SOUTHWEST TRAFFIC ENGINEERING, LLC

PARKING ANALYSIS

ORO VALLEY VILLAGE CENTER

TANGERINE ROAD/ORACLE ROAD

REVISED 23 DECEMBER 2021
10 DECEMBER 2020
27 MAY 2020

PREPARED FOR
TOWN WEST
555 EAST RIVER ROAD, SUITE 201
TUCSON, ARIZONA 87504

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ORO VALLEY VILLAGE CENTER
TANGERING ROAD/ORACLE ROAD
PARKING ANALYSIS

Project Description

Town West is proposing to finish developing the existing Oro Valley Village Shopping Center on the southwest corner of Tangerine Road/Oracle Road in Oro Valley, Arizona. The vicinity of the project is shown in **Figure 1**. The site will be located as shown in **Figure 2**. The completion of the site will include apartments, hotels, and an entertainment district and 5,267 parking spaces. The purpose of this parking analysis is to determine the parking needs/requirements of the fully completed development.

The author of this report is a registered professional engineer (civil) in the State of Arizona having specific expertise and experience in the preparation of parking analyses.

Study Methodology

In order to analyze and evaluate the parking requirements for the project:

- A review of the site plan was performed to determine the various types of existing/proposed land uses and to define distinct parking zones within the site.
- The various land uses and associated building sizes were determined for each parking zone as well as the existing and proposed number of parking spaces for each parking zone.
- A review of Town of Oro Valley (OV) parking requirements was performed to determine the parking ratios for each proposed land use.
- The required number of parking spaces was determined for each land use.
- A shared parking (interaction) evaluation was completed for the project site.
- Peak parking demand analyses were performed for each parking zone.

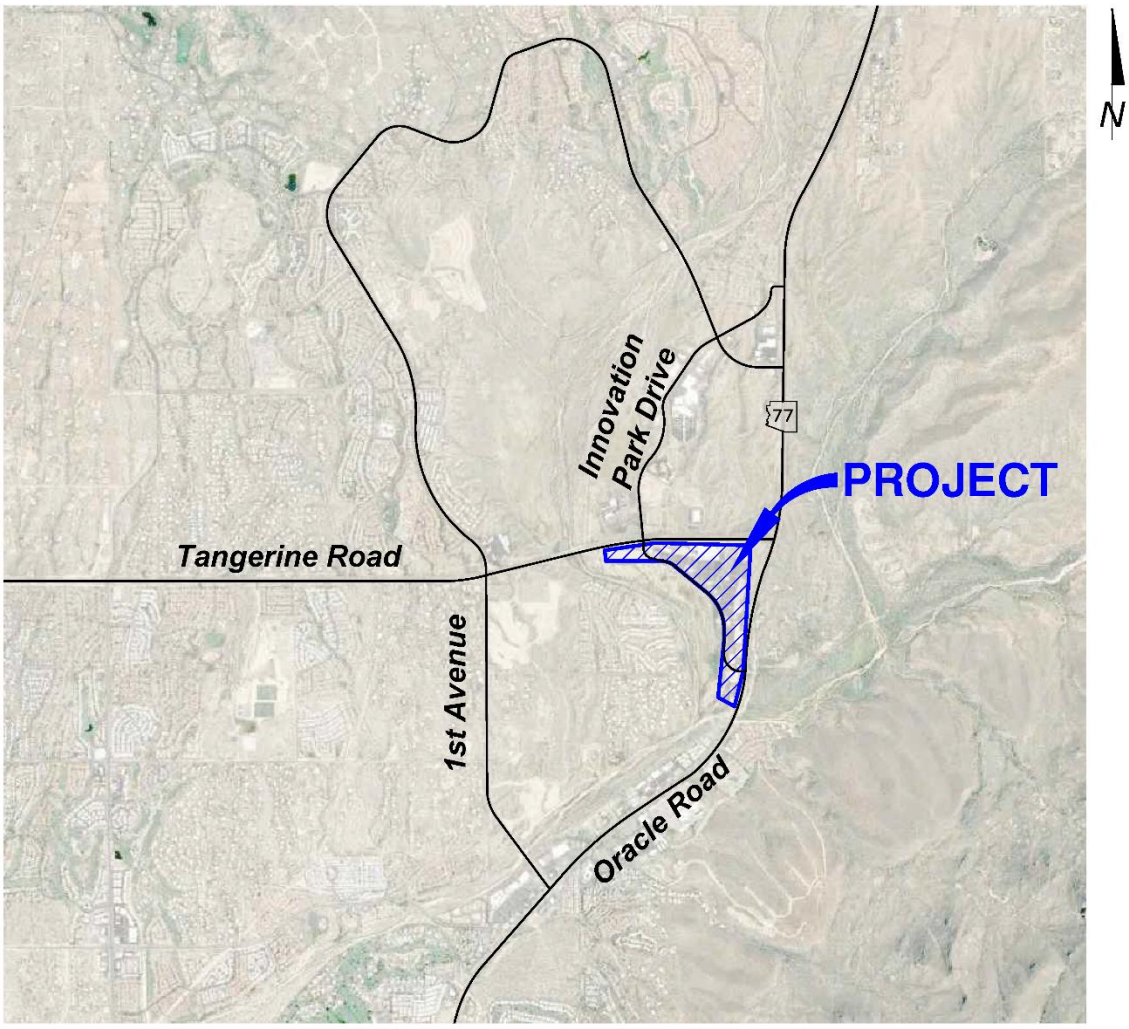
Existing and Proposed Development

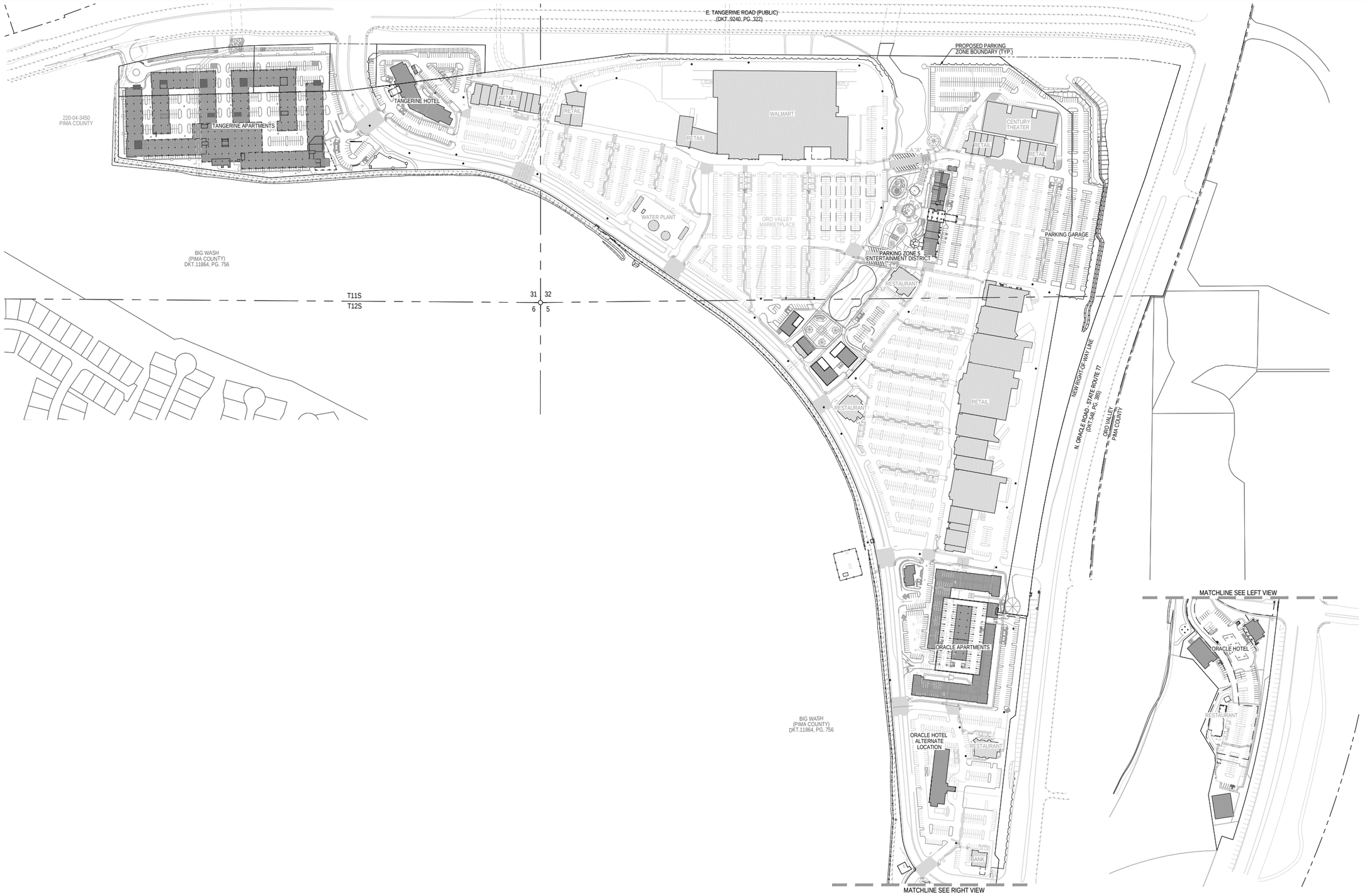
The Oro Valley Village Center is an existing shopping center located on the southwest corner of Tangerine Road/Oracle Road in Oro Valley, Arizona that is served by eight existing access points. No changes are proposed to any of the site access points or to the adjacent roadways as a part of the final development of Oro Valley Village Center.

The fully completed site will provide 5,267 parking spaces, which can be divided into nine distinct parking zones based on drive aisles and site layout, as shown in **Figure 3**.

Three vacant lots within the Oro Valley Village Center do not have specific development plans at this time. These lots were estimated to have 70,000 total square feet of shopping center space when completed. The vacant lots are included in their respective zones below.

Figure 1 – Vicinity Map





The WLB Group Inc.
WLB
Engineering Planning Surveying
Landscape Architecture Urban Design
Offices located in Tucson, Phoenix and Las Vegas
4444 East Broadway Blvd.
Tucson, Arizona (520) 881-7480

0' 150' 300' 450'

FIGURE 2 - SITE PLAN

SCALE: 1"=150'

ORO VALLEY VILLAGE CENTER

LOTS 1 THRU 31 AND COMMON AREAS A, B & D
OF THE ORO VALLEY MARKETPLACE AMENDED FINAL PLAT
BOOK 62, PAGE 19, SEQUENCE NUMBER 20090270526
BEING A PORTION OF
SEC. 31 & 32 T11S R14E AND SEC. 5, T12S R14E, G&SRM
TOWN OF ORO VALLEY, PIMA COUNTY, ARIZONA

O:\18505\DWT-03 - Town West\Resources\TI\Fig 2 Site Plan .dwg Plotted: Nov 18, 2021

E. TANGERINE ROAD (PUBLIC)
(DKT..9240, PG..322)

PROPOSED PARKING ZONE BOUNDARY (TYP.)

PARKING ZONE 1

TANGERINE APARTMENTS

220-04-3450
PIMA COUNTY

TANGERINE HOTEL

PARKING ZONE 2

RETAIL

RETAIL

PARKING ZONE 3

RETAIL

WALMART

PARKING ZONE 4

WATER PLANT

ORO VALLEY MARKETPLACE

CENTURY THEATER

RETAIL

RETAIL

PARKING GARAGE

ENTERTAINMENT DISTRICT

RESTAURANT

PARKING ZONE 5

RETAIL

RESTAURANT

BIG WASH
(PIMA COUNTY)
DKT.11864, PG. 756

T11S
T12S

31 32
6 5

PROPOSED PARKING ZONE BOUNDARY (TYP.)

NEW RIGHT-OF-WAY LINE
N. ORACLE ROAD, STATE ROUTE 77
(DKT.548, PG..388)
ORO VALLEY
PIMA COUNTY

PARKING ZONE 6

ORACLE APARTMENTS

BIG WASH
(PIMA COUNTY)
DKT.11864, PG. 756

ORACLE HOTEL ALTERNATE LOCATION

RESTAURANT

PROPOSED PARKING ZONE BOUNDARY (TYP.)

PARKING ZONE 7

BANK

MATCHLINE SEE RIGHT VIEW

MATCHLINE SEE LEFT VIEW

ORACLE HOTEL

PROPOSED PARKING ZONE BOUNDARY (TYP.)

PARKING ZONE 8

RESTAURANT

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0' 150' 300' 450'

FIGURE 3 - PARKING ZONES

SCALE: 1"=150'

ORO VALLEY VILLAGE CENTER

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O:\18506\06\WT-03 - Town West\Resources\TIA\Fig 3 Parking Zones 11.18.dwg Plotted: Nov 18, 2021

The completed Oro Valley Village Center will provide new apartments, hotels, and an entertainment district. The existing and proposed land uses within each of the distinct ten parking zones are provided in **Table 1**.

Table 1 – Parking Zone Land Use and Provided Parking Spaces

Land Use	Total Size	Existing Parking Spaces	Provided		
			Total Parking Spaces	ADA Parking Spaces*	Bicycle Parking Spaces**
Zone 1		0	909	19	45
Apartments (Proposed)	500 units				
Zone 2		199	318	11	16
Hotel (Proposed)	150 rooms				
Service Shop	4,200 sf				
Retail	4,970 sf				
Office	2,940 sf				
Medical Office	10,208 sf				
Zone 3		424	424	13	22
Retail	70,234 sf				
Office	3,470 sf				
Zone 4		926	926	24	47
Supermarket	195,273 sf				
Zone 5		1,577	1,766	47	89
Restaurant (Proposed)	32,011				
Retail (Proposed)	22,500				
Hotel (Proposed)	108 rooms				
Bar (Proposed)	7,000 sf				
Commercial Recreation (Proposed)	16,000 sf				
Community Park (Proposed)	1.4 acres				
Theater	1,928 seats				
Retail	203,128 sf				
Zone 6		234	434	12	20
Apartments	230				
Restaurant (Convenience)	5,000 sf				
Zone 7		280	329	15	17
Restaurant (Standard)	7,028 sf				
Retail	20,000 sf				
Financial Services	4,355 sf				
Hotel	112 rooms				
Zone 8		118	161	10	8
Restaurant (Convenience)	3,650 sf				
Retail	16,000 sf				
Gas Station	4,500 sf				
Total		**3,758**	**5,267**	**151**	**264**

*ADA parking spaces included within total parking space count

**Bicycle parking spaces not included within total vehicle parking space count

Parking Requirements per Town of Oro Valley

OV provides parking requirements for various land uses in their Zoning Code. Per Section 27.7 – "Off-Street Parking", the parking requirements shown in **Table 2** are applicable to the Oro Valley Village Center project.

Table 2 – Oro Valley Parking Requirements

Land Use		Required Parking
Apartments	*1 bedrom*	1.5 spaces per unit
	2 bedroom	1.75 spaces per unit
	3 bedroom	2.0 spaces per unit
	4 bedroom	2.5 spaces per unit
	guest parking	1 space per 4 units
Service Shop		4 spaces per 1,000 s.f.
Office		3 spaces per 1,000 s.f.
Med Office		4.5 spaces per 1,000 s.f.
Retail		4 spaces per 1,000 s.f.
Supermarket		6 spaces per 1,000 s.f.
Restaurant	*standard*	10 spaces per 1,000 s.f.
	convenience	15 spaces per 1,000 s.f.
Bars		10 spaces per 1,000 s.f.
Commercial Recreation		6 spaces per 1,000 s.f.
Community Park		5 spaces per acre
Theater		1 space per 3 seats
Bank		3.5 spaces per 1,000 s.f.

Applying the above parking requirements in **Table 2** to the land use values summarized in **Table 1** results in the parking space requirements for each parking zone as shown in **Table 3**.

Shared Parking Evaluation

Table 3 shows that the expected parking demand (5,795 spaces) will exceed the parking supply (5,267 spaces). While the total number of required parking spaces for the site is the combined total of the parking space requirements for each individual land use, Oro Valley Village Center is a mixed-use commercial development, and a simple addition of each individual tenants' parking requirements is an oversimplification of the actual parking needs of the development.

Many municipal agencies in the State of Arizona, including Town of Oro Valley, allow for the consideration of shared parking interaction within a mixed-use development. Shared parking interaction is the concept of different businesses using the same parking space as the vehicle driver visits multiple locations after parking. For example, it would be quite common for someone staying at a hotel to walk to an adjacent restaurant and eat dinner. This patron would only be using one parking spot, assuming they commuted to the development via a passenger vehicle.

Table 3 – Oro Valley Village Center Parking Requirements

Zone	Land Use		Size		Parking Requirements	Minimum Parking Spaces Needed	Total, By Zone
1	Apartments	1 Bedroom	256	units	1.5 spaces per unit	384	955
		2 Bedroom	171	units	1.75 spaces per unit	300	
		3 Bedroom	73	units	2.0 spaces per unit	146	
		4 Bedroom	0	units	2.5 spaces per unit	0	
		Guest Parking	-	units	1 space per 4 units	125	
2	Hotel		150	rooms	1 space per room	150	242
	Service Shop		4,200	s.f.	4 spaces per 1,000 s.f.	17	
	Retail		4,970	s.f.	4 spaces per 1,000 s.f.	20	
	Office		2,940	s.f.	3 spaces per 1,000 s.f.	9	
	Medical Office		10,208	s.f.	4.5 spaces per 1,000 s.f.	46	
3	Retail		70,234	s.f.	4 spaces per 1,000 s.f.	281	292
	Office		3,470	s.f.	3 spaces per 1,000 s.f.	11	
4	Supermarket		195,273	s.f.	6 spaces per 1,000 s.f.	1,172	1,172
5	Restaurant (Standard)		32,011	s.f.	10 spaces per 1,000 s.f.	321	2,148
	Retail		225,628	s.f.	4 spaces per 1,000 s.f.	903	
	Hotel		108	rooms	1 space per room	108	
	Bar		7,000	s.f.	10 spaces per 1,000 s.f.	70	
	Commercial Recreation		16,000	s.f.	6 spaces per 1,000 s.f.	96	
	Community Park		1.4	acres	5 spaces per acre	7	
	Theater		1,928	seats	1 space per 3 seats	643	
6	Apartments	1 Bedroom	85	units	1.5 spaces per unit	128	520
		2 Bedroom	127	units	1.75 spaces per unit	223	
		3 Bedroom	18	units	2.0 spaces per unit	36	
		4 Bedroom	0	units	2.5 spaces per unit	0	
		Guest Parking	-	units	1 space per 4 units	58	
	Restaurant (Convenience)		5,000	s.f.	15 spaces per 1,000 s.f.	75	
7	Restaurant (Standard)		7,028	s.f.	10 spaces per 1,000 s.f.	71	279
	Retail		20,000	s.f.	4 spaces per 1,000 s.f.	80	
	Financial Services		4,355	s.f.	3.5 per 1,000 s.f.	16	
	Hotel		112	rooms	1 space per room	112	
8	Restaurant (Convenience)		3,650	s.f.	15 spaces per 1,000 s.f.	55	187
	Retail		16,000	s.f.	4 spaces per 1,000 s.f.	64	
	Gas Station		4,500	s.f.	15 spaces per 1,000 s.f.	68	
						Total	**5,795**

Generally accepted shared parking interaction factors in multi-use developments range from 10% to 30%. However, the Town of Oro Valley does not provide specific requirements for shared parking interactions. Oro Valley Village Center is a regional shopping center with many attractions that will draw customers from a relatively large market area. Due to the wide variety of commercial land uses available within the site, a significant amount of interactivity is expected to occur. A 30% shared parking reduction was assumed for the Oro Valley Village Center development. It should be mentioned that a shared parking interaction factor was not applied to parking zones with only one land use (Parking Zones 1, 4, and 6) or directly to the proposed apartments.

In addition to the shared parking interaction, a 5% multimodal parking reduction was used to account for the effects of bicycle and ride-share traffic at the project site. Similar to the shared parking reduction, the multimodal reduction was not applied to the apartments. The result of a 30% shared parking interaction and 5% multi-modal parking reduction is presented in **Table 4**.

Table 4 – Oro Valley Village Center Shared Parking (Interaction)

Land Use	Provided Parking Spaces	Required Parking Spaces	Required Parking Spaces (30% Interaction)	Required Parking Spaces (30% Interaction and 5% Multi-Modal Reduction)
Zone 1*	909	955	955	955
Apartments (Proposed)**				
Zone 2	318	242	170	162
Hotel (Proposed)				
Service Shop				
Retail				
Office				
Medical Office				
Zone 3	424	292	205	195
Retail				
Office				
Zone 4*	926	1,172	1,172	1,172
Supermarket				
Zone 5	1,766	2,148	1,504	1,429
Restaurant (Proposed)				
Retail (Proposed)				
Hotel (Proposed)				
Bar (Proposed)				
Commercial Recreation (Proposed)				
Community Park (Proposed)				
Theater				
Retail				
Zone 6*	434	520	520	520
Apartments**				
Restaurant (Convenience)				
Zone 7	329	279	196	187
Restaurant (Standard)				
Retail				
Financial Services				
Hotel				
Zone 8	161	187	131	125
Restaurant (Convenience)				
Retail				
Gas Station				
Total	**5,267**	**5,795**	**4,853**	**4,745**

*No Shared Reduction Applied

** Shared and Multi-Modal Reductions Not Applied to Residential Land Uses

As shown in **Table 4**, based on Town of Oro Valley parking requirements, a 30% shared parking interaction, and a 5% multi-modal parking reduction, vehicles within Oro Valley Village Center are anticipated to require 4,745 parking spaces per day. This is expected to result in a surplus of 522 parking spaces when compared to the provided 5,267 parking spaces.

Peak Parking Evaluation

Taking the parking calculations another step further, a peak parking demand analysis was completed for each parking zone within Oro Valley Village Center. Each proposed land use has a distinct high parking demand time. For example, a restaurant that only serves breakfast and lunch experiences its peak parking demand in the morning, while a typical restaurant will experience peak parking demand in the evening. Retail and restaurant developments usually experience peaks during the midday whereas hotels and theaters are expected to experience peaks in the evening.

The Urban Land Institute (ULI) provides nationally agreed upon peak parking demand data for multiple land uses, including those proposed within the Oro Valley Village Center development. This data is used by many jurisdictions within the State of Arizona. ULI peak parking demand data was applied to the reduced parking space requirements for the project site (shown in **Table 4**) and are summarized in **Table 5**. Complete calculations can be found in the Appendix.

As shown in **Table 5**, accounting for peak parking demand (including a 30% shared parking interaction, where applicable, and a 5% multi-modal parking reduction) the site will require 4,441 parking spaces on a weekday and 4,306 parking spaces on the weekend.

While the Oro Valley Village Center development is expected to provide an overall adequate amount of parking spaces, Zones 1, 4, and 6 may encounter parking space shortages during a few peak hours of the day.

Zones 1 and 6 consist of apartment land uses, which must have all of their required parking located within their specific zone (overflow in adjacent zones is not sufficient). To ensure adequate parking for these apartments, more parking must be provided within these zones or fewer apartments should be constructed.

A pedestrian path, including a crosswalk, will be providing across the internal spine road to provide a clear path for overflow parking between Zones 1 and 2.

Due to their close proximity, overflow vehicles from Zone 4 can be accommodated in Zone 3 (which is expected to have a surplus of parking).

Overflow guest parking from the apartments in Zone 6 may park within the surplus parking available in Zone 8.

The hourly parking surplus/deficit within each parking zone was determined by comparing the hourly demand to the number of provided parking spaces. **Tables 6** through **11** show the weekday and weekend peak hour parking surplus/deficit of the zones expected to share parking.

Table 5 – Peak Parking Demand

Zone/Land Use	Provided Parking Spaces	Parking Spaces Required	
		Weekday	Weekend
Zone 1*	909	955	955
Apartments (Proposed)**			
Zone 2	318	135	123
Hotel (Proposed)			
Service Shop			
Retail			
Office			
Medical Office			
Zone 3	424	193	191
Retail			
Office			
Zone 4*	926	1,113	1,113
Supermarket			
Zone 5	1,766	1,268	1,171
Restaurant (Proposed)			
Retail (Proposed)			
Hotel (Proposed)			
Bar (Proposed)			
Commercial Recreation (Proposed)			
Community Park (Proposed)			
Theater			
Retail			
Zone 6*	434	492	492
Apartments**			
Restaurant (Convenience)			
Zone 7	329	161	141
Restaurant (Standard)			
Retail			
Financial Services			
Hotel			
Zone 8	161	124	120
Restaurant (Convenience)			
Retail			
Gas Station			
Total	**5,267**	**4,441**	**4,306**

Red values indicate a shortage of parking within a parking zone

Table 6 – Zones 1 and 2 Weekday Surplus/Deficit Parking

Time	Zone 1			Zone 2		
	Proposed Parking	Demand	Surplus or Deficit?	Proposed Parking	Demand	Surplus or Deficit?
7:00 AM	909	860	**49**	318	109	**209**
8:00 AM	909	812	**97**	318	135	**183**
9:00 AM	909	764	**145**	318	129	**189**
10:00 AM	909	716	**193**	318	126	**192**
11:00 AM	909	669	**240**	318	129	**189**
12:00 PM	909	621	**288**	318	103	**215**
1:00 PM	909	669	**240**	318	122	**196**
2:00 PM	909	669	**240**	318	130	**188**
3:00 PM	909	669	**240**	318	130	**188**
4:00 PM	909	716	**193**	318	131	**187**
5:00 PM	909	812	**97**	318	131	**187**
6:00 PM	909	860	**49**	318	131	**187**
7:00 PM	909	926	**-17**	318	119	**199**
8:00 PM	909	936	**-27**	318	117	**201**
9:00 PM	909	945	**-36**	318	113	**205**
10:00 PM	909	955	**-46**	318	110	**208**
11:00 PM	909	955	**-46**	318	112	**206**
12:00 AM	909	955	**-46**	318	111	**207**

Red values indicate a parking deficit

Table 7 – Zones 1 and 2 Weekend Surplus/Deficit Parking

Time	Zone 1			Zone 2		
	Proposed Parking	Demand	Surplus or Deficit?	Proposed Parking	Demand	Surplus or Deficit?
7:00 AM	909	860	**49**	318	103	**215**
8:00 AM	909	812	**97**	318	123	**195**
9:00 AM	909	764	**145**	318	118	**200**
10:00 AM	909	716	**193**	318	114	**204**
11:00 AM	909	669	**240**	318	116	**202**
12:00 PM	909	621	**288**	318	91	**227**
1:00 PM	909	669	**240**	318	83	**235**
2:00 PM	909	669	**240**	318	88	**230**
3:00 PM	909	669	**240**	318	87	**231**
4:00 PM	909	716	**193**	318	90	**228**
5:00 PM	909	812	**97**	318	94	**224**
6:00 PM	909	860	**49**	318	97	**221**
7:00 PM	909	926	**-17**	318	96	**222**
8:00 PM	909	936	**-27**	318	100	**218**
9:00 PM	909	945	**-36**	318	103	**215**
10:00 PM	909	955	**-46**	318	111	**207**
11:00 PM	909	955	**-46**	318	113	**205**
12:00 AM	909	955	**-46**	318	111	**207**

Red values indicate a parking deficit

Tables 6 and **7** show that Zone 1 may have parking deficits between 7:00 PM and 12:00 AM on both weekdays and weekends. Zone 1 is expected to have a weekday and weekend maximum peak parking shortage of 46 spaces (10:00 PM). During these same peak hours, the adjacent Zone 2 is expected to have a surplus of 208 spaces on a weekday (10:00 PM) and 207 parking spaces on a weekend (10:00 PM). The surplus parking available in Zone 2 could accommodate the parking shortages expected at Zones 1.

Table 8 – Zones 3 and 4 Weekday Surplus/Deficit Parking

Time	Zone 3			Zone 4		
	Proposed Parking	Demand	Surplus or Deficit?	Proposed Parking	Demand	Surplus or Deficit?
7:00 AM	424	12	**412**	926	56	**870**
8:00 AM	424	34	**390**	926	167	**759**
9:00 AM	424	72	**352**	926	390	**536**
10:00 AM	424	129	**295**	926	724	**202**
11:00 AM	424	166	**258**	926	946	**-20**
12:00 PM	424	184	**240**	926	1058	**-132**
1:00 PM	424	193	**231**	926	1113	**-187**
2:00 PM	424	185	**239**	926	1058	**-132**
3:00 PM	424	175	**249**	926	1002	**-76**
4:00 PM	424	175	**249**	926	1002	**-76**
5:00 PM	424	181	**243**	926	1058	**-132**
6:00 PM	424	179	**245**	926	1058	**-132**
7:00 PM	424	178	**246**	926	1058	**-132**
8:00 PM	424	150	**274**	926	891	**35**
9:00 PM	424	94	**330**	926	557	**369**
10:00 PM	424	56	**368**	926	334	**592**
11:00 PM	424	19	**405**	926	111	**815**
12:00 AM	424	0	**424**	926	0	**926**

Red values indicate a parking deficit

Table 9 – Zones 3 and 4 Weekend Surplus/Deficit Parking

Time	Zone 3			Zone 4		
	Proposed Parking	Demand	Surplus or Deficit?	Proposed Parking	Demand	Surplus or Deficit?
7:00 AM	424	11	**413**	926	56	**870**
8:00 AM	424	23	**401**	926	111	**815**
9:00 AM	424	62	**362**	926	334	**592**
10:00 AM	424	100	**324**	926	557	**369**
11:00 AM	424	129	**295**	926	724	**202**
12:00 PM	424	156	**268**	926	891	**35**
1:00 PM	424	174	**250**	926	1002	**-76**
2:00 PM	424	191	**233**	926	1113	**-187**
3:00 PM	424	190	**234**	926	1113	**-187**
4:00 PM	424	179	**245**	926	1058	**-132**
5:00 PM	424	169	**255**	926	1002	**-76**
6:00 PM	424	150	**274**	926	891	**35**
7:00 PM	424	140	**284**	926	835	**91**
8:00 PM	424	121	**303**	926	724	**202**
9:00 PM	424	93	**331**	926	557	**369**
10:00 PM	424	65	**359**	926	390	**536**
11:00 PM	424	28	**396**	926	167	**759**
12:00 AM	424	0	**424**	926	0	**926**

Red values indicate a parking deficit

As shown in **Tables 8** and **9**, Zone 4 may have a temporary parking space shortage during the midday to early evening hours. Parking shortages in Zone 4 may be as high as 187 spaces during the weekday peak hour (1:00 PM) and weekend peak hours (2:00 PM through 3:00 PM). During the same peak hours of Zone 4, the adjacent Zone 3 is expected to have a surplus of parking totaling 231 parking spaces on a weekday (1:00 PM) and 233 or more parking spaces on a weekend (2:00 PM through 3:00 PM). The surplus parking in Zone 3 will accommodate any overflow parking that may occur in Zone 4.

Table 10 – Zones 6 and 7 Weekday Surplus/Deficit Parking

Time	Zone 6			Zone 7		
	Proposed Parking	Demand	Surplus or Deficit?	Proposed Parking	Demand	Surplus or Deficit?
7:00 AM	434	408	**26**	329	73	**256**
8:00 AM	434	393	**41**	329	80	**249**
9:00 AM	434	379	**56**	329	88	**241**
10:00 AM	434	375	**59**	329	104	**225**
11:00 AM	434	375	**59**	329	122	**207**
12:00 PM	434	364	**70**	329	140	**189**
1:00 PM	434	387	**48**	329	142	**187**
2:00 PM	434	379	**55**	329	141	**188**
3:00 PM	434	357	**78**	329	124	**205**
4:00 PM	434	375	**59**	329	136	**193**
5:00 PM	434	423	**11**	329	156	**173**
6:00 PM	434	464	**-30**	329	159	**170**
7:00 PM	434	492	**-58**	329	161	**168**
8:00 PM	434	474	**-40**	329	157	**172**
9:00 PM	434	463	**-29**	329	145	**184**
10:00 PM	434	460	**-26**	329	132	**197**
11:00 PM	434	453	**-19**	329	115	**214**
12:00 AM	434	449	**-15**	329	86	**243**

Red values indicate a parking deficit

Table 11 – Zones 6 and 7 Weekend Surplus/Deficit Parking

Time	Zone 6			Zone 7		
	Proposed Parking	Demand	Surplus or Deficit?	Proposed Parking	Demand	Surplus or Deficit?
7:00 AM	434	408	**26**	329	70	**259**
8:00 AM	434	393	**41**	329	67	**262**
9:00 AM	434	379	**56**	329	73	**256**
10:00 AM	434	375	**59**	329	79	**250**
11:00 AM	434	375	**59**	329	97	**232**
12:00 PM	434	364	**70**	329	117	**212**
1:00 PM	434	387	**48**	329	115	**214**
2:00 PM	434	379	**55**	329	119	**210**
3:00 PM	434	357	**78**	329	119	**210**
4:00 PM	434	375	**59**	329	120	**209**
5:00 PM	434	423	**11**	329	128	**201**
6:00 PM	434	464	**-30**	329	141	**188**
7:00 PM	434	492	**-58**	329	141	**188**
8:00 PM	434	474	**-40**	329	141	**188**
9:00 PM	434	463	**-29**	329	132	**197**
10:00 PM	434	460	**-26**	329	132	**197**
11:00 PM	434	453	**-19**	329	125	**204**
12:00 AM	434	449	**-15**	329	98	**231**

Red values indicate a parking deficit

Tables 10 and **11** show that Zone 6 may have parking deficits between 6:00 PM and 12:00 AM on both weekdays and weekends. Zone 6 is expected to have a weekday maximum peak parking shortage of 58 spaces (7:00 PM) and peak weekend shortage of 58 parking spaces (7:00 PM). During these same peak hours, the adjacent Zone 7 is expected to have a surplus of 168 spaces on a weekday (7:00 PM) and 188 parking spaces on a weekend (7:00 PM). The surplus parking available in Zone 7 could accommodate the parking shortages expected at Zones 6.

Conclusion

The updated Oro Valley Village Center site will provide 5,267 total parking spaces. Based on the most basic application of the Town of Oro Valley parking requirements, Oro Valley Village Center will require 5,795 parking spaces (a parking deficit of 528 spaces). After consideration of shared parking interactions, multi-modal reductions, and peak parking demand, the required number of parking spaces is reduced to 4,441 parking spaces (a parking surplus of 826 spaces). The proposed parking supply at the Oro Valley Village Center site is expected to exceed the parking demand by 18.6%.

The proposed 5,267 parking spaces are predicted to exceed the overall needs of the Oro Valley Village Center site. However, Zones 1, 5, and 6 may encounter parking space shortages during a few peak hours of the day.

During a few peak hours at the apartment land uses in Zones 1 and 6, some of the guest parking may overflow to adjacent land uses. However, during times when parking shortages may, adjacent zones (Zones 2 and 7) are anticipated to have an excess of parking. A pedestrian path, including a crosswalk, will be providing across the internal spine road to provide a clear path for overflow parking between Zones 1 and 2.

Due to their close proximity, overflow vehicles from Zones 4 can be accommodated in Zone 3 (which is expected to have a surplus of parking).

Zone 5 is expected to provide enough parking to meet the needs of the new entertainment district within the Oro Valley Village Center. However, if consistent parking shortages are observed to occur as a result of the entertainment district, a parking garage may be built on the east side of Zone 5 that will provide a net gain of 348 parking spaces.

ORO VALLEY VILLAGE CENTER
TANGERING ROAD/ORACLE ROAD
PARKING ANALYSIS

APPENDIX

Peak Parking Demand Calculations

Comment Resolution

ORO VALLEY VILLAGE CENTER
TANGERING ROAD/ORACLE ROAD
PARKING ANALYSIS

APPENDIX

Peak Parking Demand Calculations

Oro Valley Village Center
Parking Analysis

ZONE 1

Shared Interaction	0%
Multi-Modal Reduction	0%
Total Reduction	**0%**

Peak Parking Demands (Weekday)

Time	Residential		Apartments
7:00	90%	**Proposed Parking**	**955**
8:00	85%		860
9:00	80%		812
10:00	75%		764
11:00	70%		716
12:00	65%		669
1:00	70%		621
2:00	70%		669
3:00	70%		669
4:00	75%		669
5:00	85%		716
6:00	90%		812
7:00	97%		860
8:00	98%		926
9:00	99%		936
10:00	100%		945
11:00	100%		955
12:00	100%		955
		Peak Parking Demand	**955**

Peak Parking Demands (Saturday)

Time	Residential		Apartments
7:00	90%	**Proposed Parking**	**955**
8:00	85%		860
9:00	80%		812
10:00	75%		764
11:00	70%		716
12:00	65%		669
1:00	70%		621
2:00	70%		669
3:00	70%		669
4:00	75%		669
5:00	85%		716
6:00	90%		812
7:00	97%		860
8:00	98%		926
9:00	99%		936
10:00	100%		945
11:00	100%		955
12:00	100%		955
		Peak Parking Demand	**955**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 0% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).

Oro Valley Village Center
Parking Analysis

ZONE 2

Shared Interaction	30%
Multi-Modal Reduction	5%
Total Reduction	**34%**

Peak Parking Demands (Weekday)

Time	Hotel	Office	Medical Office	Service Shop	Retail
7:00	95%	30%	0%	100%	5%
8:00	90%	75%	90%	100%	15%
9:00	80%	95%	90%	100%	35%
10:00	70%	100%	100%	100%	65%
11:00	70%	100%	100%	100%	85%
12:00	65%	90%	30%	100%	95%
1:00	65%	90%	90%	100%	100%
2:00	70%	100%	100%	100%	95%
3:00	70%	100%	100%	100%	90%
4:00	75%	90%	90%	100%	90%
5:00	80%	50%	80%	100%	95%
6:00	85%	25%	67%	100%	95%
7:00	85%	10%	30%	100%	95%
8:00	90%	7%	15%	100%	80%
9:00	95%	3%	0%	100%	50%
10:00	95%	1%	0%	100%	30%
11:00	100%	0%	0%	100%	10%
12:00	100%	0%	0%	100%	0%

	Hotel	Office	Medical Office	Service Shop	Retail	Total Zone
Proposed Parking Spaces	**150**	**9**	**46**	**17**	**20**	**242**
	95	2	0	11	1	109
	90	4	28	11	2	135
	80	6	28	11	5	129
	70	6	31	11	9	126
	70	6	31	11	11	129
	65	5	9	11	13	103
	65	5	28	11	13	122
	70	6	31	11	13	130
	70	6	31	11	12	130
	75	5	28	11	12	131
	80	3	24	11	13	131
	85	1	20	11	13	131
	85	1	9	11	13	119
	90	0	5	11	11	117
	95	0	0	11	7	113
	95	0	0	11	4	110
	100	0	0	11	1	112
	100	0	0	11	0	111
Peak Parking Demand	**100**	**6**	**31**	**11**	**13**	**135**

Peak Parking Demands (Saturday)

Time	Hotel	Office	Medical Office	Service Shop	Retail
7:00	90%	20%	0%	100%	5%
8:00	80%	60%	90%	100%	10%
9:00	70%	80%	90%	100%	30%
10:00	60%	90%	100%	100%	50%
11:00	60%	100%	100%	100%	65%
12:00	55%	90%	30%	100%	80%
1:00	55%	80%	0%	100%	90%
2:00	60%	60%	0%	100%	100%
3:00	60%	40%	0%	100%	100%
4:00	65%	20%	0%	100%	95%
5:00	70%	10%	0%	100%	90%
6:00	75%	5%	0%	100%	80%
7:00	75%	0%	0%	100%	75%
8:00	80%	0%	0%	100%	65%
9:00	85%	0%	0%	100%	50%
10:00	95%	0%	0%	100%	35%
11:00	100%	0%	0%	100%	15%
12:00	100%	0%	0%	100%	0%

	Hotel	Office	Medical Office	Service Shop	Retail	Total Zone
Proposed Parking Spaces	**150**	**9**	**46**	**17**	**20**	**242**
	90	1	0	11	1	**103**
	80	4	28	11	1	**123**
	70	5	28	11	4	**118**
	60	5	31	11	7	**114**
	60	6	31	11	9	**116**
	55	5	9	11	11	**91**
	55	5	0	11	12	**83**
	60	4	0	11	13	**88**
	60	2	0	11	13	**87**
	65	1	0	11	13	**90**
	70	1	0	11	12	**94**
	75	0	0	11	11	**97**
	75	0	0	11	10	**96**
	80	0	0	11	9	**100**
	85	0	0	11	7	**103**
	95	0	0	11	5	**111**
	100	0	0	11	2	**113**
	100	0	0	11	0	**111**
Peak Parking Demand	**100**	**6**	**31**	**11**	**13**	**123**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 33.5% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).

Oro Valley Village Center
Parking Analysis

ZONE 3

Shared Interaction
Multi-Modal Reduction
Total Reduction

Peak Parking Demands (Weekday)

Time	Shopping Center	Office
7:00	5%	30%
8:00	15%	75%
9:00	35%	95%
10:00	65%	100%
11:00	85%	100%
12:00	95%	90%
1:00	100%	90%
2:00	95%	100%
3:00	90%	100%
4:00	90%	90%
5:00	95%	50%
6:00	95%	25%
7:00	95%	10%
8:00	80%	7%
9:00	50%	3%
10:00	30%	1%
11:00	10%	0%
12:00	0%	0%

	Retail	Office	Total Zone
Proposed Parking	**281**	**11**	**292**
	9	2	12
	28	5	34
	65	7	72
	121	7	129
	159	7	166
	178	7	184
	187	7	193
	178	7	185
	168	7	175
	168	7	175
	178	4	181
	178	2	179
	178	1	178
	149	1	150
	93	0	94
	56	0	56
	19	0	19
	0	0	0
Peak Parking Demand	**187**	**7**	**193**

Peak Parking Demands (Saturday)

Time	Shopping Center	Office
7:00	5%	20%
8:00	10%	60%
9:00	30%	80%
10:00	50%	90%
11:00	65%	100%
12:00	80%	90%
1:00	90%	80%
2:00	100%	60%
3:00	100%	40%
4:00	95%	20%
5:00	90%	10%
6:00	80%	5%
7:00	75%	0%
8:00	65%	0%
9:00	50%	0%
10:00	35%	0%
11:00	15%	0%
12:00	0%	0%

	Retail	Office	Total Zone
Proposed Parking	**281**	**11**	**292**
	9	1	11
	19	4	23
	56	6	62
	93	7	100
	121	7	129
	149	7	156
	168	6	174
	187	4	191
	187	3	190
	178	1	179
	168	1	169
	149	0	150
	140	0	140
	121	0	121
	93	0	93
	65	0	65
	28	0	28
	0	0	0
Peak Parking Demand	**187**	**7**	**191**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 33.5% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).

Oro Valley Village Center
Parking Analysis

30%	
5%	
34%	

Oro Valley Village Center
Parking Analysis

ZONE 4

Shared Interaction	0%
Multi-Modal Reduction	5%
Total Reduction	**5%**

Peak Parking Demands (Weekday)

Time	Retail
7:00	5%
8:00	15%
9:00	35%
10:00	65%
11:00	85%
12:00	95%
1:00	100%
2:00	95%
3:00	90%
4:00	90%
5:00	95%
6:00	95%
7:00	95%
8:00	80%
9:00	50%
10:00	30%
11:00	10%
12:00	0%

	Retail
Proposed Parking	**1172**
	56
	167
	390
	724
	946
	1058
	1113
	1058
	1002
	1002
	1058
	1058
	1058
	891
	557
	334
	111
	0
Peak Parking Demand	**1113**

Peak Parking Demands (Saturday)

Time	Retail
7:00	5%
8:00	10%
9:00	30%
10:00	50%
11:00	65%
12:00	80%
1:00	90%
2:00	100%
3:00	100%
4:00	95%
5:00	90%
6:00	80%
7:00	75%
8:00	65%
9:00	50%
10:00	35%
11:00	15%
12:00	0%

	Retail
Proposed Parking	**1172**
	56
	111
	334
	557
	724
	891
	1002
	1113
	1113
	1058
	1002
	891
	835
	724
	557
	390
	167
	0
Peak Parking Demand	**1113**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 0% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).

Oro Valley Village Center
Parking Analysis

ZONE 5 and 6

Shared Interaction	30%
Multi-Modal Reduction	5%
Total Reduction	**34%**

Peak Parking Demands (Weekday)

Time	Casual Restaurant	Recreation	Retail	Community Park	Hotel	Theater
7:00	0%	10%	5%	100%	95%	0%
8:00	0%	30%	15%	100%	90%	0%
9:00	0%	10%	35%	100%	80%	0%
10:00	15%	10%	65%	100%	70%	0%
11:00	40%	5%	85%	100%	70%	0%
12:00	75%	100%	95%	100%	65%	20%
1:00	75%	100%	100%	100%	65%	45%
2:00	65%	33%	95%	100%	70%	55%
3:00	40%	10%	90%	100%	70%	55%
4:00	50%	10%	90%	100%	75%	55%
5:00	75%	30%	95%	100%	80%	60%
6:00	95%	55%	95%	100%	85%	60%
7:00	100%	60%	95%	100%	85%	80%
8:00	100%	70%	80%	100%	90%	100%
9:00	100%	67%	50%	100%	95%	100%
10:00	95%	60%	30%	100%	95%	80%
11:00	75%	40%	10%	100%	100%	65%
12:00	25%	30%	0%	100%	100%	40%

	Casual Restaurant	Recreation	Retail	Community Park	Hotel	Theater	Total Zone
Proposed Parking	**321**	**166**	**903**	**7**	**108**	**643**	**2148**
	0	11	30	5	68	0	114
	0	33	90	5	65	0	192
	0	11	210	5	57	0	283
	32	11	390	5	50	0	488
	85	6	510	5	50	0	656
	160	110	570	5	47	86	978
	160	110	600	5	47	192	1115
	139	36	570	5	50	235	1036
	85	11	540	5	50	235	927
	107	11	540	5	54	235	952
	160	33	570	5	57	257	1082
	203	61	570	5	61	257	1156
	213	66	570	5	61	342	1258
	213	77	480	5	65	428	1268
	213	74	300	5	68	428	1088
	203	66	180	5	68	342	864
	160	44	60	5	72	278	619
	53	33	0	5	72	171	334
Peak Parking Demand	**213**	**110**	**600**	**5**	**72**	**428**	**1268**

Peak Parking Demands (Saturday)

Time	Casual Restaurant	Recreation	Retail	Community Park	Hotel	Theater
7:00	0%	10%	5%	100%	90%	0%
8:00	0%	30%	10%	100%	80%	0%
9:00	0%	10%	30%	100%	70%	0%
10:00	0%	10%	50%	100%	60%	0%
11:00	15%	5%	65%	100%	60%	0%
12:00	50%	100%	80%	100%	55%	20%
1:00	55%	100%	90%	100%	55%	45%
2:00	45%	33%	100%	100%	60%	55%
3:00	45%	10%	100%	100%	60%	55%
4:00	45%	10%	95%	100%	65%	55%
5:00	60%	30%	90%	100%	70%	60%
6:00	90%	55%	80%	100%	75%	60%
7:00	95%	60%	75%	100%	75%	80%
8:00	100%	70%	65%	100%	80%	100%
9:00	90%	67%	50%	100%	85%	100%
10:00	90%	60%	35%	100%	95%	100%
11:00	90%	40%	15%	100%	100%	80%
12:00	50%	30%	0%	100%	100%	50%

	Casual Restaurant	Recreation	Retail	Community Park	Hotel	Theater	Total Zone
Proposed Parking	**321**	**166**	**903**	**7**	**108**	**643**	**2148**
	0	11	30	5	65	0	110
	0	33	60	5	57	0	155
	0	11	180	5	50	0	246
	0	11	300	5	43	0	359
	32	6	390	5	43	0	476
	107	110	480	5	40	86	827
	117	110	540	5	40	192	1005
	96	36	600	5	43	235	1016
	96	11	600	5	43	235	991
	96	11	570	5	47	235	964
	128	33	540	5	50	257	1013
	192	61	480	5	54	257	1048
	203	66	450	5	54	342	1120
	213	77	390	5	57	428	1171
	192	74	300	5	61	428	1060
	192	66	210	5	68	428	969
	192	44	90	5	72	342	745
	107	33	0	5	72	214	430
Peak Parking Demand	**213**	**110**	**600**	**5**	**72**	**428**	**1171**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 33.5% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).
3. No parking reductions are applied to residential land uses.

Oro Valley Village Center
Parking Analysis

ZONE 6

Shared Interaction	0%
Multi-Modal Reduction	0%
Total Reduction	**0%**

Peak Parking Demands (Weekday)

Time	Residential	Fast Food Restaruant
7:00	90%	10%
8:00	85%	20%
9:00	80%	30%
10:00	75%	55%
11:00	70%	85%
12:00	65%	100%
1:00	70%	100%
2:00	70%	90%
3:00	70%	60%
4:00	75%	55%
5:00	85%	60%
6:00	90%	85%
7:00	97%	80%
8:00	98%	50%
9:00	99%	30%
10:00	100%	20%
11:00	100%	10%
12:00	100%	5%

	Apartments	Fast Food Restaurant	Total Zone
Proposed Parking	**445**	**75**	**520**
	401	8	**408**
	378	15	**393**
	356	23	**379**
	334	41	**375**
	312	64	**375**
	289	75	**364**
	312	75	**387**
	312	68	**379**
	312	45	**357**
	334	41	**375**
	378	45	**423**
	401	64	**464**
	432	60	**492**
	436	38	**474**
	441	23	**463**
	445	15	**460**
	445	8	**453**
	445	4	**449**
Peak Parking Demand	**445**	**75**	**492**

Peak Parking Demands (Saturday)

Time	Residential	Fast Food Restaruant
7:00	90%	10%
8:00	85%	20%
9:00	80%	30%
10:00	75%	55%
11:00	70%	85%
12:00	65%	100%
1:00	70%	100%
2:00	70%	90%
3:00	70%	60%
4:00	75%	55%
5:00	85%	60%
6:00	90%	85%
7:00	97%	80%
8:00	98%	50%
9:00	99%	30%
10:00	100%	20%
11:00	100%	10%
12:00	100%	5%

	Apartments	Fast Food Restaurant	Total Zone
Proposed Parking	**445**	**75**	**520**
	401	8	**408**
	378	15	**393**
	356	23	**379**
	334	41	**375**
	312	64	**375**
	289	75	**364**
	312	75	**387**
	312	68	**379**
	312	45	**357**
	334	41	**375**
	378	45	**423**
	401	64	**464**
	432	60	**492**
	436	38	**474**
	441	23	**463**
	445	15	**460**
	445	8	**453**
	445	4	**449**
Peak Parking Demand	**445**	**75**	**492**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 0% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).

Oro Valley Village Center
Parking Analysis

Shared Interaction	30%
Multi-Modal Reduction	5%
Total Reduction	**34%**

ZONE 7

Peak Parking Demands (Weekday)

Time	Casual Restaurant	Retail	Financial Services	Hotel
7:00	0%	5%	0%	95%
8:00	0%	15%	50%	90%
9:00	0%	35%	90%	80%
10:00	15%	65%	100%	70%
11:00	40%	85%	50%	70%
12:00	75%	95%	50%	65%
1:00	75%	100%	50%	65%
2:00	65%	95%	70%	70%
3:00	40%	90%	50%	70%
4:00	50%	90%	80%	75%
5:00	75%	95%	100%	80%
6:00	95%	95%	0%	85%
7:00	100%	95%	0%	85%
8:00	100%	80%	0%	90%
9:00	100%	50%	0%	95%
10:00	95%	30%	0%	95%
11:00	75%	10%	0%	100%
12:00	25%	0%	0%	100%

	Casual Restaurant	Retail	Financial Services	Hotel	Total
Proposed Parking	**71**	**80**	**16**	**112**	**279**
	0	3	0	71	**73**
	0	8	5	67	**80**
	0	19	10	60	**88**
	7	35	11	52	**104**
	19	45	5	52	**122**
	35	51	5	48	**140**
	35	53	5	48	**142**
	31	51	7	52	**141**
	19	48	5	52	**124**
	24	48	9	56	**136**
	35	51	11	60	**156**
	45	51	0	63	**159**
	47	51	0	63	**161**
	47	43	0	67	**157**
	47	27	0	71	**145**
	45	16	0	71	**132**
	35	5	0	74	**115**
	12	0	0	74	**86**
Peak Parking Demand	**47**	**53**	**11**	**74**	**161**

Peak Parking Demands (Saturday)

Time	Casual Restaurant	Retail	Financial Services	Hotel
7:00	0%	5%	0%	90%
8:00	0%	10%	25%	80%
9:00	0%	30%	40%	70%
10:00	0%	50%	75%	60%
11:00	15%	65%	100%	60%
12:00	50%	80%	90%	55%
1:00	55%	90%	0%	55%
2:00	45%	100%	0%	60%
3:00	45%	100%	0%	60%
4:00	45%	95%	0%	65%
5:00	60%	90%	0%	70%
6:00	90%	80%	0%	75%
7:00	95%	75%	0%	75%
8:00	100%	65%	0%	80%
9:00	90%	50%	0%	85%
10:00	90%	35%	0%	95%
11:00	90%	15%	0%	100%
12:00	50%	0%	0%	100%

	Casual Restaurant	Retail	Financial Services	Hotel	Total
Proposed Parking	**71**	**80**	**16**	**112**	**279**
	0	3	0	67	**70**
	0	5	3	59	**67**
	0	16	4	52	**73**
	0	27	8	45	**79**
	7	35	11	45	**97**
	24	43	10	41	**117**
	26	48	0	41	**115**
	21	53	0	45	**119**
	21	53	0	45	**119**
	21	51	0	48	**120**
	28	48	0	52	**128**
	42	43	0	56	**141**
	45	40	0	56	**141**
	47	35	0	60	**141**
	42	27	0	63	**132**
	42	19	0	71	**132**
	42	8	0	74	**125**
	24	0	0	74	**98**
Peak Parking Demand	**47**	**53**	**11**	**74**	**141**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 33.5% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).

Oro Valley Village Center
Parking Analysis

ZONE 8

Shared Interaction	30%
Multi-Modal Reduction	5%
Total Reduction	**34%**

Peak Parking Demands (Weekday)

Time	Fast Food Restaurant/Gas Station	Retail
7:00	10%	5%
8:00	20%	15%
9:00	30%	35%
10:00	55%	65%
11:00	85%	85%
12:00	100%	95%
1:00	100%	100%
2:00	90%	95%
3:00	60%	90%
4:00	55%	90%
5:00	60%	95%
6:00	85%	95%
7:00	80%	95%
8:00	50%	80%
9:00	30%	50%
10:00	20%	30%
11:00	10%	10%
12:00	5%	0%

	Fast Food Restaurant/Gas Station	Retail	Total
Proposed Parking	**123**	**64**	**187**
	8	2	**10**
	16	6	**23**
	25	15	**39**
	45	28	**73**
	70	36	**106**
	82	40	**122**
	82	43	**124**
	74	40	**114**
	49	38	**87**
	45	38	**83**
	49	40	**90**
	70	40	**110**
	65	40	**106**
	41	34	**75**
	25	21	**46**
	16	13	**29**
	8	4	**12**
	4	0	**4**
Peak Parking Demand	**82**	**43**	**124**

Peak Parking Demands (Saturday)

Time	Fast Food Restaurant/Gas Station	Retail
7:00	10%	5%
8:00	20%	10%
9:00	30%	30%
10:00	55%	50%
11:00	85%	65%
12:00	100%	80%
1:00	100%	90%
2:00	90%	100%
3:00	60%	100%
4:00	55%	95%
5:00	60%	90%
6:00	85%	80%
7:00	80%	75%
8:00	50%	65%
9:00	30%	50%
10:00	20%	35%
11:00	10%	15%
12:00	5%	0%

	Fast Food Restaurant/Gas Station	Retail	Total
Proposed Parking	**123**	**64**	**187**
	8	2	**10**
	16	4	**21**
	25	13	**37**
	45	21	**66**
	70	28	**97**
	82	34	**116**
	82	38	**120**
	74	43	**116**
	49	43	**92**
	45	40	**85**
	49	38	**87**
	70	34	**104**
	65	32	**97**
	41	28	**69**
	25	21	**46**
	16	15	**31**
	8	6	**15**
	4	0	**4**
Peak Parking Demand	**82**	**43**	**120**

NOTES:
The peak parking demand percentages utilized are obtained from Urban Land Institute (ULI) guidelines.

For the purposes of this Peak Parking Analysis:
1. Retail stores were analyzed assuming the same peak parking requirements as shopping center.
2. A 33.5% reduction in the parking demand was taken to account for parking interaction (multiple store visits on one vehicle trip to the site, which requires only one parking space).

ORO VALLEY VILLAGE CENTER
TANGERING ROAD/ORACLE ROAD
PARKING ANALYSIS

APPENDIX

Comment Resolution

SOUTHWEST TRAFFIC ENGINEERING, LLC

Oro Valley Village Center
Parking Analysis Dated 27 May 2020
Comment Resolution

12/9/2020

Page No.	Reviewer	Code	Comment	Response
			Traffic Comments	
6	Oro Valley	A	Per Section 27.7.C.2, the amount of mobility-impaired spaces and bicycle spaces must be maintained. As such, please include the amounts of each in this breakdown.	See revised report.
9	Oro Valley	D	Per the narrative, the spaces for the apartments should not be included [in the shared parking reduction] as they are gated and not shared. As such, this number [required parking spaces with shared reduction] seems incorrect since it includes the spaces for both apartments.	Shared parking was not used with the apartment land uses. The headers of the table have been reworded clarification. The far right column table shows the required parking spaces after parking interaction and multi-modal reductions have been applied.

A - Will Revise
B - Consultant to Evaluate
C - Town of Oro Valley to Evaluate
D - See Response