COVID19 IMPACTS ON TRANSPORTATION

Produced by the NYC Department of City Planning's Transportation Division

August 4, 2020





Introduction

- The NYC Department of City Planning's Transportation Division is compiling data to help understand the effects of COVID19 on the transportation network. This is our nineteenth weekly report.
- This week's report includes the following information:
 - **Executive Summary**
 - Citywide Trends
 - MTA: Subway and Bus
 - MTA: Metro North Railroad, Long Island Rail Road, Access-A-Ride
 - 5. Ferry
 - Traffic
 - Citi Bike
 - Cell Phone-based Mobility
 - Timeline
- We continue to expand the content of these weekly reports as new data become available to us, and are prioritizing work around understanding how mobility trends relate to the economic and employment landscape.
- This report may serve to help in pandemic response and longer-term recovery. We are eager for feedback in how to make this more useful. Feel free to reach out to Laura Smith (Ismith@planning.nyc.gov) with questions or comments.



Executive Summary

- Week-over-week transit ridership remains steady.
- As of the week of July 27, subway ridership was up 77 percent, and bus ridership up 56 percent, from the week prior to the start of Phase 1 in early June.
- Total weekday subway and bus ridership changes were up 3 and 5 percent, respectively, over the previous week.
- PM peak subway ridership is more than 80 percent down in the Manhattan CBD, and more than 70 percent down in the city's other business districts, from ridership levels during July 2019.
- Neighborhoods in the Bronx and Brooklyn that show the slowest rates of return to the subway are often the same ones that saw the smallest percent decline in AM peak hour ridership compared to a year ago,
- Weekday Metro North and Long Island Rail Road ridership for the week of July 27 was slightly up over the previous week, while weekend ridership was slightly down.
- During the week of July 27, weekday AM peak hour ridership on the Staten Island Ferry shifted from 6am to 7am, consistent with peak hour travel from one year ago. PM peak travel remains at 4pm in the afternoon as opposed to 5pm from one year ago.
- Total weekday and weekend traffic counts on MTA bridges and tunnels during the week of July 27 remained steady compared to the previous week.
- Week-over-week increases to the total number of vehicular entries into the Manhattan CBD and the entirety of Manhattan have slowed since the end of June, with entries into the CBD growing at a slower rate than total Manhattan entries.
- Despite large gains in Citi Bike ridership post PAUSE, station activity is still down by more than 50 percent in many places from one year ago.



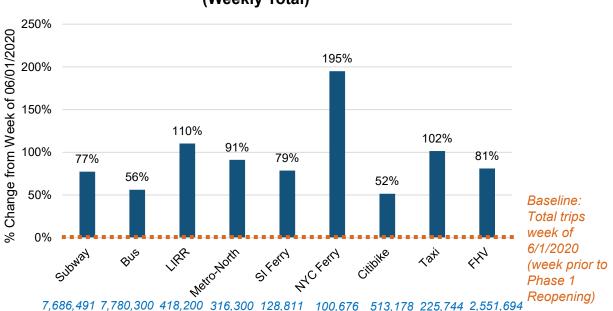
Citywide Trends



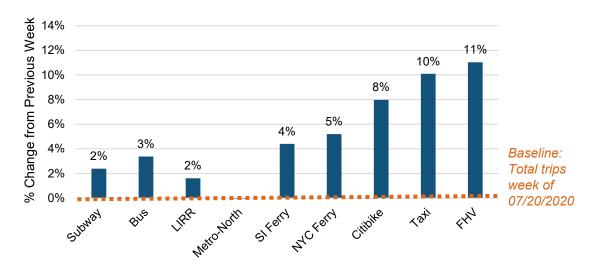
Citywide Trends

- New York City entered Phase 4 of reopening on Monday, July 20. Use of all modes of travel was up substantially over early June.
- As of the week of July 27, subway ridership was up 77 percent, and bus ridership up 56 percent, from the week prior to the start of Phase 1 in early June.
- All modes except for NYC Ferry and Citi Bike still lag substantially from their pre-pandemic ridership levels.

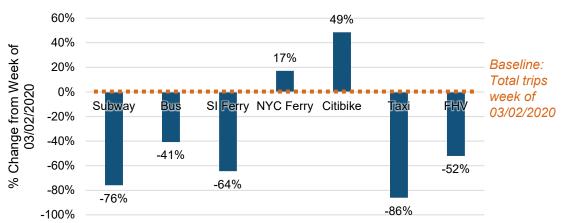
Week of 07/27/2020 Compared to Week of 06/01/2020 (Weekly Total)



Week of 07/27/2020 Compared to Week of 07/20/2020 (Weekly Total)



Week of 07/27/2020 Compared to Week of 03/02/2020 (Weekly Total)





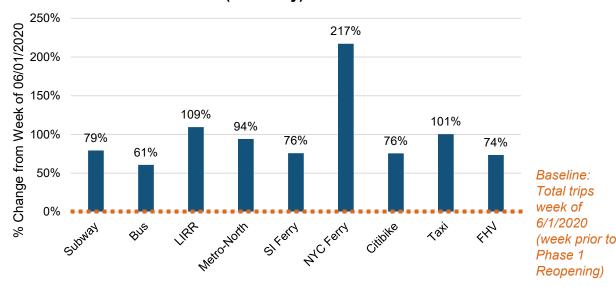
Data sources: MTA (Subway, Bus), EDC (NYC Ferry), DOT (Citi Bike, SI Ferry), TLC (Taxi, FHV).

Note: Taxi and FHV data on 08/02 is not yet available, so a week from 07/26 to 08/01 is used for the analysis of those two modes.

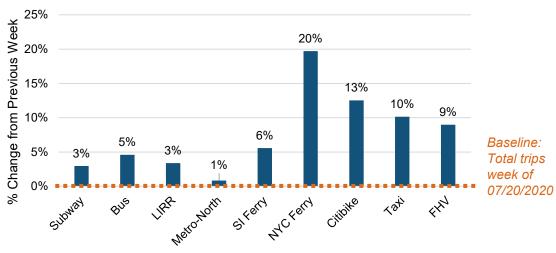
Citywide Trends: Weekday

- New York City entered Phase 4 of reopening on Monday, July 20. Use of all modes of travel was up substantially over early June.
- As of the week of July 27, weekday subway ridership was up 79 percent, and bus ridership up 61 percent, from early June.
- Total weekday subway and bus ridership changes were up 3 and 5 percent, respectively, over the previous week.

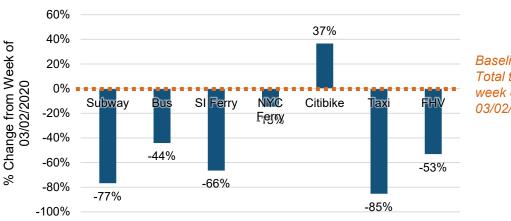
Week of 07/27/2020 Compared to Week of 06/01/2020 (Weekday)



Week of 07/27/2020 Compared to Week of 07/20 (Weekday)



Week of 07/27/2020 Compared to Week of 03/02/2020 (Weekday)



Baseline: Total trips week of 03/02/2020



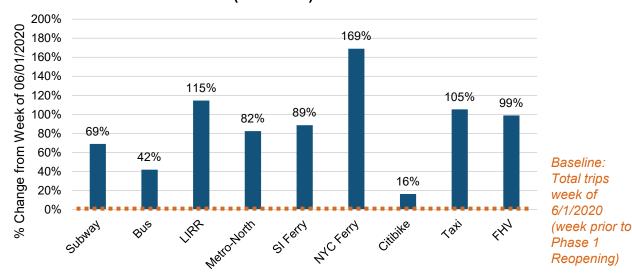
Data sources: MTA (Subway, Bus), EDC (NYC Ferry), DOT (Citi Bike, SI Ferry), TLC (Taxi, FHV).

Note: Taxi and FHV data on 08/02 is not yet available, so a week from 07/26 to 08/01 is used for the analysis of those two modes.

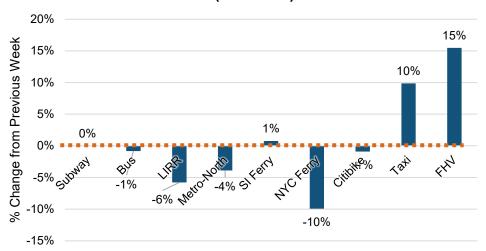
Citywide Trends: Weekend

- New York City entered Phase 4 of reopening on Monday, July 20.
 Use of all modes of travel was up substantially over early June.
- As of the week of July 27, weekend subway ridership was up 69 percent, and bus ridership up 42 percent, from early June.
- Total weekend subway and bus ridership changes were insignificant over the previous week.

Week of 07/27/2020 Compared to Week of 06/01/2020 (Weekend)

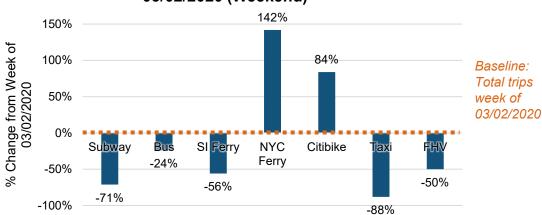


Week of 07/27/2020 Compared to Week of 07/20 (Weekend)



Baseline: Total trips week of 07/20/2020

Week of 07/27/2020 Compared to Week of 03/02/2020 (Weekend)





Data sources: MTA (Subway, Bus), EDC (NYC Ferry), DOT (Citi Bike, SI Ferry), TLC (Taxi, FHV).

Note: Taxi and FHV data on 08/02 is not yet available, so a week from 07/26 to 08/01 is used for the analysis of those two modes.

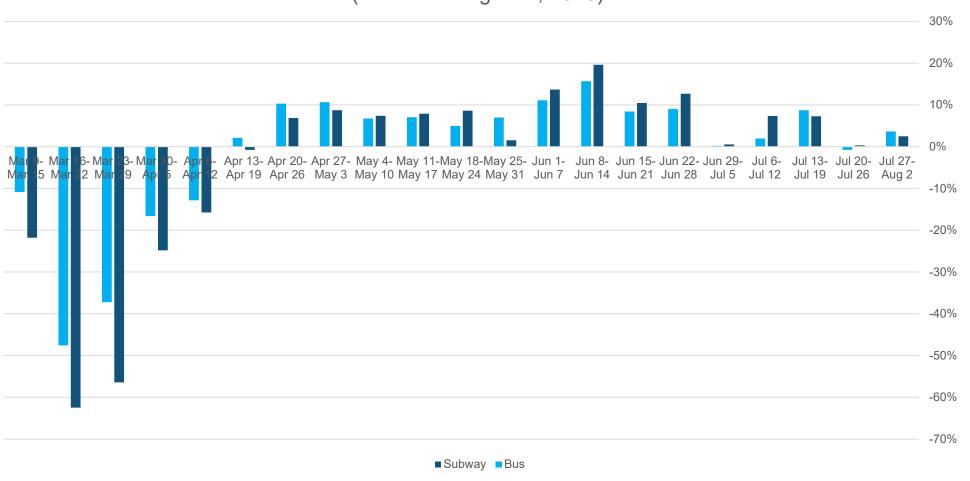
MTA data: **Subway and Bus**



MTA Subway & Bus System-wide Ridership Changes



Percent Change of Estimated* MTA Subway & Bus Weekly Ridership (March 1- August 2, 2020)

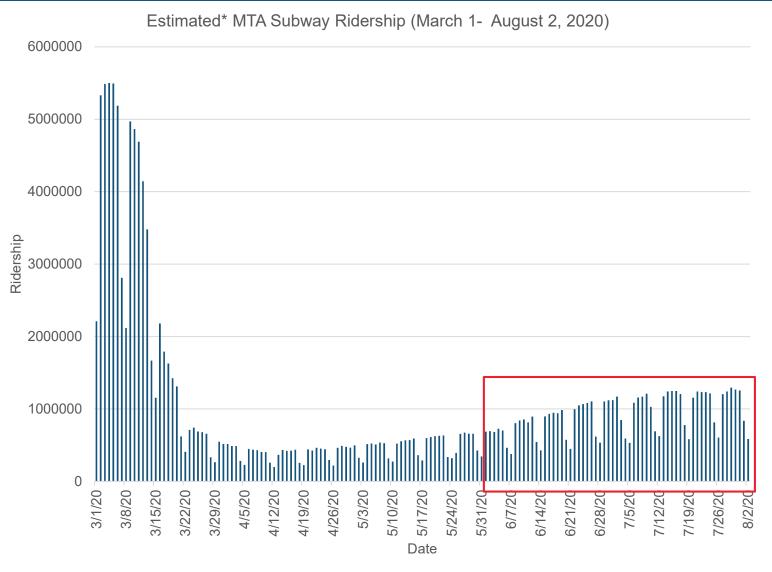


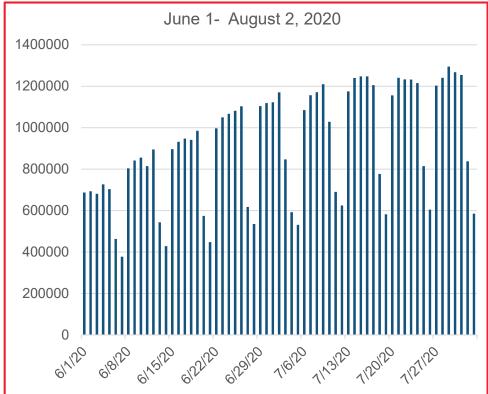
 Both subway and bus ridership have generally been increasing weekover-week since mid-April, but gains have slowed in recent weeks.

*From the MTA: Current bus ridership figures are estimated from models that use MetroCard and OMNY swipes and taps and Automatic Passenger Counter data that is available on a portion of our bus fleet. These figures are indicative of ridership but not a precise count. Figures from recent days may be revised as reconciliation processes are carried out. Data sources: MTA (https://new.mta.info/coronavirus/ridership)



Subway System-wide Ridership Changes

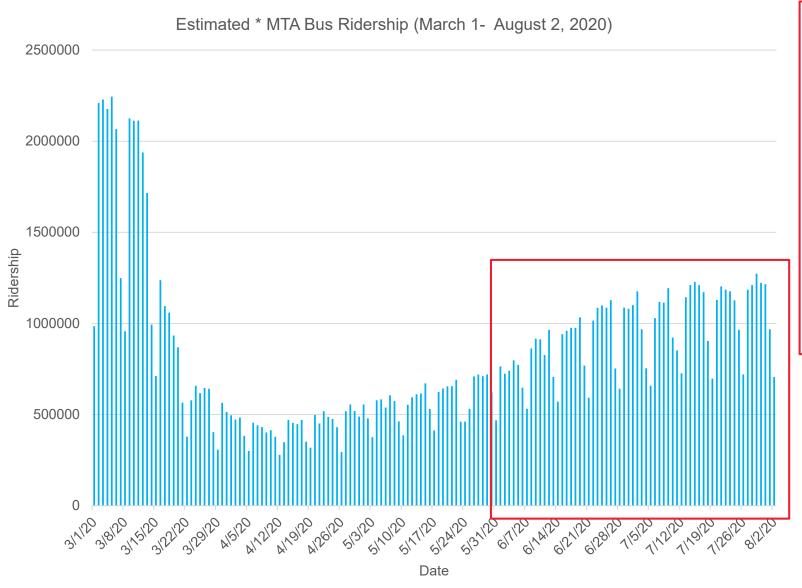


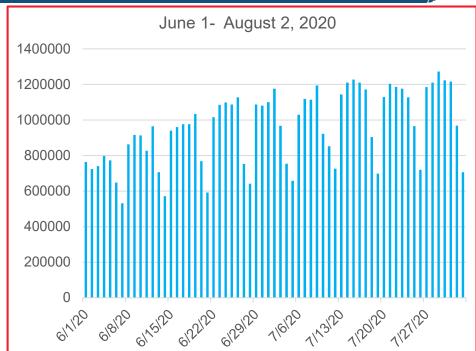


- Weekday subway ridership during the week of July 27 was up 3 percent over the previous week, while weekend ridership was comparable to the previous week.
- Weekday subway ridership is now at nearly 25 percent of pre-pandemic levels.



MTA Bus System-wide Ridership Changes





- Weekday bus ridership was up 5 percent during the week of July 27 from the previous week, while weekend ridership remained steady.
- Weekday bus ridership is now at nearly half of pre-pandemic levels.

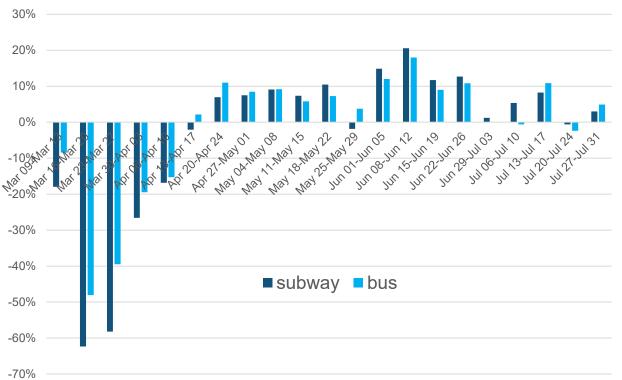


*From the MTA: Current bus ridership figures are estimated from models that use MetroCard and OMNY swipes and taps and Automatic Passenger Counter data that is available on a portion of our bus fleet. These figures are indicative of ridership but not a precise count. Figures from recent days may be revised as reconciliation processes are carried out. Data sources: MTA (https://new.mta.info/coronavirus/ridership)

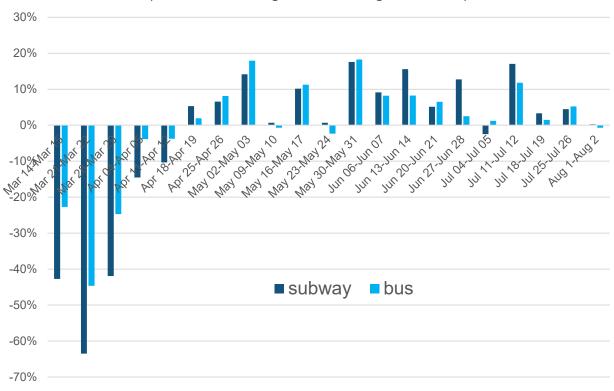
MTA Subway & Bus System-wide Ridership Changes







Percent Change of Estimated* MTA Subway & Bus Weekly Ridership (Weekends During March 1- August 2, 2020)

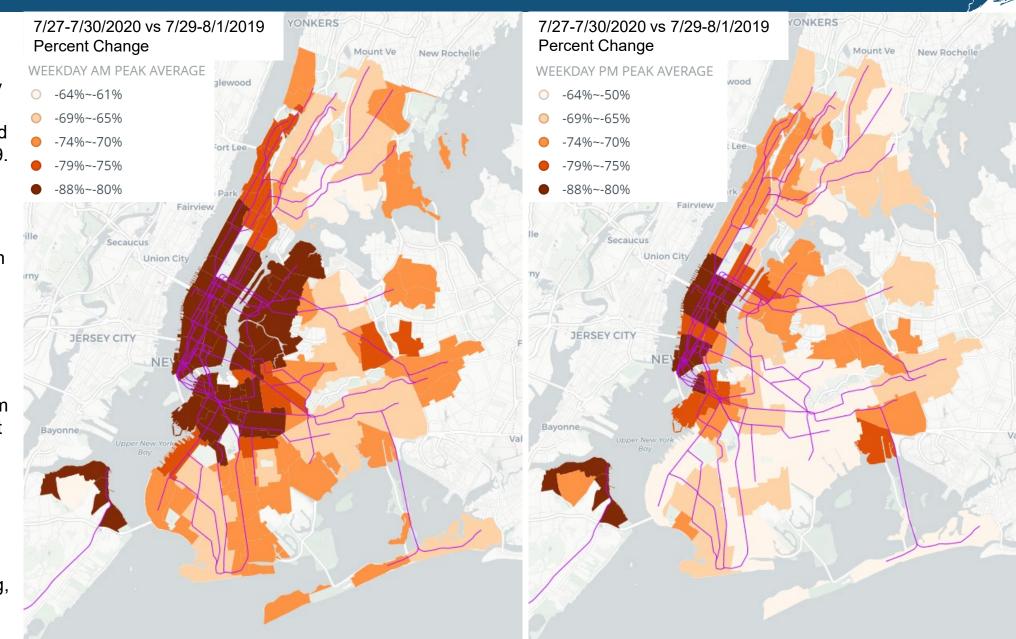


During the week of July 27, weekday ridership for both subway and bus were up slightly, while weekend ridership was down.



Weekday AM and PM Peak Turnstile Data – Comparisons with July 2019

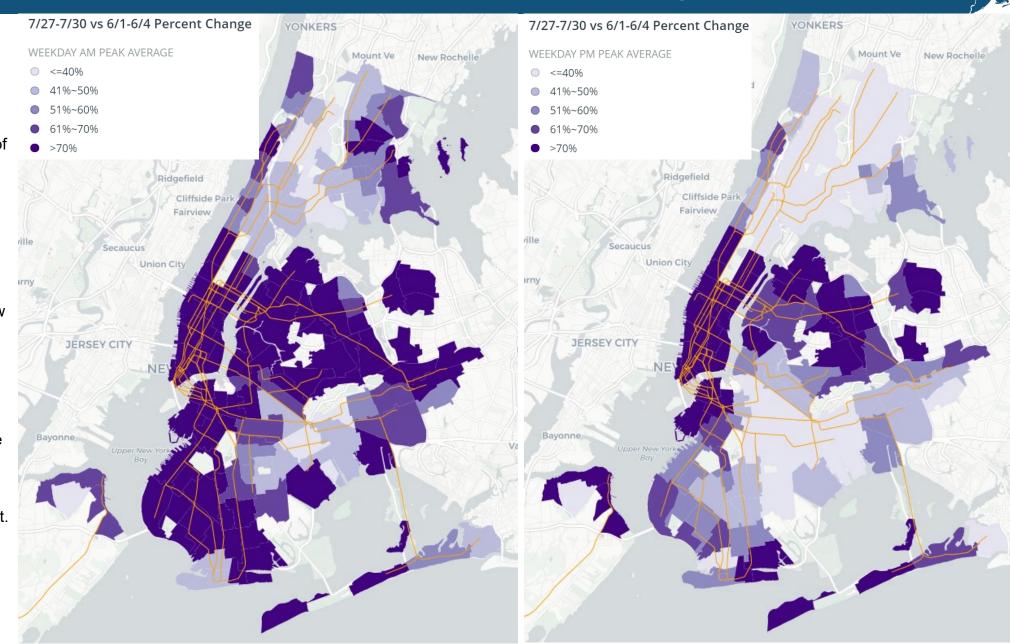
- The maps on the right illustrate changes in AM and PM peak ridership by neighborhood during the week of July 27 compared to the same week in 2019.
- AM peak ridership remains more than 80% down in the much of Manhattan and in western **Brooklyn and Queens** over the same period in 2019.
- PM peak ridership an indicator of where people are commuting home from - is more than 80 percent down in the Manhattan CBD, and more than 70 percent down in the city's other business districts. including the greater downtown Brooklyn area, Long Island City, Flushing, and Jamaica.





Weekday AM and PM Peak Turnstile Data - Comparisons with early June 2020

- AM peak subway ridership has increased by more than 70 percent since the start of June in most of the Manhattan CBD, and much of Brooklyn and Queens. Ridership in the Bronx, central Brooklyn, and southeast Queens lags.
- Neighborhoods in the Bronx and Brooklyn that show the slowest rates of return are often the same ones that saw the smallest percent decline in AM peak hour ridership compared to a year ago, as shown on the previous slide.
- PM peak ridership an indicator of where people are commuting home from increased by more than 70 percent in the Manhattan CBD, Downtown Brooklyn, St. George Staten Island, and central Queens including Jackson Heights, Corona, Rego Park and Forest Hills.

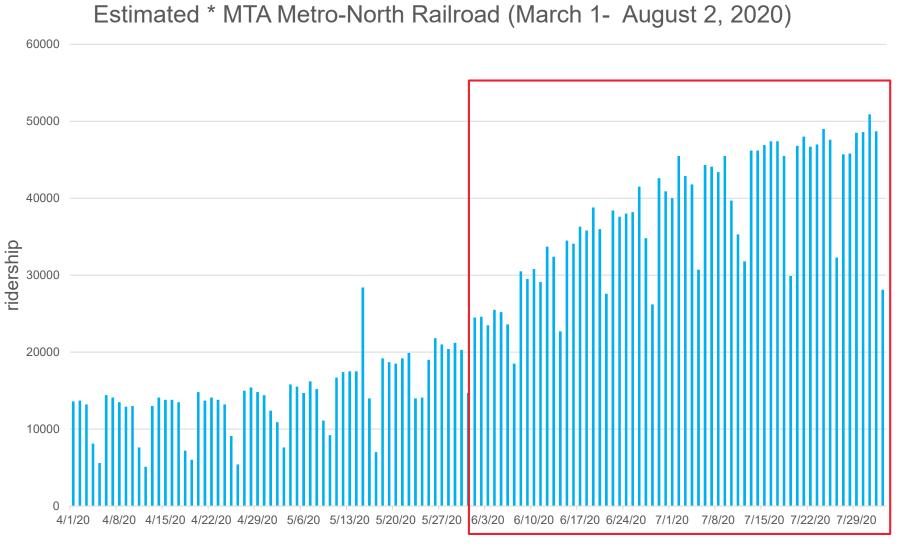


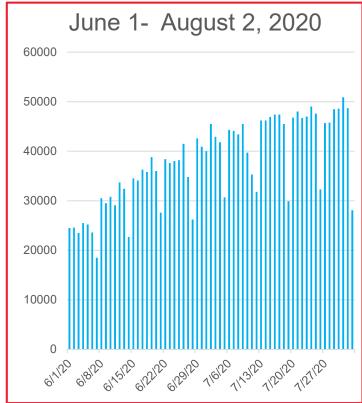


MTA data: Metro North Railroad, Long Island Rail Road, Access-A-Ride



Metro-North Railroad Ridership Changes

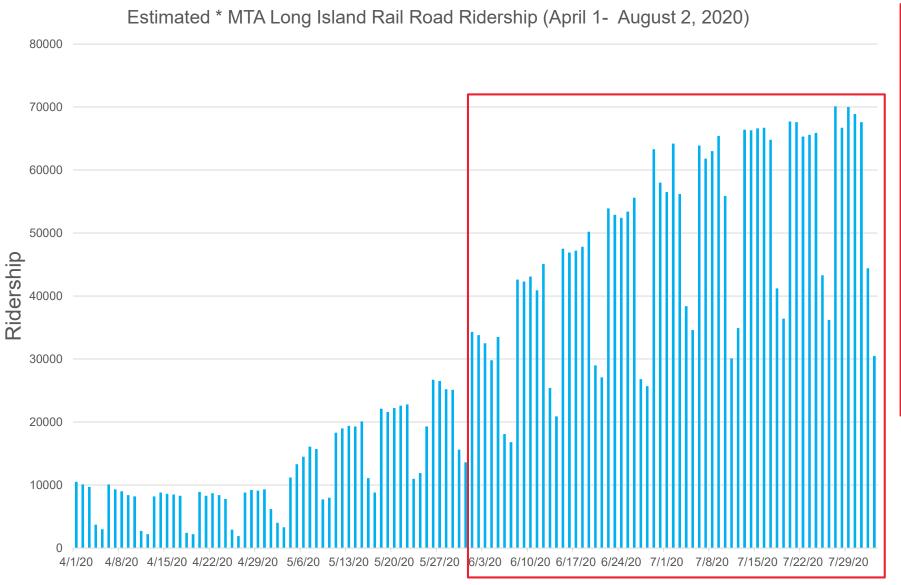


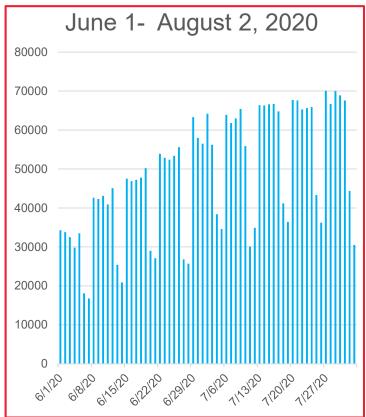


Weekday MNR ridership for the week of July 27 remained steady over the previous week, while weekend ridership was down 4 percent.



Long Island Rail Road Ridership Changes

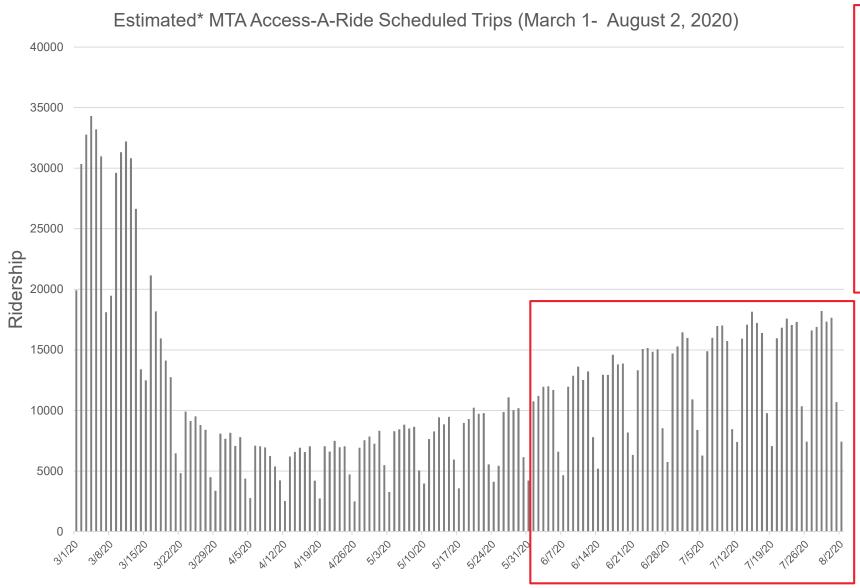


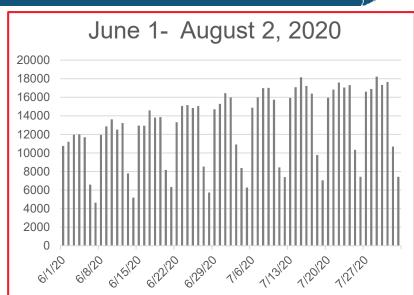


Weekday LIRR ridership for the week of July 27 was up 3 percent compared to the previous week, while weekend ridership was down 6 percent.



Access-A-Ride Scheduled Trip Changes





Weekday Access-A-Ride scheduled trips for the week of July 27 was up 2.3 percent compared to the previous week, while the weekend scheduled trips were up 1.9 percent.

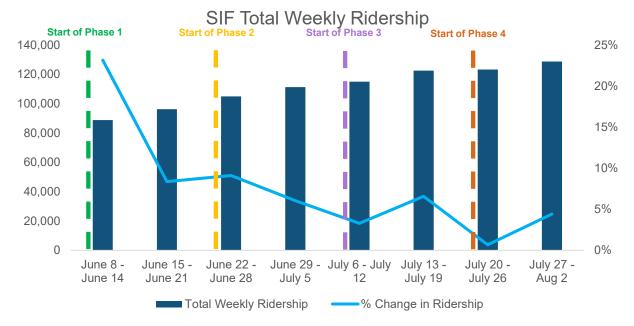


*From the MTA: To provide timely updates, this data presents scheduled Access-A-Ride trips as an indicator of demand, rather than completed trips. The process to reflect completed trips, including adjusting for on-demand trips, cancelations, no shows, and on-street issues, would delay release of data for several weeks.. Data sources: MTA (https://new.mta.info/coronavirus/ridership)

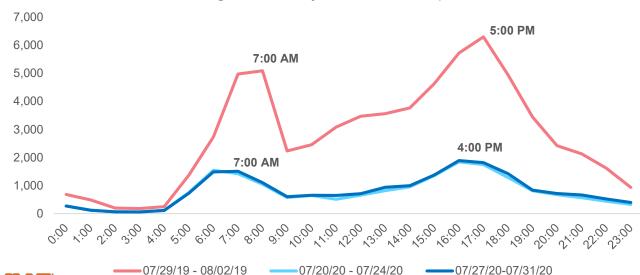
Ferry



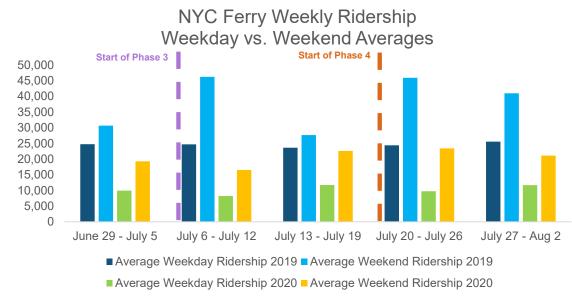
The Staten Island Ferry and NYC Ferry

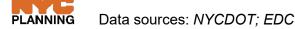


SIF Average Weekday Total Ridership Per Hour



- The week of July 27 saw almost 129,000 Staten Island Ferry riders. This represents a four percent increase, or about 5,400 additional riders, compared to the week of July 20.
- For SIF, weekday peak hour ridership shifted from 6:00 am to 7:00 am for the morning and remained at 4:00 pm in the afternoon.
- The week of July 27 saw NYC Ferry weekly ridership increase by 8 percent, or by about 5,000 riders, compared to the week of July 20.
- NYC Ferry average weekday ridership increased by 20 percent, while average weekend ridership decreased by 10 percent.
- For the month of July 2020, NYC Ferry had nearly 50 percent of its weekly ridership compared to July 2019.



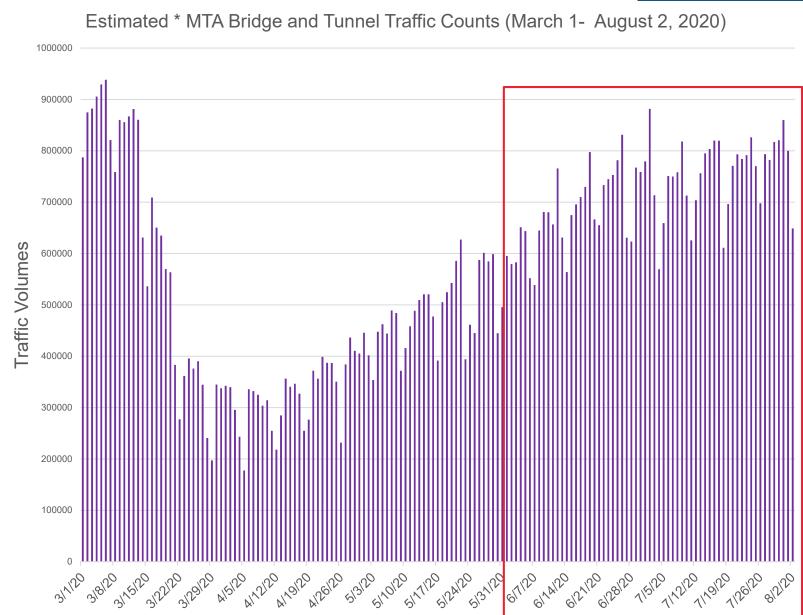


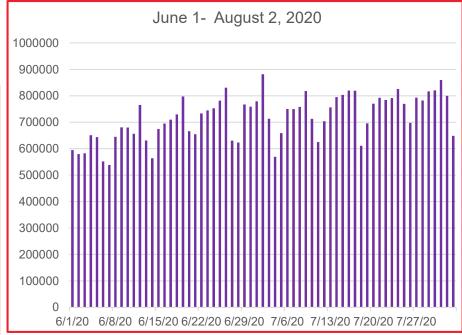
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Traffic



MTA Bridge and Tunnel Traffic Volumes





Total weekday traffic counts during the week of July 27 was up 2 percent compared to the previous week. Weekend traffic counts were down 1 percent.

MTA crossings include:

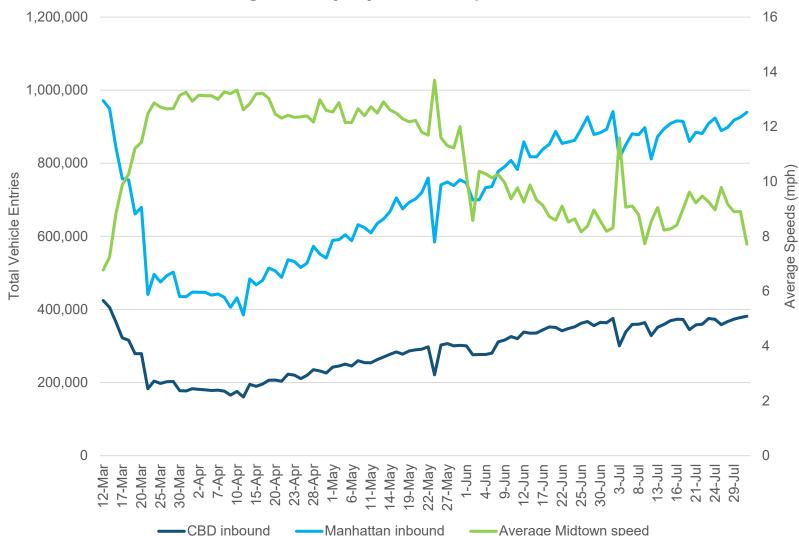
- Bridges: Robert F. Kennedy, Throgs Neck, Verrazzano Narrows, Bronx-Whitestone, Henry Hudson, Marine Parkway-Gil Hodges Memorial, and Cross Bay Veterans Memorial bridges.
- Tunnels: the Hugh L. Carey Tunnel and the Queens Midtown Tunnel.



*Data sources: MTA (https://new.mta.info/coronavirus/ridership)

Manhattan Inbound Traffic





- On Thursday, July 30, the total number of vehicles entering Manhattan was 95 percent of total entries on Thursday, March 12.
- The total number of vehicles entering the Manhattan CBD on Thursday, July 30 was 89 percent of total entries on Thursday, March 12.
- Week-over-week increases to the total number of entries into the Manhattan CBD and the entirety of Manhattan have slowed since the end of June, with entries into the CBD growing at a slower rate than total Manhattan entries.
- After peaking in early April at about 13 mph, Midtown Manhattan speeds have averaged about 8.5 mph since the end of June.

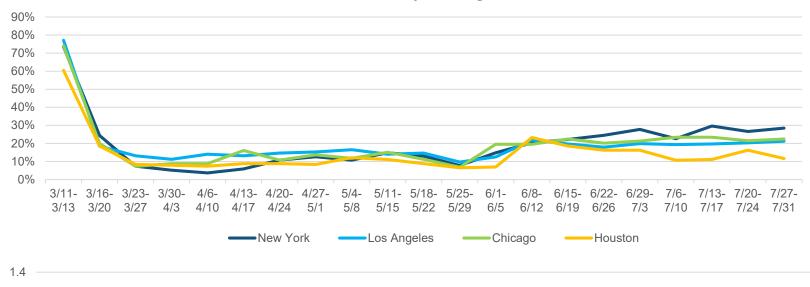


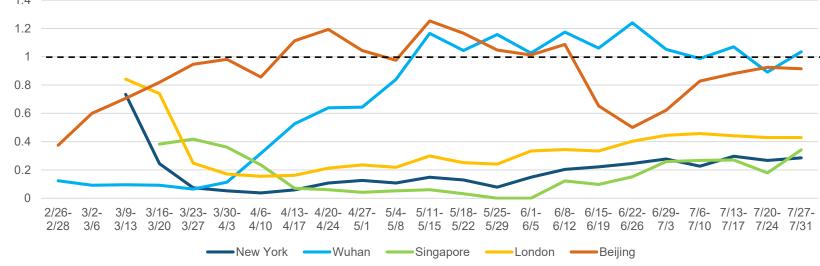
Source: NYCDOT, providing data from NYCTLC, Port Authority, Triborough **Bridge and Tunnel Authority**

Traffic Congestion

- Congestion is a measure of the average amount of additional travel time needed to get to a destination anywhere in a city compared to free flow conditions. Zero percent represents free flow speeds; 100 percent represents 2019 yearly average congestion for each city.
- After a significant initial decline in congestion in March and slow increases since June, congestion levels have been relatively stable (noting dramatic increases in Covid-19 cases in LA, Chicago and Houston in recent weeks).

Pandemic Average Weekly Traffic Congestion vs. 2019 Yearly Average*





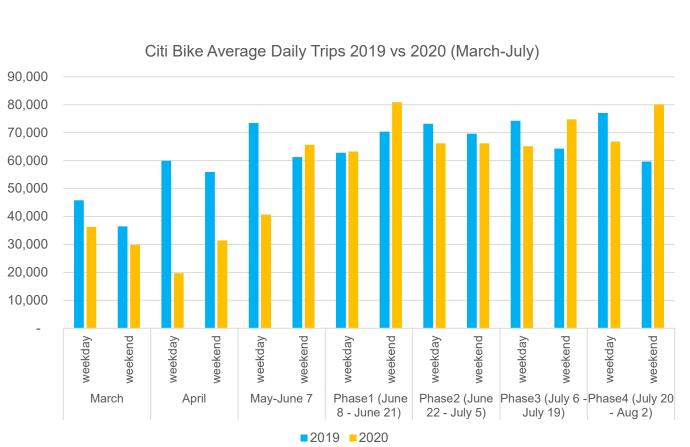


Citi Bike

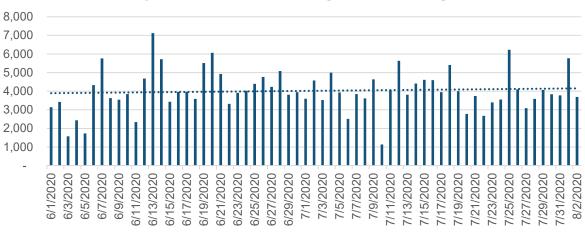


Citi Bike Ridership

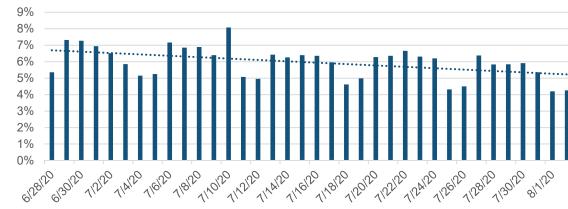
- During June and July 2020, Citi Bike ridership has been fairly consistent with ridership patterns during the same period in 2019.
- Citi Bike ridership on East River bridge crossings has been relatively steady since early June 2020, with peak travel occurring on weekends.
- The percentage of trips taken by Critical Workers has been declining.



Daily East River Bridge Crossings



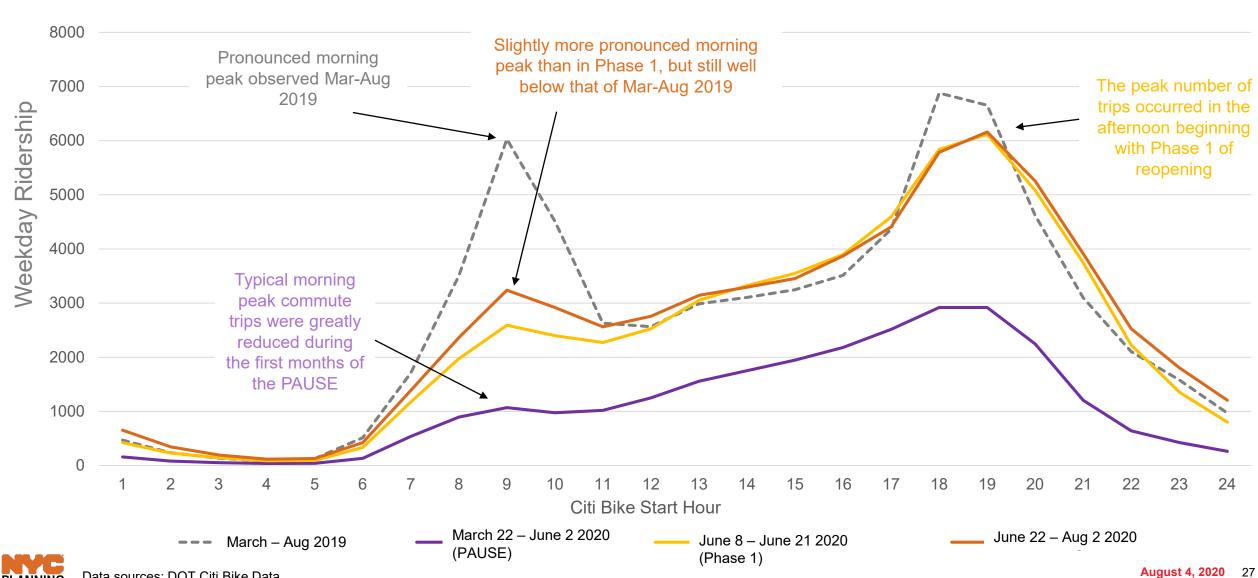
Percent of all trips taken by Critical Workers





Data sources: DOT Citi Bike Data

Citi Bike Weekday Daily Ridership by Time of Day





Data sources: DOT Citi Bike Data

Citi Bike Station ridership changes

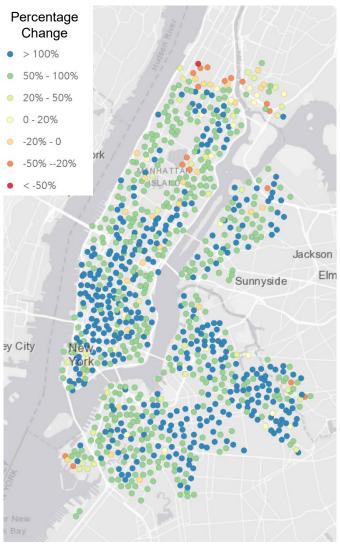
Post PAUSE vs. PAUSE ridership:

- Ridership as measured by trip starts or completions at a docking station has more than doubled at many Citi Bike stations, as shown in blue, following the city's PAUSE period.
- Ridership increases are observed nearly systemwide during this time period – some of which may be attributed to increased mobility citywide, but much of which may be attributed to nicer weather.

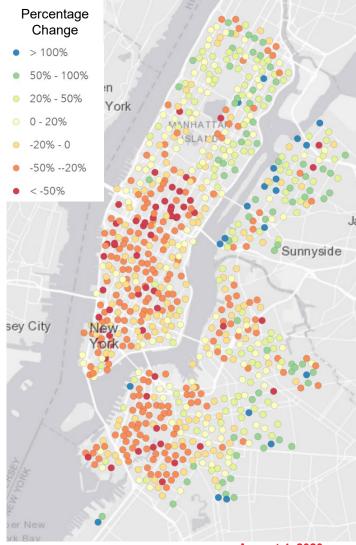
Summer 2020 vs Summer 2019 ridership:

- Despite large gains in Citi Bike ridership post PAUSE, station activity is still down by more than 50 percent in many places from one year ago.
- The stations showing the greatest lingering reductions include those in Midtown and Lower Manhattan, downtown Brooklyn, Park Slope, and Williamsburg.

Post PAUSE vs PAUSE ridership (June 8 – August 22 vs March 22 – June 2)



Summer 2020 vs Summer 2019





Data sources: DOT Citi Bike Data

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Timeline



New York COVID19 Pandemic Timeline: First Case to End of PAUSE

- March 1st, 2020: First confirmed case in New York https://www.wsj.com/articles/first-case-of-coronavirus-confirmed-in-new-york-state-11583111692
- March 7th, 2020: Governor Cuomo declares state of emergency https://www.nytimes.com/2020/03/07/nyregion/coronavirus-new-york-queens.html
- March 12th, 2020: Governor Cuomo announces restrictions on mass gatherings, directing events with more than 500 people to be cancelled or postponed and any gathering with less than 500 people in attendance to cut capacity by 50 percent. https://www.governor.ny.gov/news/during-novel-coronavirus-briefing-governor-cuomo-announces-new-mass-gatherings-regulations
- March 15th, 2020: NYC school closures announced. https://www.nytimes.com/2020/03/15/nyregion/nyc-schools-closed.html DeBlasio announces the closure of schools, bars, and restaurants (except takeout/delivery) effective the morning of the 17th https://www.nytimes.com/2020/03/15/nyregion/new-york-coronavirus.html
- March 18th: Governor Cuomo announces that 50% of non-essential employees must work from home
- March 20th: Governor Cuomo announces statewide stay at home rules, effective the evening of the 22nd. 100% of non-essential workers must stay home. https://www.npr.org/sections/coronavirus-liveupdates/2020/03/20/818952589/coronavirus-n-y-gov-cuomo-says-100-of-workforce-must-stay-home, travel on transit only when necessary
- March 25th: MTA announces service reduction to Essential Service plan https://abc7ny.com/6047040/
- March 27th: The Governor halts non-essential construction https://thecity.nvc/2020/03/cuomo-calls-off-non-essential-construction-statewide.html
- May 1st: Mayor de Blasio announces first seven miles of streets in Open Streets NYC program. https://gothamist.com/news/de-blasio-reveals-first-batch-open-streets-primarily-centered-parks
- May 6th: Governor Cuomo enacts nightly 1am-5am subway shutdowns: https://www.nytimes.com/2020/04/30/nyregion/subway-close-cuomo-coronavirus.html
- May 22nd: Mayor de Blasio announces 45 miles of open streets, the most in the nation, with the City to eventually reach 100 miles, https://www.6sqft.com/nyc-full-list-of-open-streets-summer-2020/
- May 26th: New York Stock Exchange reopens trading floor after 2 month closure. https://www.npr.org/sections/coronavirus-live-updates/2020/05/26/862082828/new-york-stock-exchange-reopenstrading-floor-after-2-month-closure
- May 29th: Governor Cuomo announces that New York City is expected to begin Phase 1 of reopening on Monday, June 8th. https://www.nytimes.com/2020/05/29/nyregion/coronavirus-new-york-liveupdates.html
- June 1st: Governor Cuomo announces overnight curfew in NYC after a weekend of protests due to the death of George Floyd. No-non local vehicles permitted in Manhattan below 96th street, and Citi Bike is shut down during curfew hours. https://deadline.com/2020/06/new-york-city-curfew-andrew-cuomo-george-floyd-protests-1202948548/
- June 5th: The MTA lays out its 13-point "Action Plan For a Safe Return" in preparation for New York City's reopening. https://new.mta.info/document/17751
- June 7th: Mayor de Blasio announces the end of protest-related curfews ahead of schedule, effective immediately. https://www.cbsnews.com/news/nyc-mayor-announces-curfew-has-ended-aheadof-schedule-2020-06-07/



New York COVID19 Pandemic Timeline: Phase 1 to Present

- June 8th: New York City begins Phase 1 of re-opening. Manufacturing, non-essential construction, and non-essential retail via curbside pickup can resume operations https://www.nytimes.com/2020/06/08/nyregion/coronavirus-nyc-reopen-phase-1.html
 - The Staten Island Ferry begins moving to a 20-minute rush hour schedule beginning with the 3:30 PM trip from St. George. https://www1.nvc.gov/html/dot/html/ferrybus/siferryschedule.shtml#SIschedule
 - Mayor De Blasio announces five new busways to be created throughout the city, modeled after the 14th Street Busway, which will be made permanent. More bus lanes will be added along major corridors, https://www.politico.com/states/new-vork/albany/story/2020/06/08/as-city-reopens-de-blasio-expands-transit-options-1291796
- June 18th: Mayor de Blasio announces guidance for the City's Open Restaurants program, which allows qualifying restaurants and bars to expand outdoor seating on sidewalks, curb lanes, backyards, patios, plazas, and Open Streets, https://www1.nvc.gov/office-of-the-mayor/news/449-20/open-restaurants-new-vork-city-prepares-phase-2-reopening-mayor-de-blasio-announces
- June 19th: Governor Cuomo holds his final daily coronavirus briefing, saying "We have done the impossible." He will continue to monitor the situation and hold press conferences as needed. https://www.cbsnews.com/news/andrew-cuomo-new-vorkers-united-coronavirus-pandemic-crisis/
- June 22nd: New York City begins Phase 2 of re-opening, including in-store retail, offices, hair salons and barbershops, house of worship, and car sales. Social distancing and hygiene guidelines remain in place. https://www.ny1.com/nyc/all-boroughs/news/2020/06/21/what-exactly-does-phase-two-reopening-mean-for-new-york-city-
 - Governor Cuomo says he is actively talking to Governor Murphy of NJ and Governor Lamont of Connecticut, and that the three governors are "seriously considering" implementing a 14-day isolation protocol for visitors from Florida, which could be extended to travelers from Arizona, Texas, and several other stats who are experiencing a rapid rise in Covid cases. https://nypost.com/2020/06/22/gov-cuomo-talks-to-ni-connecticut-about-florida-guarantine-rules/
 - According to a survey conducted by the Partnership for New York City, while Phase 2 allows office workers to return to their offices, respondents from 60 companies predicted that only 10% of their employees would return to the office by August 15th. Rudin Management Company said that, across its 14 offices in New York that reopened on Monday, it reached a collective 5.2 percent occupancy rate. https://www.nytimes.com/2020/06/22/nyregion/nyc-phase-2-reopening-coronavirus.html
- June 24th: The state governments of New York, New Jersey, and Connecticut issue self-quarantine restrictions on travelers returning from a list of 9 states with high infection rates, with the ability to add more as the situation changes. https://coronavirus.health.ny.gov/system/files/documents/2020/06/interimquidance traveladvisory.pdf
- June 29th: Mayor de Blasio announces that, while outdoor dining is "working" in New York City and that the city is moving on track for Phase 3 of reopening on July 6th, the reopening of indoor dining may be delayed due to ongoing coronavirus concerns. Governor Cuomo echoed these concerns. https://abc7ny.com/indoor-dining-in-nyc-new-york-city-reopen-coronavirus/6280941/
- July 6th: New York City begins Phase 3 of re-opening. Originally, this was to include indoor dining at restaurants, but this element has been postponed in light of outbreaks in other states.
 - The Staten Island Ferry resumes regular rush-hour service, with boats running every 15 minutes from 7:00 am 9:00 am and 5:00 pm 7:00 pm. https://mms.tveyes.com/PlaybackPortal.aspx?SavedEditID=ea13aec9-00c3-46cf-998e-a31fa521b891
- July 20th: New York City enters Phase 4 of re-opening, which includes outdoor activities like zoos and botanical gardens, as well as professional sports without spectators. Indoor dining, originally part of Phase 3, is still prohibited. https://www.nytimes.com/2020/07/20/nyregion/nyc-phase-4-reopening-coronavirus.html
- July 31st: Mayor de Blasio announces that schools will not re-open in September unless coronavirus infection rates remain below 3 percent. https://www.nv1.com/nyc/allboroughs/news/2020/07/31/nvc-public-schools-mayor-de-blasio

