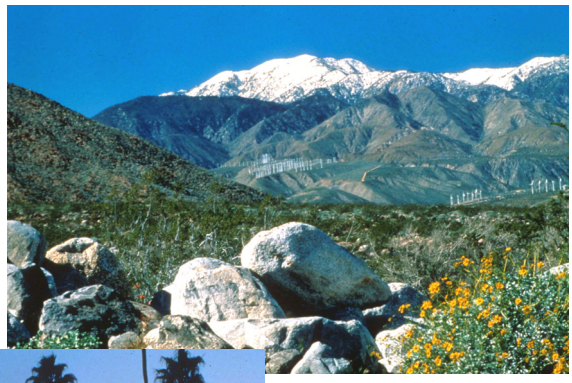
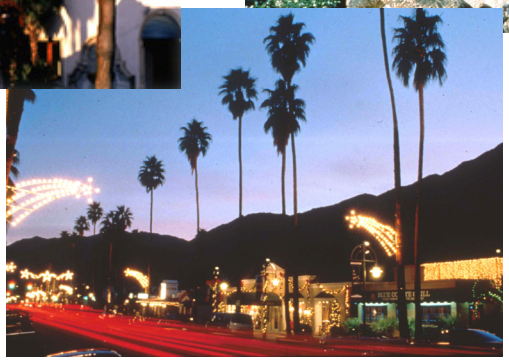
GENERAL PLAN UPDATE

TRAFFIC ANALYSIS





Prepared for:

CITY OF PALM SPRINGS

Prepared by:

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

May 25, 2007

TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 Background 1
1.2 Analysis Area 1

2.0 ELEMENTS OF THE CIRCULATION SYSTEM 4

2.1 Freeways 4
2.2 Arterials 4
2.3 Public Transportation 6
2.4 Bikeways 9
2.5 Recreational Trails 11
2.6 Parking 11
2.7 Truck Routes 11

3.0 EXISTING TRAFFIC CONDITIONS 16

3.1 LOS Definition 16
3.2 Existing Daily Conditions 16

4.0 FUTURE TRAFFIC CONDITIONS 22

4.1 Proposed General Plan Land Use 22
4.2 General Plan Buildout Daily Traffic Conditions 24
4.3 General Plan Buildout Daily Traffic Mitigation 32
4.4 Circulation Element Recommendations 42
4.4.1 Two-lane Facility Right of Way 42
4.4.2 Public Transportation 43
4.4.3 Bikeways and Recreational Trails 43
4.4.4 Parking 43
4.4.5 Palm Springs Airport 44

List of Figures

Figure 1.1 Analysis Area 3
Figure 2.1 Existing Roadway Facility Types 5
Figure 2.2 Existing Bus Routes 8
Figure 2.3 Existing and Proposed Bikeways 10
Figure 2.4 Existing and Proposed Recreational Trails 13
Figure 2.5 Existing Downtown Parking Lots 14
Figure 2.6 Existing Truck Routes 15
Figure 3.1 Existing Average Daily Traffic (in Thousands) on Arterial Segments 20
Figure 3.2 Existing Arterial Daily Level of Service 21
Figure 4.1 Palm Springs Traffic Analysis Zones 23
Figure 4.2 Forecast 2025 Average Daily Traffic 30
Figure 4.3 Forecast 2025 Arterial Daily Level of Service 31
Figure 4.4 Proposed General Plan Circulation Master Plan 38

List of Tables

Table 2.1 Roadway Facility Type 6
Table 2.2 Existing Bus Routes 6
Table 2.3 Downtown Public Parking Supply 11
Table 3.1 Level of Service Definitions for Roadway Segments 16
Table 3.2 Existing Arterial Daily Level of Service 17
Table 4.1 General Plan Buildout Land Use/Socioeconomic Data 22
Table 4.2 General Plan Buildout Forecast 2025 Arterial Daily Level of Service 25
Table 4.3 Critical Intersection Required Improvements 34
Table 4.4 General Plan Buildout Mitigation 36
Table 4.5 Critical Intersection Mitigated Level of Service 37

1.0 INTRODUCTION

The transportation network within a City serves as the backbone of its development and provides for mobility of goods and people within it. Hence synergy is needed between circulation and land uses to ensure the efficient and safe movement of citizens and goods throughout the City.

The purpose of the Circulation Element is to identify the goals, objectives, measures and policies that will improve the existing operations of the City's transportation network. In addition, it will set out guidelines to augment the transportation network to adequately serve future needs of the City and adjacent areas that will have direct effect on the City's transportation network.

The objective of this Circulation Element is to document existing and future transportation facilities in the City of Palm Springs General Plan Planning Area, their condition and impacts resulting from existing and future land uses identified in the City's General Plan. The City's General Plan which is currently in the process of an update is the basis for developing the future traffic conditions. The Circulation Element will also assure the provision of a transportation system that is in sync with the City's land uses, is safe for all modes, and facilitates and maintains adequate mobility among its citizens.

This section of the Circulation Element addresses the existing transportation condition in the City. It describes the existing circulation system including the roadway network, public transportation system, which is predominantly bus service, bikeways, recreational trails, parking and truck routes.

1.1 Background

The City of Palm Springs is known for its high quality recreational facilities, amidst the surrounding natural beauty of the Colorado Desert and San Jacinto Mountains. In essence, the City is a resort town, with almost equal number of part-time or vacationing residents and permanent residents in the City. In close proximity to Orange, Los Angeles, San Bernardino, and San Diego Counties, the City's appealing climate and abundant vacationing opportunities has facilitated it in being a second home to numerous Southern Californians. According to 2001 statistics for the City, the population typically increases roughly two fold in the winter, increasing from 43,800 to almost 75,000.[1]

In addition to its appeal to visitors, the residents of Palm Springs also enjoy an ideal lifestyle; a lifestyle that offers a balanced combination of affordable housing, surrounding natural environments, resort type amenities including parks and recreational facilities, and the relaxed paced setting of a resort town. The circulation system within the City of Palm Springs is important in providing access between various activity centers and in serving the transportation needs of both visitors and residents.

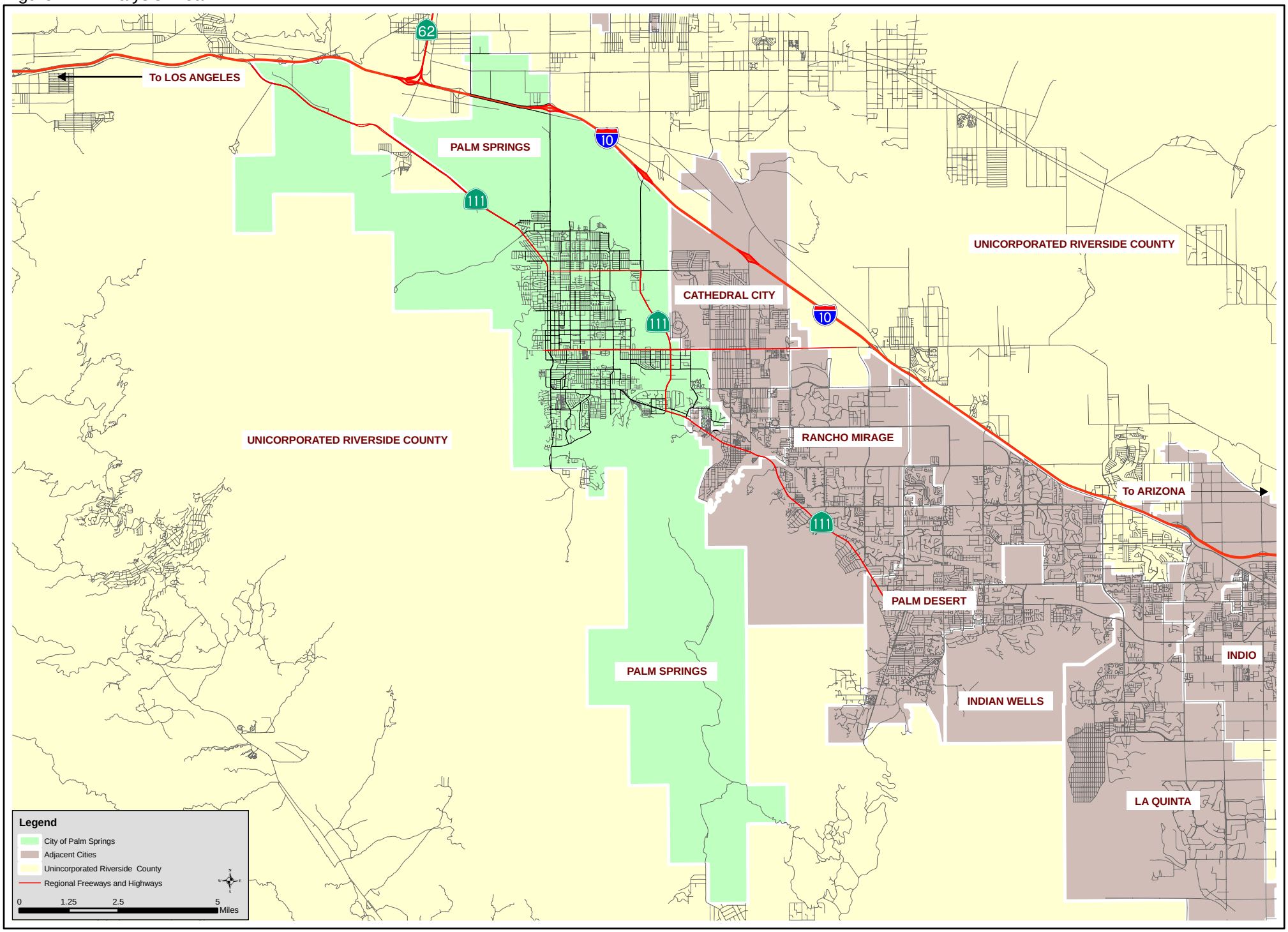
1.2 Analysis Area

The analysis area for the City of Palm Springs is illustrated in **Figure 1.1**. The City of Palm Springs comprises the western edge of the Coachella Valley within the County of Riverside. Bounded by the City of Desert Hot Springs in the north, unincorporated Riverside County to the west and City of Cathedral City and Rancho Mirage in the eastern and south-eastern direction, the City of Palm Springs lies within the ecological area commonly referred to as the Colorado Desert. The City is adequately connected to the neighboring Southern California cities and those in Arizona and Nevada by freeways and an airport. Palm Springs International Airport is served by eight airlines year around, and by another four airlines seasonally.

[1] City of Palm Springs website, http://www.ci.palm-springs.ca.us/ps_profile.html, accessed March 2006.

Approximately located 107 miles from the Los Angeles area, the City encompasses about 96 square miles of well established neighborhoods. The City's sphere of influence includes the areas adjacent to Palm Hills, areas along the northern city limits in the vicinity of Interstate 10 (I-10).

Figure 1.1: Analysis Area



2.0 ELEMENTS OF THE CIRCULATION SYSTEM

This chapter documents the existing circulation system in the City of Palm Springs. The City's circulation system includes an extensive network of roadways and local bus transit system. This chapter also includes a summary of the City's current bikeways, recreational trails, parking and truck routes.

2.1 Freeways

The City's roadway network can be broadly classified as a limited access freeway system and arterial system. Freeways are special purpose, high capacity, multi-lane, divided highways for regional travel; they connect cities and major thoroughfares into a regional network. Access is strictly controlled at grade-separated crossings to assure uninterrupted traffic flow. Freeways are owned and maintained by Caltrans and are not under the jurisdiction of the City.

The City's freeway and arterial system is shown in **Figure 2.1**. Interstate and regional access to the City is provided predominantly by I-10. In addition, access to the City from other Coachella Valley cities is provided by State Route 111 (SR-111). State Route 62 (Twenty Nine Palms Highway) connects to the I-10 from the north, providing an additional gateway to the City.

I-10 is a northwest-southeast freeway traversing through the northern limits of the City providing direct access to Los Angeles County to the northwest and the State of Arizona to the east. This facility is comprised of four general purpose lanes in each direction for its entire length of approximately seven miles through the City. I-10 has three interchanges within the City limits, located at SR-111, Indian Canyon Drive and Gene Autry Trail.

SR-111, referred to by different names at different locations within the City, provides access between Palm Springs and its neighboring Coachella Valley cities. This highway has four lanes divided by a median and provides at-grade access to other arterials within the City. The alignment of this highway is northwest-southeast in the western part of the City, where it is also called Palm Canyon Drive. At the junction of Palm Canyon Drive and Vista Chino, east of Palm Canyon Drive, SR-111 follows the alignment of Vista Chino and cuts across the City in an east-west direction. Following the junction with Gene Autry Trail, the highway follows the alignment of Gene Autry Trail, south of Vista Chino, and traverses the City in a north-south direction. Subsequent to the junction with East Palm Canyon Drive, east of Gene Autry Trail, SR-111 changes its direction to northwest-southeast and follows the alignment of East Palm Canyon Drive.

2.2 Arterials

The arterials that serve the City of Palm Springs predominantly follow a half mile grid pattern. However, the street network in areas west of Palm Canyon Drive and south of East Palm Canyon Drive is free flowing and curvilinear due to rolling surroundings. A predominant grid system of roads in the City is in concurrence with the current Circulation Element policy of developing a grid system of roadways that provides more travel choices and reduces congestion on major streets.

Key north-south arterials are Palm Canyon Drive, Indian Canyon Drive, Avenida Caballeros, Sunrise Way, Farrell Drive, El Cielo Road, Crossley Road and Gene Autry Drive. Indian Canyon Drive and Palm Canyon Drive operate as a one-way couplet in the downtown area between Alejo Road and Camino Parocella. The predominant east-west arterials are San Rafael Drive, Racquet Club Road, Vista Chino, Alejo Road, Tahquitz Canyon Way, Ramon Road, Mesquite Avenue, and East Palm Canyon Drive. In addition, La Verne Way, Murray Canyon Drive and Toledo Avenue, all located south of East Palm Canyon Drive, form key residential thoroughfares. Indian Canyon Drive from I-10 to Tahquitz Canyon Way and Tahquitz Canyon Way to the Airport are identified as National Highway System connectors.

Figure 2.1: Existing Roadway Facility Types

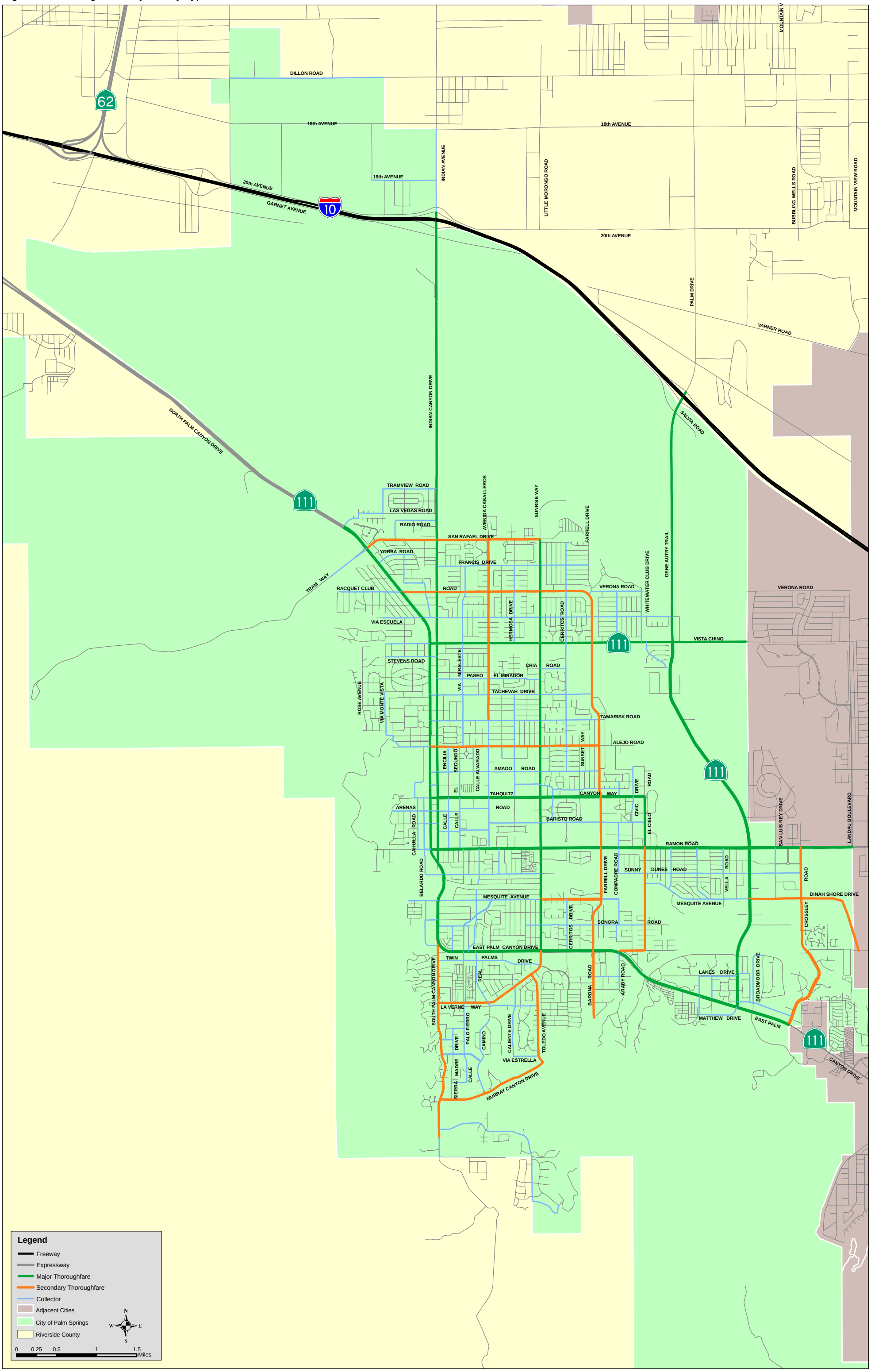


Table 2.1 lists the existing roadway classification within the City of Palm Springs along with their description.

Table 2.1 Roadway Facility Type

Roadway Classification	Description
Expressway	Serves through traffic with limited local access with a minimum of four lanes and few cross streets; they do not allow for on-street parking. Direct access from a single-family residential neighborhood to a highway is prohibited where alternate access can be provided. Currently, Palm Springs has one roadway designated as a highway, located along North Palm Canyon Drive north of Tramway, which is under the jurisdiction of Caltrans.
Major Thoroughfare	Serves mostly through-traffic with some local access allowed; on-street parking may be allowed on some streets. Typically four or more lanes, these roadways form the basic element of the City's circulation system, connecting Palm Springs to regional highways and tying together different areas of the City. Landscaped medians may be provided on major thoroughfares to maintain an acceptable level of service, to serve as a safety mechanism, and also to provide beautification features for the City.
Secondary Thoroughfare	Serves through and local traffic and may allow on-street parking. Secondary thoroughfares connect various areas of the City, provide access to major thoroughfares, and serve secondary traffic generators such as small business centers, schools, and major parks. Typical street right-of-way width is 88 feet, which can be divided or undivided.
Collector	Serves mostly local traffic; they are usually comprised of two lanes and carry traffic from secondary and major thoroughfares. On-street parking is permitted on collectors, which can be divided or undivided roadways. Typical right-of-way width for a collector is 60 feet, 66 feet in industrial areas.
Local Street	Primarily provides access to individual parcels of land. Minimum right-of-way is 50 feet.
Private Streets	Provides access to individual parcels of land in planned development communities approved with privately maintained access. Access may be restricted and gated. Street width shall be a minimum of 32 feet wide (curb face to curb face) to accommodate on-street parking and emergency access, unless otherwise specifically approved by the Planning Commission and/or City Council.

Source: City of Palm Springs, May 2006.

2.3 Public Transportation

Public transportation in the City of Palm Springs is provided by SunLine Transit Agency. SunLine Transit Agency is a joint powers authority created by the nine cities of the Coachella Valley, as well as the County of Riverside. There are six routes that currently serve the City of Palm Springs (see **Table 2.2**). Lines 14, 24, 30 and 111 operate seven days a week. Lines 23 and 31 operate Monday through Friday only. **Figure 2.2** illustrates the existing bus routes within the City and the activity centers that they serve.

Table 2.2 Existing Bus Routes

Route #	Route Type	Route Service	Service Corridors	Key Palm Springs Activity Centers Served
14	Local	Palm Springs – Desert Hot Springs	Tahquitz Canyon Way/ Farrell Drive/ Gene Autry Trail	Palm Springs High School
				Palm Springs Mall
				Department of Motor Vehicles
23	Local	Palm Springs – Cathedral City	Sunrise Way/ Vista Chino	Palm Springs High School
				Palm Springs Mall
24	Local	Palm Springs – Cathedral City	Vista Chino/ Sunrise Way/ Tahquitz Canyon Way/ Ramon Road	Raymond Cree Middle School
				Palm Springs Mall
				Palm Springs High School
				County Health Department
				Desert Regional Medical Center
30	Local	Palm Springs – Cathedral City	Ramon Road	Palm Springs High School
				Palm Springs Mall

Table 2.2 Existing Bus Routes, Continued

Route #	Route Type	Route Service	Service Corridors	Key Palm Springs Activity Centers Served
31	Local	Cathedral City – Thousand Palms	Gene Autry Trail/ Vista Chino	Palm Springs Air Museum
111	Local	Palm Springs – Indio	Palm Canyon Drive	Desert Museum
				Desert Regional Medical Center

Source: SunLine Transit Agency website, http://www.sunline.org/home/index.asp, accessed March 2006.

SunLine Transit Agency has recently developed a proposed transit service improvement plan that would revise transit service in the Coachella Valley.[2] The proposed plan outlines recommendations for new bus routes, realignment of existing bus services, as well as discontinuing non productive routes. Proposed changes to bus routes in the City of Palm Springs include:

- **Route 14** service in downtown Palm Springs would be realigned from Calle Encilia to Indian Canyon Drive.
- **Route 23** would be eliminated, as much of its current alignment would be served by Route 24 and new Route 32.
- **Route 24** would add service on San Rafael Road and Sunrise Way, provide streamlined & bi-directional service on Las Vegas Road, and discontinue service on Granada Avenue, Tramview Road, El Dorado Boulevard, and Ramon Road east of Farrell Drive.
- **Route 30** service in downtown Palm Springs would be realigned from Calle Encilia to Indian Canyon Drive, in conjunction with using Baristo Road instead of Tahquitz Canyon Way for access from Indian Canyon Drive to Palm Canyon Drive.
- **Route 31** would be eliminated and replaced with service by Route 32.
- **Route 32** is a proposed new route that would provide connections between Palm Springs, Thousand Palms, Rancho Mirage, and Palm Desert, replacing service currently provided by Route 31. Service would be extended along Vista Chino between Desert Regional Medical Center and Avenida Maravilla in Cathedral City, and discontinued on Gene Autry Trail.
- **Route 111** service in downtown Palm Springs would be realigned from Calle Encilia to Indian Canyon Drive and some stops would be eliminated to decrease travel time and provide better regional access. The proposed stops to be eliminated are all within a quarter-mile walking distance of another stop on the route.

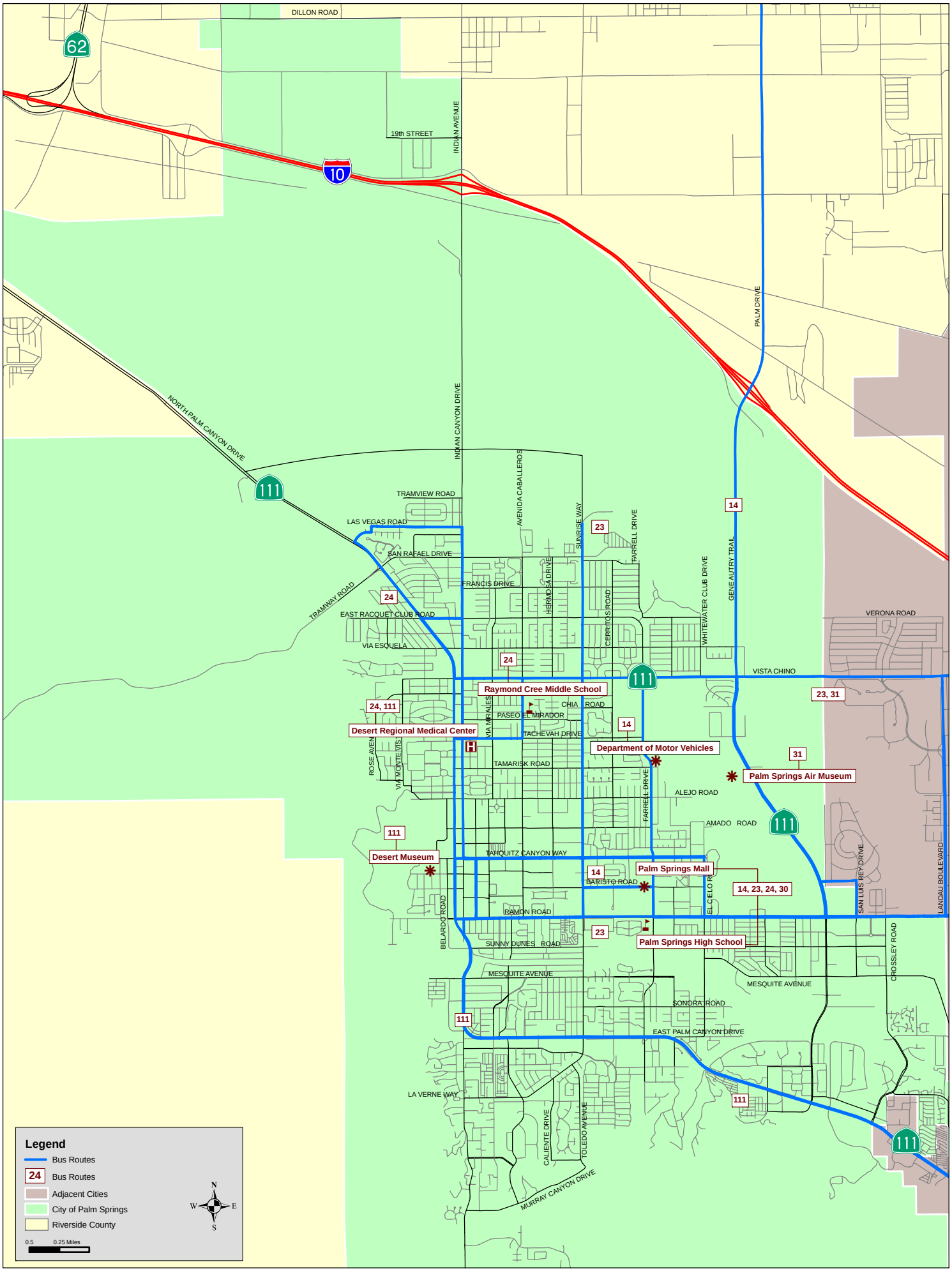
Overall, service frequency would be increased on SunLine Transit Agency bus routes. The proposed changes are anticipated to take effect at the beginning of 2007.

SunDial, operated by SunLine Transit Agency, provides on-demand curb-to-curb paratransit service to qualifying persons (i.e., seniors and disabled) within ¾ of a mile on either side of SunLine Transit Agency bus routes. As a result of implementation of the proposed transit service improvement plan, the service area for paratransit would be modified slightly due to proposed changes to the fixed bus routes. Parts of northern Palm Springs would lose some paratransit service, but these would be relatively small areas.

Regional bus service is provided by Greyhound, which has a bus depot located on North Indian Canyon Drive near Amado Road. Amtrak also provides regional rail and bus service. The North Palm Springs Amtrak train station is located at North Indian Canyon just south of I-10. The Amtrak Palm Springs bus stop is located on East Tahquitz Canyon Way, near the Palm Springs Airport, and serves as a stop for Amtrak Thruway connecting bus service.

[2] Transportation Management & Design, Inc. Comprehensive Operational Analysis (COA), Proposed Transit Service Improvement Plan, 2005-06. Prepared for SunLine Transit Agency.

Figure 2.2: Existing Bus Routes



2.4 Bikeways

The City of Palm Springs uses the following bikeway classifications to categorize the bikeways within the City:

- Class I – Protected bikeways separated from vehicular traffic by a physical barrier
  - Bicycle Path or Bicycle Trail – A specifically designated area for bicycle travel which is physically separated from auto traffic or entirely outside the road right-of-way
  - Pedestrian Safety Path – Any sidewalk or similar rights-of-way shared by cyclists and pedestrians 12 feet wide, of which 8 feet will be visually designated for pedestrians and 4 feet will be visually designated for cyclists. (Note: the City currently has 12-foot combination bicycle/pedestrian paths, but there are no specific designations on the paths.)
- Class II – Unprotected bikeways defined by a stripe on the roadway
  - Bike Lane – A lane within the roadway designated for the one-way use of bicycles. Preferably 6 feet wide lane for one-way bicycle traffic, separated from traffic by a stripe on the roadway.
- Class III – Unprotected bikeways sharing the roadway with vehicular traffic
  - Bicycle Safety Route – Any type of bikeway, including streets signed as bikeways but offering no other accommodation for bicycles.

Figure 2.3 shows the location of existing and proposed bikeways in the City by classification. The City has a total of approximately 8 miles of Class I, 13 miles of Class II, and 35 miles of Class III bikeways. Although bikeways are classified by the City, bicyclists can ride on any public street. From the bikeways, recreational bike trails have been identified throughout the city as summarized below:

<u>Las Palmas Loop</u>
This bikeway is located on Camino del Norte, Rose Avenue, Alejo Road, Belardo Road, Museum Drive, Tahquitz Canyon Way, Indian Canyon Drive, and Tachevah Drive.

<u>Heritage Trail</u>
This bikeway is located on Belardo Road, Museum Drive, and Sunny Dunes Road.

<u>Citywide Loop</u>
This bikeway is located on Camino del Norte, Rose Avenue, Alejo Road, Belardo Road, Museum Drive, Tahquitz Canyon Way, Camino Real, Murray Canyon Drive, Toledo Avenue, Sunrise Way, Mesquite Road, Farrell Drive, Civic Drive, and Tachevah Drive.

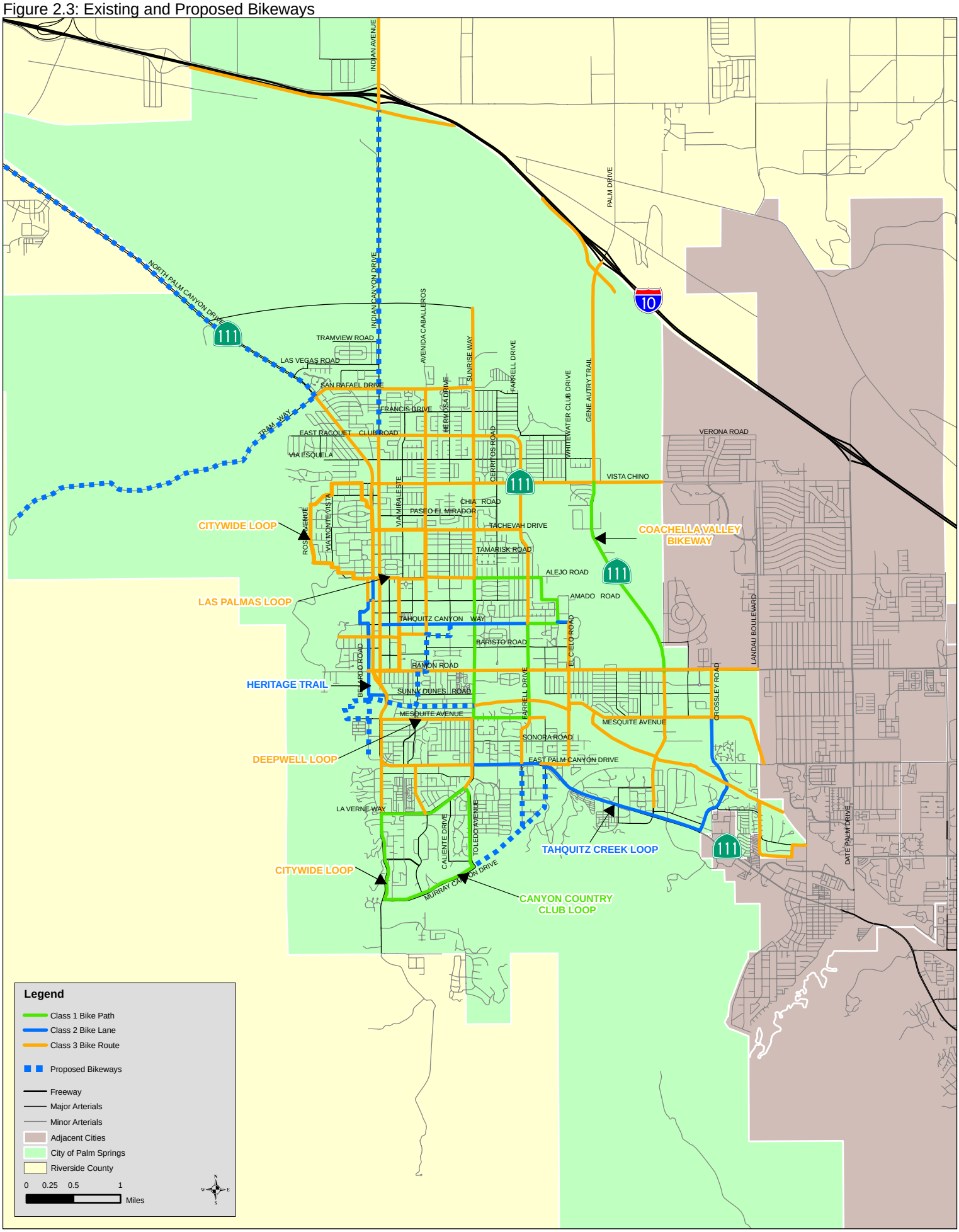
<u>Tahquitz Creek Loop</u>
This bikeway is located on Palm Canyon Drive East, Golf Club Drive, Crossley Road, Mesquite Avenue, and Sunrise Way.

<u>Deepwell Loop</u>
This bikeway is located on Camino Real, East Palm Canyon Drive, Sunrise Way and Mesquite Avenue.

<u>Canyon Country Club Loop</u>
This bikeway is located on La Verne Way, Camino Real, Murray Canyon Drive, and Toledo Avenue.

<u>Coachella Valley Bikeway</u>
This bikeway is located on Gene Autry Trail and Golf Club Drive.

Figure 2.3: Existing and Proposed Bikeways



2.5 Recreational Trails

Recreational trails are an important resource to the City of Palm Springs as they represent a major aspect of the visitor draw to the community as well as the city's history, both tribal and early anglo settlement and movement. **Figure 2.4** shows a portion of the existing and proposed recreational and bike trails that extend through the San Jacinto and Santa Rosa Mountain areas, in addition to the bike trails system in the City of Palm Springs. The recreational trails are used for hiking, equestrian, backpacking and four-wheel drive activities. Within the City of Palm Springs, there are over 80 miles of recreational trails. A comprehensive inventory and mapping of the trails in the San Jacinto and Santa Rosa Mountains have been developed through a cooperative partnership by the Bureau of Land Management – Palm Springs – South Coast Resource Area, U.S. Forest Service – San Jacinto Ranger District, Riverside County, Coachella Valley Trails Council, Coachella Valley Cycling Association and Desert Riders.

The Palm Springs Aerial Tramway provides access to trails located in the Mount San Jacinto State Park. The park covers an area of 13,000 acres and offers approximately 54 miles of hiking trails. The tramway starts in Chino Canyon on the north edge of Palm Springs and takes passengers from Valley Station at 2,643 feet elevation to Mountain Station at elevation 8,516 feet.

2.6 Parking

Figure 2.5 shows existing public parking facilities in downtown Palm Springs, including the total number of spaces provided at each location. **Table 2.3** below summarizes the number and type of spaces provided at each parking facility. The City allows for shared parking in downtown areas designated as "D" (downtown parking combining zone) in its zoning code. The "D" downtown parking combining zone is intended to provide adequate parking while recognizing the characteristic of shared parking which is unique to the downtown.

Table 2.3 Downtown Public Parking Supply

Lot #	Unrestricted	Handicapped	Loading Zone	Permit Only	2-Hour	Total
1	44	0	0	2	0	**46**
2	4	3	0	0	0	**7**
3	69	4	0	1	0	**74**
4	6	0	1	0	16	**23**
5	133	5	0	6	144	**288**
6	32	4	33	0	69	**138**
7	94	4	0	1	0	**99**
8	164	9	0	196	1029	**1,398**

Source: City of Palm Springs, April 2006.

2.7 Truck Routes

I-10 and SR-111 are part of the state highway truck route system. I-10 is included in the Surface Transportation Assistance Act (STAA) Network, which allows larger trucks with no maximum overall length. SR-111 is also included in the STAA Network, except between Gateway Drive and Gene Autry Trail, where it is designated as part of the California Legal Network, which allows trucks with maximum overall length between 65 and 75 feet.

In addition to the freeways and highways, the City has proposed the following arterials to be designated as truck routes (refer to **Figure 2.6**):

- East Palm Canyon Drive
- Gene Autry Trail
- Indian Canyon Drive

- Ramon Road
- Sunrise Way
- Sunrise Parkway
- Vista Chino

Figure 2.4: Existing and Proposed Recreational Trails

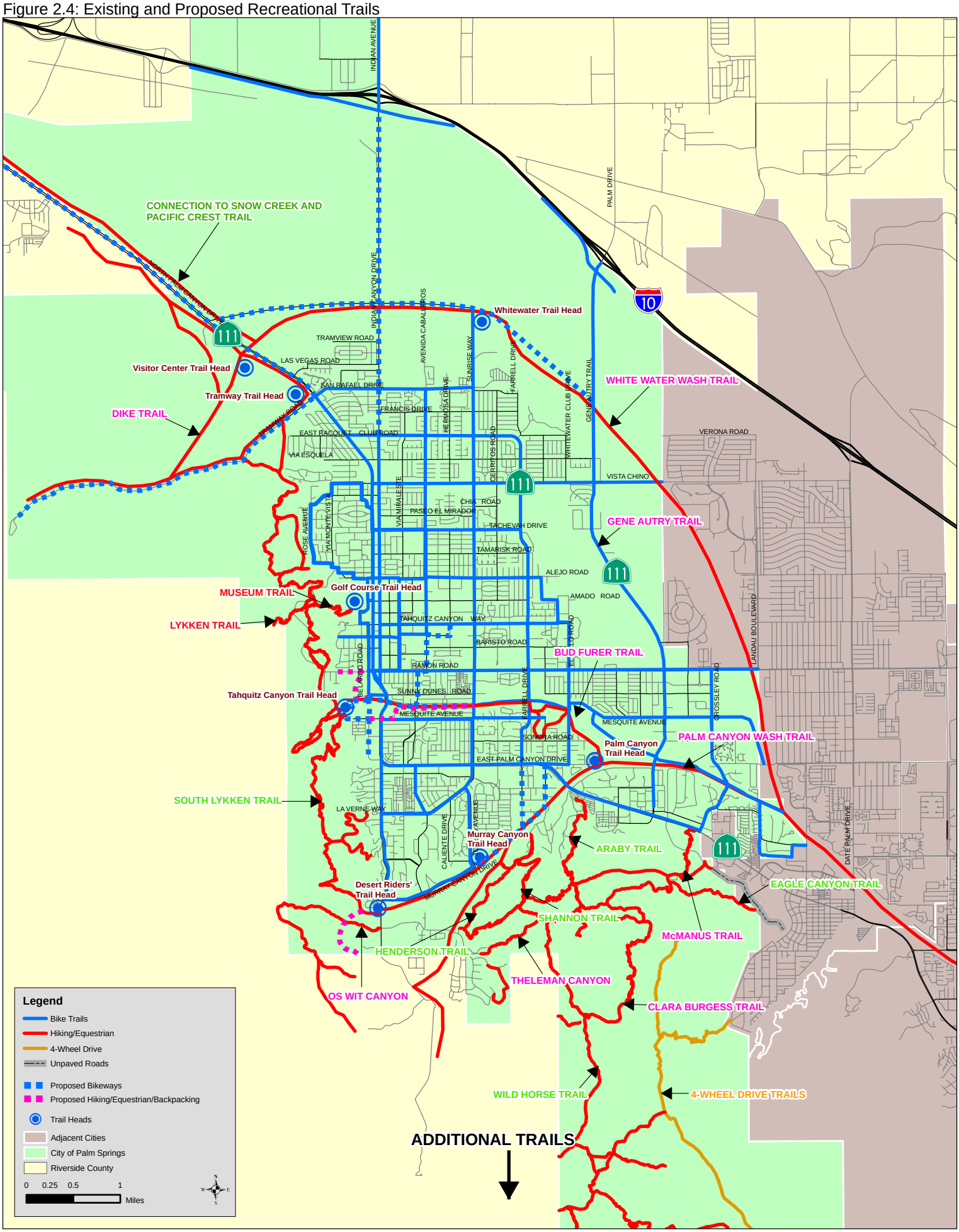


Figure 2.5: Existing Downtown Parking Lots

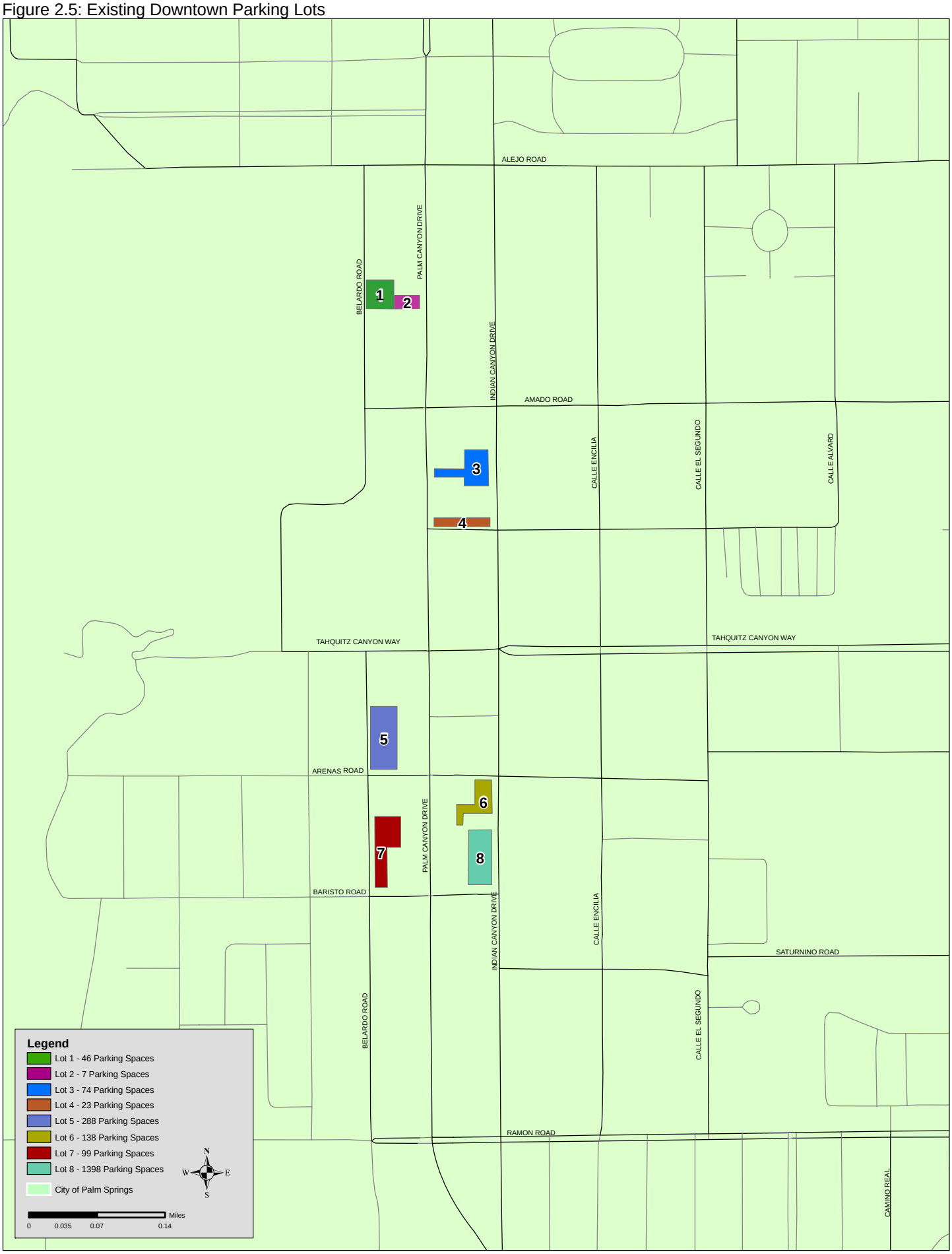
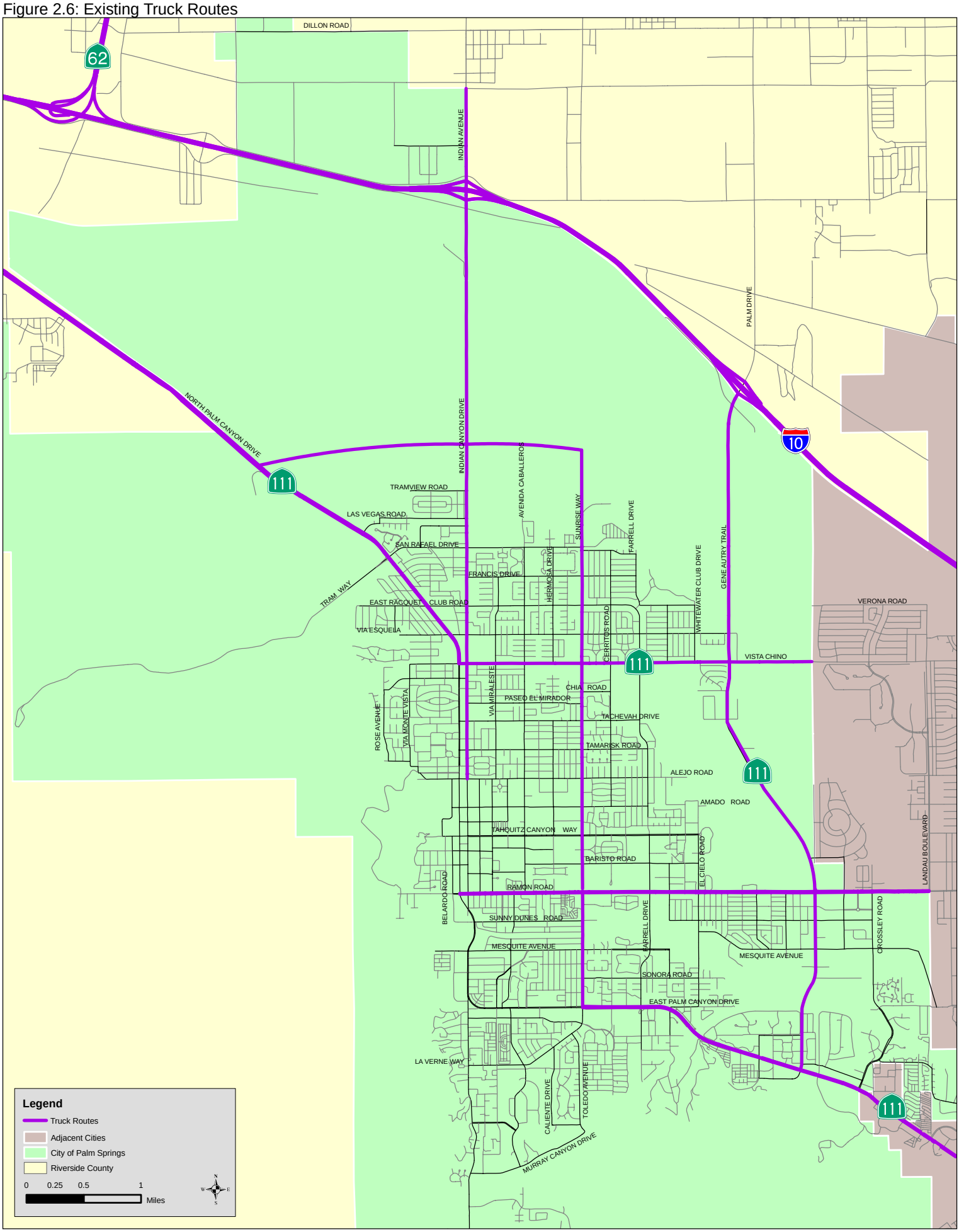


Figure 2.6: Existing Truck Routes



3.0 EXISTING TRAFFIC CONDITIONS

This chapter presents an analysis of existing traffic conditions based on 2005 arterial segment counts on selected roadways in the City of Palm Springs. The existing daily level of service (LOS) for these roadway segments were evaluated and summarized below.

3.1 LOS Definition

Daily LOS was determined for the roadway segments based on the calculated volume-to-capacity (V/C) ratio for each roadway. To determine the V/C ratio, the average daily traffic (ADT) volume for the roadway was compared to the theoretical capacity of the roadway, according to its designated roadway classification. Roadway capacities were based on assumptions used in the Circulation Element of the Riverside County General Plan, 2003. LOS is a qualitative measure of the effect of several factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, and driving comfort and convenience. Levels of service are designated by grades of "A" (excellent, free flow) through "F" (failure, jammed conditions). Table 3.1 below summarizes LOS descriptions and corresponding V/C ratios for roadway segments.

The City of Palm Springs, as noted in the General Plan, has adopted LOS D as the threshold for acceptable traffic conditions on the circulation network. The existing conditions analysis will maintain the LOS D threshold as acceptable throughout the City and facilities that currently operate at LOS E or F are noted in the analysis. The LOS D threshold applies to both arterial segments and intersections although intersection throughput capacity generally dictates circulation system performance. The existing arterial segment analysis highlights existing planning level deficiencies in the circulation system and locations where future forecasts may necessitate the need for mitigation measures to provide acceptable levels of service throughout the City.

Table 3.1 Level of Service Definitions for Roadway Segments

Level of Service	Volume-to-Capacity Ratio	Definition
A	0.00 - 0.60	EXCELLENT. Free flow, light volumes
B	0.61 - 0.70	VERY GOOD. Free to stable flow, light to moderate volumes
C	0.71 - 0.80	GOOD. Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
D	0.81 - 0.90	FAIR. Approaches unstable flow, moderate to heavy volumes, limited freedom to maneuver
E	0.91 - 0.99	POOR. Extremely unstable flow, heavy volumes, maneuverability and psychological comfort extremely poor
F	Varies (≥ 1.00)	FAILURE. Forced or breakdown conditions, slow speeds, tremendous delays with continuously increasing queue lengths

Source: Highway Capacity Manual Special Report 209, Transportation Research Board, 2000.

3.2 Existing Daily Conditions

As part of the existing condition analysis, 24-hour traffic counts were collected on various roadway segments throughout the City. The majority of counts were taken between January and March 2005. Vehicle counts at these locations are reported in **Table 3.2** with corresponding V/C ratios and LOS. **Figure 3.1** presents the existing ADT volumes for the roadway segments. **Figure 3.2** illustrates existing daily LOS conditions on these roadway segments.

Table 3.2 Existing Arterial Daily Level of Service

ID	Roadway	Segment	Lanes[1]	Volume	Capacity[2]	V/C Ratio	LOS
1	Alejo Road	West of Palm Canyon Drive	2U	4,500	13,000	0.35	A
2	Alejo Road	East of Indian Canyon Drive	2U	4,500	13,000	0.35	A
3	Alejo Road	West of Sunrise Way	4U	4,500	25,900	0.17	A
4	Amado Road	East of Indian Canyon Drive	2U	4,700	13,000	0.36	A
5	Amado Road	West of Sunrise Way	2U	2,600	13,000	0.20	A
6	Araby Drive	South of East Palm Canyon Drive	2U	800	13,000	0.06	A
7	Arenas Road	West of Palm Canyon Drive	2U	1,300	13,000	0.10	A
8	Arenas Road	East of Indian Canyon Drive	2U	1,500	13,000	0.12	A
9	Avenida Caballeros	Racquet Club to Vista Chino	4U	2,400	25,900	0.09	A
10	Avenida Caballeros	South of Vista Chino	4U	6,400	25,900	0.25	A
11	Avenida Caballeros	South of Alejo Road	2U	7,000	13,000	0.54	A
12	Avenida Caballeros	Amado Road to Tahquitz Canyon Drive Way	2U	7,000	13,000	0.54	A
13	Avenida Caballeros	North of Ramon Road	2U	6,400	13,000	0.49	A
14	Baristo Road	El Cielo Road to Farrell Drive	2U	8,100	13,000	0.63	B
15	Barona Road	South of East Palm Canyon Drive	2U	1,000	13,000	0.08	A
16	Belardo Road	North of Ramon Road	2U	3,100	13,000	0.24	A
17	Calle Alvarado	South of Alejo Road	2U	900	13,000	0.07	A
18	Camino Real	Indian Trail to South Riverside Drive	2U	700	13,000	0.05	A
19	Camino Real	South of East Palm Canyon Drive	2U	1,200	13,000	0.10	A
20	Camino Real	La Verne Way to Murray Canyon Drive	2U	2,300	13,000	0.18	A
21	Cerritos Road	South of Vista Chino	2U	1,000	13,000	0.08	A
22	Cerritos Road	South of Alejo Road	2U	200	13,000	0.01	A
23	Cherokee Way	South of East Palm Canyon Drive	2U	1,200	13,000	0.09	A
24	Compadre Road	North of Ramon Road	2U	900	13,000	0.07	A
25	Crossley Road	South of Ramon Road	2U	10,900	13,000	0.84	D
26	Crossley Road	North of Mesquite Avenue	2U	7,800	13,000	0.60	A
27	Crossley Road	South of Mesquite Avenue	2U	8,800	13,000	0.67	B
28	Crossley Road	North of East Palm Canyon Drive	4D	5,500	35,900	0.15	A
29	Date Palm Drive	South of Vista Chino	6D	33,300	53,900	0.62	B
30	Dillon Road	East of Indian Canyon Drive	2U	7,200	13,000	0.55	A
31	El Cielo Road	North of Ramon Road	4D	8,300	35,900	0.23	A
32	El Cielo Road	Ramon Road to Escoba Drive	2D	8,300	18,000	0.46	A
33	Farrell Drive	South of Vista Chino	4U	13,500	25,900	0.52	A
34	Farrell Drive	South of Alejo Road	4U	16,000	25,900	0.62	B
35	Farrell Drive	North of Ramon Road	4D	16,000	35,900	0.45	A
36	Francis Drive	East of Indian Canyon Drive	2U	1,100	13,000	0.09	A
37	Francis Drive	West of Sunrise Way	2U	1,100	13,000	0.08	A
38	Gene Autry Trail	North of Vista Chino	2U	23,400	25,800	0.91	**E**
39	Gene Autry Trail	South of Vista Chino	6D	21,000	53,900	0.39	A
40	Gene Autry Trail	North of Ramon Road	6D	23,000	53,900	0.43	A
41	Gene Autry Trail	South of Ramon Road	4D	23,500	35,900	0.65	B
42	Gene Autry Trail	South of East Palm Canyon Drive	4U	13,400	25,900	0.52	A
43	Indian Avenue	South of Dillon Road	2U	15,600	13,000	1.20	**F**
44	Indian Canyon Drive	South of I-10	2U	22,700	25,800	0.88	**D**
45	Indian Canyon Drive	North of Racquet Club	4D	16,600	35,900	0.46	A
46	Indian Canyon Drive	North of Vista Chino	4D	17,200	35,900	0.48	A
47	Indian Canyon Drive	South of Vista Chino	4D	16,500	35,900	0.46	A
48	Indian Canyon Drive	South of Tachevah Drive	4D	15,000	35,900	0.42	A
49	Indian Canyon Drive NB	South of Alejo Road	4D	15,500	35,900	0.43	A
50	Indian Canyon Drive NB	North of Ramon Road	4D	18,700	35,900	0.52	A
51	La Verne Way	East of South Palm Canyon Drive	4U	5,600	25,900	0.22	A
52	La Verne Way	West of Sunrise Way	4U	5,600	25,900	0.22	A
53	La Verne Way	South of East Palm Canyon Drive	4U	15,000	25,900	0.58	A
54	Matthew Drive	West of Gene Autry Trail	2U	4,000	13,000	0.31	A
55	Mesquite Avenue	East of South Palm Canyon Drive	2U	4,300	13,000	0.33	A
56	Mesquite Avenue	West of Sunrise Way	2U	4,300	13,000	0.33	A
57	Mesquite Avenue	West of Vella Road	2U	10,200	13,000	0.78	C
58	Mesquite Avenue	West of Gene Autry Trail	4U	8,200	25,900	0.21	**A**
59	Mesquite Avenue	East of Gene Autry Trail	4D	19,300	35,900	0.54	A
60	Murray Canyon Drive	East of South Palm Canyon Drive	4U	2,500	25,900	0.10	A
61	Murray Canyon Drive	West of Sunrise Way	4U	2,500	25,900	0.10	A

Table 3.2 Existing Arterial Daily Level of Service, Continued

ID	Roadway	Segment	Lanes[1]	Volume	Capacity[2]	V/C Ratio	LOS
62	North Calle Encilia	North of Ramon Road	2U	5,500	13,000	0.42	A
63	North Calle El Segundo	South of Alejo Road	2U	1,200	13,000	0.09	A
64	North Calle El Segundo	North of Ramon Road	2U	2,100	13,000	0.16	A
65	North Hermosa Drive	South of Alejo Road	2U	400	13,000	0.03	A
66	Palm Canyon Drive/SR-111 NB	South of I-10	2D Exp	8,600	36,000	0.23	A
67	Palm Canyon Drive/SR-111 SB	South of I-10	2D Exp	8,600	36,000	0.23	A
68	Palm Canyon Drive North	North of Racquet Club Road	4D	20,300	35,900	0.56	A
69	Palm Canyon Drive North	South of Racquet Club Road	4D	17,600	35,900	0.49	A
70	Palm Canyon Drive North	South of Vista Chino	4D	17,400	35,900	0.48	A
71	Palm Canyon Drive North	South of Tachevah Drive	4D	16,600	35,900	0.46	A
72	Palm Canyon Drive North SB	South of Alejo Road	3D	14,000	26,925	0.52	A
73	Palm Canyon Drive South SB	North of Ramon Road	3D	15,600	26,925	0.58	A
74	Palm Canyon Drive South	South of Ramon Road	4D	27,500	35,900	0.77	C
75	Palm Canyon Drive South	South of East Palm Canyon Drive	4D	17,500	35,900	0.49	A
76	Palm Canyon Drive East	East of Palm Canyon Drive South	4D	20,500	35,900	0.57	A
77	Palm Canyon Drive East	West of Sunrise Way	4D	23,100	35,900	0.64	B
78	Palm Canyon Drive East	West of Farrell Drive	4D	33,800	35,900	0.94	**E**
79	Palm Canyon Drive East	West of Gene Autry Trail	4D	33,500	35,900	0.93	**E**
80	Racquet Club Road	West of Palm Canyon Drive	2U	1,100	13,000	0.09	A
81	Racquet Club Road	East of Indian Canyon Drive	4U	8,200	25,900	0.32	A
82	Racquet Club Road	West of Sunrise Way	4U	9,300	25,900	0.36	A
83	Ramon Road	West of Palm Canyon Drive	4D	11,100	35,900	0.31	A
84	Ramon Road	East of Indian Canyon Drive	4D	16,700	35,900	0.47	A
85	Ramon Road	West of Sunrise Way	4D	22,900	35,900	0.64	A
86	Ramon Road	West of Farrell Drive	4D	32,600	35,900	0.91	**E**
87	Ramon Road	West of El Cielo Road	4D	29,700	35,900	0.83	D
88	Ramon Road	West of Gene Autry Trail	6D	44,900	53,900	0.83	D
89	San Rafael Drive	East of Indian Canyon Drive	2U	4,100	13,000	0.32	A
90	San Rafael Drive	West of Sunrise Way	2U	5,000	13,000	0.38	A
91	Seven Lakes Drive	West of Gene Autry Trail	2U	1,400	13,000	0.11	A
92	SR-62	South of Dillon Road	4D	17,000	35,900	0.47	A
93	Stevens Road	West of Palm Canyon Drive	2U	800	13,000	0.06	A
94	Sunny Dunes Road	East of South Palm Canyon Drive	2U	1,400	13,000	0.11	A
95	Sunny Dunes Road	West of Sunrise Way	2U	3,400	13,000	0.26	A
96	Sunny Dunes Road	West of Gene Autry Trail	2U	1,200	13,000	0.09	A
97	Sunrise Way	Racquet Club to Vista Chino	4D	12,000	35,900	0.34	A
98	Sunrise Way	South of Vista Chino	4D	16,400	35,900	0.46	A
99	Sunrise Way	South of Alejo Road	4D	16,000	35,900	0.45	A
100	Sunrise Way	North of Ramon Road	4D	16,000	35,900	0.45	A
101	Tachevah Drive	East of Indian Canyon Drive	2U	5,200	13,000	0.40	A
102	Tachevah Drive	West of Sunrise Way	2U	3,900	13,000	0.30	A
103	Tahquitz Canyon Way	West of Palm Canyon Drive	2U	7,700	13,000	0.59	A
104	Tahquitz Canyon Way	East of Indian Canyon Drive	4D	9,500	35,900	0.26	A
105	Tahquitz Canyon Way	West of Sunrise Way	4D	13,600	35,900	0.38	A
106	Tamarisk Road	East of Indian Canyon Drive	2U	1,200	13,000	0.09	A
107	Tamarisk Road	West of Sunrise Way	2U	1,600	13,000	0.12	A
108	Twin Palms Drive	East of South Palm Canyon Drive	2U	1,000	13,000	0.08	A
109	Twin Palms Drive	West of Sunrise Way	2U	1,000	13,000	0.08	A
110	Via Esquela	West of Palm Canyon Drive	2U	700	13,000	0.06	A
111	Via Esquela	East of Indian Canyon Drive	2U	1,000	13,000	0.07	A
112	Via Esquela	West of Gene Autry Trail	2U	3,800	13,000	0.29	A
113	Via Monte Vista	South of Vista Chino	2U	1,000	13,000	0.08	A
114	Vista Chino	West of Palm Canyon Drive	2U	2,100	13,000	0.16	A
115	Vista Chino (SR-111)	East of Indian Canyon Drive	4D	16,900	35,900	0.47	A
116	Vista Chino (SR-111)	West of Sunrise Way	4D	23,100	35,900	0.64	B
117	Vista Chino (SR-111)	West of Gene Autry Trail	4D	35,500	35,900	0.99	**E**
118	Vista Chino	East of Gene Autry Trail	4D	24,800	35,900	0.69	B

Source: City of Palm Springs

1. U = Undivided; D = Divided
2. Roadway capacities based on Riverside County General Plan, 2003 and the Highway Capacity Manual

LOS E

LOS F

The daily arterial LOS analysis serves as a planning-level evaluation of traffic conditions in the City. Actual operational level of service is defined by peak hour intersection analysis. While not conducted as part of this analysis, existing peak-hour intersection LOS may be necessary to further determine operational deficiencies on the roadway network. To define operational deficiencies under future conditions, intersection analysis will be performed to identify circulation system deficiencies.

Based on the LOS analysis, four roadway segments in the City currently operate at LOS E:

- Palm Canyon Drive East west of Farrell Drive
- Palm Canyon Drive East west of Gene Autry Trail
- Ramon Road west of Farrell Drive
- Vista Chino (SR-111) west of Gene Autry Trail

In addition, one roadway segment currently operates at LOS F:

- Indian Avenue south of Dillon Road

The remaining roadway segments currently operate at LOS D or better. However, the roadway segments that currently operate at LOS D, including Crossley Road south of Ramon Road, Ramon Road west of El Cielo Road, and Ramon Road west of Gene Autry Trail, should be closely monitored, since they may deteriorate to LOS E or F with additional traffic growth in the future.

Figure 3.1: Existing Average Daily Traffic (in Thousands) on Arterial Segments

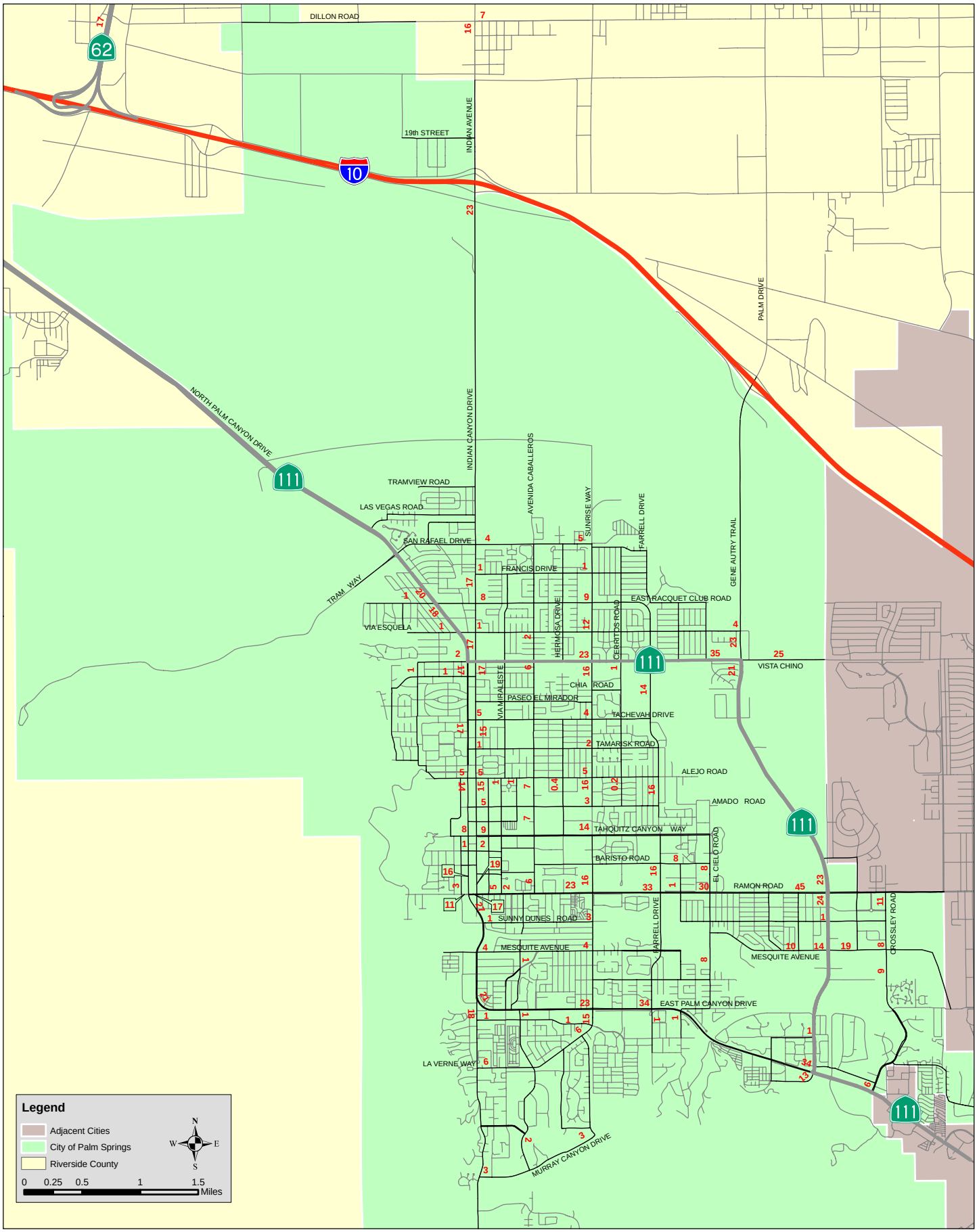
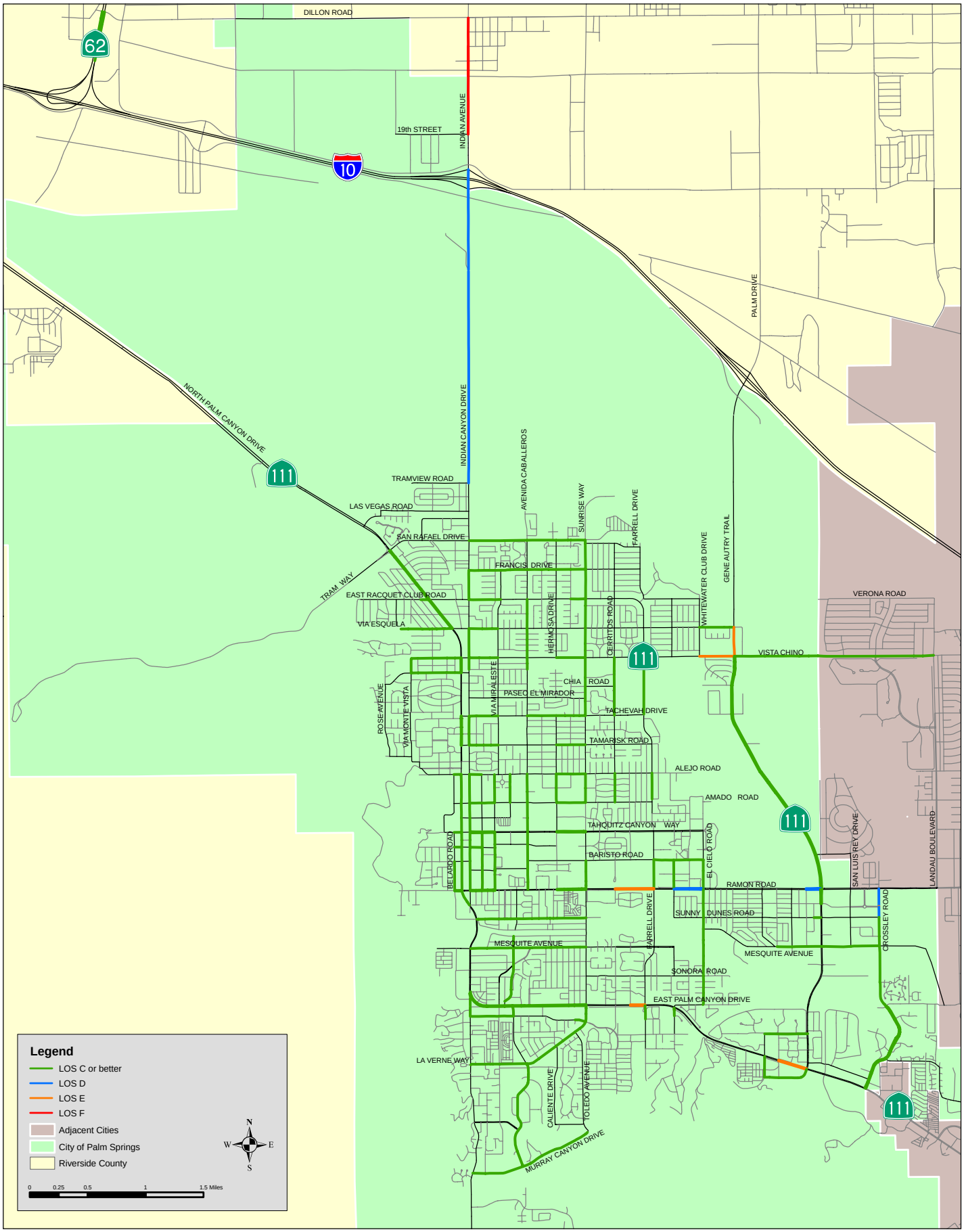


Figure 3.2: Existing Arterial Daily Level of Service



4.0 FUTURE TRAFFIC CONDITIONS

Future year 2025 traffic forecasts were generated using the Palm Springs Traffic Analysis Model (PSTAM). For detailed information on PSTAM refer to the *Palm Springs Traffic Analysis Model Development Documentation, February 2006*. The traffic model forecasts future traffic conditions throughout the City of Palm Springs based on the proposed General Plan Land Use scenario. The model estimates trips generated in traffic analysis zones throughout the City of Palm Springs and Coachella Valley. The model then distributes these trips based on various factors such as land use intensities, average trip lengths obtained from survey data and the circulation infrastructure. Future traffic projections are then evaluated for deficiencies and mitigation measure proposed where appropriate.

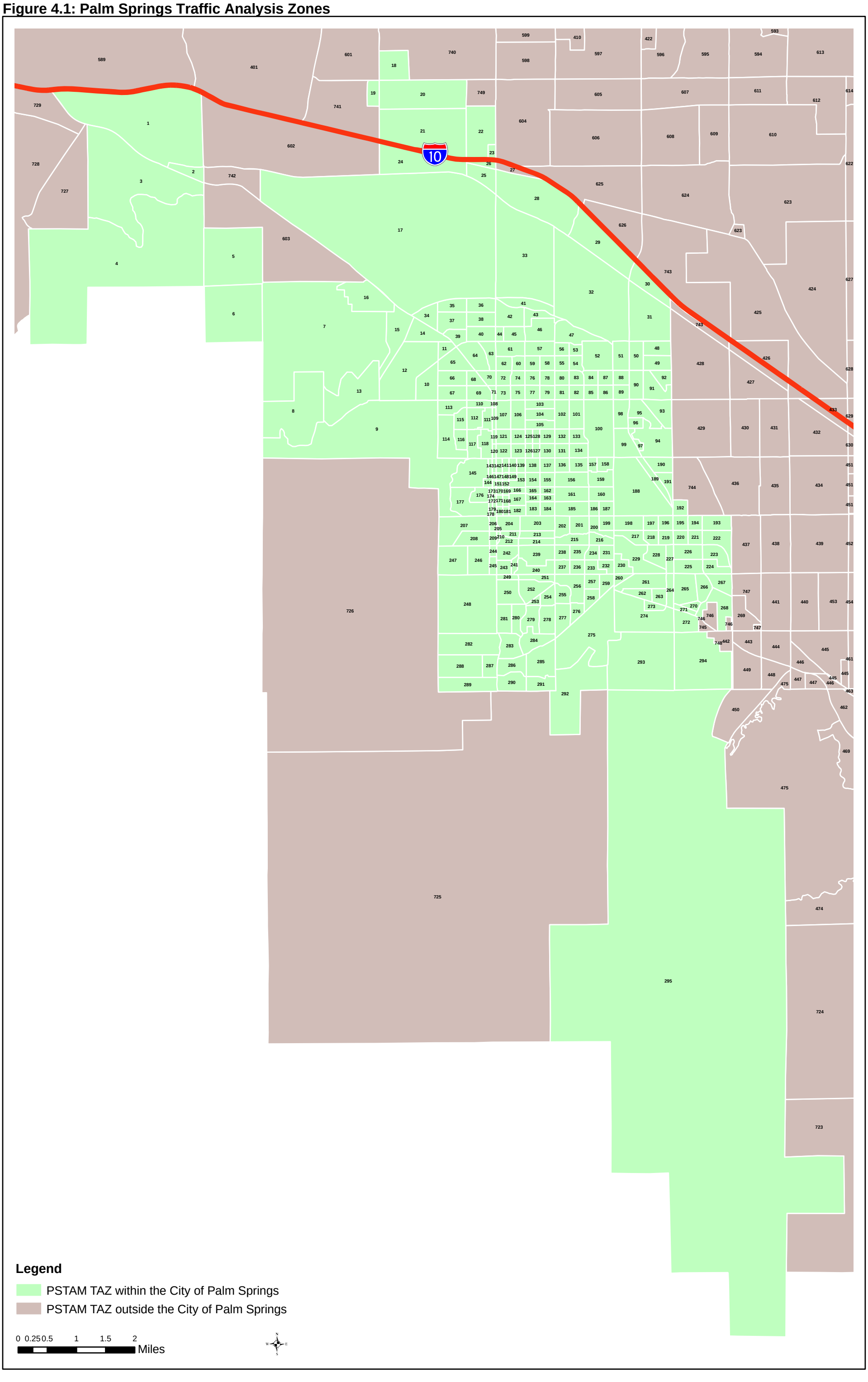
4.1 Proposed General Plan Land Use

Figure 4-1 presents the traffic model traffic analysis zones throughout the City of Palm Springs. **Table 4.1** presents a summary of the land use for the City as incorporated into the traffic model for future General Plan Buildout conditions. The values presented in the table reflect reduced land use activity for the I-10 Retail Business Complex corridor as proposed in the General Plan. While the General Plan has several land use categories, the traffic model requires specific variables to be consistent with the Coachella Valley Association of Governments (CVAG) model. The General Plan Buildout land use has been aggregated into the variables presented in **Table 4.1** by traffic analysis zone for incorporation into the traffic model.

Table 4.1 General Plan Buildout Land Use/Socioeconomic Data

Variable	Units	Quantity
Very Low Density Residential	Acres	3,210
Medium Density Residential	Acres	5,009
Commercial	Acres	1,342
Public Buildings	Acres	338
Offices	Acres	754
Low Industrial	Acres	3091
Heavy Industrial	Acres	0
Labor Force	Employees	63,971
School Enrollment	Students	4,995
Games	Games	1,000
Occupied Year-round Single Family Residences	Dwelling Units	18,063
Occupied Year-round Multi- Family Residences	Dwelling Units	15,975
Occupied Part-year Residences	Dwelling Units	11,657
Hotel Rooms	Rooms	13,119
Source: Palm Springs Traffic Analysis Model		

Figure 4.1: Palm Springs Traffic Analysis Zones



4.2 General Plan Buildout Daily Traffic Conditions

Forecast 2025 General Plan Buildout daily traffic conditions throughout the City are presented in **Table 4.2**. Under General Plan Buildout conditions, the following arterial segments are forecast to operate at a deficient level of service (LOS E or F) under daily conditions and are highlighted in **Table 4.2**:

- Indian Avenue
- Palm Canyon Drive North
- Palm Canyon Drive East
- Vista Chino
- Ramon Road

In general, future traffic conditions within the central portion of the City are forecast to operate at acceptable levels, with excess capacity along some corridors. The dense grid-like structure of the circulation system allows traffic to filter through the downtown portion of the city with minimal congestion-related delay. However, the City experiences daily capacity deficiencies through corridors accessing the City. The geographic nature of the region limits infrastructure access to the City and hence, capacity limitations result in increased levels of congestion along these corridors. Capacity limitations from the City northerly to the I-10 corridor and easterly to Cathedral City and beyond to the remainder of Coachella Valley result in arterial segments that are forecast to operate at deficient levels under future daily conditions. As noted under the existing conditions analysis, LOS D has been adopted as the threshold for acceptable operation of the City's circulation system.

While certain arterial segments are forecast to operate at LOS E or F, this does not necessarily imply the segment will experience significant traffic congestion. Daily segment analysis is a generalized planning level assessment of overall traffic conditions, whereas actual segment operation is determined by the throughput at upstream and downstream intersections. If the intersections are forecast to operate at an acceptable level of service under peak hour conditions, then the corresponding segments are expected to operate at an acceptable level. The rationale for evaluating intersection performance is that if a segment was over-capacity, traffic would spill over into the intersection, thus resulting in deficient intersection operation. Therefore, peak hour intersection analysis is used to confirm arterial segment capacity issues or demonstrate that under peak hour conditions, the segment capacity is acceptable. Daily arterial segment capacity is a theoretical capacity for planning level purposes since under real-world conditions, volumes cannot exceed a true capacity and thus, a volume to capacity ratio, or LOS F, is infeasible to achieve. For these reasons, arterial segment analysis is employed as a planning level analysis that identifies potential circulation system issues for further analysis if forecast to operate at LOS E or F.

Arterial segments with a daily volume to capacity (V/C) ratio approaching 1.0 or slightly above 1.0 are expected to operate at acceptable levels of service with appropriate intersection improvements. Roadway segments with high V/C ratios under daily forecast conditions may require additional capacity to maintain acceptable operations. **Figure 4.2** presents the 2025 forecast average daily traffic and **Figure 4.3** presents forecast daily level of service for arterial roadways.

Table 4.2 General Plan Buildout Forecast 2025 Arterial Daily Level of Service

Facility	Location	2025				
		Lanes	Capacity	ADT	V/C	LOS
19th Avenue	West of Indian Canyon Drive	4U	25,900	8,200	0.32	A
Alejo Road	Belardo Road to Palm Canyon Drive	2U	13,000	5,200	0.40	A
Alejo Road	Palm Canyon Drive to Indian Canyon Drive	4U	25,900	15,000	0.58	A
Alejo Road	Indian Canyon Drive to Avenida Caballeros	4U	25,900	11,200	0.43	A
Alejo Road	Avenida Caballeros to Sunrise Way	4U	25,900	10,200	0.39	A
Alejo Road	Sunrise Way to Farrell Drive	4U	25,900	7,000	0.27	A
Amado Road	West of Palm Canyon Drive	4U	25,900	7,400	0.29	A
Amado Road	Palm Canyon Drive to Indian Canyon Drive	4U	25,900	4,600	0.18	A
Amado Road	Indian Canyon Drive to Avenida Caballeros	4U	25,900	5,400	0.21	A
Amado Road	Avenida Caballeros to Sunrise Way	4U	25,900	3,000	0.12	A
Andreas Road East	Indian Canyon Drive to Calle Alvarado	2U	13,000	4,100	0.32	A
Araby Drive	South of East Palm Canyon Drive	2U	13,000	900	0.07	A
Arenas Road	Belardo Road to Palm Canyon Drive	4U	25,900	1,400	0.05	A
Arenas Road	Palm Canyon Drive to Indian Canyon Drive	4U	25,900	4,100	0.16	A
Arenas Road	Indian Canyon Drive to Avenida Caballeros	4U	25,900	4,100	0.16	A
Avenida Caballeros	San Rafael Drive to Racquet Club Road	4U	25,900	800	0.03	A
Avenida Caballeros	Racquet Club Road to Vista Chino	4U	25,900	2,800	0.11	A
Avenida Caballeros	Vista Chino to Tachevah Drive	4U	25,900	7,400	0.29	A
Avenida Caballeros	Tachevah Drive to Alejo Road	4U	25,900	2,100	0.08	A
Avenida Caballeros	Alejo Road to Amado Road	4U	25,900	8,100	0.31	A
Avenida Caballeros	Amado Road to Tahquitz Canyon Drive	4U	25,900	9,200	0.36	A
Avenida Caballeros	Tahquitz Road to Ramon Road	4U	25,900	11,300	0.44	A
Avenida Granada	South Palm Canyon Drive to Camino Real	2U	13,000	1,900	0.15	A
Baristo Road	Palm Canyon Drive to Indian Canyon Drive	4U	25,900	2,300	0.09	A
Baristo Road	Avenida Caballeros to Sunrise Way	4U	25,900	2,200	0.08	A
Baristo Road	Farrell Drive to El Cielo Road	4U	25,900	9,300	0.36	A
Barona Road	South of East Palm Canyon Drive	4U	25,900	1,200	0.05	A
Belardo Road	Alejo Road to Tahquitz Road	2U	13,000	1,300	0.10	A
Belardo Road	Tahquitz Road to Ramon Road	2U	13,000	3,600	0.28	A
Calle Alvarado	South of Alejo Road	2U	13,000	1,800	0.14	A
Calliente Road South / Via Estrella East	La Verne Way to Toledo Avenue	2U	13,000	1,400	0.11	A
Camino Real	Ramon Road to Sunny Dunes Road	2U	13,000	5,000	0.38	A
Camino Real	Mesquite Avenue to East Palm Canyon Drive	2U	13,000	2,900	0.22	A
Camino Real	East Palm Canyon Drive to East Twin Palms Drive	4U	25,900	4,200	0.16	A
Camino Real	La Verne Way to Murray Canyon Drive	2U	13,000	2,300	0.18	A
Cerritos Road	Racquet Club Drive to Vista Chino	2U	13,000	6,600	0.51	A
Cerritos Road	Vista Chino to Tachevah Drive	2U	13,000	11,400	0.88	D
Cerritos Road	Tachevah Drive to Alejo Road	2U	13,000	6,600	0.51	A
Cherokee Way	North of East Palm Canyon Drive	2U	13,000	2,600	0.20	A
Cherokee Way	South of East Palm Canyon Drive	2U	13,000	1,400	0.11	A
Chia Road	Sunrise Way to Cerritos Drive	2U	13,000	1,000	0.08	A
Compadre Road	North of Ramon Road	2U	13,000	1,000	0.08	A
Compadre Road	Ramon Road to Sunny Dunes	2U	13,000	4,800	0.37	A
Crossley Road	Ramon Road to Mesquite Avenue	4U	25,900	16,400	0.63	B
Crossley Road	South of Mesquite Avenue	4U	25,900	19,200	0.74	C
Crossley Road	North of East Palm Canyon Drive	4U	25,900	11,300	0.44	A
Dillon Road	Diablo Road to Indian Canyon Drive	4U	25,900	13,200	0.51	A

Table 4.2 General Plan Buildout Forecast 2025 Arterial Daily Level of Service, Continued

Facility	Location	2025				
		Lanes	Capacity	ADT	V/C	LOS
El Ceilo Road	Tahquitz Road to Ramon Road	4D	35,900	9,200	0.26	A
El Cielo Road	Ramon Road to Escoba Drive	4U	25,900	10,200	0.39	A
Farrell Drive	Joyce Drive to Racquet Club Drive	2U	13,000	2,900	0.22	A
Farrell Drive	Racquet Club Drive to Vista Chino	4U	25,900	8,800	0.34	A
Farrell Drive	Vista Chino to Tachevah Drive	4U	25,900	21,200	0.82	D
Farrell Drive	Tachevah Drive to Alejo Road	4U	25,900	19,900	0.77	C
Farrell Drive	Alejo Road to Tahquitz Road	4U	25,900	20,100	0.78	C
Farrell Drive	Tahquitz Road to Ramon Road	4D	35,900	18,400	0.51	A
Farrell Drive	Ramon Road to Mesquite Avenue	4U	25,900	9,600	0.37	A
Farrell Drive	Mesquite Avenue to East Palm Canyon Drive	4U	25,900	7,000	0.27	A
Francis Drive	Indian Canyon Drive to Avenida Caballeros	2U	13,000	1,300	0.10	A
Francis Drive	Avenida Caballeros to Sunrise Way	2U	13,000	1,300	0.10	A
Gene Autry Trail	I-10 to Via Escuela	4D	72,000	41,500	0.58	**A**
Gene Autry Trail	Via Escuela to Vista Chino	6D	53,900	37,000	0.69	B
Gene Autry Trail/SR-111	Vista Chino to Ramon Road	6D	53,900	39,000	0.72	C
Gene Autry Trail/SR-111	Ramon Road to Mesquite Avenue	4D	35,900	27,100	0.75	C
Gene Autry Trail/SR-111	Mesquite Avenue to Seven Lakes Drive	4D	35,900	27,100	0.75	C
Gene Autry Trail/SR-111	Seven Lakes Drive to East Palm Canyon Drive	4D	35,900	19,200	0.53	A
Gene Autry Trail	South of East Palm Canyon Drive	4U	25,900	15,400	0.59	A
Indian Avenue	Dillon Road to 19th Avenue	4U	25,900	41,600	1.61	**F**
Indian Avenue	19th Avenue to I-10	6D	53,900	44,900	0.83	D
Indian Canyon Drive	I-10 to Sunrise Parkway	4D	72,000	53,500	0.74	**C**
Indian Canyon Drive	Sunrise Parkway to Tramview Road	4D	35,900	34,700	0.48	**A**
Indian Canyon Drive	Tramview Road to San Rafael Drive	4D	35,900	31,700	0.97	E
Indian Canyon Drive	San Rafael Drive to Racquet Club Road	4D	35,900	23,900	0.67	B
Indian Canyon Drive	Racquet Club Road to Vista Chino	4D	35,900	23,900	0.67	B
Indian Canyon Drive	Vista Chino to Tachevah Drive	4D	35,900	23,800	0.66	B
Indian Canyon Drive	Tachevah Drive to Alejo Road	4D	35,900	23,400	0.65	B
Indian Canyon Drive NB	Alejo Road to Tahquitz Road	4D	35,900	18,200	0.51	A
Indian Canyon Drive NB	Tahquitz Road to Ramon Road	4D	35,900	21,500	0.60	A
Indian Canyon Drive NB	South of Ramon Road	4D	35,900	15,000	0.42	A
Joyce Drive East	Sunrise Way to Farrell Drive	2U	13,000	2,800	0.22	A
La Verne Way	South Palm Canyon Drive to Camino Real	4U	25,900	6,400	0.25	A
La Verne Way	Camino Real to Twin Palms Drive East	4U	25,900	7,100	0.27	A
La Verne Way	South of East Palm Canyon Drive	4U	25,900	17,300	0.67	B
Las Vegas Road	North Palm Canyon Drive to Indian Canyon Drive	2U	13,000	2,000	0.15	A
Matthew Drive	West of Gene Autry Trail	2U	13,000	4,600	0.35	A
Mesquite Avenue	West of South Palm Canyon Drive	2U	13,000	6,600	0.51	A
Mesquite Avenue	South Palm Canyon Drive to Camino Real	2U	13,000	4,900	0.38	A
Mesquite Avenue	Camino Real to Sunrise Way	2U	13,000	4,900	0.38	A
Mesquite Avenue	Sunrise Way to Farrell Drive	2U	13,000	4,900	0.38	A
Mesquite Avenue	El Cielo Road to Paseo Dorotea	2U	13,000	5,900	0.45	A
Mesquite Avenue	Paseo Dorotea to Vella Road	2U	13,000	11,500	0.88	D
Mesquite Avenue	Vella Road to Gene Autry Trail	4U	25,900	16,300	0.63	B
Dinah Shore Drive	Gene Autry Tail to San Luis Rey Drive	4D	35,900	26,400	0.74	C
Dinah Shore Drive	San Luis Rey Drive to Crossley Road	4D	35,900	29,000	0.81	D
Dinah Shore Drive	East of Crossley Drive	4D	35,900	31,800	0.89	D
Mission Drive	East of Gene Autry Trail	2U	13,000	800	0.06	A
Murray Canyon Drive	South Palm Canyon Drive to Camino Real	4U	25,900	2,900	0.11	A
Murray Canyon Drive	Camino Real to Toledo Avenue	4U	25,900	2,900	0.11	A

Table 4.2 General Plan Buildout Forecast 2025 Arterial Daily Level of Service, Continued

Facility	Location	2025				
		Lanes	Capacity	ADT	V/C	LOS
North Calle Encilia	Alejo Road to Tahquitz Road	2U	13,000	9,100	0.70	B
North Calle Encilia	Tahquitz Road to Ramon Road	2U	13,000	6,300	0.48	A
North Calle El Segundo	Alejo Road to Tahquitz Road	2U	13,000	2,000	0.15	A
North Calle El Segundo	Tahquitz Road to Ramon Road	2U	13,000	2,400	0.18	A
Palm Canyon Drive/SR-111 NB	South of I-10	2D Exp	36,000	17,200	0.48	A
Palm Canyon Drive/SR-111 SB	South of I-10	2D Exp	36,000	17,800	0.49	A
Palm Canyon Drive North/SR-111	Sunrise Parkway to Gateway Drive	4D	35,900	28,300	0.79	C
Palm Canyon Drive North/SR-111	Gateway Drive to San Rafael Road	4D	35,900	29,100	0.81	D
Palm Canyon Drive North/SR-111	San Rafael Road to Racquet Club Road	4D	35,900	37,700	1.05	F
Palm Canyon Drive North/SR-111	Racquet Club Road to Via Escuela	4D	35,900	35,100	0.98	E
Palm Canyon Drive North/SR-111	Via Escuela to Vista Chino	4D	35,900	36,600	1.02	F
Palm Canyon Drive North	Vista Chino to Tachevah Road	4D	35,900	22,500	0.63	B
Palm Canyon Drive North	Tachevah Drive to Alejo Road	4D	35,900	20,800	0.58	A
Palm Canyon Drive North SB	Alejo Road to Tahquitz Road	3D	26,925	14,700	0.55	A
Palm Canyon Drive South SB	Tahquitz Road to Ramon Road	3D	26,925	17,900	0.66	B
Palm Canyon Drive South SB	South of Ramon Road	3D	26,925	17,900	0.66	B
Palm Canyon Drive South	Indian Canyon Drive to Mesquite Avenue	4D	35,900	28,800	0.80	C
Palm Canyon Drive South	Mesquite Avenue to East Palm Canyon Drive	4D	35,900	21,800	0.61	B
Palm Canyon Drive South	East Palm Canyon Drive to La Verne Way	4D	35,900	20,100	0.56	A
Palm Canyon Drive South	La Verne Way to Murray Canyon Drive	4D	35,900	20,100	0.56	A
Palm Canyon Drive South	South of Murray Canyon Drive	2U	13,000	7,500	0.58	A
Palm Canyon Drive East	Palm Canyon Drive South to Camino Real	4D	35,900	17,100	0.48	A
Palm Canyon Drive East	Sunrise Way to Farrell Drive	4D	35,900	38,900	1.08	F
Palm Canyon Drive East	Farrell Drive to Gene Autry Trail	4D	35,900	34,400	0.96	E
Palm Canyon Drive East/SR-111	Gene Autry Trail to Golf Club Drive	4D	35,900	34,700	0.97	E
Palm Canyon Drive East/SR-111	East of Golf Club Drive	4D	35,900	41,200	1.15	F
Paseo Dorotea	Ramon Road to Mesquite Avenue	2U	13,000	2,900	0.22	A
Paseo El Mirador	Avenida Caballeros to Sunrise Way	2U	13,000	5,400	0.42	A
Racquet Club Road	Leonard Road to Palm Canyon Drive	4U	25,900	1,300	0.05	A
Racquet Club Road	Palm Canyon Drive to Indian Canyon Drive	4D	35,900	7,200	0.20	A
Racquet Club Road	Indian Canyon Drive to Via Miraleste	4U	25,900	9,400	0.36	A
Racquet Club Road	Via Miraleste to Avenida Caballeros	4U	25,900	6,800	0.26	A
Racquet Club Road	Avenida Caballeros to Hermosa Drive	4U	25,900	5,500	0.21	A
Racquet Club Road	Hermosa Drive to Sunrise Way	4U	25,900	10,700	0.41	A
Racquet Club Road	Sunrise Way to Cerritos Drive	4U	25,900	14,000	0.54	A
Racquet Club Road	Cerritos Drive to Farrell Drive	4U	25,900	9,600	0.37	A
Ramon Road	Belardo Road to Palm Canyon Drive	4D	35,900	12,800	0.36	A
Ramon Road	Palm Canyon Drive to Indian Canyon Drive	4D	35,900	19,200	0.53	A
Ramon Road	Indian Canyon Drive to Calle Encillia	4D	35,900	19,200	0.53	A
Ramon Road	Calle Encillia to Calle El Segundo	4D	35,900	12,700	0.35	A
Ramon Road	Calle El Segundo to Avenida Caballeros	4D	35,900	16,000	0.45	A
Ramon Road	Avenida Caballeros to Hermosa Drive	4D	35,900	26,700	0.74	C
Ramon Road	Hermosa Drive to Sunrise Way	4D	35,900	27,400	0.76	C
Ramon Road	Sunrise Way to Farrell Drive	6D	53,900	33,400	0.62	B
Ramon Road	Farrell Drive to Compadre Road	6D	53,900	41,200	0.76	C
Ramon Road	Compadre Road to El Cielo Road	6D	53,900	38,200	0.71	C
Ramon Road	El Cielo Road to Paseo Dorotea	6D	53,900	44,100	0.82	D
Ramon Road	Paseo Dorotea to Vella Road	6D	53,900	44,900	0.83	D

Table 4.2 General Plan Buildout Forecast 2025 Arterial Daily Level of Service, Continued

Facility	Location	2025				
		Lanes	Capacity	ADT	V/C	LOS
Ramon Road	Vella Road to Gene Autry Trail	7D	62,900	65,500	1.04	**F**
Ramon Road	Gene Autry Tail to San Luis Rey Drive	6D	53,900	58,000	1.08	**F**
Ramon Road	San Luis Rey Drive to Crossley Road	6D	53,900	55,300	1.03	**F**
Ramon Road	Crossley Road to Landau Boulevard	6D	53,900	60,200	1.12	**F**
San Luis Rey Drive	Ramon Road to Mesquite Avenue	2U	13,000	3,400	0.26	A
San Rafael Drive	Palm Canyon Drive to Indian Canyon Drive	4U	25,900	6,600	0.25	A
San Rafael Drive	Indian Canyon Drive to Avenida Caballeros	4U	25,900	4,600	0.18	A
San Rafael Drive	Avenida Caballeros to Sunrise Way	4U	25,900	7,200	0.28	A
Seven Lakes Drive	West of Gene Autry Trail	2U	13,000	2,200	0.17	A
Stevens Road	Rose Avenue to Via Monte Vista	2U	13,000	900	0.07	A
Stevens Road	Via Monte Vista to Palm Canyon Drive	2U	13,000	2,400	0.18	A
Stevens Road	Palm Canyon Drive to Indian Canyon Drive	2U	13,000	1,500	0.12	A
Sonora Road	Sunrise Way to Cerritos Drive	2U	13,000	4,400	0.34	A
Sonora Road	Cerritos Drive to Farrell Drive	2U	13,000	5,000	0.38	A
Sonora Road	Farrell Drive to Compadre Road	2U	13,000	4,900	0.38	A
Sonora Road	Compadre Road to El Cielo Road	2U	13,000	5,800	0.45	A
Sunny Dunes Road	Palm Canyon Drive to Sunrise Way	2U	13,000	3,900	0.30	A
Sunny Dunes Road	Compadre Road to El Cielo Road	2U	13,000	4,700	0.36	A
Sunny Dunes Road	El Cielo Road to Paseo Dorotea	2U	13,000	7,400	0.57	A
Sunny Dunes Road	Paseo Dorotea to Vella Road	2U	13,000	4,600	0.35	A
Sunny Dunes Road	Vella Road to Gene Autry Trail	2U	13,000	5,300	0.41	A
Sunny Dunes Road	Gene Autry Trail to Crossley Road	2U	13,000	11,600	0.89	D
Sunrise Parkway	SR-111 to Indian Canyon Drive	4D	35,900	8,100	0.23	A
Sunrise Parkway	East of Indian Canyon Drive	4D	35,900	20,100	0.56	A
Sunrise Parkway	North of San Rafael Drive	4D	35,900	20,000	0.56	A
Sunrise Way	San Rafael Drive to Racquet Club Road	4D	35,900	23,900	0.67	B
Sunrise Way	Racquet Club to Vista Chino	4D	35,900	17,900	0.50	A
Sunrise Way	Vista Chino to Tachevah Drive	4D	35,900	18,900	0.53	A
Sunrise Way	Tachevah Drive to Alejo Road	4D	35,900	19,500	0.54	A
Sunrise Way	Alejo Road to Tahquitz Road	4D	35,900	19,300	0.54	A
Sunrise Way	Tahquitz Road to Ramon Road	4D	35,900	19,800	0.55	A
Sunrise Way	Ramon Road to Mesquite Avenue	4D	35,900	29,100	0.81	D
Sunrise Way	Mesquite Avenue to East Palm Canyon Drive	4D	35,900	25,300	0.70	B
Tachevah Drive	Palm Canyon Drive to Indian Canyon Drive	4U	25,900	6,000	0.23	A
Tachevah Drive	Indian Canyon Drive to Avenida Caballeros	4U	25,900	6,000	0.23	A
Tachevah Drive	Avenida Caballeros to Sunrise Way	4U	25,900	6,000	0.23	A
Tachevah Drive	Sunrise Way to Farrell Drive	4U	25,900	5,900	0.23	A
Tahquitz Canyon Way	West of Belardo Road	2U	13,000	4,500	0.35	A
Tahquitz Canyon Way	Belardo Road to Palm Canyon Drive	2D	18,000	8,900	0.49	A
Tahquitz Canyon Way	Palm Canyon Drive to Indian Canyon Drive	3D	26,925	10,900	0.40	A
Tahquitz Canyon Way	Indian Canyon Drive to Calle El Segundo	4D	35,900	10,900	0.30	A
Tahquitz Canyon Way	Calle El Segundo to Avenida Caballeros	4D	35,900	9,800	0.27	A
Tahquitz Canyon Way	Avenida Caballeros to Hermosa Drive	4D	35,900	15,600	0.43	A
Tahquitz Canyon Way	Hermosa Drive to Sunrise Way	4D	35,900	15,600	0.43	A
Tahquitz Canyon Way	Sunrise Way to Farrell Drive	4D	35,900	15,600	0.43	A
Tahquitz Canyon Way	Farrell Drive to El Cielo Road	4D	35,900	15,600	0.43	A
Tamarisk Road	Palm Canyon Drive to Indian Canyon Drive	4U	25,900	1,400	0.05	A
Tamarisk Road	Indian Canyon Drive to Via Miraleste	2U	13,000	1,400	0.11	A
Tamarisk Road	Via Miraleste to Avenida Caballeros	2U	13,000	1,800	0.14	A

Table 4.2 General Plan Buildout Forecast 2025 Arterial Daily Level of Service, Continued

Facility	Location	2025				
		Lanes	Capacity	ADT	V/C	LOS
Tamarisk Road	Avenida Caballeros to Sunrise Way	2U	13,000	1,800	0.14	A
Tamarisk Road	Sunrise Way to Farrell Drive	2U	13,000	1,800	0.14	A
Toledo Avenue	Murray Canyon Drive to La Verne Way	4U	25,900	3,500	0.14	A
Tramview Road	West of Indian Canyon Drive	2U	13,000	2,000	0.15	A
Tram Way	West of Palm Canyon Drive	2U	13,000	13,500	1.04	F
Twin Palms Drive	South Palm Canyon Drive to Camino Real	2U	13,000	1,200	0.09	A
Twin Palms Drive	Camino Real to Sunrise Way	2U	13,000	1,600	0.12	A
Vella Road	Ramon Road to Mesquite Avenue	2U	13,000	6,100	0.47	A
Verona Road	Farrell Drive to Volturno Road	2U	13,000	3,400	0.26	A
Verona Road	Volturno Road to Whitewater Club Drive	2U	13,000	3,300	0.25	A
Via Escuela	West of Palm Canyon Drive	2U	13,000	1,400	0.11	A
Via Escuela	Palm Canyon Drive to Indian Canyon Drive	2U	13,000	2,100	0.16	A
Via Escuela	Indian Canyon Drive to Avenida Caballeros	2U	13,000	800	0.06	A
Via Escuela	Avenida Caballeros to Sunrise Way	2U	13,000	1,200	0.09	A
Via Escuela	Sunrise Way to Farrell Drive	2U	13,000	4,400	0.34	A
Via Escuela	Farrell Drive to Volturno Road	2U	13,000	9,500	0.73	C
Via Escuela	Volturno Road to Whitewater Club Drive	2U	13,000	4,800	0.37	A
Via Escuela	Whitewater Club Drive to Gene Autry Trail	2U	13,000	8,400	0.65	B
Via Miraleste	Francis Drive to Racquet Club Road	2U	13,000	1,600	0.12	A
Via Miraleste	Racquet Club Road to Vista Chino	2U	13,000	1,400	0.11	A
Via Miraleste	Vista Chino to Tachevah Drive	2U	13,000	5,700	0.44	A
Via Miraleste	Tachevah Drive to Alejo Road	2U	13,000	1,800	0.14	A
Via Monte Vista	Vista Chino to Stevens Road	2U	13,000	1,200	0.09	A
Via Monte Vista	Stevens Road to Crescent Drive	2U	13,000	1,200	0.09	A
Vista Chino	West of Palm Canyon Drive	2U	13,000	2,400	0.18	A
Vista Chino (SR-111)	Palm Canyon Drive to Indian Canyon Drive	4D	35,900	30,100	0.84	D
Vista Chino (SR-111)	Indian Canyon Drive to Via Miraleste	4D	35,900	26,000	0.72	C
Vista Chino (SR-111)	Via Miraleste to Avenida Caballeros	4D	35,900	26,600	0.74	C
Vista Chino (SR-111)	Avenida Caballeros to Hermosa Drive	4D	35,900	26,600	0.74	C
Vista Chino (SR-111)	Hermosa Drive to Sunrise Way	4D	35,900	26,600	0.74	C
Vista Chino (SR-111)	Sunrise Way to Cerritos Drive	4D	35,900	29,900	0.83	D
Vista Chino (SR-111)	Cerritos Drive to Farrell Drive	5D	44,875	46,200	1.03	F
Vista Chino (SR-111)	Farrell Drive to Volturno Road	4D	35,900	51,500	1.43	F
Vista Chino (SR-111)	Volturno Road to Whitewater Club Drive	4D	35,900	56,500	1.57	F
Vista Chino (SR-111)	Whitewater Club Drive to Gene Autry Trail	4D	35,900	60,700	1.69	F
Vista Chino	East of Gene Autry Trail	4D	35,900	49,900	1.39	F
Volturno Road	Racquet Club Road to Vista Chino	2U	13,000	5,000	0.38	A
Waverly Drive	Gene Autry to Golf Club Drive / Crossley Drive	2U	13,000	4,200	0.32	A
Whitewater Club Drive	Racquet Club Road to Vista Chino	2U	13,000	5,300	0.41	A

Source: Palm Springs Traffic Analysis Model

Figure 4.2: Forecast 2025 Average Daily Traffic (in Thousands)

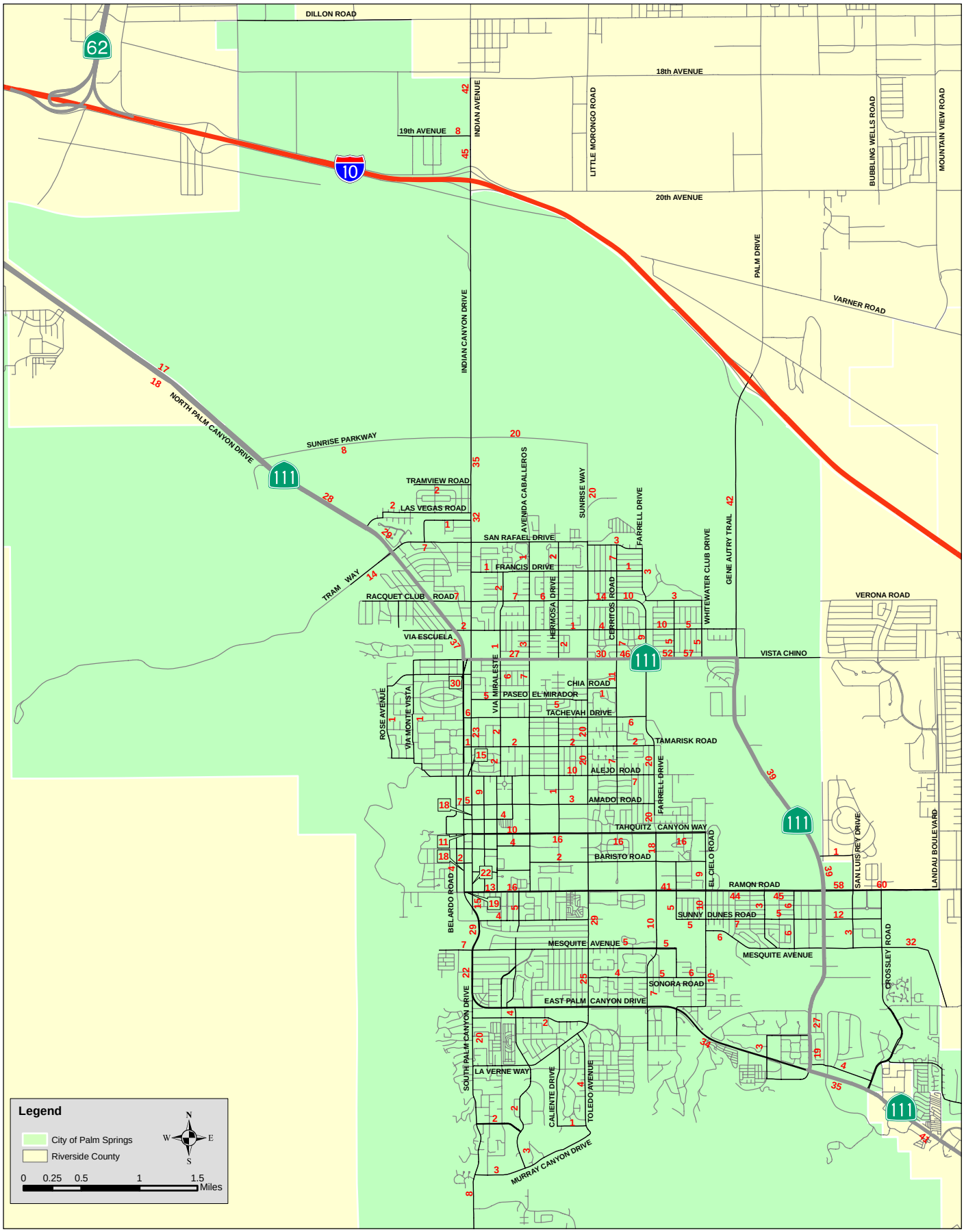
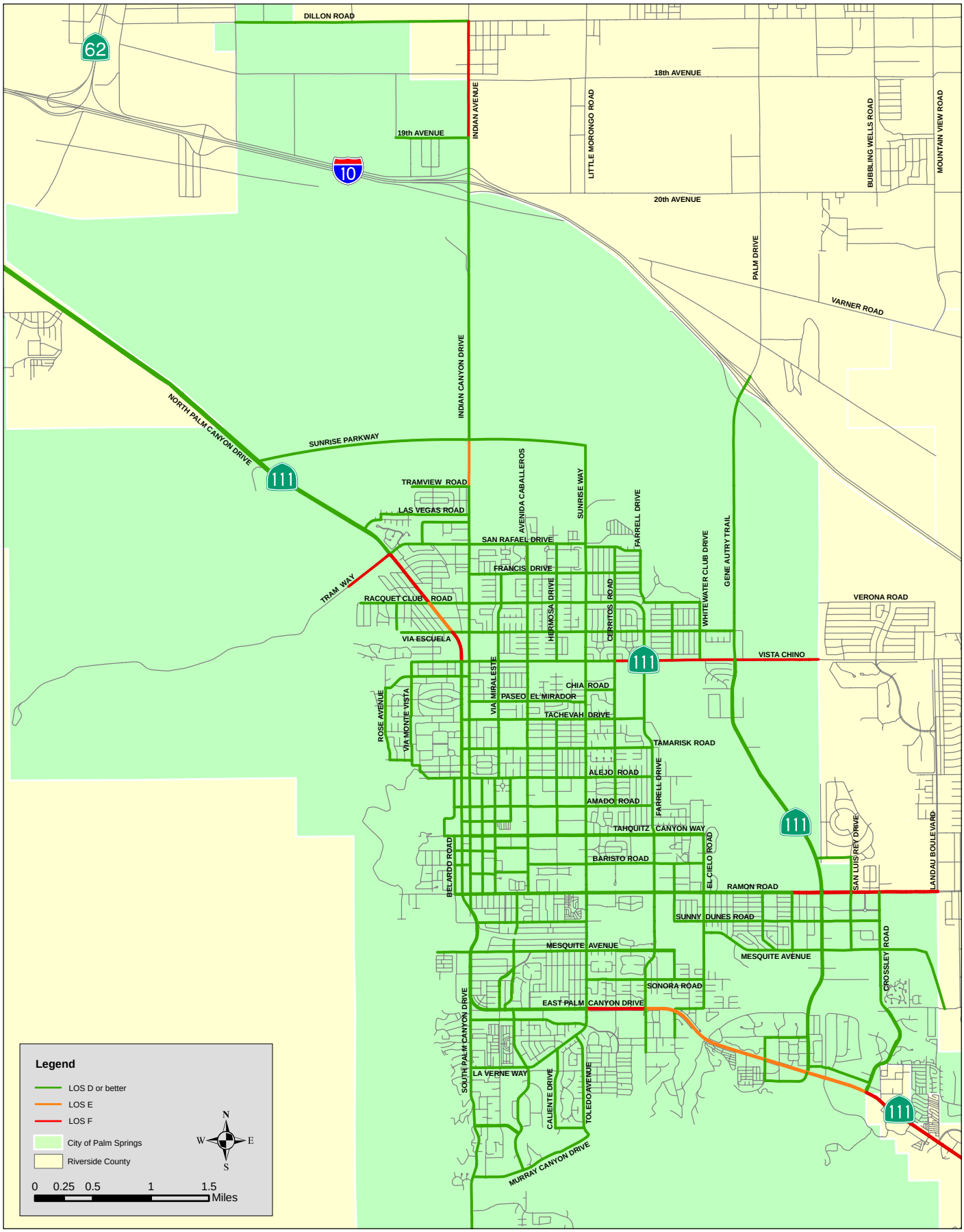


Figure 4.3: Future Arterial Daily Level of Service



4.3 General Plan Buildout Daily Traffic Mitigation

Mitigation measures have been developed for each of the segments that operate at a deficient LOS under future General Plan Buildout conditions. Arterial segment level of service is a planning level analysis that provides a general overview of potential circulation system issues for further analysis while peak hour intersection performance is considered the key measure of traffic efficiency. As noted previously, the determination of need for circulation system mitigation is throughput capacity of segment intersections. It is not recommended to improve segment capacity without a more detailed operational analysis including peak hour intersection analysis.

Future traffic demands are directly related to the type and intensity of future land uses. The City of Palm Springs is currently in the process of updating the General Plan Circulation Element to include a roadway plan that meets the desires of the community for mobility and accessibility while supporting the development intensity anticipated by the Land Use Element. Peak season average weekday traffic projections representing buildout of the Palm Springs General Plan can be compared to the daily design capacity of each master planned roadway to determine the portion of the roadway capacity that will be utilized by the future traffic volumes. However, as invariably happens, the projected demand appears to exceed the capacity along some of the master planned major thoroughfares.

It should be noted that a daily level of service analysis is a “broad-brush” indicator of when traffic congestion may be expected on a typical urban arterial street segment. It is based on the daily traffic volume, the number of midblock through lanes, and a generalized estimate of the capacity of a typical master planned facility in an urbanized area with a similar number of through lanes. A peak hour intersection analysis can more clearly define the circulation system required to satisfy the General Plan buildout travel demands.

Capacity is an issue when properties in the vicinity of a major street become fully urbanized. When capacity becomes a problem, increasing signal spacing and limiting median access (with directional median openings) are two alternatives to widening a four lane facility to six lanes. A four-lane divided roadway with 0.50-mile signal spacing and limited access can provide service comparable to that of a six-lane roadway with 0.25-mile signal spacing and full-turn median openings between signals.

Cycle lengths should be as short as possible to minimize delay for all users and queue lengths. But as volumes on arterials and cross streets increase, longer cycle lengths can be used to increase capacity by minimizing lost time. Furthermore, longer signal cycle lengths permit longer pedestrian crossing times. Flaring the minor street to provide additional turn lanes can compensate for the reduced green time on the minor street caused by increases in the portion of the cycle devoted to green on the major thoroughfare.

Since the capacity of a roadway link is limited by the amount of traffic that can flow through the intersections, favorable intersection conditions can provide better levels of service on a roadway segment than indicated by the daily volume and level of service. In particular, low-volume cross streets or tee intersections can result in a higher percentage of the traffic signal cycle being allocated to the primary traffic flow, and allow acceptable levels of service with higher traffic volumes. Additional turn lanes can increase the flow through the intersection without additional through lanes. A daily volume-to-capacity analysis is, therefore, an indicator of high traffic demand rather than an absolute indication of an unavoidable significant impact.

Capacity augmentation features can be identified and applied to intersections with restricted rights-of-way that experience high demand during peak hours. In those instances where a roadway is found to be operating at acceptable levels of service except along one link, localized capacity enhancements at intersections can be identified and implemented to maintain network continuity. In most cases, this type of localized improvement is more effective than upgrading a short roadway segment with additional through lanes.

Endo Engineering performed analysis at the following critical intersections throughout the City and identified specific mitigation measures required to achieve acceptable peak hour levels of service at each of the critical intersections (refer to Technical Memorandum dated September 20, 2006, *Palm Springs General Plan Update Peak Hour Intersection Level of Service Analysis*):

- North Palm Canyon Drive/Vista Chino
- Sunrise Way/Vista Chino
- Farrell Drive/Vista Chino
- Gene Autry Trail/Vista Chino
- Sunrise Way/Ramon Road
- Farrell Drive/Ramon Road
- Crossley Road/Ramon Road
- Sunrise Way/East Palm Canyon Drive
- Gene Autry Trail/East Palm Canyon Drive
- Golf Club Drive/East Palm Canyon Drive

Incorporation of the specified intersection improvements is expected to result in the acceptable operation of arterial segments. Supplemental intersection analysis has been performed to evaluate intersections along facilities that are forecast to operate at unacceptable levels of service under future conditions. Refer to **Figure 4.4** for the critical intersection locations. The following five supplemental intersections have been evaluated under P.M. peak hour conditions to ensure acceptable peak hour operations:

- Palm Canyon Drive/Tram Way/San Rafael Drive
- Indian Canyon Drive/San Rafael Drive
- Indian Canyon Drive/Sunrise Parkway
- Indian Avenue/Dillon Road
- Indian Avenue/19th Street

Appendix A includes the supplemental critical intersection analysis for the intersections noted above. The supplemental critical intersections are all forecast to operate at acceptable levels of service, hence the arterial is expected to operate at acceptable conditions during the peak hour. **Table 4.3** presents intersection improvements that are required to achieve acceptable levels of service at the critical intersections. The additional right-of-way requirements are also identified in **Table 4.3** assuming that a 12 feet right-of-way is required for each additional lane. A minimum of 500 feet in either direction from the centerline of the intersection for right-of-way expansion is required for mitigation measures. As right-of-way limitation may exist at critical intersections, reduced right-of-way requirements at critical intersections may be approved by the Planning Commission upon a recommendation by the City Engineer. Reduced right-of-way requirements may require special roadway alignment studies prepared for review and approval by the City Engineer, and may be recommended and approved upon determination that the required lane configurations are provided as indicated by the General Plan.

Table 4.3 Critical Intersection Required Improvements

Intersection	Required Improvements	Additional R.O.W. Requirements (12 feet per additional lane)
Palm Canyon Drive @ Vista Chino	Add a second southbound left-turn lane. Add two westbound left-turn lanes.	+ 12 feet on Palm Canyon Drive north of Vista Chino + 24 feet on Vista Chino east of Palm Canyon Drive
Sunrise Way @ Vista Chino	Add a second southbound left-turn lane. Add a second westbound left-turn lane.	+ 12 feet on Sunrise Way north of Vista Chino + 12 feet on Vista Chino east of Sunrise Way
Farrell Drive @ Vista Chino	Add a second southbound left-turn lane. Add a second westbound left-turn lane. Add a northbound right-turn lane.	+ 12 feet on Farrell Drive north of Vista Chino + 12 feet on Vista Chino east of Farrell Drive + 12 feet on Farrell Drive south of Vista Chino
Gene Autry Trail @ Vista Chino	Add a third westbound through lane. Add a third eastbound through lane. Add a second northbound left-turn lane. Add a second southbound left-turn lane. Add a second eastbound left-turn lane. Add a second westbound left-turn lane.	+ 24 feet on Vista Chino east of Gene Autry Trail + 24 feet on Vista Chino west of Gene Autry Trail + 12 feet on Gene Autry Trail south of Vista Chino + 12 feet on Gene Autry Trail north of Vista Chino
Sunrise Way @ Ramon Road	Add a second northbound left-turn lane. Add a second southbound left-turn lane. Add a second westbound left-turn lane.	+ 12 feet on Sunrise Way south of Ramon Road + 12 feet on Sunrise Way north of Ramon Road + 12 feet on Ramon Road south of Sunrise Way
Farrell Drive @ Ramon Road	Add a second southbound left-turn lane.	+ 12 feet on Farrell Drive north of Ramon Road
Gene Autry Trail @ Ramon Road	The existing lanes are adequate.	
Crossley Road @ Ramon Road	Add a third westbound through lane. Add a third eastbound through lane. Add a second northbound left-turn lane. Add a northbound right-turn lane.	+ 12 feet on Ramon Road east of Crossley Road + 12 feet on Ramon Road west of Crossley Road + 12 feet on Crossley Road south of Ramon Road
Sunrise Way @ East Palm Canyon Drive	The existing lanes are adequate.	
Farrell Drive @ East Palm Canyon Drive	The existing lanes are adequate.	
Gene Autry Trail @ East Palm Canyon Drive	The existing lanes are adequate.	
Golf Club Drive @ East Palm Canyon Drive	The existing lanes are adequate.	
Palm Canyon Drive @ Tramway	The existing lanes are adequate.	
Indian Canyon Drive @ San Rafael Drive	The existing lanes are adequate.	
Indian Canyon Drive @ Sunrise Parkway	Future intersection requiring the following geometrics: Eastbound: 1 left, 2 through, 1 right Westbound: 1 left, 2 through, 1 right Northbound: 2 left, 3 through, 1 right Southbound: 2 left, 3 through, 1 right	

Table 4.3 Critical Intersection Required Improvements, Continued

Intersection	Required Improvements	Additional R.O.W. Requirements (12 feet per additional lane)
Indian Avenue @ Dillon Road	Add a second northbound through lane. Add a northbound left-turn lane. Add a northbound right-turn lane. Add a second southbound through lane. Add a southbound left-turn lane. Add a southbound right-turn lane. Add a second eastbound through lane Add an eastbound left-turn lane Add an eastbound right-turn lane Add a second westbound through lane Add two westbound left-turn lanes Add a westbound right-turn lane	+ 36 feet on Indian Avenue south of 19th Street + 36 feet on Indian Avenue north of 19th Street + 36 feet on Dillon Road west of Indian Avenue +48 feet on Dillon Road east of Indian Avenue
Indian Avenue @ 19th Street	Add a second northbound through lane. Add a northbound left-turn lane. Add a northbound right-turn lane. Add a second southbound through lane. Add a southbound left-turn lane. Add a southbound right-turn lane.	+ 36 feet on Indian Avenue south of 19th Street + 36 feet on Indian Avenue north of 19th Street

Source: Endo Engineering

Table 4.4 documents the arterial segments that fail under daily capacity thresholds and proposed mitigation measures. Segments with a V/C ratio near 1.0 are likely candidates to operate at acceptable levels during the peak hours with appropriate intersection improvements as specified in the analysis performed by Endo Engineering. **Table 4.5** presents the future levels of service for the critical intersections with the required improvements presented in Table 4.3. As the City matures and grows, operational analysis of intersections and segments should be performed where necessary to ensure efficient and acceptable operations of the circulation system.

Figure 4.4 presents the proposed circulation system General Plan roadway classifications. The classifications employed by the City are based on right-of-way widths rather than facility capacity or number of lanes. As a result, additional major and secondary thoroughfare classifications have been incorporated into the figure to differentiate between four- and six-lane major facilities and divided and undivided secondary facilities. Many of the divided secondary thoroughfares are considered special secondary thoroughfares that may have a right-of-way that varies from the typical secondary thoroughfare right-of-way.

Table 4.4 General Plan Buildout Mitigation

Facility	2025 Location	2025 ADT	2025 V/C	2025 LOS	2025 Mitigation Class	2025 Mitigation Capacity	2025 Mitigation V/C	2025 Mitigation LOS	Comments
Indian Avenue	Dillon Road to 19th Avenue	41,600	1.61	**F**	4D	35,900	1.16	**E**	Improvement to 4D from 4U with intersection improvements results in acceptable LOS
Indian Canyon Drive	Sunrise Parkway to Tramview Road	34,700	0.97	**E**					Intersection analysis results in acceptable LOS without need for segment mitigation
Palm Canyon Drive North/SR-111	San Rafael Road to Racquet Club Road	37,700	1.05	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Palm Canyon Drive North/SR-111	Racquet Club Road to Via Escuela	35,100	0.98	**E**					Intersection analysis results in acceptable LOS without need for segment mitigation
Palm Canyon Drive North/SR-111	Via Escuela to Vista Chino	36,600	1.02	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Palm Canyon Drive East	Sunrise Way to Farrell Drive	38,900	1.08	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Palm Canyon Drive East	Farrell Drive to Gene Autry Trail	34,400	0.96	**E**					Intersection analysis results in acceptable LOS without need for segment mitigation
Palm Canyon Drive East/SR-111	Gene Autry Trail to Golf Club Drive	34,700	0.97	**E**					Intersection analysis results in acceptable LOS without need for segment mitigation
Palm Canyon Drive East/SR-111	East of Golf Club Drive	41,200	1.15	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Ramon Road	Vella Road to Gene Autry Trail	65,500	1.04	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Ramon Road	Gene Autry Tail to San Luis Rey Drive	58,000	1.08	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Ramon Road	San Luis Rey Drive to Crossley Road	55,300	1.03	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Ramon Road	Crossley Road to Landau Boulevard	60,200	1.12	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Tram Way	West of Palm Canyon Drive	13,500	1.04	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Vista Chino (SR-111)	Cerritos Drive to Farrell Drive	46,200	1.03	**F**					Intersection analysis results in acceptable LOS without need for segment mitigation
Vista Chino (SR-111)	Farrell Drive to Volturno Road	51,500	1.43	**F**	6D	53,900	0.96	**E**	Intersection improvements coordinated with segment improvements results in acceptable LOS
Vista Chino (SR-111)	Volturno Road to Whitewater Club Drive	56,500	1.57	**F**	6D	53,900	1.05	**F**	Intersection improvements coordinated with segment improvements results in acceptable LOS
Vista Chino (SR-111)	Whitewater Club Drive to Gene Autry Trail	60,700	1.69	**F**	6D	53,900	1.13	**F**	Intersection improvements coordinated with segment improvements results in acceptable LOS
Vista Chino	East of Gene Autry Trail	49,900	1.39	**F**	6D	53,900	0.93	**E**	Intersection improvements coordinated with segment improvements results in acceptable LOS

Source: Palm Springs Traffic Analysis Model

Table 4.5 Critical Intersection Mitigated Level of Service

Intersection	Peak Hour Delay (seconds/vehicle)	Level of Service
Palm Canyon Drive @ Vista Chino	41.4	D
Sunrise Way @ Vista Chino	50.1	D
Farrell Drive @ Vista Chino	39.6	D
Gene Autry Trail @ Vista Chino	44.3	D
Sunrise Way @ Ramon Road	53.5	D
Farrell Drive @ Ramon Road	36.3	D
Gene Autry Trail @ Ramon Road	46.5	D
Crossley Road @ Ramon Road	46.7	D
Sunrise Way @ East Palm Canyon Drive	50.0	D
Farrell Drive @ East Palm Canyon Drive	27.1	C
Gene Autry Trail @ East Palm Canyon Drive	39.6	D
Golf Club Drive @ East Palm Canyon Drive	24.1	C
Palm Canyon Drive @ Tramway	35.8	D
Indian Canyon Drive @ San Rafael Drive	17.0	B
Indian Canyon Drive @ Sunrise Parkway	35.3	D
Indian Avenue @ Dillon Road	24.9	C
Indian Avenue @ 19th Street	35.3	D

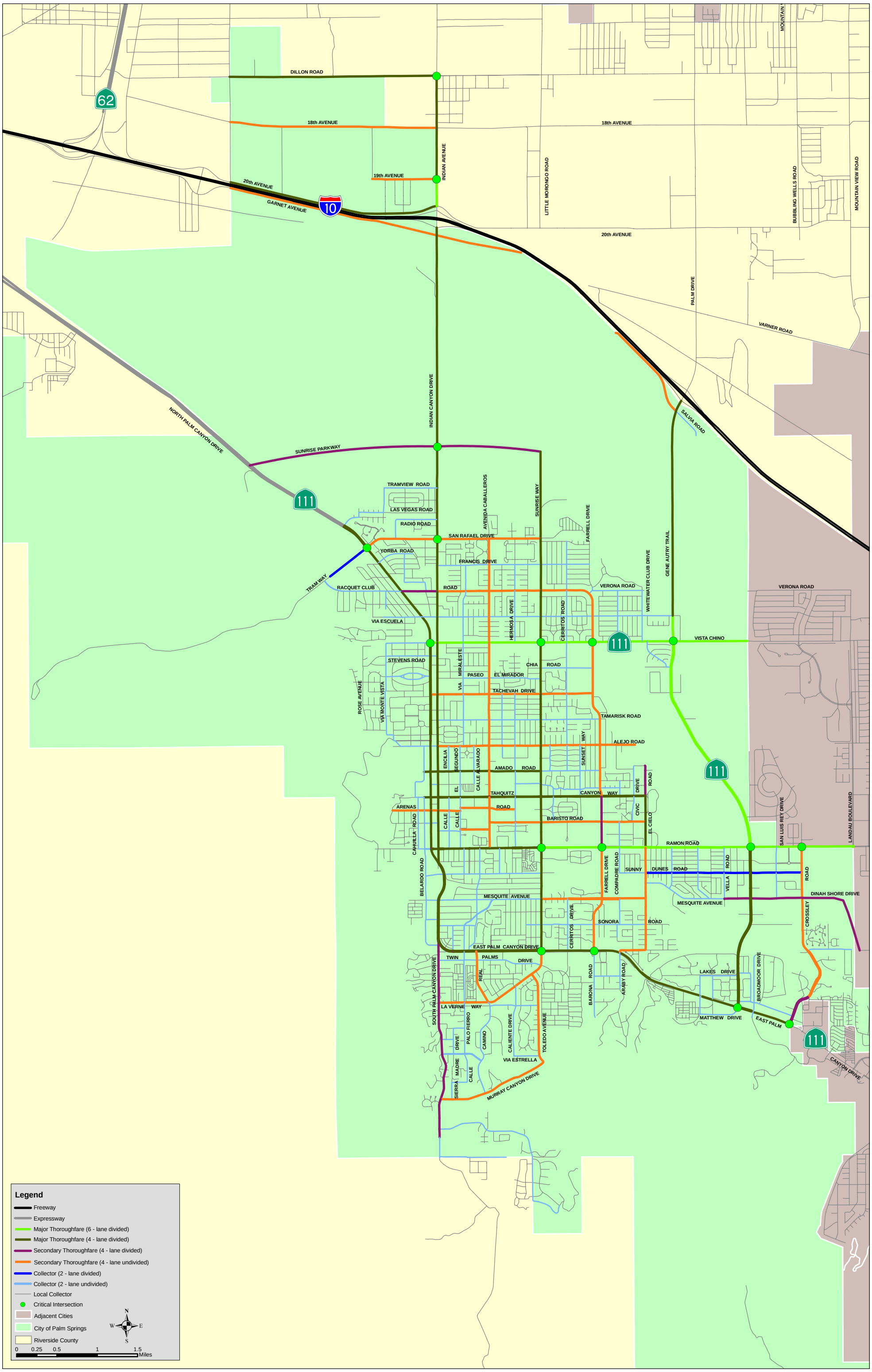
Source: Endo Engineering

The previous City General Plan identified several facilities that were evaluated from a qualitative and quantitative perspective for inclusion into the current General Plan Circulation Element. Through the years, several amendments have been made to the General Plan to address the Circulation Element and clarify or improve the circulation network where appropriate. Previous versions of the General Plan included the following system-wide improvements:

- Extension of Alejo Road under the Palm Springs International Airport to Gene Autry Trail
- Extension of Murray Canyon Road from Toledo Avenue to Farrell Drive
- Extension of Racquet Club Road from the current western terminus to Tram Way
- Hermosa Drive gap closure from Arenas Road to Ramon Road
- Garnet Avenue/Salvia Road extension from Indian Canyon Drive to Gene Autry Trail
- Mesquite Avenue extension from eastern terminus to El Cielo Road
- Belardo Road extension from Ramon Road to East Palm Canyon Drive
- Landau Boulevard extension to Gene Autry Trail
- South Camino Real extension across Tahquitz Creek
- Zanjero Road from Racquet Club Road to Via Escuela

While some of these circulation system components may not contribute to improved levels of service, many of the gap closures will provide enhanced connectivity, mobility and accessibility throughout the City and provide benefits to the overall circulation system. The Alejo Road and Murray Canyon Drive extensions are feasible given sufficient funding for construction and environmental mitigation, however, the traffic analysis does not reveal the need for the Alejo Road and Murray Canyon Drive extensions therefore it is recommended that the circulation system plan not include these extensions.

Figure 4.4: Proposed Circulation Master Plan



Since the extension of Racquet Club Road to Tramway provides additional mobility in the northeast portion of the City, it is recommended that this segment remain on the proposed circulation system as a collector facility east of Palm Canyon Drive. This potential future gap closure would provide additional access to future development in this portion of the City.

Hermosa Drive is identified as a Collector on the current General Plan Circulation Element, extending from Ramon Road to Tachevah Drive. However, an isolated segment of Hermosa Drive between Arenas Road and Baristo Road was deleted from the current General Plan Circulation Element through adoption of the Section 14 Master Development Plan Specific Plan (November 2006). The basis for the deletion of this isolated segment on Hermosa Drive was to promote an opportunity for a "catalyst site" for master development of multiple allottee parcels in the area around Arenas Road and Hermosa Drive. However, since the adoption of the Section 14 Master Plan, development of individual parcels has occurred within this catalyst site. One parcel within this catalyst site has been identified as the site of the proposed Agua Caliente Band of Cahuilla Indians Museum; and, another parcel within this catalyst site is the Palm Springs Tennis Center, located at the northeast corner of Baristo Road and Hermosa Drive. As a result, there is no practical way to consolidate parcels and provide a single catalyst site for master development within this area of Section 14, which served as the basis for the deletion of the isolated segment of Hermosa Drive between Arenas Road and Baristo Road from the General Plan Circulation Element. The complete extension of Hermosa Drive from Ramon Road to Tachevah Drive serves as an important Collector facility within the dense grid-like structure of the existing circulation system throughout the downtown area, and will more efficiently serve future traffic demands. It is recommended that the isolated segment of Hermosa Drive between Arenas Road and Baristo Road be added into the General Plan Circulation Element to maintain the City's grid-like circulation system and network of roadways. It is further recommended that the City eliminate the existing gap on the Hermosa Drive Collector, and plan for future construction of a bridge crossing on Hermosa Drive over the Baristo Channel.

Garnet Avenue/Salvia Road is identified as a Major Thoroughfare on the current General Plan Circulation Element, extending from Indian Canyon Drive to Gene Autry Trail, immediately south of and parallel with Interstate 10. This facility extends through Garnet Hill, and construction of a Major Thoroughfare immediately parallel to Interstate 10 through Garnet Hill would present many physical and environmental challenges. The traffic analysis has determined that future traffic volumes do not warrant the construction of a Major Thoroughfare facility extending between Indian Canyon Drive and Gene Autry Trail, immediately south of and parallel to Interstate 10. Future forecast traffic volumes are based on the Regional Business Center preliminary land use forecast. Ultimate buildout of the Regional Business Center may necessitate future internal circulation system improvements, including improvements to Garnet Avenue and Salvia Road. Direct accessibility to Indian Canyon Drive, Gene Autry Trail, and Interstate 10 for the Regional Business Center reduces the need for the complete extension of a roadway facility between Indian Canyon Drive and Gene Autry Trail, immediately south of and parallel to Interstate 10. However, the future development of the Regional Business Center and areas south of Interstate 10 on either side of Garnet Hill requires the continued identification of a General Plan roadway. It is recommended that the Garnet Avenue/Salvia Road Major Thoroughfare extension be removed from the General Plan Circulation Element; that Garnet Avenue east of Indian Canyon Drive to Garnet Hill be identified as a Secondary Thoroughfare; and that Salvia Road west of Gene Autry Trail to Garnet Hill be identified as a Secondary Thoroughfare. No physical connection through Garnet Hill is recommended, nor necessary to serve future forecast traffic volumes in that area.

Mesquite Avenue is identified as a Secondary Thoroughfare on the current General Plan Circulation Element, extending from Sunrise Way to El Cielo Road. However, the segment of Mesquite Avenue between Compadre Road and El Cielo Road (across the Tommy Jacobs Bel Air greens golf Course) has not yet been constructed. The ultimate extension of Mesquite Avenue to El Cielo Road, as currently designated on the General Plan Circulation Element, would provide an important east-west connection between Ramon Road and East Palm Canyon Drive, would complete a portion of the grid-like circulation system throughout the adjacent residential area, would potentially reduce or eliminate cut-through traffic from Mesquite Avenue onto Sonora Road and adjacent residential streets, and help alleviate traffic volumes that would otherwise impact the surrounding roadway network. It is recommended that Mesquite

Avenue remain identified as a Secondary Thoroughfare on the General Plan Circulation Element, including the future extension from Compadre Road to El Cielo Road across the Tommy Jacobs Bel Air Greens golf course.

Belardo Road is identified as a Secondary Thoroughfare on the current General Plan Circulation Element, extending from Ramon Road to Morongo Road, and is identified as a Collector extending from Morongo Road to South Palm Canyon Drive. Along the Belardo Road alignment between Ramon Road and South Palm Canyon Drive, there are many missing gaps, including over the Tahquitz Creek. However, the City in partnership with the Agua Caliente Band of Cahuilla Indians, received a federal Public Lands Highway Discretionary grant for the construction of the missing gaps along Belardo Road, including a new bridge across the Tahquitz Creek. The project specific traffic impact study prepared for the City's and Tribe's Belardo Road project revealed that a 2 lane roadway will serve future forecast traffic volumes in that area. It is recommended that Belardo Road be reclassified as a Collector (2 lane undivided roadway) on the General Plan Circulation Element, from Ramon Road to South Palm Canyon Drive, consistent with the City's and Tribe's prior traffic impact analysis for the Belardo Road project.

The Landau Boulevard extension from Cathedral City to Gene Autry Trail will face environmental and other obstacles. The Cathedral City General Plan, which was revised in 2002, omitted an extension of Landau Boulevard to the west from its current terminus although the extension was included in the previous version of their General Plan. Without the connection to Cathedral City, and consideration of the constraints with the segment within Palm Springs, it is recommended that the segment be removed from the General Plan circulation system. Removing the segment within Palm Springs would not result in adverse traffic impacts to the surrounding circulation system. Extension of Landau Boulevard into Cathedral City may relieve some of the congestion on Vista Chino between the cities but it is unlikely this connection would eliminate the need for additional improvements to Vista Chino to ensure acceptable operation. It is recommended that this segment be removed from the circulation system plan.

Camino Real is identified as a Collector on the current General Plan Circulation Element, extending from Ramon Road to East Palm Canyon Drive. Camino Real extends through a large, fully developed, square mile residential area of the City bordered by Ramon Road on the north, Palm Canyon Drive on the west and south, and Sunrise Way on the east. Camino Real provides the only direct north-south connection through this area between Ramon Road and East Palm Canyon Drive. It is recommended that Camino Real remain on the General Plan Circulation Element as a Collector, serving as an important north-south connection for that area. It is further recommended that the City eliminate the existing gap on the Camino Real Collector, and plan for future construction of a bridge crossing on Camino Real over the Tahquitz Creek.

Zanjero Road from Racquet Club Road to Via Escuela has been identified as a collector. However, with major parallel thoroughfares to the east (Indian Canyon Drive) and west (Palm Canyon Drive) and the local nature of traffic that this segment serves, it is unnecessary to classify Zanjero Road as a collector facility. It is recommended that this segment of Zanjero Road be removed from the Circulation Element.

Chia Road is identified as a Collector on the current General Plan Circulation Element, extending from Sunrise Way to Farrell Drive. However, the segment between Cerritos Road and Farrell Drive does not exist, and the adjacent area is undeveloped. It is recommended that Chia Road remain identified as a Collector on General Plan Circulation Element, extending from Sunrise Way to Farrell Drive, as it would complete a portion of the City's grid-like circulation system in that area. However, it is further recommended that at the time the vacant area east of Cerritos Road and north of Chia Road is proposed for development, that a project specific traffic impact study evaluate the need for extension of Chia Road from Cerritos Road to Farrell Drive. As Chia Road is a limited length Collector, extending less than one-half mile, if a project specific traffic impact study determines extension of Chia Road to Farrell Drive is unnecessary, a future General Plan Amendment should be considered at that time to delete Chia Road as Collector on the General Plan Circulation Element, extending from Sunrise Way to Farrell Drive.

Although gap closures and extensions add to the connectivity of the circulation system, they typically do not add a significant amount of capacity to the system. They serve more as operational and localized improvements that increase mobility and accessibility throughout the City. The traffic analysis reveals that the biggest challenge for the City's transportation system is the adequate provision of capacity for traffic entering and exiting the City. Palm Canyon Drive, Gene Autry Trail, Vista Chino, Ramon Road and East Palm Canyon Drive provide critical linkages to the remainder of the Coachella Valley and are shown to be strained by future traffic demands. Improvements to these facilities in terms of additional lane capacity or additional intersection capacity will ensure a circulation system that serves the City's residents, workers and visitors as the City develops its General Plan.

San Rafael Drive is identified as a Secondary Thoroughfare on the current General Plan Circulation Element, extending from North Palm Canyon Drive to Sunrise Way; and serves as an important east-west link for the area between those two Major Thoroughfares. Over time, as development has occurred in the area, San Rafael Drive has been constructed to the full Secondary Thoroughfare cross-section standard. Currently, the only segment of San Rafael Drive not fully constructed to the full Secondary Thoroughfare cross-section standard is the segment between Virginia Road and Indian Canyon Drive (however it should be noted that recent development within that segment has constructed portions of the full cross-section standard). It is recommended that San Rafael Drive remain identified as a Secondary Thoroughfare on the current General Plan Circulation Element, extending from North Palm Canyon Drive to Sunrise Way, to maintain the City's existing grid-like circulation system of roadways. Although future forecast traffic volumes for that area indicate excess capacity may exist on this 4 lane undivided roadway, it is recommended that it remain classified as a 4 lane undivided roadway to make use of the currently existing roadway improvements along the entire length of San Rafael Drive, and to ensure consistency of the designation between North Palm Canyon Drive and Sunrise Way.

Alejo Road is identified as a Major Thoroughfare on the current General Plan Circulation Element, extending from North Palm Canyon Drive to Sunrise Way, and as a Secondary Thoroughfare extending from Sunrise Way to the Palm Springs Airport. However, the segment of Alejo Road between Indian Canyon Drive and Sunrise Way was reclassified to a "Special Thoroughfare" on the General Plan Circulation Element through adoption of the Section 14 Master Development Plan Specific Plan (November 2006). Figure 5-12 of the Section 14 Master Plan identifies a special cross-section for Alejo Road between Indian Canyon Drive and Calle El Segundo, consisting of a 62 feet wide right-of-way with a 52 feet wide roadway section consisting of 4 lanes (undivided). This special cross-section locates the 4 lane undivided roadway without the need to acquire right-of-way along the north side of Alejo Road, where it would impact existing residential properties. It should be noted that Calle El Segundo is slightly offset from Via Miraleste, and therefore, the intent of this special cross-section is to identify a 4 lane undivided roadway within this restricted right-of-way segment. Figure 5-13 of the Section 14 Master Plan identifies a cross-section standard for Alejo Road between Calle El Segundo (Via Miraleste) and Sunrise Way, consisting of an 80 feet wide right-of-way with a 60 feet wide roadway section consisting of 4 lanes (undivided). It is recommended that the Section 14 Master Plan "Special Thoroughfare" designation be maintained on the General Plan Circulation Element.

Another traffic issue that has been raised by the City is the potential for Indian Canyon Drive to be redesigned to allow for on-street diagonal parking in the downtown area. This would alter the current feel for the Indian Canyon Drive corridor to a more quaint downtown appeal. Implementation of diagonal parking on both sides of Indian Canyon, however, would likely shift Indian Canyon Drive to a one-way two-lane facility. Retaining the parallel parking on one side of Indian Canyon Drive would allow for three northbound lanes. The forecast traffic volumes on Indian Canyon Drive through the downtown area are greater than the capacity of a two-lane facility. Other options for Indian Canyon Drive previously identified include shifting to two-way traffic. A shift to two-way traffic would potentially lead to capacity deficiencies on Indian Canyon Drive for northbound traffic and operational issues such as left turns impeding through traffic. In addition, two-way traffic on Indian Canyon Drive would not be consistent with Palm Canyon Drive which serves the southbound traffic. The provision of three lanes northbound on Indian Canyon Drive with diagonal parking on either side would maintain a consistent level of capacity for northbound traffic that Palm Canyon Drive provides to southbound traffic.

4.4 Circulation Element Recommendations

There are many opportunities to consider for the ultimate transportation system within the City. Although topography constraints exist, access to and from the City is a key for the economic vitality of the City. Growth throughout the Coachella Valley will necessitate improved access to the remainder of the valley. Economic opportunities exist throughout the I-10 corridor and include the Regional Business Center. However, buildout of the Business Center would necessitate infrastructure improvements southerly into the heart of Palm Springs through the wash. Generally, as noted, traffic flow throughout the dense grid network in the downtown is forecast to continue operating at acceptable levels under General Plan buildout conditions. Opportunities may exist to consider adjusting the feel of the downtown through incorporating angle parking on Indian Canyon Drive through downtown or elimination of the one-way Indian Canyon Drive operation. Parallel capacity and the dense grid system should facilitate traffic demands through downtown if revisions to the current system are considered.

The Riverside Congestion Management Program (CMP) is updated every two years in accordance with Proposition 111. The CMP was established in the State of California to more directly link land use, transportation and air quality. The objective of the CMP is to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds, alleviate traffic congestion and improve air quality.

RCTC, the Congestion Management Agency for Riverside County, is responsible for the development and implementation of the CMP. The current CMP was updated by RCTC in 2006. CMP requirements specify that local agencies must maintain minimum level of service thresholds as noted in their general plans for the CMP system. The CMP system includes all State Highways and select principal arterials throughout Riverside County. Local agencies must develop deficiency plans where non-exempt segment LOS falls to LOS F as a result of development impacts. These plans outline specific mitigation measures and a schedule for mitigating deficiencies. Palm Springs should continue to monitor the CMP system for compliance with the LOS E threshold and monitor non-CMP facilities that may affect CMP system operation.

Non-motorized transportation systems provide valuable resources to residents, workers and visitors. They provide a recreational amenity as well as a viable alternative to the automobile. Non-motorized transportation systems ideally connect community centers, residential neighborhoods, recreational amenities, employment centers, shopping districts and activity centers in a safe manner. In 1995, the Coachella Valley Association of Governments developed a Non-motorized Transportation Element. The plan was intended to facilitate alternatives to automobile traffic. The plan addressed existing and future bicycle, pedestrian, equestrian and other trail facilities throughout the Coachella Valley. Some jurisdictions have adopted the non-motorized plan, however, implementation of the plan has been limited. Close coordination with CVAG should be considered in the development and implementation of non-motorized facilities as the Valley works towards a comprehensive non-motorized transportation system.

4.4.1 *Two-lane Facility Right of Way*

The City currently specifies typical right-of-way widths for two-lane collector facilities to be 60 feet or 66 feet and local street right-of-way as a minimum of 50 feet. The right-of-way description might warrant further clarification to specify the right-of-way to be measured from the back of the curb. Private streets require a minimum 32 foot width with the provision of on-street parking on one side and the capability to maintain two-way traffic. Right-of-way specifications are critical for parking and emergency access issues and minimum clearance must be maintained on all facilities to provide 20 feet of clearance for emergency vehicles.

4.4.2 *Public Transportation*

SunLine Transit Agency provides transit service to the City and has recently proposed transit service improvements throughout Coachella Valley. As the Valley continues to grow, public transportation must be reactive to the growth. As the Regional Business Center is developed through the I-10 corridor, the City should coordinate with the SunLine Transit Agency to evaluate the provision of transit service to this development.

Future circulation system improvements also necessitate a review of public transportation considerations. With the development of Palm Springs along Sunrise Way north of Vista Chino and the implementation of Sunrise Parkway from SR-111 to Sunrise Way, provision of transit access to these new developments should be considered.

As the downtown expands and additional destinations are developed that focus on the visitor or workforce population, public transportation access should be considered. SunLine Transit Agency continually plans to meet the needs of the Valley and close coordination between the City and SunLine Transit Agency will ensure future transit needs throughout the City are satisfied. The City should aggressively participate in regional transportation programs that promote public transportation.

Additionally, amenities at bus stops should be considered as the City matures and grows. Schedule information, transfer information, real time information on bus time arrival, trash receptacles, phones, etc. may be useful to transit patrons and would promote transit ridership. Additional amenities to combat the elements including misters at bus shelters might be considered at strategic locations throughout the City.

Within Palm Springs, shuttle service might be considered that link major resort activities and the downtown area to supplement SunLine Transit Agency public transportation services.

4.4.3 *Bikeways and Recreational Trails*

The City maintains several bikeways throughout the City. The City should continue to promote bikeway and recreational trails through maintenance, improvements and expansion to the existing system. Continued maintenance and signage of the existing facilities should remain a priority for the City. Improvement of bikeways should be considered where appropriate to facilitate safety and bicycle touring. As development occurs and the City matures, the feasibility of the implementing new bikeways and recreational paths or improving to Class I standards should be evaluated.

Bikeways and recreational paths should promote interaction and linkage of parks, recreation centers, and other recreational open space areas. The City should continue to prepare and distribute bikeway and recreational path maps at various outlets.

With over 80 miles of recreational trails within the City and countless more within minutes of the City, these trails are a key resource for the City. The City should continue to foster these resources through maintenance and improvement, where feasible. Incentives should be considered for private development of bicycle and recreational trails.

4.4.4 *Parking*

Parking facilities should be maintained that serve commercial and residential uses as well as maintaining the residential quality of life throughout the City. Safe, secure and adequate provisions should be made for bicycles and motorcycles in the downtown and neighborhood/community shopping areas to promote non-vehicle trip activity. Parking demands in downtown should continually be monitored as development continues. Code parking requirements should be adjusted where necessary to assure parking demands are satisfied. Specific attention should be paid to parking in multiple-family developments, i.e. condominium and apartment developments. Often, the minimum amount of parking is provided for residents leaving little, if any, visitor parking. A lack of visitor parking often results in safety issues as cars

tend to park in fire lanes, etc. Parking code specifications should be evaluated and amended where necessary to ensure appropriate parking is provided for future developments.

4.4.5 *Palm Springs Airport*

SCAG forecasts by 2030 that Palm Springs will serve approximately 3.2 million annual passengers (MAP), a significant increase over current operations. The Palm Springs International Airport Master plan forecasts 2.7 MAP by 2020, about 0.5 MAP less than forecast by SCAG in the 2004 RTP Preferred Aviation Plan for 2030. Currently, the airport serves greater than 1.4 MAP, a 3.75% increase over 2004 activity. As a vital economic asset to the City, access to the airport must be maintained and improved to meet growing passenger demands. As passenger activity continues to grow, transportation services must keep pace with that expansion. Currently, SunLine Transit Agency route 24 provides public transportation service to the airport. In addition, several resorts and hotels offer courtesy shuttle service to the airport. Additional transportation services including limousine, taxi, shuttle, disabled and senior services are available at the airport. As the airport expands to satisfy air passenger demands, additional public transportation services should be considered to serve resident and visitor air passengers. Additional courtesy shuttles could be considered or integrated to provide efficient service to popular destinations such as the downtown area.

APPENDIX A

SUPPLEMENTAL CRITICAL INTERSECTION ANALYSIS

SHORT REPORT

General Information		Site Information	
Analyst	*TEB*	Intersection	*Palm Canyon/Tramway*
Agency or Co.	*PB*	Area Type	*All other areas*
Date Performed	*12/14/2006*	Jurisdiction	*Palm Springs*
Time Period	*PM Peak Hour*	Analysis Year	*2025*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	0	2	0	1	2	1	1	2	0
Lane Group	L	T			TR		L	T	R	L	T	
Volume (vph)	173	97			44	161	208	1387	139	120	1197	
% Heavy veh	8	8	8	8	8	8	8	8	8	8	8	8
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Actuated (P/A)	A	A		A	A	A	A	A	A	A	A	
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	3	3			3		3	3	3	3	3	
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0	0	0	
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 13.2	G = 8.5	G = 0.0	G = 0.0	G = 9.8	G = 36.5	G = 0.0	G = 0.0
	Y = 3	Y = 3	Y = 0	Y = 0	Y = 3	Y = 3	Y = 0	Y = 0
Duration of Analysis (hrs) = 1.00						Cycle Length C = 80.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	173	97			205		208	1387	139	120	1197	
Lane group cap.	276	290			314		205	1528	682	205	1528	
v/c ratio	0.63	0.33			0.65		1.01	0.91	0.20	0.59	0.78	
Green ratio	0.16	0.16			0.11		0.12	0.46	0.46	0.12	0.46	
Unif. delay d_1	31.1	29.5			34.3		35.1	20.2	13.0	33.2	18.4	
Delay factor k	0.21	0.11			0.23		0.50	0.43	0.11	0.18	0.33	
Increm. delay d_2	4.5	0.7			4.9		140.5	9.4	0.1	4.4	2.8	
PF factor	1.000	1.000			1.000		1.000	1.000	1.000	1.000	1.000	
Control delay	35.7	30.2			39.2		175.6	29.6	13.2	37.5	21.2	
Lane group LOS	D	C			D		F	C	B	D	C	
Apprch. delay	33.7			39.2			45.8			22.7		
Approach LOS	C			D			D			C		
Intersec. delay	35.8			Intersection LOS						D		

SHORT REPORT

General Information		Site Information	
Analyst	*TEB*	Intersection	*Indian Canyon/San Rafael*
Agency or Co.	*PB*	Area Type	*All other areas*
Date Performed	*12/14/2006*	Jurisdiction	*Palm Springs*
Time Period	*PM Peak Hour*	Analysis Year	*2025*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Lane Group	L	LTR	R	L	LTR	R	L	TR		L	TR	
Volume (vph)	84	169	84	58	123	111	139	1456	139	150	1227	120
% Heavy veh	8	8	8	8	8	8	8	8	8	8	8	8
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Actuated (P/A)	P	P	P	P	P	P	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type	3	3	3	3	3	3	3	3		3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 12.0	G = 0.0	G = 0.0	G = 0.0	G = 8.3	G = 43.7	G = 0.0	G = 0.0
	Y = 0	Y = 0	Y = 0	Y = 0	Y = 3	Y = 3	Y = 0	Y = 0
Duration of Analysis (hrs) = 1.00						Cycle Length C = 70.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	84	169	84	58	123	111	139	1595		150	1347	
Lane group cap.	132	302	256	103	302	256	198	2064		198	2063	
v/c ratio	0.64	0.56	0.33	0.56	0.41	0.43	0.70	0.77		0.76	0.65	
Green ratio	0.17	0.17	0.17	0.17	0.17	0.17	0.12	0.62		0.12	0.62	
Unif. delay d_1	27.0	26.6	25.5	26.6	25.8	26.0	29.7	9.5		29.9	8.3	
Delay factor k	0.50	0.50	0.50	0.50	0.50	0.50	0.27	0.32		0.31	0.23	
Increm. delay d_2	23.1	7.5	3.4	21.9	4.1	5.4	11.2	1.9		17.0	0.8	
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control delay	50.0	34.1	28.9	48.5	29.9	31.3	40.9	11.5		46.9	9.1	
Lane group LOS	D	C	C	D	C	C	D	B		D	A	
Apprch. delay	36.8			34.1			13.8			12.9		
Approach LOS	D			C			B			B		
Intersec. delay	17.0			Intersection LOS						B		

SHORT REPORT

General Information		Site Information	
Analyst	*TEB*	Intersection	*Indian Canyon/Sunrise Parkway*
Agency or Co.	*PB*	Area Type	*All other areas*
Date Performed	*12/14/2006*	Jurisdiction	*Palm Springs*
Time Period	*PM Peak Hour*	Analysis Year	*2025*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	2	3	1	2	3	1
Lane Group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	197	118	178	283	185	435	141	1483	141	497	1695	185
% Heavy veh	8	8	8	8	8	8	8	8	8	8	8	8
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 12.6	G = 10.7	G = 0.0	G = 0.0	G = 11.5	G = 26.2	G = 0.0	G = 0.0
	Y = 3	Y = 0	Y = 0	Y = 0	Y = 3	Y = 3	Y = 0	Y = 0

Duration of Analysis (hrs) = *1.00* Cycle Length C = *70.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	197	118	178	283	185	435	141	1483	141	497	1695	185
Lane group cap.	301	512	474	301	512	474	533	1794	893	533	1794	893
v/c ratio	0.65	0.23	0.38	0.94	0.36	0.92	0.26	0.83	0.16	0.93	0.94	0.21
Green ratio	0.18	0.15	0.32	0.18	0.15	0.32	0.16	0.37	0.60	0.16	0.37	0.60
Unif. delay d_1	26.7	26.0	18.5	28.3	26.6	23.0	25.6	19.8	6.3	28.9	21.2	6.5
Delay factor k	0.23	0.11	0.11	0.45	0.11	0.44	0.11	0.36	0.11	0.45	0.46	0.11
Increm. delay d_2	5.2	0.2	0.5	56.1	0.4	30.6	0.3	3.5	0.1	32.8	13.8	0.1
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Control delay	31.9	26.3	19.0	84.4	27.0	53.6	25.8	23.3	6.4	61.7	35.0	6.6
Lane group LOS	C	C	B	F	C	D	C	C	A	E	C	A
Apprch. delay	25.9			57.8			22.1			38.4		
Approach LOS	C			E			C			D		
Intersec. delay	35.3			Intersection LOS						D		

SHORT REPORT

General Information		Site Information	
Analyst	*TEB*	Intersection	*Indian Avenue/Dillon Road*
Agency or Co.	*PB*	Area Type	*All other areas*
Date Performed	*12/14/2006*	Jurisdiction	*Palm Springs*
Time Period	*PM Peak Hour*	Analysis Year	*2025*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Lane Group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	57	473	305	487	230	7	128	967	520	7	537	10
% Heavy veh	8	8	8	8	8	8	8	8	8	8	8	8
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 13.2	G = 13.4	G = 0.0	G = 0.0	G = 7.0	G = 24.4	G = 0.0	G = 0.0
	Y = 3	Y = 3	Y = 0	Y = 0	Y = 3	Y = 3	Y = 0	Y = 0

Duration of Analysis (hrs) = *1.00* Cycle Length C = *70.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	57	473	305	487	230	7	128	967	520	7	537	10
Lane group cap.	315	641	500	612	641	500	167	1168	867	167	1168	867
v/c ratio	0.18	0.74	0.61	0.80	0.36	0.01	0.77	0.83	0.60	0.04	0.46	0.01
Green ratio	0.19	0.19	0.33	0.19	0.19	0.33	0.10	0.35	0.58	0.10	0.35	0.58
Unif. delay d_1	23.9	26.6	19.5	27.1	24.6	15.6	30.7	20.9	9.5	28.5	17.7	6.2
Delay factor k	0.11	0.30	0.20	0.34	0.11	0.11	0.32	0.37	0.19	0.11	0.11	0.11
Increm. delay d_2	0.3	4.6	2.2	7.6	0.3	0.0	21.4	5.3	1.2	0.1	0.3	0.0
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Control delay	24.1	31.3	21.7	34.8	24.9	15.6	52.1	26.2	10.6	28.6	18.0	6.2
Lane group LOS	C	C	C	C	C	B	D	C	B	C	B	A
Apprch. delay	27.3			31.4			23.2			17.9		
Approach LOS	C			C			C			B		
Intersec. delay	24.9			Intersection LOS						C		

SHORT REPORT

General Information		Site Information	
Analyst	*TEB*	Intersection	*Indian Avenue/19th Street*
Agency or Co.	*PB*	Area Type	*All other areas*
Date Performed	*12/14/2006*	Jurisdiction	*Palm Springs*
Time Period	*PM Peak Hour*	Analysis Year	*2025*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Lane Group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	104	31	181	247	30	288	150	1279	211	169	1261	56
% Heavy veh	8	8	8	8	8	8	8	8	8	8	8	8
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Actuated (P/A)	P	P	P	P	P	P	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 7.2	G = 17.0	G = 0.0	G = 0.0	G = 9.3	G = 34.5	G = 0.0	G = 0.0
	Y = 3	Y = 3	Y = 0	Y = 0	Y = 3	Y = 3	Y = 0	Y = 0
Duration of Analysis (hrs) = 1.00						Cycle Length C = 80.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	104	31	181	247	30	288	150	1279	211	169	1261	56
Lane group cap.	150	158	308	355	374	318	194	1445	645	194	1445	645
v/c ratio	0.69	0.20	0.59	0.70	0.08	0.91	0.77	0.89	0.33	0.87	0.87	0.09
Green ratio	0.09	0.09	0.21	0.21	0.21	0.21	0.12	0.43	0.43	0.12	0.43	0.43
Unif. delay d_1	35.3	33.7	28.7	29.1	25.2	30.7	34.3	20.9	15.1	34.8	20.7	13.4
Delay factor k	0.50	0.50	0.18	0.50	0.50	0.50	0.32	0.41	0.11	0.40	0.40	0.11
Increm. delay d_2	25.9	2.8	3.0	11.4	0.4	43.3	19.5	7.6	0.3	42.4	6.6	0.1
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Control delay	61.2	36.5	31.6	40.5	25.7	74.0	53.8	28.5	15.4	77.1	27.4	13.5
Lane group LOS	E	D	C	D	C	E	D	C	B	E	C	B
Apprch. delay	41.9			56.8			29.1			32.5		
Approach LOS	D			E			C			C		
Intersec. delay	35.3			Intersection LOS						D		