* Traffic Engineering

* Transportation Planning

* Transportation Research

* Intelligent Transportation Systems

* Traffic Signals & Timing

Dreamport Village

NW Quadrant of the I-8/I-10 Traffic Interchange

Casa Grande, Arizona

Master Circulation Study

Prepared for:

The Block Sports Company

Prepared by:

Lee Engineering
3610 N. 44th Street, Suite 100
Phoenix, Arizona 85018
(602) 955-7206

November 2016

LEE ENGINEERING

ARIZONA
TEXAS
NEW MEXICO
OKLAHOMA

Project No. 397.11

Dreamport Village
Northwest Quadrant I-8/I-10 Traffic Interchange

Casa Grande, Arizona

MASTER CIRCULATION STUDY

Prepared for:

The Block Sports Company
7075 Kingspointe Parkway, Suite 6
Orlando, FL 32819

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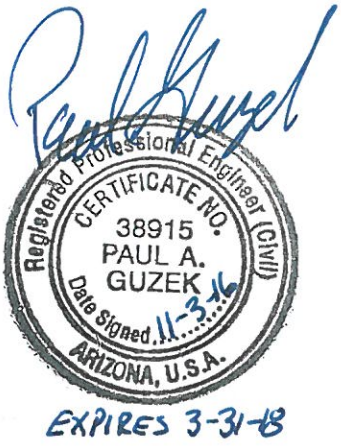

November 2016

397.11

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Introduction and Summary

Introduction

This study has been prepared to analyze the access potential of the proposed Dreamport Village development located at the northwest quadrant of the I-8/I-10 interchange in Casa Grande, Arizona. The development area was previously identified as the Regional Gateway Commerce Center.

The purpose of this study is to update the previously prepared Master Circulation Plan with the proposed new land use plan to guide the subject site through its development process, and determine on-site and off-site roadway improvements needed to accommodate background traffic as well as site-related traffic demand. This circulation plan will be a changing, evolving document dependent upon tenant demand characteristics, future roadway improvements, refinements of future traffic volumes, and other site and non-site conditions. This study is being provided for the City of Casa Grande and the Arizona Department of Transportation to better understand the development potential of the proposed site and its impacts to the adjacent roadway system prior to the time when a more formal traffic impact study is required. This master circulation plan has been prepared as a guideline for the first phase of site development, which currently has an anticipated Phase 1 opening planned for 2020. The timeline for future build-out of the site is unknown at this time, but will be aggressively assumed for the 2030 horizon year.

Major Assumptions

Based on comments received from the City of Casa Grande, ADOT, and as outlined in the revised I-8/Henness Road Change of Access Report (July 2016), the major assumptions pertaining to this project are as follows:

- The only ADOT study-area project anticipated before the assumed 2030 build-out year within the project area is an I-10 widening project that will add a general purpose lane to the existing mainline such that three directional lanes are to be provided from the I-8 system interchange west to Earley Road where 3 lanes in each direction currently exists. Funding for this project is to occur in FY 2019 with an assumed 2022 completion date. Previously planned system improvements that were part of this project to eliminate the Jimmie Kerr Boulevard TI and construct the Selma Highway TI are no longer part of this project. If the Dreamport Village developer would like to incorporate any improvements or design considerations into the current improvement plans, immediate notification to ADOT is required.

- No other City, County, or ADOT roadway improvements are planned for the foreseeable future. Any roadway improvement projects needed to provide necessary roadway capacity and to serve interim develop projects will be developer-driven and developer funded.
- Although other adjacent developments are anticipated to occur within the study area, their traffic impacts have not been included as part of the background traffic volume expansion. Any other developments contributing to the deterioration of operational performance within the study area are expected to mitigate or at a

minimum contribute to the cost associated with any roadway improvement, similar to this project.

- Analysis has been conducted for an assumed 2020 Phase 1 opening year of the site, a time frame used solely for the basis of expanding existing traffic volumes to a horizon year and allowing for a conservative analysis of baseline roadway conditions.
- For the site's anticipated opening year, the following developer improvements are planned to improve access to and from the site as well as expand the existing local roadway network:
    - Accelerate and construct the I-8/Henness Road interchange
    - Construct Henness Road (Resort Parkway North) as an arterial roadway from the I-8 interchange north to Florence Boulevard anticipated along the Camino Mercado alignment. The roadway is to provide a grade-separated crossing over the existing Union Pacific railroad tracks and Jimmie Kerr Boulevard.
    - Construct Hatfield Road as a two-lane roadway between Resort Parkway North as Peart Road for emergency and local access.
- Although improved access to and from I-10 west is preferred via a new Selma Highway TI, the ability to accelerate its construction to an opening year condition is not feasible for the developer.

Study Area Conditions

Study Area

The proposed Dreamport Village mixed-use development totals approximately 1,300± gross acres located a few miles southeast of downtown Casa Grande. The site is situated on the west side of the I-8/I-10 system interchange on both the north and south sides of I-8, extending from Jimmie Kerr Boulevard in the north, west of the Henness Road alignment and south to the Arica Road alignment. **Figure 1** provides a vicinity map of the subject site and location of the general study area.

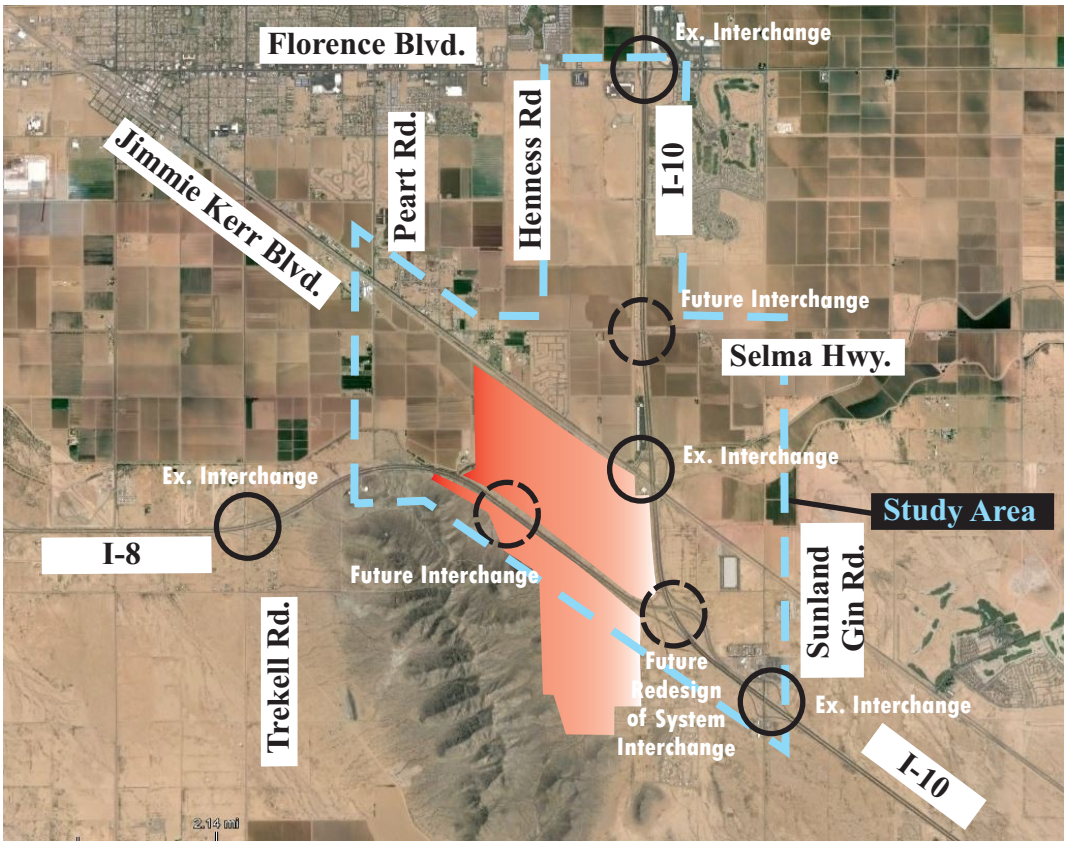
Projected to attract over 1.7 million yearly visitors to the site at completion of the first phase and over 3.2 million at completion. The planned regional resort destination development will rely on significant contributions from out of state visitor travel utilizing the Phoenix Metro airports, automobile, and from a planned Amtrak rail station to their site. The majority of these visitors will rely on the existing interstate system to bring them to the resort area, mostly projected to originate from the north using I-10 east. The site also boasts a planned veterinarian school, a technical development park, and adjacent highway commercial areas as well as a needed employee base that will largely attract from the local area.

Site Plan

Dreamport Village has a planned development schedule to extend over a 20-year period with approximately half of the major attractions, including a 166-acre event and concert area, a 74-acre wildlife animal experience, and an indoor waterpark featured within the first phase of construction planned for a soft opening in 2019 and major opening in 2020. Also included in the Phase 1 plans is construction of a planned Amtrak Rail Station, veterinarian school, a business park, a resort hotel, an adventure zone amusement area, other highway commercial and retail developments, management and utility facilities, and other amenities. The conceptual land use plan for Phase 1 of the resort destination is shown as **Figure 2**. The full build-out of the site that includes other attractions such as a coaster park, movie studio, indoor amusement park, a college campus annex, residential developments, an elementary school, open space, and other commercial parcels is presented in **Figure 3**.

It is noted that some minor differences between site plan graphics as developed by Gilmore Planning and Landscape Architecture throughout this report may exist due to the evolving nature of the project.

Vicinity Map



General Study Area

Not to scale

Master Circulation Plan
Dreamport Village

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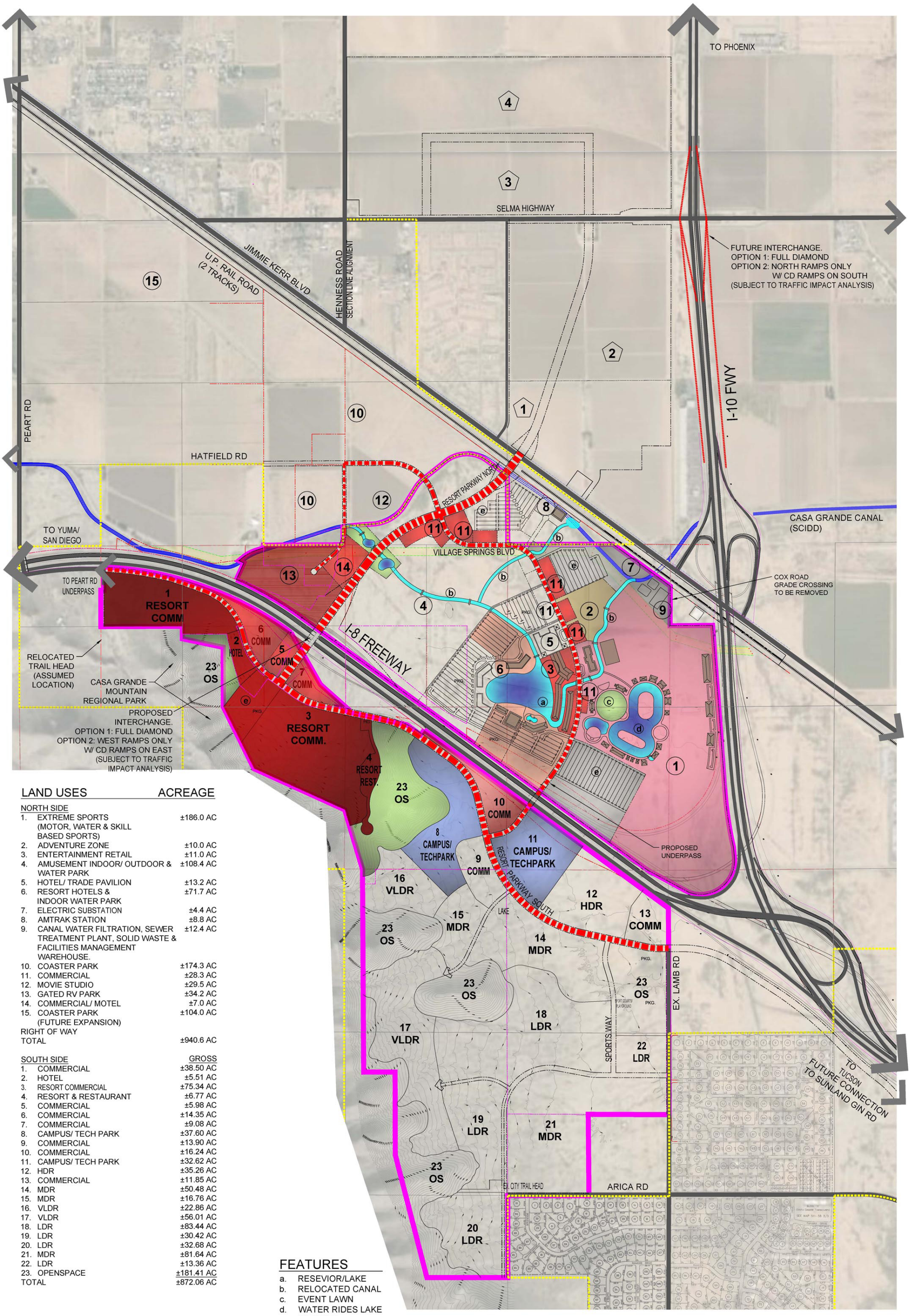
Vicinity Map

Figure 1



LAND USES — ACREAGE

NORTH SIDE		
1.	EXTREME SPORTS (MOTOR, WATER & SKILL BASED SPORTS)	±186.0 AC
2.	ADVENTURE ZONE	±10.0 AC
3.	ENTERTAINMENT RETAIL	±11.0 AC
4.	AMUSEMENT INDOOR/ OUTDOOR & WATER PARK	±108.4 AC
5.	HOTEL/ TRADE PAVILION	±13.2 AC
6.	RESORT HOTELS & INDOOR WATER PARK	±71.7 AC
7.	ELECTRIC SUBSTATION	±4.4 AC
8.	AMTRAK STATION	±8.8 AC
9.	CANAL WATER FILTRATION, SEWER TREATMENT PLANT, SOLID WASTE & FACILITIES MANAGEMENT WAREHOUSE.	±12.4 AC
10.	COASTER PARK	±174.3 AC
11.	COMMERCIAL	±28.3 AC
12.	MOVIE STUDIO	±29.5 AC
13.	GATED RV PARK	±34.2 AC
14.	COMMERCIAL/ MOTEL	±7.0 AC
15.	COASTER PARK (FUTURE EXPANSION)	±104.0 AC
RIGHT OF WAY		
TOTAL		±940.6 AC

SOUTH SIDE		GROSS
1.	COMMERCIAL	±38.50 AC
2.	HOTEL	±5.51 AC
3.	RESORT COMMERCIAL	±75.34 AC
4.	RESORT & RESTAURANT	±6.77 AC
5.	COMMERCIAL	±5.98 AC
6.	COMMERCIAL	±14.35 AC
7.	COMMERCIAL	±9.08 AC
8.	CAMPUS/ TECH PARK	±37.60 AC
9.	COMMERCIAL	±13.90 AC
10.	COMMERCIAL	±16.24 AC
11.	CAMPUS/ TECH PARK	±32.62 AC
12.	HDR	±35.26 AC
13.	COMMERCIAL	±11.85 AC
14.	MDR	±50.48 AC
15.	MDR	±16.76 AC
16.	VLDR	±22.86 AC
17.	VLDR	±56.01 AC
18.	LDR	±83.44 AC
19.	LDR	±30.42 AC
20.	LDR	±32.68 AC
21.	MDR	±81.64 AC
22.	LDR	±13.36 AC
23.	OPENSPACE	±181.41 AC
TOTAL		±872.06 AC

FEATURES

a. RESEVIOR/LAKE
b. RELOCATED CANAL
c. EVENT LAWN
d. WATER RIDES LAKE
e. PARKING

Figure 2

DREAMPORT VILLAGES CASA GRANDE

CASA GRANDE, AZ

PREPARED FOR: THE BLOCK SPORTS COMPANY Rudy Camp, Director Cell: 858-395-1660

PHASE 1
MASTER
LAND USE PLAN

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SCALE: 1" = 500'
DATE: 2.15.17
GPLA JOB# 16037

0' 250' 500' 1000' 1500'

NORTH

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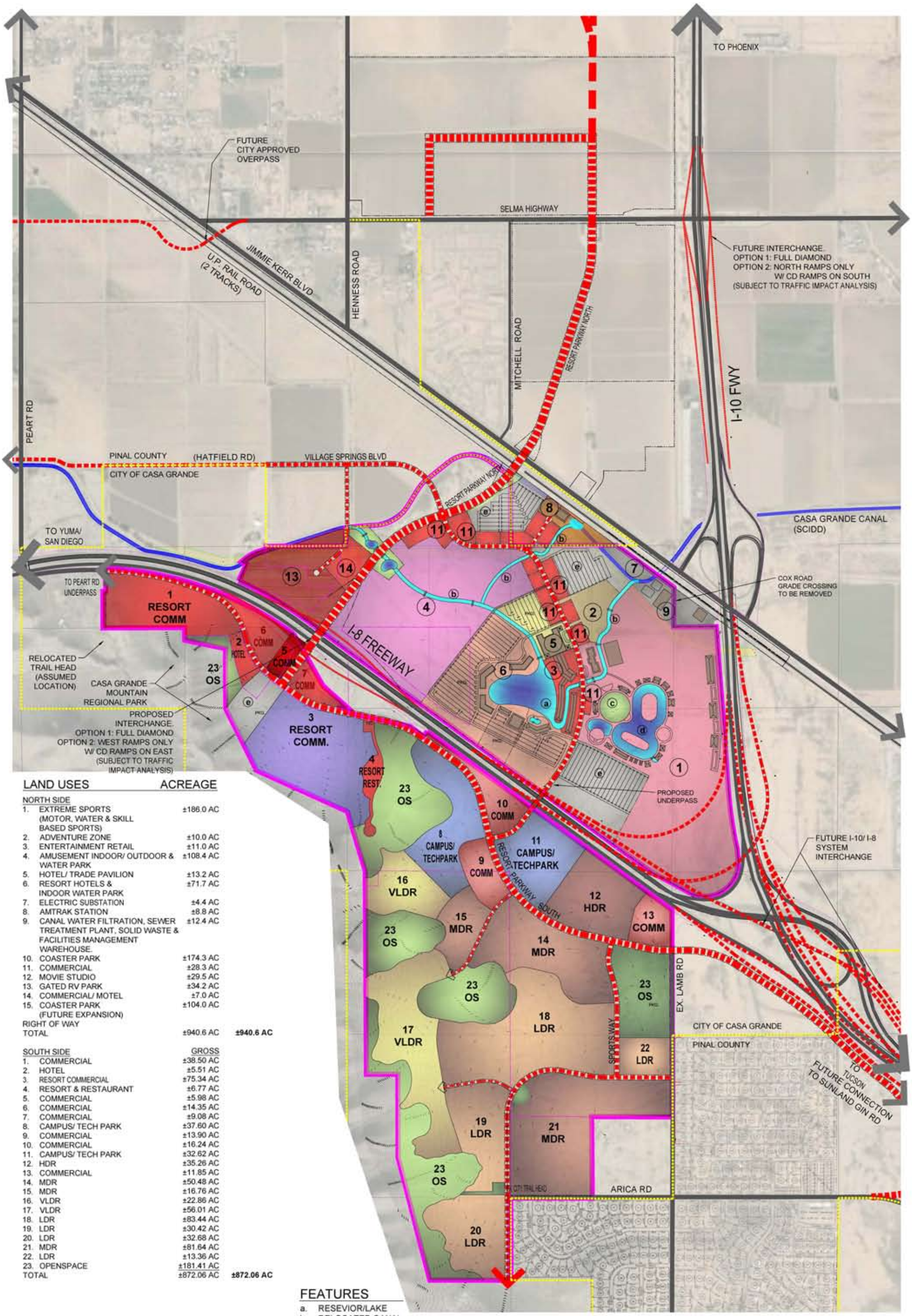

LAND USES	ACREAGE	
NORTH SIDE		
1. EXTREME SPORTS (MOTOR, WATER & SKILL BASED SPORTS)	±186.0 AC	
2. ADVENTURE ZONE	±10.0 AC	
3. ENTERTAINMENT RETAIL	±11.0 AC	
4. AMUSEMENT INDOOR/ OUTDOOR & WATER PARK	±108.4 AC	
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6. RESORT HOTELS & INDOOR WATER PARK	±71.7 AC	
7. ELECTRIC SUBSTATION	±4.4 AC	
8. AMTRAK STATION	±8.8 AC	
9. CANAL WATER FILTRATION, SEWER TREATMENT PLANT, SOLID WASTE & FACILITIES MANAGEMENT WAREHOUSE.	±12.4 AC	
10. COASTER PARK	±174.3 AC	
11. COMMERCIAL	±28.3 AC	
12. MOVIE STUDIO	±29.5 AC	
13. GATED RV PARK	±34.2 AC	
14. COMMERCIAL/ MOTEL	±7.0 AC	
15. COASTER PARK (FUTURE EXPANSION)	±104.0 AC	
RIGHT OF WAY		
TOTAL	±940.6 AC	**±940.6 AC**

SOUTH SIDE	GROSS	
1. COMMERCIAL	±38.50 AC	
2. HOTEL	±5.51 AC	
3. RESORT COMMERCIAL	±75.34 AC	
4. RESORT & RESTAURANT	±6.77 AC	
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12. HDR	±35.26 AC	
13. COMMERCIAL	±11.85 AC	
14. MDR	±50.48 AC	
15. MDR	±16.76 AC	
16. VLDR	±22.86 AC	
17. VLDR	±56.01 AC	
18. LDR	±83.44 AC	
19. LDR	±30.42 AC	
20. LDR	±32.68 AC	
21. MDR	±81.64 AC	
22. LDR	±13.36 AC	
23. OPENSPACE	±181.41 AC	
TOTAL	±872.06 AC	**±872.06 AC**

FEATURES

a. RESEVIOR/LAKE
b. RELOCATED CANAL
c. EVENT LAWN
d. WATER RIDES LAKE
e. PARKING

Figure 3

DREAMPORT VILLAGES CASA GRANDE

CASA GRANDE, AZ

PREPARED FOR: THE BLOCK SPORTS COMPANY Rudy Camp, Director Cell: 858-395-1660

MASTER LAND USE PLAN

SCALE: 1" = 500'
DATE: 1.16.17
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0 250 500 1000 1500

NORTH

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Non-Site Developments in the Study Area

A previous master circulation study was conducted by Lee Engineering for this same property under a different land use plan and time horizon (Regional Gateway Commerce Center, March 2014). At that time, the City of Casa Grande (City) had identified a few projects near the subject site having the potential of developing in the near future. From review of information on the City's Planning Department website, those projects near the northwest corner of the I-10/Jimmie Kerr Boulevard intersection (City Gate) have not materialized, but appear to still be active including the redevelopment of an existing 187,000 SF vacant outlet mall area as an outlet for home improvement offerings and a 34-acre mixed-use development. These two developments were estimated to generate 15,308 daily trips, 513 trips in the AM peak hour and 1311 PM peak hour trips prior to any reductions or credits for pass-by conditions.

It is anticipated that the above and any nearby developments to the subject site will only have minor vehicular impact on the Dreamport Village project since access to the City Gate developments are via Jimmie Kerr Boulevard while the Dreamport Village site does not provide access to or route any vehicular traffic onto this roadway.

Figure 4 displays the City's projects that are currently in review within the general study area. No information was available for the projects located at the east side of I-10 and Jimmie Kerr interchange, only identified as the Lawrence Project. The cluster of projects near the west side of the I-10/Jimmie Kerr interchange are the City Gate projects while the to the southeast (northeast corner of Lamb and Arica), Mountain View Estates, is identified with an annexation classification. The project located east of I-10 at Florence Boulevard is for a restaurant in an existing retail space.

Discussions with a City of Casa Grande representative identified no other developments are near completion within the general area that would have a significant impact to the local study area roadway volumes. It was noted that some potential larger-scale developments are planned for the future that will add traffic to the general area and the regional interstate system but details are not available at this time. For the purposes of this study, no new developments will be considered within the study area that will contribute to increased traffic volumes on any roadway segment that could significantly impact the study area conditions, outside of the subject site and typical background traffic growth. The City has identified a minimum 2% per year traffic growth rate for this area.

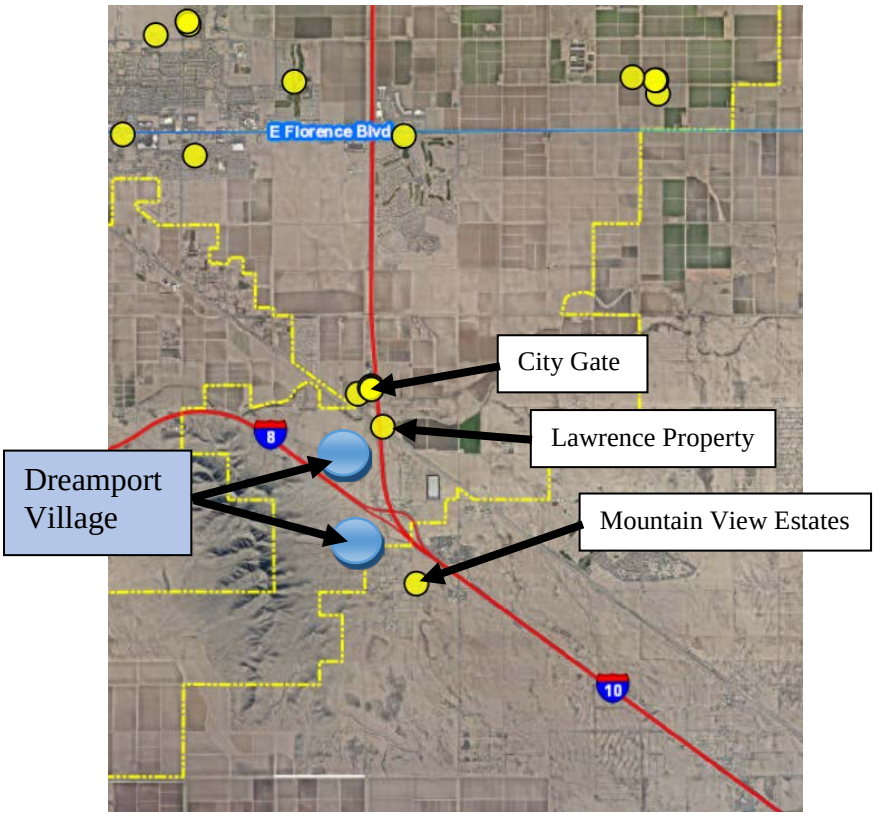


Figure 4. Location of Casa Grande Development Projects in Review Near the Study Area

Study Area Traffic Volumes

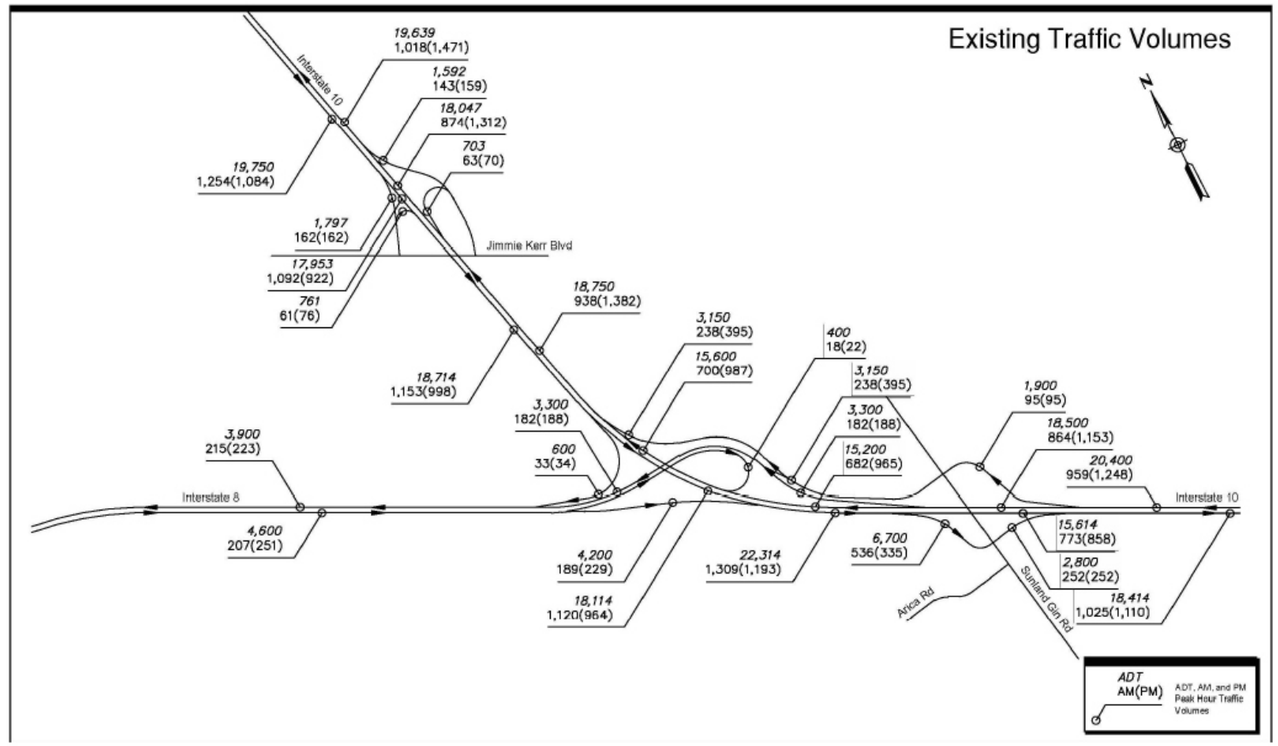
Daily, morning and evening peak hour traffic volume data was sought from the City for the major roadways and intersections within the study area. It was identified that traffic volumes have not changed significantly over the last few years and previously collected data would be applicable for this study. Traffic information was obtained through a number sources including:

- the City's most recent data collection effort in 2013,
- as presented in the previous Lee Engineering Master Circulation Study for the Regional Gateway Commerce Center (2014),
- as collected from a 2014 traffic impact study on Florence Boulevard at Camino Mercado,
- data available from the ADOT Transportation Data Management System,
- the Pinal County website, and
- as presented in the recent I-8/Henness Road Change of Access Report (July 2016).

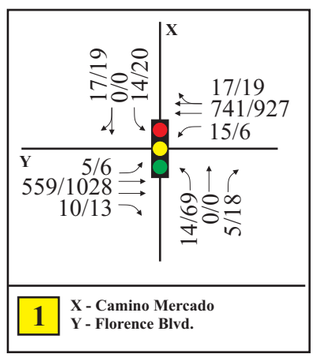
Figure 5 presents the existing traffic volume data for the immediate study area as obtained through the above sources.

Daily Volume from ADOT TMS, City Database, TIA Estimates

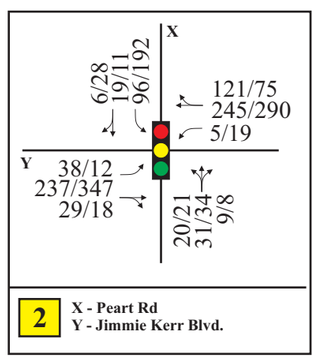
Not to scale



Daily Volume from I-8/Henness Road Change of Access Report



Turn volumes at this location have been estimated based on 2014 traffic study



Turn volumes at this location have been estimated based on 2014 traffic study

Peak Hour Intersection Volumes at Selected Study Locations

Legend

4,851	- Daily Count Location ADOT/MAG/City
X	- TMC Count Location
	- Existing Lane Configuration
XX /XX	- AM/PM Peak Hour Traffic Volume

Master Circulation Plan
Dreamport Village

Existing Study Area Traffic Volumes

Figure 5

LEE ENGINEERING

Study Area Roadways

Due to the limited nature of the local and regional roadway network to serve as efficient access options for the site, a number of new facilities are being proposed to accommodate the site-related vehicle trips that are to be generated by the site. The following is a list of improvements anticipated to be in-place for the first phase of the Dreamport Village development (or in-place soon after Phase 1 opening), constructed by others or in large part by the site developer:

- I-10 Widening (1A, ADOT)
  I-10 currently provides for two directional lanes from the I-8 system interchange west to Earley Road (about 4 miles). Fiscal year 2019 funding will add an additional general purpose lane to each travel direction. Other improvements originally related to this project including the modification of the Jimmie Kerr TI and construction of a new TI at Selma Highway have been eliminated. Completion of this project is anticipated for 2021/2022.
- I-8 / Henness Road Traffic Interchange (1B, Developer)
  The project development team is to contribute to the construction of this new interchange pending near-term approval by the Federal Highway Administration (FHWA). An interim full diamond interchange is to provide direct access to site-related visitors approaching from I-8 eastbound, I-10 westbound, and for some vehicles traffic travelling I-10 eastbound. Eventually, as part of the future I-8/I-10 system interchange improvements (unknown time horizon), a system of collector-distributor roads will replace the direct Henness Road ramps to and from the east, but access to both I-10 eastbound and westbound will still be possible.
- Henness Road / Resort Parkway North (1C, Developer)
  In conjunction with the I-8/Henness Road TI, the site developers plan to extend Henness Road north as Resort Parkway North. The four-lane roadway is planned to cross Jimmie Kerr Boulevard and the existing Southern Pacific Railroad tracks as an above grade crossing and extend northward along mostly undeveloped/agricultural adjacent parcels, intersecting Selma Highway and Earley Road, to Florence Boulevard (approximately 3.5 miles). Currently the exact alignment of this roadway has not been determined, but for this study, is planned to intersect Florence Boulevard at the existing signalized intersection of Camino Mercado one-quarter mile west of the I-10 interchange. This roadway is anticipated to accommodate the majority of site-related trips generated from the Phoenix area areas north until the new Selma Highway interchange is constructed in the future. No direct access to Jimmie Kerr Boulevard is planned from this roadway, only indirectly via the existing Jimmie Kerr/Selma Highway intersection.

  Note: Construction of the Resort Parkway North segment over Jimmie Kerr Boulevard and north to Florence Boulevard is not part of the current PAD. However, an amendment to the PAD is anticipated to occur immediately after initial submittal to include this improvement. Until approval, the existing Cox Road/Jimmie Kerr intersection at the I-10 interchange is to remain open, but will not be utilized for site access. Resort Parkway North will be considered in-place for Phase 1 analysis purposes, but constructed in a Phase 1B scenario.

- Henness Road / Resort Parkway South (1D, Developer)
  South of I-8, Resort Parkway South is to roughly parallel I-8 providing access to the southern portion of the site's Phase 1 development. The roadway is to extend between Henness Road TI in the west to Lamb Road, eventually continuing east to Sunland Gin Road near the Arica Road alignment. Future highway commercial development west of Henness Road will extend the roadway to Tate Road connecting to the Peart Road underpass of I-8. This roadway is to accommodate the majority of Phase 1 traffic destined to site's parcels south of I-8 via the Henness Road TI.
- Hatfield Road / Village Springs Boulevard (1E, Developer)
  A new east-west two-lane roadway extending from Resort Parkway North to Peart Road and potentially to Trekell Road (existing I-8 TI, 2 miles west of Henness Road). Hatfield Road, the west extension of this roadway is anticipated to serve a low volume of local traffic from the downtown Casa Grande area, provide continuity to the local street network, serve emergency and service related vehicles, and be an eventual western alternative or by-pass to the I-8/Henness TI. The eastern extension of the roadway will serve as the main entrance into the resort area.

The above projects are anticipated to be in place or near-complete for the opening phase to accommodate the site-generated traffic. The planned developer improvements will also remove the potential site-related access concerns near the Jimmie Kerr/I-10 eastbound on-off ramps by eliminating the southern site access roadway (Cox Road) at this location and its complications associated with its railroad crossing. Eventually, ADOT plans to eliminate the I-10/Jimmie Kerr TI when the I-8/I-10 system interchange improvements occur.

Additional projects are planned for Dreamport Village, including the Village Springs Boulevard/I-8 Underpass (a roadway to provide a direct connection between the northern and southern portions of the resort without having to utilize I-8/Henness TI), have a time horizon beyond the opening year of Phase 1. ADOT related improvements for the I-8/I-10 system interchange as well as the Sunland Gin TI and Selma Highway TI are more long term, but have been assumed for the full buildout condition of the site.

Figure 6 shows the most recent Master Regional Circulation Plan for the project area. The Phase 1 improvements anticipated to be in-place are numbered corresponding to the above project descriptions above.

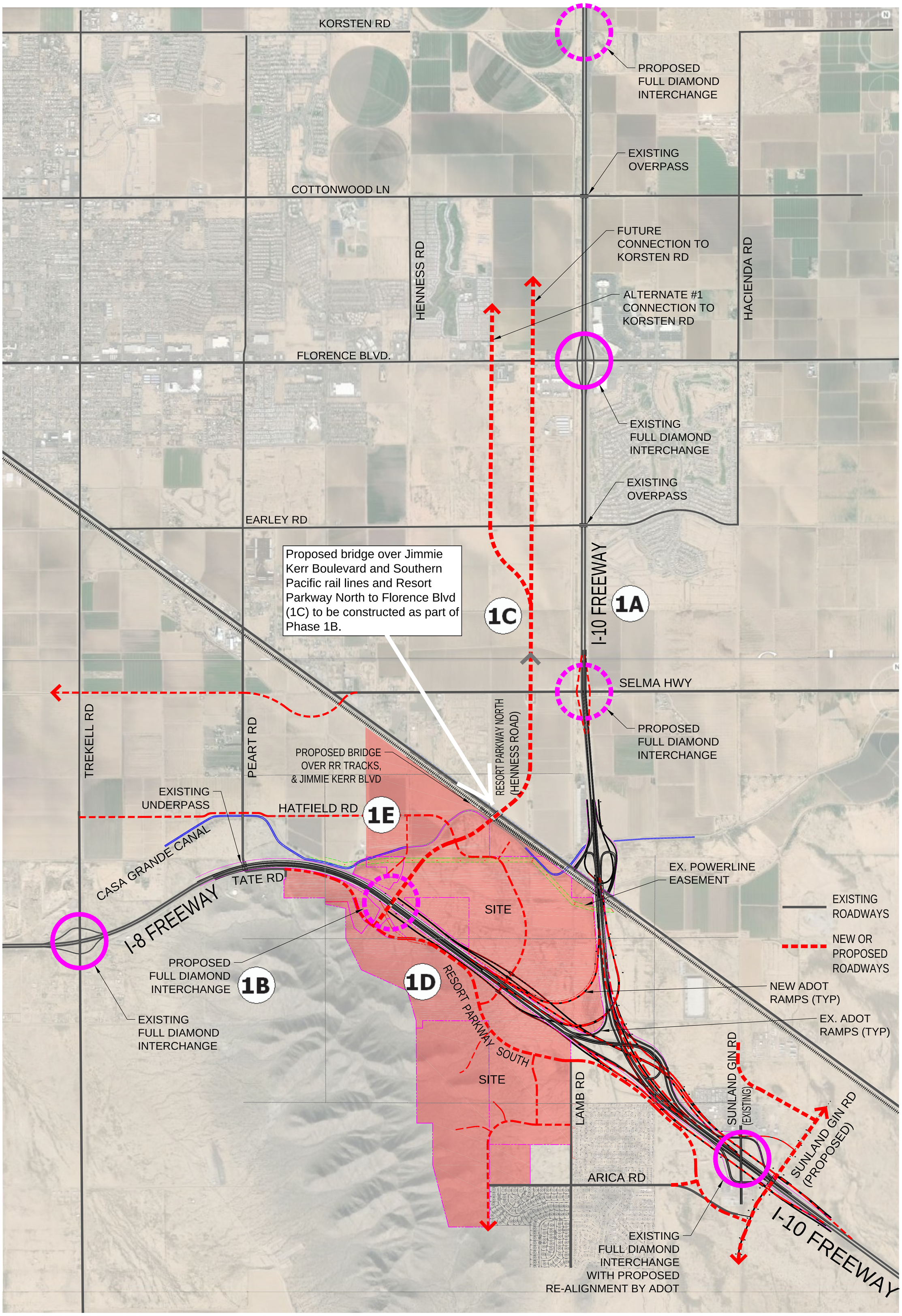


Figure 6

DREAMPORT VILLAGE

CASA GRANDE, AZ

PREPARED FOR: THE BLOCK SPORTS COMPANY

MASTER REGIONAL CIRCULATION PLAN

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0' 700' 1400' 2800' 4200'

NORTH

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Traffic Volume Forecasting

Non-Site Traffic Development

Noting very little development is planned for the study area outside of the subject site, traffic volumes conditions are not anticipated to change drastically, growing at a City identified 2 percent per year. Construction of the I-8/Henness Road TI is not anticipated to change traffic volume patterns significantly without the construction of the Dreamport Village project. There are relatively low volume conditions at the I-10/Jimmie Kerr TI, I-8/Trekell TI, and along on the I-8 corridor. Furthermore, the nature of the area is rural/agricultural and has a limited local roadway network.

As part of the I-8/Henness Road Change of Access Report (COA), a 2025 Total Build scenario was developed for the immediate study area which considered the following assumptions:

- Construction of the Henness Road TI
- Elimination of the Jimmie Kerr Boulevard TI, although access between Jimmie Kerr and a new Selma Highway TI is provided via directional frontage roadways.
- Build-out of the study area property south of the I-8 corridor at Henness Road originally planned in the Casa Grande Mountain Ranch (CGMR) development. Under the CGMR land use development plan, as provided in the appendix from the COA report, was estimated to generate over 45,000 daily trips.
- No continuation/connection of Henness Road north of I-8.
- I-10/Henness Road ramp volumes based on an assumed maximum capacity of the proposed interchange signal system.

Thus, the 2025 Build volume results as shown in the COA report are not reflective of a no-build or interim condition comparable to a Dreamport Village development. However the planned development of the southern half of the subject property is estimated to generate about 45,000 new external trips when fully developed, equal to the CGMR estimate.

For the purposes of this analysis, it will be assumed that the I-8/Henness Road TI, the Resort Parkway North roadway over Jimmie Kerr Boulevard to Florence Boulevard, the Hatfield Road connection between Peart Road and Henness Road, and the development of Resort Parkway South between Henness Road and Lamb Road will not significantly change travel path routes within the existing study area. All existing traffic will utilize their existing travel paths. Any change to the traffic volume conditions shown in the analysis figures will be based on background traffic growth and vehicles associated with the Dreamport Village development. Consideration of potential non-site vehicular impacts will be analyzed independently.

Site Traffic Development

Trip Generation

To estimate the site's trip generation characteristics, *Trip Generation, Ninth Edition*, published by the Institute of Transportation Engineers (ITE) 2012, was used to calculate average weekday daily total, AM peak hour, and PM peak hour number of trips. The data in this publication is categorized by land use types. The land use categories (LUC) that would be applicable to the proposed site was based on information received from the client and placed into an ITE category deemed applicable to the land use.

Noting the site will be primarily a regional resort destination, the use of typical ITE trip generation values to estimate traffic volumes may not be the most appropriate manner of vehicle estimation tool. Due to the site's nature, weekend conditions (Friday thru Sunday) are anticipated to generate the highest number of site visitors to the resort and recreational areas. Research conducted by the client team projects 37 percent of visits will come from a customer base staying at least one night at an on-site accommodation. A system of planned water taxis, shuttle bus service between facilities and attractions, and integration of land uses, will result in reduced internal vehicle trips. The client has also indicated attendance and operation at the resort functioning in a similar manner to that of the Disneyland Resort in Anaheim, California where employees are to arrive before the attraction opening and the majority of guests will not enter a specific on-site destination until late morning, after the peak morning commute peak hour. Day-trip customers are not anticipated to leave the resort area until late in the evening to maximize their time spent visiting the complex. It was noted by the client team that peak season conditions are projected to be from November to May with specific attraction areas open from 9AM until midnight. It is assumed for peak season conditions that attendance to be 20 percent above average daily conditions and off-peak attendance during the hotter summer months 65 percent of peak-season.

To estimate potential AM and PM peak hour site-related vehicle traffic, both the ITE and Disneyland Resort Trip Generation methodologies (based on person-trips and a spreadsheet developed by Patrick A. Gibson, Kaku Associates, Inc. and John a Lower, Traffic and Transportation Manager, City of Anaheim, California) were conducted. It was soon discovered that too many assumptions were being utilized in the Disneyland person-trip method to be effective, and the final trip generation results based only on the ITE method. It is noted, however, the Disneyland spreadsheet indicates peak times for vehicles entering or exiting the resort area are outside the typical peak AM and PM commuter times.

Tables 1 and **2** identify the trip generation characteristics estimated for Phase 1 of the site's development on weekday and weekend conditions, respectively, and in relation to the I-8 corridor (North or South). Trip reductions were assumed based on the client's research that 37 percent of resort based trips are estimated to be inter-parcel trips (alternative mode/non-vehicular trips). Engineering judgement was utilized to estimate internal trip reductions between the non-resort commercial and retail land uses based on the parcels proximity within the resort area. Pass-by trips were assumed based on the latest edition of

the ITE Trip Generation Handbook utilizing average values, where appropriate. **Table 3** displays the trip generation results for weekday build-out conditions of the entire site.

From the tables developed, Phase 1 of site development is anticipated to generate over 25,000 new daily vehicle trips to the area (nearly 52,000 total trips prior to trip reductions) while weekend conditions are anticipated to generate over 32,000 new trip ends. During the peak weekday commuter travel time periods, Phase 1 is anticipated to generated approximately 1,000 AM peak hour trips (inbound plus outbound) and 1,750 PM peak hour trips. At full build-out, the site is anticipated to generate nearly 66,000 new daily weekday trips onto the area roadways (over 124,000 total trips prior to trip reduction credits are applied).

Based on the land uses for Phase 1, it is assumed that 70% of all trips are guest-related (resort-related) trips and the remaining 30% are generated from land uses that are associated with the employee base or non-resort vehicles, including most of the land uses on the south side of I-8 except for the Wildlife Experience and Resort Hotel. At full build-out, about 55% of the site-generated trips are resort-related trips, a result of the later-phase residential areas located on the south side of the project area.

It is noted that the ITE assumptions may not account for potential commuter bus or other higher occupancy type vehicles that may be used for the larger attraction areas or consider the attraction opening and closing times. Depending upon the season and resort hours, significant impact to the arrival and departure times and the peak hour estimations used in the development of the site-generated trips are possible.

Table 1. Trip Generation Estimate - WEEKDAY (Phase 1)

Parcel No.	Phase 1 - North Site													Phase 1 - South Site						
Land Use	Block Sports	Entertain. Retail	Indoor Water Park	Adventure Zone	Resort Hotel	AMTRAK	Facilities Management	Electric Substation	Commercial	Restaurant	Motel	RV Park		Tech Park	Highway Comm	Hotel	Wildlife Exp.	C-Store / Welcome Center	Vet School	
ITE Land Use Code	415	820	414	480	330	93	170	170	820	932	320	240		760	820	310	481	945	550[2]	
ITE Land Use Title	Beach Park	Shopping Center	Water Slide Park	Amusement Park	Resort Hotel	LRT with Parking	Utilities	Utilities	Shopping Center	High-Turnover (sit-down) Restaurant	Motel	Mobile Home Park		Research & Development Center	Shopping Center	Hotel	Zoo	Gasoline/Service Station w/ Convience Market	University / College	
Land Use Variable	Acres	1000 SF GLA	Parking Spaces	Acres	Rooms	Parking Spaces	Acres	Acres	1000 SF GLA	1000 GFA	Rooms	Acres		Acres	1000 SF GLA	Rooms	Acres	VFP	Acres	
Variable Amount	186.0	95.8	600	10.0	300	380	5.0	5.0	100.0	6.000	200	29.8		21.2	301	200	74.1	20	12.8	
Weekday	29.81	42.7	2.27	75.76	8.17	2.51	6.93	6.93	42.7	127.15	5.63	39.61		79.61	42.7	8.17	114.88	162.78	100	
AM Peak Hour	0.48	0.96	0.08	0.21	0.31	1.07	2.49	2.49	0.96	10.81	0.45	3.2		16.77	0.96	0.53	0.31	10.16	10	
PM Peak Hour	1.3	3.71	0.28	3.95	0.42	1.24	1.32	1.32	3.71	9.85	0.47	4.45		15.44	3.71	0.6	0.42	13.51	9	
Weekday	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%		50%	50%	50%	50%	50%	50%	
AM Peak Hour	59%	49%	70%	88%	72%	80%	50%	50%	49%	55%	36%	18%		84%	49%	59%	72%	50%	90%	
PM Peak Hour	34%	52%	21%	61%	43%	58%	50%	50%	52%	60%	54%	63%		12%	52%	51%	43%	50%	30%	
Percentage of Inter-Parcel Trips	37%	50%	37%	37%	37%	75%	0%	0%	50%	37%	37%	37%		37%	37%	37%	37%	37%	37%	
TOTAL TRIPS													Total							Total
Weekday	5,545	4,091	1,362	758	2,451	954	35	35	4,270	763	1,126	1,180	22,570	1,688	12,853	1,634	8,513	3,256	1,280	29,224
AM Peak Hour Inbound	53	46	34	2	67	326	7	7	48	36	33	18	677	299	142	63	17	102	116	739
AM Peak Hour Outbound	36	46	14	0	26	81	5	5	48	29	57	77	424	57	147	43	6	101	12	366
PM Peak Hour Inbound	83	185	36	25	55	274	4	4	193	36	51	84	1,030	40	581	62	14	136	35	868
PM Peak Hour Outbound	159	171	132	15	71	198	3	3	178	24	43	49	1,046	288	536	58	18	135	81	1,116
INTERNAL / ALTERNATIVE MODE TRIPS													Total							Total
Weekday	2,052	2,045	504	280	907	715	0	0	2,135	282	417	437	9,774	624	4,755	605	3,150	1,205	474	10,813
AM Peak Hour Inbound	20	23	13	1	25	244	0	0	24	14	12	7	383	111	53	24	7	38	43	276
AM Peak Hour Outbound	14	23	5	0	10	61	0	0	24	10	22	29	198	21	54	16	2	38	5	136
PM Peak Hour Inbound	31	93	14	9	21	205	0	0	97	14	19	31	534	15	215	23	5	50	13	321
PM Peak Hour Outbound	59	85	49	6	26	149	0	0	89	8	16	19	506	107	199	22	7	50	30	415
EXTERNAL TRIPS													Total							Total
Weekday	3,493	2,046	858	478	1,544	239	35	35	2,135	481	709	744	12,797	1,064	8,098	1,029	5,363	2,051	806	18,411
AM Peak Hour Inbound	33	23	21	1	42	82	7	7	24	22	21	11	294	188	89	39	10	64	73	463
AM Peak Hour Outbound	23	23	9	1	16	20	6	6	24	19	35	49	231	36	93	27	4	64	7	231
PM Peak Hour Inbound	52	92	22	16	34	69	4	4	96	22	32	53	496	25	366	39	9	86	22	547
PM Peak Hour Outbound	100	86	83	9	45	49	3	3	89	16	27	30	540	181	337	36	11	85	51	701
Percentage of Pass-by Trips	0%	34%	0%	0%	0%	0%	0%	0%	34%	43%	0%	0%		0%	34%	0%	0%	59%	0%	
PASS-BY TRIPS													Total							Total
Weekday	0	696	0	0	0	0	0	0	726	207	0	0	1,629	0	2,753	0	0	1,210	0	3,963
AM Peak Hour Inbound	0	8	0	0	0	0	0	0	8	9	0	0	25	0	30	0	0	38	0	68
AM Peak Hour Outbound	0	8	0	0	0	0	0	0	8	8	0	0	24	0	32	0	0	38	0	70
PM Peak Hour Inbound	0	31	0	0	0	0	0	0	33	9	0	0	73	0	124	0	0	51	0	175
PM Peak Hour Outbound	0	29	0	0	0	0	0	0	30	7	0	0	66	0	115	0	0	50	0	165
NEW TRIPS													Total							Total	North + South Total
Weekday	3,493	1,350	858	478	1,544	239	35	35	1,409	274	709	744	11,168	1,064	5,345	1,029	5,363	841	806	14,448	25,616
AM Peak Hour Inbound	33	15	21	1	42	82	7	7	16	13	21	11	269	188	59	39	10	26	73	395	664
AM Peak Hour Outbound	23	15	9	1	16	20	6	6	16	11	35	49	207	36	61	27	4	26	7	161	368
PM Peak Hour Inbound	52	61	22	16	34	69	4	4	63	13	32	53	423	25	242	39	9	35	22	372	795
PM Peak Hour Outbound	100	57	83	9	45	49	3	3	59	9	27	30	474	181	222	36	11	35	51	536	1,010

Notes:

1. Per developer projections, 63% of all trips to resort area to be day trips, 37% internal. Internal commercial assumed to generate 50% of trips from internal customer base.
2. For Wildlife/Zoo land use, used San Diego Zoo (SANDAG) for daily rates, AM and PM peak hour used ITE amusement park rates.
3. Vet School - Assumed University/College. ITE based on students, San Diego region (SANDAG) based on acres, used SANDAG data.
4. San Diego region (SANDAG) has resort hotel with convention facilities land use at 10 trips/room weekday or 300 per acre. 6% of total trips in AM 60% are inbound, 8% trips in PM, 60% are inbound, ITE rates used above.

Table 2. Trip Generation Estimate - WEEKEND (Phase 1)

Parcel No.	Phase 1 - North Site													Phase 1 - South Site							
Land Use	Block Sports	Entertain. Retail	Indoor Water Park	Adventure Zone	Resort Hotel	AMTRAK	Facilities Management	Electric Substation	Commercial	Restaurant	Motel	RV Park		Tech Park	Highway Comm	Hotel	Wildlife Exp.	C-Store / Welcome Center	Vet School		
ITE Land Use Code	415	820	414	480	330	93	170	170	820	932	320	240		760	820	310	481	945	550[2]		
ITE Land Use Title	Beach Park	Shopping Center	Water Slide Park	Amusement Park	Resort Hotel	LRT with Parking	Utilities	Utilities	Shopping Center	High-Turnover (sit-down) Restaurant	Motel	Mobile Home Park		Research & Development Center	Shopping Center	Hotel	Zoo	Gasoline/Service Station w/ Convience Market	University / College		
Land Use Variable	Acres	1000 SF GLA	Parking Spaces	Acres	Rooms	Parking Spaces	Acres	Acres	1000 SF GLA	1000 GFA	Rooms	Acres		Acres	1000 SF GLA	Rooms	Acres	VFP	Acres		
Variable Amount	186.0	95.8	600	10.0	300	380	5.0	5.0	100.0	6.000	200	29.8		21.2	301	200	74.1	20	12.8		
Weekend	66.47	49.97	2.91	180.2	13.43	2.51	6.93	6.93	49.97	158.37	8.84	36.21		22.47	49.97	8.19	114.88	162.78	76		
Peak Hour	1.18	4.82	0.39	18.86	1.23	1.24	1.32	1.32	4.82	14.07	0.76	4.2		3.37	4.82	0.72	0.42	13.57	9.6		
Weekend	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%		50%	50%	50%	50%	50%	50%		
Peak Hour	46%	52%	13%	58%	50%	58%	50%	50%	52%	53%	45%	54%		50%	52%	56%	43%	50%	57%		
Percentage of Inter-Parcel Trips / Alt Mode	37%	50%	37%	37%	37%	75%	0%	0%	50%	37%	37%	37%		37%	37%	37%	37%	37%	37%		
TOTAL TRIPS													Total							Total	
Weekend	12,363	4,787	1,746	1,802	4,029	954	35	35	4,997	950	1,768	1,079	34,545	476	15,041	1,638	8,513	3,256	973	29,897	
Peak Hour Inbound	101	241	31	110	185	274	4	4	251	45	69	68	1,383	36	755	81	14	136	71	1,093	
Peak Hour Outbound	119	221	203	79	184	198	3	3	231	40	83	58	1,422	36	696	63	18	136	52	1,001	
INTERNAL / ALTERNATIVE MODE TRIPS													Total							Total	
Weekend	4,574	2,394	646	667	1,491	715	0	0	2,499	352	654	399	14,391	176	5,565	606	3,150	1,205	360	11,062	
Peak Hour Inbound	38	121	12	41	69	205	0	0	126	17	26	26	681	14	280	30	5	51	26	406	
Peak Hour Outbound	44	110	75	29	68	149	0	0	115	15	31	21	657	13	257	24	7	50	20	371	
EXTERNAL TRIPS													Total							Total	
Weekend	7,790	2,394	1,100	1,135	2,538	239	35	35	2,498	599	1,114	681	20,158	301	9,476	1,032	5,363	2,051	613	18,836	
Peak Hour Inbound	63	120	19	69	116	69	4	4	125	28	43	42	702	22	475	51	9	85	45	687	
Peak Hour Outbound	75	111	128	50	116	49	3	3	116	25	52	37	765	23	439	39	11	86	32	630	
Percentage of Pass-by Trips	0%	34%	0%	0%	0%	0%	0%	0%	34%	43%	0%	0%		0%	34%	0%	0%	59%	0%		
PASS-BY TRIPS													Total							Total	
Weekend	0	814	0	0	0	0	0	0	849	258	0	0	1,921	0	3,222	0	0	1,210	0	4,432	
Peak Hour Inbound	0	41	0	0	0	0	0	0	43	12	0	0	96	0	162	0	0	50	0	212	
Peak Hour Outbound	0	38	0	0	0	0	0	0	39	11	0	0	88	0	149	0	0	51	0	200	
NEW TRIPS													Total							Total	North + South Total
Weekend	7,790	1,580	1,100	1,135	2,538	239	35	35	1,649	341	1,114	681	18,237	301	6,254	1,032	5,363	841	613	14,404	32,641
Peak Hour Inbound	63	79	19	69	116	69	4	4	82	16	43	42	606	22	313	51	9	35	45	475	1,081
Peak Hour Outbound	75	73	128	50	116	49	3	3	77	14	52	37	677	23	290	39	11	35	32	430	1,107

Notes:
1. Weekend / Saturday rates from ITE used where applicable. No weekend estimates provided for AMTRAK and Zoo, above rates are for weekday conditions.

Table 3. Trip Generation Estimate - Weekday (Full Build-out, North side only)

	Phase	North Side (plan dated 10.14.16)															
	Parcel No.	1	2	3	4	5	8	9	10	11	12	13	15	17	18	19	29
Description	Land Use	Coaster Park	AMTRAK	Block Sports	Adventure Zone	Amusement Indoor	Entertain. Retail	In/Out Waterpark	Hotel/ Trade Pavilion	Resort Hotel	Facilities Management	Electric Substation	Commercial	Restaurant	Motel	RV Park	Movie Studio
Description	ITE Land Use Code	480	93	415	480	480	820	414	310	330	170	170	820	932	320	240	480
Description	ITE Land Use Title	Amusement Park	LRT with Parking	Beach Park	Amusement Park	Amusement Park	Shopping Center	Water Slide Park	Hotel	Resort Hotel	Utilities	Utilities	Shopping Center	High-Turnover (sit-down) Restaurant	Motel	Mobile Home Park	Amusement Park
Description	Land Use Variable	Acres	Parking Spaces	Acres	Acres	Acres	1000 SF GLA	Parking Spaces	Rooms	Rooms	Acres	Acres	1000 SF GLA	1000 GFA	Rooms	Acres	Acres
Description	Variable Amount	169.5	380	186.0	10.0	108.4	96	600	300	300	5.0	5.0	247	6.000	200	29.8	33.7
Trip Rates	Weekday	75.76	2.51	29.81	75.76	75.76	42.7	2.27	8.17	8.17	6.93	6.93	42.7	127.15	5.63	39.61	75.76
Trip Rates	AM Peak Hour	0.21	1.07	0.48	0.21	0.21	0.96	0.08	0.53	0.31	2.49	2.49	0.96	10.81	0.45	3.2	0.21
Trip Rates	PM Peak Hour	3.95	1.24	1.3	3.95	3.95	3.71	0.28	0.6	0.42	1.32	1.32	3.71	9.85	0.47	4.45	3.95
Inbound %	Weekday	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Inbound %	AM Peak Hour	88%	80%	59%	88%	88%	49%	70%	59%	72%	50%	50%	49%	55%	36%	18%	88%
Inbound %	PM Peak Hour	61%	58%	34%	61%	61%	52%	21%	51%	43%	50%	50%	52%	60%	54%	63%	61%
	Percentage of Inter-Parcel Trips	37%	75%	37%	37%	37%	50%	37%	37%	37%	0%	0%	50%	37%	37%	37%	37%

TOTAL TRIPS

																	North Side Trip Totals	
																	Phase 1	Build-out
Weekday	12,841	954	5,545	758	8,212	4,091	1,362	2,451	2,451	35	35	10,528	763	1,126	1,180	2,553	22,562	54,885
AM Peak Hour Inbound	32	326	53	2	21	46	34	94	67	7	7	116	36	33	18	7	676	899
AM Peak Hour Outbound	4	81	36	0	2	46	14	65	26	5	5	121	29	57	77	0	425	568
PM Peak Hour Inbound	409	274	83	25	262	185	36	92	55	4	4	476	36	51	84	82	1,030	2,158
PM Peak Hour Outbound	261	198	159	15	167	171	132	88	71	3	3	439	24	43	49	52	1,046	1,875

INTERNAL / ALTERNATIVE MODE TRIPS

																	INTERNAL TRIPS	
Weekday	4,751	715	2,052	280	3,039	2,045	504	907	907	0	0	5,264	282	417	437	945	9,770	22,545
AM Peak Hour Inbound	12	244	20	1	8	23	13	35	25	0	0	58	14	12	7	3	382	475
AM Peak Hour Outbound	2	61	14	0	1	23	5	24	10	0	0	61	10	22	29	0	199	262
PM Peak Hour Inbound	152	205	31	9	97	93	14	34	21	0	0	238	14	19	31	31	533	989
PM Peak Hour Outbound	96	149	59	6	62	85	49	33	26	0	0	220	8	16	19	19	506	847

EXTERNAL TRIPS

																	EXTERNAL TRIPS	
Weekday	8,091	239	3,493	478	5,174	2,046	858	1,544	1,544	35	35	5,264	481	709	744	1,609	12,793	32,344
AM Peak Hour Inbound	20	82	33	1	13	23	21	59	42	7	7	58	22	21	11	4	293	424
AM Peak Hour Outbound	2	20	23	1	1	23	9	41	16	6	6	60	19	35	49	1	231	312
PM Peak Hour Inbound	257	69	52	16	165	92	22	58	34	4	4	238	22	32	53	51	496	1,169
PM Peak Hour Outbound	165	49	100	9	105	86	83	55	45	3	3	219	16	27	30	33	540	1,028

																	North Side Trip Totals	
Percentage of Pass-by Trips	0%	0%	0%	0%	0%	34%	0%	0%	0%	0%	0%	34%	43%	0%	0%	0%	Phase 1	Build-out

PASS-BY TRIPS

																	PASS-BY TRIPS	
Weekday	0	0	0	0	0	696	0	0	0	0	0	1,790	207	0	0	0	1,628	2,693
AM Peak Hour Inbound	0	0	0	0	0	8	0	0	0	0	0	20	9	0	0	0	25	37
AM Peak Hour Outbound	0	0	0	0	0	8	0	0	0	0	0	20	8	0	0	0	24	36
PM Peak Hour Inbound	0	0	0	0	0	31	0	0	0	0	0	81	9	0	0	0	73	121
PM Peak Hour Outbound	0	0	0	0	0	29	0	0	0	0	0	74	7	0	0	0	66	110

NEW TRIPS

																	NEW TRIPS	
Weekday	8,091	239	3,493	478	5,174	1,350	858	1,544	1,544	35	35	3,474	274	709	744	1,609	11,165	29,651
AM Peak Hour Inbound	20	82	33	1	13	15	21	59	42	7	7	38	13	21	11	4	268	387
AM Peak Hour Outbound	2	20	23	1	1	15	9	41	16	6	6	40	11	35	49	1	207	276
PM Peak Hour Inbound	257	69	52	16	165	61	22	58	34	4	4	157	13	32	53	51	424	1,048
PM Peak Hour Outbound	165	49	100	9	105	57	83	55	45	3	3	145	9	27	30	33	474	918

Table 3 (Continued). Trip Generation Estimate - Weekday (Full Build-out, South side only)

South of I-8 (plan dated 10.14.16)																														
20A	**20B**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**							**43**
Highway Comm	Hotel	Highway Comm	Highway Comm	Wildlife Exp.	Resort	Tech Park	Vet School	Student Housing	Commercial	HD Residential	Commercial	MD Residential	MD Residential	MD Residential	LD Residential	LD Residential	VLD Residential	LD Residential	LD Residential	MD Residential	Elem. School	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	C-Store / Welcome Center
820	310	820	820	481	330	760	550[2]	550	820	220	820	210	210	210	210	210	210	210	210	210	520	412	412	412	412	412	412	945
Shopping Center	Hotel	Shopping Center	Shopping Center	Zoo	Resort Hotel	Development Center	University / College	University/College	Shopping Center	Apartment	Shopping Center	Single-Family Detached	Single-Family Detached	Single-Family Detached	Single-Family Detached	Single-Family Detached	Single-Family Detached	Single-Family Detached	Single-Family Detached	Single-Family Detached	Elementary School	County Park	County Park	County Park	County Park	County Park	County Park	ce Station w/ Convience
1000 SF GLA	Rooms	1000 SF GLA	1000 SF GLA	Acres	Rooms	Acres	Acres	Acres	1000 GLA	Acres	1000 GLA	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Students	Acres	Acres	Acres	Acres	Acres	Acres	VFP
314.500	200	138.520	178.596	74.1	200	21.2	12.8	35.2	95.960	21.8	95.960	16.0	16.6	25.2	41.3	32.7	56.0	27.1	31.5	38.9	620	6.4	43.3	22.0	26.8	49.4	47.1	20
42.7	8.17	42.7	42.7	114.88	8.17	79.61	100	100	42.94	99.75	42.94	57.12	57.12	57.12	26.04	26.04	9.52	26.04	26.04	57.12	1.29	1	1	1	1	1	1	162.78
0.96	0.53	0.96	0.96	0.31	0.31	16.77	10	10	1.03	7.65	1.03	3.75	3.75	3.75	2.06	2.06	0.75	2.06	2.06	3.75	0.45	1	1	1	1	1	1	10.16
3.71	0.6	3.71	3.71	0.42	0.42	15.44	9	9	3.75	9.3	3.75	5.00	5.00	5.00	2.74	2.74	1.00	2.74	2.74	5.00	0.15	1.00	1.00	1.00	1.00	1.00	1.00	13.51
50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
49%	59%	49%	49%	72%	72%	84%	90%	90%	61%	61%	61%	25%	25%	25%	31%	31%	25%	31%	31%	25%	55%	61%	61%	61%	61%	61%	61%	50%
52%	51%	52%	52%	43%	43%	12%	30%	30%	48%	48%	48%	63%	63%	63%	66%	66%	63%	66%	66%	63%	49%	61%	61%	61%	61%	61%	61%	50%
37%	37%	37%	37%	37%	37%	37%	37%	37%	50%	25%	50%	25%	25%	25%	25%	25%	25%	25%	25%	25%	0%	0%	0%	0%	0%	0%	0%	37%
13,429	1,634	5,915	7,626	8,513	1,634	1,688	1,280	3,520	4,121	2,175	4,121	914	948	1,439	1,075	852	533	706	820	2,222	800	6	43	22	27	49	47	3,256
148	63	66	85	17	45	299	116	317	61	102	61	15	16	24	27	21	11	18	21	37	154	4	27	14	17	31	29	102
154	43	67	86	6	17	57	12	35	38	65	38	45	46	71	58	46	31	38	44	109	125	2	16	8	10	18	18	101
607	62	268	345	14	37	40	35	96	173	98	173	51	53	80	75	60	36	50	57	123	46	4	27	14	17	31	29	136
560	58	246	318	18	47	288	81	221	187	105	187	29	30	46	39	30	20	25	30	72	47	3	17	8	10	19	19	135
4,969	605	2,188	2,822	3,150	605	624	474	1,302	2,060	544	2,060	228	237	360	269	213	133	176	205	555	0	0	0	0	0	0	0	1,205
55	24	25	32	7	17	111	43	118	31	26	31	4	4	6	7	6	3	5	6	10	0	0	0	0	0	0	0	38
57	16	25	32	2	6	21	5	13	19	16	19	11	12	18	15	11	8	9	11	27	0	0	0	0	0	0	0	38
225	23	99	128	5	14	15	13	36	87	25	87	13	14	20	19	15	9	13	15	31	0	0	0	0	0	0	0	50
207	22	92	118	7	18	107	30	82	93	26	93	7	7	12	10	8	5	6	7	18	0	0	0	0	0	0	0	50
8,461	1,029	3,727	4,805	5,363	1,029	1,064	806	2,218	2,061	1,631	2,061	686	712	1,080	807	639	401	530	616	1,667	800	7	44	22	27	50	48	2,051
93	39	41	53	10	28	188	73	199	30	76	30	11	12	18	20	15	8	13	15	27	154	4	27	14	17	31	29	64
97	27	42	55	4	11	36	7	22	19	49	19	34	35	53	44	36	23	29	33	82	125	3	17	8	10	19	19	64
382	39	169	217	9	23	25	22	60	86	73	86	38	39	60	56	45	27	37	42	92	46	4	27	14	17	31	29	86
353	36	154	200	11	29	181	51	139	94	79	94	22	23	34	29	22	15	19	23	54	47	3	17	8	10	19	19	85
34%	0%	34%	34%	0%	0%	0%	0%	0%	34%	0%	34%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	59%
2,877	0	1,267	1,634	0	0	0	0	0	701	0	701	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,210
32	0	14	18	0	0	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
33	0	14	19	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
130	0	57	74	0	0	0	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
120	0	52	68	0	0	0	0	0	32	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
5,584	1,029	2,460	3,171	5,363	1,029	1,064	806	2,218	1,360	1,631	1,360	686	712	1,080	807	639	401	530	616	1,667	800	7	44	22	27	50	48	841
61	39	27	35	10	28	188	73	199	20	76	20	11	12	18	20	15	8	13	15	27	154	4	27	14	17	31	29	26
64	27	28	36	4	11	36	7	22	13	49	13	34	35	53	44	36	23	29	33	82	125	3	17	8	10	19	19	26
252	39	112	143	9	23	25	22	60	57	73	57	38	39	60	56	45	27	37	42	92	46	4	27	14	17	31	29	35
233	36	102	132	11	29	181	51	139	62	79	62	22	23	34	29	22	15	19	23	54	47	3	17	8	10	19	19	35

South Side Trip Totals	
Phase 1	**Build-out**
26,656	69,415
646	1,948
271	1,404
764	2,837
1,009	2,895
INTERNAL TRIPS	
9,863	24,984
242	609
101	391
283	956
376	1,025
EXTERNAL TRIPS	
16,794	44,442
404	1,339
171	1,022
481	1,881
633	1,870
South Side Trip Totals	
Phase 1	**Build-out**
PASS-BY TRIPS	
2,901	8,390
32	122
33	116
131	370
120	354
NEW TRIPS	
13,893	36,052
372	1,217
138	906
350	1,511
513	1,516

Grand Total North + South Trip Totals	
Phase 1	**Build-out**
49,218	124,300
1,322	2,847
696	1,972
1,794	4,995
2,055	4,770
INTERNAL TRIPS	
19,633	47,529
624	1,084
300	653
816	1,945
882	1,872
EXTERNAL TRIPS	
29,587	76,786
697	1,763
402	1,334
977	3,050
1,173	2,898
North + South Trip Totals	
Phase 1	**Build-out**
PASS-BY TRIPS	
4,529	11,083
57	159
57	152
204	491
186	464
NEW TRIPS	
25,058	65,703
640	1,604
345	1,182
774	2,559
987	2,434

Trip Distribution

Noting the land uses and projected attendance numbers of the resort, the client's market research anticipates a significant visitor base generating from out-of-state, traveling through the major airports in the Phoenix area and/or via automobile traveling through the Phoenix area. In addition, the population base within Arizona is heavily skewed to the north that would use I-10 eastbound to reach the site. Based on client information and a 2014 socioeconomic population report of Arizona from the Office of Employment and Population Statistics, the following trip distribution percentages are assumed for both Phase 1 and full build-out of the site for both resort and non-resort traffic:

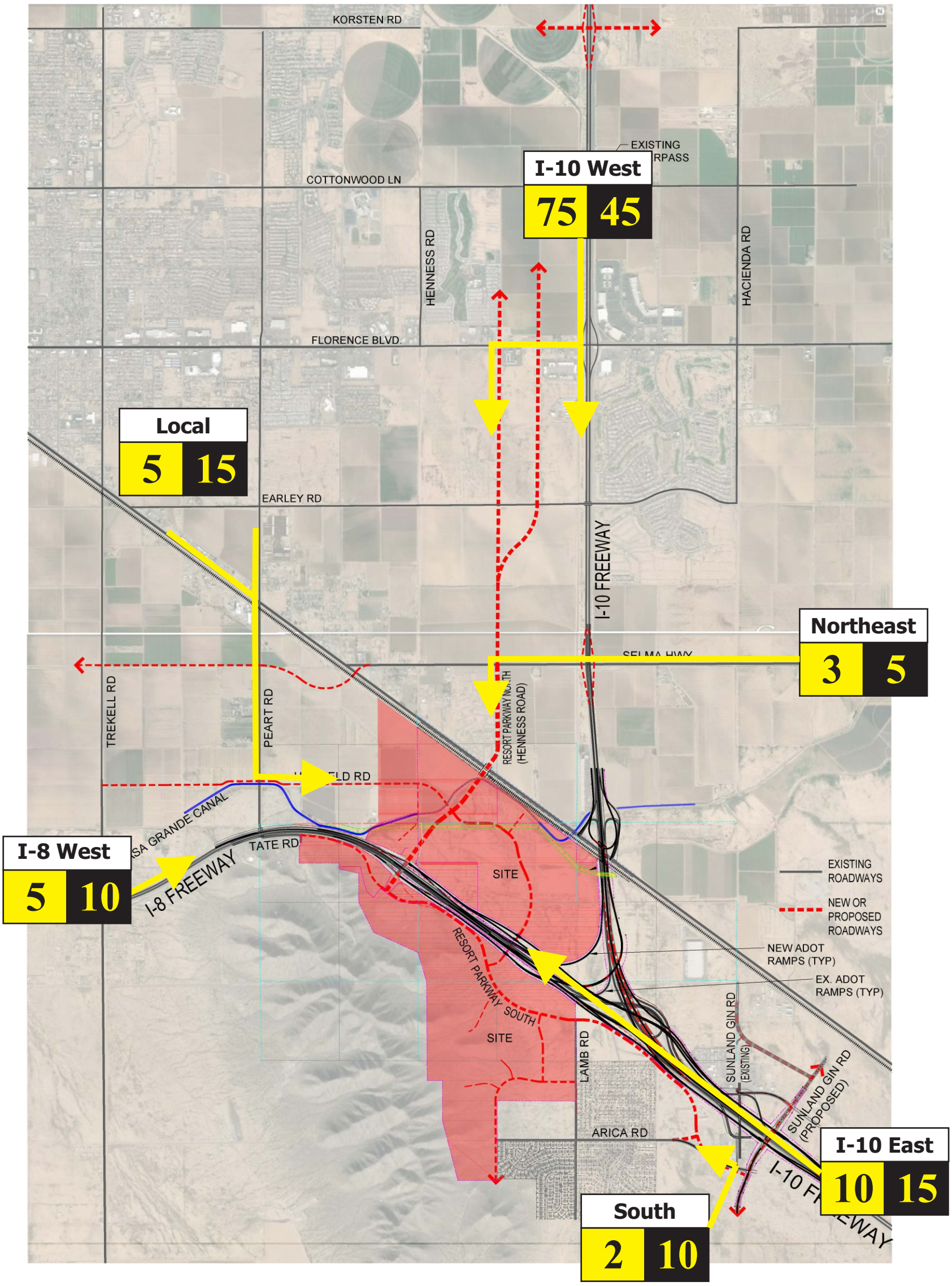
Origin / Destination	Resort Traffic	Non-Resort Traffic
I-10 West	75%	45%
I-10 East	10%	15%
I-8 West	5%	10%
Local (Downtown Casa Grande)	5%	15%
Selma Highway (Northeast)	3%	5%
Sunland Gin (South)	2%	10%

Trip Assignment

The new vehicle trips generated by the site were assigned to travel routes based on the roadway network assumed to be generally in-place for the 2020 opening year of the site and their relative destination within the site itself.

Due to the large percentage of resort traffic being generated from the north, the client has identified roadway signing would likely be in-place on I-10 eastbound to direct visitor traffic to exit initially at the Florence Boulevard interchange and utilize Resort Parkway North to access the site. This will minimize concerns associated with the existing Jimmie Kerr/I-10 interchange which will not provide direct access to and from the site. For the Phase 1 opening year condition, it is assumed 75% of all resort trips to and from the north will utilize the northern route while the remaining 25% would use the future I-8/Henness Road TI (southern route). At full-build out and with the opening of the Selma Highway interchange, half of the vehicle trips assumed to use the Florence Boulevard TI were assumed to use the new Selma Highway TI to arrive and depart the site.

Figure 7 displays the trip distribution used for the Phase 1 and full Build-out of the site based on the roadway network assumed to be in-place for the time period. **Figure 8** shows the trip assignment for the new vehicle trips under the Phase 1 and the full Build-out scenarios.



Legend

Local
XX **XX**

- Origin / Destination
- Non-Resort/Guest Traffic Distribution Percentage
- Resort/Guest Traffic Distribution Percentage

CONCEPTUAL
MASTER REGIONAL
CIRCULATION PLAN

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SCALE: 1" = 1400'
DATE: 09.29.16
GPLA JOB# 16037

0' 700' 1400' 2800' 4200'

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Notes:
1. Traffic from I-10 West to distribute 75% to Florence Blvd and 25% to I-8/Henness interchange.
2. Resort Parkway North and bridge over Jimmie Kerr Blvd and railroad tracks (Phase 1B) assumed to be in-place.
3. At Full Build-out, traffic to/from I-10 West to use Selma Highway Interchange instead of Florence Blvd.
4. At Full Build-out, 50% of Non-Resort/Guest traffic to use Sunland Gin Road Interchange.

Master Circulation Plan
Dreamport Village

Site Traffic Distribution

Figure 7

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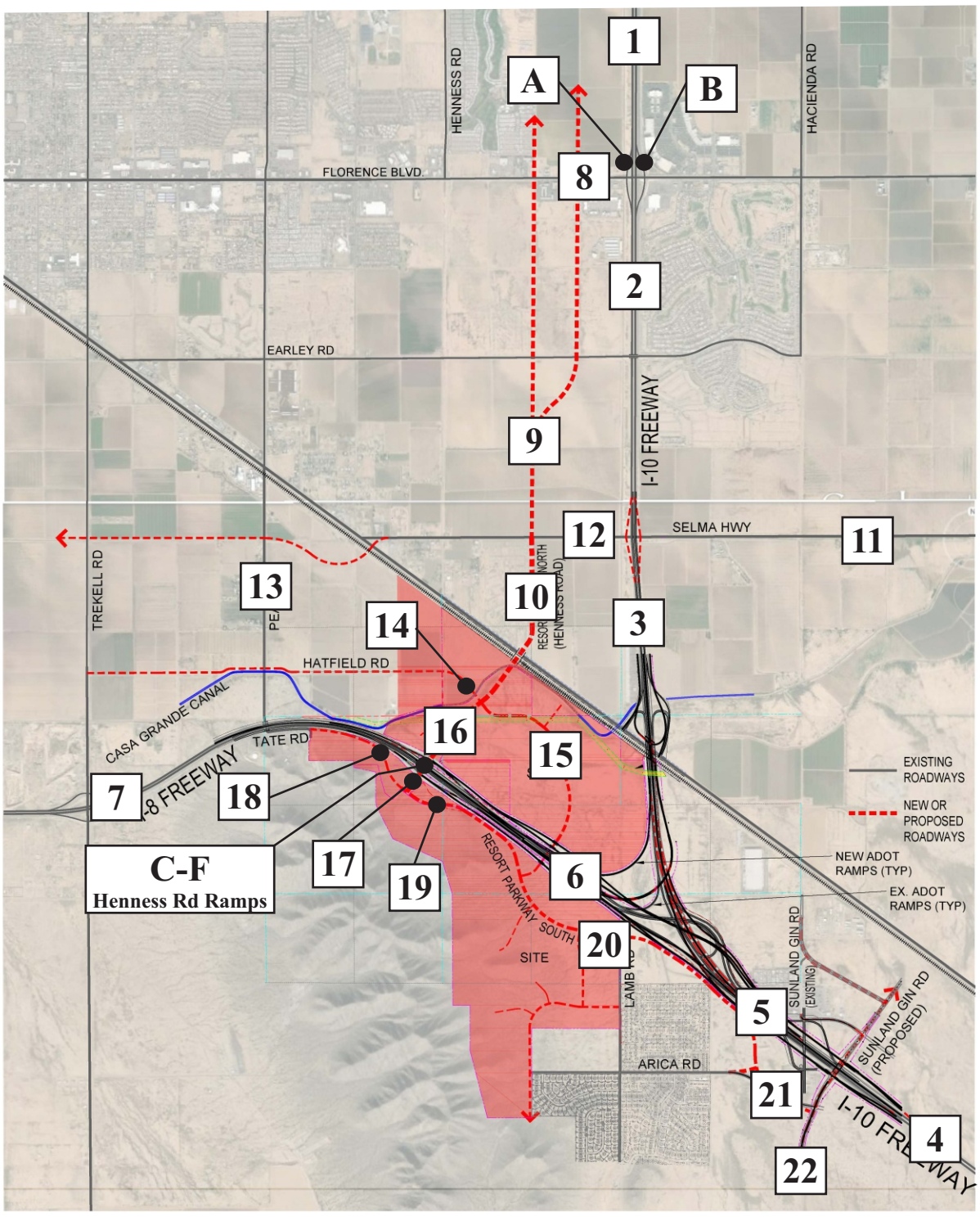

Legend

X - Roadway Segment

SCALE: 1" = 1400'
DATE: 09.29.16
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0' 700' 1400' 2800' 4200'

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Segment #	Roadway Segment	Phase 1 Traffic			Build-out Traffic		
		AM Pk Hr	PM Pk Hr	24-Hour	AM Pk Hr	PM Pk Hr	24-Hour
1	I-10 W of Florence Blvd	681	1191	16907	1713	3071	43364
2	I-10 E of Florence Blvd	254	444	7270	1240	2223	32508
3	I-10 E of Selma Highway	254	444	7270	767	1374	21652
4	I-10 E of Sunland Gin Rd	119	208	2946	341	612	7556
5	I-10 E of I-8	119	208	2946	257	612	7556
6	I-8 E of Henness Rd	373	652	10216	1024	1834	27795
7	I-8 W of Henness Rd	67	117	1665	202	362	4271
8	Florence Blvd W of I-10	427	747	9637	237	424	5428
9	Resort Parkway North S of Florence Blvd	427	747	9637	237	424	5428
10	Resort Parkway North S of Selma Hwy	464	812	10559	1055	1891	24078
11	Selma Highway E of I-10	37	65	922	109	195	2365
12	Selma Highway W of I-10	37	65	922	582	619	7793
13	Peart Road S of Jimmie Kerr Blvd	83	144	2049	265	474	5256
14	Hatfield Road W of Resort Parkway North	57	100	1392	461	280	11412
15	Village Springs Blvd E of Resort Parkway North	544	951	13521	947	2124	23305
16	Henness Road N of I-8	357	624	8201	640	1555	13708
17	Henness Road S of I-8	393	687	10016	1151	2182	27602
18	Tate Road W of Henness Rd	13	23	329	253	454	5546
19	Resort Parkway South E of Henness Rd	381	666	9704	930	1785	22357
20	Resort Parkway South W of Lamb Rd	211	370	5262	618	1107	14050
21	Resort Parkway South W of Sunland Gin Rd	45	79	1127	156	280	2891
22	Sunland Gin Road S of Resort Parkway South	45	79	1127	156	280	2891
A	I-10 EB Off Ramp to Florence Blvd	275	329	4818	272	435	5428
B	I-10 WB On Ramp from Florence Blvd	152	418	4818	201	413	5428
C	I-8 EB Off Ramp to Henness Rd	43	52	833	116	186	2135
D	I-8 WB Off Ramp to Henness Rd	240	287	5108	589	940	13897
E	I-8 EB On Ramp from Henness Rd	133	365	5108	434	894	13897
F	I-8 WB On Ramp from Henness Rd	24	66	833	86	176	2135

Master Circulation Plan
Dreamport Village

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Traffic Assignment, Weekday

Figure 8

Analysis of Conditions

Roadway Capacity, 2020 Phase 1 Conditions

Per the City of Casa Grande Small Area Transportation Study (SATS), July 2007, roadway segment level of service thresholds and roadway capacities by functional classification have been identified. Tables 3-1 and 3-2 from the report are shown below to help estimate the cross-section design of the new roadway facilities planned as part of the proposed development. These tables will be utilized in determining roadway capacity requirements. Typically LOS C should be designed for although LOS D is acceptable during peak hour conditions.

TABLE 3-1
DAILY ROADWAY CAPACITIES

Functional Classification	Daily Per Lane Capacity
Interstate/Freeway	16,375
Arterial	8,700
Collector	7,500
Freeway Ramps	8,000

Source: Casa Grande Multimodal Transportation Study, 2001.

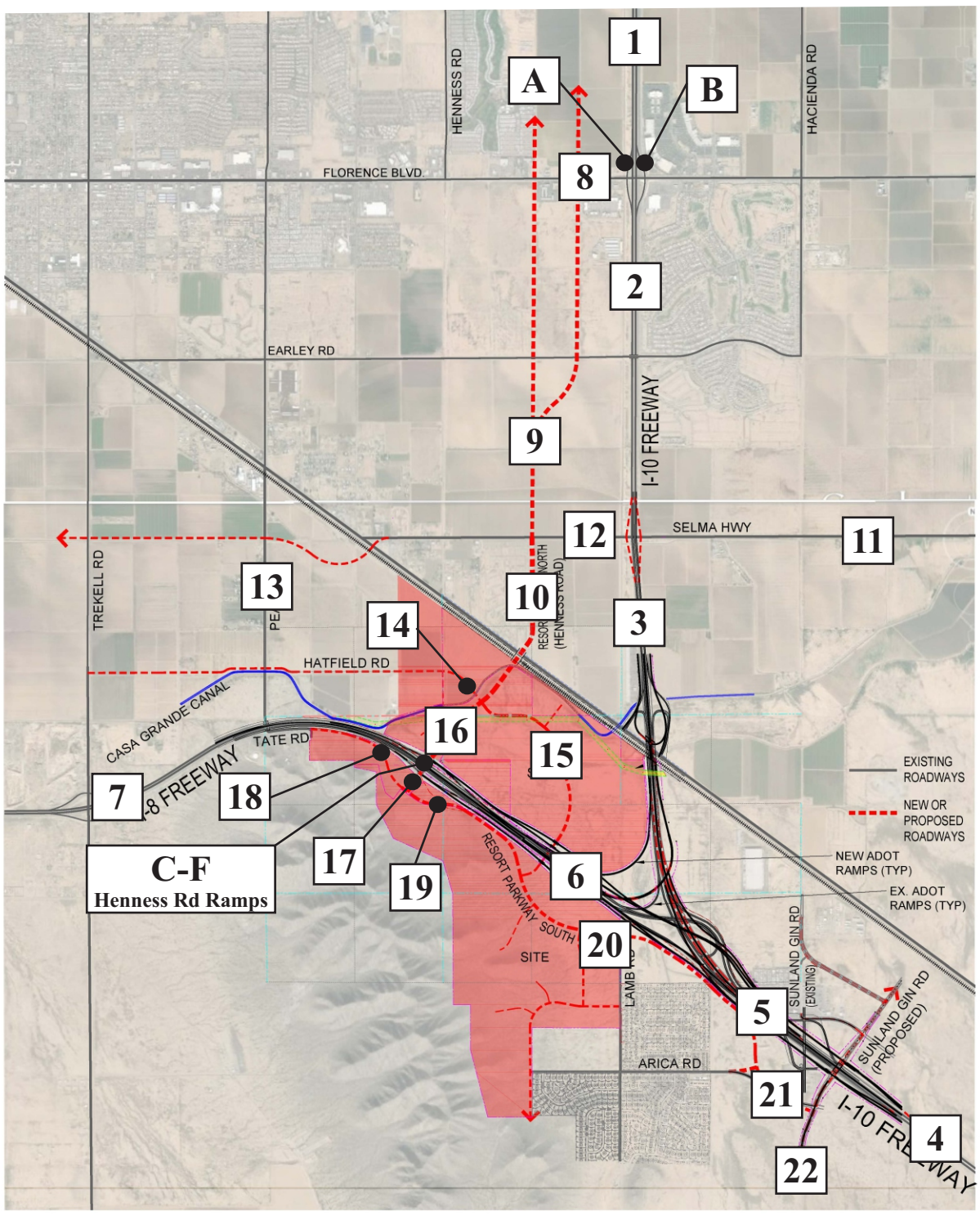
TABLE 3-2
LEVELS OF SERVICE

LOS	Maximum V/C
A	0.00 – 0.30
B	0.30 – 0.54
C	0.54 - 0.75
D	0.75 - 0.90
E	0.90 - 1.00
F	>1.00

Source: Casa Grande Multimodal Transportation Study, 2001.

Assuming Resort Parkway North/Henness Road as an arterial roadway and Resort Parkway South, Hatfield Road and Village Springs Boulevard will function as collector facilities, the required number of directional travel lanes for the Phase 1 and Build-out volume scenarios can be estimated for the study area roadways.

To estimate volume conditions for the 2020 Phase 1 opening year, the existing traffic volumes shown in Figure 5 have been increased by 2 percent per year for 4 years (total volume increase of 1.0824 or +8.24%) to identify 2020 background conditions. The background traffic was then added to the new site-generated traffic volume plus any pass-by traffic that was estimated for the adjacent commercial parcels. **Figure 9** shows the estimated 2020 opening year traffic volume conditions associated with Phase 1 of the subject site.



Legend

X - Roadway Segment

SCALE: 1" = 1400'
DATE: 09.29.16
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0' 700' 1400' 2800' 4200'

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Segment #	Roadway Segment	Background Traffic			Phase 1 New Traffic			Pass-by Traffic			Total 2020 Build Traffic		
		AM Pk Hr	PM Pk Hr	24-Hour	AM Pk Hr	PM Pk Hr	24-Hour	AM Pk Hr	PM Pk Hr	24-Hour	AM Pk Hr	PM Pk Hr	24-Hour
1	I-10 W of Florence Blvd	3297	3408	44909	681	1191	16907	0	0	0	3978	4599	61816
2	I-10 E of Florence Blvd	3810	4075	43029	254	444	7270	0	0	0	4064	4519	50299
3	I-10 E of Selma Highway	3555	3781	50130	254	444	7270	0	0	0	3809	4225	57400
4	I-10 E of Sunland Gin Rd	2143	2552	42012	119	208	2946	0	0	0	2262	2760	44958
5	I-10 E of I-8	2155	2336	40605	119	208	2946	0	0	0	2274	2544	43551
6	I-8 E of Henness Rd	457	513	9200	373	652	10216	0	0	0	830	1165	19416
7	I-8 W of Henness Rd	457	513	9200	67	117	1665	0	0	0	524	630	10865
8	Florence Blvd W of I-10	1462	2184	30293	427	747	9637	0	0	0	1889	2931	39930
9	Resort Parkway North S of Florence Blvd	48	115	1147	427	747	9637	25	70	815	500	932	11599
10	Resort Parkway North S of Selma Hwy	0	0	0	464	812	10559	25	70	815	489	882	11374
11	Selma Highway E of I-10	129	166	1879	37	65	922	0	0	0	166	231	2801
12	Selma Highway W of I-10	154	186	1782	37	65	922	0	0	0	191	251	2704
13	Peart Road S of Jimmie Kerr Blvd	122	120	1201	83	144	2049	0	0	0	205	265	3251
14	Hatfield Road W of Resort Parkway North	21	37	515	57	100	1392	0	0	0	78	137	1907
15	Village Springs Blvd E of Resort Parkway North	201	352	5003	544	951	13521	0	0	0	745	1303	18524
16	Henness Road N of I-8	132	231	3034	357	624	8201	25	70	815	514	925	12050
17	Henness Road S of I-8	145	254	3706	393	687	10016	138	340	3963	676	1281	17685
18	Tate Road W of Henness Rd	5	9	122	13	23	329	0	0	0	18	32	451
19	Resort Parkway South E of Henness Rd	141	246	3590	381	666	9704	0	0	0	522	912	13294
20	Resort Parkway South W of Lamb Rd	0	0	0	211	370	5262	0	0	0	211	370	5262
21	Resort Parkway South W of Sunland Gin Rd	111	154	1505	45	79	1127	0	0	0	157	233	2632
22	Sunland Gin Road S of Resort Parkway South	849	1047	9060	45	79	1127	0	0	0	894	1126	10187
A	I-10 EB Off Ramp to Florence Blvd	398	425	5276	275	329	4818	0	0	0	673	754	10094
B	I-10 WB On Ramp from Florence Blvd	245	380	4170	152	418	4818	0	0	0	397	798	8988
C	I-8 EB Off Ramp to Henness Rd	0	0	0	43	52	833	41	103	1195	84	154	2027
D	I-8 WB Off Ramp to Henness Rd	0	0	0	240	287	5108	41	103	1195	280	389	6302
E	I-8 EB On Ramp from Henness Rd	0	0	0	133	365	5108	41	103	1195	174	467	6302
F	I-8 WB On Ramp from Henness Rd	0	0	0	24	66	833	41	103	1195	65	168	2027

Note:
Background Traffic - volume on existing roadway segments increased by 8.24%
Background Traffic - Blue highlighted new roadway segments (#14 - #19) assumes 37% of Phase 1 New Traffic to account for interparcel trips.
Phase 1 New Traffic - As shown in Figure 8.
Pass-by Traffic - To account for traffic volumes on roadway network to/from commercial parcels.

Master Circulation Plan
Dreamport Village

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2020 Opening Year Traffic Volumes

Figure 9

Applying the volume threshold values found in the Casa Grande SATS tables above to the 2020 build volumes shown in Figure 9 gives the ability to calculate the number of lanes needed to accommodate traffic demand and a projected level or service (LOS). **Table 4** has been developed to estimate the number of travel lanes required to accommodate the projected daily traffic volumes and the expected level of service for the roadway.

Table 4. Roadway LOS Conditions, 2020 Phase 1 Build

Segment #	Roadway Segment	Segment Classification	Number of Lanes	Roadway Capacity	2020 Phase 1 Volume	Volume / Capacity	LOS
1	I-10 W of Florence Blvd	Interstate	6	98250	61816	0.629	C
2	I-10 E of Florence Blvd	Interstate	6	98250	50299	0.512	B
3	I-10 E of Selma Highway	Interstate	6	98250	57400	0.584	C
4	I-10 E of Sunland Gin Rd	Interstate	6	98250	44958	0.458	B
5	I-10 E of I-8	Interstate	6	98250	43551	0.443	B
6	I-8 E of Henness Rd	Interstate	4	65500	19416	0.296	A
7	I-8 W of Henness Rd	Interstate	4	65500	10865	0.166	A
8	Florence Blvd W of I-10	Arterial	4	34800	39930	1.147	F
9	Resort Parkway North S of Florence Blvd	Arterial	2	17400	11599	0.667	C
10	Resort Parkway North S of Selma Hwy	Arterial	2	17400	11374	0.654	C
11	Selma Highway E of I-10	Collector	2	15000	2801	0.187	A
12	Selma Highway W of I-10	Collector	2	15000	2704	0.180	A
13	Peart Road S of Jimmie Kerr Blvd	Collector	2	15000	3251	0.217	A
14	Hatfield Road W of Resort Parkway North	Collector	2	15000	1907	0.127	A
15	Village Springs Blvd E of Resort Parkway North	Collector	4	30000	18524	0.617	C
16	Henness Road N of I-8	Arterial	4	34800	12050	0.346	B
17	Henness Road S of I-8	Arterial	4	34800	17685	0.508	B
18	Tate Road W of Henness Rd	Collector	2	15000	451	0.030	A
19	Resort Parkway South E of Henness Rd	Collector	4	30000	13294	0.443	B
20	Resort Parkway South W of Lamb Rd	Collector	4	30000	5262	0.175	A
21	Resort Parkway South W of Sunland Gin Rd	Collector	4	30000	2632	0.088	A
22	Sunland Gin Road S of Resort Parkway South	Arterial	2	17400	10187	0.585	C
A	I-10 EB Off Ramp to Florence Blvd	Ramp	1	8000	10094	1.262	F
B	I-10 WB On Ramp from Florence Blvd	Ramp	1	8000	8988	1.124	F
C	I-8 EB Off Ramp to Henness Rd	Ramp	1	8000	2027	0.253	A
D	I-8 WB Off Ramp to Henness Rd	Ramp	1	8000	6302	0.788	D
E	I-8 EB On Ramp from Henness Rd	Ramp	1	8000	6302	0.788	D
F	I-8 WB On Ramp from Henness Rd	Ramp	1	8000	2027	0.253	A

Review of the above table indicates three roadway segments are projected to operate at LOS F conditions, including the 0.25-mile Florence Boulevard roadway segment between I-10 and the Resort Parkway North roadway (Camino Mercado alignment assumed). The 9,600 daily site-generated vehicles estimated to use Florence Boulevard and its I-10 west ramps would require an additional travel lane in each direction on Florence Boulevard. Improvements to increase roadway capacity may not be possible noting Florence Boulevard is elevated near I-10 for clearance and drainage needs. Any capacity-related improvements in this area would come with significant costs.

To accommodate site-related vehicle demand estimated for Florence Boulevard, the new Resort Parkway North intersection should be aligned as far west as practical. The increased distance would improve weave and merge operations. Dual left-turn lanes at a signalized westbound to southbound approach to Resort Parkway North may be required considering 330 PM peak hour vehicles are estimated to make this turn movement (175 vehicles in the AM peak). Access control measures such as raised center medians, right-in/right-out only driveway movements, consolidation of left turn movements, may be needed on Florence Boulevard near the Resort Parkway North intersection to better accommodate left turn operations. If allowed, the City may wish to entertain a potential roundabout opposed to a signalized intersection as a traffic control option at this location.

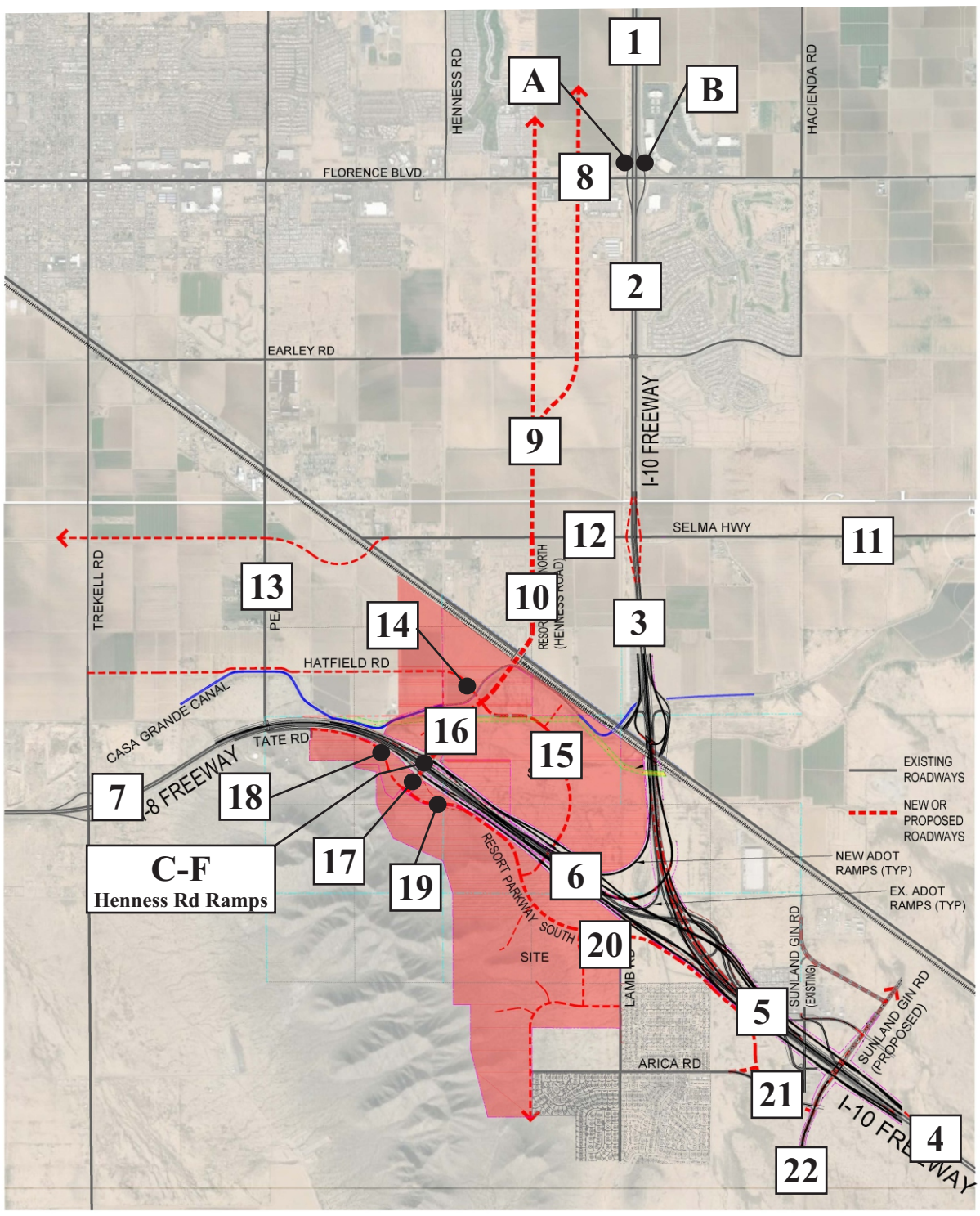
It is noted that unused capacity is available at the I-8/Henness Road On/Off-ramp. Analysis indicates 3,400 of the projected 5,100 vehicle over-demand can be accommodated before the single-lane ramps reach their capacity. Based on this, repeat customers to the site (employees, local visitors, others) are likely to modify their travel route to use the I-8/Henness Road ramps, if delays are repeatable and consistent on Florence Boulevard. To accommodate the additional 1,700 daily vehicles (5,100 vehicles over-demand minus 3,400 that could be accommodated at the I-8/Henness ramps), acceleration of the I-10/Selma Highway TI construction will be needed. The 1,700 daily vehicles that create the over-capacity condition is approximately 5% of the new plus pass-by Phase 1 trips. If the site is to generate traffic at a lower rate then estimated using the ITE average rate calculations, the currently planned access scheme should be sufficient to accommodate existing plus site generated traffic.

Roadway Capacity, 2030 Full Build-Out Conditions

When applying the same methodology to the full build-out conditions (which was conducted for the 2020 opening year), **Figure 10** shows the estimated volume conditions for the 2030 horizon year. This scenario considers the I-10/Selma Highway TI has been constructed along with all other interstate improvement projects including the I-8/I-10 system interchange and new ramp systems to be in-place.

To estimate 2030 background conditions, 2020 background traffic volumes were increased by 21.9% to account for 10 years of 2% compounded growth then added to the 2020 build volumes. The background volumes were then added to the new site trips generated after the Phase 1 development along with adding any pass-by vehicles from the new commercial parcels accessing Resort Parkway North or located at the I-8/Henness Road TI. For the purpose of considering traffic volume conditions on Florence Boulevard, it was assumed that half of vehicles approaching and departing the site to/from I-10 west would divide equally between Florence Boulevard and Selma Highway, although most drivers are anticipated to use Selma Highway rather than Florence Boulevard between the site and I-10 west due to capacity restraints associated with Florence Boulevard. This results in some roadway segments showing a negative value for Full Build New Traffic volume columns in the Figure 10 table.

For comparison purposes, the 2025 Build and the 2040 Build scenario traffic volumes as presented in the I-8/Henness Road COA Report (Figures 4-4 and 6-2 respectively) are presented in **Figure 11**. When comparing the COA 2025 Build volumes conditions to the 2030 conditions presented in Figure 10, the 2025 COA volumes are significantly higher on the interstate system and at I-8/Henness Road ramps. This may be due to unknown development further to the west, a change in traffic volume conditions resulting from the subject site's plan to construct Resort Parkway North over Jimmie Kerr Boulevard allowing easier and more direct access to the resort area north of I-8, closing of the I-10/Jimmie Kerr TI, or other changes not assumed in this analysis.



Legend

X - Roadway Segment

SCALE: 1" = 1400'
DATE: 09.29.16
GPLA JOB# 16037

0' 700' 1400' 2800' 4200'

NORTH

GILMORE
PLANNING & LANDSCAPE ARCHITECTURE
2211 N. 7th Street T 602.266.5622
Phoenix, Az 85006 www.gettgilmore.com

Segment #	Roadway Segment	2030 Background Traffic (1)			Full Build New Traffic (2)			Pass-by Traffic (3)			Total 2030 Build Traffic		
		AM Pk Hr	PM Pk Hr	24-Hour	AM Pk Hr	PM Pk Hr	24-Hour	AM Pk Hr	PM Pk Hr	24-Hour	AM Pk Hr	PM Pk Hr	24-Hour
1	I-10 W of Florence Blvd	4700	5346	71651	1032	1880	26457	0	0	0	5732	7226	98108
2	I-10 E of Florence Blvd	4898	5412	59722	986	1779	25238	0	0	0	5884	7191	84960
3	I-10 E of Selma Highway	4587	5053	68379	513	930	14382	0	0	0	5100	5983	82761
4	I-10 E of Sunland Gin Rd	2732	3319	54159	222	404	4610	0	0	0	2954	3723	58769
5	I-10 E of I-8	2746	3055	52444	138	404	4610	0	0	0	2884	3459	57054
6	I-8 E of Henness Rd	930	1277	21431	651	1182	17579	0	0	0	1581	2459	39010
7	I-8 W of Henness Rd	624	742	12880	135	245	2606	0	0	0	759	987	15486
8	Florence Blvd W of I-10	2210	3410	46564	-191	-323	-4209	0	0	0	2019	3087	42355
9	Resort Parkway North S of Florence Blvd	510	957	11851	-191	-323	-4209	12	46	532	332	680	8174
10	Resort Parkway North S of Selma Hwy	489	882	11374	591	1079	13519	12	46	532	1092	2007	25425
11	Selma Highway E of I-10	194	267	3213	72	130	1443	0	0	0	266	397	4656
12	Selma Highway W of I-10	225	292	3094	545	554	6871	0	0	0	769	846	9965
13	Peart Road S of Jimmie Kerr Blvd	232	291	3514	182	330	3207	0	0	0	414	621	6721
14	Hatfield Road W of Resort Parkway North	83	145	2020	404	180	10019	0	0	0	486	325	12039
15	Village Springs Blvd E of Resort Parkway North	789	1380	19620	403	1173	9784	0	0	0	1192	2553	29404
16	Henness Road N of I-8	542	975	12714	284	931	5507	12	46	532	838	1952	18753
17	Henness Road S of I-8	707	1336	18497	759	1495	17586	0	0	0	1466	2832	36083
18	Tate Road W of Henness Rd	19	34	478	240	430	5217	0	0	0	259	465	5695
19	Resort Parkway South E of Henness Rd	553	966	14080	549	1119	12653	0	0	0	1102	2084	26733
20	Resort Parkway South W of Lamb Rd	211	370	5262	406	737	8788	0	0	0	618	1107	14050
21	Resort Parkway South W of Sunland Gin Rd	181	267	2961	111	200	1764	0	0	0	292	467	4725
22	Sunland Gin Road S of Resort Parkway South	1080	1355	12171	111	200	1764	0	0	0	1190	1556	13935
A	I-10 EB Off Ramp to Florence Blvd	760	847	11250	-2	106	610	0	0	0	758	953	11860
B	I-10 WB On Ramp from Florence Blvd	451	881	9902	48	-5	610	0	0	0	499	877	10511
C	I-8 EB Off Ramp to Henness Rd	84	154	2027	73	134	1303	3	12	133	160	300	3463
D	I-8 WB Off Ramp to Henness Rd	280	389	6302	350	653	8790	3	12	133	633	1054	15225
E	I-8 EB On Ramp from Henness Rd	174	467	6302	301	530	8790	3	12	133	478	1008	15225
F	I-8 WB On Ramp from Henness Rd	65	168	2027	62	111	1303	3	12	133	129	290	3463

Note:
(1) The 2030 Background traffic is the 2020 Total traffic plus a 21.9% increase of Table 4 Background traffic to account for 10 years of traffic growth.
(2) Difference between 2020 Build and Full Build new site-generated traffic volumes.
(3) Pass-by traffic volumes generated from develoments constructed after the Phase 1 condition.

LEE ENGINEERING

2030 Full Build-Out Traffic Volumes

Figure 10

Figure 6-2 – Year 2040 Traffic Volumes, Build

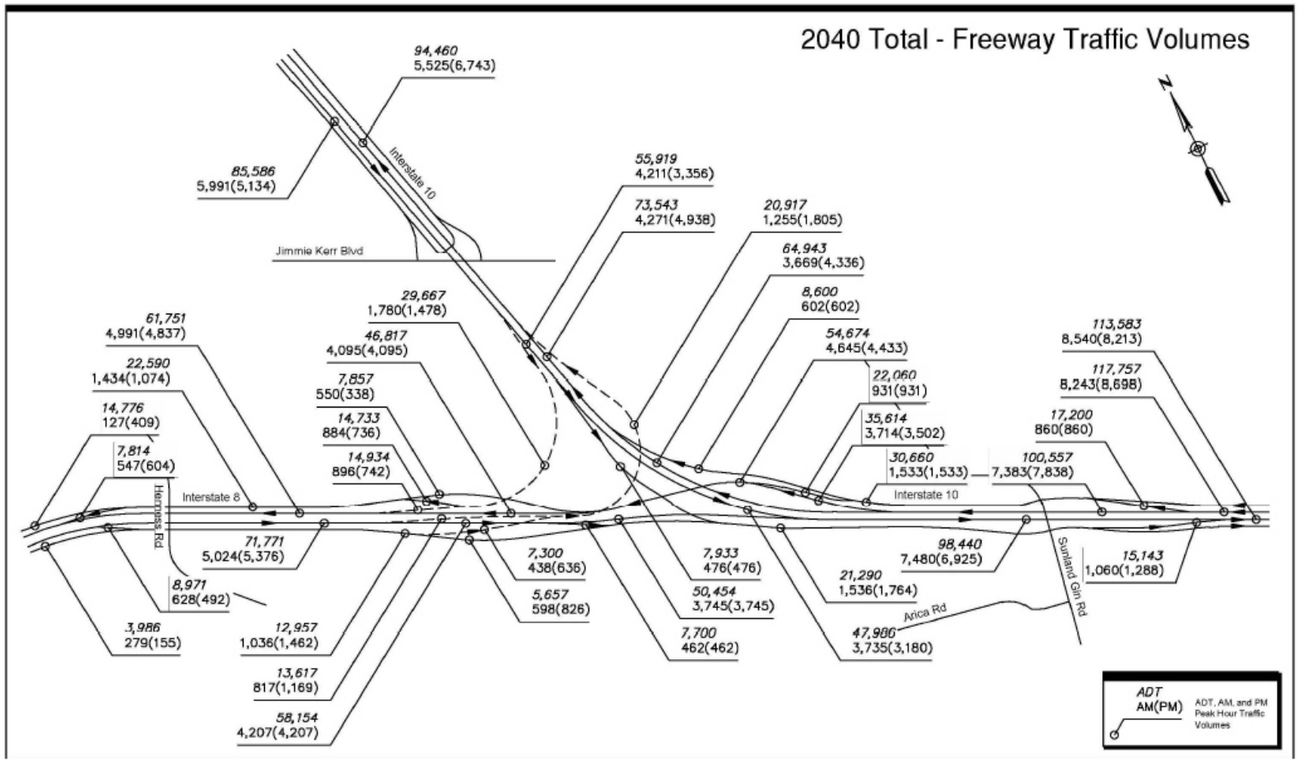
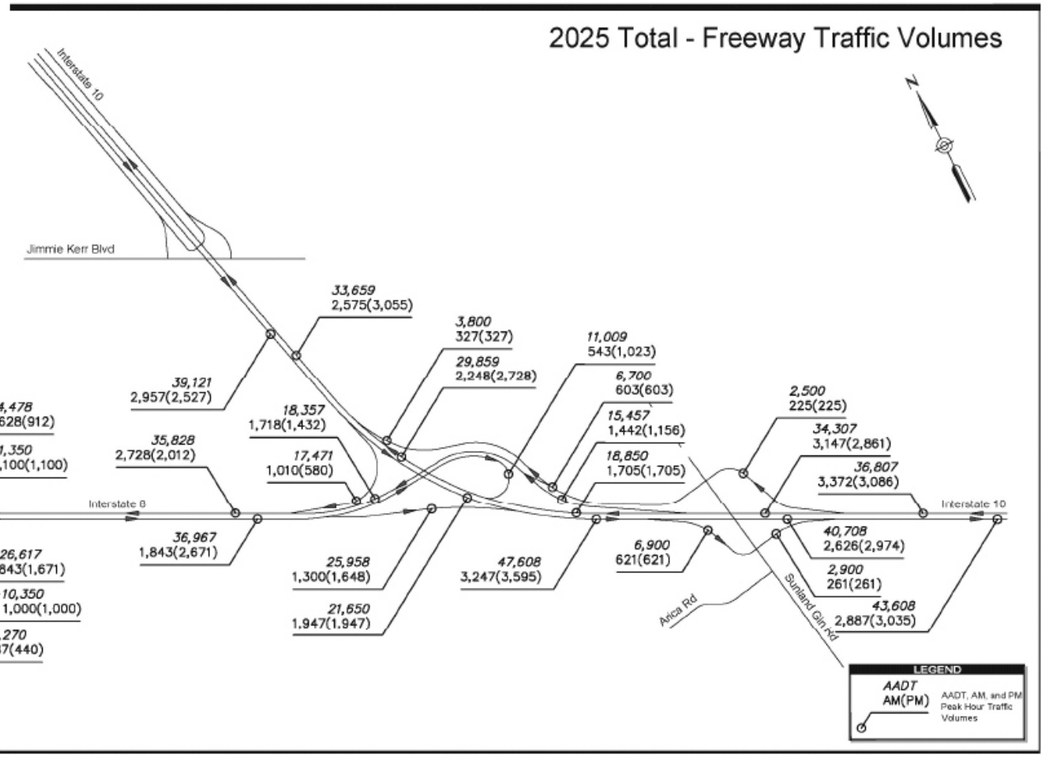


Figure 4-4 – Year 2025 Traffic Volumes, Build



Not to scale

Table 5, similar to Table 4, is provided showing the roadway capacities based on the same number of lanes as the 2020 Phase 1 condition, except for the I-8/Henness ramps to and from the east where 2 lanes are assumed to account for the new ramp system and individual C-D roads/ramps from I-10 westbound and I-10 eastbound.

Table 5. Roadway LOS Conditions, 2030 Build-Out

Segment #	Roadway Segment	Segment Classification	Number of Lanes	Roadway Capacity	2030 Build-Out Volume	Volume / Capacity	LOS
1	I-10 W of Florence Blvd	Interstate	6	98250	98108	0.999	E
2	I-10 E of Florence Blvd	Interstate	6	98250	84960	0.865	D
3	I-10 E of Selma Highway	Interstate	6	98250	82761	0.842	D
4	I-10 E of Sunland Gin Rd	Interstate	6	98250	58769	0.598	C
5	I-10 E of I-8	Interstate	6	98250	57054	0.581	C
6	I-8 E of Henness Rd	Interstate	4	65500	39010	0.596	C
7	I-8 W of Henness Rd	Interstate	4	65500	15486	0.236	A
8	Florence Blvd W of I-10	Arterial	4	34800	42355	1.217	F
9	Resort Parkway North S of Florence Blvd	Arterial	4	34800	8174	0.235	A
10	Resort Parkway North S of Selma Hwy	Arterial	4	34800	25425	0.731	C
11	Selma Highway E of I-10	Collector	2	15000	4656	0.310	B
12	Selma Highway W of I-10	Collector	2	15000	9965	0.664	C
13	Peart Road S of Jimmie Kerr Blvd	Collector	2	15000	6721	0.448	B
14	Hatfield Road W of Resort Parkway North	Collector	2	15000	12039	0.803	D
15	Village Springs Blvd E of Resort Parkway North	Collector	4	30000	29404	0.980	E
16	Henness Road N of I-8	Arterial	4	34800	18753	0.539	B
17	Henness Road S of I-8	Arterial	4	34800	36083	1.037	F
18	Tate Road W of Henness Rd	Collector	2	15000	5695	0.380	B
19	Resort Parkway South E of Henness Rd	Collector	4	30000	26733	0.891	D
20	Resort Parkway South W of Lamb Rd	Collector	4	30000	14050	0.468	B
21	Resort Parkway South W of Sunland Gin Rd	Collector	4	30000	4725	0.157	A
22	Sunland Gin Road S of Resort Parkway South	Arterial	2	17400	13935	0.801	D
A	I-10 EB Off Ramp to Florence Blvd	Ramp	1	8000	11860	1.482	F
B	I-10 WB On Ramp from Florence Blvd	Ramp	1	8000	10511	1.314	F
C	I-8 EB Off Ramp to Henness Rd	Ramp	1	8000	3463	0.433	B
D	I-8 WB Off Ramp to Henness Rd	Ramp	2	16000	15225	0.952	E
E	I-8 EB On Ramp from Henness Rd	Ramp	2	16000	15225	0.952	E
F	I-8 WB On Ramp from Henness Rd	Ramp	1	8000	3463	0.433	B

The following information can be inferred from the information provided in Table 5:

- I-10 traffic volumes west of Florence Boulevard are anticipated to be operating near capacity under a 6-lane design.
- Traffic demand on Florence Boulevard west of I-10 is anticipated to exceed capacity of a 4-lane arterial roadway segment.
- Single-lane Selma Highway TI ramps to and from the west are anticipated to accommodate site-related vehicles (2,500 vehicles per ramp) in an acceptable manner. In the scenario where all site-related resort traffic would use Selma Highway as opposed to Florence Boulevard, the 5,000 daily site vehicle demand would still permit an additional 3,000 vehicles per day to accommodate the vehicles displaced from the closing of the Jimmie Kerr TI ramps and other growth in the adjacent area before a second lane would be needed.
- Village Springs Boulevard is anticipated to operate near capacity of a 4-lane collector roadway. Adequate ROW should be obtained to potentially widen this roadway to a six-lane facility (arterial cross-section/classification) at full build-out.
- Henness Road between Resort Parkway South and Village Springs Boulevard/Hatfield Road should be constructed to six-lanes. North of Village Springs Blvd/Hatfield Road as a four-lane section over Jimmie Kerr is appropriate,

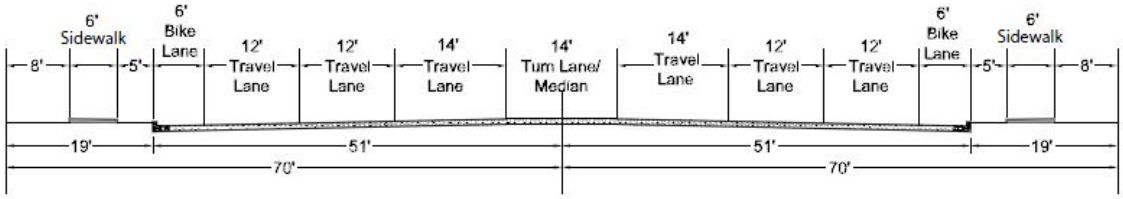
unless other development in the general area would contribute to additional vehicle demand above the 25,400 vehicles per day that is projected.

- Hatfield Road west of Resort Parkway North can be constructed as a two-lane facility and operate at an acceptable level of service. Depending upon the construction of the Coaster Park and Movie Studio, a 4-lane section between the access driveways east to Resort Parkway North could be considered.
- Resort Parkway South is projected to accommodate vehicle demand at a LOS D as a 4-lane collector roadway at full build-out which is acceptable. East of its intersection with Village Springs Boulevard, the 4-lane roadway is anticipated to operate at LOS B.

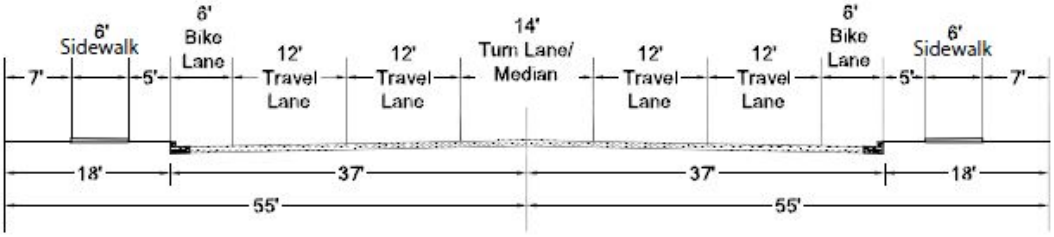
Roadway Cross Sections

The following roadway cross-sections have been identified from the City of Casa Grande 2006 CGSATS pertaining to 6-lane, 4-lane, and 2-lane designs. Widening at intersection approaches may be needed to accommodate dual left-turn lanes or exclusive right-turn lanes.

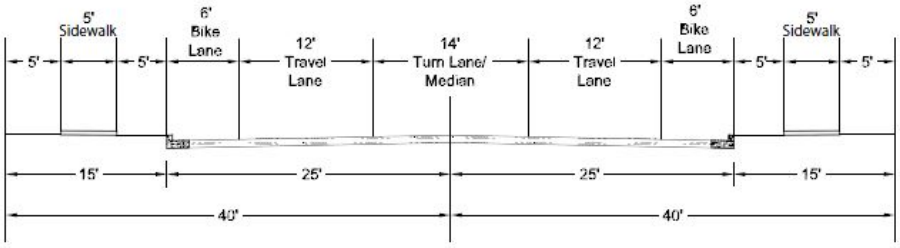
City of Casa Grande Principal Arterial – Typical Section
(Henness Road between Resort Parkway South and Hatfield Road/Village Springs Boulevard)



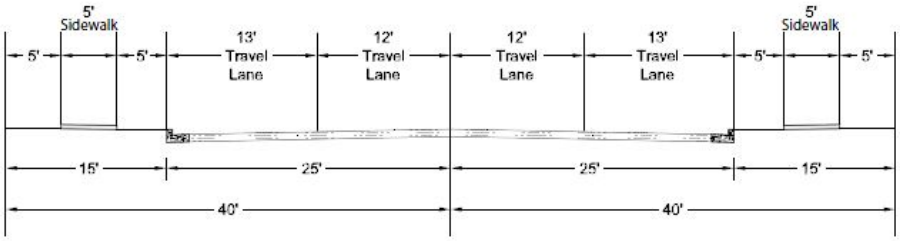
City of Casa Grande Minor Arterial – Typical Section
(Resort Parkway North, Resort Parkway South, Village Springs Boulevard)



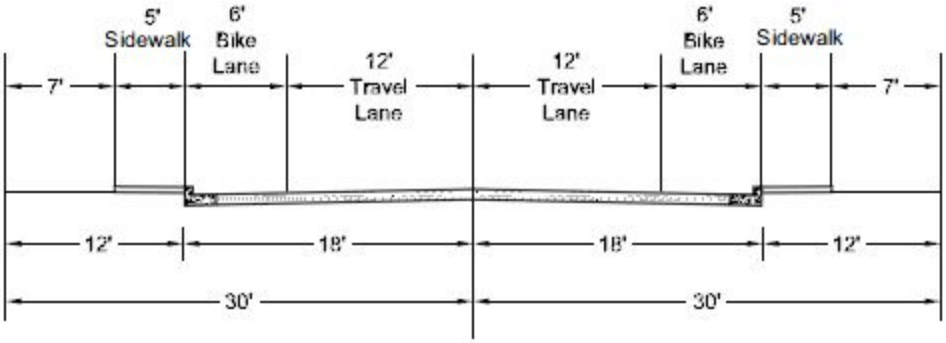
City of Casa Grande Major Collector – Typical Sections
(Hatfield Road west of Coaster Park/Movie Studio driveways and Other Lower Volume Internal Roads)



ALTERNATE



City of Casa Grande Minor Collector – Typical Section
(Potential Site Internal Residential Roads)



Next Steps

Upon review of this analysis and as more detailed information pertaining the individual land use designs and construction schedules are known, a more detailed analysis of study area conditions will be required, as well as conducting individual traffic impact studies to validate trip generation estimates and determine any incremental improvement strategies are needed to accommodate changes within the community. From past analysis of area conditions and based on the results of this study, it is anticipated that more detailed evaluations are required at the following locations:

- Intersection of Florence Boulevard and the I-10 west on-off ramps
- Intersection of Florence Boulevard and Resort Parkway North
- The Florence Boulevard corridor between I-10 and Resort Parkway North
- Intersection of Jimmie Kerr Boulevard and Peart Road
- Intersection of Arica Road and Sunland Gin Road
- Internal site intersections

Conclusions and Recommendations

The following bullet items highlight the conclusions of this study based on the information presented and interpretation of the analyses performed:

- Previous City and ADOT recommends have identified no roadway improvements are planned for any study area facilities that are not developer driven or developer funded, except for the I-10 Roadway widening between Earley Road and the I-8 interchange.

- Adjacent planned development projects within the study area (City Gate, the Lawrence Property, Mountain View Estates Annexation, restaurant within an existing shopping center at the SEC of I-10/Florence Boulevard) have not been considered as part of the background traffic volumes. It is assumed that any new developments will be required to mitigate any poor operational roadways conditions adjacent to those developments, or at a minimum, contribute to roadway improvement costs within the study area.

- Traffic volumes collected in the study area within the past 3 years have been estimated by the City to be reflective of current conditions. Assuming a 2% per year background growth rate, study area roadway segments are anticipated to operate at acceptable LOS conditions for the 2020 horizon year. The poorest performing roadway segment, Florence Boulevard west of I-10, is projected to operate at LOS D with a daily volume to capacity ratio calculated at 0.87 under background conditions.

- Typical ITE methodology to estimate trip generation characteristics of the subject site was utilized, supplemented with client-related land use interaction data and site-traffic distribution estimates based on market research conducted by the client.

Phase 1 development of the site, analyzed for a 2020 opening year condition, is estimated to generate a total of 25,616 new daily trip ends when constructed. When considering all vehicle trips (excluding reductions for internal-internal trips and pass-by traffic), Phase 1 is expected to generate a total of 51,794 trip ends. At full build-out, assumed for the 2030 horizon year, the site is expected to generate a total of 124,300 daily trips, of which 65,700 trips are considered new trips onto the roadway network.

- To accommodate Phase 1 site traffic demand for the 2020 conditions, the existing and currently planned roadway improvements are not adequate. It is projected that traffic demand to and from the site will exceed available daily capacity by 1,700 daily vehicles (5% of Phase 1 site traffic). To accommodate this additional traffic, the Selma Highway TI may have to be accelerated from a currently unknown time period, or a slight modification of planned Phase 1 construction will have to be diverted to a later phase. To best accommodate site-related traffic directed to Florence Boulevard, the Resort Parkway North alignment should be located as far west as practical to help improve merging and potential turn lane storage needs. Some access control modifications to driveways along Florence Boulevard may be required to better accommodate left turn operations. The City may wish to consider a roundabout as opposed to a traffic signal at the intersection of Florence Blvd and Resort Parkway North to better accommodate traffic flow.

- Capacity improvements on Florence Boulevard west of I-10 are required. Under 2020 background conditions the 4-lane facility is estimated to operate at LOS D (V/C = 0.87). The addition of Phase 1 traffic will result in over-capacity conditions. More detailed analysis of this corridor to increase capacity and better accommodate site-related trips is needed as simple roadway widening is not possible, making roadway improvements in this area cost-prohibitive.

- The following study area roadway cross-section considerations are identified for Phase 1 and full Build-out conditions:

  <u>I-8/Henness Road TI Ramps (1-lane ramps, multiple approach lanes to/from Henness Road to/from the East)</u>
  Under Phase 1 conditions, a significant number of motorists to and from the Phoenix area may have to utilize a Henness Road approach if delays occur at Florence Boulevard and no other routing option exists. If capacity can't be increased on Florence Boulevard and a Selma Highway TI is not feasible in the near-term, two-lane on and off ramps from I-8 east may be required. At a minimum, a single lane off-ramp widening to accommodate two right and two left-turn lanes may be required. The I-8 eastbound on-ramp will required to accept two left-turn lanes before tapering to a single lane. In 2030, the two lanes originating from I-10 westbound and I-10 eastbound via individual ramps/C-D road should be adequate with construction of the Selma Highway TI.

Henness Road, Resort Parkway South to Village Springs Boulevard/Hatfield Road (6-lanes)

Henness Road at its I-8 intersection should be constructed as a 6-lane facility although 2020 Phase 1 conditions under a 4-lane cross-section indicates LOS B operation. The six-lane facility is needed in case capacity restrictions along Florence Boulevard result in increased demand at this location. Dual west to north right-turn lanes and south to east left-turn lanes should be considered in the initial design of the Henness Road at I-8 interchange.

Resort Parkway North, Village Springs Boulevard/Hatfield Road to Florence Boulevard (2-lane initial, 4-lane ultimate)

Resort Parkway North north of Village Springs Boulevard could be designed as a two-lane facility under a Phase 1 conditions, operating at LOS C conditions (V/C = 0.67). A four-lane section would not be needed unless adequate Florence Boulevard improvements can be made to accommodate increased westbound to southbound vehicle demand (dual left-turn lanes or roundabout) or the Selma Highway TI is constructed. Under a two-lane scenario, Resort Parkway North could accommodate 50% more site-generated traffic than identified for the Phase 1 condition before operating at a V/C ratio of 1.0.

Village Springs Boulevard (4-lane initial, 6-lane ultimate)

Village Springs Boulevard should be constructed initially as a 4-lane facility, but planned to ultimately have 6 lanes. Phase 1 analysis indicates a 4-lane facility to operate at LOS C (V/C = 0.61), however, at full build-out LOS E (V/C = 0.98) is estimated under a 4-lane design. As additional commercial developments are constructed fronting this roadway beyond the Phase 1 condition and as area residents realize that a new local network connection to Peart Road, Jimmie Kerr Boulevard, or Florence Boulevard is available without having to use the interstate system (underpass of I-8 constructed), additional traffic volumes could materialize on Village Springs Boulevard, requiring the 6-lane design.

Resort Parkway South, Henness Road to Village Springs Boulevard (4-lanes); East of Village Springs Boulevard (2-lanes initial, 4 lanes ultimate)

This roadway should be constructed initially as a 4-lane facility to accommodate demand from I-8 interchange east to the tech park parcel. A two-lane roadway east of this location can be constructed until future development along this roadway and its extension east of Lamb Road is built to facilitate traffic to the Sunland Gin Road interchange and accommodate the residential traffic demands.

Hatfield Road, Peart Road to Resort Parkway North (2-lanes, 4-lanes east of Movie Studio/Coaster Park driveway)

This roadway is only anticipated to accommodate a minor amount of traffic volume between the resort and downtown Casa Grande. Under 2030 Build-out volumes the 2-lane roadway is anticipated to operate at LOS B. Depending upon where the site driveway to the planned coaster park and movie studio, motel, and RV park location on the south side of the road is located, a 4-lane section may be beneficial to accommodate peak-hour demand at opening and closing times of the coaster park.

- The next step in this process is to better refine the peak-period traffic volumes to conduct intersection analyses for the peak-period conditions at the key intersections and interchanges.

APPENDIX

Highway Projects

ItemNo/TRACS	Route	BMP	CO	District Resource	Location Type of Work	Length	Funding	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Summary
	I 10	196	PN	Southcentral	**EARLEY RD TO JCT I-8**								
3649 / H798401C			341, RURAL CORRIDOR RECONSTRUCTION		Widen to 6 Lanes	4	FA	$0	$0	$40,000	$0	$0	$40,000
								$0	$0	$40,000	$0	$0	$40,000
	I 10	209	PN	Southcentral	**I-10 MP 209- MP 219**								
8364 / Fxxxx01D			341, RURAL CORRIDOR RECONSTRUCTION		Design Safety Improvements	10	HSIP	$500	$0	$0	$0	$0	$500
8364 / Fxxxx01C					Construct Safety Improvements		HSIP	$0	$4,048	$0	$0	$0	$4,048
								$500	$4,048	$0	$0	$0	$4,548
	I 10	210	PN	Southcentral	**SR-87 TO TOWN OF PICACHO**								
14510 / H769601C			341, RURAL CORRIDOR RECONSTRUCTION		Widen to 6 Lanes	4	NH	$0	$85,000	$0	$0	$0	$85,000
$85,000 (Estimate)								$0	$85,000	$0	$0	$0	$85,000
	I 10	232	PN	Southcentral	**PINAL AIR PARK TI UP STR #771**								
8366 / H894101D			126, BRIDGE INSPECTION & INVENTORY		Design Bridge Rehabilitation	1	FA	$500	$0	$0	$0	$0	$500
$500 (Estimate)								$500	$0	$0	$0	$0	$500
	I 10	267	PM	Southcentral	**WILMOT ROAD TIOP AND EARP WASH TRIB BRIDGE**								
4777 / F006301C			125, BRIDGE REPLACEMENT & REHABILITATION		Construct Bridge Deck Rehabilitation	2	FA	$5,000	$0	$0	$0	$0	$5,000
$5,000 (Estimate)								$5,000	$0	$0	$0	$0	$5,000
	I 10	277	PM	Southcentral	**WASH BRIDGE #463**								
7916 / Hxxx01D			126, BRIDGE INSPECTION & INVENTORY		Design Scour Retrofit	1	FA	$225	$0	$0	$0	$0	$225
7916 / Hxxx01C					Construct Scour Retrofit		FA	$0	$0	$150	$0	$0	$150
$375 (Estimate)								$225	$0	$150	$0	$0	$375
	I 10	279	PM	Southcentral	**VAIL ROAD TIUP #744 & MTN VIEW TIUP #1053**								
7928 / F003301D			125, BRIDGE REPLACEMENT & REHABILITATION		Design Rehabilitation	1	FA	$750	$0	$0	$0	$0	$750
7928 / Hxxx01C					Deck Rehabilitation		FA	$0	$0	$5,000	$0	$0	$5,000
$5,750 (Estimate)								$750	$0	$5,000	$0	$0	$5,750
	I 10	281	PM	Southcentral	**I-10 EASTBOUND OFFRAMP AT SR 84**								
8341 / 01C			311, DESIGN & CONSTRUCT MINOR PROJECTS		Construct Intersection Improvements	0	NH	$0	$200	$0	$0	$0	$200
$200 (Estimate)								$0	$200	$0	$0	$0	$200
	I 10	309	CH	Southcentral	**ADAMS PEAK WASH STR#1604 &1605**								
14816 / H854501C			125, BRIDGE REPLACEMENT & REHABILITATION		Scour Retrofit	1	FA	$400	$0	$0	$0	$0	$400
$400 (Estimate)								$400	$0	$0	$0	$0	$400
	I 10	316	CH	Safford	**DRAGOON ROAD - JOHNSON ROAD PHASE II**								
23614 / F002301C			132, HIGHWAY SAFETY IMPROVEMENT PROGRAM		Construct Safety Improvements	6	HSIP	$0	$1,655	$0	$0	$0	$1,655
$1,655 (Estimate)								$0	$1,655	$0	$0	$0	$1,655

All amounts are in thousands ($000)

(NOT SO)

BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION

APRIL 2002

SANDAG
401 B Street, Suite 800
San Diego, California 92101
(619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. *Always check with local jurisdictions for their preferred or applicable rates.*

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][P]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)[L]
AGRICULTURE (Open Space)	[80:18:2]	2/acre**					10.8
AIRPORT	[78:20:2]						12.5
Commercial		60/acre, 100/flight, 70/1000 sq. ft.* **	5%	(6:4)	6%	(5:5)	
General Aviation		6/acre, 2/flight, 6/based aircraft* **	9%	(7:3)	15%	(5:5)	
Heliports		100/acre**					
AUTOMOBILE[S]							
Car Wash							
Automatic		900/site, 600/acre**	4%	(5:5)	9%	(5:5)	
Self-serve		100/wash stall**	4%	(5:5)	8%	(5:5)	
Gasoline	[21:51:28]						2.8
with/Food Mart		160/vehicle fueling space**	7%	(5:5)	8%	(5:5)	
with/Food Mart & Car Wash		155/vehicle fueling space**	8%	(5:5)	9%	(5:5)	
Older Service Station Design		150/vehicle fueling space, 900/station**	7%	(5:5)	9%	(5:5)	
Sales (Dealer & Repair)		50/1000 sq. ft., 300/acre, 60/service stall* **	5%	(7:3)	8%	(4:6)	
Auto Repair Center		20/1000 sq. ft., 400/acre, 20/service stall*	8%	(7:3)	11%	(4:6)	
Auto Parts Sales		60/1000 sq. ft. **	4%		10%		
Quick Lube		40/service stall**	7%	(6:4)	10%	(5:5)	
Tire Store		25/1000 sq. ft., 30/service stall**	7%	(6:4)	11%	(5:5)	
CEMETERY		5/acre*					
CHURCH (or Synagogue)	[64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5%	(6:4)	8%	(5:5)	5.1
COMMERCIAL/RETAIL[S]							
Super Regional Shopping Center (More than 80 acres, more than 800,000 sq. ft., w/usually 3 + major stores)		35/1000 sq. ft.,[C] 400/acre*	4%	(7:3)	10%	(5:5)	
Regional Shopping Center (40-80acres, 400,000-800,000 sq. ft., w/usually 2 + major stores)	[54:35:11]	50/1000 sq. ft.,[C] 500/acre*	4%	(7:3)	9%	(5:5)	5.2
Community Shopping Center (15-40 acres, 125,000-400,000 sq. ft., w/usually 1 major store, detached restaurant(s), grocery and drugstore)	[47:31:22]	80/1000 sq. ft., 700/acre* **	4%	(6:4)	10%	(5:5)	3.6
Neighborhood Shopping Center (Less than 15 acres, less than 125,000 sq. ft., w/usually grocery & drugstore, cleaners, beauty & barber shop, & fast food services)		120/1000 sq. ft., 1200/acre* **	4%	(6:4)	10%	(5:5)	
Commercial Shops	[45:40:15]						
Specialty Retail/Strip Commercial		40/1000 sq. ft., 400/acre*	3%	(6:4)	9%	(5:5)	4.3
Electronics Superstore		50/1000 sq. ft**			10%	(5:5)	
Factory Outlet		40/1000 sq. ft.**	3%	(7:3)	9%	(5:5)	
Supermarket		150/1000 sq. ft., 2000/acre* **	4%	(7:3)	10%	(5:5)	
Drugstore		90/1000 sq. ft.**	4%	(6:4)	10%	(5:5)	
Convenience Market (15-16 hours)		500/1000 sq. ft.**	8%	(5:5)	8%	(5:5)	
Convenience Market (24 hours)		700/1000 sq. ft.**	9%	(5:5)	7%	(5:5)	
Convenience Market (w/gasoline pumps)		850/1000 sq. ft., 550/vehicle fueling space**	6%	(5:5)	7%	(5:5)	
Discount Club		60/1000 sq. ft., 600/acre* **	1%	(7:3)	9%	(5:5)	
Discount Store		60/1000 sq. ft., 600/acre**	3%	(6:4)	8%	(5:5)	
Furniture Store		6/1000 sq. ft., 100/acre**	4%	(7:3)	9%	(5:5)	
Lumber Store		30/1000 sq. ft., 150/acre**	7%	(6:4)	9%	(5:5)	
Home Improvement Superstore		40/1000 sq. ft.**	5%	(6:4)	8%	(5:5)	
Hardware/Paint Store		60/1000 sq. ft., 600/acre**	2%	(6:4)	9%	(5:5)	
Garden Nursery		40/1000 sq. ft., 90/acre**	3%	(6:4)	10%	(5:5)	
Mixed Use: Commercial (w/supermarket)/Residential		{110/1000 sq. ft., 2000/acre* (commercial only) 5/dwelling unit, 200/acre* (residential only)	3% 9%	(6:4) (3:7)	9% 13%	(5:5) (6:4)	
EDUCATION							
University (4 years)	[91:9:0]	2.4/student, 100 acre*	10%	(8:2)	9%	(3:7)	8.9
Junior College (2 years)	[92:7:1]	1.2/student, 24/1000 sq. ft., 120/acre* **	12%	(8:2)	9%	(6:4)	9.0
High School	[75:19:6]	1.3/student, 15/1000 sq. ft., 60/acre* **	20%	(7:3)	10%	(4:6)	4.8
Middle/Junior High	[63:25:12]	1.4/student, 12/1000 sq. ft. 50/acre**	30%	(6:4)	9%	(4:6)	5.0
Elementary	[57:25:10]	1.6/student, 14/1000 sq. ft., 90/acre* **	32%	(6:4)	9%	(4:6)	3.4
Day Care	[28:58:14]	5/child, 80/1000 sq. ft.**	17%	(5:5)	18%	(5:5)	3.7
FINANCIAL[S]	[35:42:23]						3.4
Bank (Walk-In only)		150/1000 sq. ft., 1000/acre* **	4%	(7:3)	8%	(4:6)	
with Drive-Through		200/1000 sq. ft., 1500/acre*	5%	(6:4)	10%	(5:5)	
Drive-Through only		250 (125 one-way)/lane*	3%	(5:5)	13%	(5:5)	
Savings & Loan		60/1000 sq. ft., 600/acre**	2%		9%		
Drive-Through only		100 (50 one-way)/lane**	4%		15%		
HOSPITAL	[73:25:2]						8.3
General		20/bed, 25/1000 sq. ft., 250/acre*	8%	(7:3)	10%	(4:6)	
Convalescent/Nursing		3/bed**	7%	(6:4)	7%	(4:6)	
INDUSTRIAL							
Industrial/Business Park (commercial included)	[79:19:2]	16/1000 sq. ft., 200/acre* **	12%	(8:2)	12%	(2:8)	9.0
Industrial Park (no commercial)		8/1000 sq. ft., 90/acre**	11%	(9:1)	12%	(2:8)	
Industrial Plant (multiple shifts)	[92:5:3]	10/1000 sq. ft., 120/acre*	14%	(8:2)	15%	(3:7)	11.7
Manufacturing/Assembly		4/1000 sq. ft., 50/acre**	19%	(9:1)	20%	(2:8)	
Warehousing		5/1000 sq. ft., 60/acre**	13%	(7:3)	15%	(4:6)	
Storage		2/1000 sq. ft., 0.2/vault, 30/acre*	6%	(5:5)	9%	(5:5)	
Science Research & Development		8/1000 sq. ft., 80/acre*	16%	(9:1)	14%	(1:9)	
Landfill & Recycling Center		6/acre	11%	(5:5)	10%	(4:6)	

(OVER)

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.
ADVISORY/LIAISON MEMBERS: California Department of Transportation, County Water Authority, U.S. Department of Defense, S.D. Unified Port District and Tijuana/Baja California.

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][P]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)[L]
LIBRARY	[44:44:12]	50/1000 sq. ft., 400/acre**	2%	(7:3)	10%	(5:5)	3.9
LODGING	[58:38:4]						7.6
Hotel (w/convention facilities/restaurant)		10/occupied room, 300/acre	6%	(6:4)	8%	(6:4)	
Motel		9/occupied room, 200/acre*	8%	(4:6)	9%	(6:4)	
Resort Hotel		8/occupied room, 100/acre*	5%	(6:4)	7%	(4:6)	
Business Hotel		7/occupied room**	8%	(4:6)	9%	(6:4)	
MILITARY	[82:16:2]	2.5/military & civilian personnel*	9%	(9:1)	10%	(2:8)	11.2
OFFICE							
Standard Commercial Office (less than 100,000 sq. ft.)	[77:19:4]	20/1000 sq. ft.,[O] 300/acre*	14%	(9:1)	13%	(2:8)	8.8
Large (High-Rise) Commercial Office (more than 100,000 sq. ft., 6 + stories)	[82:15:3]	17/1000 sq. ft.,[O] 600/acre*	13%	(9:1)	14%	(2:8)	10.0
Office Park (400,000 + sq. ft.)		12/1000 sq.ft., 200/acre* **	13%	(9:1)	13%	(2:8)	
Single Tenant Office		14/1000 sq. ft., 180/acre*	15%	(9:1)	15%	(2:8)	8.8
Corporate Headquarters		7/1000 sq. ft., 110/acre*	17%	(9:1)	16%	(1:9)	
Government (Civic Center)	[50:34:16]	30/1000 sq. ft.**	9%	(9:1)	12%	(3:7)	6.0
Post Office							
Central/Walk-In Only		90/1000 sq. ft.**	5%		7%		
Community (not including mail drop lane)		200/1000 sq. ft., 1300/acre*	6%	(6:4)	9%	(5:5)	
Community (w/mail drop lane)		300/1000 sq. ft., 2000/acre*	7%	(5:5)	10%	(5:5)	
Mail Drop Lane only		1500 (750 one-way)/lane*	7%	(5:5)	12%	(5:5)	
Department of Motor Vehicles		180/1000 sq. ft., 900/acre**	6%	(6:4)	10%	(4:6)	
Medical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	6%	(8:2)	11%	(3:7)	6.4
PARKS	[66:28:6]		4%		8%		5.4
City (developed w/meeting rooms and sports facilities)		50/acre*	13%	(5:5)	9%	(5:5)	
Regional (developed)		20/acre*					
Neighborhood/County (undeveloped)		5/acre (add for specific sport uses), 6/picnic site* **					
State (average 1000 acres)		1/acre, 10/picnic site**					
Amusement (Theme)		80/acre, 130/acre (summer only)**			6%	(6:4)	
San Diego Zoo		115/acre*					
Sea World		80/acre*					
RECREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*					6.3
Beach, Lake (fresh water)		50/1000 ft. shoreline, 5/acre*					
Bowling Center		30/1000 sq. ft., 300/acre, 30/lane **	7%	(7:3)	11%	(4:6)	
Campground		4/campsite**	4%		8%		
Golf Course		7/acre, 40/hole, 700/course* **	7%	(8:2)	9%	(3:7)	
Driving Range only		70/acre, 14/tee box*	3%	(7:3)	9%	(5:5)	
Marinas		4/berth, 20/acre* **	3%	(3:7)	7%	(6:4)	
Multi-purpose (miniature golf, video arcade, batting cage, etc.)		90/acre	2%		6%		
Racquetball/Health Club		30/1000 sq. ft., 300/acre, 40/court*	4%	(6:4)	9%	(6:4)	
Tennis Courts		16/acre, 30/court**	5%		11%	(5:5)	
Sports Facilities							
Outdoor Stadium		50/acre, 0.2/seat*					
Indoor Arena		30/acre, 0.1/seat*					
Racetrack		40/acre, 0.6 seat*					
Theaters (multiplex w/matinee)	[66:17:17]	80/1000 sq. ft., 1.8/seat, 360/screen*	1/3%		8%	(6:4)	6.1
RESIDENTIAL	[86:11:3]						7.9
Estate, Urban or Rural (average 1-2 DU/acre)		12/dwelling unit *[R]	8%	(3:7)	10%	(7:3)	
Single Family Detached (average 3-6 DU/acre)		10/dwelling unit *[R]	8%	(3:7)	10%	(7:3)	
Condominium (or any multi-family 6-20 DU/acre)		8/dwelling unit *[R]	8%	(2:8)	10%	(7:3)	
Apartment (or any multi-family units more than 20 DU/acre)		6/dwelling unit *[R]	8%	(2:8)	9%	(7:3)	
Military Housing (off-base, multi-family)							
(less than 6 DU/acre)		8/dwelling unit	7%	(3:7)	9%	(6:4)	
(6-20 DU/acre)		6/dwelling unit	7%	(3:7)	9%	(6:4)	
Mobile Home							
Family		5/dwelling unit, 40/acre*	8%	(3:7)	11%	(6:4)	
Adults Only		3/dwelling unit, 20/acre*	9%	(3:7)	10%	(6:4)	
Retirement Community		4/dwelling unit**	5%	(4:6)	7%	(6:4)	
Congregate Care Facility		2.5/dwelling unit**	4%	(6:4)	8%	(5:5)	
RESTAURANT[S]	[51:37:12]						4.7
Quality		100/1000 sq. ft., 3/seat, 500/acre* **	1%	(6:4)	8%	(7:3)	
Sit-down, high turnover		160/1000 sq. ft., 6/seat, 1000/acre* **	8%	(5:5)	8%	(6:4)	
Fast Food (w/drive-through)		650/1000 sq. ft., 20/seat, 3000/acre* **	7%	(5:5)	7%	(5:5)	
Fast Food (without drive-through)		700/1000 sq. ft.**	5%	(6:4)	7%	(5:5)	
Delicatessen (7am-4pm)		150/1000 sq. ft., 11/seat*	9%	(6:4)	3%	(3:7)	
TRANSPORTATION							
Bus Depot		25/1000 sq. ft.**					
Truck Terminal		10/1000 sq. ft., 7/bay, 80/acre**	9%	(4:6)	8%	(5:5)	
Waterport/Marine Terminal		170/berth, 12/acre**					
Transit Station (Light Rail w/parking)		300/acre, $2^{1/2}$/parking space (4/occupied)**	14%	(7:3)	15%	(3:7)	
Park & Ride Lots		400/acre (600/paved acre), 5/parking space (8/occupied)* **	14%	(7:3)	15%	(3:7)	

* Primary source: *San Diego Traffic Generators.*

* Other sources: *ITE Trip Generation Report [6th Edition]*, Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

[P] Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (draft SANDAG *Analysis of Trip Diversion*, revised November, 1990):
PRIMARY - one trip directly between origin and primary destination.
DIVERTED - linked trip (having one or more stops along the way to a primary destination) whose distance compared to direct distance ≥ 1 mile.
PASS-BY - undiverted or diverted < 1 mile.

[L] Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6.9 miles)

[C] Fitted curve equation: $Ln(T) = 0.502\ Ln(x) + 6.945$

[O] Fitted curve equation: $Ln(T) = 0.756\ Ln(x) + 3.950$

T = total trips, x = 1,000 sq. ft.

[R] Fitted curve equation: $t = -2.169\ Ln(d) + 12.85$ t = trips/DU, d = density (DU/acre), DU = dwelling unit

[S] Suggested PASS-BY [undiverted or diverted < 1 mile] percentages for trip rate reductions only during P.M. peak period (based on combination of local data/review and Other sources**):

COMMERCIAL/RETAIL	
Regional Shopping Center	20%
Community " "	30%
Neighborhood " "	40%
Specialty Retail/Strip Commercial (other)	10%
Supermarket	40%
Convenience Market	50%
Discount Club/Store	30%
FINANCIAL	
Bank	25%
AUTOMOBILE	
Gasoline Station	50%
RESTAURANT	
Quality	10%
Sit-down high turnover	20%
Fast Food	40%

[T] Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

Available Traffic Data , Partial List

Route	Segment/ Intersection	Direction/ Approach	24-hr Volume	Year, Source	Peak Hour Factor AM/PM	AM Peak Hour	PM Peak Hour	Years of AM/PM Peak Volumes
I-8	I-10 to Peart Rd	EB	4,428	2015, ADOT		322	395	2015
		WB	4,720	2015, ADOT		430	435	2015
	I-8 to Jimmie Kerr	EB	23,320	2016, ADOT		1,604	1,755	2016
		WB	22,994	2016, ADOT		1,680	1,738	2016
I-10	Selma Hwy to Earley Rd	EB	9,373	2016, ADOT		1,628	1,732	2013
		WB	19,380	2015, ADOT		1,892	2,033	2013
	Cottonwood to Korsten Rd	EB	20,257	2016, ADOT		1,450	1,488	2016
		WB	21,232	2016, ADOT		1,506	1,661	2016
Sunland Gin Rd	Jimmie Kerr to I-10	NB	2,216	2014, MAG		186	183	2014
		SB	2,422	2014, MAG		202	222	2014
	Peart Rd to Selma Hwy	EB	5,429	2015, ADOT				
		WB	5,429	2015, ADOT				
Jimmie Kerr	Henness Rd to I-10	EB	4,452	2014, MAG		303	436	2014
		WB	4,310	2014, MAG		410	349	2014
	I-10 to SunlandGin Rd	EB	5,188	2011, MAG		335	444	2011
		WB	5,232	2011, MAG		434	389	2011
Peart Rd	Jimmie Kerr to Earley Rd	NB	1,954	2013, ADOT				2013
		SB	2,158	2013, ADOT				2013
Selma Hwy	Jimmie Kerr to Henness Rd	EB	814	2013, ADOT				2013
		WB	832	2013, ADOT				2013
	I-10 to Hacienda Rd	EB	698	2011, MAG		54	79	2011
		WB	746	2011, MAG		65	74	2011
	I-10 to Jimmie Kerr	SB	1,692	2015, ADOT		105	114	2013
	Jimmie Kerr to I-10	SB	511	2015, ADOT		37	58	2013
	Jimmie Kerr to I-10	NB	2,403	2015, ADOT		182	243	2013
	I-10 to Jimmie Kerr	SB	1,483	2015, ADOT		139	110	2013
	I-10 to Sunland Gin	EB	6,332	2015, ADOT		321	456	2013
		WB	2,561	2015, ADOT		167	191	2013
I-10 Ramp	Sunland Gin to I-10	EB	2,885	2015, ADOT		181	183	2013
	Sunland Gin to I-8/I-10	WB	4,157	2015, ADOT		393	260	2013
	Sunland Gin to !-8	WB	1,444	2015, ADOT		120	127	2013
	I-10 to I-8	EB	519	2015, ADOT		46	54	2015
		WB	2,494	2015, ADOT		250	322	2015
	I-8 to I-10	EB	5,063	2015, ADOT		271	332	2013
		WB	391	2015, ADOT		31	36	2013
Indn Rte 15	I-8 to W Hanna St	NB	1,005	2014, MAG		98	82	2014
		SB	850	2014, MAG		57	101	2014
	W Houser Rd to Battaglia Dr	NB	1,280	2015, MAG		119	108	2015
		SB	987	2015, MAG		55	90	2015
S Trekell Rd	I-8 to W hanna St	NB	431	2011, MAG		41	40	2011
		SB	622	2011, MAG		36	54	2011
	I-8 to W Skyway Rd	NB	1,243	2015, MAG		132	107	2015
		SB	1,260	2015, MAG		86	134	2015
W Battaglia	S Tekell Rd to Peart Rd	EB	450	2015, MAG		21	71	2015
		WB	1,084	2015, MAG		113	89	2015
S Thornton Rd	I-8 to W Selma Rd	NB	1,176	2014, MAG		89	105	2014
		SB	1,099	2014, MAG		78	99	2014
Florance Blvd	Cacheris Ct to I-10	EB	11,846	2014, MAG		974	1,001	2014
		WB	11,721	2014, MAG		888	957	2014
	I-10 to N Hacienda Rd	EB	3,975	2014, MAG		290	332	2014
		WB	4,156	2014, MAG		329	345	2014
Cottonwood Ln	Henness Rd to I-10	EB	4,053	2014, MAG		342	401	2014
		WB	3,703	2014, MAG		234	409	2014

Figure 2-4 – Future Development Plan