIBIT 4-I

PROJECT ONLY (2016)
PM PEAK HOUR INTERSECTION VOLUMES



study area roadways. Analyzing cumulative developments within ½ mile from a studied intersection ensures a reasonable projection of future traffic without over estimating future traffic volumes by including cumulative projects outside the ½ mile radius. Per direction of City of La Quinta staff, cumulative project trip generation is based on the anticipated completion of each individual project in relation to the project phasing years of 2011 and 2016. City staff has estimated the current level of completion for each project currently under construction or pending approval by the years 2011 and 2016. These land use quantities for 2011 and 2016 were applied to generate cumulative traffic. In addition, City of La Quinta staff contacted the neighboring jurisdictions to solicit cumulative projects to be included in the traffic analysis and has provided cumulative project information on behalf of the Cities of Indio and Indian Wells. Appendix G provides the locations of these cumulative developments.

Appendix G depicts the locations, land uses and trip generation rates utilized for these other developments in the study. It should be noted that the trip generation rates utilized in the traffic impact analysis are based on the assumptions described in the City of La Quinta Engineering Bulletin #06-13 which stipulates the application of the peak hour of the generator trip generation rates in the ITE manual.

Cumulative projects trip generation and trip distribution was derived from traffic studies submitted to the City of La Quinta. For these specific projects, the trip generation and trip distributions assumptions were incorporated for use in this study. The following traffic studies were considered in the trip generation:

Centre at La Quinta Access Evaluation, Urban Crossroads, Inc., March 2005.

Komar/Costco Development Transportation Impact Analysis, Kittleson & Associates, Inc., October 2005.

Polo Square Traffic Study, City of Indio, LSA, October 2006.

Jefferson Park Centre Traffic Impact Analysis, City of Indio, Kunzman Associates, October 2007 (Revised).

Shoppes at La Quinta Traffic Impact Analysis, Sept. 2008.

La Quinta Retail and Office Complex (TT 35088) Traffic Impact Study, Endo Engineering, May 2008.

Silver Rock Resort Traffic Evaluation, Urban Crossroads, Inc., May 2006.

For cumulative projects without a specific traffic study, ITE Trip Generation Rates (7th Edition) were used. Cumulative developments are projected to generate a total of approximately 47,108 trip-ends per day with 2,422 vehicles per hour during the AM peak hour and 5,163 vehicles per hour during the PM peak hour for 2011 conditions. For 2016 conditions, the cumulative developments are projected to generate a total of approximately 132,074 trip-ends per day with 7,102 vehicles per hour during the AM peak hour and 13,656 vehicles per hour during the PM peak hour.

Moreover, cumulative trip distribution patterns provided in the abovementioned traffic studies were incorporated into the traffic impact study. Appendix "G" contains the directional distribution patterns of the cumulative development traffic and cumulative development land use quantities.

Based on the identified trip distribution for the cumulative development on arterial highways throughout the study area, other cumulative development ADT volumes for 2011 and 2016 are shown on Exhibit 4-J and Exhibit 4-K, respectively. Other cumulative development AM and PM peak hour intersection turning movement volumes for 2011 and 2016 are shown on Exhibits 4-L through 4-O.

3. Ambient Growth Rate

To account for area-wide growth on roadways, future traffic volumes have been calculated based on a 1% annual growth rate of existing traffic volumes. The ambient growth rate ("A") is applied over a three (3) year period for 2011 conditions and over an eight (8) year period for 2016 conditions since traffic counts were conducted in 2008. A total growth rate of 3% for 2011 conditions and 8% for 2016 conditions have been applied to existing traffic volumes. The area-wide growth was approved by City of La Quinta staff.

EXHIBIT 4-J

OTHER DEVELOPMENT (2011) AVERAGE DAILY TRAFFIC (ADT)

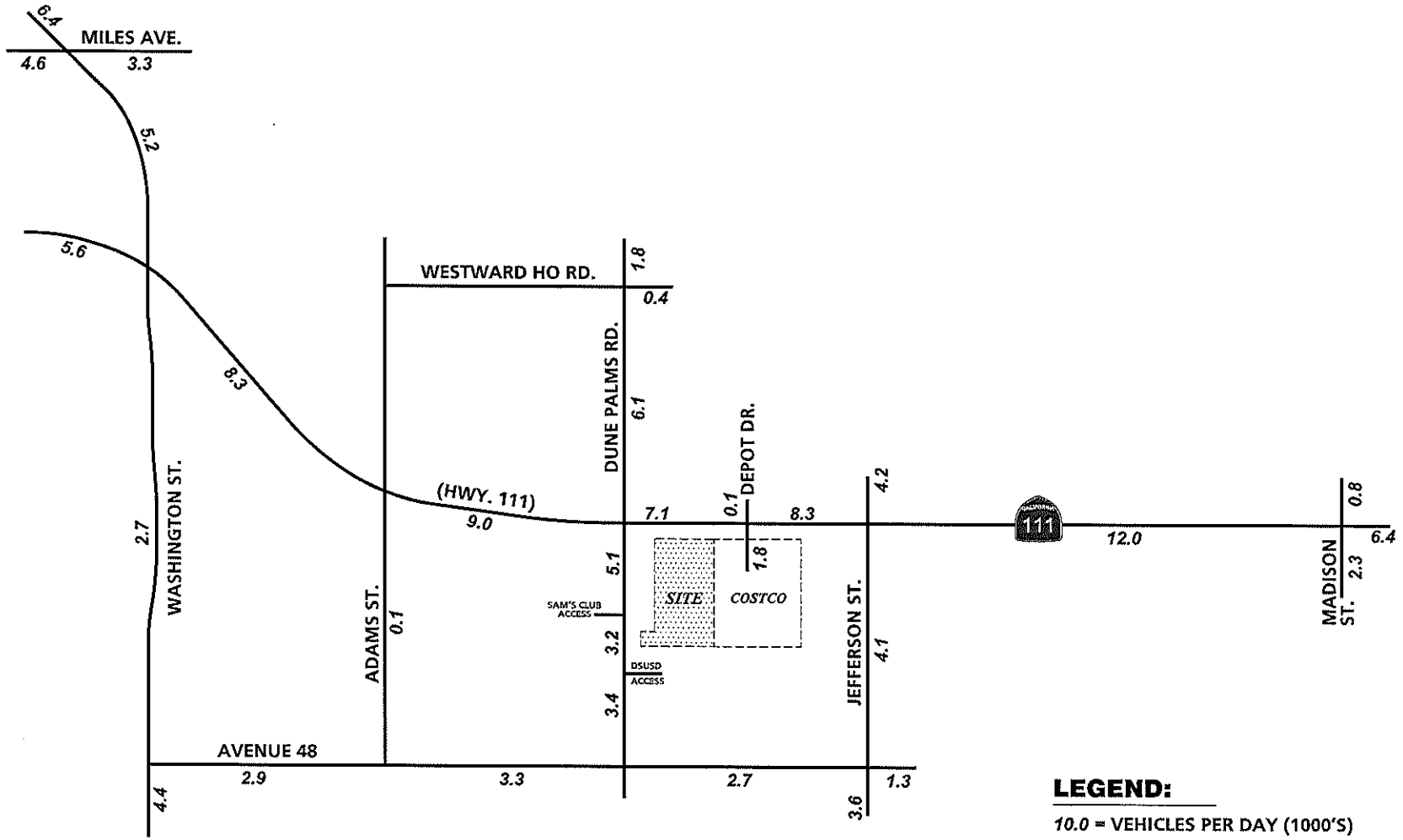


EXHIBIT 4-K

OTHER DEVELOPMENT (2016) AVERAGE DAILY TRAFFIC (ADT)

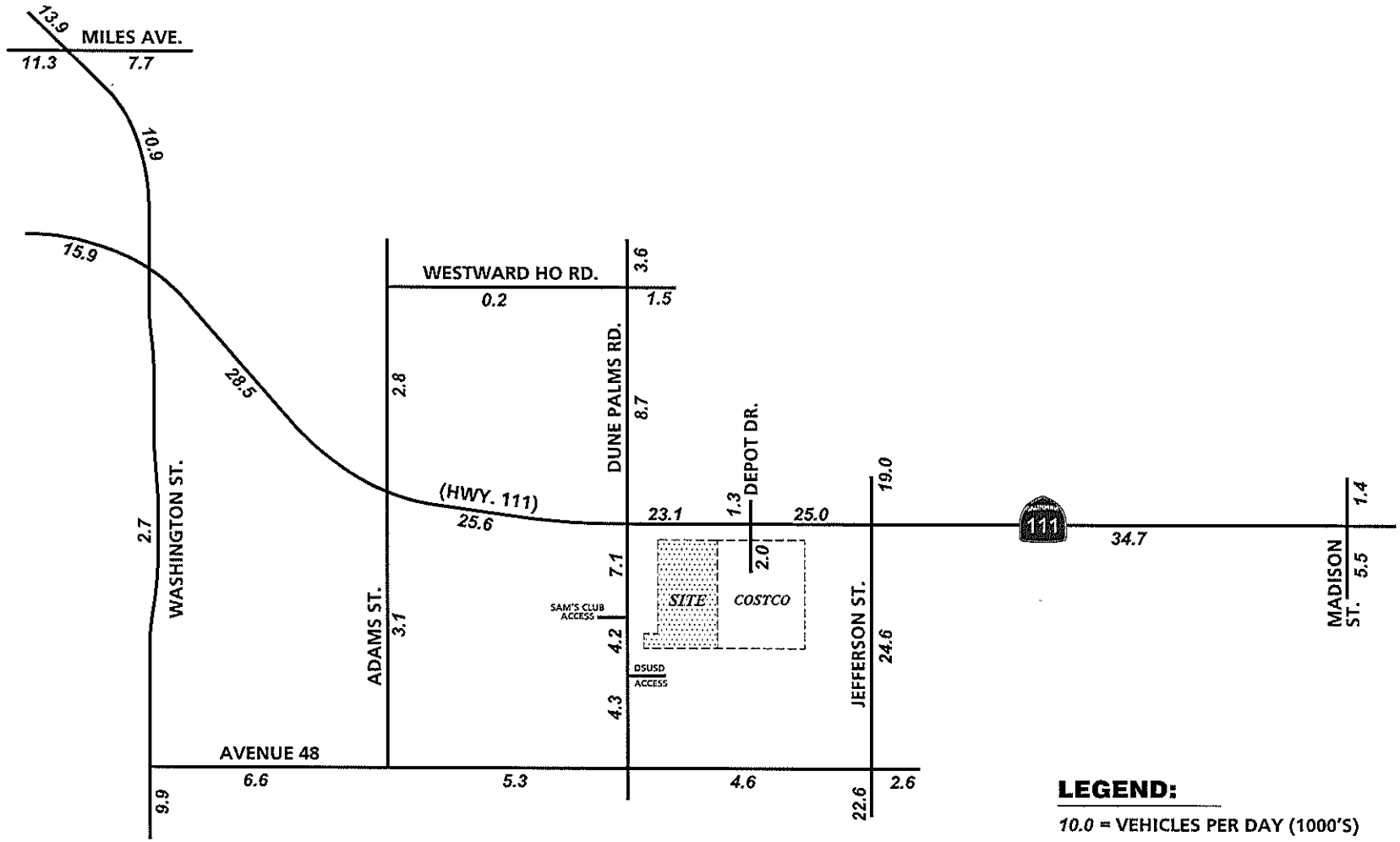


EXHIBIT 4-L

OTHER DEVELOPMENT (2011) AM PEAK HOUR INTERSECTION VOLUMES

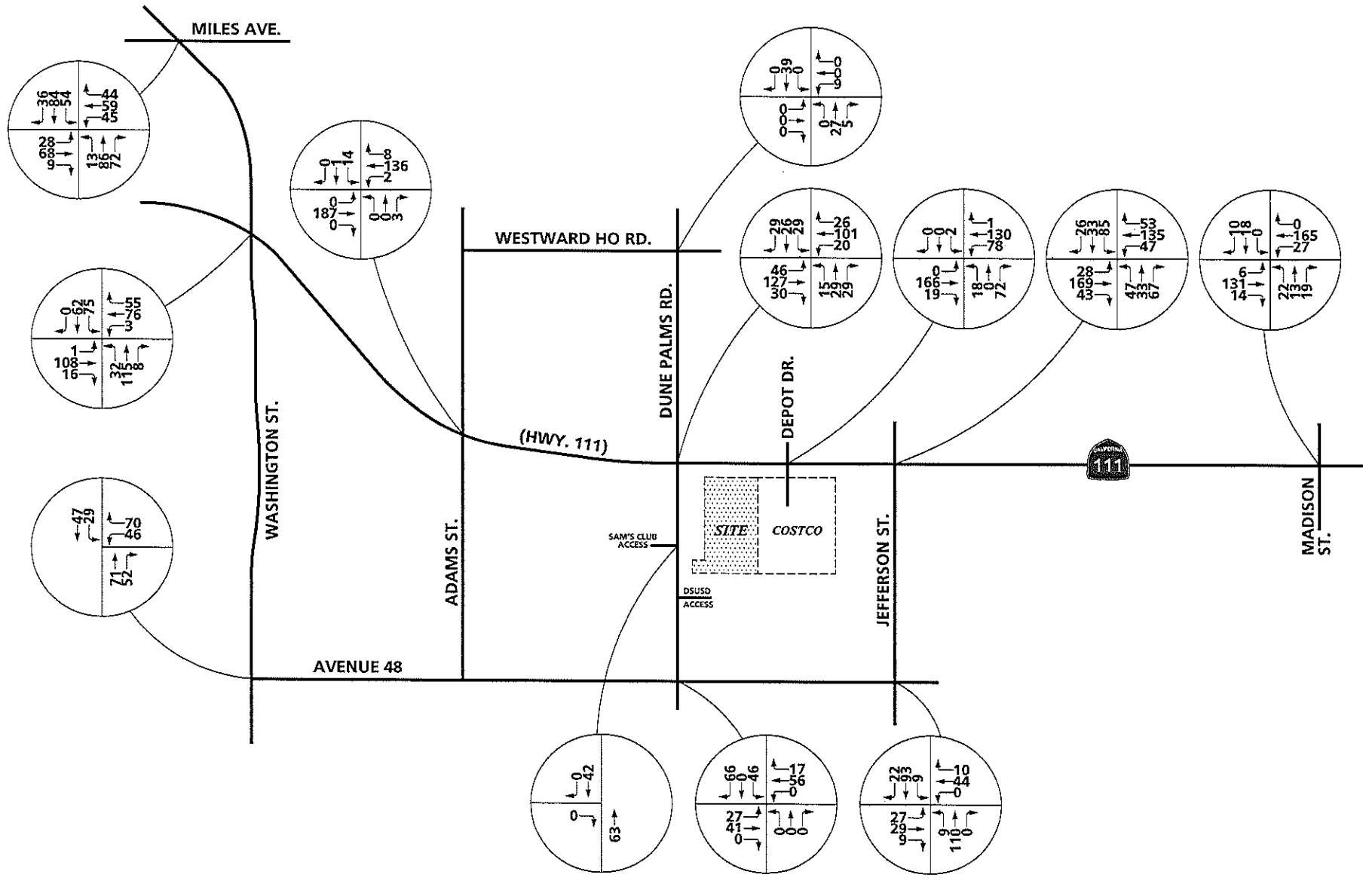


EXHIBIT 4-M

OTHER DEVELOPMENT (2011)
PM PEAK HOUR INTERSECTION VOLUMES

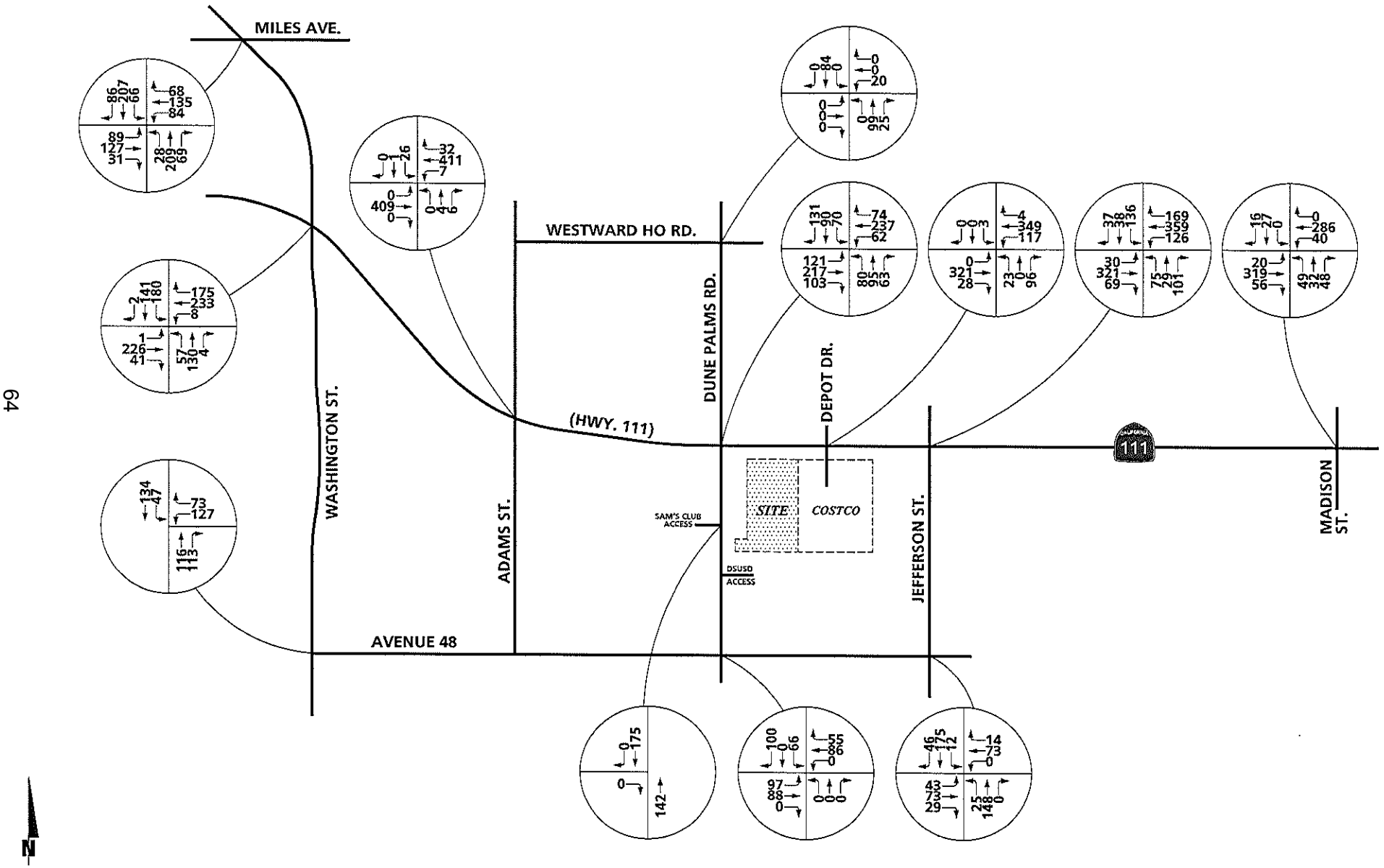


EXHIBIT 4-N

OTHER DEVELOPMENT (2016) AM PEAK HOUR INTERSECTION VOLUMES

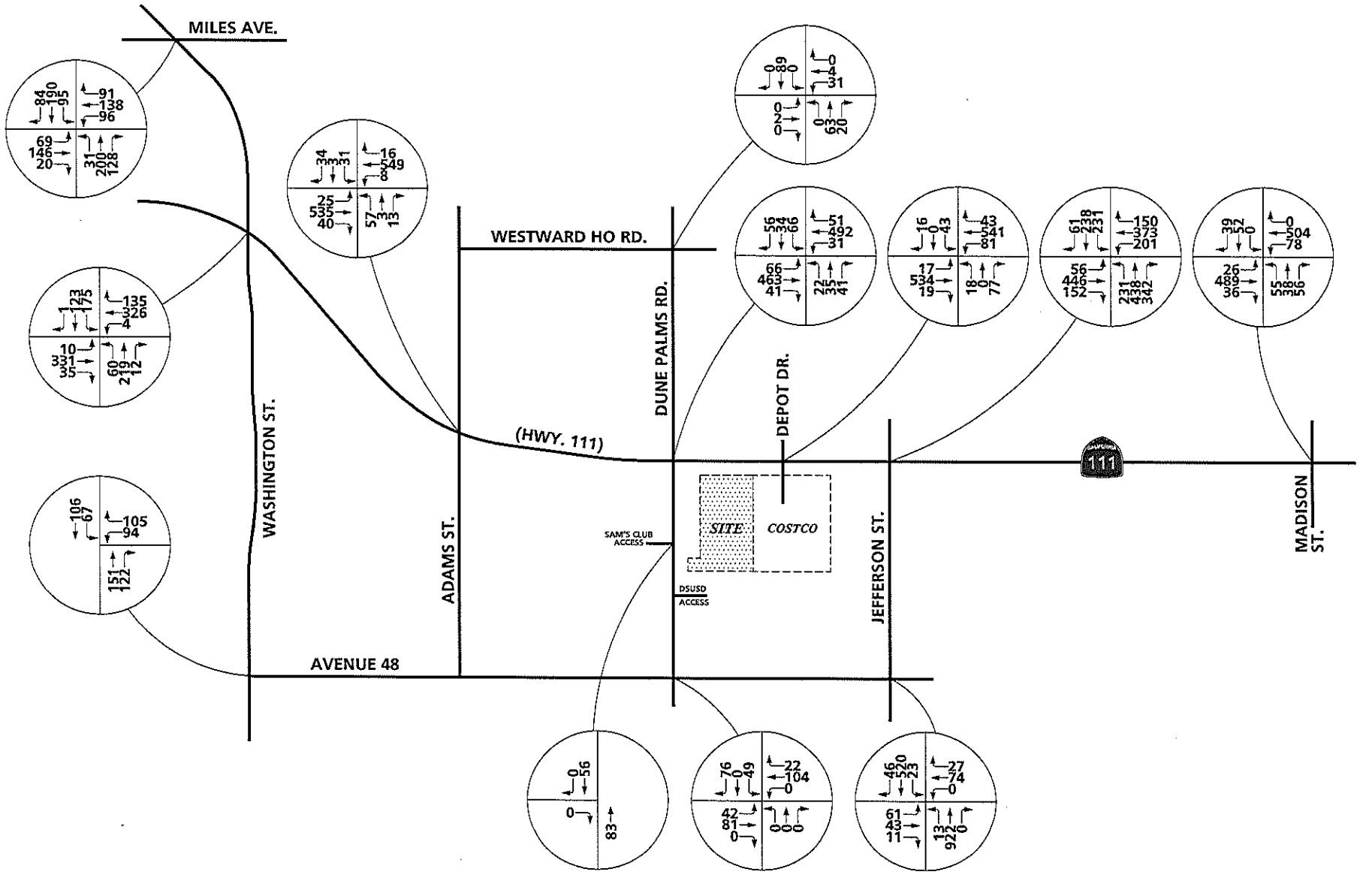
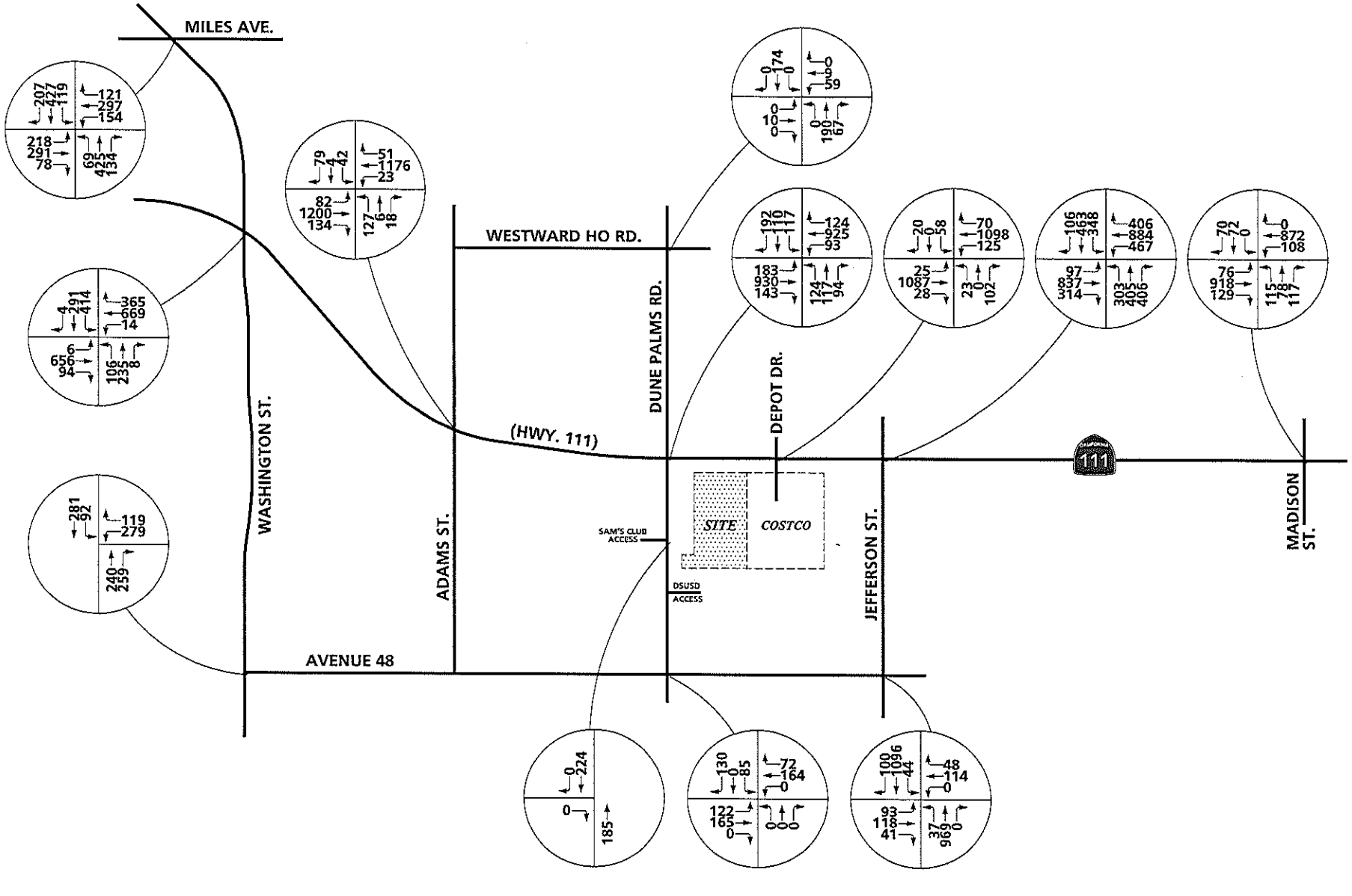


EXHIBIT 4-O

OTHER DEVELOPMENT (2016) PM PEAK HOUR INTERSECTION VOLUMES



C. Total Future Traffic

Existing plus Ambient plus Cumulative (2011) traffic conditions ADT volumes are shown on Exhibit 4-P and Existing plus Ambient plus Cumulative plus Project (2011) traffic conditions ADT volumes are shown on Exhibit 4-Q.

Existing plus Ambient plus Cumulative (2016) traffic conditions ADT volumes are shown on Exhibit 4-R and Existing plus Ambient plus Cumulative plus Project (2016) traffic conditions ADT volumes are shown on Exhibit 4-S.

EXHIBIT 4-P

EXISTING PLUS AMBIENT PLUS CUMULATIVE (2011) AVERAGE DAILY TRAFFIC (ADT)

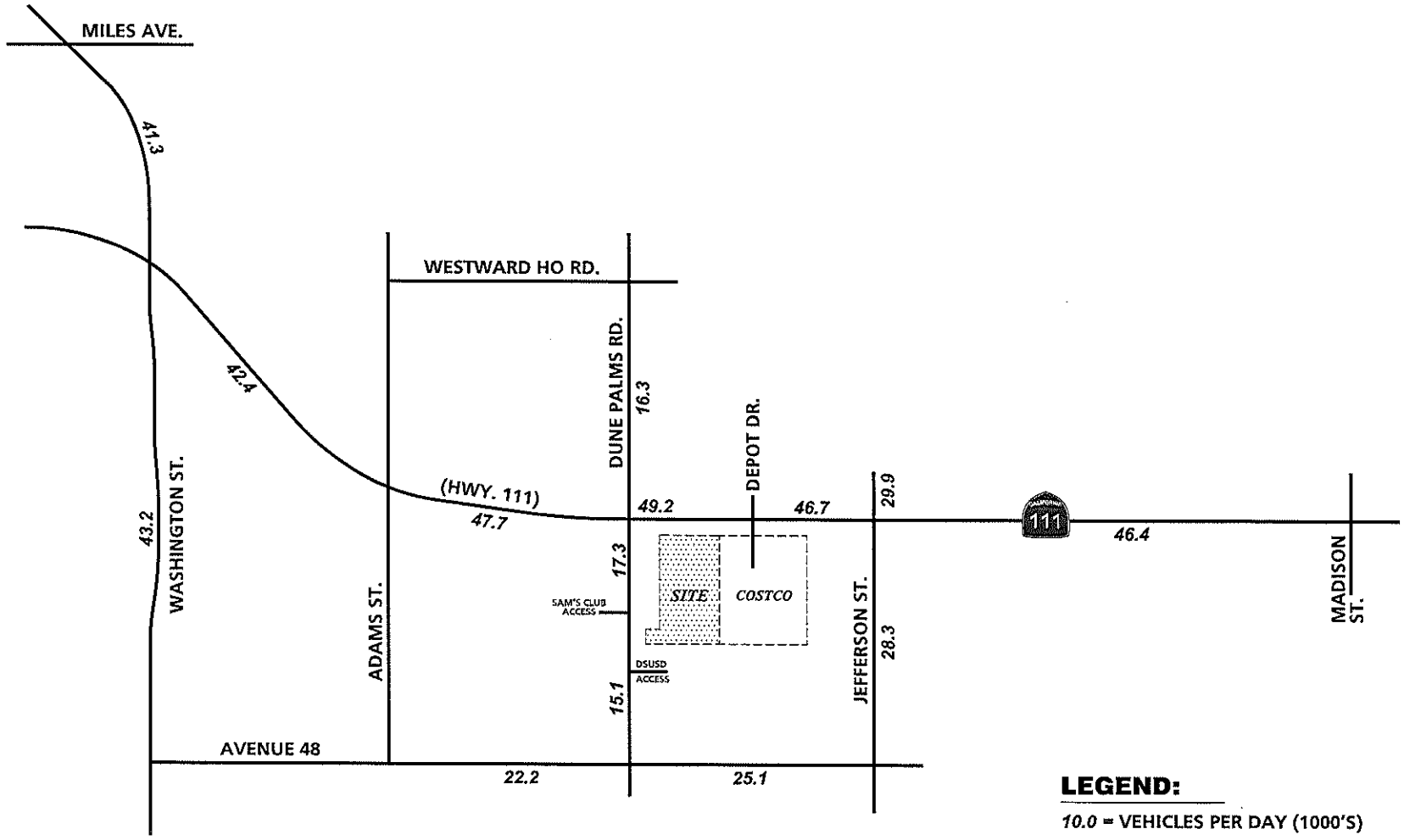


EXHIBIT 4-Q

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011) AVERAGE DAILY TRAFFIC (ADT)

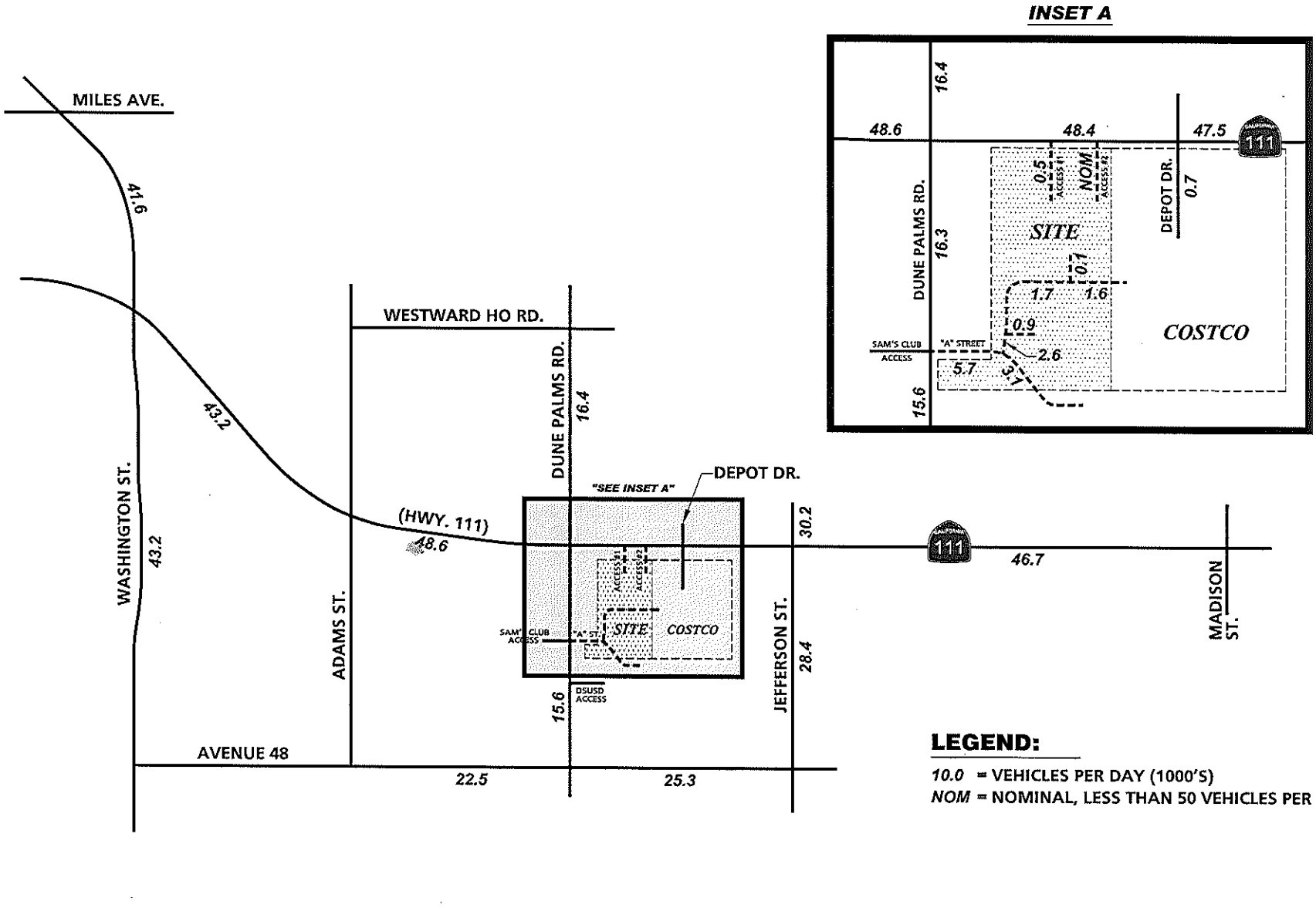


EXHIBIT 4-R

EXISTING PLUS AMBIENT PLUS CUMULATIVE (2016) AVERAGE DAILY TRAFFIC (ADT)

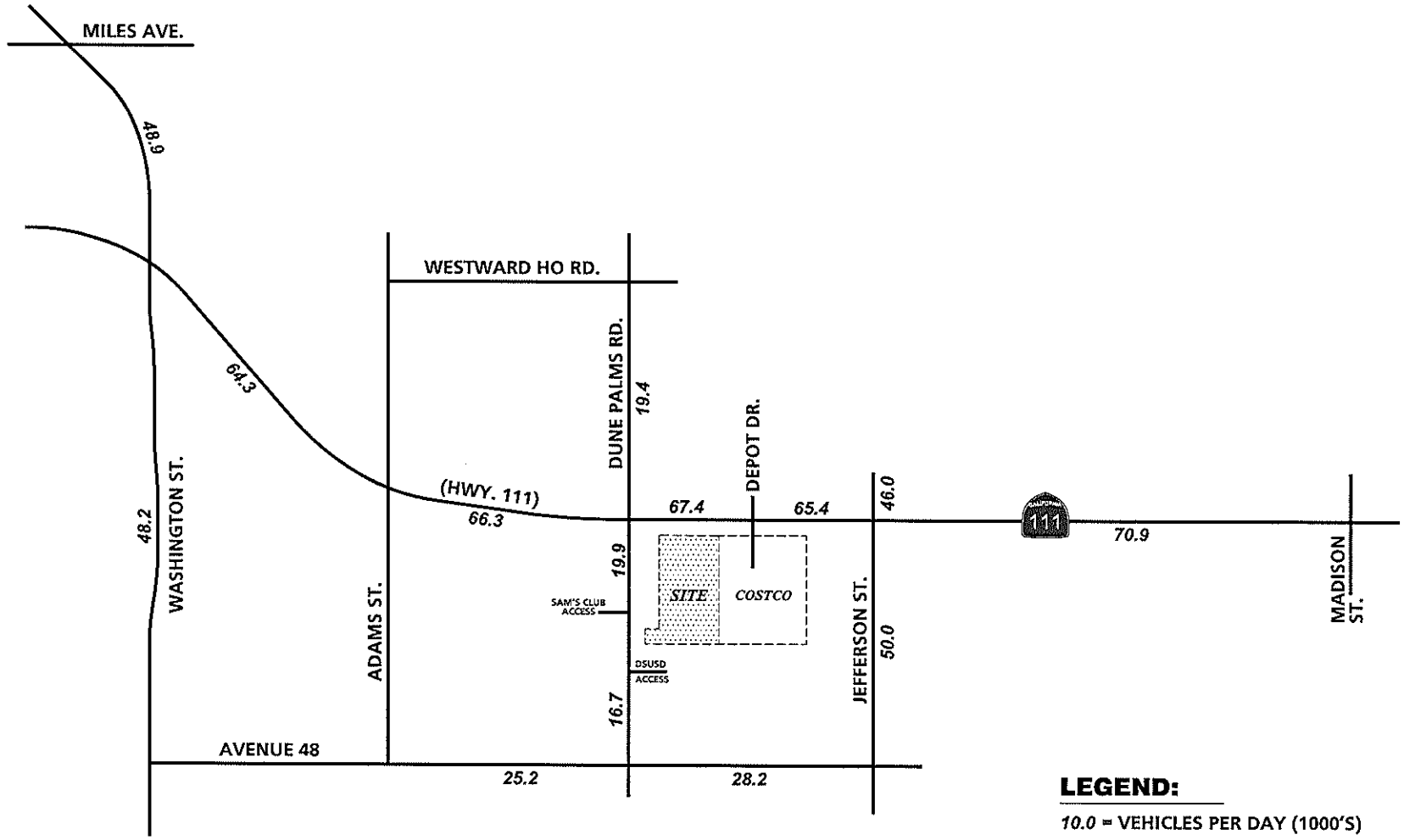
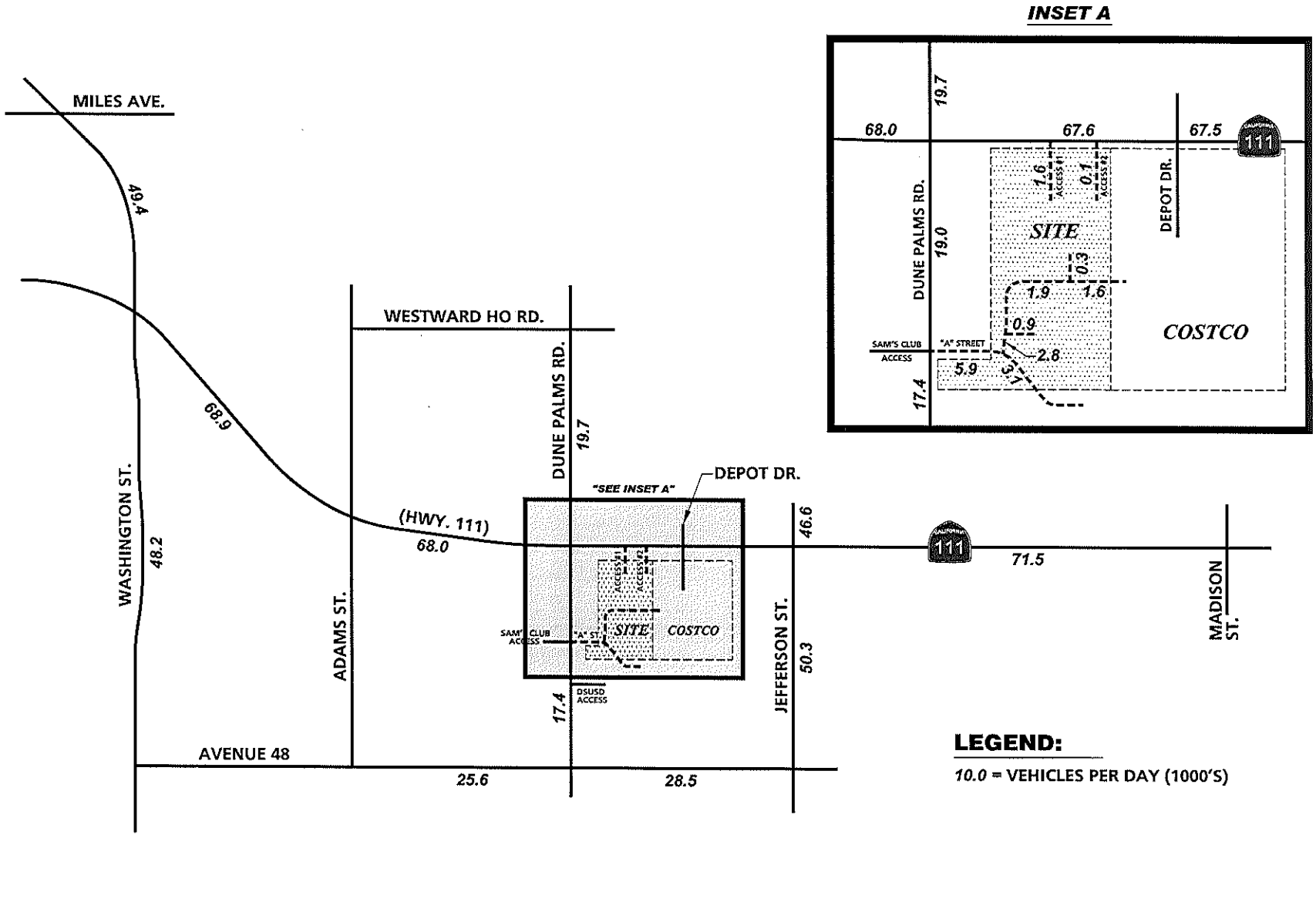


EXHIBIT 4-S

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016) AVERAGE DAILY TRAFFIC (ADT)



THIS PAGE LEFT INTENTIONALLY BLANK

5.0 TRAFFIC IMPACT ASSESSMENT METHODOLOGY

This section of the report describes the criteria used to determine project-related impacts. The traffic scenarios identified below are compared to each other to determine a direct or cumulative project impact.

A. Scenarios

In accordance with the City of La Quinta Engineering Bulletin #06-13 and discussions with City staff, this study has analyzed the following scenarios:

(1) Documentation of existing traffic conditions in the vicinity of the site,
(2) Evaluation of existing plus ambient growth plus cumulative (2011) traffic conditions;
(3) Evaluation of existing plus ambient growth plus cumulative (2016) traffic conditions;
(4) Evaluation of existing plus ambient growth plus cumulative plus project (2011) traffic conditions,
(5) Evaluation of existing plus ambient growth plus cumulative plus project (2016) traffic conditions,
(6) Determination of on-site and off-site improvements to achieve City of La Quinta level of service requirements.

In looking at future year traffic volumes, three sources of traffic are considered in addition to the existing traffic volumes described above:

- Ambient Growth traffic ("A") – To account for area-wide growth on roadways, future traffic volumes have been calculated based on a 1% annual growth rate of existing traffic volumes. The ambient growth rate is applied over a three (3) year period for 2011 conditions and over an eight (8) year period for 2016 conditions since traffic counts were conducted in 2008. A total growth rate of 3% for 2011 conditions and 8% for 2016 conditions have been applied to existing traffic volumes. The area-wide growth was approved by City of La Quinta staff.

- Cumulative traffic ("C") - Traffic from particular projects that will be completed (or partially completed) and generating traffic in 2011 and 2016.
- Project Traffic ("P") – Traffic generated by the Project itself.

a. Existing Traffic Conditions

The existing conditions refer to the conditions which take into account the existing traffic counts taken in January and July 2008 (40% seasonal adjustment for the July 2008 traffic counts) and existing lane configurations at study area intersections and roadway segments. Results of the analysis are discussed in section 3.0 of the report.

b. E + A + C (2011) Traffic Conditions

Existing plus ambient growth plus cumulative traffic conditions includes the cumulative (2011) traffic, which is added to the adjusted existing volumes (40% seasonal adjustment) and area wide growth (3%). Existing roadway design and intersection controls are analyzed first, then with CIP improvements. The analysis will present the basis for any potential near term (2011) project impacts.

c. E + A + C + P (2011) Traffic Conditions

Existing Plus Ambient Growth Plus Cumulative Plus Project (2011) traffic conditions includes the addition of the Project Phase 1 and cumulative developments (2011) proposed within the study area to the adjusted existing volumes (40% seasonal adjustment) with 3% ambient growth rate. Existing lane configuration and intersection controls are analyzed first, then with CIP improvements and if necessary, additional improvements.

A potentially significant project specific impact assessment was conducted for study area intersections and road segments. Potentially significant project

specific impacts at the study area intersections were determined through comparing the ICU values for E+A+C (2011) and E+A+C+P (2011) for intersections operating below LOS "D" at project buildout. Similarly, potentially significant project specific impacts at the study area road segments were determined by comparing the volume to capacity for E+A+C (2011) and E+A+C+P (2011) for road segments operating below LOS "D" at project buildout.

A sensitivity analysis was conducted for access points and adjacent intersections through adding one statistical standard deviation to the project's trip generation and analyzed in light of existing roadway design, CIP improvements, and if necessary, additional improvements.

d. E + A + C (2016) Traffic Conditions

Existing plus Ambient plus Cumulative traffic conditions includes the cumulative (2016) traffic, which is added to the adjusted existing volumes (40% seasonal adjustment) and area wide growth (8%). Existing lane configuration and intersection controls were analyzed first, then with CIP improvements. The analysis will present the basis for any potential near term (2016) project impacts.

e. E + A + C + P (2016) Traffic Conditions

Existing plus Ambient plus Cumulative plus Project (2016) traffic conditions includes the addition of the Project Phase 2 and cumulative developments (2016) proposed within the study area to the adjusted existing volumes (40% seasonal adjustment) with 8% ambient growth rate. Existing roadway design and intersection controls are analyzed first, then with CIP improvements and if necessary, additional improvements.

A potentially significant project specific impact assessment was conducted for study area intersections and road segments. Potentially significant project specific impacts at the study area intersections were determined through

comparing the ICU values for E+A+C (2016) and E+A+C+P (2016) for intersections operating below LOS "D" at project buildout. Similarly, potentially significant project specific impacts at the study area road segments were determined by comparing the volume to capacity for E+A+C (2016) and E+A+C+P (2016) for road segments operating below LOS "D" at project buildout.

A sensitivity analysis was conducted for access points and adjacent intersections through adding 1 statistical standard deviation to the project's trip generation and analyzed with existing lane configuration, CIP improvements, and if necessary, additional improvements.

B. With Improvement Scenarios

Per City of La Quinta's Traffic Study Guidelines, the traffic impact analysis scenarios discussed in this section consist of calculations based on three lane geometric scenarios:

- Existing lane geometrics (lane configuration at the time traffic counts were conducted),
- Currently adopted CIP improvements, and
- Additional improvements required to satisfy City of La Quinta's service level requirements.

Some additional recommended improvements beyond the City's funded CIP program are consistent with the City of La Quinta's General Plan roadway designation for the particular intersection and/or road segment.

C. Diverted Traffic

The project is proposed to share access with the existing Komar/Costco shopping center to the east of the project. It is assumed that some of the project traffic will utilize the Komar/Costco access at Depot Drive. Similar assumptions are anticipated to occur at project buildout when the Dune Palms Road /"A" Street intersection is constructed. It is anticipated that a portion of the inbound and outbound traffic from the Komar/Costco shopping center will utilize the Dune Palms Road/ "A" Street intersection. For "with" project

scenarios, a 25% traffic diversion has been applied for traffic entering and exiting the Komar/Costco shopping center via Depot Drive. It is assumed that 25% of the northbound traffic at Depot Drive/ Highway 111 travelling west on Highway 111 has been diverted to exit via Dune Palms Road/ "A" Street. Eastbound traffic entering Depot Drive/ Highway 111 was also diverted to access the proposed "A" Street. Traffic diverted for these ingress/egress movements are applied to E+A+C+P (2011) and E+A+C+P (2016) scenarios.

D. Potentially Significant Traffic Impact Criteria

Potentially significant project specific impacts are divided into intersection impacts and road segment impacts. Intersections and road segments are evaluated for both potentially significant project and cumulative impacts. The traffic impact criteria indicated below for both intersection and road segments are derived from the City of La Quinta traffic guidelines (*Engineering Bulletin #06-13* Revised June 2008).

1. Potentially Significant Impacts for Intersections

Potentially Significant Project Specific Impacts at Project Opening

A potentially significant project specific impact is defined to occur at any intersection if the project trips will result in the LOS for an intersection to be worse than LOS D. A potentially significant project specific traffic impact is also assumed to occur at any intersection if the project will exceed the criteria established in the table below. The ICU method only shall be used for this calculation.

Impact Criteria For Existing Intersections Already Operating at LOS E or LOS F	
SIGNIFICANT CHANGES IN LOS	
Intersection LOS (Existing)	Increase in Trips equal to or greater than
LOS E	20 trips *
LOS F	10 trips *

* Critical movements are the controlling movements when the sums of the maximum volumes per lane for conflicting movements on each roadway are compared. Typically there are two pairs of critical movements (one left with its opposing through movement) for a four legged intersection.

A potentially significant project specific impact is determined by calculating the critical movements at each approach leg divided by the number of lanes for each corresponding approach leg. If any of the critical movements exceed 20 project trips per lane to an intersection operating at LOS "E" or 10 project trips per lane to an intersection operating at LOS "F," a potentially significant project specific impact is anticipated at project buildout.

Per City of La Quinta traffic impact guidelines, a potentially significant project specific impact at an unsignalized study intersection is defined to occur when the addition of the project traffic results in LOS F on the side street for two way control and LOS E or worse for all-way stop control. A potentially significant project specific impact at an unsignalized study intersection that is already operating at LOS E or LOS F is defined to occur when the addition of the project traffic results in an addition of 3 seconds of delay. The delay is calculated for all signalized intersections and indicated if the LOS for any intersections that change from one LOS to another LOS. Improvements fully funded by the City's Capital Improvements Program (CIP) are assumed to be in place.

Potentially Significant Cumulative Impacts at Project Buildout

A potentially significant cumulative traffic impact is assumed to occur at any intersection if the project trips will result in the LOS for an intersection to be worse than LOS D at project buildout. Additionally, a potentially significant cumulative impact is assumed to occur if the project will add 25 or more Peak Hour Trips to a studied intersection which is projected to operate at worse than LOS D at project buildout. The ICU method only shall be used for this calculation. For this analysis scenario, improvements fully funded by the City's Capital Improvements Program (CIP) are assumed to be in place.

In addition, a potentially significant cumulative traffic impact at an unsignalized study intersection is defined to occur when the addition of the project traffic results in LOS F at build out on the side street for two way control and LOS E or worse at buildout for all-way stop control. A potentially significant impact at an unsignalized study intersection that is already operating at LOS E or LOS F is defined to occur

when the addition of the project traffic results in an addition of 3 seconds of delay. Delay shall be calculated for all unsignalized intersections to demonstrate this.

2. Potentially Significant Impacts for Road Segments

Potentially Significant Project Specific Impacts at Project Opening

For roadway segments, a potentially significant project specific impact is defined to occur on any road segment if the project would cause the existing LOS to fall to worse than LOS D at project buildout. A potentially significant project specific impact is also defined to occur on any road segment that is already operating at LOS E or LOS F, if the V/C ratio is increased by 0.02. Changes from one LOS to another LOS will be reported in the analysis. Those improvements that are fully funded by the City's Capital Improvements Program (CIP) are assumed to be in place.

Potentially Significant Cumulative Impacts at Project Buildout

A potentially significant cumulative traffic impact is defined to occur on any studied road segment if the project would cause the existing LOS to fall to worse than LOS D at project buildout. A potentially significant cumulative traffic impact is also defined to occur on any studied road segment that is already operating at LOS E or LOS F, if the project traffic will increase the peak hour V/C in the peak direction by more than 0.05. The V/C ratio shall be calculated for all studied road segments to demonstrate this. For this analysis scenario, improvements fully funded by the City's Capital Improvements Program are assumed to be in place.

Changes from one LOS to another LOS will be reported in the analysis. Improvements fully funded by the City's Capital Improvements Program (CIP) are assumed to be in place.

Per discussions with City of La Quinta Staff, it has been determined that potentially significant cumulative impacts identified at the analysis locations will require mitigation measures. However, the project is only responsible for its "fair share" cost for the improvements.

THIS PAGE LEFT INTENTIONALLY BLANK

6.0 NEAR TERM (2011) CONDITIONS TRAFFIC ANALYSIS

This section of the report includes the results of the near term ICU and HCM intersection analysis, progression analysis and roadway segment capacity analysis. Furthermore, this section identifies any potentially significant project and cumulative impacts to the study area intersections and roadway segments.

A. Site Access

The project is proposing three access points: Project Access 1 and Project Access 2 along Highway 111 will be restricted to right-in-right-out access. In addition, the proposed project will have access to the signalized Depot Drive/ Highway 111 intersection to the east. A third access point located along Dune Palms Road is proposed to offer full access to Dune Palms Road for Phase 1 (2011). This intersection (Dune Palms Road/ "A" Street – Sam's Club Access) is anticipated to warrant a traffic signal in conjunction with the first phase of the project. Appendix "D" provides the traffic signal warrant. Therefore, the proposed Dune Palms Road access is analyzed as a signalized intersection at project opening.

As indicated in the conceptual intersection layout previously illustrated in Exhibit 2-A, the Dune Palms Road/ "A" Street access is proposed to align with the Sam's Club Access to the west, which will serve as an access point for the existing commercial center west of Dune Palms Road, the Desert Sands Unified School District Office south of the project site and the proposed project. The intersection of "A" Street/ DSUSD Driveway is configured as a T intersection with a stop sign control for the southbound approach.

A progression analysis was conducted to determine if the proposed stacking distance at the east leg of the intersection of Dune Palms Road/ "A" Street is adequate to facilitate the project traffic and DSUSD traffic. In addition, the Synchro program calculates the stacking distance required to the 95th percentile queue based on signal timing adjustments, which is utilized to determine the storage length for the turn pockets at the Dune Palms Road/ "A" Street intersection.

B. Level of Service for Existing Plus Ambient Plus Cumulative (2011) Conditions

1. Intersection Analysis for E + A + C (2011) Conditions

Existing plus Ambient plus Cumulative (2011) intersection levels of service for the existing roadway network are shown in Table 6-1. Table 6-1 shows ICU and HCM calculations based on existing lane configuration and CIP lane configurations at the study area intersections. E + A + C (2011) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-A and 6-B, respectively.

Study Area Intersections Level of Service with Existing Lane Configurations for E+A+C (2011) Conditions

For E + A + C (2011) traffic conditions, the following study area intersections are projected to operate at unacceptable levels of service during the peak hours with existing lane configurations:

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- Westward Ho (EW)
- School District Driveway (EW)

Jefferson Street (NS)

- Highway 111 (EW)

Madison Street (NS)

- Highway 111 (EW)

TABLE 6-1

INTERSECTION ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE (2011) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												ICU/DELAY[2] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Washington Street (NS) at:																	
• Miles Avenue (EW)	TS	1	3	1>>	1	3	1	1	2	0	2	2	0	0.700	0.682	B	B
• Highway 111 (EW)	TS	2	3	1	2	3	0	2	3	1	2	3	1	0.736	0.906	C	E
• Avenue 48 (EW)	TS	0	3	0	1	3	0	0	0	0	2	0	1	0.876	0.953	D	E
Adams Street (NS)																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	2	1	2	2	1>	1	3	1	1	3	1	0.476	0.618	A	B
with CIP improvements [6]	TS	2	2	1	2	2	1>	**2**	3	1	**2**	3	1	0.451	0.582	A	A
Dune Palms Road (NS) at:																	
• Westward Ho Road (EW)	TS	1	1	0	1	1	1	1	1	0	1	1	1	0.944	0.488	E	A
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	2	1	2	2	1	1	2	1	1	2	1	0.625	0.874	B	D
with CIP improvements [6]	TS	2	2	1	2	2	1	**2**	**3**	1	**2**	**3**	1	0.481	0.641	A	B
• Sam's Club Driveway (EW)	CSS	0	2	0	1	2	1	0	0	1	0	0	0	10.6	11.2	B	B
• School District Driveway - "A" Street (EW)	CSS	0	2	0	1	2	0	0	0	0	0	1!	0	--[4]	--[4]	F	F
• Avenue 48 (EW)	TS	0	1!	0	2	0	1	2	2	1	1	2	1	0.565	0.439	A	A
Depot Drive (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	1.5	0.5	1	1	1	0	1	3	1	1	2	1	0.488	0.800	A	C
with CIP improvements [6]	TS	1.5	0.5	1	1	1	0	**2**	3	1	**2**	**3**	1	0.341	0.656	A	B
Jefferson Street (NS) at:																	
Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	3	1	2	3	1	1	2	1	1	2	0	0.802	1.035	D	F
with CIP improvements [6]	TS	2	3	1	2	3	1	**2**	**3**	1	**2**	**3**	**1**	0.560	0.717	A	C
• Avenue 48 (EW)	TS	2	3	1	2	3	1	1	2	1	1	2	0	0.777	0.734	C	C
Madison Street (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	1	1	0	1	1	0	1	2	1	1	2	0	0.617	0.952	B	E
with CIP improvements [6]	TS	1	**2**	**1**	1	1	**1**	**2**	**3**	1	**2**	**3**	0	0.407	0.620	A	B

---

[1] When a right turn is designated, the lane can either be striped or unstriped. 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/thru/right lane; > = Right Turn Overlap Phase; >> Free Right Turn Lane
1 = Improvement

[2] Per City of La Quinta Engineering Bulletin, the ICU method shall be used to determine signalized intersection level of service. For unsignalized intersections, the intersection delay has been calculated using the HCM methodology.
Delay and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008) and SYNCHRO 7 (2007).
Intersection level of service shown is based on the V/C for intersections with traffic signals. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Delay and LOS based on existing lane geometric configuration identified in Exhibit 3-A

[6] Delay and LOS based on City of La Quinta and City of Indio's Capital Improvement Plan as illustrated in Exhibit 3-G

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 6-1

EXHIBIT 6-A

EXISTING PLUS AMBIENT PLUS CUMULATIVE (2011) AM PEAK HOUR INTERSECTION VOLUMES

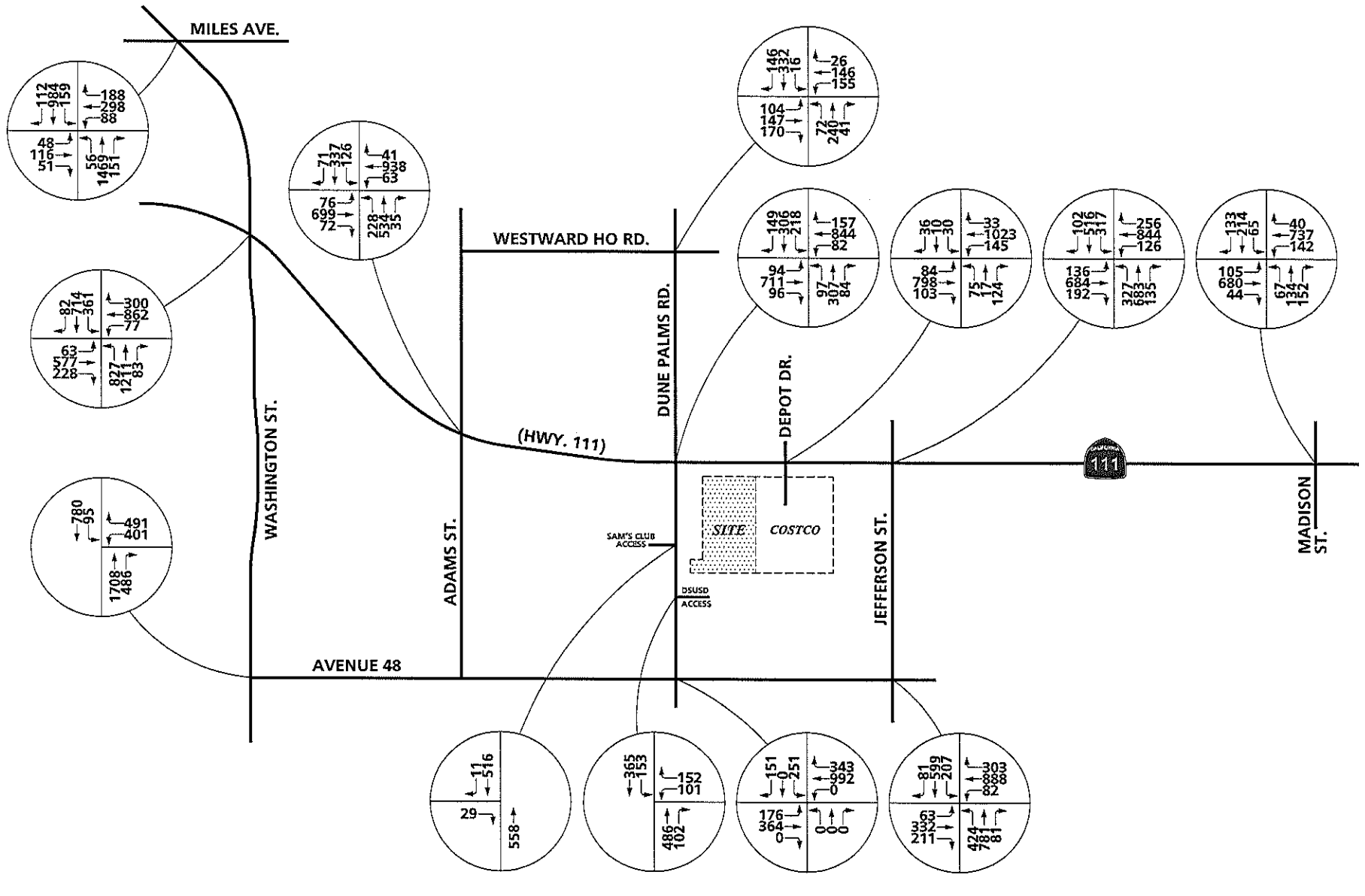
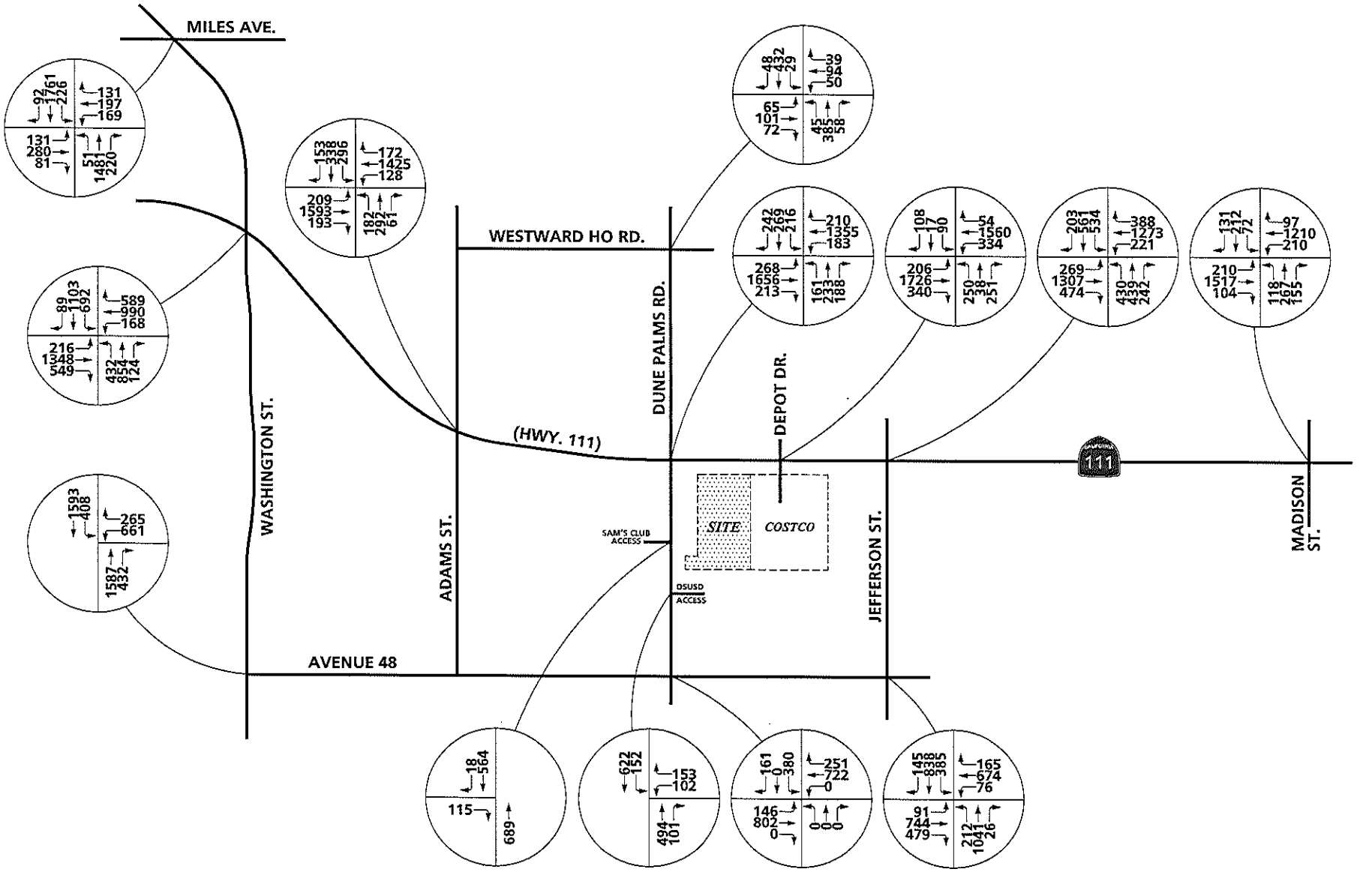


EXHIBIT 6-B

EXISTING PLUS AMBIENT PLUS CUMULATIVE (2011) PM PEAK HOUR INTERSECTION VOLUMES



Study Area Intersections Level of Service with CIP Lane Configurations for E+A+C (2011) Conditions

For E + A + C (2011) traffic conditions, the following study area intersections are anticipated to continue to operate at unacceptable levels of service during the peak hours with the CIP improvements listed on Table 6-1:

Dune Palms Road (NS) at:

- Westward Ho (EW)
- School District Driveway (EW)

E + A + C (2011) intersection operation analysis worksheets are provided in Appendix "H".

2. Road Segment Analysis for E + A + C (2011) Conditions

As noted above, the City of La Quinta has established Level of Service capacities for the various types of roadway classifications. For purposes of this analysis, the Level of Service "D" capacity has been established as the acceptable capacity Existing plus Ambient plus Cumulative (2011) average daily traffic (ADT) is depicted previously on Exhibit 4-Q. Table 6-2 shows the Existing plus Ambient plus Cumulative (2011) segment analysis with the corresponding levels of service.

Study Area Roadway Segments Level of Service with Existing Lane Configurations for E+A+C (2011) Conditions

As shown on Table 6-2, the following study area roadway segments are anticipated to operate with unacceptable levels of service with existing lane configurations:

Dune Palms Road (NS) between:

- Westward Ho and Highway 111

TABLE 6-2

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE (2011) CONDITIONS

INTERSECTION	GENERAL PLAN ROADWAY CLASSIFICATION [1]	EXISTING NUMBER OF LANES	E+A+C (2011)							
							WITH CIP IMPROVEMENTS			
			LOS E CAPACITY [2]	ADT [3]	V/C	LOS [4]	# OF LANES	LOS E CAPACITY [2]	CIP V/C	LOS [4]
Washington Street (NS) between:										
• Miles Avenue and Highway 111	Major (6D)	6	57,000	41,344	0.73	C	6	N/A	N/A	N/A
• Highway 111 and Avenue 48	Augmented Arterial (8D)	6	57,000 [5]	43,155	0.76	C	N/A	N/A	N/A	N/A
Dune Palms Road (NS) between:										
• Westward Ho and Highway 111	Secondary Roadway (4U)	2	14,000 [5]	16,284	1.16	F	N/A	N/A	N/A	N/A
• Highway 111 and DSUSD Dwy.- "A" Street	Secondary Roadway (4U)	4	28,000	17,259	0.62	B	N/A	N/A	N/A	N/A
• School District Driveway - "A" Street and Avenue 48	Secondary Roadway (4U)	4	28,000	15,126	0.54	A	N/A	N/A	N/A	N/A
Jefferson Street (NS) between:										
• North of Highway 111	Major (6D)	6	57,000	29,904	0.52	A	N/A	N/A	N/A	N/A
• Highway 111 and Avenue 48	Major (6D)	6	57,000	28,311	0.50	A	N/A	N/A	N/A	N/A
Highway 111 (EW) between:										
• Washington Street and Adams Street	Major (6D)	6	57,000	42,413	0.74	C	N/A	N/A	N/A	N/A
• Adams Street and Dune Palms Road	Major (6D)	6	57,000	47,650	0.84	D	N/A	N/A	N/A	N/A
• Dune Palms Road and Depot Drive	Major (6D)	4	38,000 [5]	49,211	1.30	F	6	57,000	0.86	D
• Depot Drive and Jefferson Street	Major (6D)	4	38,000 [5]	46,694	1.23	F	6	57,000	0.82	D
• Jefferson Street and Madison Street	Major (6D)	4	38,000 [5]	46,409	1.22	F	6	57,000	0.81	D
Avenue 48 (EW) between:										
• Adams Street and Dune Palms Road	Primary Roadway - A (4D)	4	38,000	22,168	0.58	A	N/A	N/A	N/A	N/A
• Dune Palms Road and Jefferson Street	Primary Roadway - A (4D)	4	38,000	25,115	0.66	B	N/A	N/A	N/A	N/A

[1] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[2] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, volume to capacity ratios greater than or equal to 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity as applied in the City of La Quinta General Plan Circulation Element (2002).

[3] Average Daily Traffic (ADT) expressed in vehicles per day.

[4] Level of Service:
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

[5] Some road segments are not built to their ultimate General Plan buildout classification. LOS "E" capacity is based on the current functional roadway classification that closely corresponds City of La Quinta roadway classifications.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 6-2

Highway 111 (EW) between:

- Dune Palms Road and Depot Drive
- Depot Drive and Jefferson Street
- Jefferson Street and Madison Street

Study Area Roadway Segments Level of Service with CIP Configurations for E+A+C (2011) Conditions

With the completion of the CIP improvements along Highway 111, the following road segment is anticipated to continue to operate with unacceptable levels of service:

Dune Palms Road (NS)

- Between Westward Ho and Highway 111

C. Level of Service for E + A + C + P (2011)

1. Intersection Analysis for Existing Plus Ambient Plus Cumulative Plus Project (2011) Conditions

Existing plus Ambient plus Cumulative plus Project (2011) intersection levels of service for the existing network are shown in Table 6-3. Table 6-3 shows the ICU and HCM calculations based on the lane configurations and recommended improvements at the study area intersections. Existing plus Ambient plus Cumulative plus Project (2011) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-C and 6-D, respectively.

Study Area Intersections Level of Service with Existing Lane Configurations for E+A+C+P (2011) Conditions

For Existing plus Ambient plus Cumulative plus Project (2011) traffic conditions, the following study area intersections are projected to operate at unacceptable levels of service during the peak hours with existing lane configurations:

TABLE 6-3

INTERSECTION ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE + PROJECT (2011) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												ICU/DELAY[2] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Washington Street (NS) at:																	
• Miles Avenue (EW)	TS	1	3	1>>	1	3	1	1	2	0	2	2	0	0.703	0.688	C	B
• Highway 111 (EW)	TS	2	3	1	2	3	0	2	3	1	2	3	1	0.745	0.919	C	E
• Avenue 48 (EW)	TS	0	3	0	1	3	0	0	0	0	2	0	1	0.878	0.960	D	E
Adams Street (NS)																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	2	1	2	2	1>	1	3	1	1	3	1	0.482	0.643	A	B
with CIP improvements [6]	TS	2	2	1	2	2	1>	2	3	1	2	3	1	0.459	0.592	A	A
Dune Palms Road (NS) at:																	
• Westward Ho Road (EW)	TS	1	1	0	1	1	1	1	1	0	1	1	1	0.948	0.492	E	A
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	2	1	2	2	1	1	2	1	1	2	1	0.635	0.857	B	D
with CIP improvements [6]	TS	2	2	1	2	2	1	2	3	1	2	3	1	0.488	0.635	A	B
• School District Driveway - "A" Street (EW)	TS	1	2	1	1	2	0	1	1	0	1	1	0	0.484	0.537	A	A
• Avenue 48 (EW)	TS	0	1!	0	2	0	1	2	2	1	1	2	1	0.573	0.448	A	A
Project Access #1 (NS) at:																	
• Highway 111 (EW)																	
with CIP improvements [6]	CSS	0	0	1	0	0	0	0	3	1	0	3	0	10.7	15.7	B	C
Project Access #2 (NS) at:																	
• Highway 111 (EW)																	
with CIP improvements [6]	CSS	0	0	1	0	0	0	0	3	1	0	3	0	10.7	16.2	B	C
School District Driveway (NS) at:																	
• "A" Street	CSS	0	0	0	0	1!	0	1	1	0	0	1	0	10.2	10.4	B	B
Depot Drive (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	1.5	0.5	1	1	1	0	1	3	1	1	2	1	0.492	0.793	A	C
with CIP improvements [6]	TS	1.5	0.5	1	1	1	0	2	3	1	2	3	1	0.344	0.658	A	B
Jefferson Street (NS) at:																	
Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	3	1	2	3	1	1	2	1	1	2	0	0.822	1.050	D	F
with CIP improvements [6]	TS	2	3	1	2	3	1	2	3	1	2	3	1	0.574	0.721	A	C
• Avenue 48 (EW)	TS	2	3	1	2	3	1	1	2	1	1	2	0	0.779	0.738	C	C
Madison Street (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	1	1	0	1	1	0	1	2	1	1	2	0	0.622	0.956	B	E
with CIP improvements [6]	TS	1	2	1	1	1	1	2	3	1	2	3	0	0.409	0.623	A	B

[1] When a right turn is designated, the lane can either be striped or unstriped. 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/thru/right lane; > = Right Turn Overlap Phase; >> Free Right Turn Lane; 1 = Improvement

[2] Per City of La Quinta Engineering Bulletin, the ICU method shall be used to determine signalized intersection level of service. For unsignalized intersections, the intersection delay has been calculated using the HCM methodology.
Delay and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008) and SYNCHRO 7 (2007).
Intersection level of service shown is based on the V/C for intersections with traffic signals. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Delay and LOS based on existing lane geometric configuration identified in Exhibit 3-A

[6] Delay and LOS based on City of La Quinta and City of Indio's Capital Improvement Plan as illustrated in Exhibit 3-G

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 6-3

EXHIBIT 6-C

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011) AM PEAK HOUR INTERSECTION VOLUMES

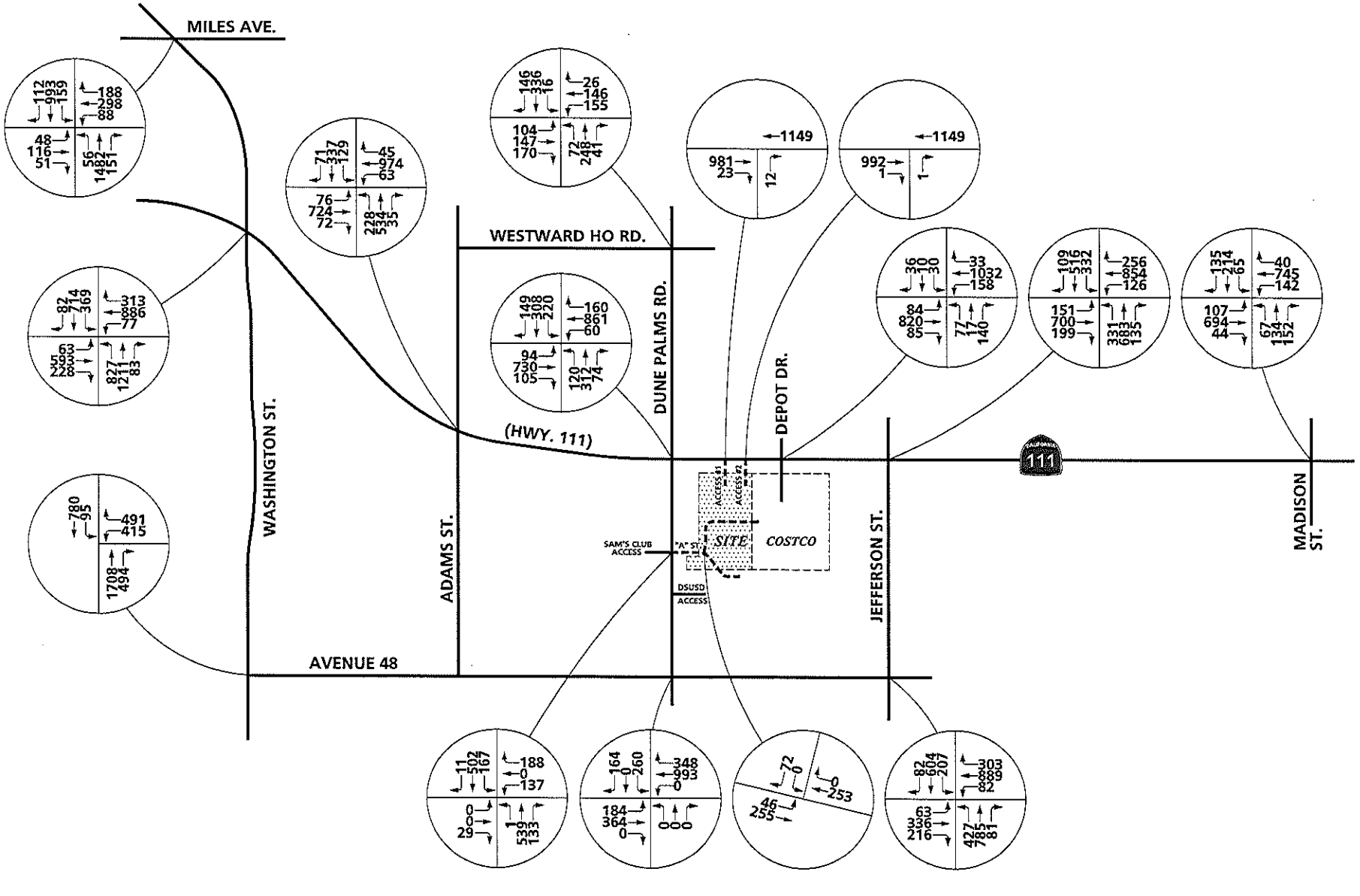
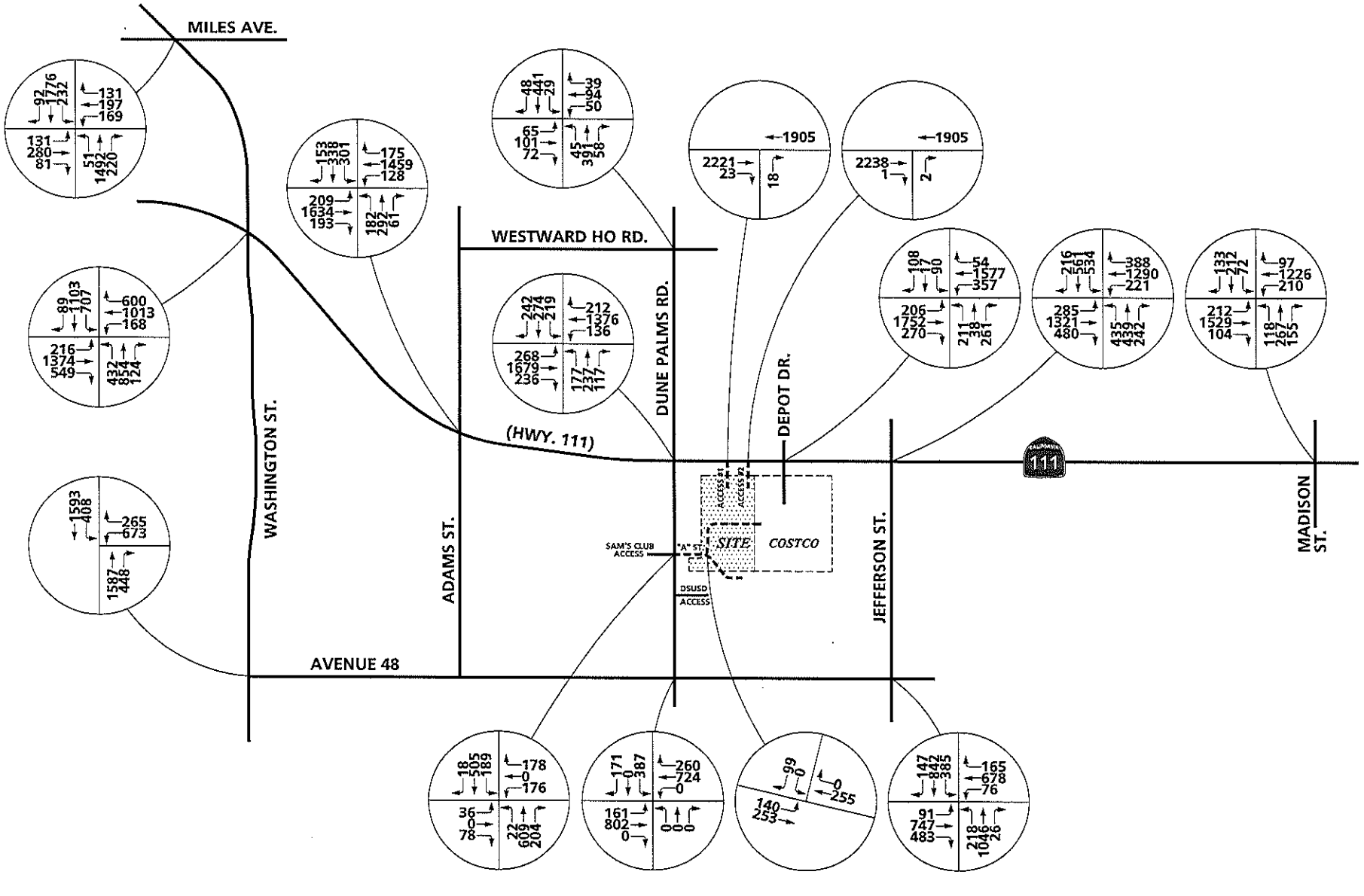


EXHIBIT 6-D

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011) PM PEAK HOUR INTERSECTION VOLUMES



Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- Westward Ho (EW)

Jefferson Street (NS)

- Highway 111 (EW)

Madison Street (NS)

- Highway 111 (EW)

Study Area Intersections Level of Service with CIP Configurations for E+A+C+P (2011) Conditions

For Existing plus Ambient plus Cumulative plus Project (2011) traffic conditions, the following study area intersections are anticipated to continue to operate with unacceptable levels of service during the peak hours with the CIP improvements listed on Table 6-3:

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- Westward Ho (EW)

The analysis calculation worksheets for Existing plus Ambient plus Cumulative plus Project (2011) conditions are provided in Appendix "I".

2. Progression Analysis for Existing Plus Ambient Plus Cumulative Plus Project (2011) Conditions

Table 6-4 compares the storage provided for each possible traffic movement to the 95th percentile queue for the Existing plus Ambient plus Cumulative plus Project (2011) traffic conditions. As indicated on Table 6-4, it is anticipated that the inbound and outbound turning movements are provided with adequate storage with the installation of a traffic signal and storage length improvements at the Dune Palms Road/ "A" Street intersection. The SYNCHRO analysis calculation worksheets for Existing plus Ambient plus Cumulative plus Project (2011) conditions are provided in Appendix "I".

3. Potentially Significant Impact Intersection Assessment for E + A + C + P (2011) Conditions

Potentially Significant Project Specific Impacts

The results of the potentially significant project specific impact assessment are summarized in Table 6-5. The analysis indicates that a potentially significant project specific impact is anticipated at the following study area intersection with the completion of CIP improvements along Highway 111:

Dune Palms Street (NS) at:

- "A" Street (EW)

Potentially Significant Cumulative Impacts

In addition to identifying potentially significant project specific impacts, the City of La Quinta requires a potentially significant cumulative impact assessment for the study area intersections. The results of the analysis indicate potentially significant cumulative impacts are anticipated at the following study area intersection locations:

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

TABLE 6-4

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011)
AM/PM PEAK HOUR STACKING LENGTH SUMMARY WITH IMPROVEMENTS

INTERSECTION	MOVEMENT	STACKING DISTANCE PROVIDED (FEET)	STACKING DISTANCE REQUIRED (FT) [1]		ACCEPTABLE? [2]	
			AM	PM	AM	PM
Dune Palms Road (NS) / at:						
• "A" Street (EW)						
	NBL	100	6	48	YES	YES
	NBT	1300	201	266	YES	YES
	NBR	**250**	42	107	YES	YES
	SBL	**250**	198	224	YES	YES
	SBT	1100	121	153	YES	YES
	EBL	100	0	52	YES	YES
	EBT	100	0	0	YES	YES
	WBT	209	167	202	YES	YES
	WBR	209	46	49	YES	YES

[1] Required stacking distance shown is based on average (95th Percentile) queue length.

[2] Stacking Distance is acceptable if one of the following criteria is satisfied: (1) stacking distance is less than or equal to the stacking distance provided, (2) the anticipated queue can be accommodated within the transition area; or (3) appropriate signage can be installed to avoid blockage to the upstream intersection.

[3] 95th percentile volume exceeds capacity, queue may be longer.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 6-4

TABLE 6-5

POTENTIALLY SIGNIFICANT IMPACT INTERSECTION ASSESSMENT FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011) TRAFFIC CONDITIONS

		E+A+C (2011)				E+A+C+P (2011)													
		ICU[1] (V/C)		LEVEL OF SERVICE		ICU[1] (V/C)		LEVEL OF SERVICE		AM Δ	PK. HR. PROJECT TRIPS TO		SIGNIFICANT IMPACT? [3]		PM Δ	PK. HR. PROJECT TRIPS TO		SIGNIFICANT IMPACT? [3]	
INTERSECTION	TRAFFIC CONTROL[2]	AM	PM	AM	PM	AM	PM	AM	PM	V/C	CRITICAL MOVEMENT	INTERSECTION	PROJECT	CUMULATIVE	V/C	CRITICAL MOVEMENT	INTERSECTION	PROJECT	CUMULATIVE
Washington Street (NS) at:																			
• Miles Avenue (EW)	TS	0.700	0.682	B	B	0.703	0.688	C	B	0.003	4	21	NO	NO	0.006	4	26	NO	NO
• Highway 111 (EW)	TS	0.736	0.906	C	E	0.745	0.919	C	E	0.009	12	80	NO	NO	0.013	11	74	NO	YES
• Avenue 48 (EW)	TS	0.878	0.953	D	E	0.878	0.960	D	E	0.002	0	22	NO	NO	0.007	6	28	NO	YES
Adams Street (NS)																			
• Highway 111 (EW)																			
with CIP improvements	TS	0.451	0.582	A	A	0.459	0.592	A	A	0.008	12	68	NO	NO	0.010	14	82	NO	NO
Dune Palms Road (NS) at:																			
• Westward Ho Road (EW)	TS	0.944	0.488	E	A	0.948	0.492	E	A	0.004	4	12	NO	NO	0.004	6	14	NO	NO
• Highway 111 (EW)	TS																		
with CIP Improvements		0.481	0.641	A	B	0.488	0.635	A	B	0.007	6	97	NO	NO	-0.006	8	117	NO	NO
• Avenue 48 (EW)	TS	0.565	0.439	A	A	0.573	0.448	A	A	0.008	5	36	NO	NO	0.009	8	45	NO	NO
Depot Drive (NS) at:																			
• Highway 111 (EW)	TS																		
with CIP Improvements		0.341	0.656	A	B	0.344	0.658	A	B	0.003	3	80	NO	NO	0.002	12	102	NO	NO
Jefferson Street (NS) at:																			
• Highway 111 (EW)	TS																		
with CIP Improvements		0.560	0.717	A	C	0.574	0.721	A	C	0.014	8	58	NO	NO	0.004	7	72	NO	NO
• Avenue 48 (EW)		0.777	0.734	C	C	0.779	0.738	C	C	0.002	2	23	NO	NO	0.004	5	31	NO	NO
Madison Street (NS) at:																			
• Highway 111 (EW)	TS																		
with CIP Improvements		0.407	0.620	A	B	0.409	0.623	A	B	0.002	3	25	NO	NO	0.003	4	32	NO	NO

[1] Per City of La Quinta Engineering Bulletin, the ICU method shall be used to determine signalized intersection level of service. The ICU and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008) and SYNCHRO 7 (2007). Intersection level of service shown is based on the V/C for intersections with traffic signals.

[2] TS = Traffic Signal

[3] SIG.? = An intersection is classified as having a project specific impact if the intersection is operating with a LOS E and the project adds 20 peak hour trips to any critical movement. For LOS F, if the project adds 10 peak hour trips to a critical movement, it is considered as a project specific impact. A cumulative impact is assumed to occur if the project adds 25 or more peak hour trips to an intersection projected to operate at worse than LOS D at project buildout.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 6-5

4. Road Segment Analysis for E + A + C + P (2011) Conditions

Table 6-6 shows the Existing plus Ambient plus Cumulative plus Project (2011) Phase conditions segment analysis with appropriate levels of service.

Study area Road Segments Level of Service with Existing Lane Configurations for E+A+C+P (2011) Conditions

As shown on Table 6-6, with the addition of the project traffic, the following study area roadway segments are anticipated to operate with unacceptable levels of with existing lane configurations:

Dune Palms Road (EW) between:

- Westward Ho and Highway 111

Highway 111 (EW) between:

- Dune Palms Road and Depot Drive
- Depot Drive and Jefferson Street
- Jefferson Street and Madison Street

Study area Road Segments Level of Service with CIP Lane Configurations for E+A+C+P (2011) Conditions

With the completion of the CIP improvements along Highway 111, the following road segment is anticipated to continue to operate with unacceptable levels of service:

Dune Palms Road (EW)

- Between Westward Ho and Highway 111

TABLE 6-6

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011) CONDITIONS

INTERSECTION	GENERAL PLAN ROADWAY CLASSIFICATION [1]	EXISTING NUMBER OF LANES	E+A+C+P (2011)							
							WITH CIP IMPROVEMENTS			
			LOS E CAPACITY [2]	ADT [3]	V/C	LOS [4]	# OF LANES	LOS E CAPACITY [2]	CIP V/C	LOS [4]
Washington Street (NS) between:										
• Miles Avenue and Highway 111	Major (6D)	6	57,000	41,628	0.73	C	N/A	N/A	N/A	N/A
• Highway 111 and Avenue 48	Augmented Arterial (8D)	6	57,000 [5]	43,155	0.76	C	N/A	N/A	N/A	N/A
Dune Palms Road (NS) between:										
• Westward Ho and Highway 111	Secondary Roadway (4U)	2	14,000 [5]	16,436	1.17	F	N/A	N/A	N/A	N/A
• Highway 111 and DSUSD Dwy.- "A" Street	Secondary Roadway (4U)	4	28,000	16,299	0.58	A	N/A	N/A	N/A	N/A
• School District Driveway - "A" Street and Avenue 48	Secondary Roadway (4U)	4	28,000	15,575	0.56	A	N/A	N/A	N/A	N/A
Jefferson Street (NS) between:										
• North of Highway 111	Major (6D)	6	57,000	30,208	0.53	A	N/A	N/A	N/A	N/A
• Highway 111 and Avenue 48	Major (6D)	6	57,000	28,446	0.50	A	N/A	N/A	N/A	N/A
Highway 111 (EW) between:										
• Washington Street and Adams Street	Major (6D)	6	57,000	43,235	0.76	C	N/A	N/A	N/A	N/A
• Adams Street and Dune Palms Road	Major (6D)	6	57,000	48,561	0.85	D	N/A	N/A	N/A	N/A
• Dune Palms Road and Depot Drive	Major (6D)	4	38,000 [5]	48,403	1.27	F	6	57,000	0.85	D
• Depot Drive and Jefferson Street	Major (6D)	4	38,000 [5]	47,513	1.25	F	6	57,000	0.83	D
• Jefferson Street and Madison Street	Major (6D)	4	38,000 [5]	46,747	1.23	F	6	57,000	0.82	D
Avenue 48 (EW) between:										
• Adams Street and Dune Palms Road	Primary Roadway - A (4D)	4	38,000	22,460	0.59	A	N/A	N/A	N/A	N/A
• Dune Palms Road and Jefferson Street	Primary Roadway - A (4D)	4	38,000	25,318	0.67	B	N/A	N/A	N/A	N/A

[1] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[2] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, volume to capacity ratios greater than or equal to 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity as applied in the City of La Quinta General Plan Circulation Element (2002).

[3] Average Daily Traffic (ADT) expressed in vehicles per day.

[4] Level of Service:
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

[5] Some road segments are not built to their ultimate General Plan buildout classification. LOS "E" capacity is based on the current functional roadway classification that closely corresponds City of La Quinta roadway classifications.

[6] -- = No CIP Improvements

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls] 6-6

5. Potentially Significant Road Segment Project Specific Impact Assessment for E + A + C + P (2011) Conditions

Potentially Significant Project Impacts

The results of the potentially significant project specific impact assessment for the study area roadway segments are summarized in Table 6-7. The analysis indicates that no potentially significant project specific impacts are anticipated at the study area roadway segments with CIP lane configurations.

D. Level of Service for E + A + C (2016) Conditions

1. Intersection Analysis for E + A + C (2016) Conditions

Existing plus Ambient plus Cumulative (2016) intersection levels of service for the existing network are shown in Table 6-8. Table 6-8 shows ICU and HCM calculations based on existing lane configuration and recommended improvements at the study area intersections. Existing plus Ambient plus Cumulative (2016) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-E and 6-F, respectively.

Study Area Intersections Level of Service with Existing Lane Configurations for E+A+C (2016) Conditions

For Existing plus Ambient plus Cumulative (2016) traffic conditions, the following study area intersections are projected to operate at unacceptable levels of service during the peak hours with existing roadway design:

Washington Street (NS) at:

- Miles Avenue (EW)
- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- Westward Ho (EW)
- Highway 111 (EW)
- School District Driveway (EW)

TABLE 6-7

POTENTIALLY SIGNIFICANT IMPACT ROADWAY SEGMENT ASSESSMENT FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011) CONDITIONS

INTERSECTION	GENERAL PLAN ROAD CLASSIFICATION [1]	NUMBER OF LANES	E+A+C (2011) LOS E CAPACITY [2]	E+A+C (2011) ADT [3]	E+A+C (2011) V/C	E+A+C (2011) LOS [4]	PROJECT ADT [3]	E+A+C+P (2011) PHASE 1 CONDITIONS LOS E CAPACITY [2]	E+A+C+P (2011) PHASE 1 CONDITIONS ADT [3]	E+A+C+P (2011) PHASE 1 CONDITIONS V/C	E+A+C+P (2011) PHASE 1 CONDITIONS LOS [4]	E+A+C+P (2011) PHASE 1 CONDITIONS Δ V/C	E+A+C+P (2011) PHASE 1 CONDITIONS PROJECT IMPACT [5]
Washington Street (NS) between:													
• Miles Avenue and Highway 111	Major (6D)	6	57,000	41,344	0.73	C	284	57,000	41,628	0.73	C	0.00	NO
• Highway 111 and Avenue 48	Augmented Arterial (8D)	6	57,000 [6]	43,155	0.76	C	0	57,000 [6]	43,155	0.76	C	0.00	NO
Dune Palms Road (NS) between:													
• Westward Ho and Highway 111	Secondary Roadway (4U)	2	14,000 [6]	16,284	1.16	F	152	14,000 [6]	16,436	1.17	F	0.01	NO
• Highway 111 and DSUSD Dwy.- "A" Street	Secondary Roadway (4U)	4	28,000	17,259	0.62	B	706	28,000	16,299	0.58	A	-0.04	NO
• School District Driveway - "A" Street and Avenue 48	Secondary Roadway (4U)	4	28,000	15,126	0.54	A	449	28,000	15,575	0.56	A	0.02	NO
Jefferson Street (NS) between:													
• North of Highway 111	Major (6D)	6	57,000	29,904	0.52	A	304	57,000	30,208	0.53	A	0.01	NO
• Highway 111 and Avenue 48	Major (6D)	6	57,000	28,311	0.50	A	135	57,000	28,446	0.50	A	0.00	NO
Highway 111 (EW) between:													
• Washington Street and Adams Street	Major (6D)	6	57,000	42,413	0.74	C	822	57,000	43,235	0.76	C	0.02	NO
• Adams Street and Dune Palms Road	Major (6D)	6	57,000	47,650	0.84	D	911	57,000	48,561	0.85	D	0.01	NO
• Dune Palms Road and Depot Drive - with CIP improvements	Major (6D)	6	57,000	49,211	0.86	D	858	57,000	48,403	0.85	D	-0.01	NO
• Depot Drive and Jefferson Street - with CIP improvements	Major (6D)	6	57,000	46,694	0.82	D	819	57,000	47,513	0.83	D	0.01	NO
• Jefferson Street and Madison Street - with CIP improvements	Major (6D)	6	57,000	46,409	0.81	D	338	57,000	46,747	0.82	D	0.01	NO
Avenue 48 (EW) between:													
• Adams Street and Dune Palms Road	Primary Roadway - A (4D)	4	38,000	22,168	0.58	A	292	38,000	22,460	0.59	A	0.01	NO
• Dune Palms Road and Jefferson Street	Primary Roadway - A (4D)	4	38,000	25,115	0.66	B	203	38,000	25,318	0.67	B	0.01	NO

[1] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[2] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, volume to capacity ratios greater than or equal to 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity as applied in the City of La Quinta General Plan Circulation Element (2002).

[3] Average Daily Traffic (ADT) expressed in vehicles per day. See Appendix "B".

[4] Level of Service:
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

[5] Per City of La Quinta Engineering Bulletin #06-13, a potentially significant project specific traffic impact is defined to occur on any road segment if the project would cause the existing LOS to fall to worse than LOS D at project buildout. In addition, a potentially significant project specific traffic impact is also defined to occur on any road segment operating at LOS E or LOS F, if the V/C ratio is increased by 0.02. It is assumed that CIP improvements are already in place.

[6] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, capacity ratios greater than 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity/ Level of Service for Riverside County Roadways.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]6-7

TABLE 6-8

INTERSECTION ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												ICU/DELAY[2] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Washington Street (NS) at:																	
• Miles Avenue (EW)	TS	1	3	1>>	1	3	1	1	2	0	2	2	0	0.864	0.947	D	E
• Highway 111 (EW)	TS	2	3	1	2	3	0	2	3	1	2	3	1	0.847	1.176	D	F
• Avenue 48 (EW)	TS	0	3	0	1	3	0	0	0	0	2	0	1	0.996	1.137	E	F
Adams Street (NS)																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	2	1	2	2	1>	1	3	1	1	3	1	0.593	0.881	A	D
with CIP improvements [6]	TS	2	2	1	2	2	1>	**2**	3	1	**2**	3	1	0.562	0.786	A	C
Dune Palms Road (NS) at:																	
• Westward Ho Road (EW)	TS	1	1	0	1	1	1	1	1	0	1	1	1	1.067	0.635	F	B
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	2	1	2	2	1	1	2	1	1	2	1	0.840	1.182	D	F
with CIP improvements [6]	TS	2	2	1	2	2	1	**2**	**3**	1	**2**	**3**	1	0.631	0.853	B	D
• Sam's Club Driveway (EW)	CSS	0	2	0	1	2	1	0	0	1	0	0	0	10.8	11.6	B	B
• School District Driveway - "A" Street (EW)	CSS	0	2	0	1	2	0	0	0	0	0	1l	0	--[4]	--[4]	F	F
• Avenue 48 (EW)	TS	0	1l	0	2	0	1	2	2	1	1	2	1	0.617	0.499	B	A
Depot Drive (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	1.5	0.5	1	1	1	0	1	3	1	1	2	1	0.679	1.086	B	F
with CIP improvements [6]	TS	1.5	0.5	1	1	1	0	**2**	3	1	**2**	**3**	1	0.466	0.849	A	D
Jefferson Street (NS) at:																	
Highway 111 (EW)																	
with existing lane geometry [5]	TS	2	3	1	2	3	1	1	2	1	1	2	0	1.166	1.620	F	F
with CIP improvements [6]	TS	2	3	1	2	3	1	**2**	**3**	1	**2**	**3**	1	0.855	1.284	D	F
• Avenue 48 (EW)	TS	2	3	1	2	3	1	1	2	1	1	2	0	1.005	0.967	F	E
Madison Street (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry [5]	TS	1	1	0	1	1	0	1	2	1	1	2	0	0.855	1.304	D	F
with CIP improvements [6]	TS	1	**2**	**1**	1	1	**1**	**2**	**3**	1	**2**	**3**	0	0.553	0.870	A	D

[1] When a right turn is designated, the lane can either be striped or unstriped. 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; 1l = Shared left/thru/right lane; > = Right Turn Overlap Phase; >> Free Right Turn Lane
1 = Improvement

[2] Per City of La Quinta Engineering Bulletin, the ICU method shall be used to determine signalized intersection level of service. For unsignalized intersections, the intersection delay has been calculated using the HCM methodology.
Delay and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008) and SYNCHRO 7 (2007).
Intersection level of service shown is based on the V/C for intersections with traffic signals. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Delay and LOS based on existing lane geometric configuration identified in Exhibit 3-A

[6] Delay and LOS based on City of La Quinta and City of Indio's Capital Improvement Plan as illustrated in Exhibit 3-G

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 6-5

EXHIBIT 6-E

EXISTING PLUS AMBIENT PLUS CUMULATIVE (2016) AM PEAK HOUR INTERSECTION VOLUMES

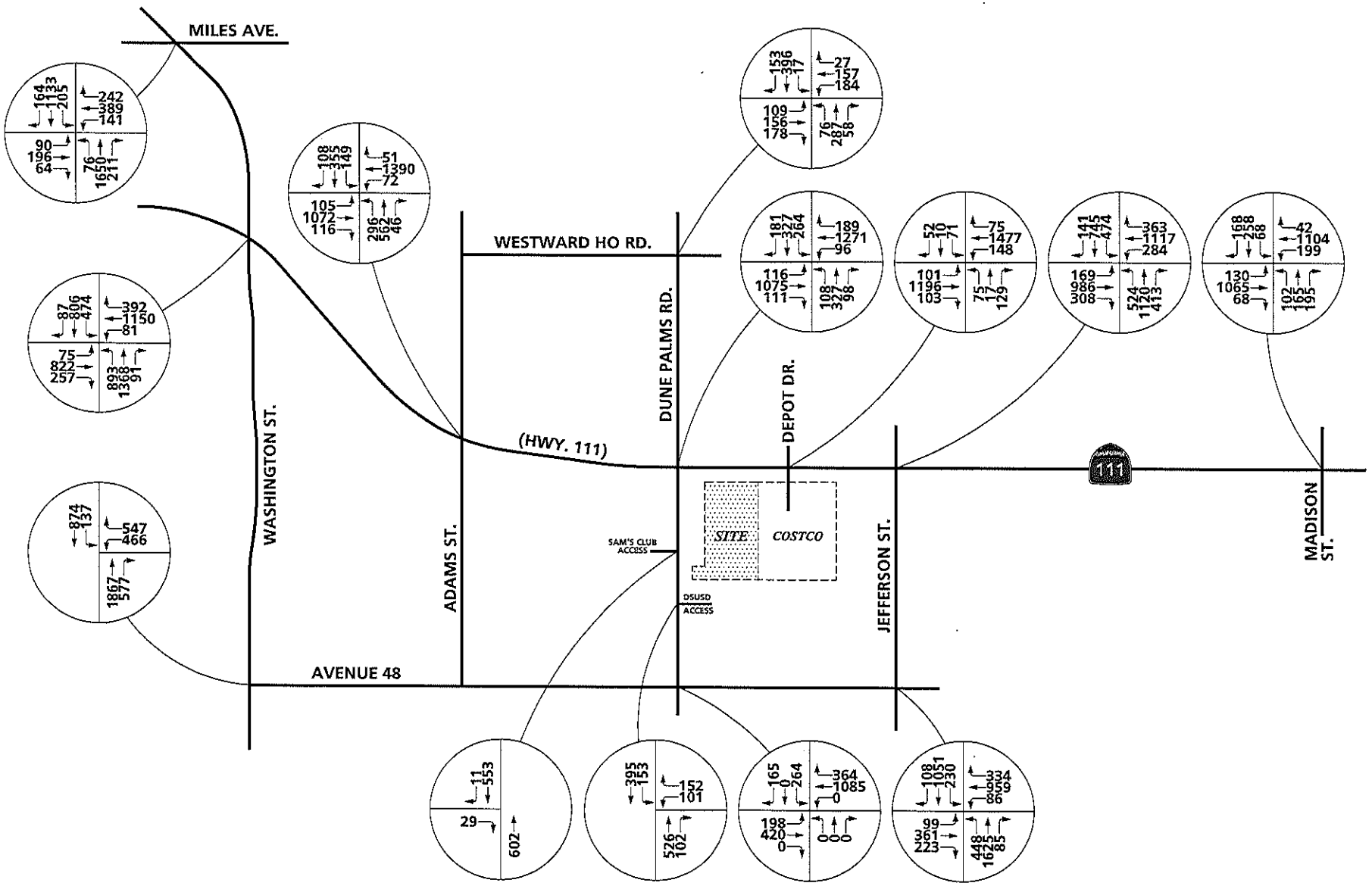
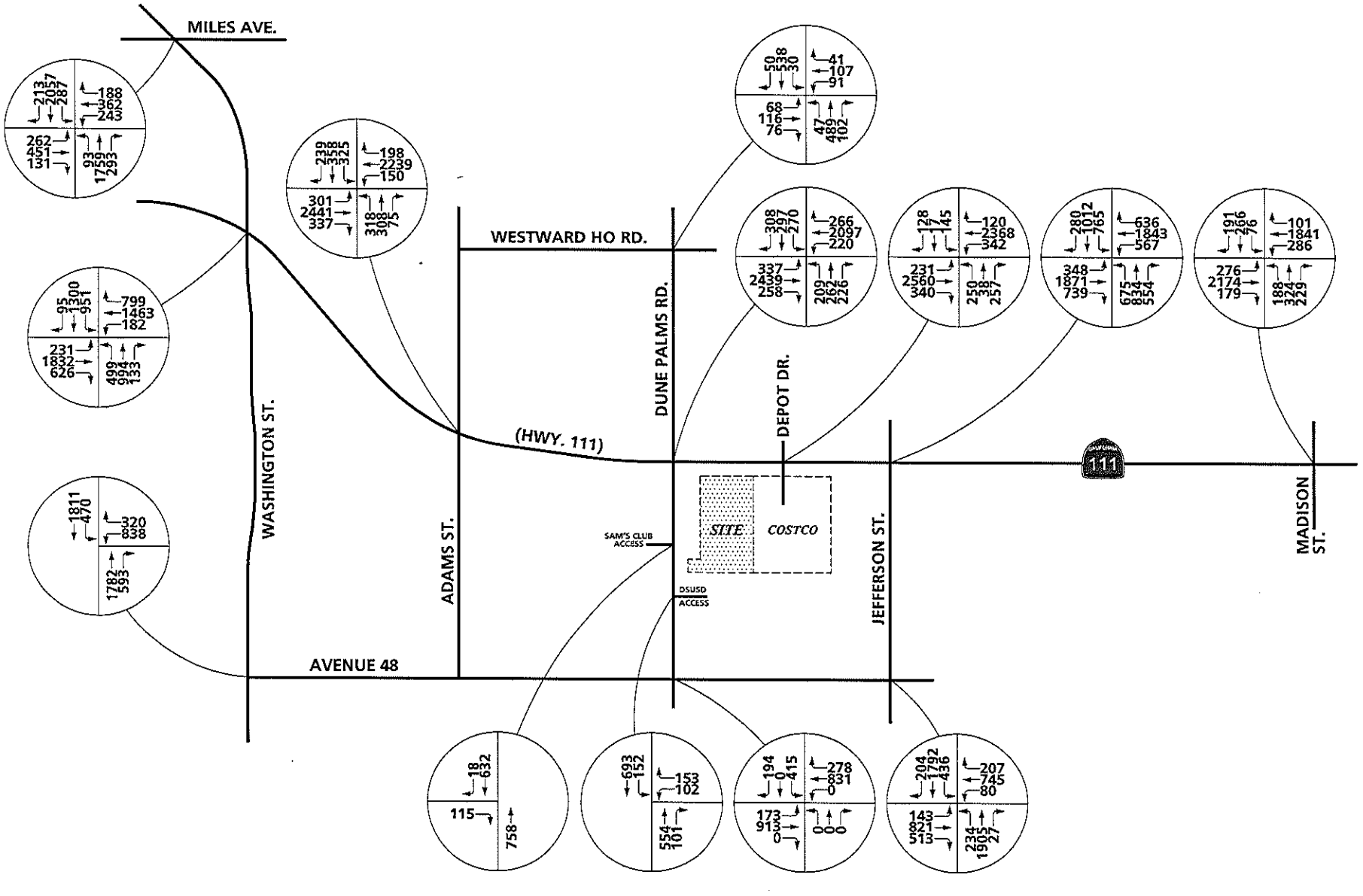


EXHIBIT 6-F

EXISTING PLUS AMBIENT PLUS CUMULATIVE (2016) PM PEAK HOUR INTERSECTION VOLUMES



Depot Drive (NS)

- Highway 111 (EW)

Jefferson Street (NS)

- Highway 111 (EW)
- Avenue 48 (EW)

Madison Street (NS)

- Highway 111 (EW)

Study Area Intersections Level of Service with CIP Lane Configurations for E+A+C (2016) Conditions

For Existing plus Ambient plus Cumulative (2016) traffic conditions, the following study area intersections are anticipated to continue to operate with unacceptable levels of service during the peak hours with the CIP improvements listed on Table 6-8:

Washington Street (NS) at:

- Miles Avenue (EW)
- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- Westward Ho (EW)
- School District Driveway (EW)

Jefferson Street (NS)

- Highway 111 (EW)
- Avenue 48 (EW)

Existing plus Ambient plus Cumulative (2016) intersection operation analysis worksheets are provided in Appendix "K".

2. Road Segment Analysis for E + A + C (2016) Conditions

Existing plus Ambient plus Cumulative (2016) average daily traffic (ADT) is depicted previously on Exhibit 4-S. Table 6-9 shows the Existing plus Ambient plus Cumulative (2016) segment analysis with the corresponding levels of service.

Study Area Road Segments Level of Service with Existing Lane Configurations for E+A+C (2016) Conditions

As shown on Table 6-9, the following study area roadway segments are anticipated to operate with unacceptable levels of service with existing lane configurations:

Dune Palms Road (NS) between:

- Westward Ho and Highway 111

Highway 111 (EW) between:

- Washington Street and Adams Street
- Adams Street and Dune Palms Road
- Dune Palms Road and Depot Drive
- Depot Drive and Jefferson Street
- Jefferson Street and Madison Street

Study Area Road Segments Level of Service with CIP Lane Configurations for E+A+C (2016) Conditions

With the completion of the CIP improvements along Highway 111, the abovementioned road segments are anticipated to continue to operate with unacceptable levels of service.

TABLE 6-9

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE (2016) CONDITIONS

INTERSECTION	GENERAL PLAN ROADWAY CLASSIFICATION [1]	EXISTING NUMBER OF LANES	E+A+C (2016)							
							WITH CIP IMPROVEMENTS			
			LOS E CAPACITY [2]	ADT [3]	V/C	LOS [4]	# OF LANES	LOS E CAPACITY [2]	CIP V/C	LOS [4]
Washington Street (NS) between:										
• Miles Avenue and Highway 111	Major (6D)	6	57,000	48,913	0.86	D	N/A	N/A	N/A	N/A
• Highway 111 and Avenue 48	Augmented Arterial (8D)	6	57,000 [5]	48,185	0.85	D	N/A	N/A	N/A	N/A
Dune Palms Road (NS) between:										
• Westward Ho and Highway 111	Secondary Roadway (4U)	2	14,000 [5]	19,426	1.39	F	N/A	N/A	N/A	N/A
• Highway 111 and DSUSD Dwy.- "A" Street	Secondary Roadway (4U)	4	28,000	19,854	0.71	C	N/A	N/A	N/A	N/A
• School District Driveway - "A" Street and Avenue 48	Secondary Roadway (4U)	4	28,000	16,685	0.60	A	N/A	N/A	N/A	N/A
Jefferson Street (NS) between:										
• North of Highway 111	Major (6D)	6	57,000	45,978	0.81	D	N/A	N/A	N/A	N/A
• Highway 111 and Avenue 48	Major (6D)	6	57,000	49,997	0.88	D	N/A	N/A	N/A	N/A
Highway 111 (EW) between:										
• Washington Street and Adams Street	Major (6D)	6	57,000	64,325	1.13	F	N/A	N/A	N/A	N/A
• Adams Street and Dune Palms Road	Major (6D)	6	57,000	66,253	1.16	F	N/A	N/A	N/A	N/A
• Dune Palms Road and Depot Drive	Major (6D)	4	38,000 [5]	67,351	1.77	F	6	57,000	1.18	F
• Depot Drive and Jefferson Street	Major (6D)	4	38,000 [5]	65,368	1.72	F	6	57,000	1.15	F
• Jefferson Street and Madison Street	Major (6D)	4	38,000 [5]	70,868	1.86	F	6	57,000	1.24	F
Avenue 48 (EW) between:										
• Adams Street and Dune Palms Road	Primary Roadway - A (4D)	4	38,000	25,156	0.66	B	N/A	N/A	N/A	N/A
• Dune Palms Road and Jefferson Street	Primary Roadway - A (4D)	4	38,000	28,190	0.74	B	N/A	N/A	N/A	N/A

[1] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[2] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, volume to capacity ratios greater than or equal to 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity as applied in the City of La Quinta General Plan Circulation Element (2002).

[3] Average Daily Traffic (ADT) expressed in vehicles per day.

[4] Level of Service:
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

[5] Some road segments are not built to their ultimate General Plan buildout classification. LOS "E" capacity is based on the current functional roadway classification that closely corresponds City of La Quinta roadway classifications.

[6] -- = No CIP Improvements

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls] 6-9

E. Level of Service for E + A + C + P (2016)

1. Intersection Analysis for E + A +C + P (2016) Conditions

Existing plus Ambient plus Cumulative plus Project (2016) intersection levels of service for the existing network are shown in Table 6-10. Table 6-10 shows the ICU and HCM calculations based on the lane configurations and recommended improvements at the study area intersections. Existing plus Ambient plus Cumulative plus Project (2016) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-G and 6-H, respectively.

Study Area Intersections Level of Service with Existing Lane Configurations for E+A+C+P (2016) Conditions

For Existing plus Ambient plus Cumulative plus Project (2016) traffic conditions, the following study area intersections are projected to operate at unacceptable levels of service during the peak hours with existing lane configurations:

Washington Street (NS) at:

- Miles Avenue (EW)
- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- Westward Ho (EW)
- Highway 111 (EW)

Depot Drive (NS) at:

- Highway 111 (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

TABLE 6-10

INTERSECTION ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE + PROJECT (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	ICU/DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
Washington Street (NS) at:																	
• Miles Avenue (EW)																	
with existing lane geometry[5]	TS	1	3	1>>	1	3	1	1	2	0	2	2	0	0.669	0.952	D	E
with additional improvements[8]	TS	1	3	1>>	1	3	1	**2**	2	0	2	2	0	0.839	0.874	D	D
• Highway 111 (EW)																	
with existing lane geometry[5]	TS	2	3	1	2	3	0	2	3	1	2	3	1	0.866	1.199	D	F
with additional improvements[7]	TS	2	3	1	2	3	0	2	3	1	2	3	**1>**	0.856	1.053	D	F
• Avenue 48 (EW)																	
with existing lane geometry[5]	TS	0	3	0	1	3	0	0	0	0	2	0	1	0.999	1.149	E	F
with additional improvements[7]	TS	0	3	0	**2**	3	0	0	0	0	2	0	1	0.959	1.011	E	F
Adams Street (NS)																	
• Highway 111 (EW)																	
with existing lane geometry[5]	TS	2	2	1	2	2	1>	1	3	1	1	3	1	0.605	0.899	B	D
with CIP improvements[6]	TS	2	2	1	2	2	1>	**2**	3	1	**2**	3	1	0.575	0.804	A	D
Dune Palms Road (NS) at:																	
• Westward Ho Road (EW)	TS	1	1	0	1	1	1	1	1	0	1	1	1	1.075	0.642	F	B
• Highway 111 (EW)																	
with existing lane geometry[5]	TS	2	2	1	2	2	1	1	2	1	1	2	1	0.860	1.128	D	F
with CIP improvements[6]	TS	2	2	1	2	2	1	**2**	**3**	1	**2**	**3**	1	0.647	0.806	B	D
• School District Driveway - "A" Street (EW)	TS	**1**	2	**1**	**1**	2	0	**1**	**1**	0	**1**	**1**	0	0.500	0.561	A	B
• Avenue 48 (EW)	TS	0	1!	0	2	0	1	2	2	1	1	2	1	0.630	0.513	B	A
Project Access #1 (NS) at:																	
• Highway 111 (EW)																	
with CIP improvements[6]	CSS	0	0	**1**	0	0	0	0	**3**	**1**	0	**3**	0	12.6	29.0	B	D
Project Access #2 (NS) at:																	
• Highway 111 (EW)																	
with CIP improvements[6]	CSS	0	0	**1**	0	0	0	0	**3**	**1**	0	**3**	0	12.3	24.1	B	C
School District Driveway (NS) at:																	
• "A" Street	CSS	0	0	0	0	**1!**	0	**1**	**1**	0	0	**1**	0	10.2	10.5	B	B
Depot Drive (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry[5]	TS	1.5	0.5	1	1	1	0	1	3	1	1	2	1	0.694	1.093	B	F
with CIP improvements[6]	TS	1.5	0.5	1	1	1	0	**2**	3	1	**2**	**3**	1	0.479	0.673	A	D
Jefferson Street (NS) at:																	
Highway 111 (EW)																	
with existing lane geometry[5]	TS	2	3	1	2	3	1	1	2	1	1	2	0	1.194	1.652	F	F
with CIP improvements[6]	TS	2	3	1	2	3	1	**2**	**3**	1	**2**	**3**	**1**	0.861	1.293	D	F
with additional improvements[7]	TS	2	3	1	2	3	1	2	3	**1>**	2	3	1	0.861	1.216	D	F
• Avenue 48 (EW)																	
with existing lane geometry[5]	TS	2	3	1	2	3	1	1	2	1	1	2	0	1.007	0.975	F	E
with additional improvements[8]	TS	2	3	1	2	3	1	1	2	**1>**	1	2	**1**	0.688	0.919	D	E
Madison Street (NS) at:																	
• Highway 111 (EW)																	
with existing lane geometry[5]	TS	1	1	0	1	1	0	1	2	1	1	2	0	0.865	1.310	D	F
with CIP improvements[6]	TS	1	**2**	**1**	1	1	**1**	**2**	**3**	1	**2**	**3**	0	0.558	0.875	A	D

[1] When a right turn is designated, the lane can either be striped or unstriped. 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/thru/right lane; > = Right Turn Overlap Phase; >> Free Right Turn Lane
1 = Improvement

[2] Per City of La Quinta Engineering Bulletin, the ICU method shall be used to determine signalized intersection level of service. For unsignalized intersections, the intersection delay has been calculated using the HCM methodology.
Delay and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008) and SYNCHRO 7 (2007).
Intersection level of service shown is based on the V/C for intersections with traffic signals. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Delay and LOS based on existing lane geometric configuration identified in Exhibit 3-A

[6] Delay and LOS based on City of La Quinta and City of Indio's Capital Improvement Plan as illustrated in Exhibit 3-G

[7] Additional improvements required beyond the CIP program to mitigate potentially significant project impacts.

[8] Additional improvements required beyond the CIP program to mitigate potentially significant cumulative impacts.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls] 6-10

EXHIBIT 6-G

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016) AM PEAK HOUR INTERSECTION VOLUMES

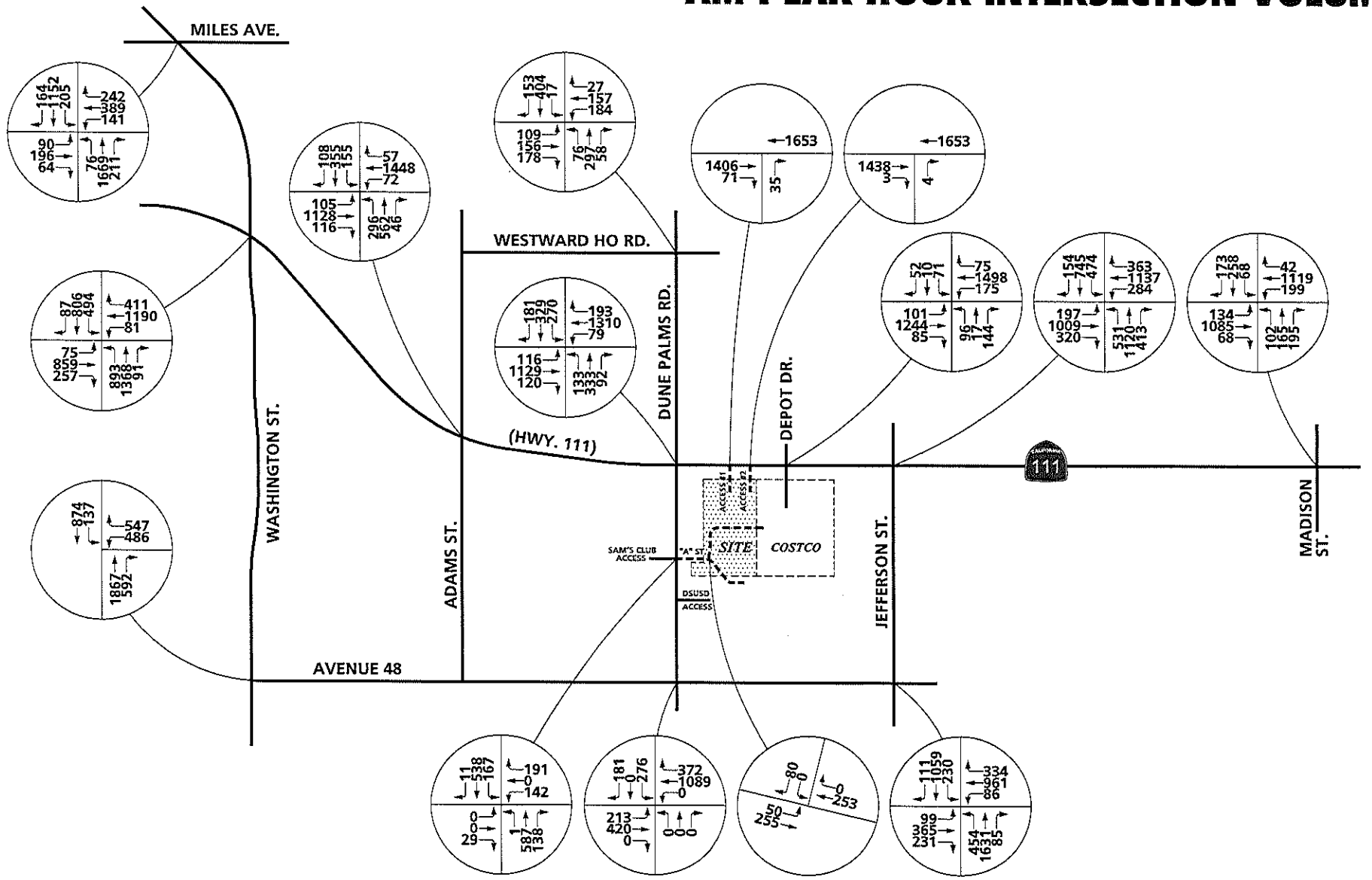
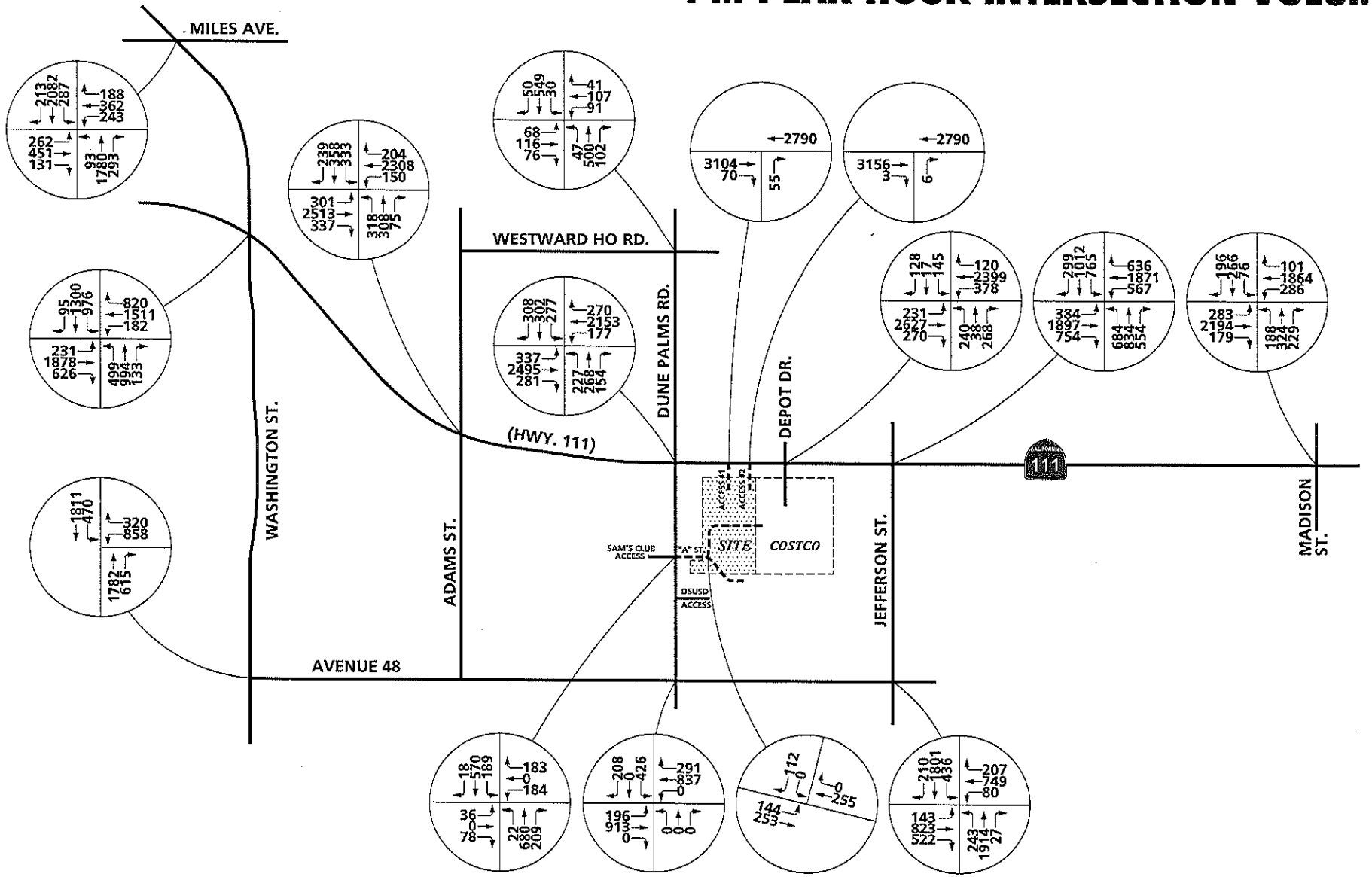


EXHIBIT 6-H

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016) PM PEAK HOUR INTERSECTION VOLUMES



Madison Street (NS) at:

- Highway 111 (EW)

Study Area Intersections Level of Service with CIP Lane Configurations for E+A+C+P (2016) Conditions

For Existing plus Ambient plus Cumulative plus Project (2016) traffic conditions, the following study area intersections are anticipated to continue to operate at unacceptable levels of service during the peak hours with the CIP lane configurations listed on Table 6-10:

Washington Street (NS) at:

- Miles Avenue (EW)
- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- Westward Ho (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

The analysis calculation worksheets for existing plus ambient plus cumulative plus project (2016) conditions are provided in Appendix "L".

2. Progression Analysis for E + A + C + P (2016) Conditions

Table 6-11 compares the storage provided for each possible traffic movement to the 95th percentile queue for the Existing plus Ambient plus Cumulative plus Project (2016) traffic conditions. As indicated on Table 6-11, it is anticipated that the inbound and outbound movements are provided with adequate storage with

TABLE 6-11

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016)
AM/PM PEAK HOUR STACKING LENGTH SUMMARY WITH IMPROVEMENTS

INTERSECTION	MOVEMENT	STACKING DISTANCE PROVIDED (FEET)	STACKING DISTANCE REQUIRED (FT) [1]		ACCEPTABLE? [2]	
			AM	PM	AM	PM
Dune Palms Road (NS) / at:						
• "A" Street (EW)						
	NBL	100	6	48	YES	YES
	NBT	1300	223	307	YES	YES
	NBR	**250**	47	121	YES	YES
	SBL	**250**	198	224	YES	YES
	SBT	1100	133	178	YES	YES
	EBL	100	0	52	YES	YES
	EBT	100	0	0	YES	YES
	WBT	209	172	209	YES	YES
	WBR	209	46	49	YES	YES

[1] Required stacking distance shown is based on average (95th Percentile) queue length.

[2] Stacking Distance is acceptable if one of the following criteria is satisfied: (1) stacking distance is less than or equal to the stacking distance provided, (2) the anticipated queue can be accommodated within the transition area; or (3) appropriate signage can be installed to avoid blockage to the upstream intersection.

[3] 95th percentile volume exceeds capacity, queue may be longer.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]T 6-11

the installation of a traffic signal and storage length improvements at the intersection of Dune Palms Road/ "A" Street. The SYNCHRO analysis calculation worksheets for existing plus ambient plus cumulative plus project (2016) conditions are provided in Appendix "L".

3. Potentially Significant Intersection Impact Assessment for E + A + C + P (2016) Conditions

Potentially Significant Project Specific Impacts

The results of the potentially significant project specific impact assessment are summarized in Table 6-12. The analysis indicates that potentially significant project specific impacts are anticipated at the following intersections with CIP lane configurations:

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- "A" Street (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)

The above mentioned intersections will continue to operate at unacceptable levels of service during the peak hours. However, additional improvements listed in Table 6-10 are anticipated to mitigate these impacts to less than significant levels. These improvements are anticipated to reduce the project impact by mitigating to at least pre-project E+A+C (2016) conditions V/C. As indicated in Table 6-12, the recommended improvements mitigate the project's impact on intersections projected to operate at worse than LOS"D" for E+A+C+P (2016) conditions.

TABLE 6-12

POTENTIALLY SIGNIFICANT IMPACT INTERSECTION ASSESSMENT FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016) TRAFFIC CONDITIONS

		E+A+C (2016)				E+A+C+P (2016)														
										AM PEAK HOUR					PM PEAK HOUR				
		ICU[1] (V/C)		LEVEL OF SERVICE		ICU[1] (V/C)		LEVEL OF SERVICE			PK. HR. PROJECT TRIPS TO		POTENTIALLY SIGNIFICANT IMPACT? [3]			PK. HR. PROJECT TRIPS TO		POTENTIALLY SIGNIFICANT IMPACT? [3]	
INTERSECTION	TRAFFIC CONTROL[2]	AM	PM	AM	PM	AM	PM	AM	PM	AM Δ V/C	CRITICAL MOVEMENT	INTERSECTION	PROJECT	CUMULATIVE	PM Δ V/C	CRITICAL MOVEMENT	INTERSECTION	PROJECT	CUMULATIVE
Washington Street (NS) at:																			
• Miles Avenue (EW)																			
with existing lane geometry	TS	0.864	0.947	D	E	0.869	0.952	D	E	0.005	6	38	NO	NO	0.005	7	46	NO	YES
with additional improvements [4]	TS	--	--	--	--	0.839	0.874	D	D	-0.025	--	--	--	--	-0.073	--	--	--	--
• Highway 111 (EW)																			
with existing lane geometry	TS	0.847	1.176	D	F	0.866	1.199	D	F	0.019	19	114	NO	NO	0.023	21	139	YES	YES
with additional improvements [4]		--	--	--	--	0.856	1.053	D	F	0.009	--	--	--	--	-0.123	--	--	--	--
• Avenue 48 (EW)																			
with existing lane geometry	TS	0.996	1.137	E	F	0.999	1.149	E	F	0.003	0	35	NO	YES	0.012	10	42	YES	YES
with additional improvements [4]		--	--	--	--	0.959	1.011	E	F	-0.037	--	--	--	--	-0.126	--	--	--	--
Adams Street (NS)																			
• Highway 111 (EW)																			
with CIP improvements	TS	0.562	0.786	A	C	0.575	0.804	A	D	0.013	19	125	NO	NO	0.018	24	153	NO	NO
Dune Palms Road (NS) at:																			
• Westward Ho Road (EW)	TS	1.067	0.635	F	B	1.075	0.642	F	B	0.008	8	18	NO	NO	0.007	10	22	NO	NO
• Highway 111 (EW)	TS																		
with CIP improvements		0.631	0.853	B	D	0.647	0.806	B	D	0.016	13	174	NO	NO	-0.047	19	210	NO	NO
• Avenue 48 (EW)	TS	0.617	0.499	B	A	0.630	0.513	B	A	0.013	7	55	NO	NO	0.014	6	66	NO	NO
Depot Drive (NS) at:																			
• Highway 111 (EW)	TS																		
with CIP improvements		0.466	0.849	A	D	0.479	0.873	A	D	0.013	7	151	NO	NO	0.024	22	200	NO	NO
Jefferson Street (NS) at:																			
• Highway 111 (EW)	TS																		
with CIP improvements		0.855	1.284	D	F	0.861	1.293	D	F	0.006	8	105	NO	NO	0.009	15	132	YES	YES
with additional improvements [4]		--	--	--	--	0.861	1.216	D	F	0.006	--	--	--	--	-0.068	--	--	--	--
• Avenue 48 (EW)																			
with existing lane geometry	TS	1.005	0.967	F	E	1.007	0.975	F	E	0.002	2	40	NO	YES	0.008	9	49	NO	YES
with additional improvements [4]	TS	--	--	--	--	0.888	0.919	D	E	-0.117	--	--	--	--	-0.048	--	--	--	--
Madison Street (NS) at:																			
• Highway 111 (EW)	TS																		
with CIP improvements		0.553	0.870	A	D	0.558	0.875	A	D	0.005	5	44	NO	NO	0.005	7	53	NO	NO

[1] Per City of La Quinta Engineering Bulletin, the ICU method shall be used to determine signalized intersection level of service. The ICU and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008) and SYNCHRO 7 (2007). Intersection level of service shown is based on the V/C for intersections with traffic signals.

[2] TS = Traffic Signal

[3] SIG.? = An intersection is classified as having a potentially significant project impact if the intersection is operating with a LOS E and the project adds 20 peak hour trips to any critical movement. For LOS F, if the project adds 10 peak hour trips to a critical movement, it is considered as a potentially significant project impact.

A potentially significant cumulative impact is assumed to occur if the project adds 25 or more peak hour trips to an intersection projected to operate at worse than LOS D at project buildout.

[4] Improvements to mitigate potentially significant impact are listed on Table 6-10. Recommended improvements are intended to mitigate potentially significant project impacts to improve conditions to pre-project (E+A+C 2016) V/C levels.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]6-12

Potentially Significant Cumulative Impacts

In addition to identifying the potentially significant project impacts, the City of La Quinta requires a potentially significant cumulative impact assessment. Based on the City of La Quinta's Cumulative Impact criteria, cumulative impacts are anticipated at the following intersection study area locations with CIP lane configurations:

Washington Street (NS) at:

- Miles Avenue (EW)
- Highway 111 (EW)
- Avenue 48 (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

4. Road Segment Analysis for E + A + C + P (2016) Conditions

Table 6-13 shows the Existing plus Ambient plus Cumulative plus Project (2016) Phase conditions segment analysis with appropriate levels of service.

Study Area Road Segments Level of Service with Existing Lane Configurations for E+A+C+P (2016) Conditions

As shown on Table 6-13, the following study area roadway segments are anticipated to operate at unacceptable levels of service with existing lane configurations:

Dune Palms Road (NS) between:

- Westward Ho and Highway 111

Highway 111 (EW) between:

- Washington Street and Adams Street
- Adams Street and Dune Palms Road

TABLE 6-13

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016) CONDITIONS

INTERSECTION	GENERAL PLAN ROADWAY CLASSIFICATION [1]	EXISTING NUMBER OF LANES	E+A+C+P (2016) LOS E CAPACITY [2]	ADT [3]	V/C	LOS [4]	WITH CIP IMPROVEMENTS # OF LANES	WITH CIP IMPROVEMENTS LOS E CAPACITY [2]	WITH CIP IMPROVEMENTS CIP V/C	WITH CIP IMPROVEMENTS LOS [4]
Washington Street (NS) between:										
• Miles Avenue and Highway 111	Major (6D)	6	57,000	49,446	0.87	D	N/A	N/A	N/A	N/A
• Highway 111 and Avenue 48	Augmented Arterial (8D)	6	57,000 [5]	48,185	0.85	D	N/A	N/A	N/A	N/A
Dune Palms Road (NS) between:										
• Westward Ho and Highway 111	Secondary Roadway (4U)	2	14,000 [5]	19,670	1.41	F	N/A	N/A	N/A	N/A
• Highway 111 and DSUSD Dwy.- "A" Street	Secondary Roadway (4U)	4	28,000	19,020	0.68	B	N/A	N/A	N/A	N/A
• School District Driveway - "A" Street and Avenue 48	Secondary Roadway (4U)	4	28,000	17,364	0.62	B	N/A	N/A	N/A	N/A
Jefferson Street (NS) between:										
• North of Highway 111	Major (6D)	6	57,000	46,601	0.82	D	N/A	N/A	N/A	N/A
• Highway 111 and Avenue 48	Major (6D)	6	57,000	50,269	0.88	D	N/A	N/A	N/A	N/A
Highway 111 (EW) between:										
• Washington Street and Adams Street	Major (6D)	6	57,000	65,948	1.16	F	N/A	N/A	N/A	N/A
• Adams Street and Dune Palms Road	Major (6D)	6	57,000	68,037	1.19	F	N/A	N/A	N/A	N/A
• Dune Palms Road and Depot Drive	Major (6D)	4	38,000 [5]	67,631	1.78	F	6	57,000	1.19	F
• Depot Drive and Jefferson Street	Major (6D)	4	38,000 [5]	67,011	1.76	F	6	57,000	1.18	F
• Jefferson Street and Madison Street	Major (6D)	4	38,000 [5]	71,480	1.88	F	6	57,000	1.25	F
Avenue 48 (EW) between:										
• Adams Street and Dune Palms Road	Primary Roadway - A (4D)	4	38,000	25,631	0.67	B	N/A	N/A	N/A	N/A
• Dune Palms Road and Jefferson Street	Primary Roadway - A (4D)	4	38,000	28,530	0.75	C	N/A	N/A	N/A	N/A

[1] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[2] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, volume to capacity ratios greater than or equal to 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity as applied in the City of La Quinta General Plan Circulation Element (2002).

[3] Average Daily Traffic (ADT) expressed in vehicles per day.

[4] Level of Service:
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

[5] Some road segments are not built to their ultimate General Plan buildout classification. LOS "E" capacity is based on the current functional roadway classification that closely corresponds City of La Quinta roadway classifications.

[6] -- = No CIP Improvements

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls] 6-13

- Dune Palms Road and Depot Drive
- Depot Drive and Jefferson Street
- Jefferson Street and Madison Street

Study Area Road Segments Level of Service with CIP Lane Configurations for E+A+C+P (2016) Conditions

With the completion of the CIP improvements along Highway 111, the abovementioned road segments are anticipated to continue to operate with unacceptable levels of service.

5. Potentially Significant Project Specific Impact Road Segment Impact Assessment for E + A + C + P (2016) Conditions

The results of the potentially significant project specific impact assessment for the study area road segments are summarized in Table 6-14. The analysis indicates that potentially significant project specific impacts are anticipated at the following road segment with CIP lane configurations:

Highway 111 (EW) between:

- Washington Street and Adams Street
- Adams Street and Dune Palms Road
- Depot Drive and Jefferson Street

It is anticipated that the road segments impacted by the project will continue to operate at unacceptable levels of service with the completion of the CIP improvements along Highway 111. Since the CIP improvements have been recently constructed at the abovementioned road segments, Highway 111 is built to its ultimate General Plan Buildout configuration as a 6 lane arterial. Therefore, further improvements to enhance the capacity at these road segments are not feasible.

TABLE 6-14

POTENTIALLY SIGNIFICANT IMPACT ROADWAY SEGMENT ASSESSMENT FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016) CONDITIONS

ROAD SEGMENT	GENERAL PLAN ROAD CLASSIFICATION [1]	NUMBER OF LANES	E+A+C (2016) LOS E CAPACITY [2]	E+A+C (2016) ADT [3]	E+A+C (2016) V/C	E+A+C (2016) LOS [4]	PROJECT ADT [1]	E+A+C+P (2016) CONDITIONS LOS E CAPACITY [2]	E+A+C+P (2016) CONDITIONS ADT [3]	E+A+C+P (2016) CONDITIONS V/C	E+A+C+P (2016) CONDITIONS LOS [4]	E+A+C+P (2016) CONDITIONS Δ V/C	E+A+C+P (2016) CONDITIONS PROJECT IMPACT [5]
Washington Street (NS) between:													
• Miles Avenue and Highway 111	Major (6D)	6	57,000	48,913	0.86	D	533	57,000	49,446	0.87	D	0.01	NO
• Highway 111 and Avenue 48	Augmented Arterial (8D)	6	57,000 [6]	48,185	0.85	D	0	57,000 [6]	48,185	0.85	D	0.00	NO
Dune Palms Road (NS) between:													
• Westward Ho and Highway 111	Secondary Roadway (4U)	2	14,000 [6]	19,426	1.39	F	244	14,000 [6]	19,670	1.41	F	0.02	NO
• Highway 111 and DSUSD Dwy.- "A" Street	Secondary Roadway (4U)	4	28,000	19,854	0.71	C	917	28,000	19,020	0.68	B	-0.03	NO
• School District Driveway - "A" Street and Avenue 48	Secondary Roadway (4U)	4	28,000	16,685	0.60	A	679	28,000	17,364	0.62	B	0.02	NO
Jefferson Street (NS) between:													
• North of Highway 111	Major (6D)	6	57,000	45,978	0.81	D	623	57,000	46,601	0.82	D	0.01	NO
• Highway 111 and Avenue 48	Major (6D)	6	57,000	49,997	0.88	D	272	57,000	50,269	0.88	D	0.00	NO
Highway 111 (EW) between:													
• Washington Street and Adams Street	Major (6D)	6	57,000	64,325	1.13	F	1623	57,000	65,948	1.16	F	0.03	YES
• Adams Street and Dune Palms Road	Major (6D)	6	57,000	66,253	1.16	F	1784	57,000	68,037	1.19	F	0.03	YES
• Dune Palms Road and Depot Drive - with CIP improvements	Major (6D)	6	57,000	67,351	1.18	F	2031	57,000	67,631	1.19	F	0.01	NO
• Depot Drive and Jefferson Street - with CIP improvements	Major (6D)	6	57,000	65,368	1.15	F	1643	57,000	67,011	1.18	F	0.03	YES
• Jefferson Street and Madison Street - with CIP improvements	Major (6D)	6	57,000	70,868	1.24	F	612	57,000	71,480	1.25	F	0.01	NO
Avenue 48 (EW) between:													
• Adams Street and Dune Palms Road	Primary Roadway - A (4D)	4	38,000	25,156	0.66	B	475	38,000	25,631	0.67	B	0.01	NO
• Dune Palms Road and Jefferson Street	Primary Roadway - A (4D)	4	38,000	28,190	0.74	B	340	38,000	28,530	0.75	C	0.01	NO

[1] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[2] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, volume to capacity ratios greater than or equal to 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity as applied in the City of La Quinta General Plan Circulation Element (2002).

[3] Average Daily Traffic (ADT) expressed in vehicles per day. See Appendix "B".

[4] Level of Service:
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

[5] Per City of La Quinta Engineering Bulletin #06-13, a potentially significant project specific traffic impact is defined to occur on any road segment if the project would cause the existing LOS to fall to worse than LOS D at project buildout. In addition, a potentially significant project specific traffic impact is also defined to occur on any road segment operating at LOS E or LOS F, if the V/C ratio is increased by 0.02. It is assumed that CIP improvements are already in place.

[6] Acceptable capacity ratio in the City of La Quinta is 0.90 with a corresponding LOS "D". Therefore, capacity ratios greater than 0.91 (LOS"E") is considered unacceptable. Level of Service "E" capacities were derived from the Link/Volume Capacity/ Level of Service for Riverside County Roadways.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls] 6-14

F. Sensitivity Analysis

The City of La Quinta requires a worst case sensitivity analysis at all site access points and adjacent arterials to account for the variations in the average peak hour rates, which incorporates one statistical standard deviation to the project trip generation. It is anticipated that adjacent study area intersections and project access points are projected to operate at acceptable levels of service during the peak hours at project buildout. The sensitivity analysis indicates that the proposed access configuration at the intersection of Dune Palms Road/ "A" Street provides adequate stacking distance with the additional standard deviation added to the project trip generation. The results of the sensitivity analysis for E+A+C+P (2011) are provided in Appendix "J." The results of the sensitivity analysis for E+A+C+P (2016) are provided in Appendix "M".

7.0 ALTERNATIVES ANALYSIS

This section discusses the proposed alternatives for CEQA purposes.

A. Project Alternatives

In addition to the auto dealership and apartment land uses, three alternative land uses are proposed:

Project Alternative 1

- 80,000 square feet of retail space.
- 40,000 square feet of general office space.
- 144 multi-family units.

Project Alternative 2

- 200,000 square feet of general office
- 50,000 square feet of medical office
- 20,000 square feet of ancillary retail

Project Alternative 3

- 150,000 square feet of retail space.
- 75,000 square feet of design center uses
- 75,000 square feet of general warehouse space

The Project Alternative land uses and trip generation rates are summarized in Table 7-1. Trip generation rates utilized in the project alternatives are consistent with the trip generation guidelines stipulated in the Engineering Bulletin #06-13.

B. Trip Generation for Alternatives

As shown in Table 7-2, Project Alternative 1 is anticipated to generate approximately 5,429 trip-ends per day with 276 vehicles per hour during the AM peak hour and 565 vehicles per hour during the PM peak hour. Project Alternative 2 is anticipated to generate approximately 4,381 trip-ends per day with 511 vehicles per hour during the AM peak hour and 649 vehicles per hour during the PM peak hour. Project Alternative 3 is anticipated to

TABLE 7-1

PROJECT ALTERNATIVES TRIP GENERATION RATES[1]

LAND USE	ITE CODE	QUANTITY	UNITS[2]	PEAK HOUR TRIP RATES						DAILY
				AM			PM			
				IN	OUT	TOTAL	IN	OUT	TOTAL	
ALTERNATIVE 1										
Shopping Center	820	80.0	TSF	1.04	0.67	1.71	3.24	3.51	6.75	73.43
General Office Building	710	40.0	TSF	1.98	0.27	2.25	0.53	2.56	3.09	16.47
Apartments	220	200	DU	0.16	0.3905	0.55	0.409	0.261	0.67	6.72
ALTERNATIVE 2										
General Office Building	710	200.0	TSF	1.44	0.2	1.64	0.26	1.26	1.52	11.37
Medical-Dental Office Building	720G	50.0	TSF	2.37	1.22	3.59	1.78	2.66	4.44	8.91
Shopping Center	820	20.0	TSF	1.82	1.16	2.98	5.19	5.63	10.82	119.28
ALTERNATIVE 3										
Shopping Center	820	150.0	TSF	0.81	0.52	1.33	2.62	2.84	5.46	58.93
Research and Development Center	760	75.0	TSF	1.192	0.2441	1.4361	0.208	1.178	1.385	10.6212
General Warehouse	150	75.0	TSF	0.727	0.505	1.2316	0.093	1.075	1.168	8.350267

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 7th Edition, 2003.
The "Peak Hour of the Generator" rates are used based on the City's Engineering Bulletin #06-13.

[2] DU = Dwelling Units
TSF = Thousand Square Feet

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]7-1

TABLE 7-2

PROJECT ALTERNATIVES TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
PROPOSED PROJECT									
Phase 1 2011									
New Car Sales	27	TSF	33	26	59	33	40	73	900
Apartments	200	DU	32	78	110	82	52	134	1344
TOTAL			**65**	**104**	**169**	**115**	**92**	**207**	**2,244**
Phase 2 2016									
New Car Sales	82	TSF	101	79	180	100	123	223	2,734
Apartments	200	DU	32	78	110	82	52	134	1,344
TOTAL			**133**	**157**	**290**	**182**	**175**	**357**	**4,078**
ALTERNATIVE 1									
Shopping Center	80.0	TSF	83	54	137	259	281	540	5874
Pass-by (25%) [1]						-65	-70	-135	-1469
Subtotal Shopping Center			83	54	137	194	211	405	4406
General Office Building	40.0	TSF	79	11	90	21	102	123	659
Apartments	144.0	DU	23	56	79	59	38	97	968
Less internal capture (10%) [2]			-15	-15	-30	-30	-30	-60	-603
TOTAL			**170**	**106**	**276**	**244**	**321**	**565**	**5,429**
ALTERNATIVE 2									
General Office Building	200.0	TSF	288	40	328	52	252	304	2274
Medical-Dental Office Building	50.0	TSF	119	61	180	89	133	222	446
Shopping Center	20.0	TSF	36	23	59	104	113	217	2386
Pass-by (25%) [1]						-26	-28	-54	-597
Subtotal Shopping Center			36	23	59	78	85	163	1790
Less internal capture (10%) [2]			-28	-28	-56	-34	-34	-69	-451
TOTAL			**415**	**96**	**511**	**185**	**435**	**620**	**4,059**
ALTERNATIVE 3									
Shopping Center	150.0	TSF	122	78	200	393	426	819	8840
Pass-by (25%) [1]						-98	-107	-205	-2210
Subtotal Shopping Center			122	78	200	295	320	614	6630
Research and Development Center	75.0	TSF	89	18	107	16	88	104	797
General Warehouse	75.0	TSF	54	38	92	7	81	88	626
Less internal capture (5%) [2]			-10	-10	-20	-20	-20	-40	-403
TOTAL			**255**	**124**	**379**	**298**	**469**	**766**	**7,650**

[1] "Pass-By" reduction rates have been used to account for traffic that will access the site as an intermediate stop on the way to a primary destination.

[2] Internal Capture is the reduction of the overall traffic due to the compatibility of land uses within the project site.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]7-2

generate approximately 7,650 trip-ends per day with 379 vehicles per hour during the AM peak hour and 766 vehicles per hour during the PM peak hour.

8.0 CONCLUSIONS AND RECOMMENDATIONS

A. Project Access

The project is proposing two right-in/ right out access points along Highway 111, a shared access with Komar/Costco (Depot Drive) to the east of the project, and one full access point along Dune Palms Road with a connection by "A" Street directly across from the existing Sam's Club access which will be constructed as part of the Project. The existing Desert Sands Unified School District (DSUSD) access to Dune Palms Road will be eliminated and replaced by a new access via "A" Street.

Deceleration Lane Guidance

Right Turn Bay Length

The City of La Quinta requires a right-turn deceleration lane as outlined in the City of La Quinta's Engineering Bulletin #06-13. Based on the bulletin, a right turn deceleration lane is required if a driveway experiences 50 or more right turns during the peak hour. Although Project Access #2 is anticipated to experience fewer than 50 peak hour trips, a right turn lane is recommended to reduce the potential for vehicle conflicts. The right turn pocket length has been determined based on the right turn volumes entering the project site, availability of right of way adjacent to the site, and distance between driveways and intersections. Project Access #1 indicates 71 right turn ingress movements with a distance of approximately 678 feet from Dune Palms Road and 278 feet from Project Access #2. It is anticipated that a 150 foot eastbound right turn pocket along Highway 111 will accommodate the right turn ingress movements at Project Access #1. Project Access #2 indicates 3 eastbound right turn movements with a distance of 278 feet from Project Access #1. A 150 foot right turn pocket is recommended at Project Access #2, which is anticipated to accommodate project trips turning into the site. For the intersection of Dune Palms Road/ "A" Street, it is anticipated that a 250 foot right turn pocket will accommodate northbound right turns into the project site. It should be noted that the proposed intersection of Dune Palms Road/"A" Street will be located approximately 350 feet north of the DSUSD driveway. Table 8-1 summarizes the right turn lane requirements for the

TABLE 8-1

DECELERATION LENGTHS AT PROJECT ACCESS FOR
ROADWAYS ADJACENT TO THE SITE

RIGHT-TURN BAY STORAGE AND DECELERATION LENGTHS					
INTERSECTION	E+A+C+P (2016) PEAK HOUR TURNING VOLUME		AUXILARY LANE	POSTED SPEED LIMIT	BAY LENGTH (FEET)
	AM	PM		(MPH)	TOTAL
Dune Palms Road (NS) at: • A Street (EW) - Northbound	138	209	YES	45	250
Project Access #1 (NS) at: • Highway 111 (EW) - Eastbound	71	70	YES	55	150
Project Access #2 (NS) at: • Highway 111 (EW) - Eastbound	3	3	YES	55	150

project. As indicated in Exhibit 8-D, the distances between the intersections are anticipated to accommodate the recommended pocket lengths.

Left Turn Bay Length

For left turn bays at the project site, the City of La Quinta requires the ITE method in determining single-lane left turn queue storage length at signalized intersections. Exhibit 8-A illustrates the nomograph utilized to calculate the storage length required for the southbound left turn bay at Dune Palms Road/ "A" Street. It should be noted that the 189 southbound left turn traffic volumes are trips associated with the project and DSUSD traffic. As discussed in Section 3.0, traffic volumes associated with DSUSD have been converted to passenger car equivalence, which assumes that one school bus is equal to that of two passenger cars. Therefore, the percentage of trucks and buses to determine the left turn lane storage length in the nomograph was not considered. The storage length has been calculated based on the following assumptions:

- 120 second cycle length
- 189 PM peak hour left turn volume

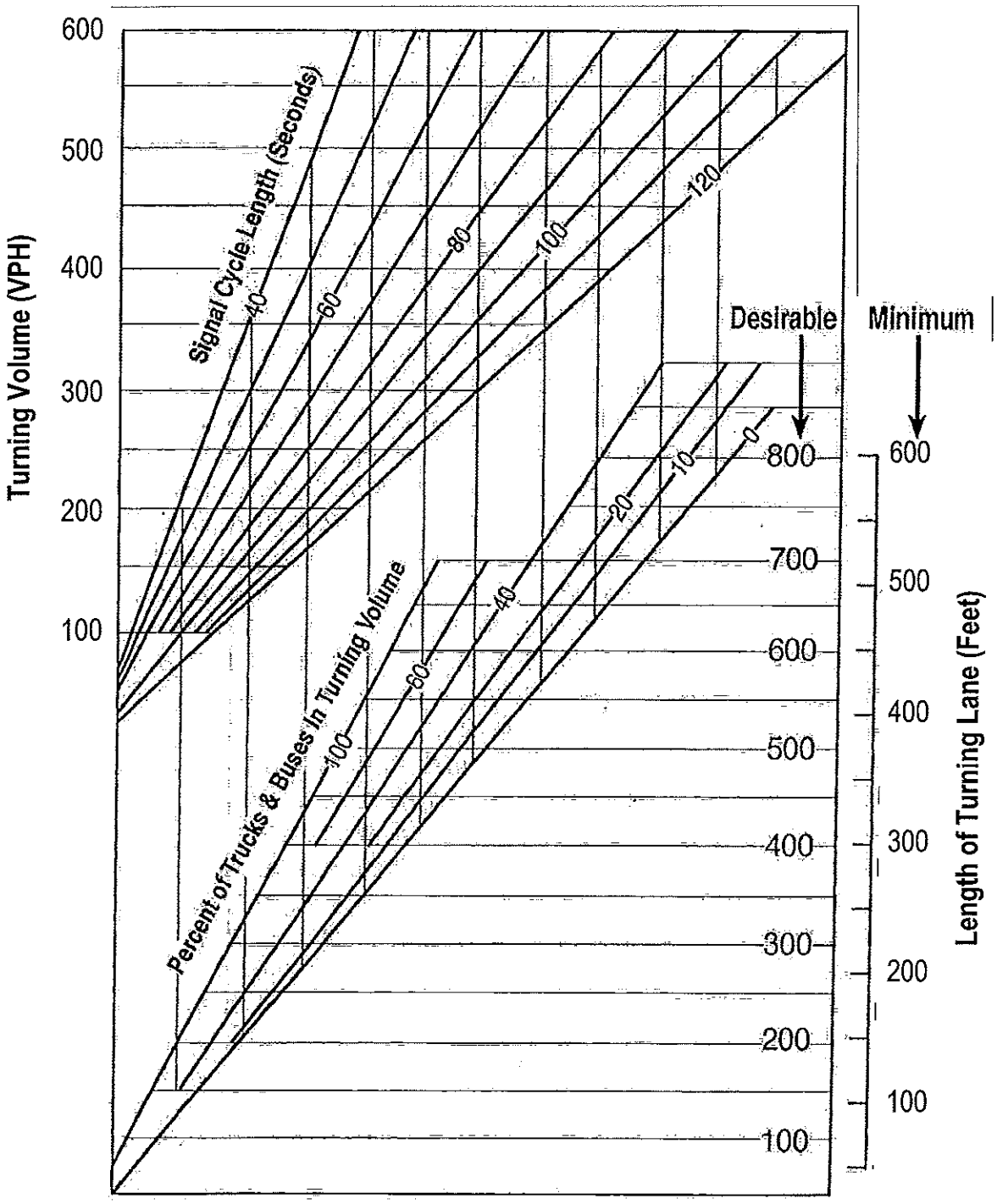
In addition, the SYNCHRO analysis at the intersection of Dune Palms Road/ "A" Street indicates that a 250 foot left turn storage bay adequately accommodates southbound left turns into the project site during the peak hours. Table 8-2 summarizes the City of La Quinta left turn deceleration length requirements.

B. Traffic Impacts

The proposed residential development project will consist of a total of 82,000 square feet of auto dealership uses and 200 apartment units. For Phase 1 (2011) conditions, approximately 27,000 square feet of the proposed auto dealership will be constructed in conjunction with the 200 apartment units. For Phase 2 (2016) conditions, the remainder of the auto dealership (55,000 square feet) will be constructed.

EXHIBIT 8-A

SINGLE-LANE LEFT-TURN STORAGE AT SIGNALIZED INTERSECTION



Desirable: 95% probability of storing all left-turn vehicles

Minimum: 85% probability

SOURCE: ITE, "Transportation and Land Development" (Second Edition) 2002, Fig 5-24, p.5-51

TABLE 8-2

LEFT TURN BAY STORAGE AT PROJECT ACCESS FOR
ROADWAYS ADJACENT TO THE SITE

LEFT-TURN BAY STORAGE AND DECELERATION LENGTHS					
INTERSECTION	E+A+C+P (2016) PEAK HOUR TURNING VOLUME		AUXILARY LANE	POSTED SPEED LIMIT (MPH)	BAY LENGTH (FEET)
	AM	PM			TOTAL [1]
Dune Palms Road (NS) at: • A Street (EW) - Southbound	167	189	YES	45	250

[1] Based on the SYNCHRO analysis at a 120 second cycle length, a 250 ft left turn bay adequately accommodates the anticipated southbound inbound traffic.

The project site is projected to generate approximately 2,244 trip-ends per day with 169 vehicles per hour during the AM peak hour and 207 vehicles per hour during the PM peak hour for Phase 1 (2011) conditions. For Phase 2 (2016) conditions, the project is anticipated to generate approximately 4,078 trip-ends per day with 290 vehicles per hour during the AM peak hour and 357 vehicles per hour during the PM peak hour.

A traffic signal is projected to be warranted at the following study area intersection for Existing conditions and in each scenario (see Appendix "D"):

Dune Palms Road (NS) at:

- "A" Street (EW)

C. Potentially Significant Impact Assessment Results

The City of La Quinta's Engineering Bulletin #06-13 stipulates that both project specific impacts and cumulative impacts must be identified in the report. The results of the potentially significant impact assessment identifying project and cumulative impacts are summarized in Table 8-3.

Potentially Significant Project Specific Impacts

Potentially significant project specific impacts have been identified at the following study area intersection at opening year (2011):

Dune Palms Road (NS) at:

- "A" Street (EW)

Improvements at the intersection of Dune Palms Road/ "A" Street include:

- The installation of a traffic signal
- Construct a northbound left turn lane
- Construct a northbound right turn lane with a 250' pocket
- Construct a southbound left turn lane with a 250' pocket
- Construct an eastbound left turn lane
- Construct a westbound left turn lane
- Construct a westbound shared right-thru lane

TABLE 8-3

SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS FOR INTERSECTIONS AND ROADWAY SEGMENTS [1]

POTENTIALLY SIGNIFICANT IMPACTS AT THE STUDY AREA INTERSECTIONS

	E+A+C+P (2011)				E+A+C+P (2016)			
	POTENTIALLY SIGNIFICANT IMPACT? [2]				POTENTIALLY SIGNIFICANT IMPACT? [2]			
INTERSECTION	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2011) PROJECT RELATED INTERSECTION IMPROVEMENTS	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2016) PROJECT RELATED INTERSECTION IMPROVEMENTS
Washintgton Street (NS) at:								
• Miles Avenue (EW)	NO	NO	N/A	N/A	NO	YES	Fair share (2.8%)*	• Project to contribute towards the construction of a 2nd EB left turn lane on a fair share basis
• Highway 111 (EW)	NO	YES	Fair share (7.9%)	• Provide a WB Right Turn Overlap Phasing*	YES	YES	Fair share (7.9%)*	Same as 2011
• Avenue 48 (EW)	NO	YES	Fair share (4.9%)	• Construct a 2nd SB Left Turn Lane*	YES	YES	Fair share (4.9%)*	Same as 2011
Dune Palms Road (NS) at:								
• "A" Street (EW)	YES	NO	Mitigatable	• Install a Traffic Signal [5]	YES	NO	Mitigatable	Same as 2011
				• Construct a NB Left Turn Lane				Same as 2011
				• Construct a NB Right Turn Lane with a 250' right turn pocket				Same as 2011
				• Construct a SB Left Turn Lane with a 250' left turn pocket				Same as 2011
				• Construct an EB Left Turn Lane				Same as 2011
				• Construct a WB Left Turn Lane				Same as 2011
				• Construct a WB Shared Right-Thru Lane				Same as 2011
Jefferson Street (NS) at:								
• Highway 111 (EW)	NO	NO	N/A	N/A	YES	YES	Fair share (3.2%)*	• Provide an EB Right Turn Overlap Phasing*
• Avenue 48 (EW)	NO	NO	N/A	N/A	NO	YES	Fair share (2.2%)*	• Project to contribute towards the construction of a EB right turn overlap and WB right turn lane in a fair share basis.

POTENTIALLY SIGNIFICANT IMPACTS AT STUDY AREA ROADWAY SEGMENTS

	E+A+C+P (2011)				E+A+C+P (2016)			
	POTENTIALLY SIGNIFICANT IMPACT? [3]				POTENTIALLY SIGNIFICANTIMPACT? [3]			
ROAD SEGMENT	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2011) PROJECT RELATED ROADWAY IMPROVEMENTS	PROJECT	CUMULATIVE	IMPACT ASSESSMENT	E+A+C+P (2016) PROJECT RELATED ROADWAY IMPROVEMENTS
Highway 111 (EW) between:								
• Washington St. and Adams St.	NO	NO	N/A	N/A	YES	NO	Unavoidable Impact	Infeasible [4]
• Adams St. and Dune Palms Rd.	NO	NO	N/A	N/A	YES	NO	Unavoidable Impact	Infeasible [4]
• Depot Dr.and Jefferson St.	NO	NO	N/A	N/A	YES	NO	Unavoidable Impact	Infeasible [4]

* The payment of fair share percentages is based on the specified improvement being adopted into the City's CIP (La Quinta or Indio). Otherwise, the project will be fully responsible for the improvement or the impacts will considered significant and unavoidable.

[1] Per City of La Quinta Engineering Bulletin, project specific and cumulative impacts must be evaluated. Project are required to mitigate their impacts by mitigation measures.

[2] An intersection is classified as having a project specific impact if the intersection is operating with a LOS E and the project adds 20 per lane peak hour trips to any critical movement. For LOS F, if the project adds 10 per lane peak hour trips to a crit it is considered as a project specific impact. A cumulative impact is assumed to occur if the project adds 25 or more peak hour trips to an intersection projected to operate at worse than LOS D at project buildout.

[3] A roadway segment is classified as having a project specific impact if the project would cause the existing LOS to fall worse than LOS D at project buildout. In addition, a project specific imapct impact is also defined to occur on any road segment that at LOS E or LOS F, if the V/C ratio is increased by 0.02. A cumulative impact is defined to occur if the project would cause the existing LOS to fall to worse than LOS D at buildout. A cumualtive impact is also defined if the studied road segment is opera and the peak hour V/C in the peak direction is increased by 0.05 at City General Plan buildout.

[4] Roadway is anticiapted to operate at LOS "F" at project buildout. Widening the roadway is not feasible since the roadway is built to its ultimate cross-section. Acquiring additional right-of-way will be required beyond its ultimate classification.

[5] For the intersection of Dune Palms Road/ "A" Street, the project is responsible for 50% of the cost of the traffic signal.

T:\Carlsbad_Jobs_05400_05468\Excel\REVISED 07_2009\[05468-TABLES.xls]8-3

Potentially significant project specific impacts have been identified at these study area intersections at project buildout (2016):

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Dune Palms Road (NS) at:

- "A" Street (EW)

Jefferson Street (NS) at:

- Highway 111 (EW)

The developer needs to contribute its fair share toward cost of mitigation of the abovementioned intersections. Per discussions with the City of La Quinta, intersections identified with potentially significant project specific impacts are not subject to the full responsibility in the construction of mitigation measures to address the impacts. The developer needs to contribute its fair share toward cost of mitigation of the abovementioned intersections. The fair share calculations are summarized in Table 8-4. The project percent fair share contribution is calculated based on the project's traffic volumes to the addition of new traffic beyond existing conditions. The fair share percent contribution of the proposed project to the intersection of Washington Street/ Highway 111 is 7.9%. For the intersection of Washington Street/ Avenue 48, the project's fair share contribution is 4.9%. At the intersection of Jefferson Street/ Highway 111, the project's fair share is 3.2%. It should be noted that the contribution towards these improvements will mitigate the potentially significant project specific impacts to less than significant levels. The payment of the project's fair share contribution towards improvements is based on the specified improvements being adopted into the City's CIP. Otherwise, the project will be fully responsible for the improvements to address potentially significant project specific impacts. Project related improvements are as follows:

Washington Street (NS) at Highway 111 (EW)

- Construct a WB right turn lane
- Provide a WB right turn overlap phasing

TABLE 8-4

PROJECT FAIR SHARE SHARE PERCENTAGE SUMMARY

PROJECT FAIR SHARE AT PROJECT OPENING YEAR (2011)

INTERSECTION	EXISTING PEAK HOUR TRAFFIC		E+A+C+P (2011) PEAK HOUR TRAFFIC		TOTAL NEW PEAK HOUR TRAFFIC		PROJECT PEAK HOUR TRAFFIC		PROJECT FAIRSHARE PERCENTAGE	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Washington St./ Highway 111	4691	5781	5446	7229	755	1448	60	74	7.9%	5.1%
Washington St./ Avenue 48	3538	4208	3983	4974	445	766	22	28	4.9%	3.7%

PROJECT FAIR SHARE AT PROJECT BUILDOUT (2016)

INTERSECTION	EXISTING PEAK HOUR TRAFFIC		E+A+C+P (2016) PEAK HOUR TRAFFIC		TOTAL NEW PEAK HOUR TRAFFIC		PROJECT PEAK HOUR TRAFFIC		PROJECT FAIRSHARE PERCENTAGE	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Washington St./ Miles Ave.	3033	3517	4599	5148	1566	1631	38	46	2.4%	2.8%
Washington St./ Highway 111	4691	5781	6612	9245	1921	3464	114	139	5.9%	4.0%
Washington St./ Avenue 48	3538	4208	4503	5856	965	1648	35	42	3.6%	2.5%
Jefferson St./ Highway 111	3449	4710	6747	10257	3298	5547	105	132	3.2%	2.4%
Jefferson St./ Avenue 48	3580	4117	5646	6385	2066	2268	40	49	1.9%	2.2%

* The payment of the fair share percentages is based on the specified improvement being adopted in to the City's CIP. Otherwise, the project will be fully responsible for the improvement.

Washington Street (NS) at Avenue 48 (EW)

- Construct a 2nd SB left turn lane

Jefferson Street (NS) at Highway 111 (EW)

- Provide an EB right turn overlap phase

Mitigation for Jefferson Street/Highway 111

If the City of Indio either: 1) adopts a reasonable program of actual mitigation that the City of Indio commits itself to implement, or 2) otherwise obtains the balance of the funding needed for improvement to the Jefferson Street/Highway 111 intersection consisting of the addition of an eastbound right-turn overlap phasing, the project sponsor shall be required to pay its fair share into that program, i.e., 3.2% for the improvement. If the City of Indio takes either of these steps, the project sponsor shall be required to pay its fair-share contribution for these improvements to the City of Indio, or to another entity as directed by the City of Indio, prior to obtaining its next building permit for the project. If neither step is taken by the City of Indio, the cumulative impact on these intersections would remain significant and unavoidable.

In addition to potentially significant project specific impacts at intersections, potentially significant project specific impacts at the study area roadway segments are identified at the following locations:

Highway 111 (EW) between:

- Washington Street and Adams Street
- Adams Street and Dune Palms Road
- Depot Drive and Jefferson Street

Although potentially significant project specific impacts have been identified at the abovementioned road segments along Highway 111, roadway improvements are not feasible since the E+A+C+P (2016) road segment analysis assumes that the road segments along Highway 111 are built to their ultimate six lane configuration. Further widening of Highway 111 will exceed the General Plan roadway classification. Moreover,

the location of adjacent development makes the acquisition of additional right of way infeasible. As a result, the project specific impacts at these road segments are unmitigatable.

Potentially Significant Cumulative Impacts

Potentially Significant Cumulative Impacts have been identified at these intersections at project opening year (2011):

Washington Street (NS) at:

- Highway 111 (EW)
- Avenue 48 (EW)

Potentially significant cumulative impacts at the intersections of Washington Street/ Highway 111 and Washington Street/ Avenue 48 have been identified. Improvements are required at these two locations. To reduce the potentially significant cumulative impacts to less than significant levels, the project must contribute towards the improvements on a fair share basis. These improvements to off-site intersections are described below.

Washington Street (NS) at Highway 111 (EW)

- Provide a WB right turn lane with overlap phase

Washington Street (NS) at Avenue 48 (EW)

- Construct a 2nd SB left turn lane

Potentially Significant Cumulative Impacts have been identified at these intersections at project buildout (2016):

Washington Street (NS) at:

- Miles Avenue (EW)

Jefferson Street (NS) at:

- Avenue 48 (EW)

The developer needs to contribute its fair share toward cost of mitigation of the abovementioned intersections. Intersections identified with potentially significant cumulative impacts are not subject to the full responsibility in the construction of mitigation measures to address the impacts. The developer needs to contribute its fair share toward cost of mitigation of the abovementioned intersections. The fair share calculations are summarized in Table 8-4. The project percent fair share contribution is calculated based on the project's traffic volumes to the addition of new traffic beyond existing conditions. The fair share percent contribution of the proposed project to the intersection of Washington Street/ Miles Avenue is 2.8%. For the intersection of Jefferson Street/ Avenue 48, the project's fair share contribution is 2.2%. The following mitigation measures are required to address potentially significant cumulative impacts:

Washington Street (NS) at Miles Avenue (EW)

- Construct a 2nd EB left turn lane

Jefferson Street (NS) at Avenue 48 (EW)

- Provide an EB right turn overlap phase
- Provide an WB right turn lane

For near term (2016) conditions, potentially significant cumulative impacts at the study area intersections are mitigatable by providing the abovementioned intersection improvements through the project's fair share contribution towards the recommended improvements. Therefore, the potentially significant cumulative impacts will be less than significant.

Mitigation for Jefferson Street/Avenue 48

If the City of Indio either: 1) adopts a reasonable program of actual mitigation that the City of Indio commits itself to implement, or 2) otherwise obtains the balance of the funding needed for improvement to the Jefferson/Ave. 48 intersection consisting of the addition of a westbound right-turn lane and an eastbound right-turn overlap phasing, the project sponsor shall be required to pay its fair share into that program, i.e., 2.2% for the improvement. If the City of Indio takes either of these steps, the project sponsor shall be required to pay its fair-share contribution for these improvements to the City of Indio,

or to another entity as directed by the City of Indio, prior to obtaining its next building permit for the project. If neither step is taken by the City of Indio, the cumulative impact on these intersections would remain significant and unavoidable.

D. Off-Site Recommended Improvements

It should be noted that at the time of the preparation of this study (July 2008), roadway improvements under the City's Capital Improvement Program along Highway 111 was under construction. The CIP improvements assumed in this report has been completed as of late 2008. Additional recommended off-site improvements are required to mitigate potentially significant project specific impacts.

The City of La Quinta requires projects to mitigate project specific impacts. As indicated in the results of the Potentially Significant Impact Assessment, intersections and road segments impacted by the project require mitigation measures to reduce the project impact by mitigating to at least pre-project E+A+C conditions. Table 8-3 summarizes the required project related improvements to mitigate the potentially significant project specific impacts.

Potentially significant project specific impacts at the study area road segments identified along Highway 111 cannot be mitigated since the road segments are built to their ultimate roadway design. Further widening of Highway 111 will exceed the General Plan roadway classification and is infeasible because of the location of existing developments. Accordingly, the potentially significant project specific impacts at the following road segments are unavoidable since the level of service without project (E+A+C 2016) indicates an unacceptable level of service and further improvements to these locations are not feasible:

Highway 111 (EW) between:

- Washington Street and Adams Street
- Adams Street and Dune Palms Road
- Depot Drive and Jefferson Street

Based on the results of the analysis in Section 6.0, the improvements identified in Exhibit 8-B are recommended to mitigate project-related improvements for Existing plus Ambient plus Cumulative (2011) Conditions. The project should contribute towards the City of La Quinta's Development Impact Fee program and on a fair share basis toward the improvements shown on Exhibit 8-C to mitigate potentially significant cumulative traffic impacts for off-site improvements. Because the project's fair share contribution is a relatively small portion of the overall costs of the identified offsite improvements, it is possible that the improvements may not be completed before the occupancy of the project structures. It is therefore possible that there could be a temporary significant cumulative impact on the specified intersections pending the completion of the improvements.

E. Recommended Improvements for E + A + C + P (2011) Conditions

Based on the results of the analysis in Section 6.0, the improvements identified in Exhibit 8-B are recommended to mitigate project-related improvements for Existing plus Ambient plus Cumulative plus Project (2011) Conditions. The recommended improvements indicated in Exhibit 8-B should be implemented prior to the first occupancy of the project. The project should contribute towards the City of La Quinta's Development Impact Fee program to mitigate potentially significant cumulative traffic impacts.

F. Recommended Improvements for E + A + C + P (2016) Conditions

Based on the results of the analysis in Section 6.0, the improvements identified in Exhibit 8-C are recommended to mitigate project-related improvements for Existing plus Ambient plus Cumulative plus Project (2016) Conditions. The recommended improvements indicated in Exhibit 8-C should be implemented prior to the completion of the second phase of the project. The project should contribute towards the City of La Quinta's Development Impact Fee program and/ or pay its fair share to mitigate potentially significant cumulative traffic impacts.

EXHIBIT 8-B

RECOMMENDED IMPROVEMENTS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2011)

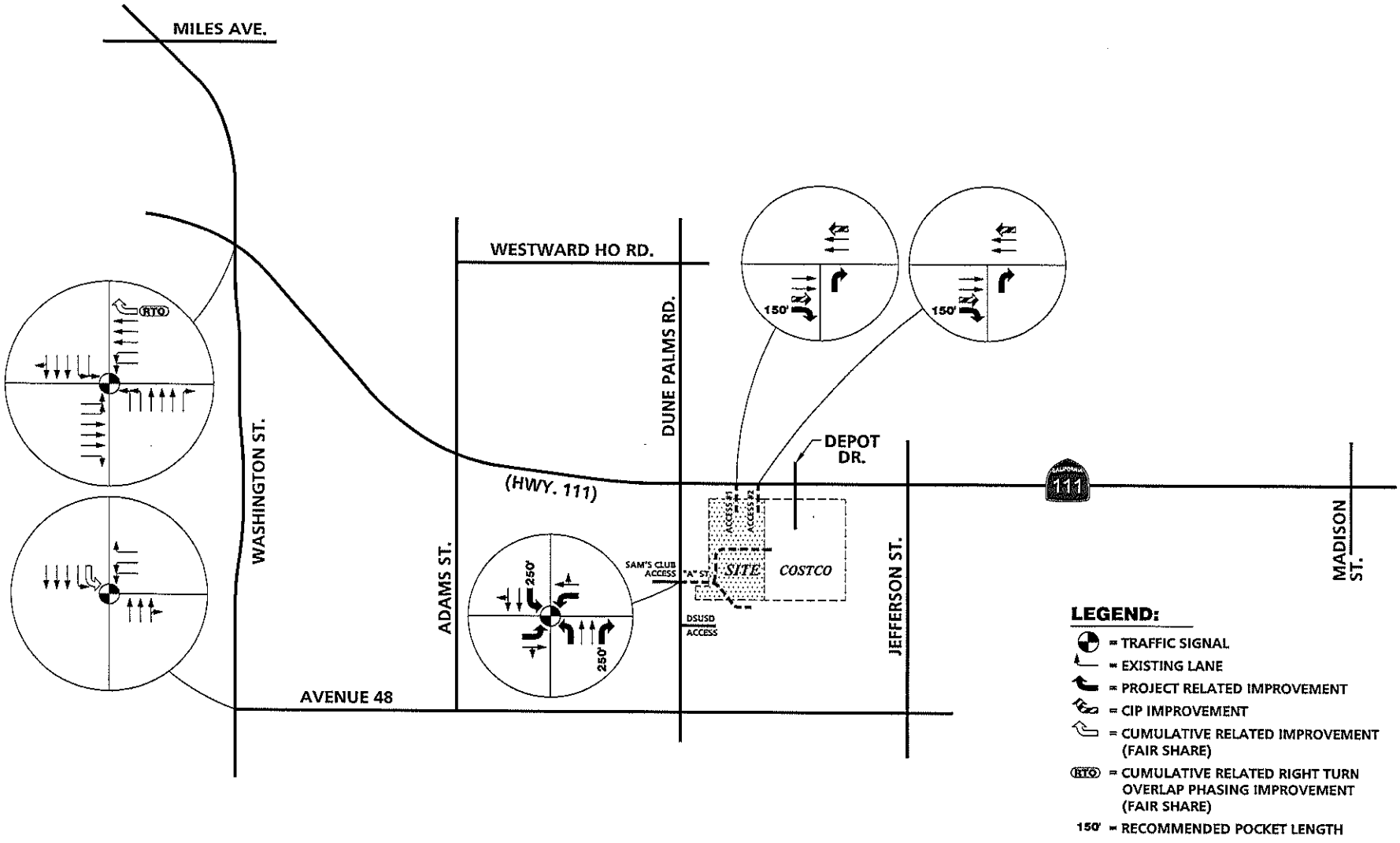
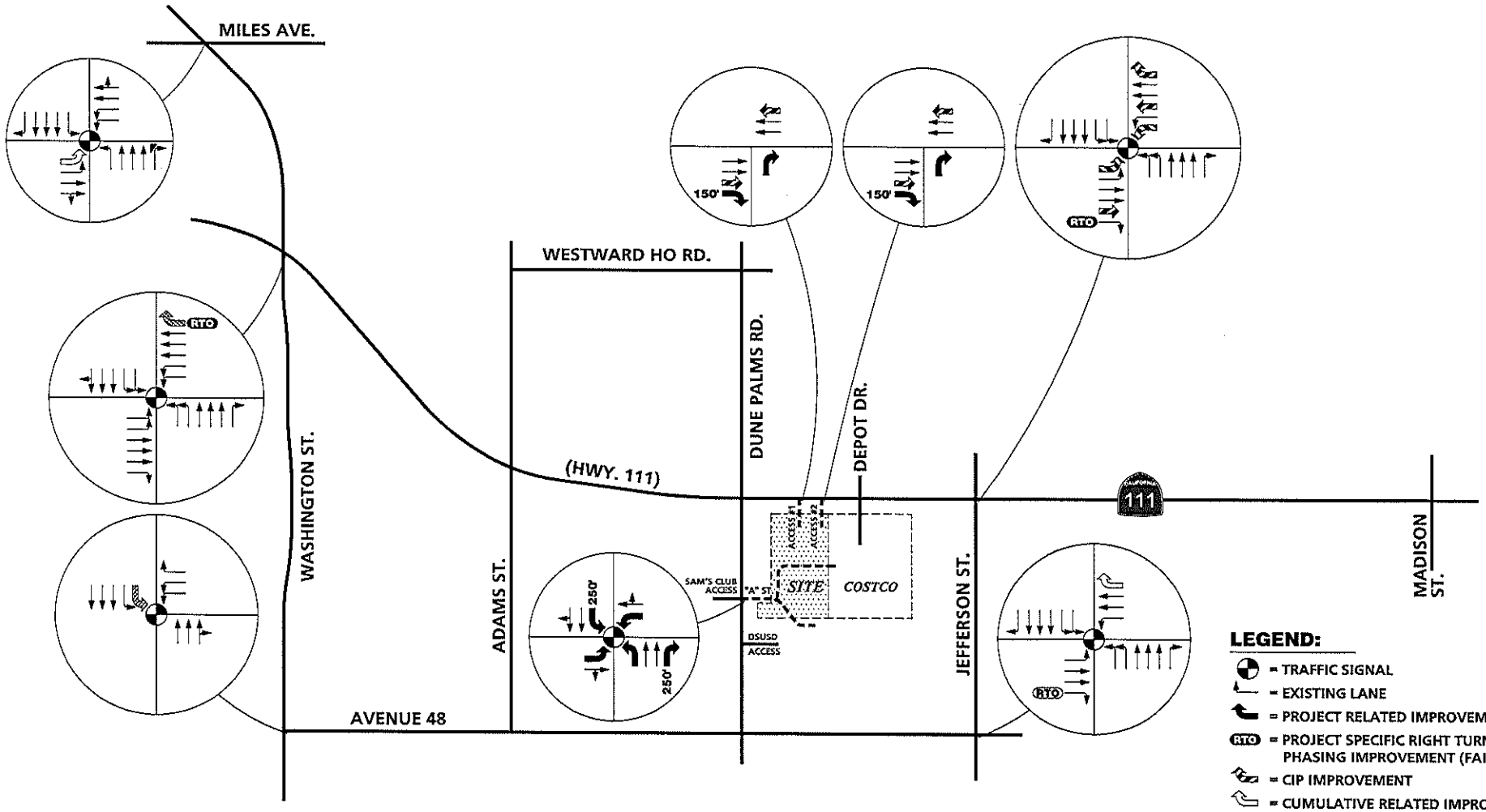


EXHIBIT 8-C

RECOMMENDED IMPROVEMENTS FOR EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (2016)



LEGEND:

- = TRAFFIC SIGNAL
- = EXISTING LANE
- = PROJECT RELATED IMPROVEMENT
- RTO = PROJECT SPECIFIC RIGHT TURN OVERLAP PHASING IMPROVEMENT (FAIR SHARE)
- = CIP IMPROVEMENT
- = CUMULATIVE RELATED IMPROVEMENT (FAIR SHARE)
- = PROJECT SPECIFIC IMPROVEMENT (FAIR SHARE)
- RTO = CUMULATIVE RELATED RIGHT TURN OVERLAP PHASING IMPROVEMENT (FAIR SHARE)
- 150' = RECOMMENDED POCKET LENGTH

N

G. On-Site Circulation Recommendations

Site-specific circulation and access recommendations should be implemented prior to the occupancy of the first project phase. On-site circulation and access recommendations are depicted on Exhibit 8-D and are described below:

- Construct Highway 111 at its ultimate half-section width as a six lane Augmented Arterial from the westerly project boundary to the easterly project boundary.
- Construct "A" Street at its ultimate full-section width as a 2 lane roadway from Dune Palms Road to the easterly project boundary.
- Provide a minimum 250-foot southbound left turn pocket on Dune Palms Road at the "A" Street.
- Provide a minimum 150-foot eastbound right turn pocket/ deceleration lane on Highway 111 at Project Access #1 and Project Access #2.
- Provide a minimum 250-foot northbound right turn pocket/ deceleration lane on Dune Palms Road at "A" Street.
- On-site signing and striping should be implemented in conjunction with detailed construction plans for the project site.
- Provide stop sign control at the intersections of all internal roadways and at the project access points.
- Provide a traffic signal at the intersection of Dune Palms Road/ "A" Street.

Sight distance at the project entrance should be reviewed with respect to standard City of La Quinta sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

The project should contribute towards a citywide roadway and traffic signal improvement program (DIF) through payment of development impact fees to the City of La Quinta.

EXHIBIT 8-D

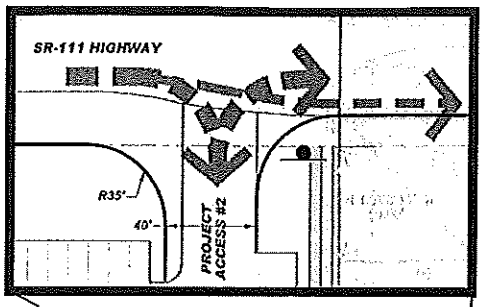
CIRCULATION RECOMMENDATIONS

PROVIDE STOP SIGN CONTROL AT THE INTERSECTIONS OF ALL INTERNAL ROADWAYS AND AT THE PROJECT ACCESS POINTS.

ON-SITE TRAFFIC SIGNING AND STRIPING SHOULD BE IMPLEMENTED IN CONJUNCTION WITH DETAILED CONSTRUCTION PLANS FOR THE PROJECT SITE.

SIGHT DISTANCE AT THE PROJECT ACCESS SHOULD BE REVIEWED WITH RESPECT TO CALTRANS STANDARDS AND THE CITY OF LA QUINTA SIGHT DISTANCE STANDARDS AT THE TIME OF PREPARATION OF FINAL GRADING, LANDSCAPING, AND STREET IMPROVEMENTS PLANS.

CONSTRUCT SR-111 HIGHWAY AT ITS ULTIMATE HALF-SECTION WIDTH AS A 6-LANE MAJOR ROADWAY FROM THE WESTERLY PROJECT BOUNDARY TO THE EASTERLY PROJECT BOUNDARY IN CONJUNCTION WITH DEVELOPMENT.

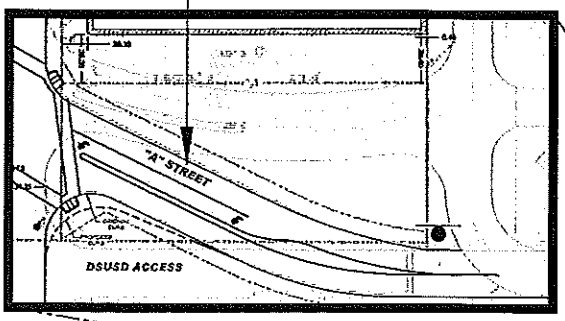


LEGEND:

= TRAFFIC SIGNAL

= STOP SIGN

CONSTRUCT "A" STREET AT ITS ULTIMATE FULL-SECTION WIDTH AS A 2-LANE ROADWAY FROM DUNE PALMS ROAD TO THE EASTERLY PROJECT BOUNDARY IN CONJUNCTION WITH DEVELOPMENT.



INSTALL A TRAFFIC SIGNAL AT DUNE PALMS ROAD AND "A" STREET.