

# APPENDIX A

## Work From Home Estimates

**An estimated 70% of New York residents worked from home during the NYS on PAUSE order**

In 2010, United States Census Bureau data revealed that 3.8% New York City residents worked from home. This number grew slightly over the next several years—by 2018, 4.2% worked from home. Due to stay-at-home orders that mandated that only essential workers would be permitted to travel to work, the coronavirus outbreak led to a massive increase in work from home in the New York City region for those able to perform their jobs remotely, and a large increase in unemployment for those who could not.

New York State labor force estimates provide the most up-to-date estimates of persons employed and unemployed by place of residence.\* The New York City labor market area includes Bronx, Kings, New York, Queens and Richmond counties. In March 2020, New York State reported that the New York City area had a 4% unemployment rate. By April 2020, unemployment had risen to 15%. Numbers continued to climb in May, reaching 18%. Our calculations indicate that over half the workforce worked from home during March, April, and May. This percentage declined through the months as an increasing number of city residents lost their jobs.

**Estimated New York City Labor Force Working From Home**

	March 2020	April 2020	May 2020
NYC Labor Force	3,944,212	3,738,815	3,670,470
Unemployed	160,306	560,073	671,304
Employed	3,783,906	3,178,742	2,999,166
<i>Essential Workers*</i>	1,038,779	1,038,779	1,038,779
<i>Non-Essential Workers</i>	2,745,127	2,139,963	1,960,387
<b>% Labor Force, Unemployed</b>	<b>4.1%</b>	<b>15.0%</b>	<b>18.3%</b>
<b>% Labor Force, Essential Workers</b>	<b>26.3%</b>	<b>27.8%</b>	<b>28.3%</b>
<b>% Labor Force, Work from Home</b>	<b>69.6%</b>	<b>57.2%</b>	<b>53.4%</b>

Sources: New York State Department of Labor: Seasonally Adjusted Labor Force Data - NYS, NYC, and BOS; Office of the Comptroller of New York.

\* Essential Workers numbers come from the Office of the Comptroller March report, and assume no changes in employment status for essential workers. Estimates thus may be inaccurate if this sector experienced significant job loss or growth.

\* Data publicly available at <https://labor.ny.gov/stats/LSLAUS.shtm>. New York State Department of Labor. “Seasonally Adjusted Labor Force Data - NYS, NYC, and BOS.”

# APPENDIX B

Table 2.2.1 Subway Entries by Month

Borough	Month	2019 Entries	2020 Entries	YOY % Change
Brooklyn	February	27,899,340	29,298,042	5.0%
	March	31,776,209	17,761,793	-44.1%
	April	31,627,514	3,455,358	-89.1%
	May	33,438,869	4,438,375	-86.7%
	% Change Feb–May	19.9%	-84.9%	
Bronx	February	10,208,565	10,475,453	2.6%
	March	11,687,286	7,309,516	-37.5%
	April	11,582,199	2,036,869	-82.4%
	May	12,215,620	2,536,843	-79.2%
	% Change Feb–May	19.7%	-75.8%	
Manhattan	February	71,722,733	71,099,466	-0.9%
	March	81,886,059	37,091,826	-54.7%
	April	82,686,401	4,727,710	-94.3%
	May	85,137,276	5,948,891	-93.0%
	% Change Feb–May	18.7%	-91.6%	
Queens	February	18,075,954	18,813,001	4.1%
	March	20,679,727	11,724,878	-43.3%
	April	20,687,529	1,995,047	-90.4%
	May	21,769,419	2,777,699	-87.2%
	% Change Feb–May	20.4%	-85.2%	
Staten Island	February	306,962	277,155	-9.7%
	March	358,180	174,470	-51.3%
	April	365,169	23,266	-93.6%
	May	384,406	27,229	-92.9%
	% Change Feb–May	25.2%	-90.2%	
Systemwide	February	128,213,554	129,963,117	1.4%
	March	146,387,461	74,062,483	-49.4%
	April	146,948,812	12,238,250	-91.7%
	May	152,945,590	15,729,037	-89.7%
	% Change Feb–May	19.3%	-87.9%	

Source: MTA

**Table 2.2.2A Estimated Weekly Bus Ridership (Local, Limited, SBS, and Express)**

Week Ending	Weekly Total*	Average % Change from 2019 Average**
March 7, 2020	13,160,090	-0.6%
March 14, 2020	11,954,337	-9.9%
March 21, 2020	6,470,438	-49.7%
March 28, 2020	3,924,500	-69.6%
April 4, 2020	3,220,300	-74.9%
April 11, 2020	2,821,400	-77.7%
April 18, 2020	2,821,200	-77.9%
April 25, 2020	3,180,100	-74.9%
May 2, 2020	3,409,800	-73.1%
May 9, 2020	3,718,100	-70.6%
May 16, 2020	3,963,600	-68.6%
May 23, 2020	4,142,300	-67.7%
May 30, 2020	4,474,600	-64.4%
June 6, 2020	4,916,800	-61.4%

Source: MTA

\* Accessed June 24, 2020; numbers may be revised during reconciliation processes

\*\* MTA provided information on the % change from the average 2019 ridership for each day; this column is an average those daily values

**Table 2.2.2B Estimated Average Daily Bus Weekday/Weekend Ridership, Percent Change from 2019 Average**

Month	Daily Weekday Average*	Average % Change 2019 Average**	Daily Weekend Average*	Average % Change 2019 Average**
March	1,379,275	-36.1%	727,813	-37.0%
April	468,145	-78.3%	341,838	-71.1%
May	625,790	-71.0%	465,920	-60.1%
% Change March–May	-54.6%		-36.0%	

Source: MTA

\* Accessed June 24, 2020; numbers may be revised during reconciliation processes

\*\* MTA provided information on the % change from the average 2019 ridership for each day; this column is an average of those daily values

**Table 2.2.2C Average Bus Speeds by Borough**

<b>Borough</b>	<b>Month</b>	<b>2019 Bus Speed, MPH</b>	<b>2020 Bus Speed, MPH</b>	<b>YOY % Change</b>
Brooklyn	February	7.2	7.2	0.0%
	March	7.1	7.5	5.6%
	April	7.1	8.6	21.1%
	May	7.0	8.5	21.4%
	<i>% Change Feb–May</i>	<i>–2.8%</i>	<i>18.1%</i>	
Bronx	February	7.4	7.5	1.4%
	March	7.4	7.7	4.1%
	April	7.4	8.1	9.5%
	May	7.3	8.2	12.3%
	<i>% Change Feb–May</i>	<i>–1.4%</i>	<i>9.3%</i>	
Manhattan	February	5.9	6.0	1.7%
	March	5.9	6.4	8.5%
	April	5.9	7.7	30.5%
	May	5.8	7.6	31.0%
	<i>% Change Feb–May</i>	<i>–1.7%</i>	<i>26.7%</i>	
Queens	February	8.9	8.9	0.0%
	March	8.8	9.4	6.8%
	April	8.9	10.6	19.1%
	May	8.7	10.8	24.1%
	<i>% Change Feb–May</i>	<i>–2.2%</i>	<i>21.3%</i>	
Staten Island	February	14.0	14.0	0.0%
	March	13.9	14.2	2.2%
	April	13.9	14.2	2.2%
	May	13.5	14.6	8.1%
	<i>% Change Feb–May</i>	<i>–3.6%</i>	<i>4.3%</i>	
Systemwide	February	8.0	8.0	0.0%
	March	8.0	8.3	3.8%
	April	8.0	9.2	15.0%
	May	7.9	9.3	17.7%
	<i>% Change Feb–May</i>	<i>–1.3%</i>	<i>16.3%</i>	

Source: MTA

**Table 2.2.3.1 Average Daily VMT by Borough**

Borough	January*	March	April	May	% Change Jan–March	% Change Jan–April	% Change Jan–May
Bronx	14,487,489	10,160,645	3,222,667	5,931,935	–29.87%	–77.8%	–68.3%
Brooklyn	30,019,690	19,337,742	6,698,667	10,452,581	–35.58%	–77.7%	–65.4%
Manhattan	35,620,155	20,257,097	2,527,000	5,063,871	–43.13%	–92.9%	–87.5%
Queens	40,028,777	23,900,645	6,939,667	12,872,258	–40.29%	–82.7%	–71.0%
Staten Island	13,132,478	7,680,000	2,161,000	4,240,000	–41.52%	–83.5%	–71.9%
NYC	133,288,589	81,336,129	21,549,001	38,560,645	–39.0%	–83.8%	–71.1%

Source: StreetLight

\* StreetLight does not provide February data, so January average daily VMT was utilized as the index

**Table 2.2.3.3 Weekly Speed Camera Violations, February – May 2020**

Week Of	Monday	Tuesday	Wednesday	Thursday	Friday	Weekly Sum	Average	% Change Weekly Sum, Baseline week (3/3–3/9)
February 3	12,446	10,772	11,179	8,981	10,896	54,274	10,855	–
February 10	8,723	9,776	11,613	9,405	13,243	52,760	10,552	–2.8%
February 17	17,902	12,788	13,732	13,853	15,144	73,419	14,684	35.3%
February 24	12,308	8,925	9,840	11,403	12,477	54,953	10,991	1.3%
March 2	12,320	10,310	11,473	12,329	10,060	56,492	11,298	4.1%
March 9	13,524	12,554	12,464	11,478	12,590	62,610	12,522	15.4%
March 16	15,863	14,805	17,114	16,208	20,401	84,391	16,878	55.5%
March 23	13,300	21,305	19,734	21,931	23,754	100,024	20,005	84.3%
March 30	21,068	21,996	24,438	24,983	22,471	114,956	22,991	111.8%
April 6	25,907	25,553	25,023	21,510	26,115	124,108	24,822	128.7%
April 13	17,182	25,589	24,116	23,973	25,326	116,186	23,237	114.1%
April 20	23,797	20,630	24,032	21,818	19,454	109,731	21,946	102.2%
April 27	21,609	23,028	18,961	18,883	22,450	104,931	20,986	93.3%
May 4	22,636	22,196	17,713	21,632	18,114	102,291	20,458	88.5%
May 11	18,470	20,475	19,710	19,766	22,072	100,493	20,099	85.2%
May 18	18,763	18,511	19,265	19,746	19,518	95,803	19,161	76.5%
May 25	–	18,765	18,650	17,540	20,152	75,107	18,777	73.0%

Source: NYC Department of Finance

Figure 2.2.3.4A

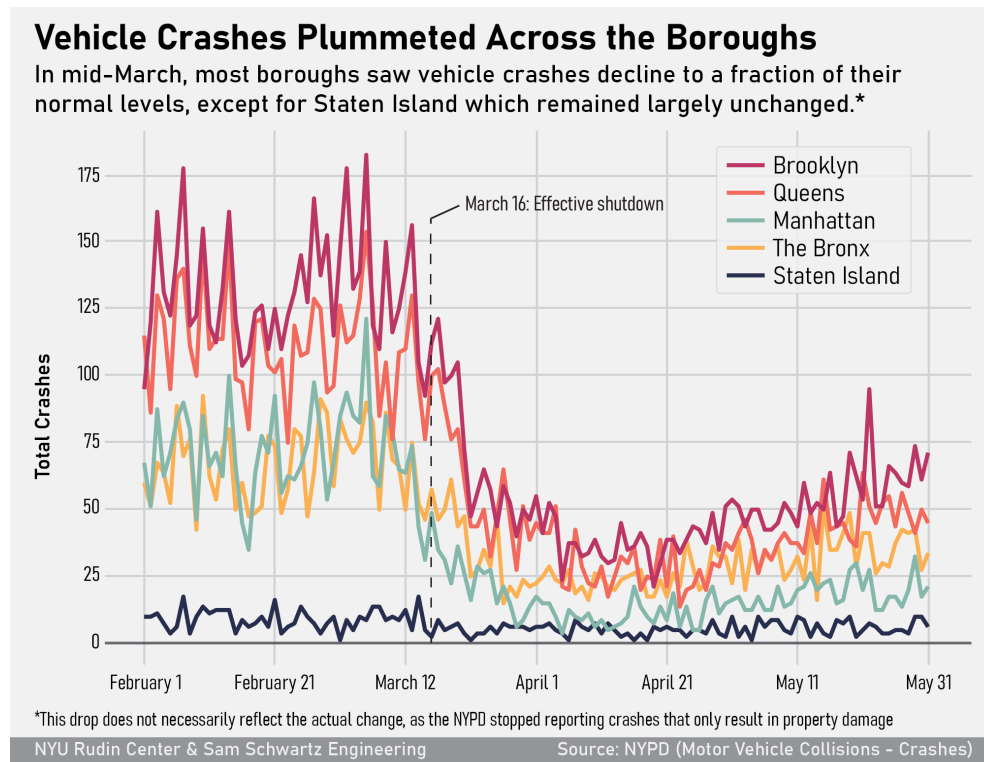


Table 2.2.3.4A Vehicle Crash Injuries and Fatalities

Month	2019		2020		YOY % Change	
	Injuries	Fatalities	Injuries	Fatalities	Injuries	Fatalities
February	4,173	14	4,036	20	-3.3%	-42.9%
March	4,637	16	3,153	7	-32.0%	-56.3%
April	4,808	20	1,294	13	-73.1%	-35.0%
May	5,729	22	2,535	11	-55.8%	-50.0%
% Change Feb-May	37.3%	57.1%	-37.2%	-45.0%		

Source: New York City Police Department

Table 2.2.3.4B Pedestrian Injuries and Fatalities

Month	2019		2020		YOY % Change	
	Injuries	Fatalities	Injuries	Fatalities	Injuries	Fatalities
February	835	9	832	11	-0.4%	22.2%
March	853	10	558	6	-34.6%	-40.0%
April	747	8	145	1	-80.6%	-87.5%
May	902	11	287	2	-68.2%	-81.8%
% Change Feb-May	8.0%	22.2%	-65.5%	-81.8%		

Source: New York City Police Department

Figure 2.2.3.4B

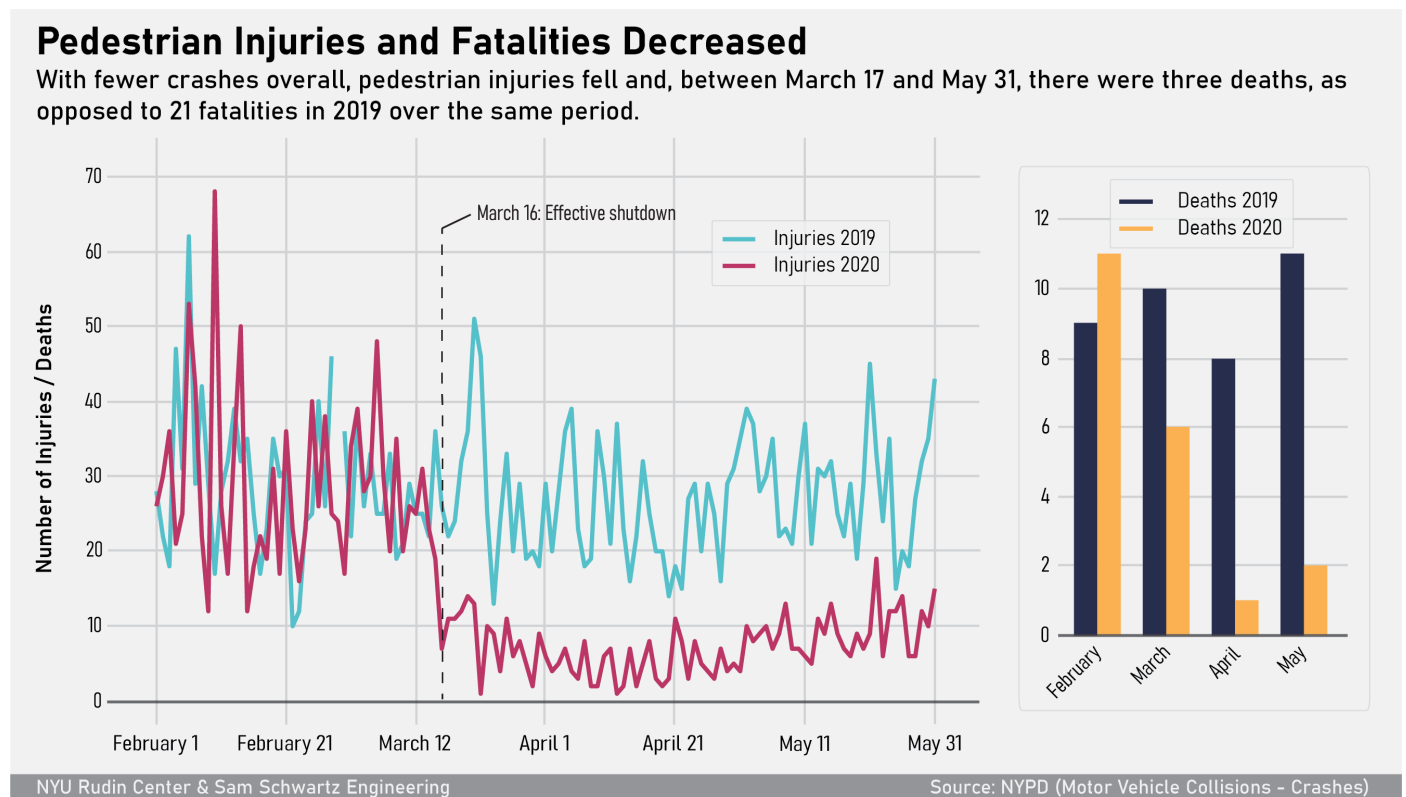


Table 2.2.4A Average Daily Taxi/FHV Pickups/Dropoffs by Month, 2020

Taxi/FHV	Month	2019 Avg Pickups	2020 Avg Pickups	YOY % Change	2019 Avg Dropoffs	2020 Avg Dropoffs	YOY % Change
Yellow	March	252,702	96,309	-61.6%	252,614	97,106	-61.6%
	April	248,247	7,519	-97.0%	248,202	7,928	-96.8%
	% Change March-April	-1.8%	-92.2%		-1.7%	-91.8%	
FHV	March	761,888	431,990	-43.3%	761,591	432,519	-43.2%
	April	729,640	138,051	-81.1%	729,458	143,732	-80.3%
	% Change March-April	-4.2%	-68.0%		-4.2%	-66.8%	

Source: New York City Taxi & Limousine Commission

**Table 2.2.4B Top Ten Taxi Neighborhoods by Number of Pickups**

March		April	
Upper East Side South	131,042	Kips Bay	11,282
Upper East Side North	127,212	Lenox Hill East	10,203
Midtown Center	121,063	Upper West Side North	9,786
Midtown East	105,558	East Harlem South	9,736
Penn Station/Madison Sq West	97,430	Yorkville West	9,165
Times Sq/Theatre District	95,740	Upper East Side North	8,461
Clinton East	91,568	Lenox Hill West	8,081
Murray Hill	91,132	Clinton East	7,524
JFK Airport	90,062	Upper West Side South	7,283
Lincoln Square East	87,500	Lincoln Square East	7,045

Source: New York City Taxi &amp; Limousine Commission

**Table 2.2.4C Top Ten FHV Neighborhoods by Number of Pickups**

March		April	
Crown Heights North	222,094	Crown Heights North	94,242
East Village	183,821	East New York	91,110
East New York	168,311	Central Harlem North	71,552
JFK Airport	163,734	Brownsville	62,224
LaGuardia Airport	155,876	Canarsie	57,789
Bushwick South	155,388	Washington Heights South	56,489
Central Harlem North	143,389	East Harlem North	54,702
TriBeCa/Civic Center	135,712	Bushwick South	52,502
Union Sq	132,693	Mott Haven/Port Morris	52,107
Midtown Center	128,751	Flatbush/Ditmas Park	51,570

Source: New York City Taxi &amp; Limousine Commission

**Table 2.2.5 NYC Ferry Routes**

Ferry Line	Month	2019 Average Weekday Ridership	2020 Average Weekday Ridership	YOY % Change
East River	February	3,811	4,965	30.3%
	March	4,519	2,682	-40.7%
	April	6,713	448	-93.3%
	May	8,000	1,303	-83.7%
	% Change Feb-May	109.9%	-73.8%	
Astoria	February	1,817	2,221	22.2%
	March	1,921	1,278	-33.5%
	April	2,672	286	-89.3%
	May	3,035	738	-75.7%
	% Change Feb-May	67.0%	-66.8%	
Lower East Side	February	674	969	43.8%
	March	767	565	-26.3%
	April	995	153	-84.6%
	May	1,124	134	-88.1%
	% Change Feb-May	66.8%	-86.2%	
South Brooklyn	February	799	863	8.0%
	March	966	552	-42.9%
	April	1,808	116	-93.6%
	May	1,938	309	-84.1%
	% Change Feb-May	142.6%	-64.2%	
Rockaway	February	1,032	1,175	13.9%
	March	1,093	664	-39.2%
	April	1,668	155	-90.7%
	May	1,975	602	-69.5%
	% Change Feb-May	91.4%	-48.8%	
Soundview	February	1,200	1,674	39.5%
	March	1,365	999	-26.8%
	April	1,700	258	-84.8%
	May	2,016	528	-73.8%
	% Change Feb-May	68.0%	-68.5%	

Source: NYC Department of Transportation

Figure 2.2.5

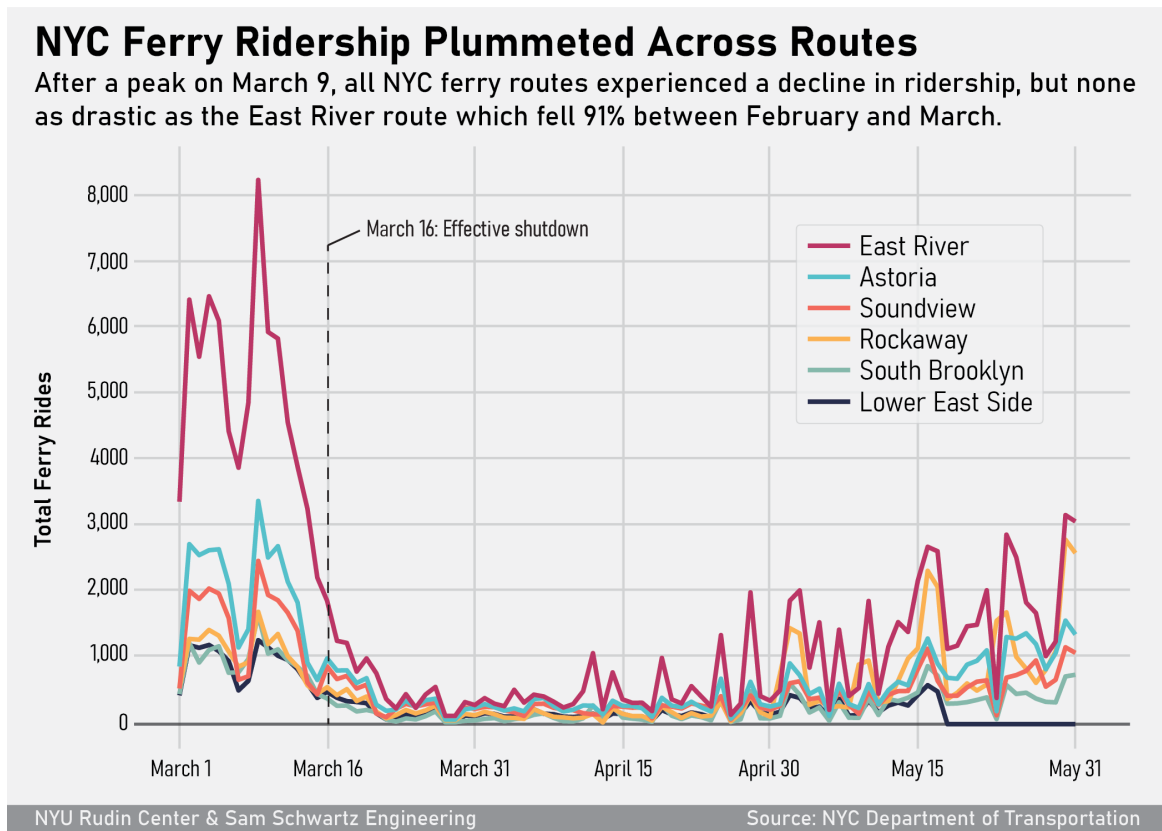
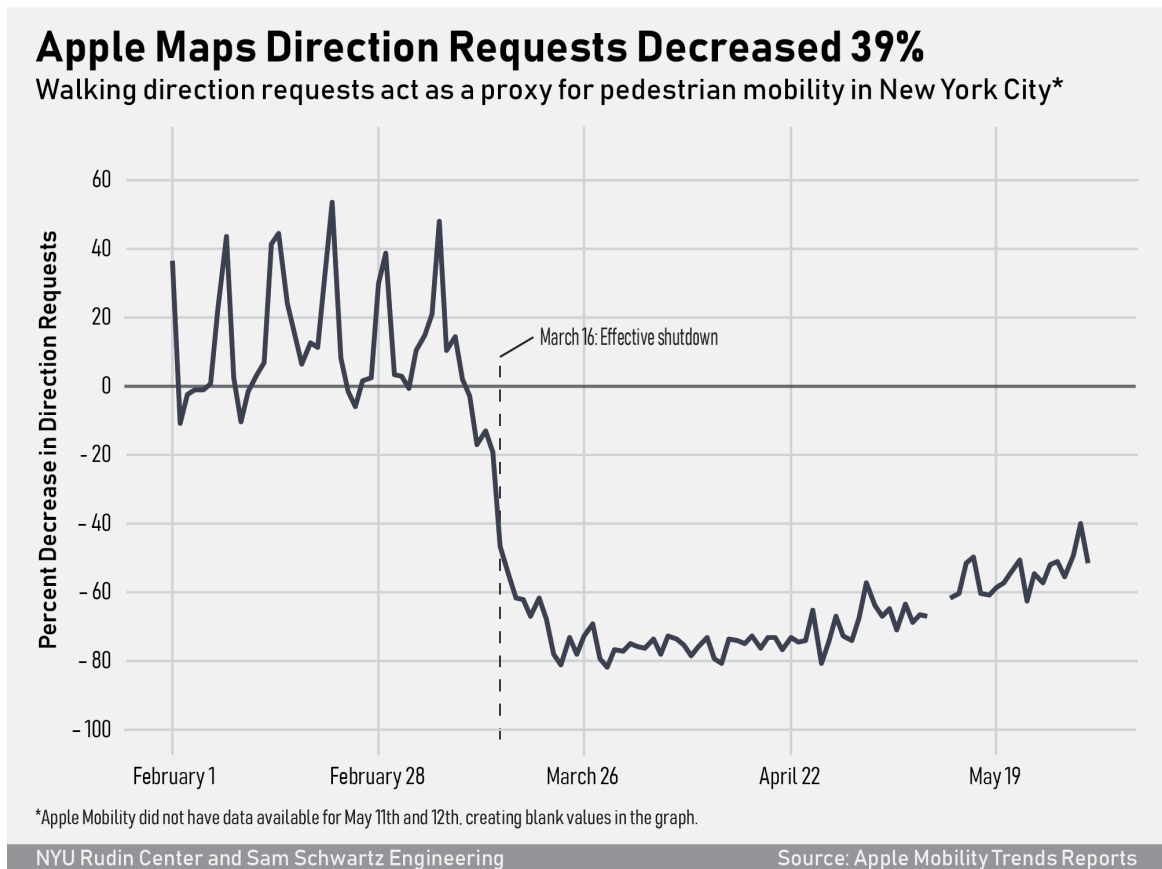


Figure 2.3.1



**Table 2.3.2.1A March Citi Bike Trips Pre- and Post-Effective Shutdown, by Origin**

Origin	Trips 3/1–3/15	Trips 3/16–3/31	% Change
Midtown	254,706	91,115	–64.2%
South of 14 (Non-FiDi)	177,503	68,278	–61.5%
South Brooklyn	84,167	37,291	–55.7%
North Brooklyn	55,926	28,016	–49.9%
Financial District	49,651	25,158	–49.3%
Upper West Side	46,395	24,700	–46.8%
Upper East	35,374	19,296	–45.5%
Harlem	21,460	13,865	–35.4%
Queens	20,347	13,406	–34.1%
Upper Manhattan	840	929	10.6%

Sources: Citi Bike; Joanna Simon/Way Wiser Spatial

**Table 2.3.2.1B March Citi Bike Trips Pre- and Post-Effective Shutdown, by Destination**

Destination	Trips 3/1–3/15	Trips 3/16–3/31	% Change
Midtown	253,459	91,207	–64.0%
South of 14 (Non-FiDi)	179,688	68,753	–61.7%
South BK	84,585	37,645	–55.5%
North BK	56,082	27,948	–50.2%
Financial District	50,272	25,094	–50.1%
Upper West Side	44,451	23,997	–46.0%
Upper East	32,540	17,576	–46.0%
Harlem	21,497	13,979	–35.0%
Queens	20,434	13,383	–34.5%
Upper Manhattan	823	926	12.5%

Sources: Citi Bike; Joanna Simon/Way Wiser Spatial

**Table 2.3.2.1C Citi Bike Trips by Origin**

Origin	March 2019	March 2020	April 2019	April 2020	May 2019	May 2020	YOY % Change March	YOY % Change April	YOY % Change May
Midtown	467,977	345,422	604,303	178,325	634,320	360,349	-26.2%	-70.5%	-43.2%
South of 14th Street (Non FiDI)	317,421	245,703	422,466	139,780	466,761	287,425	-22.6%	-66.9%	-38.4%
South Brooklyn	154,935	121,428	207,585	78,726	224,400	182,634	-21.6%	-62.1%	-18.6%
North Brooklyn	85,823	83,915	118,140	66,263	137,396	153,121	-2.2%	-43.9%	11.4%
Financial District	85,917	74,754	134,458	56,352	160,231	135,573	-13.0%	-58.1%	-15.4%
Upper West Side	84,454	71,095	106,489	52,487	113,042	110,196	-15.8%	-50.7%	-2.5%
Upper East Side	61,045	54,625	76,740	44,084	82,608	87,179	-10.5%	-42.6%	5.5%
Harlem	36,962	35,276	48,808	30,536	54,914	68,434	-4.6%	-37.4%	24.6%
Queens	32,826	33,753	46,329	31,263	50,202	79,606	2.8%	-32.5%	58.6%
Upper Manhattan	301	886	326	1,565	315	6,258	194.4%	380.1%	1,886.7%
South Bronx*	0	0	0	0	0	3,267	-	-	-

Sources: Citi Bike; Joanna Simon/Way Wiser Spatial

\* Citi Bike expanded to the South Bronx in May 2020

**Table 2.3.2.1D Citi Bike Trips by Destination**

Destination	March 2019	March 2020	April 2019	April 2020	May 2019	May 2020	YOY % Change March	YOY % Change April	YOY % Change May
Midtown	469,137	344,252	604,826	178,432	634,541	357,736	-26.6%	-70.5%	-43.6%
South of 14th Street (Non FiDI)	320,707	248,345	426,574	141,092	470,479	291,162	-22.6%	-66.9%	-38.1%
South Brooklyn	155,027	122,209	207,265	79,873	224,909	185,823	-21.2%	-61.5%	-17.4%
North Brooklyn	85,909	84,002	118,404	66,188	136,587	153,782	-2.2%	-44.1%	12.6%
Financial District	85,393	75,273	134,511	56,516	161,495	135,959	-11.9%	-58.0%	-15.8%
Upper West Side	79,486	68,448	101,664	50,812	107,990	107,689	-13.9%	-50.0%	-0.3%
Upper East Side	61,359	54,163	76,886	42,841	82,750	85,426	-11.7%	-44.3%	3.2%
Harlem	37,671	35,426	48,955	31,028	55,001	68,311	-6.0%	-36.6%	24.2%
Queens	32,667	33,817	46,234	31,119	50,138	79,048	3.5%	-32.7%	57.7%
Upper Manhattan	305	922	325	1,480	299	5,839	202.3%	355.4%	1,852.8%
South Bronx*	0	0	0	0	0	3,250	-	-	-

Sources: Citi Bike; Joanna Simon/Way Wiser Spatial

\* Citi Bike expanded to the South Bronx in May 2020

**Table 2.3.3 Revel Trips, Monthly 2020**

Month	Revel Rides	Average Daily Rides	MOM % Change
February	86,614	2,987	—
March	91,608	2,995	5.8%
April	76,330	2,544	-16.7%
May	225,815	7,284	195.8%

Source: Revel Transit Inc.

**Table 2.4.1.1 Metro-North Railroad Ridership Based on Ticket Sales, Weekly 2020**

Week of	Ridership based on MNR Ticket Sales	% Change Week over Week	% Change Baseline Week (2/24–3/1)
March 2	418,430	—	-6.8%
March 9	256,128	-38.8%	-43.0%
March 16	87,912	-65.7%	-80.4%
March 23	38,514	-56.2%	-91.4%
March 30	46,433	20.6%	-89.7%
April 6	54,679	17.8%	-87.8%
April 13	55,277	1.1%	-87.7%
April 20	56,866	2.9%	-87.3%
April 27	60,864	7.0%	-86.4%
May 4	65,863	8.2%	-85.3%
May 11	74,191	12.6%	-83.5%
May 18	83,270	12.2%	-81.5%
May 25	92,606	11.2%	-79.4%

Source: MTA

\* Figures do not include sale of 10 trips, weeklies, mail and ride monthlies, and on-board one way tickets

**Table 2.4.1.2 LIRR Ridership Based on Ticket Sales, Weekly 2020**

Week of	Ridership based on LIRR Ticket Sales*	% Change Week over Week	% Change Baseline Week (2/24–3/1)
March 2	532,506	–	–2.0%
March 9	342,931	–35.6%	–36.9%
March 16	112,471	–67.2%	–79.3%
March 23	39,980	–64.5%	–92.6%
March 30	36,411	–8.9%	–93.3%
April 6	36,686	0.8%	–93.2%
April 13	34,375	–6.3%	–93.7%
April 20	34,325	–0.1%	–93.7%
April 27	36,368	6.0%	–93.3%
May 4	62,400	71.6%	–88.5%
May 11	83,563	33.9%	–84.6%
May 18	96,607	15.6%	–82.2%
May 25	109,755	13.6%	–79.8%

Source: MTA

\* Figures do not include sale of 10 trips, weeklies, mail and ride monthlies, and on-board one way tickets

**Table 2.4.1.4A PATH Average Weekday and Weekend Ridership, 2019 and 2020**

Month	2019 Weekday	2020 Weekday	2020 % Change from Feb	YOY % Change	2019 Weekend Day	2020 Weekend Day	2020% Change from Feb	YOY % Change
February	278,047	282,850	–	1.7%	81,988	81,481	–	–0.6%
March	281,605	126,409	–55.3%	–55.1%	87,887	36,690	–55.0%	–58.3%
April	285,930	14,596	–94.8%	–94.9%	96,568	6,936	–91.5%	–92.8%
May	289,413	20,445	–92.8%	–92.9%	97,908	10,891	–86.6%	–88.9%

Source: Port Authority of New York and New Jersey

**Table 2.4.1.4B PATH Monthly Ridership, New York Stations, 2019 and 2020**

New York Stations	Month	2019 Monthly Totals	2020 Monthly Totals	2020 % Change from February	YOY % Change
Christopher Street	February	122,290	130,276	—	6.5%
	March	141,854	61,709	-52.6%	-56.5%
	April	141,624	4,670	-96.4%	-96.7%
	May	145,879	8,592	-93.4%	-94.1%
9th Street	February	134,594	142,993	—	6.2%
	March	155,139	62,967	-56.0%	-59.4%
	April	156,659	5,239	-96.3%	-96.7%
	May	156,637	8,428	-94.1%	-94.6%
14th Street	February	214,149	226,706	—	5.9%
	March	248,767	110,832	-51.1%	-55.4%
	April	251,149	13,020	-94.3%	-94.8%
	May	254,265	19,124	-91.6%	-92.5%
23rd Street	February	212,711	231,573	—	8.9%
	March	235,543	107,738	-53.5%	-54.3%
	April	238,030	9,206	-96.0%	-96.1%
	May	246,744	12,568	-94.6%	-94.9%
33rd Street	February	765,956	793,546	—	3.6%
	March	897,738	398,075	-49.8%	-55.7%
	April	925,076	43,148	-94.6%	-95.3%
	May	943,097	62,070	-92.2%	-93.4%
World Trade Center	February	1,267,807	1,281,652	—	1.1%
	March	1,371,174	648,938	-49.4%	-52.7%
	April	1,469,770	82,386	-93.6%	-94.4%
	May	1,508,842	118,715	-90.7%	-92.1%
New York Subtotals	February	2,717,507	2,806,746	—	3.3%
	March	3,050,215	1,390,259	-50.5%	-54.4%
	April	3,182,308	157,669	-94.4%	-95.0%
	May	3,255,464	229,497	-91.8%	-93.0%

Source: Port Authority of New York and New Jersey

**Table 2.4.1.4C PATH Monthly Ridership, New Jersey Stations, 2019 and 2020**

New Jersey Stations	Month	2019 Monthly Totals	2020 Monthly Totals	2020 % Change from February	YOY% Change
Newark	February	634,333	649,587	–	2.4%
	March	702,694	357,391	–45.0%	–49.1%
	April	728,048	64,048	–90.1%	–91.2%
	May	751,759	84,879	–86.9%	–88.7%
Harrison	February	186,829	198,115	–	6.0%
	March	213,355	106,129	–46.4%	–50.3%
	April	220,448	11,238	–94.3%	–94.9%
	May	235,761	16,424	–91.7%	–93.0%
Journal Square	February	595,158	623,264	–	4.7%
	March	674,841	357,055	–42.7%	–47.1%
	April	705,668	73,814	–88.2%	–89.5%
	May	723,636	99,219	–84.1%	–86.3%
Grove Street	February	481,789	523,532	–	8.7%
	March	544,810	243,834	–53.4%	–55.2%
	April	563,030	22,392	–95.7%	–96.0%
	May	580,760	32,337	–93.8%	–94.4%
Exchange Place	February	374,174	369,748	–	–1.2%
	March	421,371	174,604	–52.8%	–58.6%
	April	442,819	16,457	–95.5%	–96.3%
	May	452,729	23,853	–93.5%	–94.7%
Newport	February	425,200	411,322	–	–3.3%
	March	479,235	179,260	–56.4%	–62.6%
	April	498,149	11,256	–97.3%	–97.7%
	May	510,395	15,968	–96.1%	–96.9%
Hoboken	February	635,293	655,191	–	3.1%
	March	706,047	301,166	–54.0%	–57.3%
	April	722,531	19,732	–97.0%	–97.3%
	May	729,433	28,679	–95.6%	–96.1%
New Jersey Subtotal	February	3,332,776	3,430,759	–	2.9%
	March	3,742,353	1,719,439	–49.9%	–54.1%
	April	3,880,693	218,937	–93.6%	–94.4%
	May	3,984,473	301,359	–91.2%	–92.4%

Source: Port Authority of New York and New Jersey

Figure 2.4.2.2

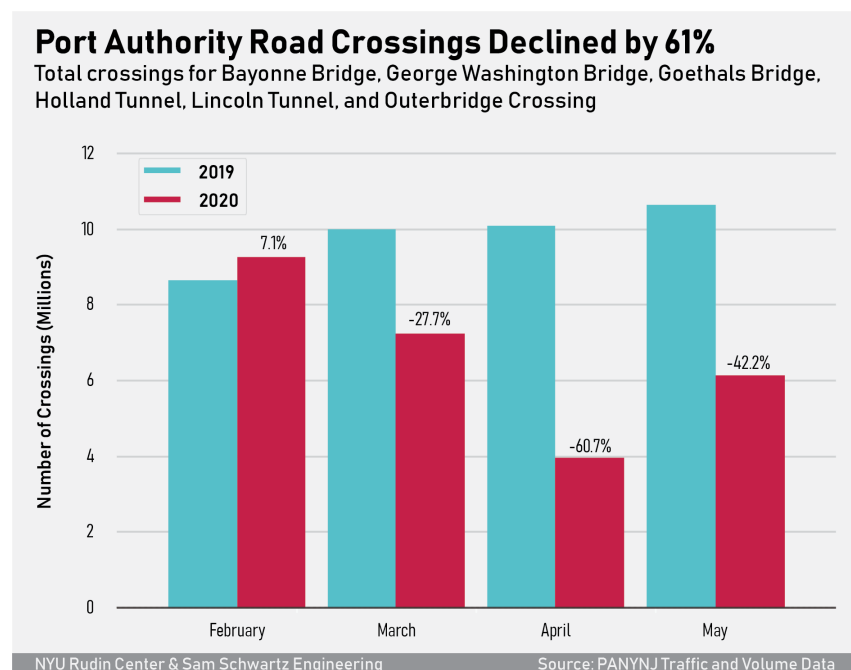


Table 2.4.3.1 Total Passengers at NYC Region Airports, 2019–2020

Airport	Month	2019 Total Passengers	2020 Total Passengers	YOY % Change
John F. Kennedy International Airport (JFK)	February	4,142,980	4,156,946	0.3%
	March	5,153,203	2,331,064	-54.8%
	April	5,217,506	81,997	-98.4%
	May	5,587,477	136,900	-97.5%
	% Change Feb–May	34.9%	-96.7%	
Newark Liberty International Airport (EWR)	February	3,095,389	3,397,448	9.8%
	March	3,946,222	1,856,566	-53.0%
	April	3,939,524	66,189	-98.3%
	May	4,024,880	148,418	-96.3%
	% Change Feb–May	30.0%	-95.6%	
LaGuardia Airport (LGA)	February	2,034,708	2,112,051	3.8%
	March	2,589,567	1,050,174	-59.4%
	April	2,647,258	37,294	-98.6%
	May	2,861,666	89,690	-96.9%
	% Change Feb–May	40.7%	-95.8%	
Systemwide	February	9,273,077	9,665,445	4.2%
	March	11,688,992	5,237,804	-55.2%
	April	11,804,288	185,480	-98.4%
	May	12,474,023	375,008	-97.0%
	% Change Feb–May	34.5%	-96.1%	

Source: Port Authority of New York and New Jersey

**Table 2.4.3.2 Hotel Demand and Occupancy**

Week Ending	Demand	YOY % Change	Occupancy	YOY % Change
March 7	647,235	-9.5%	72.1%	-13.1%
March 14	437,768	-41.6%	48.8%	-44.0%
March 21	150,690	-79.8%	16.8%	-80.6%
March 28	136,708	-87.3%	15.2%	-81.8%
April 4	145,825	-80.7%	18.3%	-79.0%
April 11	179,771	-76.4%	24.8%	-71.7%
April 18	242,821	-69.6%	32.2%	-63.9%
April 25	242,797	-68.1%	40.8%	-53.5%
May 2	280,224	-64.2%	44.8%	-50.1%
May 9	301,370	-60.6%	43.7%	-50.2%
May 16	285,902	-64.0%	43.5%	-52.3%
May 23	295,438	-63.0%	44.9%	-50.9%
May 30	312,938	-58.9%	47.5%	-45.5%
June 6	306,379	-61.0%	47.0%	-47.7%

Source: NYC & Company

**Table 2.4.3.3 Airbnb Indicators, 2020**

Month	Daily Rate	% Change Month over Month	Occupancy Rate	% Change Month over Month	Available Supply	% Change Month over Month	Host Income	% Change Month over Month
February	\$118	—	36%	—	25,291	—	\$1,221	—
March	\$114	-3.4%	24%	-33.3%	27,280	7.9%	\$856	-29.9%
April	\$95	-16.7%	13%	-45.8%	28,790	5.5%	\$358	-58.2%
May	\$99	4.2%	11%	-15.4%	27,829	-3.3%	\$343	-4.2%
% Change Feb–May	-16.1%		-69.4%		10.0%		-71.9%	

Source: AllTheRooms Analytics

**Table 2.5.1 Subway Station Entries in Top 5 Central Business District Subway Stations**

Station Name	Month	2019 Entries	2020 Entries	YOY % Change
Union Square	February	2,440,720	2,343,359	-4.0%
	March	2,797,224	1,221,243	-56.3%
	April	2,813,642	173,937	-93.8%
	May	2,867,979	215,681	-92.5%
	<i>% Change Feb-May</i>	<i>17.5%</i>	<i>-90.8%</i>	
Herald Square	February	2,862,643	2,856,893	-0.2%
	March	3,354,601	1,420,753	-57.6%
	April	3,331,213	140,664	-95.8%
	May	3,430,002	185,440	-94.6%
	<i>% Change Feb-May</i>	<i>19.8%</i>	<i>-93.5%</i>	
Fulton Street	February	2,021,294	2,023,715	0.1%
	March	2,307,018	1,039,078	-55.0%
	April	2,393,305	120,920	-94.9%
	May	2,454,707	151,563	-93.8%
	<i>% Change Feb-May</i>	<i>21.4%</i>	<i>-92.5%</i>	
Grand Central	February	3,450,199	3,212,681	-6.9%
	March	3,919,704	1,549,503	-60.5%
	April	3,973,691	135,936	-96.6%
	May	4,008,898	173,648	-95.7%
	<i>% Change Feb-May</i>	<i>16.2%</i>	<i>-94.6%</i>	
Times Square	February	4,802,101	4,638,248	-3.4%
	March	5,566,013	2,358,617	-57.6%
	April	5,657,274	256,254	-95.5%
	May	5,762,682	370,919	-93.6%
	<i>% Change Feb-May</i>	<i>20.0%</i>	<i>-92.0%</i>	
Totals	February	15,576,957	15,074,896	-3.2%
	March	17,944,560	7,589,194	-57.7%
	April	18,169,125	827,711	-95.4%
	May	18,524,268	1,097,251	-94.1%
	<i>% Change Feb-May</i>	<i>18.9%</i>	<i>-92.7%</i>	

Source: MTA

**Table 2.5.2 MTA and Port Authority Crossings into the CBD, 2019 and 2020**

Crossing Name	Month	2019 Crossings	2020 Crossings	YOY % Change
Holland Tunnel	February	1,128,086	1,221,499	8.3%
	March	1,266,571	909,070	-28.2%
	April	1,300,323	445,082	-65.8%
	May	1,362,005	689,010	-49.4%
	<i>% Change Feb-May</i>	<i>20.7%</i>	<i>-43.6%</i>	
Lincoln Tunnel	February	1,357,207	1,393,271	2.7%
	March	1,585,107	1,026,043	-35.3%
	April	1,567,347	477,458	-69.5%
	May	1,628,922	726,692	-55.4%
	<i>% Change Feb-May</i>	<i>20.0%</i>	<i>-47.8%</i>	
Queens Midtown Tunnel	February	2,228,289	2,330,268	4.6%
	March	2,573,516	1,585,781	-38.4%
	April	2,548,844	584,739	-77.1%
	May	2,716,490	905,889	-66.7%
	<i>% Change Feb-May</i>	<i>21.9%</i>	<i>-61.1%</i>	
Hugh L. Carey Tunnel	February	1,468,632	1,515,184	3.2%
	March	1,670,672	1,076,846	-35.5%
	April	1,650,924	415,466	-74.8%
	May	1,726,554	709,565	-58.9%
	<i>% Change Feb-May</i>	<i>17.6%</i>	<i>-53.2%</i>	
<b>Totals</b>	February	6,182,214	6,460,222	4.5%
	March	7,095,866	4,597,740	-35.2%
	April	7,067,438	1,922,205	-72.8%
	May	7,433,971	3,031,454	-59.2%
	<i>% Change Feb-May</i>	<i>-20.2%</i>	<i>-53.1%</i>	

Sources: MTA; Port Authority of New York and New Jersey

# APPENDIX C

## Weather Linked to Mobility

**Discretionary trips are linked to weather; days with good weather are linked to days of higher Citi Bike and pedestrian activity**

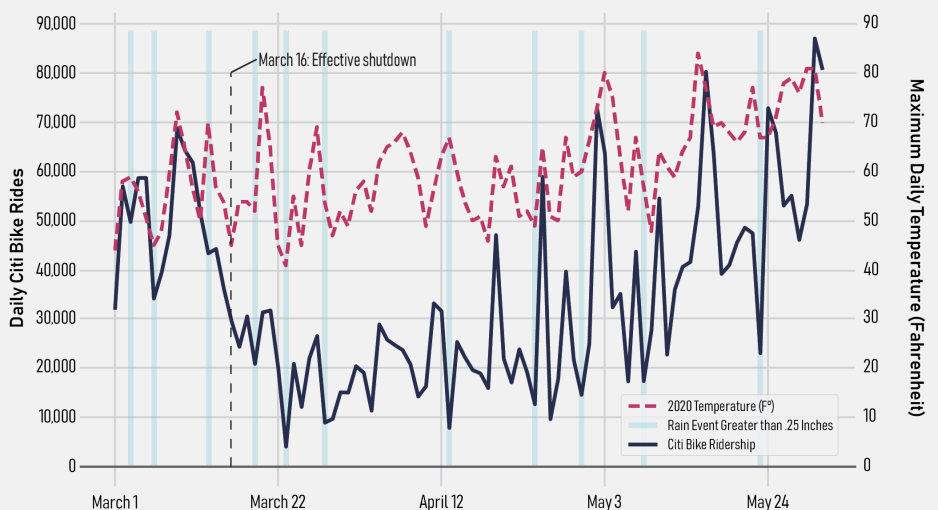
Weather was an apparent factor in the transportation patterns of New Yorkers as they adjusted to the NYS on PAUSE.\* Recognizing variable weather patterns, days that included rain or sunshine influenced mobility. For several modes, April 13th had the lowest counts in the time frame considered. Vehicles' miles traveled hit the bottom, ferries were at their emptiest, and BIDs counted the lowest amount of pedestrian activity. April 13th had almost two inches of rain, higher than any amount experienced in 2019. Citi Bikes also experienced their lowest ridership (3,999) on a rainy day, March 23rd.

In contrast, some of the highest days of activity after the initial drop from the NYS on PAUSE occurred on days with exceptionally nice weather. Citi Bike ridership peaked on April 19th and 25th when temperatures hit the mid-60s and there was no rain. Apple Mobility data also points to the highest number of direction requests on April 25th, a Saturday. It is possible that weekends with good weather may have begotten increased travel and contact, potentially inflaming the pandemic's dangers.

The coronavirus' effect on mobility also reflects the impact of good weather on discretionary trips. While pre-pandemic, ridership fluctuated slightly on rainy days, during the NYS on PAUSE order, movement was highly connected to weather. The days of lowest mobility in mid-April may reflect the closest approximation to essential travel, as most discretionary trips were cancelled.

### Weather Drove Citi Bike Ridership

High temperatures helped encourage bike ridership while rainy days often led to reduced riders

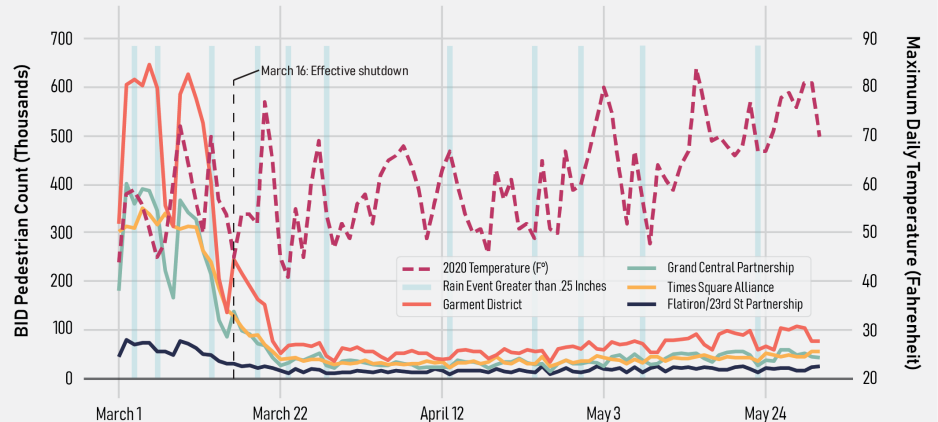


NYU Rudin Center & Sam Schwartz Engineering

Source: NOAA and Citi Bike

### Weather Drove Pedestrian Patterns

Days with sunshine and little rain pulled people from their homes while days with high amounts of precipitation resulted in days with little pedestrian activity



NYU Rudin Center & Sam Schwartz Engineering

Source: NOAA and BID Pedestrian Data

\* Data publicly available at <https://www.ncdc.noaa.gov/cdo-web/datasets>. National Oceanic and Atmospheric Administration. Climate Data Online. Weather data was collected from the "NY City Central Park" or "USW00094728" location.