VIII. CONCLUSIONS AND RECOMMENDATIONS

The Borgata at San Tan Valley is being planned to include a mixture of single-family residential, multifamily residential units, and commercial uses on approximately 100 acres. Initial opening of site ("Parcel A" - 430 units of multifamily residential) is planned for year 2023. Full build out of the site is assumed to occur by 2026.

External access points for the overall development site are proposed to be provided on Hunt Highway, Thompson Road, and San Tan Heights Boulevard, the latter of which will be extended from its current terminus to Hunt Highway. At the time of final site planning of the site's individual parcels, the access spacing and function should be designed per the *Pinal County Access Management Manual, 2017*.

On a typical weekday at full build out the proposed development is estimated to generate 688 trips in the AM peak hour, 1,276 trips in the PM peak hour, and 15,425 daily trips.

The proposed development under its proposed zoning is estimated to generate 6,043 fewer daily trips in comparison to allowable potential commercial development under the existing zoning of the site.

The signalized study area intersections along Hunt Highway operate at level of service (LOS) D or better in the AM and PM peak hours in the existing year 2021. All movements at the stop-controlled study area intersections operate at LOS C or better in the AM and PM peak hours in the existing year 2021.

For background traffic conditions, in 2026 several of the study area signalized intersections on Hunt Highway are forecasted to begin to operate at LOS E or LOS F in the AM and/or PM peak hours due to the projected ambient traffic growth and additional developments in the area. All movements at the existing stop-controlled intersections continue to operate at LOS C or better in the AM and PM peak hours through horizon background year 2036. Hunt Highway having its ultimate section (3 through lanes in each direction) would provide additional approach lanes at the intersections; the enhanced capacity would improve the forecasted level of service at the intersections from Empire Boulevard to Gary Road through the background year 2036. The full section of Hunt Highway will ultimately be implemented through developer-led improvements as Pinal County's recent Hunt Highway CIP implemented the current section of 2 through lanes in each direction.

It is reasonably assumed by full buildout year 2036, Hunt Highway will be constructed to its ultimate section (3 through lanes in each direction) by developer improvements, which will provide additional capacity at the intersections. For total traffic conditions, several of the study area signalized intersections along Hunt Highway are forecasted to operate at LOS E or LOS F in the AM and/or PM peak hours due to the projected ambient traffic growth and additional developments in the area. The compounded

annual growth rate (CAGR) applied to the existing collected traffic volumes as part of this study is greater than the MAG-provided CAGR due to general developments occurring and planned in the study area. If ultimately the future projected traffic volumes based on the annual growth rates utilized for the purposes of this study are not realized, the reported forecasted levels of service would be improved at the Hunt Highway intersections.

At the site accesses intersections with Hunt Highway, the exiting driveway movements may experience average delay resulting in LOS E or LOS F in the peak hours, which is typical for stop-controlled movements from minor streets as they wait for an acceptable gap to turn onto to free-flowing major streets during the peak hours (Hunt Highway legs are LOS A). The total turn volumes with forecasted LOS E or LOS F are relatively minor, and the 95th percentile queue lengths of these legs are calculated to be minimal (See Section VII.F.1).

Traffic signal warrants are met at the planned intersection of Hunt Highway & San Tan Heights Boulevard/Spring Valley Parkway. Per input by Pinal County Engineering and Planning staff, a traffic signal will begin design in July 2021 for the Spring Valley Parkway leg of this intersection funded by the Promenade development. Signalization of this intersection is assumed to be implemented by year 2023.

Based on this Traffic Impact Study, the following recommendations apply for the Development:

- Provide right-of-way dedication and construction of the half-street improvements along the property's Hunt Highway frontage (Major Arterial/Regionally Significant Route) per coordination and input from the Pinal County Engineering staff. This should include width for the ultimate three southeast-bound through lanes.
- Provide right-of-way dedication and construction of the half-street improvements of San Tan Heights Boulevard along the property's frontage. Planned improvements include the completion of San Tan Heights Boulevard between Hunt Highway and its existing terminus approximately 2,100 feet south of Hunt Highway. The required right-of-way dedication and roadway improvements for San Tan Heights Boulevard should be per Exhibit 6.2 of the and/or per input and coordination with Pinal County Engineering staff. Appropriate right-of-way should be provided and account for any required turn lanes at the Hunt Highway & San Tan Heights Boulevard/Spring Valley Parkway intersection.
- Provide for and incorporate the San Tan Heights Boulevard leg into the planned signalized intersection of Hunt Highway & San Tan Heights/Spring Valley Parkway.

- Lane configuration of the northeast-bound San Tan Heights Boulevard approach at Hunt Highway should be planned to include dual left turn lanes, a through lane, and a right-turn lane.
- At the time of site planning for each individual parcel of the Development, the location and function of site access driveways should be per the *Pinal County Access Management Manual, 2017*.
- Provide dedicated right-turn and left-turn lanes at the proposed site access intersections and site access points as follows:
    - Hunt Highway/San Tan Heights Boulevard:
        - Left Turn Lanes
            - Northeast-bound – provide dual lefts with **225 feet storage length**
            - Northwest-bound – provide **325 feet storage length**
        - Right Turn Lanes
            - Northeast-bound – provide **175 feet storage length**
            - Southeast-bound – provide **175 feet storage length**
    - For all of the required left- and right-turn lanes at the site access driveways on Hunt Highway, San Tan Heights Boulevard, and Thompson Road, provide a minimum of **100 feet storage length**; the exception is the right-turn lane on southwest-bound San Tan Heights Boulevard at Access H which should have a minimum of **125 feet storage length**.
- Adequate sight distances and sight distance triangles at the site access points should be provided per AASHTO's A Policy on Geometric Design of Highways and Streets, Section 9.5, the Pinal County Traffic Impact Assessment Guidelines & Procedures and Subdivision and Infrastructure Design Manual.
- At the time of actual site planning of the individual parcels of the site, a subsequent Traffic Impact Analysis(es) should be conducted providing updated evaluations of the right turn lane warrants, queue length analyses, and storage lane length requirements based on refined traffic volume forecasts.

The following recommendations are for consideration for Pinal County and/or the Town of Queen Creek by horizon year 2036:

- Continually update and optimize signal timings at the study area signalized intersections along Hunt Highway based on actual traffic volumes once additional development occurs and ambient growth in the area is realized.

IX. LIMITATIONS

Our professional services have been performed using the degree of skill ordinarily exercised, under similar circumstances, by reputable transportation engineering firms practicing in this locality. No other warranty, expressed or implied, is made.

The contents of this report are intended for the sole use of the addressee and his/her designees. In completing this report, data was obtained from a variety of sources (i.e. City, County, State and Federal sources); United Civil Group has assumed these sources to be reliable and accurate. Should deviations from this report be noted, this firm shall be contacted for review of the area of concern.

Every reasonable attempt was made to acquire recent traffic impact studies, traffic projections and/or data that may be helpful in more accurately projecting traffic volumes. United Civil Group is not responsible for incorporating data made available after this document has been finalized.

This report is issued with the understanding that it is the responsibility of the owner to see that its provisions are carried out or brought to the attention of those concerned. In the event that any changes of the proposed project are planned, the conclusions and recommendations contained in this report shall be reviewed and the report shall be modified or supplemented as necessary.

X. SOURCES

A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2018.

Highway Capacity Manual, HCM, Transportation Research Board, 2010.

Manual on Uniform Traffic Control Devices, Federal Highway Administration, MUTCD 2009.

Pinal County Access Management Manual, 2017.

Pinal County Regionally Significant Routes for Safety and Mobility Final Report, December 2008.

Pinal County Small Area Transportation Study Final Report, August 2006.

Pinal County Subdivision & Infrastructure Design Manual, latest updates.

Pinal County Traffic Assessment Guidelines & Procedures, January 2007.

Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.

APPENDIX A

Traffic Data

United Civil Group

Turning Movement Count

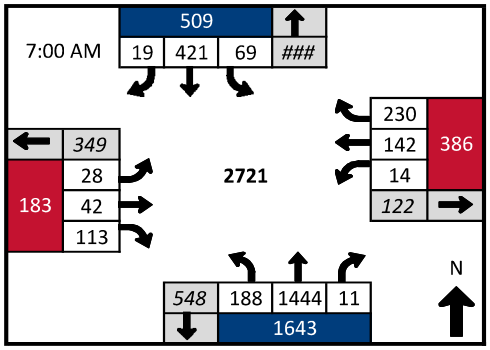
Project No: TR21056

Location: Ellsworth Road and Empire Boulevard

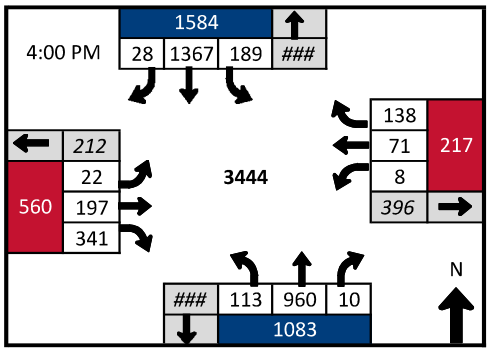
Intersection Configuration: Signalized

Jun-8-2021 (Tuesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	45	2		2	1			
Southbound	45	2		2		1		
Eastbound	45	1		2		1		
Westbound	45	1		2		1		



	Ellsworth Road Northbound				Ellsworth Road Southbound				Empire Boulevard Eastbound				Empire Boulevard Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	41	316	0	0	9	91	9	0	9	12	29	0	5	34	61	0	616	
7:15 AM	61	417	5	0	22	102	3	0	6	12	27	0	1	44	59	0	759	
7:30 AM	50	356	1	0	20	104	3	0	8	7	42	0	7	37	54	0	689	
7:45 AM	36	355	5	0	18	124	4	0	5	11	15	0	1	27	56	0	657	2721
8:00 AM	36	288	1	1	12	134	9	1	6	8	33	0	2	31	46	0	606	2711
8:15 AM	41	299	4	1	15	139	5	0	15	12	28	0	5	39	53	0	655	2607
8:30 AM	38	279	2	0	17	131	2	0	6	15	24	0	1	22	49	0	586	2504
8:45 AM	33	274	6	0	19	160	2	0	2	15	38	0	3	24	44	0	620	2467
Peak Hour Total	**188**	**1444**	**11**	**0**	**69**	**421**	**19**	**0**	**28**	**42**	**113**	**0**	**14**	**142**	**230**	**0**	**2721**	



	Ellsworth Road Northbound				Ellsworth Road Southbound				Empire Boulevard Eastbound				Empire Boulevard Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	22	225	4	1	51	339	9	0	5	42	68	1	2	12	26	0	805	
4:15 PM	27	249	3	0	38	351	4	0	3	52	79	0	2	23	32	0	863	
4:30 PM	35	225	2	0	57	345	5	0	10	47	90	0	1	18	35	0	870	
4:45 PM	29	261	1	1	43	332	10	0	4	56	104	0	3	18	45	0	906	3444
5:00 PM	27	213	6	0	39	285	12	0	6	53	74	0	1	15	40	0	771	3410
5:15 PM	35	242	3	0	49	313	8	0	5	49	73	0	0	16	31	0	824	3371
5:30 PM	23	210	4	0	35	341	11	0	5	52	82	0	3	14	32	0	812	3313
5:45 PM	14	199	6	0	48	306	5	0	7	44	87	0	0	8	31	0	755	3162
Peak Hour Total	**113**	**960**	**10**	**2**	**189**	**1367**	**28**	**0**	**22**	**197**	**341**	**1**	**8**	**71**	**138**	**0**	**3444**	

United Civil Group

Turning Movement Count

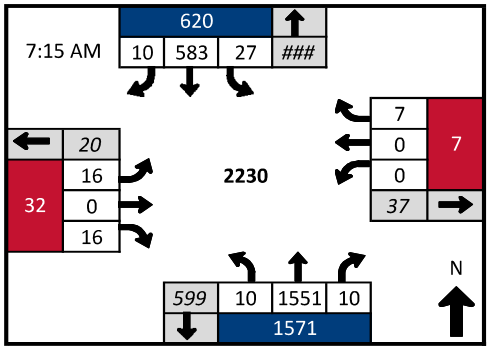
Project No: TR21056

Location: Hunt Highway and Ellsworth Avenue

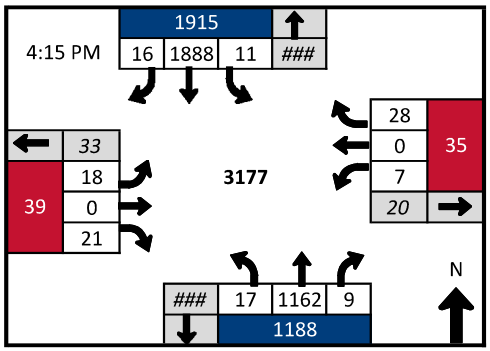
Intersection Configuration: Signalized

Jun-9-2021 (Wednesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	45	1		2		1		
Southbound	45	1		2		1		
Eastbound	25	1			1			
Westbound	25	1			1			



	Hunt Highway Northbound				Hunt Highway Southbound				Ellsworth Avenue Eastbound				Ellsworth Avenue Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	6	316	1	0	3	89	4	0	8	0	3	0	0	0	0	0	430	
7:15 AM	3	438	2	3	6	137	2	0	5	0	3	0	0	0	2	0	598	
7:30 AM	2	426	1	1	9	130	2	0	1	0	8	0	0	0	2	0	581	
7:45 AM	2	366	3	0	5	173	4	0	5	0	1	0	0	0	1	0	560	2169
8:00 AM	3	321	4	0	7	143	2	1	5	0	4	0	0	0	2	0	491	2230
8:15 AM	2	297	3	0	2	134	2	0	3	0	2	0	0	0	4	0	449	2081
8:30 AM	2	331	2	0	3	187	5	0	5	0	3	0	1	0	3	0	542	2042
8:45 AM	2	381	3	0	7	203	3	0	2	1	1	0	0	0	2	0	605	2087
Peak Hour Total	**10**	**1551**	**10**	**4**	**27**	**583**	**10**	**1**	**16**	**0**	**16**	**0**	**0**	**0**	**7**	**0**	**2230**	



	Hunt Highway Northbound				Hunt Highway Southbound				Ellsworth Avenue Eastbound				Ellsworth Avenue Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	2	254	2	0	4	409	7	0	2	0	5	0	3	0	6	0	694	
4:15 PM	5	291	2	0	4	477	6	0	6	0	8	0	4	0	5	0	808	
4:30 PM	3	289	3	0	5	477	5	0	2	0	4	0	1	0	11	0	800	
4:45 PM	4	314	2	0	2	488	3	0	8	0	7	0	1	0	8	0	837	3139
5:00 PM	5	268	2	0	0	446	2	0	2	0	2	0	1	0	4	0	732	3177
5:15 PM	3	261	3	1	2	491	2	0	0	0	2	0	2	0	8	0	774	3143
5:30 PM	2	227	0	0	0	466	6	0	4	0	7	0	0	0	2	0	714	3057
5:45 PM	3	254	1	0	1	519	3	0	3	0	6	0	0	0	2	0	792	3012
Peak Hour Total	**17**	**1162**	**9**	**0**	**11**	**1888**	**16**	**0**	**18**	**0**	**21**	**0**	**7**	**0**	**28**	**0**	**3177**	

United Civil Group

Turning Movement Count

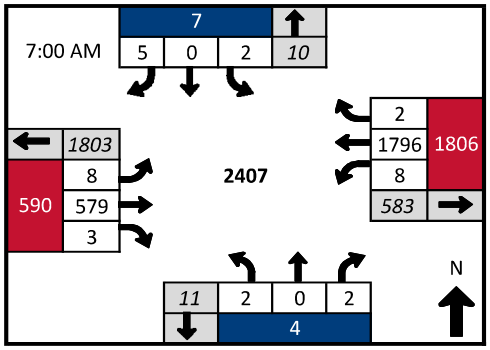
Project No: TR21056

Location: San Tan Flat Drive and Hunt Highway

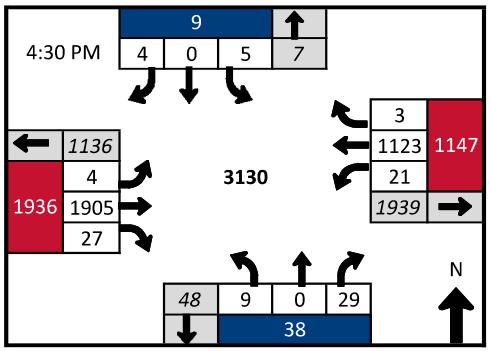
Intersection Configuration: Signalized

Jun-10-2021 (Thursday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	15	1			1			
Southbound	15	1			1			
Eastbound	45	1		2		1		
Westbound	45	1		2		1		



	San Tan Flat Drive				San Tan Flat Drive				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	2	0	0	0	0	0	0	0	2	118	0	0	2	440	0	1	564	
7:15 AM	0	0	0	0	1	0	3	0	1	154	0	0	1	483	0	0	643	
7:30 AM	0	0	0	0	0	0	1	0	1	130	0	0	2	418	0	0	552	
7:45 AM	0	0	2	0	1	0	1	0	4	177	3	0	3	455	2	1	648	2407
8:00 AM	0	0	2	0	0	0	5	0	2	139	0	0	0	302	1	0	451	2294
8:15 AM	0	0	1	0	0	0	2	0	0	161	0	0	0	389	0	0	553	2204
8:30 AM	0	0	1	0	0	0	0	0	2	166	0	0	1	345	0	1	515	2167
8:45 AM	0	0	1	0	0	0	0	0	0	171	1	0	1	357	0	0	531	2050
Peak Hour Total	**2**	**0**	**2**	**0**	**2**	**0**	**5**	**0**	**8**	**579**	**3**	**0**	**8**	**1796**	**2**	**2**	**2407**	



	San Tan Flat Drive				San Tan Flat Drive				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	3	0	5	0	0	0	4	0	5	401	2	0	6	236	0	1	662	
4:15 PM	1	0	11	0	1	0	3	0	3	445	7	0	1	251	1	0	724	
4:30 PM	1	0	6	0	1	0	0	0	1	460	4	0	5	300	2	1	780	
4:45 PM	3	0	8	0	0	0	1	0	1	483	7	1	9	298	0	0	810	2976
5:00 PM	3	0	8	0	1	0	1	0	0	473	8	0	6	265	0	0	765	3079
5:15 PM	2	0	7	0	3	0	2	0	2	489	8	0	1	260	1	0	775	3130
5:30 PM	5	0	6	0	0	0	0	0	3	466	4	0	3	259	0	0	746	3096
5:45 PM	5	0	1	0	2	0	1	0	3	431	5	0	6	187	1	0	642	2928
Peak Hour Total	**9**	**0**	**29**	**0**	**5**	**0**	**4**	**0**	**4**	**1905**	**27**	**1**	**21**	**1123**	**3**	**1**	**3130**	

United Civil Group

Turning Movement Count

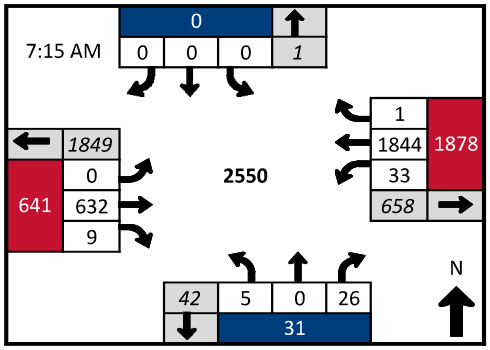
Project No: TR21056

Location: Leading Edge Academy and Hunt Highway

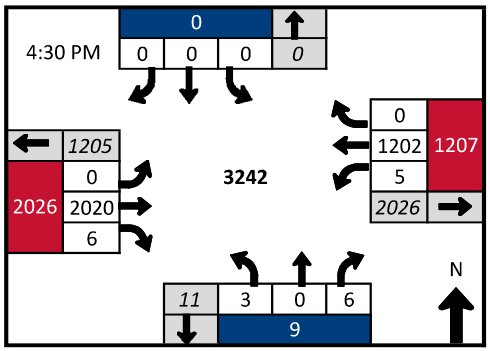
Intersection Configuration: Signalized

Jun-9-2021 (Wednesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	15	1				1		
Southbound	NA							
Eastbound	45			2		1		
Westbound	45	1		2				



	Leading Edge Academy				NA				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	0	0	0	96	1	0	1	430	0	0	528	
7:15 AM	0	0	1	0	0	0	0	0	0	150	4	0	3	521	0	3	679	
7:30 AM	0	0	0	0	0	0	0	0	0	145	0	0	8	467	0	0	620	
7:45 AM	3	0	19	0	0	0	0	0	0	170	3	0	19	447	0	0	661	2488
8:00 AM	2	0	6	0	0	0	0	0	0	167	2	1	3	409	1	0	590	2550
8:15 AM	0	0	2	0	0	0	0	0	0	156	2	0	1	405	0	0	566	2437
8:30 AM	1	0	1	0	0	0	0	0	0	195	3	0	1	378	0	0	579	2396
8:45 AM	1	0	1	0	0	0	0	0	0	220	1	0	3	371	0	0	597	2332
Peak Hour Total	**5**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**632**	**9**	**1**	**33**	**1844**	**1**	**3**	**2550**	



	Leading Edge Academy				NA				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	1	0	0	0	0	0	0	0	0	456	1	0	0	301	0	0	759	
4:15 PM	1	0	1	0	0	0	0	0	0	485	1	0	1	301	0	0	790	
4:30 PM	0	0	0	0	0	0	0	0	0	503	0	0	0	325	0	0	828	
4:45 PM	2	0	3	0	0	0	0	0	0	495	3	0	1	310	0	0	814	3191
5:00 PM	1	0	2	0	0	0	0	0	0	479	3	0	3	306	0	0	794	3226
5:15 PM	0	0	1	0	0	0	0	0	0	543	0	0	1	261	0	0	806	3242
5:30 PM	1	0	0	0	0	0	0	0	0	488	0	0	1	291	0	0	781	3195
5:45 PM	0	0	0	0	0	0	0	0	0	568	0	0	2	239	0	0	809	3190
Peak Hour Total	**3**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**2020**	**6**	**0**	**5**	**1202**	**0**	**0**	**3242**	

UCG
United Civil Group

Turning Movement Count

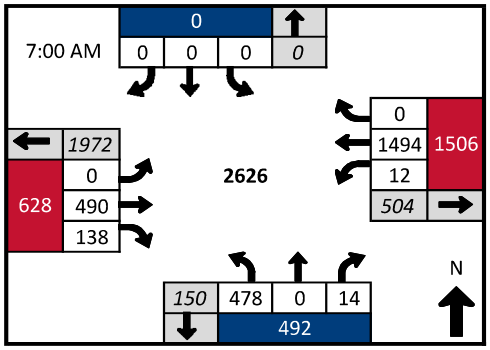
Project No: TR21056

Location: Thompson Road and Hunt Highway

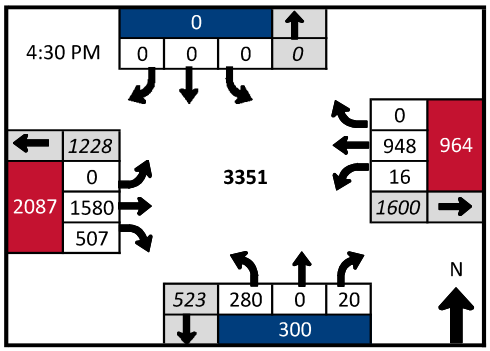
Intersection Configuration: Signalized

Jun-8-2021 (Tuesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	45	1				1		
Southbound	NA							
Eastbound	45			2		1		
Westbound	45	1		2				



	Thompson Road				NA				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	118	0	0	0	0	0	0	0	0	107	24	0	0	401	0	0	650	
7:15 AM	128	0	5	0	0	0	0	0	0	117	25	0	3	389	0	0	667	
7:30 AM	118	0	5	0	0	0	0	0	0	131	46	0	6	372	0	0	678	
7:45 AM	114	0	4	0	0	0	0	0	0	135	43	0	3	332	0	0	631	2626
8:00 AM	100	0	2	0	0	0	0	0	0	122	49	0	4	293	0	0	570	2546
8:15 AM	114	0	5	0	0	0	0	0	0	144	51	0	7	266	0	0	587	2466
8:30 AM	77	0	2	0	0	0	0	0	0	146	39	0	0	304	0	0	568	2356
8:45 AM	71	0	5	0	0	0	0	0	0	164	31	0	5	225	0	0	501	2226
Peak Hour Total	**478**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**490**	**138**	**0**	**12**	**1494**	**0**	**0**	**2626**	



	Thompson Road				NA				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	60	0	6	0	0	0	0	0	0	375	107	0	8	248	0	0	804	
4:15 PM	74	0	4	0	0	0	0	0	0	388	109	0	10	237	0	0	822	
4:30 PM	71	0	3	0	0	0	0	0	0	373	132	0	6	237	0	0	822	
4:45 PM	66	0	5	0	0	0	0	0	0	429	127	0	2	264	0	0	893	3341
5:00 PM	77	0	6	0	0	0	0	0	0	375	119	0	4	209	0	0	790	3327
5:15 PM	66	0	6	0	0	0	0	0	0	403	129	0	4	238	0	0	846	3351
5:30 PM	62	0	4	0	0	0	0	0	0	413	120	0	2	203	0	0	804	3333
5:45 PM	51	0	6	0	0	0	0	0	0	403	130	0	7	177	0	0	774	3214
Peak Hour Total	**280**	**0**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**1580**	**507**	**0**	**16**	**948**	**0**	**0**	**3351**	

United Civil Group

Turning Movement Count

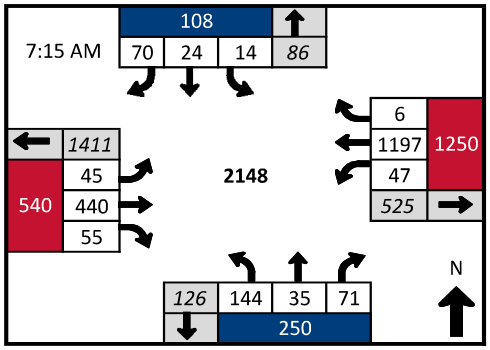
Project No: TR21056

Location: Mountain Vista Boulevard and Hunt Highway

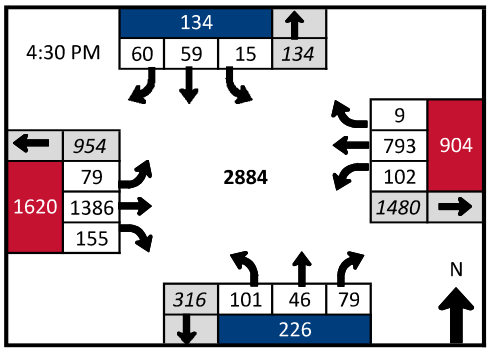
Intersection Configuration: Signalized

Jun-9-2021 (Wednesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	35	1			1			
Southbound	35	1			1			
Eastbound	45	1		2		1		
Westbound	45	1		2		1		



	Mountain Vista Boulevard				Mountain Vista Boulevard				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	50	13	11	0	5	2	24	0	8	66	6	0	11	281	3	0	480	
7:15 AM	43	9	18	0	3	4	21	0	16	99	7	0	10	337	2	0	569	
7:30 AM	35	8	16	0	4	3	16	0	11	99	10	0	13	311	1	0	527	
7:45 AM	36	9	13	0	4	7	17	0	11	125	17	0	13	290	2	0	544	2120
8:00 AM	30	9	24	0	3	10	16	0	7	117	21	0	11	259	1	0	508	2148
8:15 AM	29	12	14	0	5	8	20	0	20	115	15	0	13	255	1	0	507	2086
8:30 AM	35	12	25	0	4	9	21	0	9	131	14	0	7	226	3	0	496	2055
8:45 AM	23	7	15	0	4	4	27	0	12	157	26	0	23	234	1	0	533	2044
Peak Hour Total	**144**	**35**	**71**	**0**	**14**	**24**	**70**	**0**	**45**	**440**	**55**	**0**	**47**	**1197**	**6**	**0**	**2148**	



	Mountain Vista Boulevard				Mountain Vista Boulevard				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	22	13	20	0	9	10	24	0	22	298	32	0	17	198	2	0	667	
4:15 PM	38	10	11	0	3	12	14	0	24	326	37	0	24	176	3	0	678	
4:30 PM	26	12	18	0	2	11	7	0	16	354	44	0	23	216	2	0	731	
4:45 PM	37	6	19	0	3	15	20	0	22	345	28	0	28	187	2	0	712	2788
5:00 PM	15	18	26	0	3	16	21	0	19	333	35	0	25	202	2	0	715	2836
5:15 PM	23	10	16	1	7	17	12	0	22	354	48	0	26	188	3	0	726	2884
5:30 PM	33	12	14	0	5	18	17	0	23	325	50	0	19	183	2	0	701	2854
5:45 PM	22	7	22	0	4	16	15	0	14	370	48	0	25	171	0	0	714	2856
Peak Hour Total	**101**	**46**	**79**	**1**	**15**	**59**	**60**	**0**	**79**	**1386**	**155**	**0**	**102**	**793**	**9**	**0**	**2884**	

United Civil Group

Turning Movement Count

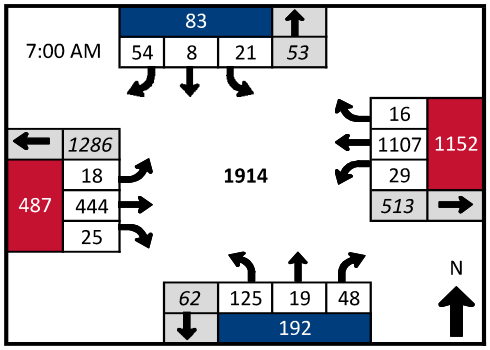
Project No: TR21056

Location: Village Lane and Hunt Highway

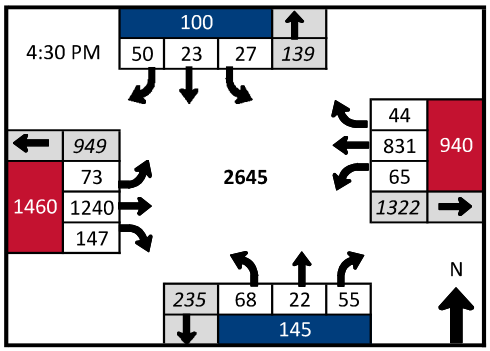
Intersection Configuration: Signalized

Jun-10-2021 (Thursday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	35	1			1			
Southbound	35	1			1			
Eastbound	45	1		2		1		
Westbound	45	1		2		1		



	Village Lane				Village Lane				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	39	6	5	0	6	1	15	0	3	106	4	0	6	286	3	0	480	
7:15 AM	25	1	16	0	6	0	10	0	4	108	5	0	9	279	5	0	468	
7:30 AM	30	2	11	0	3	3	16	0	4	101	7	0	6	272	2	0	457	
7:45 AM	31	10	16	0	6	4	13	0	7	129	9	0	8	270	6	0	509	1914
8:00 AM	30	4	12	0	2	3	17	0	4	124	7	0	6	202	8	0	419	1853
8:15 AM	31	0	13	0	3	3	16	0	4	102	10	0	4	221	5	0	412	1797
8:30 AM	32	5	15	0	3	2	13	0	9	130	17	0	9	211	4	0	450	1790
8:45 AM	15	1	8	0	4	5	11	0	4	121	12	0	6	197	3	0	387	1668
Peak Hour Total	**125**	**19**	**48**	**0**	**21**	**8**	**54**	**0**	**18**	**444**	**25**	**0**	**29**	**1107**	**16**	**0**	**1914**	



	Village Lane				Village Lane				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	14	4	11	0	7	5	8	0	20	306	35	0	11	203	8	0	632	
4:15 PM	19	7	10	0	6	3	13	0	15	303	29	0	16	204	13	0	638	
4:30 PM	15	4	14	0	5	3	19	0	22	337	33	0	17	217	8	0	694	
4:45 PM	23	4	10	0	7	9	10	0	14	276	36	0	18	221	10	0	638	2602
5:00 PM	15	10	13	0	6	4	6	0	21	321	42	0	8	209	13	0	668	2638
5:15 PM	15	4	18	0	9	7	15	0	16	306	36	0	22	184	13	0	645	2645
5:30 PM	23	3	13	0	4	9	10	0	18	324	46	0	18	179	16	0	663	2614
5:45 PM	19	4	13	0	8	8	10	0	23	318	40	0	12	187	13	0	655	2631
Peak Hour Total	**68**	**22**	**55**	**0**	**27**	**23**	**50**	**0**	**73**	**1240**	**147**	**0**	**65**	**831**	**44**	**0**	**2645**	

UCG
United Civil Group

Turning Movement Count

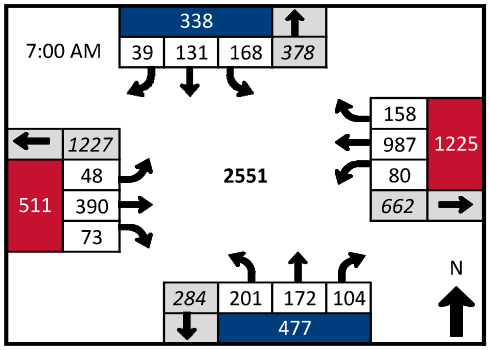
Project No: TR21056

Location: Gary Road
and Hunt Highway

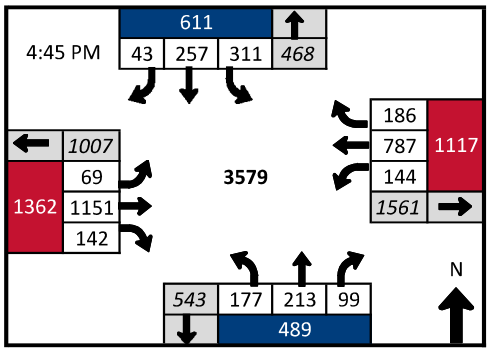
Intersection Configuration: Signalized

Jun-8-2021 (Tuesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	35	2		1	1			
Southbound	45	2		2		1		
Eastbound	45	1		2		1		
Westbound	45	1		2		1		



	Gary Road				Gary Road				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	38	37	27	0	36	36	9	4	10	91	20	0	13	254	30	0	601	
7:15 AM	56	44	24	0	37	35	9	0	6	95	16	0	27	279	42	0	670	
7:30 AM	68	46	24	2	57	30	8	0	20	88	19	2	21	215	46	2	642	
7:45 AM	39	45	29	0	38	30	13	0	12	116	18	0	19	239	40	5	638	2551
8:00 AM	42	43	22	0	50	38	6	1	10	92	13	0	15	172	44	0	547	2497
8:15 AM	29	46	17	0	35	26	11	1	12	109	24	2	24	207	42	0	582	2409
8:30 AM	44	51	16	0	40	30	9	0	11	102	18	0	8	177	44	0	550	2317
8:45 AM	38	29	19	1	52	33	15	0	13	135	25	0	16	177	28	0	580	2259
Peak Hour Total	**201**	**172**	**104**	**2**	**168**	**131**	**39**	**4**	**48**	**390**	**73**	**2**	**80**	**987**	**158**	**7**	**2551**	



	Gary Road				Gary Road				Hunt Highway				Hunt Highway				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	36	77	19	5	72	50	11	0	20	259	31	2	32	172	35	0	814	
4:15 PM	45	55	25	0	64	57	14	0	19	292	21	0	30	193	52	0	867	
4:30 PM	62	52	27	0	66	51	13	1	17	260	32	2	28	177	56	1	841	
4:45 PM	42	66	29	0	80	61	9	0	16	257	39	0	43	219	52	0	913	3435
5:00 PM	41	50	27	0	71	73	14	0	23	295	35	0	34	169	55	1	887	3508
5:15 PM	59	53	26	0	90	67	12	0	18	281	37	0	34	208	33	1	918	3559
5:30 PM	35	44	17	0	70	56	8	1	12	318	31	1	33	191	46	0	861	3579
5:45 PM	47	56	20	12	95	60	14	0	14	288	34	0	31	159	37	0	855	3521
Peak Hour Total	**177**	**213**	**99**	**0**	**311**	**257**	**43**	**1**	**69**	**1151**	**142**	**1**	**144**	**787**	**186**	**2**	**3579**	

United Civil Group

Turning Movement Count

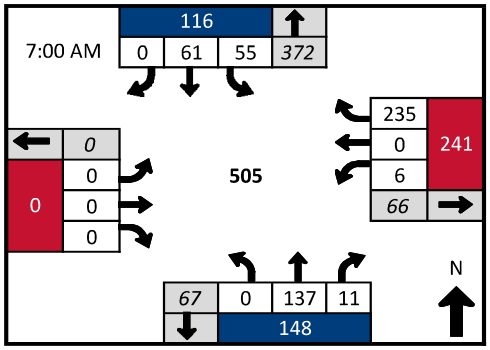
Project No: TR21056

Location: Thompson Road
and Mountain Vista Boulevard

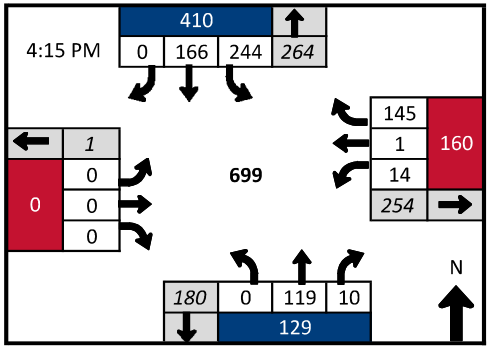
Intersection Configuration: Unsignalized

Jun-10-2021 (Thursday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	45			1	1			
Southbound	45		1					
Eastbound	NA							
Westbound	35	1				1		



	Thompson Road				Thompson Road				Mountain Vista Boulevard				Mountain Vista Boulevard				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	35	2	1	13	18	0	0	0	0	0	0	1	0	62	0	131	
7:15 AM	0	47	4	0	9	13	0	0	0	0	0	0	1	0	55	0	129	
7:30 AM	0	31	3	1	11	16	0	0	0	0	0	0	1	0	69	0	131	
7:45 AM	0	24	2	0	22	14	0	0	0	0	0	0	3	0	49	0	114	505
8:00 AM	0	29	1	0	11	22	0	0	0	0	0	0	1	0	65	0	129	503
8:15 AM	0	37	2	0	19	16	0	0	0	0	0	0	0	0	42	0	116	490
8:30 AM	1	31	2	0	10	14	0	0	0	0	0	0	0	0	57	0	115	474
8:45 AM	0	28	2	0	9	22	0	0	0	0	0	0	1	0	42	0	104	464
Peak Hour Total	**0**	**137**	**11**	**2**	**55**	**61**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**235**	**0**	**505**	



	Thompson Road				Thompson Road				Mountain Vista Boulevard				Mountain Vista Boulevard				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	0	29	3	0	59	36	0	0	0	0	0	0	5	0	35	0	167	
4:15 PM	0	33	2	0	55	47	0	0	0	0	0	0	3	0	31	0	171	
4:30 PM	0	28	2	0	69	41	0	0	0	0	0	0	1	0	34	0	175	
4:45 PM	0	21	1	1	58	33	0	0	0	0	0	0	7	1	45	0	166	679
5:00 PM	0	37	5	0	62	45	0	0	0	0	0	0	3	0	35	0	187	699
5:15 PM	0	27	2	0	58	44	0	0	0	0	0	0	1	0	28	1	160	688
5:30 PM	0	18	2	1	76	39	0	0	0	0	0	0	4	0	36	0	175	688
5:45 PM	0	9	4	0	69	49	0	0	0	0	0	0	7	0	31	0	169	691
Peak Hour Total	**0**	**119**	**10**	**1**	**244**	**166**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**1**	**145**	**0**	**699**	

United Civil Group

Turning Movement Count

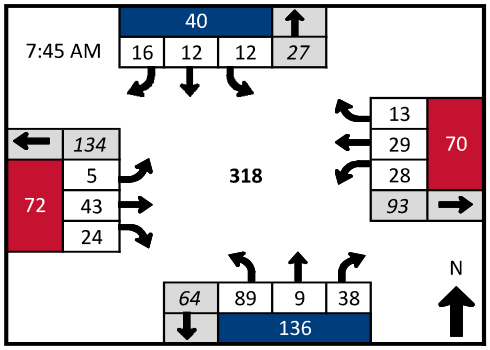
Project No: TR21056

Location: San Tan Heights Boulevard and Mountain Vista Boulevard

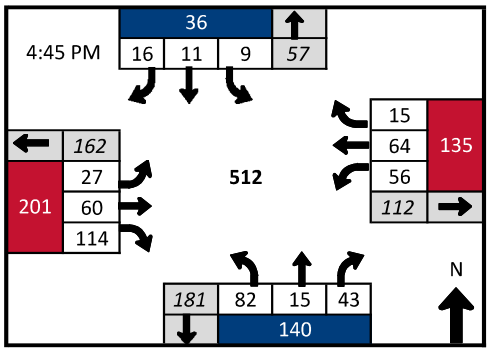
Intersection Configuration: Unsignalized

Jun-15-2021 (Tuesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	35						1	
Southbound	35						1	
Eastbound	35	1			1			
Westbound	35	1			1			



	San Tan Heights Boulevard				San Tan Heights Boulevard				Mountain Vista Boulevard				Mountain Vista Boulevard					
	Northbound				Southbound				Eastbound				Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	28	0	10	0	5	0	4	0	0	7	9	0	1	8	2	0	74	
7:15 AM	20	1	10	0	1	2	2	0	0	6	7	0	1	8	1	0	59	
7:30 AM	18	3	18	0	2	0	3	0	0	18	6	0	6	3	2	0	79	
7:45 AM	34	2	8	0	3	1	4	0	0	9	6	0	8	4	4	0	83	295
8:00 AM	20	3	7	0	3	1	4	0	3	15	5	0	5	9	4	0	79	300
8:15 AM	21	2	15	0	3	4	2	0	0	9	4	0	8	5	2	0	75	316
8:30 AM	14	2	8	0	3	6	6	0	2	10	9	0	7	11	3	0	81	318
8:45 AM	12	2	9	0	5	2	2	0	3	9	8	0	5	9	3	0	69	304
Peak Hour Total	**89**	**9**	**38**	**0**	**12**	**12**	**16**	**0**	**5**	**43**	**24**	**0**	**28**	**29**	**13**	**0**	**318**	



	San Tan Heights Boulevard				San Tan Heights Boulevard				Mountain Vista Boulevard				Mountain Vista Boulevard					
	Northbound				Southbound				Eastbound				Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	15	5	13	0	5	6	8	0	6	17	21	0	10	12	2	0	120	
4:15 PM	19	4	11	0	7	2	1	0	9	14	28	0	8	14	2	0	119	
4:30 PM	17	2	11	0	3	4	0	0	3	13	22	0	12	15	4	0	106	
4:45 PM	27	4	8	0	2	2	7	0	9	9	25	0	8	15	2	0	118	463
5:00 PM	19	2	9	0	3	6	3	0	5	18	36	0	12	15	6	0	134	477
5:15 PM	17	4	8	0	1	2	4	0	10	16	33	0	16	13	3	0	127	485
5:30 PM	19	5	18	0	3	1	2	0	3	17	20	0	20	21	4	0	133	512
5:45 PM	17	3	14	0	5	0	3	0	9	10	24	0	13	14	5	0	117	511
Peak Hour Total	**82**	**15**	**43**	**0**	**9**	**11**	**16**	**0**	**27**	**60**	**114**	**0**	**56**	**64**	**15**	**0**	**512**	

Preliminary Wastewater Report

For

Borgata-SkyHI

Pinal County, Arizona

Owner/Developer
Borgata Ventures, LLC
SkyHI Holdings, LLC
Galeb Companies
12340 Saratoga-Sunnyvale Rd
Saratoga, CA 95070
Contact: Peggy Galeb

Project No. 21-0512

Date: September 2021

1125 W. Pinnacle Peak Road, Suite 136
Phoenix, AZ 85027
o: 480.503.2250
f: 480.503.2258

Table of Contents

Appendices

1.0 Introduction

1.1 Plan Objective

The purpose of this report is to outline the proposed wastewater demands, analysis, and infrastructure improvements, utilizing design methodology outlined in EPCOR's Developer Engineering Guide, in support of a new development known as Borgata-SkyHI.

1.2 Site Location

Borgata-SkyHI is located in San Tan Valley, Arizona, and is bounded by Hunt Highway to the North and East, vacant land and Thompson Peak to the West, and the existing San Tan Heights development to the South. The site can be further located within a portion of Section 2, Township 3 South, Range 7 East of the Gila and Salt River Meridian, Maricopa County, Arizona. A vicinity map has been included in Appendix A.

1.3 Proposed Development

The project consists of varying types of land use. A portion will be dedicated as commercial development and the rest will be different types of residential development with different densities. A portion of the site is to be dedicated as single family residential lots with the other two land uses being medium to high density residential with their own type of products offered.

2.0 Design Criteria

2.1 Demands

The Average Daily Flow and Peaking Factor will be obtained from the *2020 Developer & Engineering Guide by EPCOR*. Minimum slope requirements, capacity ratios, pipe diameters, manhole spacing, and depth of cover will be determined from the D&EG as well. Below is the summary of demand factors from the D&EG.

1. Average Daily Wastewater Design Flows

Land Use	Unit	Average Daily Flow (gal/day/unit)	Peak Hour Peaking Factor
Active Adult	Dwelling	190	3.0
Single Family	Dwelling	240	3.0
Multi Family	Dwelling	180	3.0
Commercial[1]	Acre	1,500	3.0
Warehouse/Big Box Retail	1000 sq. ft.	25	3.0
Schools[1]	Acre	1,500	3.0
Resort	Room	380	3.0
Hotel (no restaurant)	Room	100	3.0
Hotel (with restaurant)	Room	150	3.0

[1]*Acreage is based on gross number of acres.*

A summary of modeling standards is included below.

Category	Value	Unit
Minimum Slope (8" Diameter)	0.368	%
Maximum Slope (8" Diameter)	6.760	%
Minimum Cover (Diameter < 12")	6	ft
Capacity Ratio (Peak Hour)	0.75	N/A
Manhole Spacing (8" <Diameter<18")	500	ft
Manhole Diameter (Diameter <15", Depth >10')	4	ft
Manning's Roughness	0.013	N/A

Supplemental design standards will be utilized from MAG and ADEQ for distribution system design and construction.

3.0 Demands

3.1 Demand Categories

The project will be utilizing Single Family, Multi-Family, and Commercial demand factors for determining the needs for the project (see Table in Section 2.1).

3.2 Zoning

There is no current zoning case associated with the proposed project improvements. A previous zoning case (PZ-PD-006-10) is associated with the project.

3.3 Demand Projections

The proposed phasing approach for the site is to develop each type of land use on its own one at a time. As the project progresses the final phasing order is to be implemented during final design reports and will be implemented that time. It will be necessary for the Multi-Family by others parcel to develop ahead of or at the least concurrently with other parcels in order to provide sewer for the remaining parcels.

3.4 Demand Summary

The site will be utilizing demands from a couple of different categories. A proposed 115 dwelling units of Single Family Residential will be modeled with a demand of 240 gallons per day per dwelling unit. The 156 cluster units from the medium density residential parcel will utilize the multi family demand factor of 180 gallons per day per dwelling unit. Both commercial parcels will be modeled using the commercial demand of 1,500 gallons per day per gross acre.

3.5 Demand Calculations

Utilizing the amount of units per parcel from the Site Plan, detailed demand calculations are as follows:

- Single Family: 112 dwelling units * 240 gal/day/du = 26,880 gal/day (ADD)
    - Peak Hour: 26,880 gal/day * 3.0 = 80,640 gal/day (PHD)
- Multi-Family: 156 dwelling units * 180 gal/day/du = 28,080 gal/day (ADD)
    - Peak Hour: 28,080 gal/day * 3.0 = 84,240 gal/day (PHD)
- Commercial: 3.43 gross ac * 1,500 gal/ac/day = 5,164 gal/day (ADD)
    - Peak Hour: 5,164 gal/day * 3.0 = 15,492 gal/day (PHD)

4.0 Existing Facilities

The existing sewer lines within W Hunt Highway are an 8" diameter force main that stems from an existing lift station at the northwest corner of the site and a 12" PVC sewer main. The 12" PVC sewer will be used to tie in the proposed sewer lines into.

5.0 Proposed Facilities

5.1 Minimum and Maximum Slopes

Based on a Manning's Roughness Coefficient of 0.013, the minimum slope for new sewer lines is based on the minimum velocity of 2.1 ft/s when flowing full, resulting in a slope of 0.368%. The maximum allowable velocity when flowing full is 9 ft/s, which prevents scour of the pipe, results in a slope of 6.760%.

5.2 Depth of Cover

For the purposes of this project, the sewer lines are anticipated to only require 8" lines which allow for a minimum cover of 6 ft.

5.3 Sewer Capacity Ratio

The maximum allowable ratio of depth of flow to pipe diameter is 0.75 when under peak hour flow.

5.4 Distribution System

The proposed distribution system piping will all be installing 8" PVC sewer lines based on the minimum requirements set forth in the D&EG.

5.5 Manhole Spacing

Including the required installation location of manholes (at grade changes, alignment changes, sewer intersections), additional manholes will be required every 500 ft of pipe for 8" pipes.

5.6 Manhole Diameter

The required manhole diameter given minimum cover and 8" pipes is 4 ft. If the sewer depth reaches 10 ft or greater, a 5 ft diameter manhole will need to be used.

5.7 Manhole Rim Elevations

Manholes will be above the 100-year floodplain elevation.

5.8 Phasing

The proposed phasing approach for the site is to develop each type of land use on its own one at a time. As the project progresses the final phasing order is to be implemented during final design reports and will be implemented that time. It will be

necessary for the Multi-Family by others parcel to develop ahead of or at the least concurrently with other parcels in order to provide sewer for the remaining parcels.

6.0 Wastewater Model

6.1 Description

The wastewater system will be modeled using Autodesk Storm and Sanitary Analysis 2018. The system will be evaluated for the average day demand and peak hour demand, and its resulting flow capacities and velocities.

6.2 Assumptions

Aside from the accepted demand factors, proposed sewer lines and their associated properties were imported from the Pipe Network created within Autodesk's Civil 3D. Additional factors and parameters to build the model include the Manning's n-value of 0.013.

6.3 Results

Below is a summary table of the observed results in the model.

Model Results by Parcel

Single-Family	**Flow (gpm)**	**d/D**	**Velocity (ft/s)**
Average Day Demand	19.17	0.06	0.34
Peak Hour Demand	57.50	0.28	1.58
Multi-Family	**Flow (gpm)**	**d/D**	**Velocity (ft/s)**
Average Day Demand	19.50	0.07	0.35
Peak Hour Demand	57.11	0.29	1.59
Commercial	**Flow (gpd)**	**d/D**	**Velocity (ft/s)**
Average Day Demand	3.59	0.03	0.15
Peak Hour Demand	10.76	0.15	1.61

7.0 Conclusions

- EPCOR Wastewater design standards will be met.
- Internal sewer lines are 8-inch diameter and remain within the required operating parameters set forth in the D&EG.

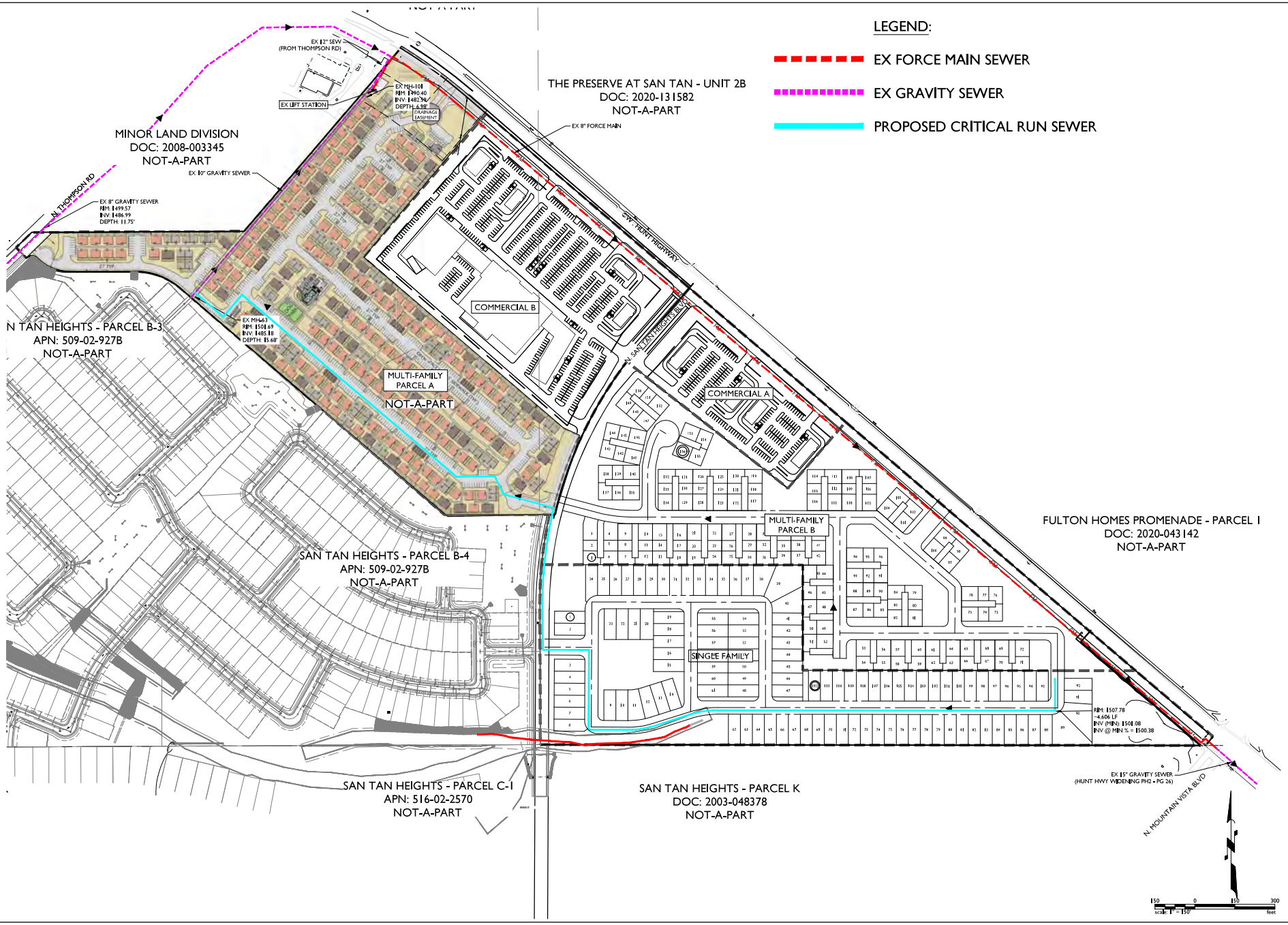
- Borgata-SkyHI will connect to an existing 8-inch sewer main located in W. Hunt Highway, to the East of the project.

8.0 References

2020 Developer & Engineering Guide, EPCOR Water Arizona Inc.

Appendix A:

Figures



21-0512

Sep 10, 2021 11:11am S:\Projects\2021\21-0512\Civil\Preliminary\Design\Sewer\21-0512 - Preliminary Sewer Exhibit.dwg

jgarcia

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w w w . e p s g r o u p i n c . c o m

Project:
BORGATA-SKYHI
PINAL COUNTY, AZ

PRELIMINARY SEWER EXHIBIT

Revisions:

Designer: CM
Drawn by: JLG

Preliminary
Not For
Construction
Or
Recording

Job No.
21-0512
PS01

Sheet No.
1
of 1

Appendix B:

Wastewater Model Results

Average Daily Sewer Flows and Pipe Capacity Using Manning's Equation

Project: Borgata-SkyHI

Prepared by: Jorge L. Garcia, EIT **Date:** 9/10/2021

Single-Family Calculations Assume 240 GPD/DU
Multi-Family Calculations Assume 180 GPD/DU
Commercial Calculations Assume 1,500 GPD/AC

Sewer Pipe Information					Additional Flow Information						Peak Demand Information					Full Flow Check		Non-Pressurized Flow Calculations					
Sewer Reach	Length (ft)	Pipe Diameter (in)	Slope (ft/ft)	Manning's Roughness	Description	Single-Family (DU)	Multi-Family (DU)	Commercial (AC)	Other Additional Contributing Flow (GPD)		Additional Upstream Flow (GPD)	Cumulative Daily Flow (GPD)	Peaking Factor	Peak Demand (GPD)	Peak Demand (MGD)	Peak Demand (cfs)	Full Flow Capacity (cfs)	Pressurized Flow?	Theta of flow (rad)	Depth of Flow (ft)	Percent Full (d/D)	Area of Flow (ft2)	Wetted Perimeter of flow (ft)	Velocity of Flow (fps)
SF	484	8	0.00368	0.013	Single-Family Parcel	115						27,600	3.00	82,800	0.083	0.128	0.74	NO	2.24	0.19	28%	0.0810	0.747	1.58
MF-1	361	8	0.00368	0.013	Multi-Family - Cluster	0	156					28,080	3.00	84,240	0.084	0.130	0.74	NO	2.25	0.19	29%	0.0820	0.751	1.59
C-A	489	8	0.00368	0.013	Commercial - A	0		0.4018				603	3.00	1,808	0.002	0.003	0.74	NO	0.79	0.03	4%	0.0044	0.262	0.64
C-B	268	8	0.00368	0.013	Commercial - B	0		3.0408				4,561	3.00	13,684	0.014	0.021	0.74	NO	1.37	0.08	11%	0.0218	0.458	0.97

Notes:

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

OF

A PORTION OF THE SECTION 2, TOWNSHIP 3 SOUTH, RANGE 7 EAST OF THE GILA AND SALT RIVER MERIDIAN, PINAL COUNTY, ARIZONA

TITLE REFERENCE

THIS SURVEY IS BASED UPON THE TITLE COMMITMENT PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, TITLE NO. AZ-FMPC-IMP-N/A-1-20-55002801, DATED OCTOBER 19, 2020.

HILGARTWILSON, LLC HAS RELIED SOLELY UPON THE INFORMATION CONTAINED WITHIN THE TITLE COMMITMENT AND SCHEDULE B DOCUMENTS PROVIDED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY AS LISTED HEREON. HILGARTWILSON, LLC AND JOHN W. MARSHALL (RLS) MAKE NO STATEMENT AS TO THE ACCURACY OR COMPLETENESS OF THE SUBJECT REPORT.

LEGAL DESCRIPTION

PARCEL NO. 1: (509-02-926)

THAT PORTION OF THE SOUTH HALF OF SECTION 2, TOWNSHIP 3 SOUTH, RANGE 7 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTH QUARTER CORNER OF SAID SECTION 2;
THENCE ALONG THE SOUTH LINE OF SAID SECTION 2, SOUTH 89° 55' 21" WEST (SOUTH 89° 55' 23" WEST, RECORD), 2651.57 FEET TO THE SOUTHWEST CORNER OF SAID SECTION 2;
THENCE NORTH 00° 07' 01" EAST (NORTH 00° 03' 18" WEST, RECORD), OF 704.93 FEET ALONG THE MONUMENT LINE OF THOMPSON ROAD, TO THE BEGINNING OF A TANGENT CURVE, CONCAVE SOUTHEASTERLY AND HAVING A RADIUS OF 1200.00 FEET;
THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 23° 11' 49", A DISTANCE OF 485.84 FEET TO A POINT ON SAID CURVE AT WHICH THE RECORDED MONUMENT LINE OF THOMPSON ROAD DIVERGES IN A NORTHWESTERLY DIRECTION FROM THE PHYSICAL MONUMENTED CENTERLINE OF SAID THOMPSON ROAD;
THENCE CONTINUING NORTHEASTERLY ALONG THE ARC OF SAID CURVE, AND ALONG THE PHYSICAL MONUMENTED CENTERLINE OF SAID THOMPSON ROAD, THROUGH A CENTRAL ANGLE OF 22° 59' 03", A DISTANCE OF 481.38 FEET TO A POINT ON A TANGENT LINE;
THENCE NORTH 46° 17' 53" EAST (NORTH 46° 07' 29" EAST, RECORD), ALONG SAID PARALLEL LINE, 522.15 FEET;
THENCE NORTH 89° 55' 17" EAST, 796.22 FEET;
THENCE NORTH 40° 46' 24" EAST, 904.32 FEET TO THE PHYSICAL CENTERLINE OF THE HUNT HIGHWAY, ACCORDING TO DECLARATION OF ROAD NO. 31, RECORDED IN BOOK 7 OF MINUTES; PAGE 195 OF THE PINAL COUNTY, ARIZONA BOARD OF SUPERVISORS AND THE BEGINNING OF A NON-TANGENT CURVE, CONCAVE SOUTHWESTERLY, THE CENTER OF WHICH BEARS SOUTH 29° 44' 09" WEST, 1100.00 FEET;
THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, AND ALONG THE PHYSICAL CENTERLINE OF SAID HUNT HIGHWAY, THROUGH A CENTRAL ANGLE OF 01° 39' 01", A DISTANCE OF 144.01 FEET TO A POINT OF TANGENCY;
THENCE SOUTH 49° 12' 37" EAST, ALONG SAID TANGENT LINE AND THE PHYSICAL CENTERLINE OF SAID HUNT HIGHWAY, 1063.00 FEET;
THENCE LEAVING SAID CENTERLINE, SOUTH 40° 46' 24" WEST, 283.42 FEET TO THE BEGINNING OF A TANGENT CURVE, CONCAVE SOUTHEASTERLY AND HAVING A RADIUS OF 1500.00 FEET;
THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 40° 47' 42", A DISTANCE OF 1068.01 FEET TO POINT OF TANGENCY;
THENCE SOUTH 00° 01' 18" EAST, ALONG SAID TANGENT LINE, 529.54 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 2: (509-02-929)

THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 2, TOWNSHIP 3 SOUTH, RANGE 7 EAST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 2;
THENCE ALONG THE SOUTH LINE OF SAID SECTION 2, SOUTH 89° 55' 51" WEST (SOUTH 89° 55' 23" WEST, RECORD), 171.15 FEET TO A POINT ON THE NORTHWESTERLY LINE OF MOUNTAIN VISTA BOULEVARD, AS SHOWN ON PLAT OF MOUNTAIN VISTA BOULEVARD, HUNT HIGHWAY, PARCEL G AND PARCEL H, ACCORDING TO CABINET D, SLIDE 175, RECORDS OF PINAL COUNTY, ARIZONA AND THE POINT OF BEGINNING;
THENCE CONTINUING ALONG SAID SOUTH LINE, SOUTH 89° 55' 51" WEST, 2479.50 FEET TO THE SOUTH QUARTER CORNER OF SAID SECTION 2;
THENCE NORTH 00° 01' 18" WEST, 529.54 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE SOUTHEASTERLY AND HAVING A RADIUS OF 1500.00 FEET;
THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 40° 47' 42", A DISTANCE OF 1068.01 TO A POINT OF TANGENCY;
THENCE NORTH 40° 46' 24" EAST, 283.42 FEET TO A POINT ON THE CENTERLINE OF HUNT HIGHWAY, ACCORDING TO DECLARATION OF ROAD NO. 31, RECORDED IN BOOK 7 OF MINUTES, PAGE 195 OF THE PINAL COUNTY, ARIZONA BOARD OF SUPERVISORS;
THENCE SOUTH 49° 12' 37" EAST, ALONG SAID CENTERLINE, 2586.17 FEET TO A POINT OF INTERSECTION WITH THE NORTHWESTERLY LINE OF SAID MOUNTAIN VISTA BOULEVARD;
THENCE SOUTH 40° 47' 23"WEST, ALONG SAID NORTHWESTERLY LINE, 42.08 FEET TO THE POINT OF BEGINNING.

EXCEPT A PORTION OF LAND BEING SITUATED WITHIN THE SOUTH HALF OF SECTION 2, TOWNSHIP 3 SOUTH, RANGE 7 EAST OF THE GILA AND SALT RIVER MERIDIAN, PINAL COUNTY, ARIZONA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTH QUARTER CORNER (1" IRON PIPE) OF SAID SECTION 2, FROM WHICH THE SOUTHWEST CORNER (PINAL COUNTY BRASS CAP) OF SECTION 2 BEARS SOUTH 89°45'04" WEST, 2651.54 FEET THENCE ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 2. SOUTH 89° 45' 04" WEST, 2651.54 FEET;
THENCE LEAVING SAID SOUTH ONE, NORTH 00°02'59" WEST, 705.02 FEET ALONG THE MONUMENTED CENTERLINE OF THOMPSON ROAD, TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 1200.00 FEET;
THENCE NORTHEASTERLY ALONG SAID CURVE AND SAID CENTERLINE, THROUGH A CENTRAL ANGLE OF 46° 10' 38", AN ARC LENGTH OF 967.13 FEET TO A POINT OF TANGENCY
THENCE NORTH 46° 07' 39" EAST, 439.89 FEET;
THENCE LEAVING SAID CENTERLINE SOUTH 43° 52' 21" EAST, 55.00 FEET TO A NON-TANGENT CURVE, CONCAVE TO THE SOUTH, HAVING A RADIUS OF 30.00 FEET, THE CENTER OF WHICH BEARS SOUTH 43° 52' 21" EAST;
THENCE EASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 89° 36' 07", AN ARC LENGTH OF 46.92 FEET TO A REVERSE CURVE CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 165.00 FEET;
THENCE SOUTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 45° 49' 21", AN ARC LENGTH OF 131.96 FEET TO A POINT OF TANGENCY;
THENCE NORTH 89° 54' 25" EAST, 246.82 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTH, HAVING A RADIUS OF 260.00 FEET;
THENCE EASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 40° 42' 38", AN ARC LENGTH OF 184.74 FEET TO A POINT OF TANGENCY;
THENCE SOUTH 49° 22' 57" EAST, 1306.93 FEET;
THENCE NORTH 89° 45' 30" EAST, 393.90 FEET TO A NON-TANGENT CURVE, CONCAVE TO THE EAST, HAVING A RADIUS OF 1500.00 FEET THE CENTER OF WHICH BEARS SOUTH 77° 21' 23" EAST;
THENCE SOUTH ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 12° 50' 12", AN ARC LENGTH OF 336.06 FEET TO A POINT OF TANGENCY;
THENCE SOUTH 00° 11' 35" EAST, 529.54 FEET TO THE POINT OF BEGINNING.

SCHEDULE "B" - EXCEPTIONS (#)

1. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES, FOR THE FIRST INSTALLMENT OF 2020 TAXES, PLUS INTEREST AND PENALTIES.
2. ANY RIGHTS, LIENS, CLAIMS OR EQUITIES, IF ANY, IN FAVOR OF CENTRAL ARIZONA WATER CONSERVATION DISTRICT.
3. ANY RIGHTS, LIENS, CLAIMS OR EQUITIES, IF ANY, IN FAVOR OF NEW MAGMA IRRIGATION AND DRAINAGE DISTRICT.
4. RIGHT OF WAY FOR HUNT HIGHWAY RECORDED IN BOOK 7 OF MINUTES, PAGE 195 **(SHOWN)**
5. EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS AS SET FORTH ON THE PLAT RECORDED IN BOOK 10 OF SURVEYS, PAGE 215. **(SHOWN)**
6. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED: RESOLUTION RECORDING NO: 99-32325
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(SHOWN)**
7. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED:ORDINANCE NO 122000-BS RECORDING NO: 2001-00756
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(AFFECTS - NOTHING PLOTTABLE)**
8. COVENANTS, CONDITIONS AND RESTRICTIONS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, SOURCE OF INCOME, GENDER, GENDER IDENTITY, GENDER EXPRESSION, MEDICAL CONDITION, OR GENETIC INFORMATION, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH IN THE DOCUMENT RECORDING NO: 2004-13481 (PARCEL 1) **(AFFECTS - NOTHING PLOTTABLE)**
9. COVENANTS, CONDITIONS AND RESTRICTIONS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, SOURCE OF INCOME, GENDER, GENDER IDENTITY, GENDER EXPRESSION, MEDICAL CONDITION, OR GENETIC INFORMATION, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH IN THE DOCUMENT RECORDING NO: 2004-13482 (PARCEL 2) **(AFFECTS - NOTHING PLOTTABLE)**
10. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED:ORDINANCE NO 121207-AQ1 RECORDING NO: 2008-01862
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(AFFECTS - NOTHING PLOTTABLE)**
11. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED:UTILITY EASEMENT AGREEMENT RECORDING NO: 2012-72316 (PARCEL 1) **(SHOWN)**
12. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED: RESOLUTION NO 072314-RD14-003 RECORDING NO: 2014-043893
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(SHOWN)**
13. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED: PERMANENT DRAINAGE EASEMENT AND AGREEMENT RECORDING NO: 2014-047413 (PARCEL 1)
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(SHOWN)**
14. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED: LICENSE TO USE RIGHT OF WAY RECORDING NO: 2017-065729 (PARCEL 2)
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(SHOWN)**
15. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED: MEMORANDUM OF JOINT DEVELOPMENT AGREEMENT RECORDING NO: 2018-093772 (PARCEL 1, 2)
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(AGREEMENT - AFFECTS - NOTHING PLOTTABLE)**
16. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT: PURPOSE:ACCESS AND UTILITY RECORDING NO: 2019-027453 (PARCEL 1) **(SHOWN)**
17. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT: PURPOSE:ACCESS AND UTILITY RECORDING NO: 2019-027455 (PARCEL 1) **(DOES NOT AFFECT)**
18. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT: PURPOSE:ACCESS AND UTILITY RECORDING NO: 2019-027456 (PARCEL 2) **(SHOWN)**
19. MATTERS CONTAINED IN THAT CERTAIN DOCUMENT ENTITLED: CONTRACT NO 19-LM-32-4243 RECORDING NO: 2019-029906 (PARCEL 2)
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS. **(AFFECTS - NOTHING PLOTTABLE)**

BASIS OF BEARING

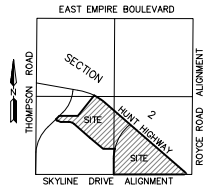
BASIS OF BEARING IS S89°45'04"W ASSUMED ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 3 SOUTH, RANGE 7 EAST OF THE GILA AND SALT RIVER MERIDIAN, PINAL COUNTY, ARIZONA.

FLOOD ZONE DESIGNATION

THE SUBJECT PROPERTY LIES WITHIN ZONE "X" WITH A DEFINITION OF:
AREAS OUTSIDE THE 0.2-PERCENT-ANNUAL-CHANCE FLOODPLAIN. NO BFES OR DEPTHS ARE SHOWN IN THIS ZONE, AND INSURANCE PURCHASE IS NOT REQUIRED.
DESIGNATION DETERMINED BY FEMA FLOOD ZONE MAP 04021C0475E, PANEL NUMBER 475 OF 2575, EFFECTIVE DATE DECEMBER 4 2007.

REFERENCE DOCUMENTS

1. BOOK 10 OF SURVEY, PAGE 215, P.C.R.
2. FINAL PLAT OF SAN TAN SHADOWS UNIT 2, 2017-093030, P.C.R.
3. MINOR LAND DIVISION, 2008-005025, P.C.R.
4. MINOR LAND DIVISION, 2019-018972, P.C.R.
5. FINAL PLAT OF SAN TAN HEIGHTS PARCEL J, 2003-048377, P.C.R.



VICINITY MAP
NOT TO SCALE

OWNER/CLIENT

BORGATA VENTURES LLC & SKYHI HOLDINGS LLC
C/O: GALEB COMPANIES
12340 SARATOGA – SUNNYVALE ROAD
SARATOGO, CA 95070
ATTN: PEGGY GALEB

SURVEYOR

HILGARTWILSON, LLC
2141 E. HIGHLAND AVE., STE. 250
PHOENIX, ARIZONA 85016
PHONE: (602) 490-0535
CONTACT: JOHN W. MARSHALL, RLS

NOTES

1. AREA IS 4,329,125 SQ. FT. OR 99.3830 ACRES MORE OR LESS.
2. THIS SURVEY REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES. THE SURVEYOR MAKES NO GUARANTEE THAT ALL OF THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION PROVIDED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED UNDERGROUND UTILITIES. (TABLE A, ITEM #11 & 21 IN REFERENCE TO VISIBLE SURFACE UTILITIES)
3. DECLARATION IS MADE TO THE ORIGINAL PURCHASER OF SURVEY AND ALL PARTIES LISTED IN THE SURVEYORS CERTIFICATION. IT IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS WITHOUT WRITTEN PERMISSION OF THE SURVEYOR.
4. THIS SURVEY IS VALID ONLY WHEN BEARING SEAL AND SIGNATURE OF SURVEYOR.
5. THIS SURVEY IS BASED ON FIELD WORK LAST PERFORMED BY HILGARTWILSON, LLC IN DECEMBER, 2020. SITE CONDITIONS THAT MAY HAVE CHANGED SUBSEQUENT TO FIELD WORK WILL NOT BE REFLECTED HEREON.
6. THE INTENT OF THIS SURVEY IS NOT TO CREATE AN ILLEGAL LAND SPLIT PER THE APPLICABLE ARIZONA LAW AND/OR STATUTES.
7. THE POTENTIAL BUYER(S) OF THIS SITE IS HEREBY ADVISED THAT THIS SITE MAY BE SUBJECT TO ARIZONA PLATTING LAWS PRIOR TO THE DEVELOPMENT OF THIS SITE.
8. SITE ADDRESS IS 4091 W HUNT HWY SAN TAN VALLEY, AZ 85142. (TABLE A, ITEM #2)
9. THE SUBJECT SITE HAS NO AVAILABLE PARKING STALLS & 0 HANDICAPPED STALLS. (TABLE A, ITEM #9)
10. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVABLE SURFACE EVIDENCE AT THE TIME OF THE SURVEY, ALONG WITH UTILITY MAPS PROVIDED BY THE RESPECTIVE UTILITY COMPANY. (TABLE A, ITEM #11).
11. THERE IS NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK. (TABLE A, ITEM #16)
12. THERE ARE NO KNOWN PROPOSED CHANGES IN STREET RIGHT OF WAY LINES OR EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK. (TABLE A, ITEM #17)

SURVEYOR'S CERTIFICATION

TO:
1. BORGATA VENTURES, LLC, AN ARIZONA LIMITED LIABILITY COMPANY AS TO PARCEL 1
2. SKYHI HOLDINGS, LLC, AN ARIZONA LIMITED LIABILITY COMPANY AS TO PARCEL 2
3. FIDELITY NATIONAL TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR A.L.T.A./N.S.P.S. LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1,2,3,4,7(a),8,9,11,16,19, and 21 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED IN DECEMBER, 2020.

JOHN W. MARSHALL
RLS# 53151
HILGARTWILSON, LLC
2141 E. HIGHLAND AVE., STE. 250
PHOENIX, ARIZONA 85016
P: 602.490.0535
jmarshall@hilgartwilson.com

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
53151
JOHN W.
MARSHALL
12/30/2020
ARIZONA U.S.A.

NOTE:
A.R.S. 32-151 STATES THAT THE USE OF THE WORD "CERTIFY" OR "CERTIFICATION" BY A PERSON OR FIRM THAT IS REGISTERED OR CERTIFIED BY THE BOARD IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING FACTS OR FINDINGS THAT ARE SUBJECT OF THE CERTIFICATION AND DOES NOT CONSTITUTE AN EXPRESS OR IMPLIED WARRANTY OR GUARANTEE.

REV.:

HILGARTWILSON
ENGINEERS | PLANNERS | SURVEYORS | MANAGERS
2141 E. HIGHLAND AVE, STE 250 | P: 602.490.0535 | F: 602.368.2436
PHOENIX, AZ 85016 | www.hilgartwilson.com

BORGATA VENTURES & SKYHI HOLDINGS
SEC HUNT HIGHWAY & THOMPSON ROAD
PINAL COUNTY, ARIZONA

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

HILGARTWILSON	
PROJ NO.:	2302
DATE:	DEC. 2020
SCALE:	NTS
DRAWN:	JHVD
DESIGNED:	HW
APPROVED:	JWM

DWG. NO.
SV-1
SHT. 1 OF 2

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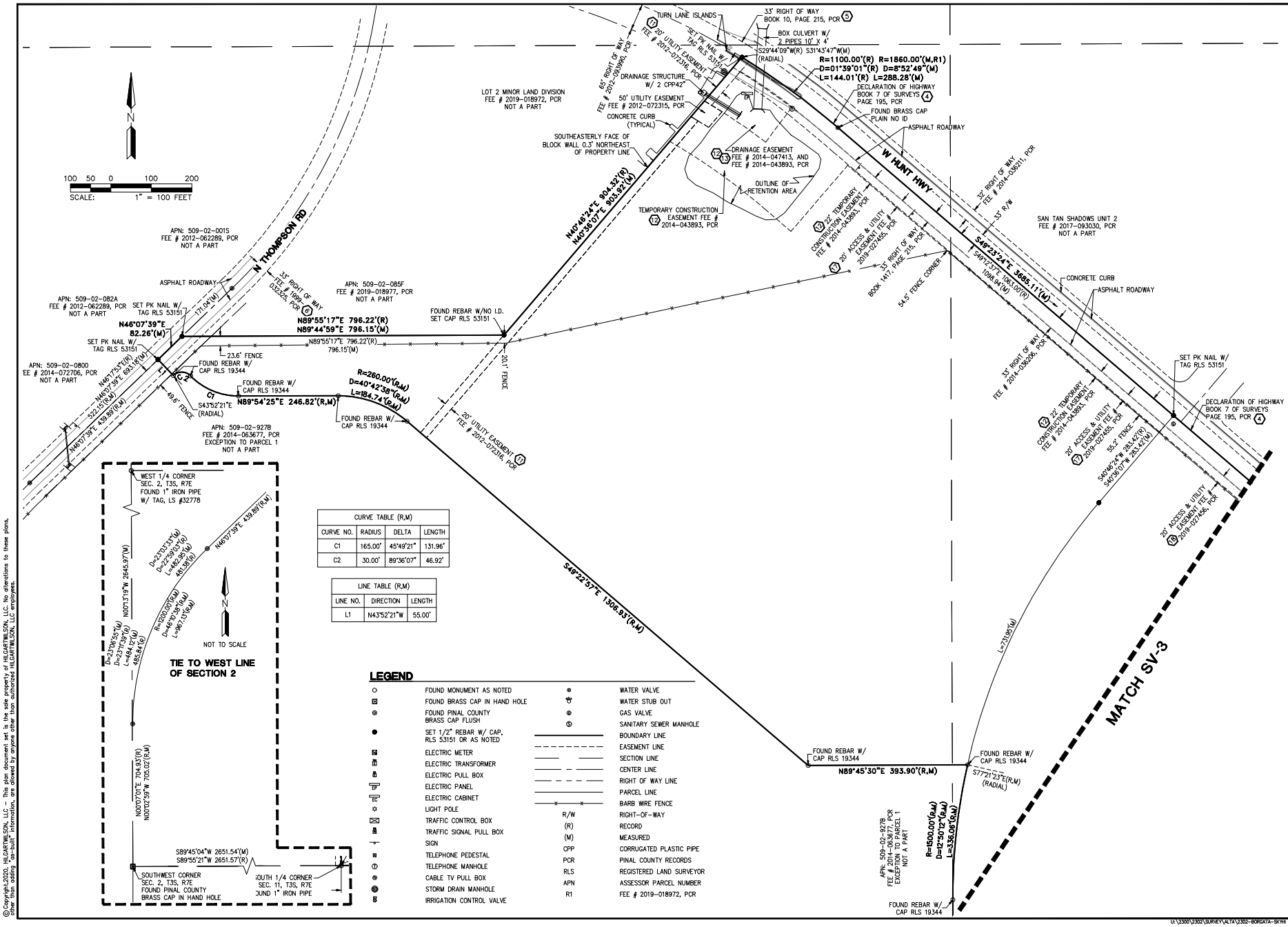

CURVE TABLE (R,M)			
CURVE NO.	RADIUS	DELTA	LENGTH
C1	165.00'	45°49'21"	131.96'
C2	30.00'	89°36'07"	46.92'

LINE TABLE (R,M)		
LINE NO.	DIRECTION	LENGTH
L1	N43°52'21"W	55.00'

LEGEND

○	FOUND MONUMENT AS NOTED	⊗	WATER VALVE
⊡	FOUND BRASS CAP IN HAND HOLE		WATER STUB OUT
◎	FOUND PINAL COUNTY BRASS CAP FLUSH		GAS VALVE
●	SET 1/2" REBAR W/ CAP, RLS 53151 OR AS NOTED		SANITARY SEWER MANHOLE
	ELECTRIC METER		BOUNDARY LINE
	ELECTRIC TRANSFORMER		EASEMENT LINE
	ELECTRIC PULL BOX		SECTION LINE
EP	ELECTRIC PANEL		CENTER LINE
EC	ELECTRIC CABINET		RIGHT OF WAY LINE
	LIGHT POLE		PARCEL LINE
	TRAFFIC CONTROL BOX		BARB WIRE FENCE
	TRAFFIC SIGNAL PULL BOX	R/W	RIGHT-OF-WAY
	SIGN	(R)	RECORD
	TELEPHONE PEDESTAL	(M)	MEASURED
	TELEPHONE MANHOLE	CPP	CORRUGATED PLASTIC PIPE
	CABLE TV PULL BOX	PCR	PINAL COUNTY RECORDS
	STORM DRAIN MANHOLE	RLS	REGISTERED LAND SURVEYOR
	IRRIGATION CONTROL VALVE	APN	ASSESSOR PARCEL NUMBER
		R1	FEE # 2019-018972, PCR

REV.:

HILGARTWILSON
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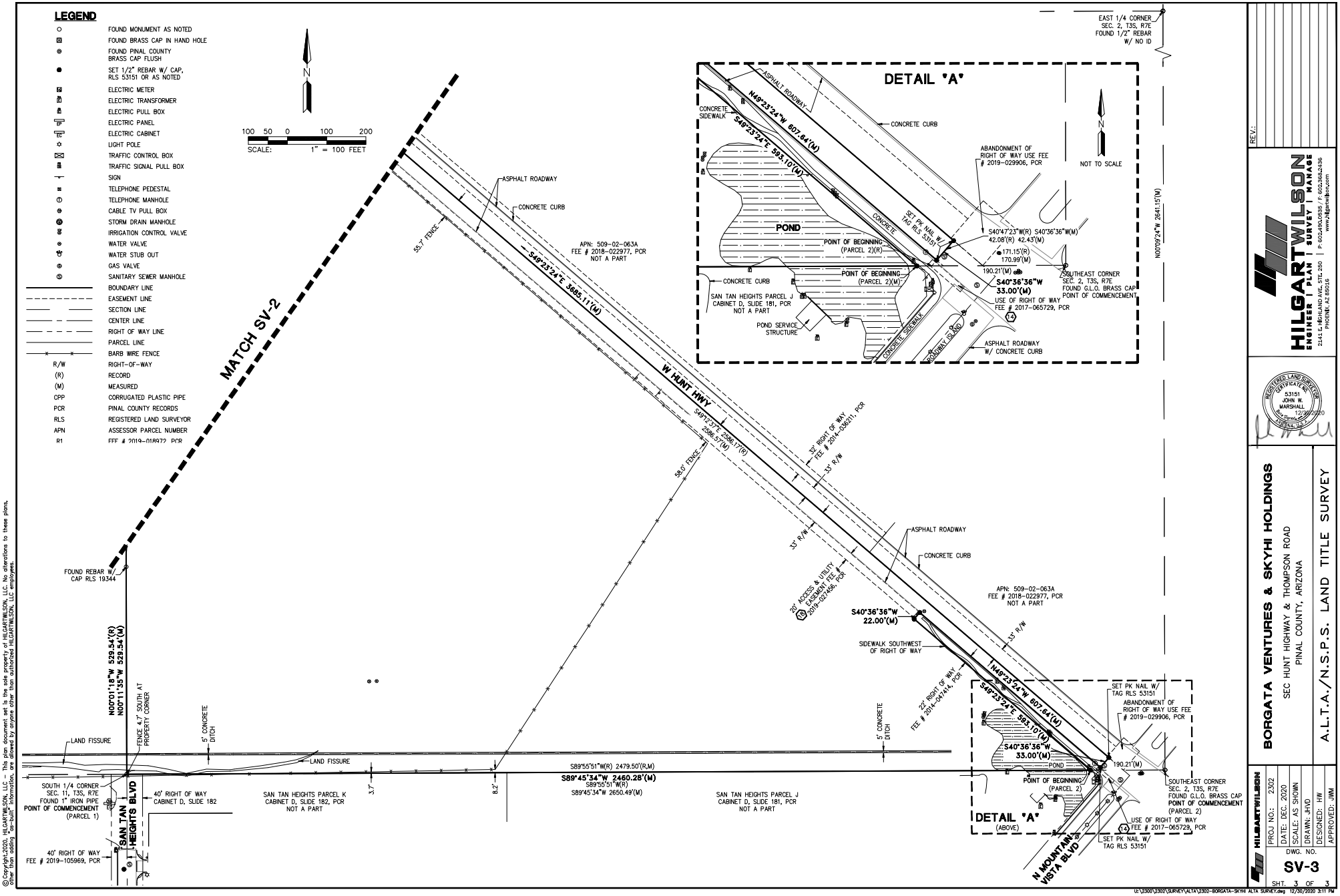
SEC HUNT HIGHWAY & THOMPSON ROAD
PINAL COUNTY, ARIZONA

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

HILGARTWILSON	
PROJ NO.:	2302
DATE:	DEC. 2020
SCALE:	AS SHOWN
DRAWN:	JHVD
DESIGNED:	HW
APPROVED:	JWM

DWG. NO.
SV-2
SHT. 2 OF 3



REV.:

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12/30/2020
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BORGATA VENTURES & SKYHI HOLDINGS

SEC HUNT HIGHWAY & THOMPSON ROAD
PINAL COUNTY, ARIZONA

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

HILGARTWILSON	
PROJ NO.:	2302
DATE:	DEC. 2020
SCALE:	AS SHOWN
DRAWN:	JHVD
DESIGNED:	HW
APPROVED:	JWM

DWG. NO.
SV-3
SHT. 3 OF 3

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PCA
PHOENIX COMMERCIAL ADVISORS
CHAIN.INKS

July 1, 2021

Mr. Himanshu Patel
Pinal County Planning Division
85 N Florence Street
Florence, AZ 85132

Re: Commercial land located on Hunt Highway between Thompson Road and Mountain Vista Blvd, San Tan Valley

Dear Mr. Patel,

Phoenix Commercial Advisors is the proud partner of many retail developers as well as the representative broker for over 65 regional or national brand tenants, such as Chipotle, Starbucks and Sprouts, in the Phoenix metropolitan market. We have worked closely for more than a decade with Galeb Companies ("Galeb") in San Tan Valley helping lease up the Walmart-anchored Pavilions Center at Gary Road and Hunt Highway and the Towne Center located at Mountain Vista and Hunt Highway. Galeb has asked that we write to you specifically to address market appetite for the proposed 20 – 25 acres of commercial land at Hunt Highway between Thompson Road and Mountain Vista Blvd.

We believe Galeb's current proposed plan for a 16-acre neighborhood shopping center with some additional pads (approximately 6 acres) along Hunt Highway, conveniently located at a signalized intersection to allow for connectivity across Hunt Hwy and with pedestrian connectivity to the adjacent multi-family projects, is commercially viable and sustainable in the long term. This plan also serves to satisfy the disproportionate amount of demand we see for street frontage and visibility on Hunt Highway (versus a location in the back of a shopping center). Maximizing pad development along Hunt Highway will also create a highly effective buffer between the residential neighborhoods and a heavily travelled arterial. We also contend that the inclusion of multi-family type projects in walking distance to the commercial parcels is a significant part of our analysis to support a neighborhood commercial development at this location. The development of those multifamily projects should ensure the roof-top numbers desired by the commercial users in the market today.

We do not believe a retail/commercial development *exceeding* the proposed approximate 23 acres is a viable proposition for many of the same reasons the property has sat vacant since being rezoned to commercial from residential over a decade ago. Some of these reasons are:

- Shrinking, nation-wide demand for retail establishments and in particular larger box formats since 2008
- Better positioned commercial centers at Riggs/Ellsworth and Ocotillo/Ellsworth.
- Lack of proximate access to freeway transportation corridors.

- Hunt Highway being only four lanes which constricts access to the location and hence makes trade centers around Ellsworth/Ocotillo and Ellsworth/Riggs relatively more appealing to retailers and commercial users.
- The relatively low residential density of the market area.
- The relative greater appeal of other tertiary trade markets such as Buckeye, Goodyear, and Maricopa which continue to benefit from freeway access, job growth and infrastructure investment.

We are very excited about the recent growth in housing demand in San Tan Valley and are confident that we can help Galeb make the proposed 16-acre neighborhood center and additional 6 acres of pads along Hunt Highway a success. We sincerely welcome any feedback you may have as we continue to partner with Galeb, Pinal County and the terrific San Tan Valley community.

Sincerely,

Greg Laing | Principal
Phoenix Commercial Advisors
Direct 602-734-7207
3131 E Camelback Rd, Suite 340
Phoenix, AZ 85016

Open Space and Recreation Plan

for

BORGATA

AT SAN TAN

Case: _____

Submitted to:
PINAL COUNTY
PLANNING & DEVELOPMENT DEPARTMENT
85 N Florence Street, First Floor
P.O. Box 2973
Florence, Arizona 85132

Submitted on Behalf of:
BORGATA VENTURES, LLC
SKYHI HOLDINGS, LLC
12340 Saratoga – Sunnyvale Road
Saratoga, California 85070

Prepared by:
IPLAN CONSULTING | GREG DAVIS
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Prepared: September 2021

PRINCIPALS AND DEVELOPMENT TEAM

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BORGATA AT SAN TAN
OPEN SPACE AND RECREATION PLAN

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Exhibits

2. OPEN SPACE AND RECREATION PLAN OVERVIEW

Iplan Consulting, on behalf of Borgata Ventures, LLC and SkyHi Holdings, LLC, is pleased to submit for your consideration the Borgata at San Tan Open Space and Recreation Plan (OSRP) for an approximate 100.1-acre (gross) property generally located generally located west of the southwest corner of West Hunt Highway and North Mountain Vista Boulevard in the San Tan Valley Area of north Pinal County. The property is further identified as Pinal County Assessor parcel numbers: 509-02-926 and 509-02-929.

The undeveloped property is currently located within the San Tan Heights Planned Area Development (PAD); is zoned CB-2 (General Business Zone), PAD; and, maintains a Comprehensive Plan land use classification of Community Center (San Tan Valley Special Area Plan); however, this OSRP accompanies a corresponding request to re-classify 25-acres of the property as Urban Transitional and to remove the entire property from the existing PAD and thereby establishing new PAD zoning for the property.

Responding to policies outlined in the Pinal County Open Space and Recreation Area Guideline Manual (OSRAM), the purpose of the Borgata at San Tan OSRP is to establish open space, landscape, and hardscape design concepts that will result in adequate recreation and circulation opportunities for the future residents of this project.

Conceptual design for Borgata at San Tan includes approximately 19.5-acres (+/- 19.3%) total open space which consist of structured recreational open space, natural recreational open space, and passive open space areas. Recreational or active open space areas comprise approximately 8.8-acres or 9% of the total site area (45% of the total open space area) and accommodates three large, programmed amenity park areas, several secondary pocket parks, and miles of pedestrian paths/trails. Other developed passive open space areas supplement the overall recreational experience and comprise 10.7-acres or 11% of the total project area.

Open space design and recreation programming will be finalized and submitted for County approval as part of the Site Plan and Tentative Plat processes. All community open space areas will be owned and maintained by a Homeowner's Association, or similar.

3. CONTEXT AND CONNECTIVITY

Borgata at San Tan is an approximate 100-acre property generally located 0.5-miles west of the southwest corner of North Thompson Road and West Phillips Road. The property is bound by similarly undeveloped properties (Arizona State Trust Land) adjacent to all geographic boundaries with the exception of the San Tan Regional Park entrance and associated parking areas located at the northwest corner of the project area.

The property is immediately adjacent to the San Tan Heights community which is over 2,000 acres in Size and includes over 3,500 homes and families. This project will not be a part of the San Tan Heights HOA and thus will not have authorized access to the parks and amenities of that project. That said, there will be strong pedestrian connections between the two communities to promote social interaction and we expect families in both communities will ultimately share in recreational pursuits.

4. OPEN SPACE AND RECREATION GUIDELINE CONFORMANCE

As set forth in the Pinal County OSRAM, the primary purpose of the guidelines are to assist the development community in determining the combination of developed and conservation open space areas required for a project. These guidelines also establish criteria for high quality open space and recreation amenities that promote quality of life and sense of place. We believe this OSRP for Borgata at San Tan substantially promotes the overall vision established by the OSRAM policies and guidelines by:

- Promoting public health and a higher quality of life for the area by providing additional active and passive recreational opportunities, while conserving views to the San Tan Mountains to the southwest.
- Installing desert appropriate landscaping and shade producing trees along the multi-use trails for enhancement of human comfort.
- Maintaining and enhancing existing multi-use trails adjacent to the property, which connect area residents to the various residential and retail uses in the area.
- Planning a connected system of open space areas that protect and conserve natural, physical and social resources.

- Reducing demand for water resources through very limited use of turf and careful selection of a low water use, desert appropriate landscape palette for both the community open spaces and private lots (via CCRs).
- Including appropriate open space buffering from the contiguous arterial and collector level streets – Hunt Highway and Sant Tan Heights Blvd., through inclusion of landscape tract widths that meet or exceed the suggested 10 – 15-feet width.
- Systematically locating active play areas to ensure high visibility.
- Including design elements to create neighborhoods in context with the native Sonoran desert setting. Examples include the low water use plant palette and the establishment of limited neighborhood lighting that furthers the Dark Sky lighting philosophy by meeting or exceeding all provisions for Lighting Zone 1, as set forth in Chapter 2.195: Outdoor Lighting of the PCDSC.

The above list is not meant to be an exhaustive list, rather a summary of several notable features of conformance with the overall OSRAM vision and guidelines.

The following table is a comparison of the minimum recreational facilities suggested within the OSRAM for Residential Development to those proposed as part of the Borgata at San Tan project.

TABLE 4.101: MINIMUM FACILITIES FOR NATURAL & FAMILY ORIENTED DEVELOPMENT (LESS THAN (1,000 UNITS) – BORGATA AT SAN TAN

OSRAM GUIDELINES	BORGATA AT SAN TAN
Paths in Addition to Sidewalks	Significant pedestrian and multi-use trails throughout
One-Acre Turf Field	One-acre turf area provided in SFD Parcel
1 Play Structure	Three play structures are provided
1 Picnic Ramada	A minimum of 6 Picnic Ramadas provided

5. SLOPE | DRAINAGE | PRELIMINARY HYDROLOGY

5.1 EXISTING CONDITIONS | SLOPE | OPEN SPACE REQUIREMENTS:

Although the site is part of a alluvial plain for the San Tan mountains, the project area only slopes to the northeast at approximately 1-2% and is generally flat. There is an area of historic water collection and resulting fissures along the south boundary which are addressed in a separate section. Runoff into the project site and the upstream drainage areas is all eventually conveyed to the Sonoqui Wash which is about one mile to the north. Sonoqui Wash is one of the primary watercourses that drains the surrounding portions of southeastern Maricopa County and northwestern Pinal County.

The property is generally void of any significant plant material, so much so that a native plant inventory and salvage plan is not being proposed as it would be a fruitless effort. The site features a few areas of desert plants such as creosote, yucca, and cholla. Unfortunately, these areas are infested with weeds and debris from years of trespassing and dumping. It is our intent to mass grade the site and install new, healthy desert friendly plant materials and associated irrigation.

The project was designed to comply and exceed in the provision of open space including conservation areas, active park areas, and passive open space areas. To illustrate this compliance, the following table compares the minimum open space areas as set forth in Section 2.176.130 of the Pinal County Development Services Code (PCDSC) to those proposed as part of the Borgata at San Tan project. Open space requirements are determined by the average slope of the net acreage.

TABLE 5.101: OPEN SPACE REQUIREMENTS FOR 0 – 5% SLOPES, DISTRIBUTED PROPERTY – BORGATA AT SAN TAN

OPEN SPACE TYPE	REQUIRED		PROVIDED	
	%	Area (Ac.)	%	Area (Ac.)
Recreation Open Space	7	7.1	8.7	8.8
Passive Open Space	--	--	10.6	10.7
Total Open Space	18	18.1	19.3	19.5

5.2 FLOOD ZONE:

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) coverage for the site is provided on FIRM panel 04021C0450E dated December 4, 2007. According to this FIRM the Project resides entirely within a flood hazard Zone X. FEMA defines this flood hazard zone as follows:

> *Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile.*

5.3 FISSURES:

There is a known and documented area of fissures along the south boundary of the project. To appropriately mitigate this area, we have ordered a detailed fissure evaluation and report. This Fissure Report will include several mitigation methods which we intend to fully implement to ensure the project does not exacerbate the existing fissures, or create new opportunities for fissures to form.

5.4 PROPOSED STORMWATER MANAGEMENT:

EPS has completed an existing conditions hydrologic evaluation of the watershed affecting the Project. 100-year design flow rates have been determined at the upstream and downstream limits of the site. Based on these discharges and the topographic mapping that is available for the property, EPS has directed our land planning efforts to ensure appropriate stormwater drainage is accommodated for.

6. ARCHAEOLOGY

Archeological investigation was conducted on the project site in 2010 by Northland Research, Inc., and nothing of note was identified. Even so, should any artifacts or remains be uncovered during construction activities, development work will stop until the Arizona State Museum is notified and further investigation is performed.

7. DEVELOPED OPEN SPACE

The developed open space at Borgata at San Tan consists of a balance of both active and passive recreation areas. Open space amenities will be designed and developed in accordance with the guidelines of the Open Space and Recreation Manual in mind and with the timing requirements set forth in Pinal County Development Services Code 2.176.160(A). All open space areas will be owned and maintained by the Borgata at San Tan Homeowner's Association. The following guidelines have been implemented in the developed open space areas:

- Natural and historic drainage patterns in the area have been maintained.
- Storm water retention areas have been designed to appear as natural as possible with meandering edges, gradual grade changes, and varying side slopes.
- Storm water retention areas have been located in visible and accessible areas throughout the community.
- Non-vegetative and vegetative ground covers, trees and shrubs in open space areas and along street frontages will be installed in conformance with the size, quantity, coverage and placement guidance of the OSRAM.
- Enhanced landscape areas have been provided on both sides of the main collector street at the entrance to the community in order to create a sense of arrival and community.

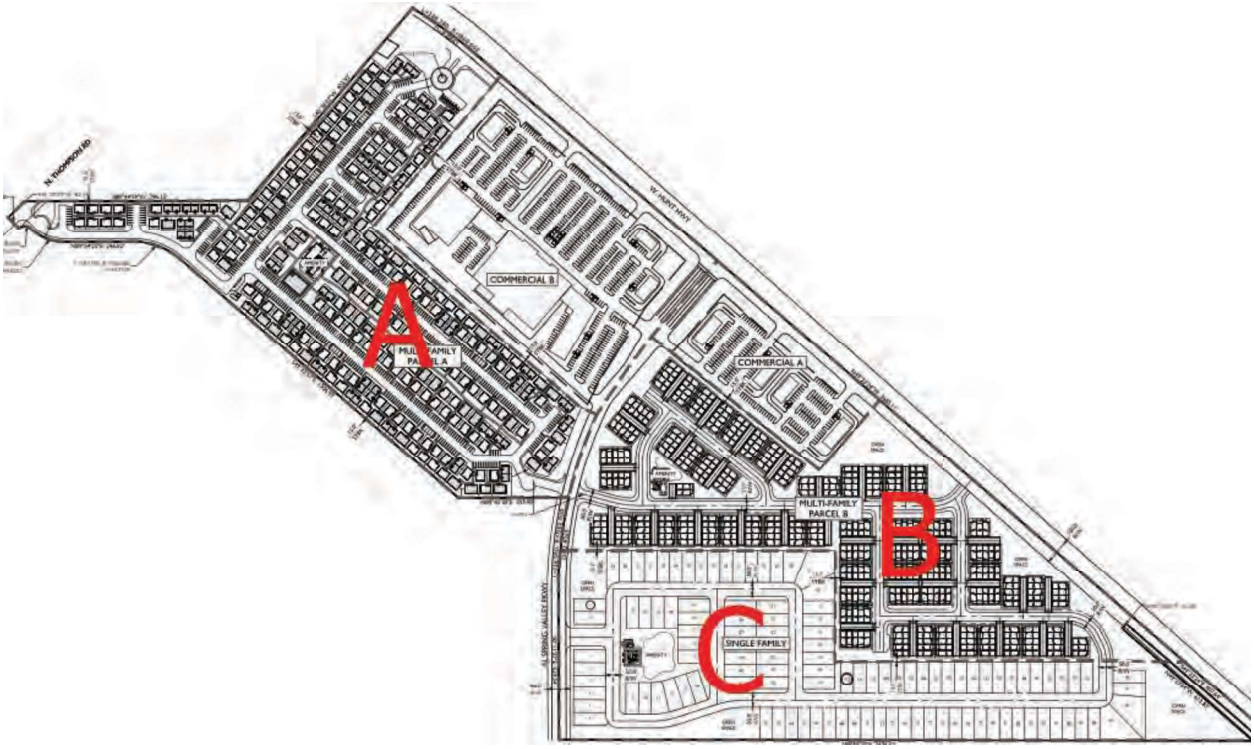
7.1 COMMERCIAL PARCELS:

The commercial parcels in Borgata at San Tan have not been fully designed yet but will feature landscaping around the perimeter of the sites, in the parking areas, and along the building's foundation. The larger commercial parcel will include pedestrian amenities such as wide sidewalks, pedestrian crossings, and sitting areas. Passive open space areas along the shared boundary with the residential neighborhoods will provide for both retention and buffering.

7.2 RESIDENTIAL PARCELS:

The residential portion of Borgata at San Tan is a family-oriented community and the community's recreation areas have been designed accordingly. This OSRP provides several neighborhood park recreation areas with a variety of amenities for residents to use, fulfilling the OSRP guidelines for a development of this size.

The Borgata at San Tan project has three distinct neighborhoods and each one has their own approach to providing recreational opportunities for its residents. Below is a breakdown of each neighborhood's approach.



Neighborhood A is 26.96 acres in area and currently offers 14.2 acres of open space which equates to 53.1% of the total project area. The open space can be broken down into three categories: active open space (3.0 acres - 11.3%); passive open space (8.8 acres - 32.7%); and private yards (2.4 acres - 9.1%). The amenities for the project include a community clubhouse with fitness gym, a swimming pool with spa, a large sundeck, an outdoor fire fit with seating, a turf area for lawn games, and a dog park.

Neighborhood B is 26.04 acres in area and currently offers 4.7 acres of open space which equates to 18.0% of the total project area. The active open space comprises about 1.4 acres and includes amenities such as a large shaded playground, two cornhole courts, a ramada with two picnic tables, a BBQ grill, and a turf area for field sports. There is about 3.3 acres of passive open space areas in this neighborhood that serve aesthetic and buffering (from the commercial parcel) purposes.

Neighborhood C is 24.32 acres in area and includes approximately 4.1 acres of open space with about 1.1 acres being active and 3.0 acres being passive. The active open space includes the

centralized park which is home to the playground, ramada with seating, two BBQ grills, and large turf area for yard games and field sports. The passive open space includes the fissure mitigation area along the south boundary which will be capped with a paved pedestrian trail.

7.3 PEDESTRIAN CONNECTIVITY

The commercial parcels will provide for pedestrian pathways along the storefronts and into the parking field(s) at multiple locations. Decorative paving and signage will help demarcate pedestrian pathways crossing the drive aisles and dedicated sidewalk areas will allow pedestrians to travel safely within the parking field areas of the projects. This pedestrian connectivity extends out to the perimeter streets of the project as we expect those will be used by area residents in the cooler months of the year. Direct pedestrian connectivity with the adjacent residential development is also proposed and will be a welcome way for the two uses to help sustain one another.

The three neighborhood parcels all feature an extensive pedestrian circulation system that includes a network of open space paths, sidewalks, and multi-use trails to achieve community connectivity and a healthy lifestyle for residents. These pathways provide safe and efficient pedestrian access from the residential units to the community amenities and to the perimeter of each neighborhood which can then connect them to the larger community of San Tan Valley. Furthermore and as aforementioned, both residential parcels that are adjacent to the commercial parcel have direct pedestrian access promoting walkability and reducing the number of vehicular trips taken.

8. LANDSCAPE MATERIALS

Responsible design focuses on understanding the regional climatic and resource conditions. As part of the site development, an important goal is to create a sustainable and environmentally sensitive landscape design while also providing a level of lushness that is complimentary to suburban family lifestyles. With implementation of this goal, the project will reduce the amount of impact on valuable resources by utilizing drought tolerant and low water use desert firenfly trees and shrubs.

Streetscape landscaping assists in establishing the property's character from public view and from adjacent properties, as well as buffering residential dwelling units from the adjacent major collector level street. An appropriate mix of indigenous trees, shrubs, accent plants and groundcover materials are provided between street curb and the private property lines to create an attractive and naturalistic environment while also providing shade for pedestrians and wildlife. Existing and undulating landforms in conjunction with appropriate use of vegetation enhances visual character.

Common open space areas provide sufficient opportunities for semi-public gathering places, active and passive recreational opportunities, neighborhood connectivity, and storm water retention. Integration of these spaces are to include limited turf areas for recreational purposes; active and passive recreational amenities to foster development of healthy communities and to encourage genuine interaction between the residents and creates a greater sense of connectedness. Landscape in these areas is systematically designed so that the plant material has opportunities to use the storm water runoff to supplement the irrigation system and provide groundwater recharge while also enhancing the desired organic appearance of the community.

The overriding intent is to provide a naturalistic appearance native to the Sonoran Desert with a distinctive aesthetic that is unique to the Borgata at San Tan PAD and sensitive to the surrounding community. Additionally, sustaining existing and installing additional native flora should contribute to the propagation of wildlife populations. Landscape material quantities and sizes are set forth in the exhibits contained herein, and will meet or exceed all size and quantity provisions set forth in the PCDSC.

9. FENCES AND WALLS

The various community wall designs for the commercial parcel and the three residential parcels Borgata at San Tan will provide variety and identity to each project but also contain enough similar elements to unify them into an overall project theme. Theme walls, composed of a variety of split face, smooth-face, and scored CMU block, will be used along Hunt Highway and San Tan Heights Blvd. to create visual interest as one travels by and through the community. Partial view fencing may be provided for lots backing to open space, common areas, and where appropriate based on the final site layouts. The theme walls will be accented with trees, shrubs, and groundcover to

soften the collector road and provide visual relief and interest. Subdivision walls, which complement the theme walls, will be utilized throughout the project where theme walls and view walls are not appropriate. More simplistic builder walls will be used at the end of blocks where a landscape tract separates the lot from the local roadway and where lots back or side directly on the property.

10. Entry Monuments and Signs

Monumentation signage is proposed at multiple locations for each parcel within the project and is described in more detail below:

The commercial parcel proposes both a primary and secondary sign monument along the adjacent street frontages. The Primary sign type is used on the corner of Hunt Highway and San Tan Blvd. for both commercial parcels. This sign type is 8-feet tall and features pin mounted letters on a stucco wall that is anchored into a larger battered ledgestone veneered wall. A decorative metal trellis compliments the stucco and stone wall and provides both a material and color relief for this design.

The secondary commercial sign type is a tenant name sign that will feature multiple names in metal letters pin mounted on stucco bands that are inset into a battered ledgestone wall. A decorative metal trellis also compliments this wall type again to offer material and color variation. This sign type is proposed at four locations along Hunt Highway and two locations along San Tan Blvd.

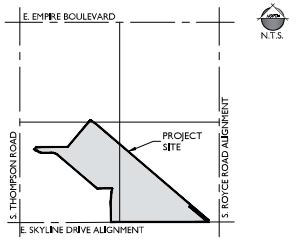
The multi-family residential parcel west of the collector road proposes one primary entry monument along Hunt Highway, one secondary entry monument along San Tan Blvd. and another secondary entry monument at the project entry on Thompson Road. The primary entry monument sign features metal pin mounted letters on steel panels that are floating above a stone veneered base wall with a smaller stucco wall above and to the right of the letters. The stucco wall provides space for the project address. The secondary monument wall omits the letters but has an ornamental "v" shaped steel panel inset into a stucco wall that is attached to a stone veneered column. These designs are also carried into the design of the gates since this parcel is proposed to be gated.

The other two residential parcels, both east of San Tan Heights Blvd. share the design of the entry monuments since they are interconnected. Three residential entry monuments are proposed; one at the shared entrance of the two parcels along Hunt Highway; and the other two along San Tan Heights Blvd. at each separate project entrance. This sign type is more similar to the commercial entry monument signs as it features metal pin mounted letters onto a large stucco wall that is anchored into an even larger battered ledgestone veneered wall. Larger and additional decorative metal trellis' are employed to add color and texture to the design.

11. CONCLUSION

It is the intent of this OSRP to ensure the project develops to a high community standard and provides the residents with active and passive open spaces, and a family friendly community. Amendments found to be compatible to this intent and in compliance with the County regulations shall be determined consistent with this OSRP/ PAD and in line for approval.

VICINITY MAP



KEYNOTES

1. SINGLE FAMILY RESIDENTIAL AMENITY (SEE L-3.01)
2. NULTI FAMILY RESIDENTIAL AMENITY (SEE L-3.02)
3. ENTRY MONUMENT (SEE L-2.01)

PLANT LEGEND

SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE
TREES			
	Acacia salicina	Willow Acacia	24" Box
	Caesalpinea cacalaco 'Smoothie'	Thornless Cascalote	24" Box
	Chitalpa tashkentensis 'Pink Dawn'	Chitalpa	24" Box
	Fraxinus velutina 'Fan West'	Fan West Ash	24" Box
	Parkinsonia x 'Desert Museum'	Desert Museum Palo Verde	24" Box
	Pisctacia X 'Red Push'	Red Push Pisctacia	24" Box
	Quercus virginiana 'Heritage'	'Heritage' Live Oak	24" Box
	Ulmus parvifolia	Chinese Evergreen Elm	24" Box
SHRUBS/ACCENTS		**COMMON NAME**	**SIZE**
	Bougainvillea 'La Jolla'	'La Jolla' Bougainvillea	5 Gal
	Caesalpinia pulcherrima	Red Bird of Paradise	5 Gal
	Callistemon viminalis 'Little John'	Little John	5 Gal
	Eremophila maculata 'Valentine'	Valentine Bush	5 Gal
	Gossypium harknessii	San Marcos Hibiscus	5 Gal
	Lantana x 'Dallas Red'	Dallas Red Lantana	5 Gal
	Leucophyllum langmaniae 'Rio Bravo'	Rio Bravo Sage	5 Gal
	Leucophyllum candidum 'Thunder Cloud'	Thunder Cloud Sage	5 Gal
	Muhlenbergia capillaris 'Regal Mist'	'Regal Mist' Muhly	5 Gal
	Muhlenbergia lindheimeri 'Autumn Glow'	'Autumn Glow' Muhly	5 Gal
	Muhlenbergia rigens	Deer Grass	5 Gal
	Myrtus communis 'Compacta'	Dwarf Myrtle	5 Gal
	Ruellia peninsularis	Desert Ruellia	5 Gal
	Russellia equisetiformis	Coral Fountain	5 Gal
	Tecoma x 'Sunrise'	Sunrise Esperanza	5 Gal
GROUNDCOVERS		**COMMON NAME**	**SIZE**
	Lantana montevidensis	Trailing Purple Lantana	1 Gal
	Lantana x 'New Gold'	New Gold Lantana	1 Gal
	Rosmarinus officinalis 'Huntington Carpet'	Trailing Rosemary	1 Gal
	Sphagneticola trilobata	Yellow Dot	1 Gal
TURF			
	Cynodon dactylon 'Tifway 419'	Tifway 419	Sod
	3/4" Screened Decomposed Granite Desert Brown or Equal, 2" Depth Min.		

NORTH

0' 75' 150' 300'

SCALE: 1" = 150'-0"

Conceptual Landscape Plan

21-0512

L-1.01
09.17.2021

EPS GROUP

PLANT LEGEND

SYMBOL	BOTANICAL NAME - COMMON NAME
TREES	
	PARKINSONIA HYBRID - 'DESERT MUSEUM'
	PROSOPIS HYBRID - 'PHOENIX' MESQUITE
	QUERCUS VIRGINIANA - LIVE OAK
	ULMUS PARVIFOLIA - EVERGREEN ELM
	PHOENIX DACTYLIFERA - DATE PALM
SHRUBS	
	BOUGAINVILLEA HYBRID - BUSH 3OUG. 'FLAME'
	CAESALPINIA PULCHERRIMA - RED BIRD OF PARADISE
	JUSTICIA SPECIGERA - MEXICAN HONEYSUCKLE
	MUHLENBERGIA CAPILLARIS - REGAL MIST
	EREMOPHILA HYGROPHANA - BLUE BELLS
	LEUCOPHYLLUM LANGMANIAE 'RIO BRAVO'
	RUELLIA PENINSULARIS - BAJA RUELLIA
	TECOMA STANS HYBRID - 'LYDIA'
	EREMOPHILA GLABRA SSP. CARNOSA - WINTER BLAZE
ACCENTS	
	AGAVE WEBERI - WEBER'S AGAVE
	ALOE HYBRID - 'TOPAZ' ALOE
	DASYLIRION ACROTRICHE - GREEN SPOON
	HESPERALOE PARVIFLORA (RED/YELLOW MIX)
	EUPHORBIA ANTISYPHILITICA - CANDELILLA
	YUCCA RUPICOLA - TWISTED LEAF YUCCA
	BOUTELOUA GRACILIS - 'BLONDE AMBITION'
GROUND COVERS	
	ACACIA REDOLENS - 'DESERT CARPET'
	RUELLIA BRITTONIANA 'KATIE' - 'KATIE' RUELLIA
	LANTANA HYBRID - 'NEW GOLD'
	HYMENOXYS ACAULIS - 'ANGELITA DAISY'
	DECOMPOSED GRANITE - ¾" SCREENED, 2" DEPTH MIN.
	MID-IRON BERMUDA TURF

NOTES:

1. DUE TO PLANT MATERIAL AVAILABILITY, SUBSTITUTIONS FOR PLANT MATERIAL LISTED ABOVE MAY BE USED. ANY ALTERNATES OR SUBSTITUTIONS MUST BE ON THE ADWR LOW WATER USE PLANT LIST.

2. SUB-SPECIES OR HYBRIDS OF PLANT MATERIAL LISTED ABOVE MAY BE USED AS ALTERNATES/SUBSTITUTIONS.

3. ADDITIONAL PLANT MATERIAL MAY BE ADDED TO THE LIST ABOVE DUE TO UTILITY COMPANY OR HOA REQUESTS AND/OR PLANTING RESTRICTIONS WITHIN UTILITY EASEMENTS.

4. NO TREES TO BE LOCATED WITHIN THE P.U.E. OR ANY OTHER NOTED EASEMENTS.

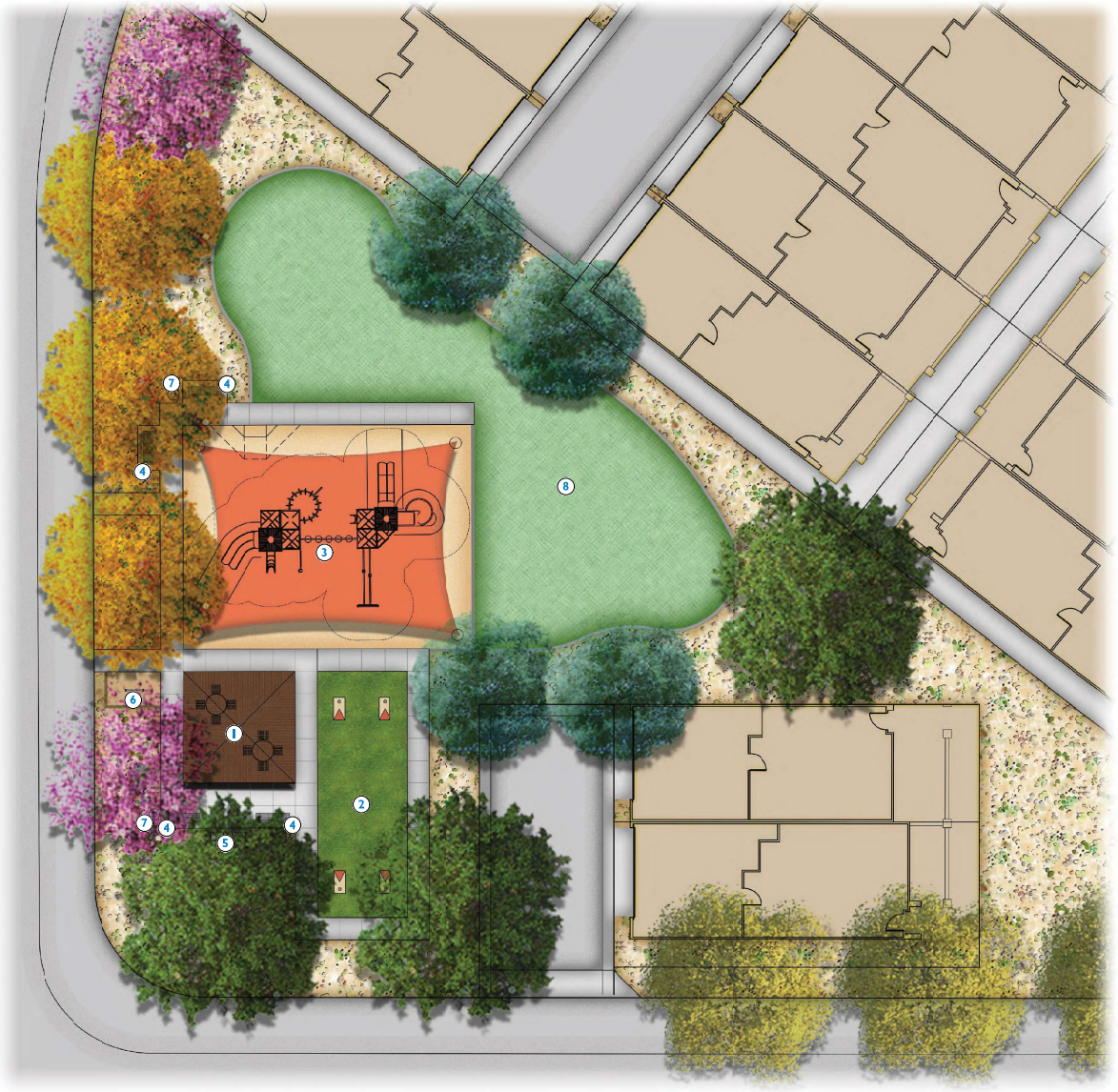
MCCOUGH ADAMSON
Landscape Architects
Land Planning
Irrigation

The EMPIRE Group of Companies

Conceptual Landscape Plan

SCALE: 1"=100'-0"
0' 50' 100' 200' 300'

NORTH



KEYNOTES

1. 20' x 20' RAMADA WITH PICNIC TABLE & TRASH RECEPTACLE
2. CORNHOLE COURT
3. TOT LOT
4. LANDSCAPE BENCH
5. BARBEQUE GRILL
6. BIKE RACK
7. TRASH RECEPTACLE
8. TURF

PLANT LEGEND

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TURF		
Cynodon dactylon 'Tifway 419'	Tifway 419	Sod
3/4" Screened Decomposed Granite Desert Brown or Equal, 2" Depth Min.		

NORTH

0' 5' 10' 20'

SCALE: 1" = 10'-0"

Conceptual Park Plan

21-0512

L-3.02

09.17.2021

EPS GROUP