

Attachment D

Draft internal paper that will be submitted to ITE summarizing spring bike/ped counts

Effect of the Pandemic on Bicycle and Pedestrian Activity in Spring 2020 in Phoenix, AZ

The City of Phoenix has been conducting bicycle and pedestrian counts at 40 citywide locations and 10 project-based locations every year for the past three years as part of the Transportation 2050 (T2050) evaluation of Mobility and Access. T2050 is a Transit and Streets improvement program, which includes enhancements to active transportation infrastructure such as bicycle lanes, sidewalks, and ADA ramps funded by a voter-approved, 35-year, half cent sales tax initiative.

The counts are captured using video cameras. Post processing is done by manually viewing the video and summarizing the counts by one-hour intervals which can be broken down by sidewalk versus street, direction of travel, and side of street. The citywide counts are conducted for five consecutive days starting on a Wednesday and extending through Sunday, during the hours of 6 a.m. to 6 p.m. Twenty-two of the 40 citywide bike counts are done in mid-April. Nearly half of the spring counts start on the Bike-to-Work Day in Maricopa County (Bike-to-Work Day was not observed in 2020 due to the pandemic). The remaining spring counts are done in the last week of April.

The spring 2020 counts coincided with the Arizona Governor's "*Stay Home, Stay Healthy, Stay Connected*" order¹, which was issued to minimize the spread of Covid-19. This allowed us to compare the bicycle counts during the pandemic conditions with the prior two years at the same 22 citywide count locations. There were four locations, which were primarily along recreational routes, where the counts increased substantially in 2020, indicating that many people were out using the bicycle facilities during the pandemic. Comparison of bicycle counts along non-recreational and recreational routes is shown in Table 1.

The pedestrian counts at 22 spring locations showed a similar trend: an increase in overall pedestrian activity along the recreational trails/routes and an increase in weekend pedestrian activity on the non-recreational routes. A comparison of pedestrian counts along non-recreational and recreational routes is shown in Table 2. At the same time, walking along the non-recreational routes decreased by 17%, compared to an increase in walking of 21% on weekends in these same areas.

Temperature and precipitation data were also gathered to determine if environmental factors affected the active transportation counts from year to year. There has been no recorded rainfall on any of the count days, and the temperature fluctuations observed was within the normal range for each year. Environmental factors did not appear to have a noticeable effect on

¹ State of Arizona Executive Order 2020-18, *Physical Distancing to Mitigate COVID-19 Transmission*, https://azgovernor.gov/sites/default/files/eo_2020-18_stay_home_stay_healthy_stay_connected_1.0.pdf, effective March 31, 2020.

walking or bicycling activity during the three-year study period. In fact, the counts are conducted in April and October, which are the ideal times to be outdoors in the Phoenix metropolitan area due to the ideal temperature and weather conditions. It is often too hot during the day during the summer months to see much active transportation activity from midday to the afternoon time periods.

The team also conducted seven of the ten three-day project-based counts (which are done Thursday through Saturday from 6 a.m. to 6 p.m.) in late March and early April. Most of these were “before” counts where new facilities are planned for the near future. One of those locations (Indian Bend Wash Trail west of Tatum Boulevard) was counted two years ago on a single day (Saturday). The 2020 project-based counts and the before and after comparison of one site are shown in Table 3.

In summary, from the comparison of counts, it can be concluded that both bicycle and pedestrian activity has been positively affected during the pandemic, especially on recreational routes and trails. The comparison also shows that weekday bicycle travel on most commuter routes and streets has stayed more or less constant from 2018 to 2020. On the other hand, pedestrian travel along commuter routes was lower during the pandemic during weekdays but higher on the weekends.

Anecdotally, the pandemic has corresponded to a surge in bicycle sales in Phoenix^{2,3} and throughout Arizona as some former transit riders are turning to bicycling to create more social distancing, and other individuals find it as an ideal way to commute, exercise, and enjoy their community.

The remaining 18 citywide locations will be counted in mid-October 2020. This will enable the team to evaluate the lasting effects of the pandemic on bicycle and pedestrian activity. The 18 locations will include a mixture of commuter and recreational routes. The collection and analyses of bicycle and pedestrian counts are expected to continue in 2021.

² *Phoenix-Area Bicycle Shops See Surge in Demand Amid Coronavirus Pandemic*, AZ Central.com, March 26, 2020, <https://www.azcentral.com/picture-gallery/news/local/phoenix/2020/03/26/phoenix-area-bike-shops-roll-coronavirus-spurs-surge-demand/2914055001/>

³ *Pandemic Leads to a Bicycle Boom, and Shortage Around the World*, KTAR News, by the Associated Press, June 14, 2020, <https://ktar.com/story/3281938/pandemic-leads-to-a-bicycle-boom-and-shortage-around-world/>

Table 1
COMPARISON OF T2050 2018-2019-2020 CITYWIDE BICYCLE COUNTS FOR THE 22 SPRING LOCATIONS

Non-Recreational Count Locations

Street Location	Facility Type	Weekdays			Weekends			All Days		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
Jefferson St w/o 19th Ave	BL	84	78	67	35	55	39	119	133	106
Central Ave n/o Elwood St	BL	243	207	162	191	242	224	434	449	386
Baseline Rd e/o 51st Ave	BL	93	65	88	44	37	70	137	102	158
51st Ave n/o Baseline Rd	BL	121	81	123	56	79	77	177	160	200
Roeser Rd e/o 7th St	BL	105	95	62	74	82	58	179	151	120
48th St s/o Warner Rd	BL	133	133	232	162	201	246	295	334	478
Ray Rd w/o 48th St	N/A	60	62	67	47	31	72	107	93	139
3rd Ave s/o Roosevelt St	BL	253	252	154	108	89	166	361	341	320
5th Ave s/o Roosevelt St	BL	368	402	159	138	103	243	506	505	402
15th Ave n/o Osborn Rd	BL	225	213	292	158	119	222	383	332	514
3rd St n/o McDowell Rd	BL	250	275	161	184	161	162	434	436	323
12th St n/o Indian School Rd	BL	314	284	327	244	162	256	558	446	583
15th Ave s/o Van Buren St	BL	220	235	395	106	121	229	326	356	624
Van Buren St w/o 16th St	N/A	183	209	185	105	114	137	288	323	322
Encanto Blvd w/o 35th Ave	BL	60	53	53	44	21	30	104	74	83
Sweetwater Ave e/o 35th Ave	BL	119	106	56	33	32	41	152	138	97
19th Ave n/o Deer Valley Rd	BL	131	73	131	76	60	85	207	133	216
56th St s/o Osborn Rd	BL	278	209	277	159	263	302	437	472	579
Total		3,240	3,032	2,991	1,964	1,972	2,659	5,204	4,978	5,650
Year over Year % Change		NA	-6%	-1%	NA	0%	35%	NA	-4%	13%

Facility Type: BL (Bike Lane), TR (Trail)

Recreational Count Locations

Street Location	Facility Type	Weekdays			Weekends			All Days		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
Grand Canal Trail n/o Thomas Rd	TR	276	294	643	163	183	762	439	477	1405
Campbell Ave w/o 44th St	BL	284	365	890	589	502	1358	873	867	2248
Dreamy Draw Trail e/o SR-51	TR	394	385	811	500	557	851	894	942	1662
Arizona Canal Trail e/o Central Ave	TR	638	583	1358	742	645	1688	1380	1228	3046
Total		1,592	1,627	3,702	1,994	1,887	4,659	3,586	3,514	8,361
Year over Year % Change		NA	2%	128%	NA	-5%	147%	NA	-2%	138%

Facility Type: BL (Bike Lane), TR (Trail)

Table 2
COMPARISON OF T2050 2018-2019-2020 CITYWIDE PEDESTRIAN COUNTS FOR THE 22 SPRING LOCATIONS

Non-Recreational Count Locations

Location	Facility Type	Weekdays			Weekends			All Days		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
Jefferson St w/o 19th Ave	SW	292	163	142	54	59	54	346	222	196
Central Ave n/o Elwood St	SW	180	139	148	70	45	57	250	184	205
Baseline Rd e/o 51st Ave	SW	302	228	174	162	139	119	464	367	293
51st Ave n/o Baseline Rd	SW	409	462	369	210	303	246	619	765	615
Roeser Rd e/o 7th St	SW	265	191	85	63	185	50	328	376	135
48th St s/o Warner Rd	SW	91	114	215	70	109	208	161	223	423
Ray Rd w/o 48th St	SW	155	222	105	113	68	84	268	290	189
3rd Ave s/o Roosevelt St	SW	596	560	428	247	230	294	843	790	722
5th Ave s/o Roosevelt St	SW	439	375	567	278	242	372	717	617	939
15th Ave n/o Osborn Rd	SW	693	499	244	76	68	132	769	567	376
3rd St n/o McDowell Rd	SW	356	299	318	130	146	254	486	445	572
12th St n/o Indian School Rd	SW	499	517	335	270	404	179	769	921	514
15th Ave s/o Van Buren St	SW	1026	729	1144	287	222	724	1313	951	1868
Van Buren St w/o 16th St	SW	361	238	206	163	164	135	524	402	341
Encanto Blvd w/o 35th Ave	SW	109	148	62	47	43	31	156	191	93
Sweetwater Ave e/o 35th Ave	SW	200	318	110	46	45	43	246	363	153
19th Ave n/o Deer Valley Rd	SW	166	126	174	26	34	22	192	160	196
56th St s/o Osborn Rd	SW	374	691	167	179	54	88	553	745	255
Total		6,513	6,019	4,993	2,491	2,560	3,092	9,004	8,579	8,085
Year over Year % Change		NA	-8%	-17%	NA	3%	21%	NA	-5%	-6%

Facility Type: SW (Sidewalk), TR (Trail)

Recreational Count Locations

Location	Facility Type	Weekdays			Weekends			All Days		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
Grand Canal Trail n/o Thomas Rd	TR	397	377	622	148	233	439	545	610	1061
Campbell Ave w/o 44th St	SW	264	375	583	190	234	497	454	609	1080
Dreamy Draw Trail e/o SR-51	TR	135	121	417	128	154	271	263	275	688
Arizona Canal Trail e/o Central Ave	TR	376	428	1124	354	424	1173	730	852	2297
Total		1,172	1,301	2,746	820	1,045	2,380	1,992	2,346	5,126
Year over Year % Change		NA	11%	111%	NA	27%	128%	NA	18%	118%

Facility Type: SW (Sidewalk), TR (Trail)

Table 3
2020 T2050 PROJECT-RELATED BIKE AND PEDESTRIAN COUNT SUMMARY
(3 Day Total / 6 AM - 6 PM)

Location	Date	Ped	Bike	Weather	
				Temp *	Precip.
16th St between Jefferson St and Roosevelt St	4/2/2020	336	123	84	0
Indian Bend Wash Trail west of Tatum Blvd	4/2/2020	1205	443	84	0
Hatcher between 7th Ave and 19th Ave	4/2/2020	701	475	84	0
40th St between Washington St and SR Loop 202	4/2/2020	99	119	84	0
7th St south of Lincoln St	4/2/2020	143	64	84	0
Oak St east of 3rd St	4/2/2020	136	131	84	0
20th St south of Oak St	3/26/2020	151	87	69	0

*Note: Temperature is the average of the high temperatures over the 3-day study period.

BEFORE v. AFTER T2050 BIKE AND PEDESTRIAN COUNT COMPARISON

Location	Year	Ped			Bike			Weather	
		Th	Fr	Sa	Th	Fr	Sa	Temp *	Precip.
Indian Bend Wash Trail west of Tatum Blvd	2018	-	-	253	-	-	43	79	0
	2020	407	395	403	133	110	200	84	0

*Note: Temperature is the average of the high temperatures over the 3-day study period.