

COVID19 IMPACTS ON TRANSPORTATION

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

November 2, 2020



- The NYC Department of City Planning's Transportation Division is compiling data to help understand the effects of COVID19 on the transportation network. This report and all prior reports beginning in April 2020 can be found at <https://www1.nyc.gov/site/planning/planning-level/transportation/transportation-overview.page>
- This week's report includes the following information:
 1. Executive Summary
 2. Citywide Trends
 3. MTA: Subway and Bus
 4. Ferry
 5. Traffic
 6. Bicycles
 7. Timeline
- 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 (lsmith@planning.nyc.gov) with questions or comments.

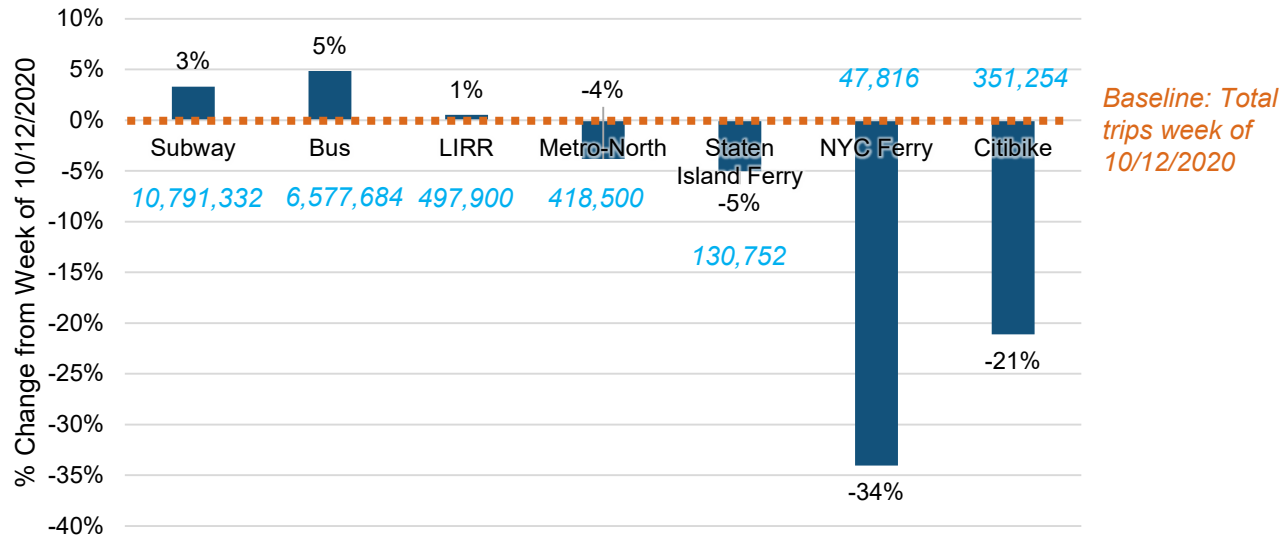
- **There are minimal changes to ridership on subways and buses** week over week. Poor weather during the final week of October likely contributed to reduced ridership on the ferries and Citi Bike.
- The **city's business districts** in midtown and lower Manhattan, downtown Brooklyn, and Long Island City continue to see less than a quarter of their PM peak subway entries, indicating a **very limited return to work in those areas**.
- Year over year, the **greatest ridership differences are currently seen in neighborhoods with the strongest likelihood of having telework-capable populations, and telework-capable jobs**.
- AM and PM peak hour ridership on the Staten Island Ferry continues to be earlier than during the same period in 2019.
- Total **average weekday daytime inbound vehicles** to Manhattan and the Manhattan central business district **are comparable to pre-pandemic levels**.
- Bike ridership, as measured both by Citi Bike trips and DOT bike counts, is highly weather dependent and has been declining since September.

Citywide Trends

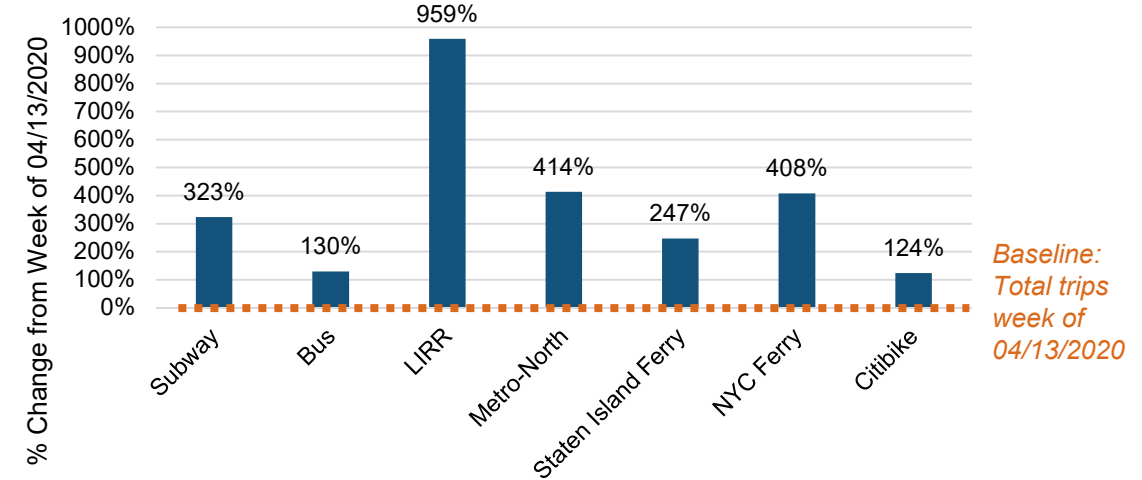
Citywide Trends

- Poor weather during the final week of October likely contributed to reduced ridership on the ferries and Citi Bike.
- Still, travel across all modes is up substantially over mid-April volumes.
- *Note: While bus ridership data had been estimated during the suspension of fare collection, bus ridership data from 10/1/20 onward is based on actual MetroCard and OMNY swipes and taps and an estimate of cash fares paid, which may account for some of the change observed this week over earlier in September.*

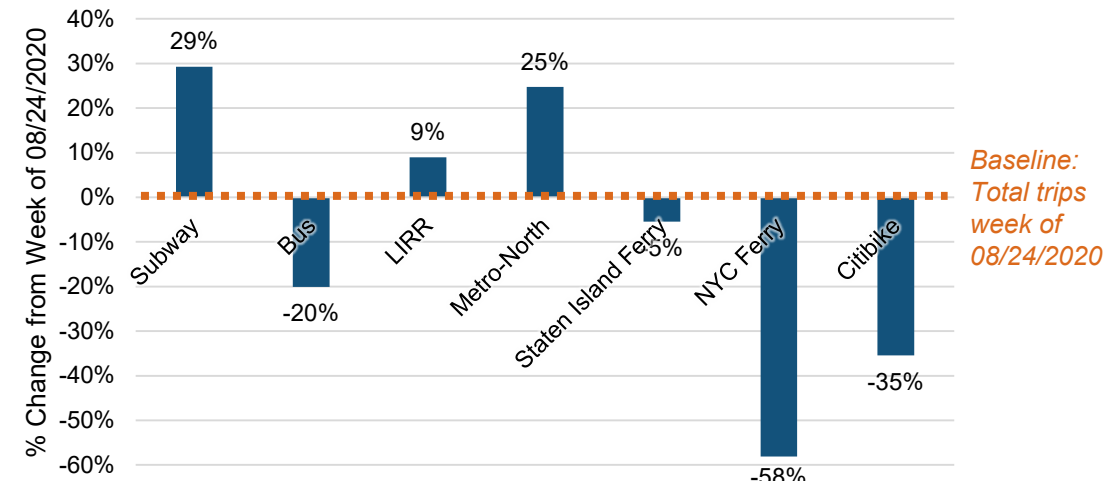
Week of 10/26/2020 Compared to Week of 10/12/2020 (Weekly Total)



Week of 10/26/2020 Compared to Week of 04/13/2020 (Weekly Total)

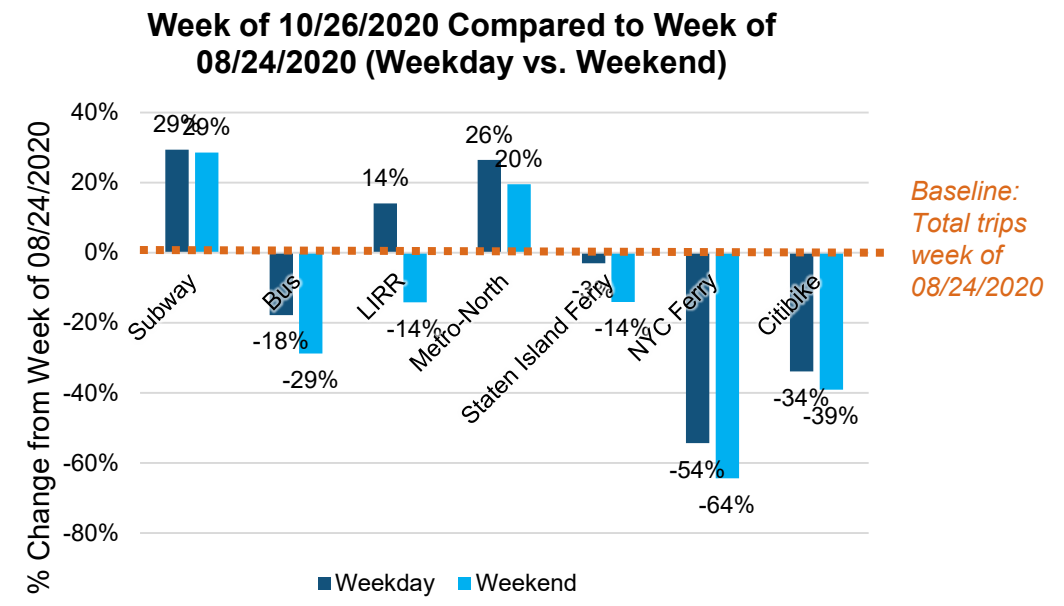
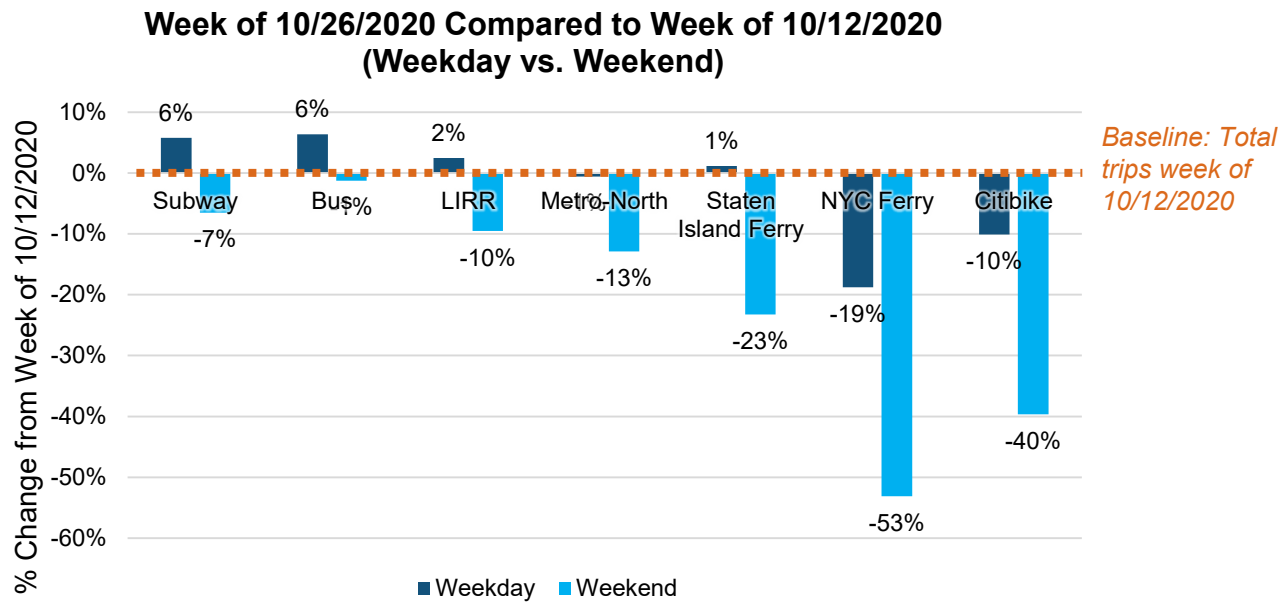
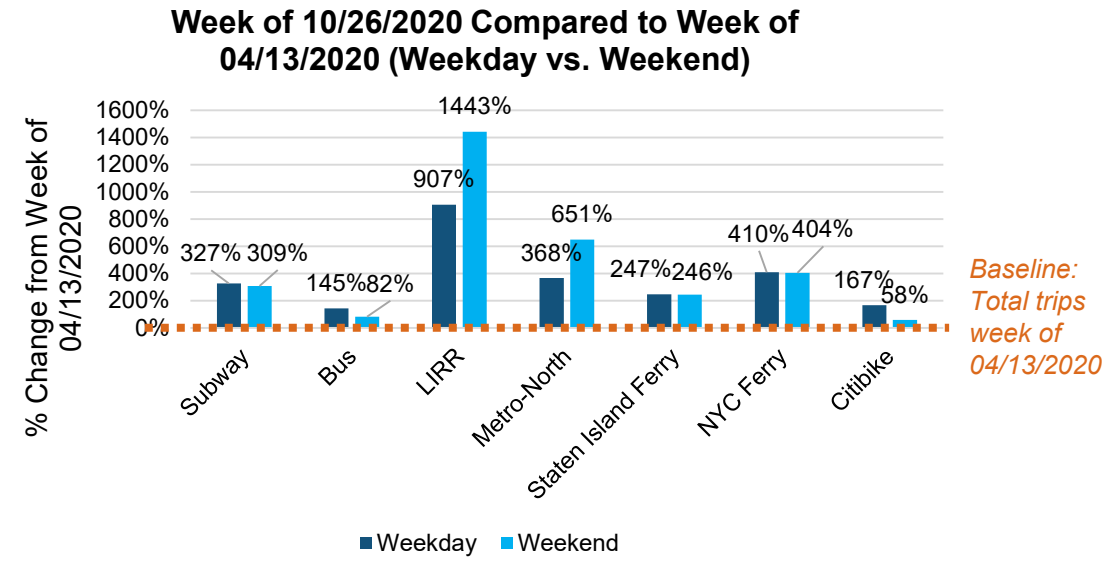


Week of 10/26/2020 Compared to Week of 08/24/2020 (Weekly Total)



Citywide Trends: Weekday vs Weekend

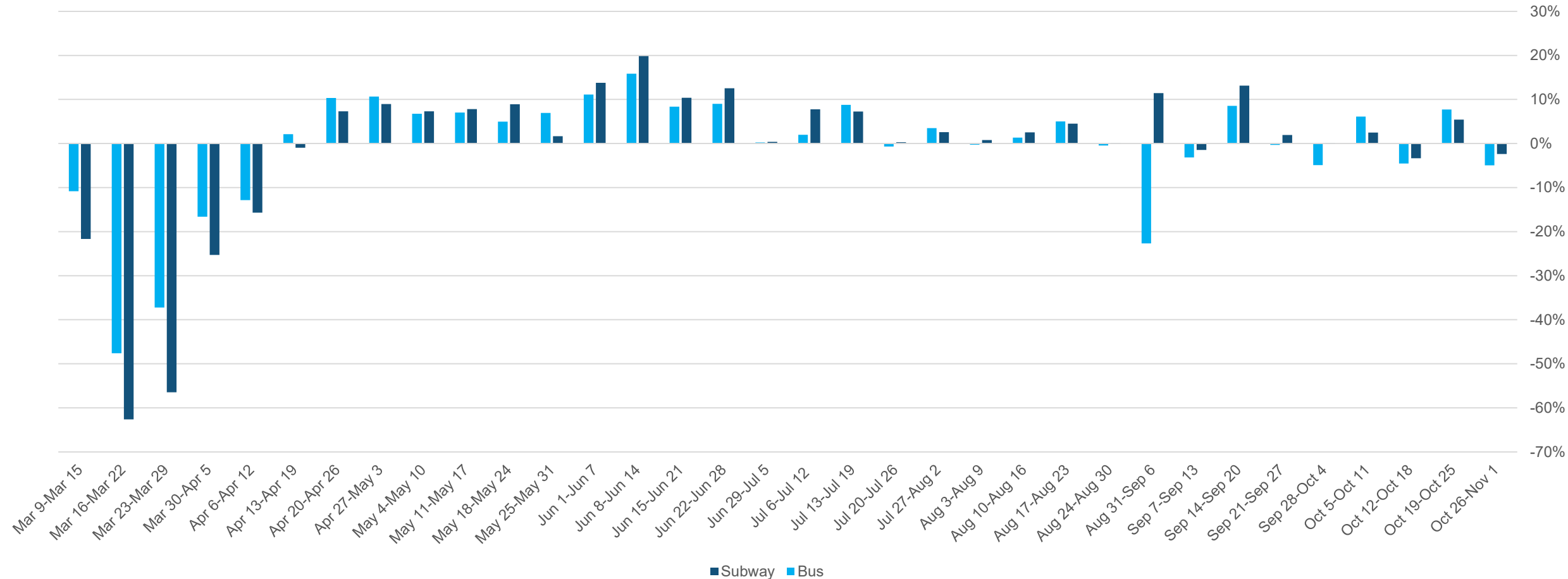
- Gains in travel across different modes have been substantial, but distributed unevenly since the mid-April low, and skewed more towards weekend travel. This indicates a growing willingness to leave home, but perhaps not a return to places of work for many people who would typically be commuting.
- The Halloween holiday, and poor weather, likely contributed to low weekend ridership across most modes, as shown below.
- Note: While bus ridership data had been estimated during the suspension of fare collection, bus ridership data from 10/1/20 onward is based on actual MetroCard and OMNY swipes and taps and an estimate of cash fares paid and thus may be unreliable to compare against ridership counts from earlier this year.*



MTA data: Subway and Bus

MTA Subway & Bus System-wide Ridership Changes

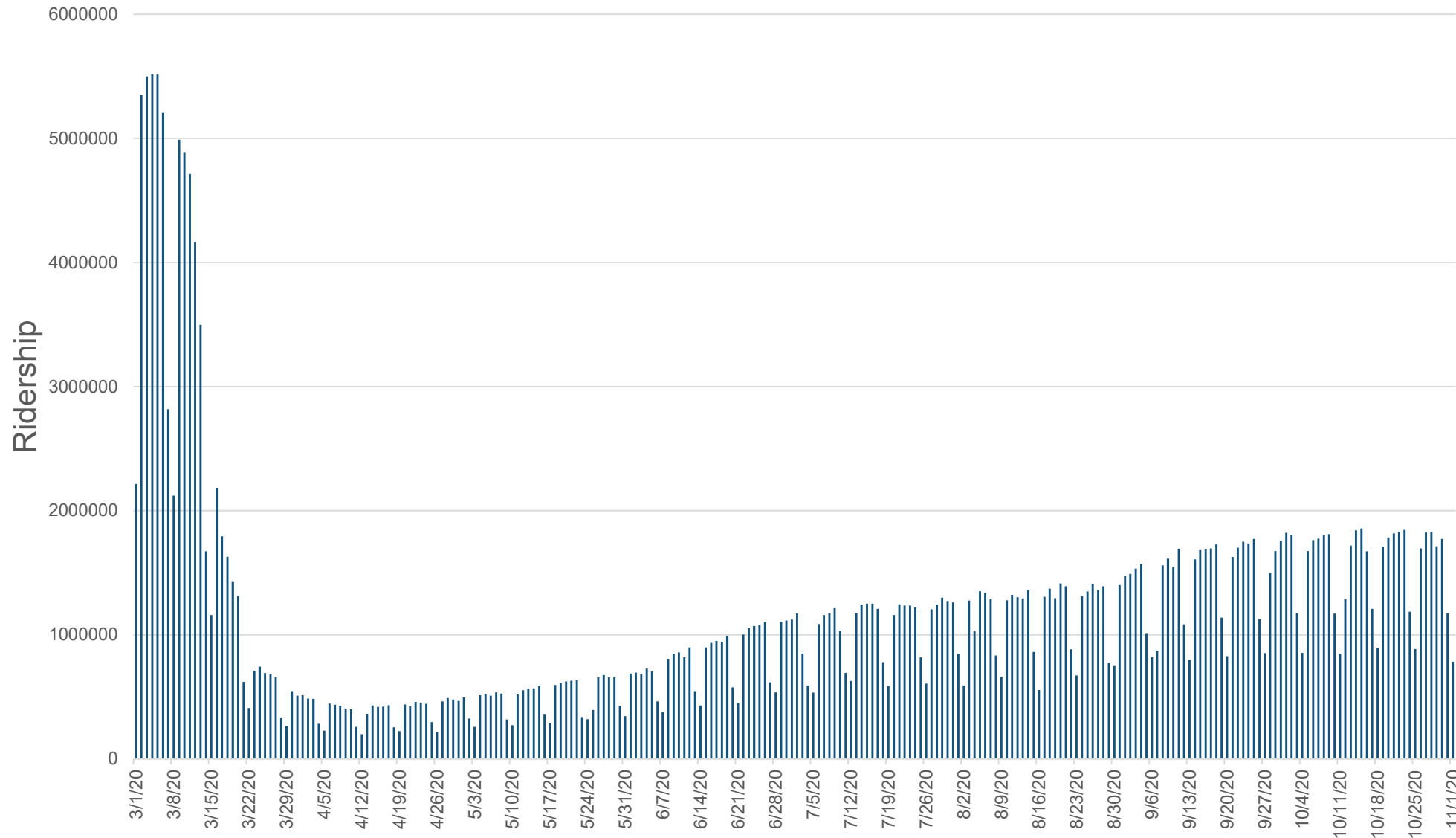
Percent Change of Estimated* MTA Subway & Bus Weekly Ridership
(March 1- November 1, 2020)



- Ridership on subway and bus has remained stable week over week since mid-September, with minor fluctuations of about 5 percent occurring week over week through October.

MTA Subway System-wide Ridership Changes

Estimated* MTA Subway Ridership (March 1- November 1, 2020)

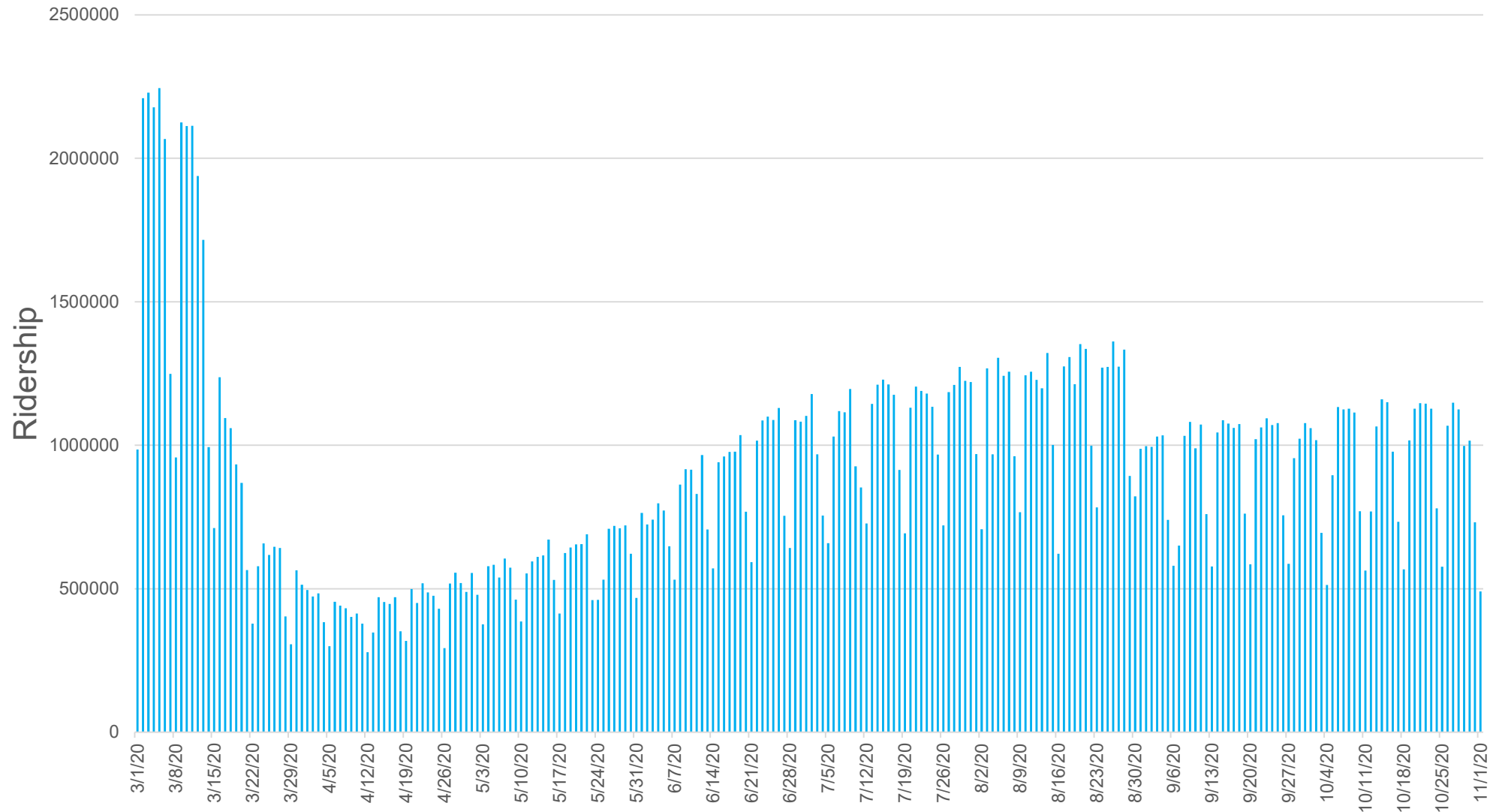


- Subway ridership was down 2 percent during the week of October 26 compared to the previous week.

From the MTA: Subway ridership figures are determined from MetroCard and OMNY swipes and taps. Figures from recent days may be revised as data reconciliation processes are carried out. Data sources: MTA (<https://new.mta.info/coronavirus/ridership>)

MTA Bus System-wide Ridership Changes

Estimated * MTA Bus Ridership (March 1- November 1, 2020)

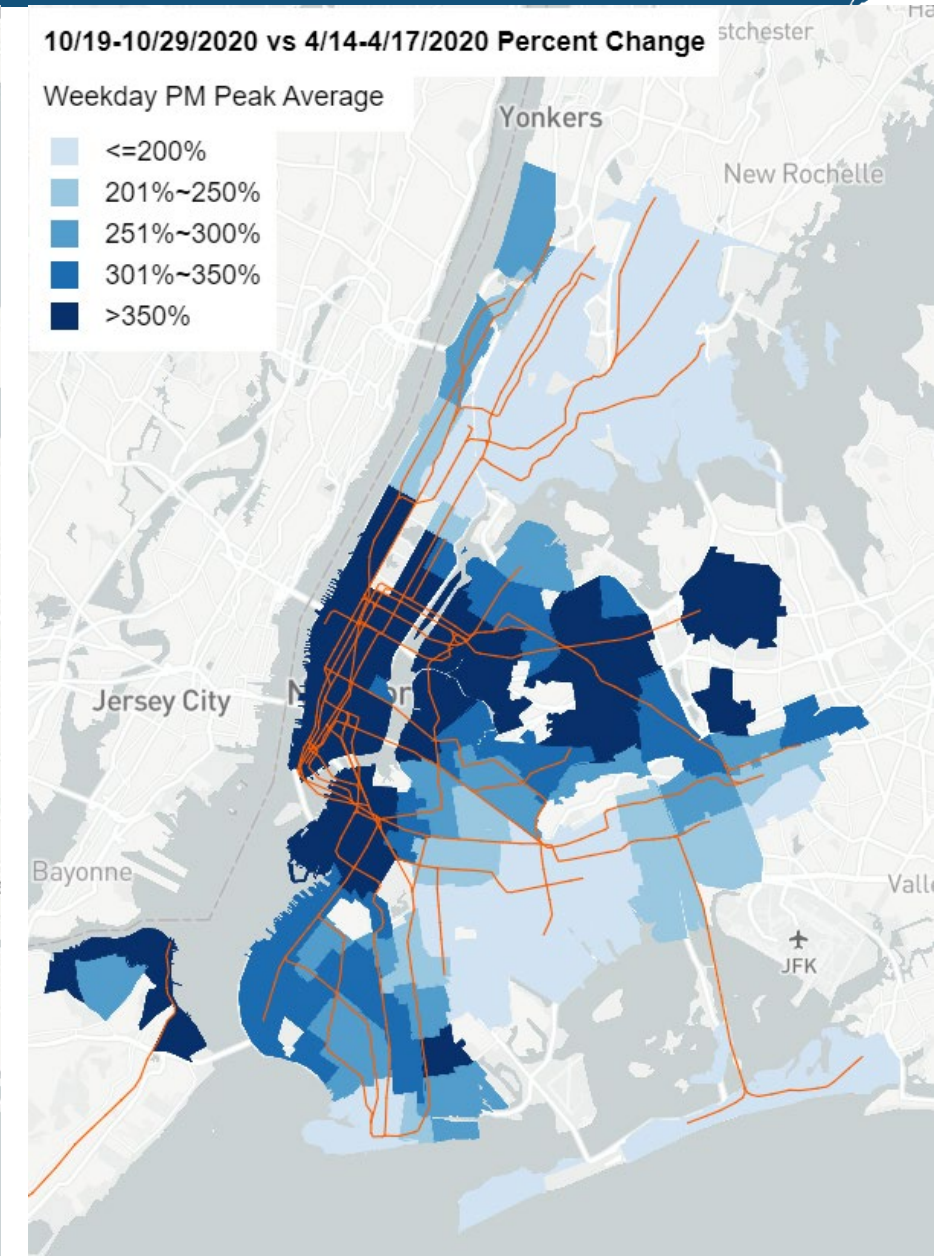
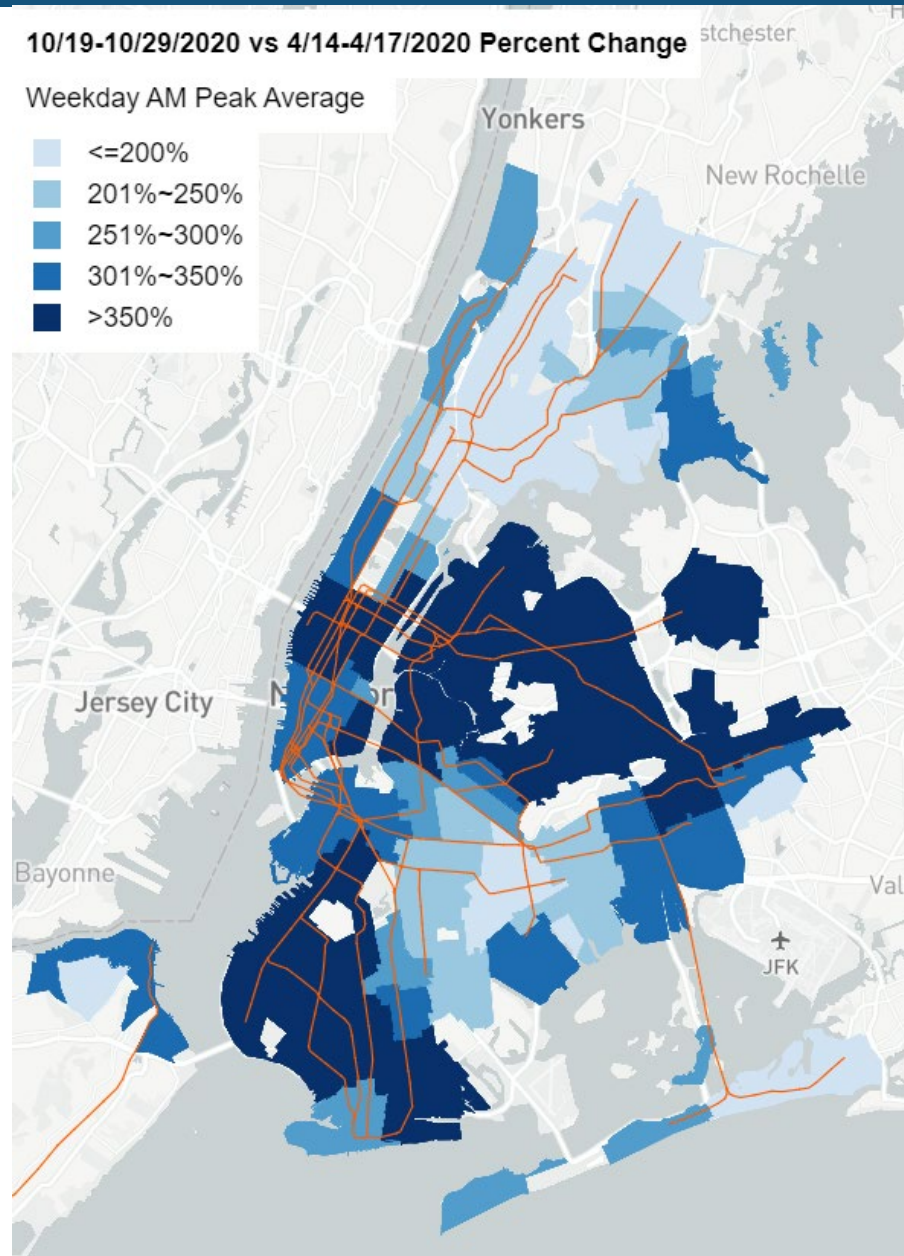


- Bus ridership was down 5 percent during the week of October 26 compared to the previous week.
- On October 1, the MTA changed how ridership is reported, noting on their website: *“Bus ridership data from 10/1/20 onward is based on actual MetroCard and OMNY swipes and taps and an estimate of cash fares paid.”*

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>)

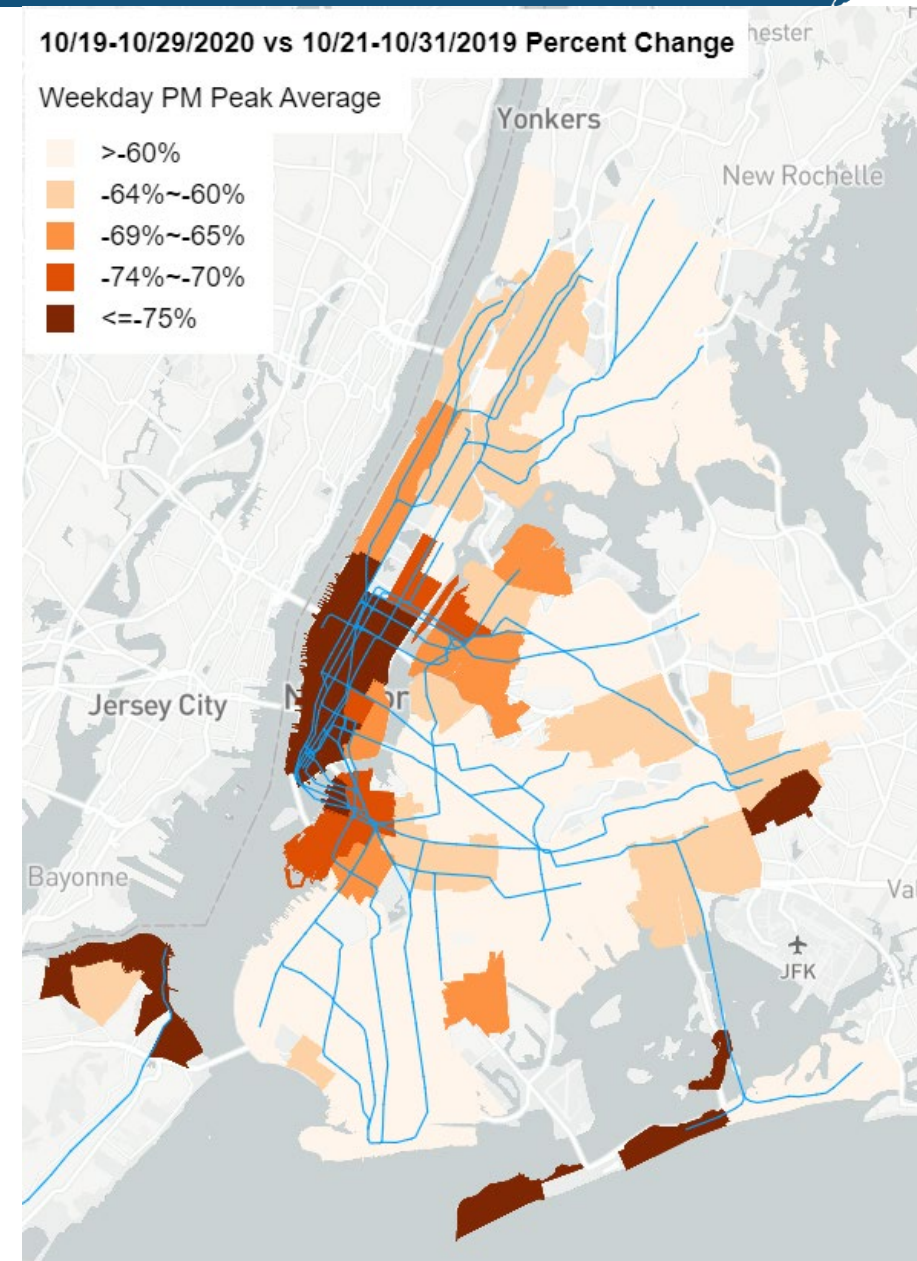
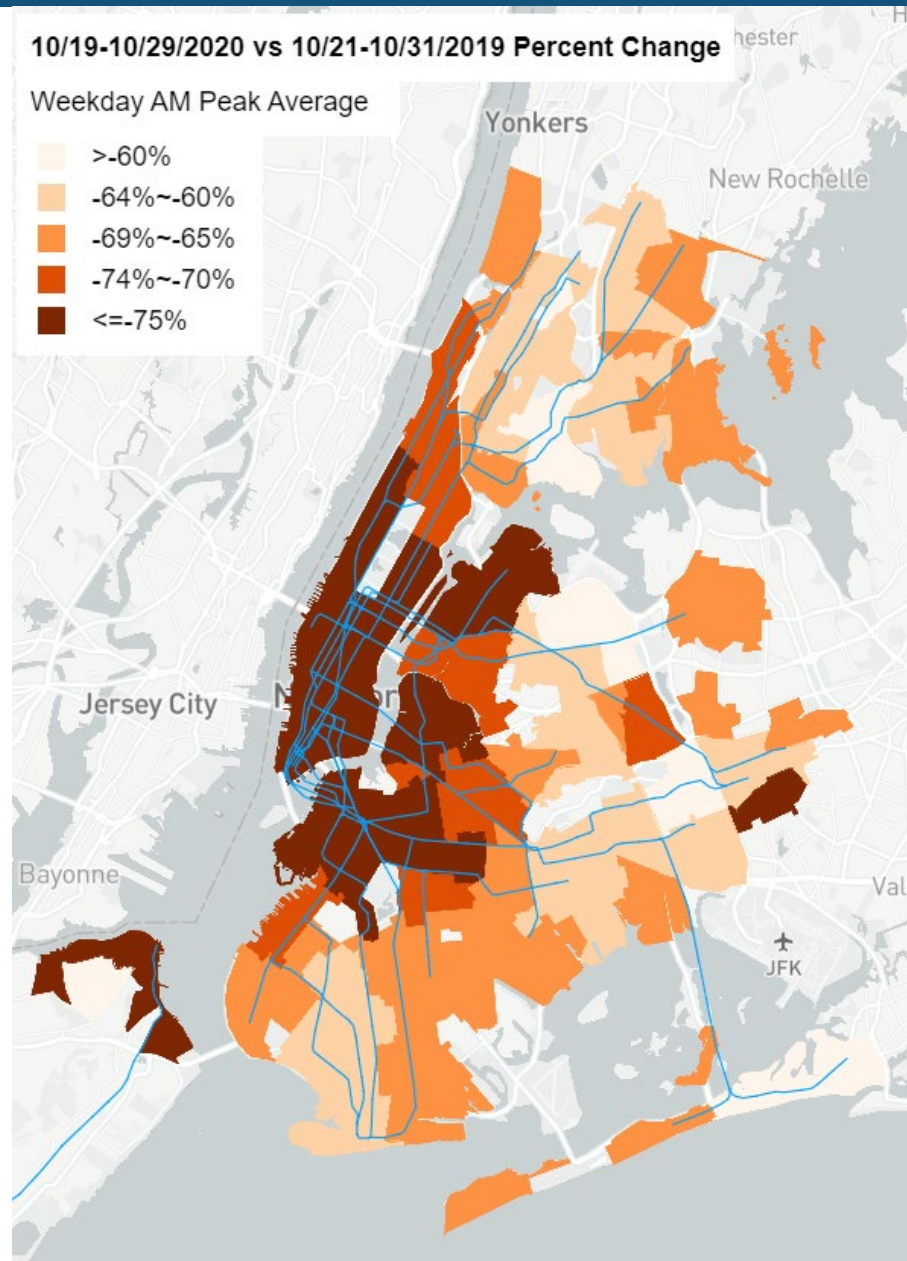
Weekday AM and PM Peak Turnstile Data – Comparisons with April 2020

- **In mid-April, subway travel was at its lowest.** Ridership has been increasing since then, to varying degrees across the city. The areas showing the least amount of increase coincide with those that declined the least in April.
- The AM peak hour map may indicate where commuters are returning to the subway system, while the PM peak hour map may indicate where people are commuting home from.
- Much of Queens and south Brooklyn are seeing strong AM peak hour gains. The city's business districts have gained substantial PM peak ridership since mid-April.



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

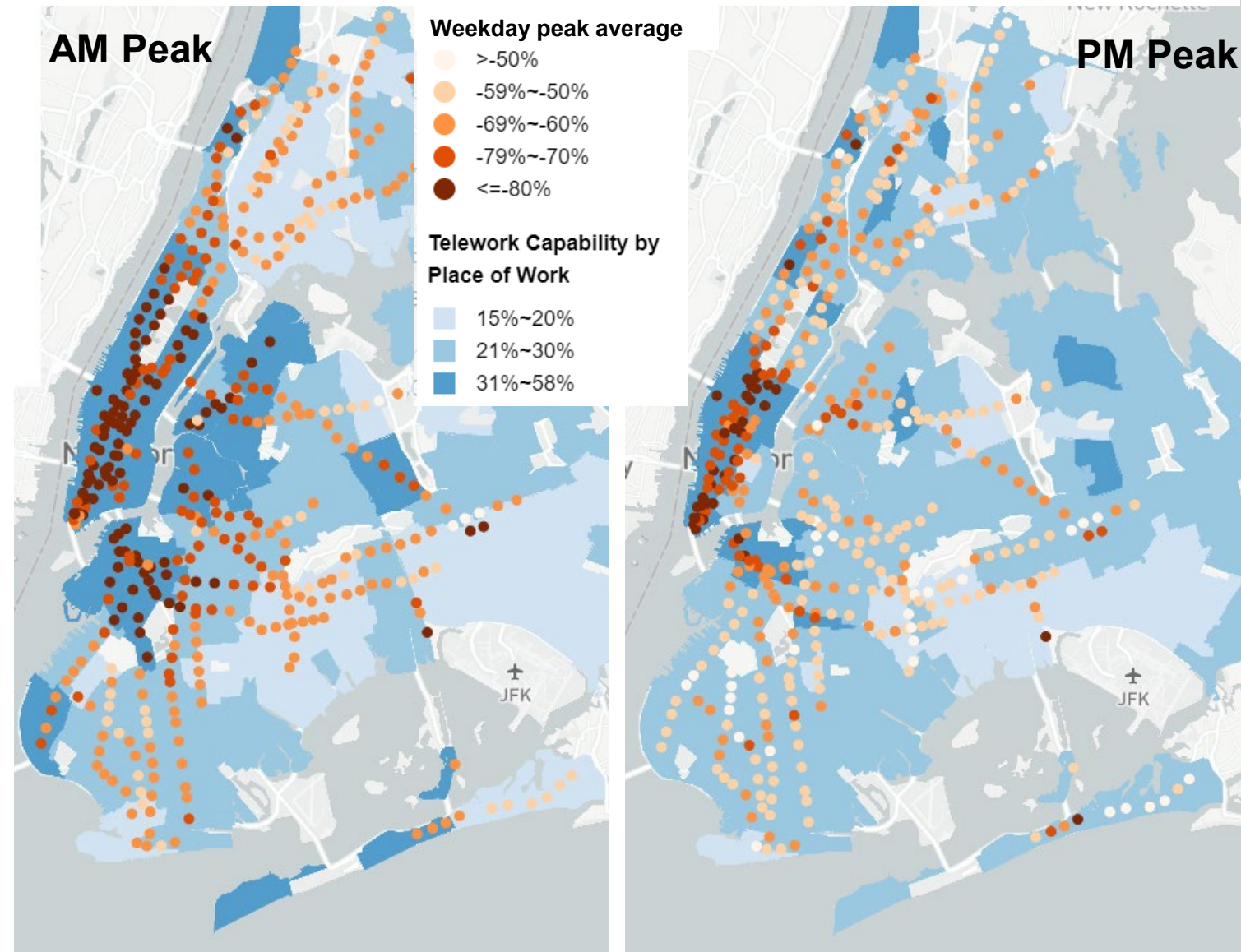
- While subway ridership has been increasing in recent months, AM and PM peak hour trips in remain substantially off from their volumes during the same weeks in 2019.
- **The city's business districts** in midtown and lower Manhattan, downtown Brooklyn, and Long Island City **continue to see less than a quarter of their PM peak subway entries**, indicating a very limited return to work in those areas.



Weekday AM and PM Peak Subway Turnstile Data and Telework Capability

- A University of Chicago study estimated the “telework capability” of workers in different economic sectors.
- By mapping AM peak subway entries during early October 2020 and comparing them to entries over the same period in 2019, the **highest rates of ridership decreases are seen in neighborhoods with the strongest likelihood of having telework-capable populations**, including much of Manhattan, Downtown Brooklyn, Williamsburg, Long Island City, and Astoria.
- **Mapping PM peak entries against neighborhoods with high concentrations of telework-capable jobs**, we see similarly that ridership recovery has lagged in those areas **where workers are more likely to be working from home rather than place of work.**

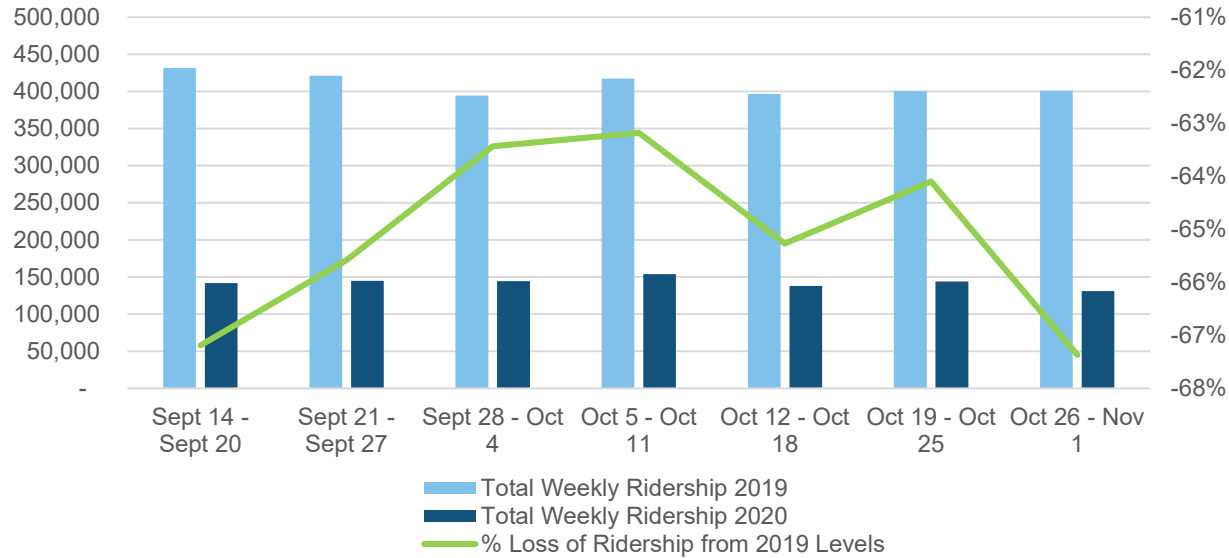
Subway Ridership Changes: Current Ridership vs. late October 2019 ridership



Ferry

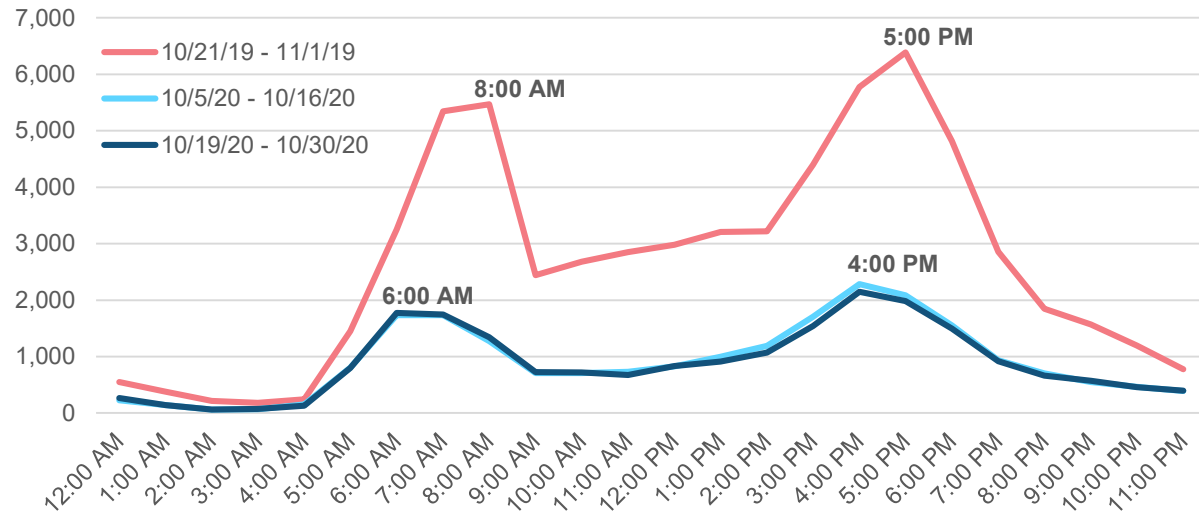
The Staten Island Ferry and NYC Ferry

SIF Total Weekly Ridership

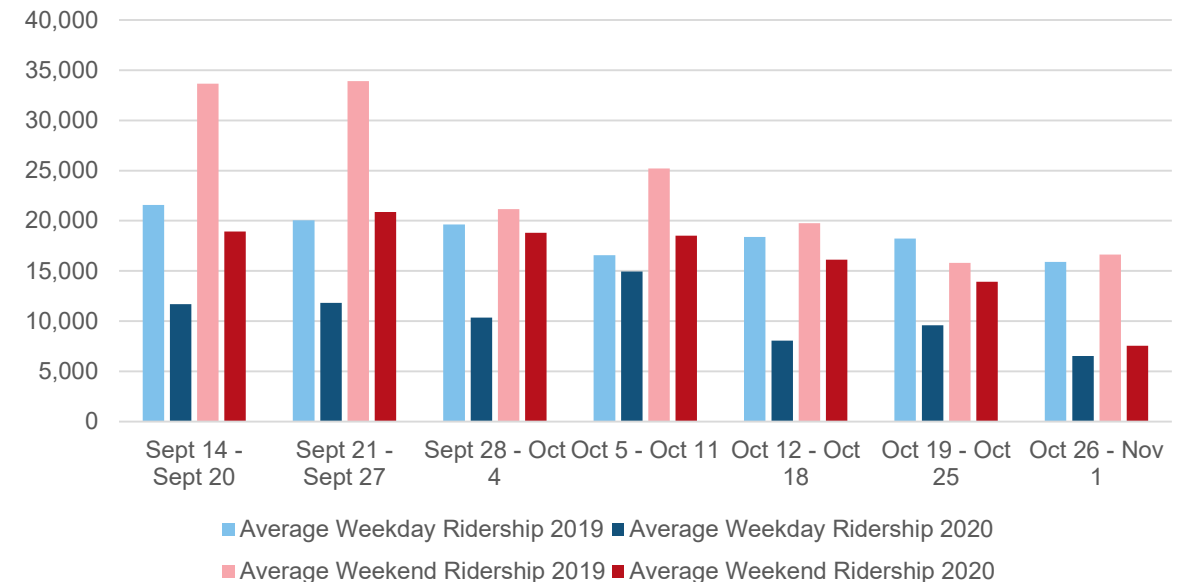


- The two-week period of **October 19 to November 1** saw a daily weekday average of about **21,400 Staten Island Ferry riders**. During these two weeks, the SIF **recovered an average of about 36 percent of its daily ridership**, compared to 2019 levels.
- For the SIF, weekday peak hour ridership for the two-week period of October 19 to November 1 **changed from 7:00 am to 6:00 am for the morning and remained at 4:00 pm for the afternoon**, compared to the previous two-week period.
- The two-week period of October 19 to November 1 saw NYC Ferry weekly ridership recover **an average of 47 percent of its weekday ridership**, and **an average of 67 percent of its weekend ridership**, compared to 2019 levels.

SIF Average Weekday Total Ridership Per Hour



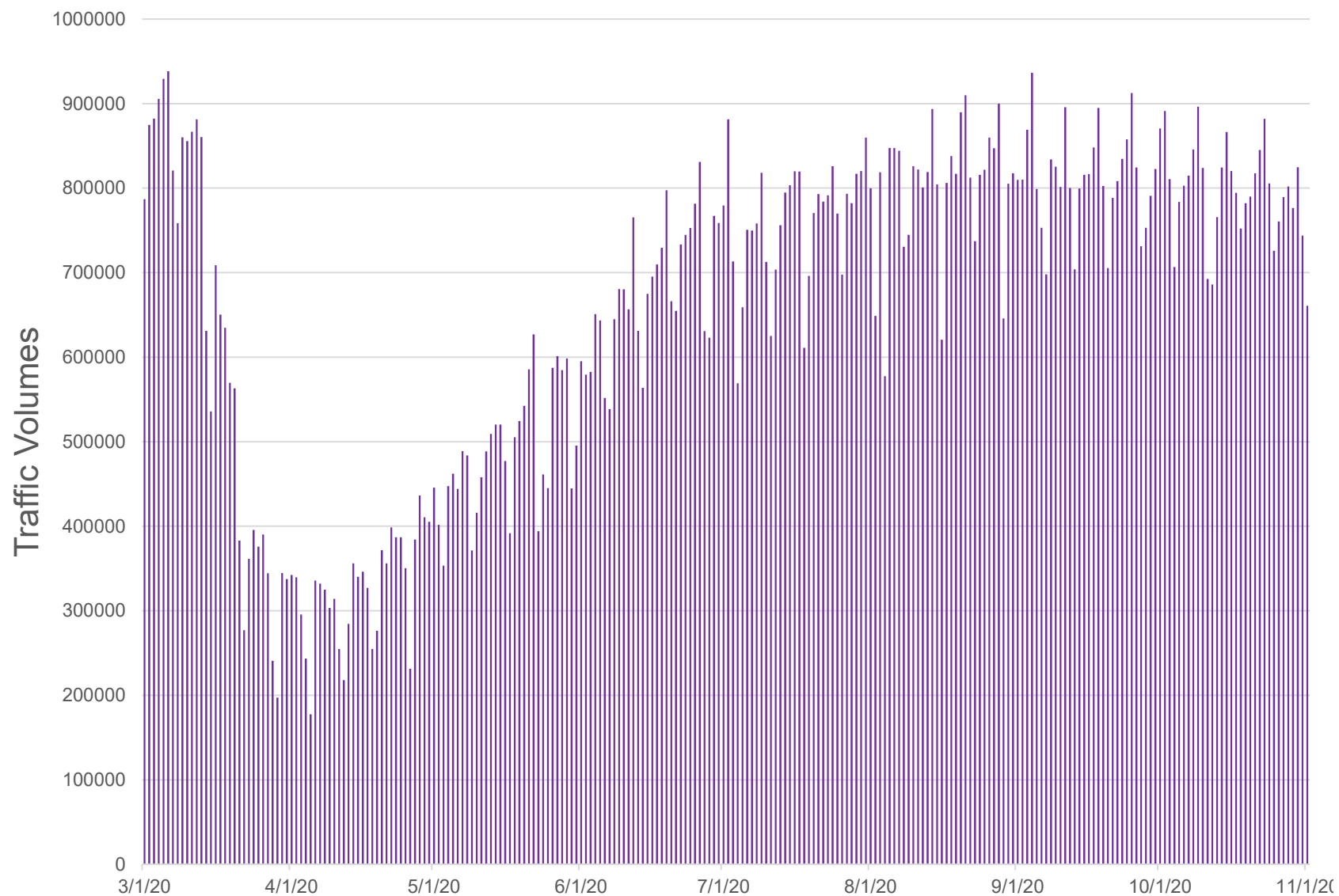
NYC Ferry Weekly Ridership Weekday vs. Weekend Averages



Traffic

MTA Bridge and Tunnel Traffic Volumes

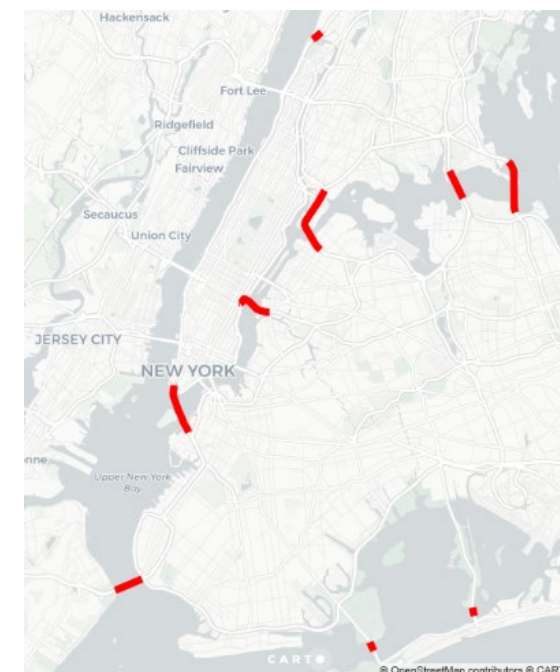
Estimated * MTA Bridge and Tunnel Traffic Counts (March 1 - November 1, 2020)



- Weekday traffic counts on MTA bridges and tunnels during the week of October 26 were nearly stable compared to the week of October 12. Weekend traffic counts were down 10 percent.

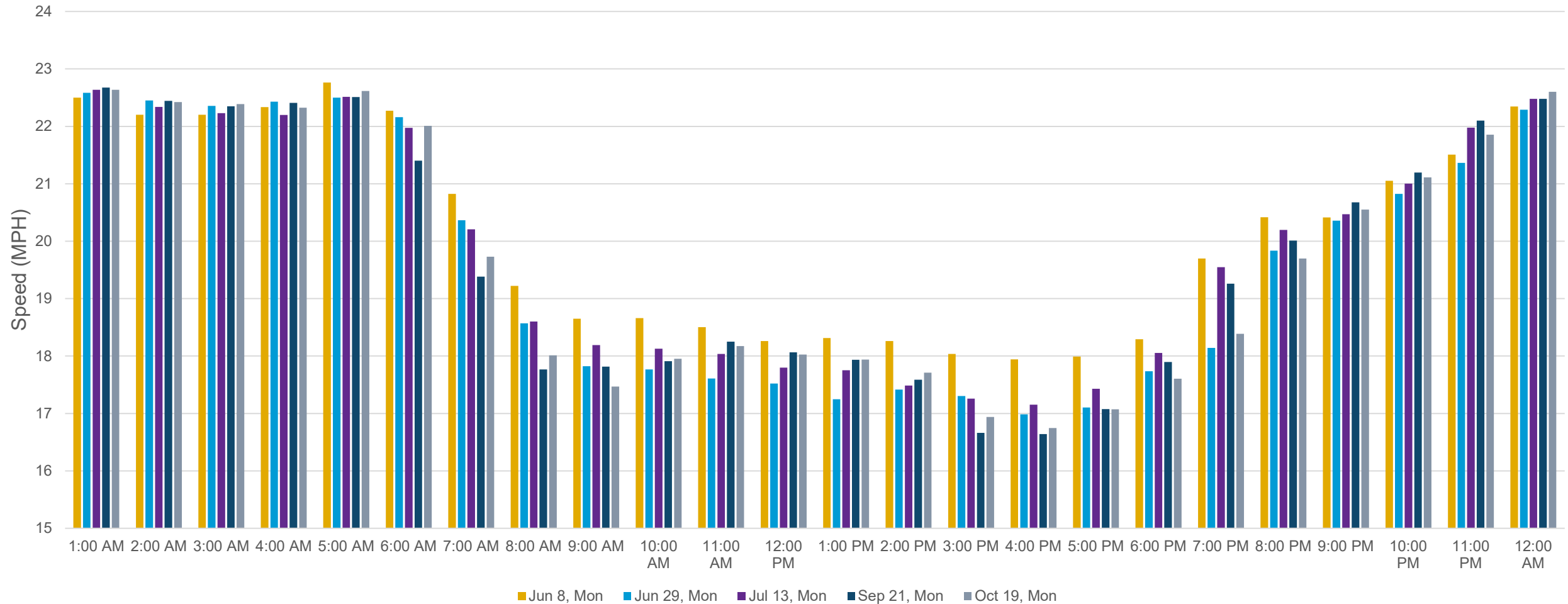
MTA crossings include:

- 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.





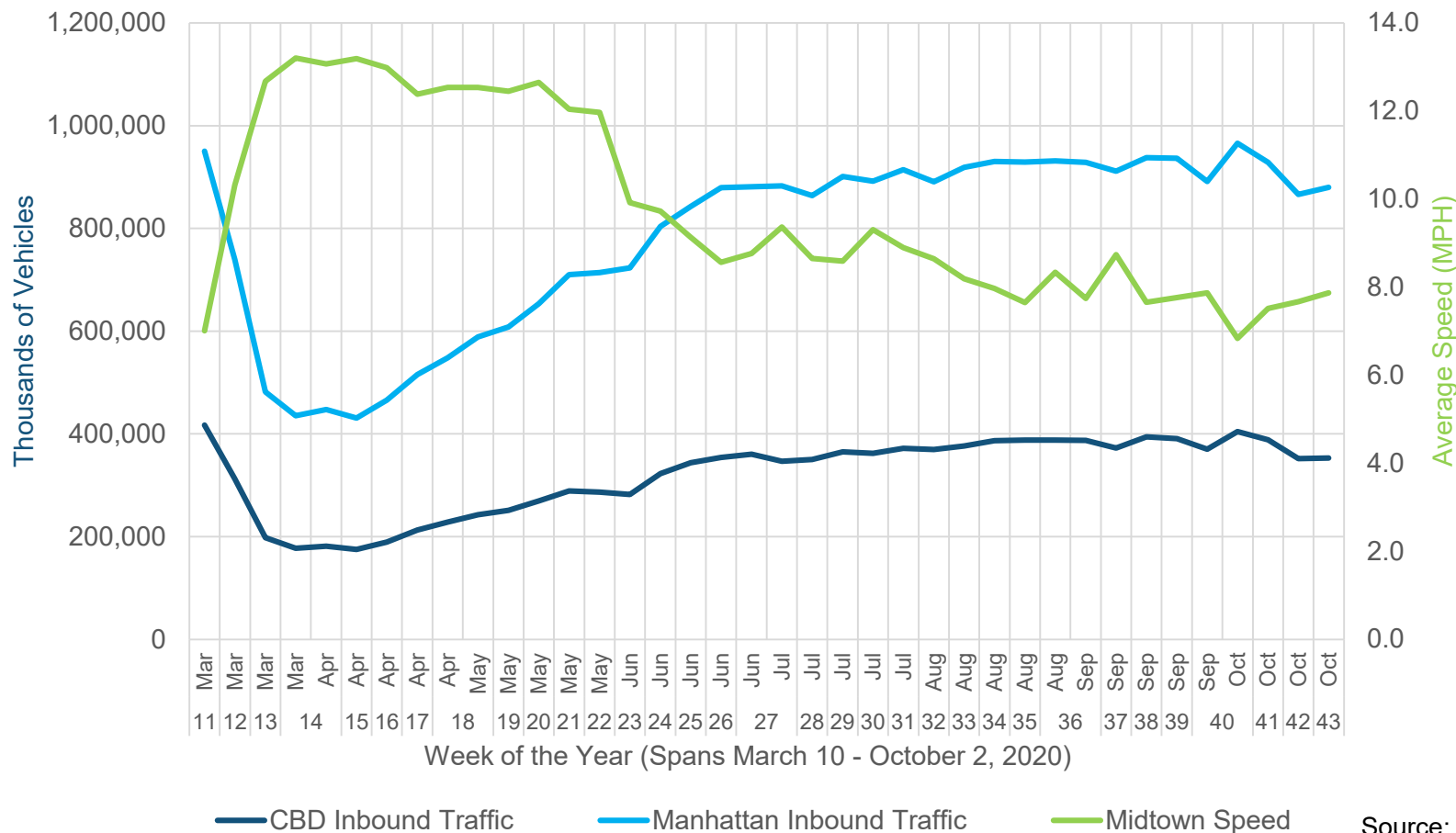
Real-time Traffic Flow Speed by Hour in NYC



- Compared to earlier weeks, average hourly traffic flow speeds on Monday, October 19 were generally consistent with mid September, and peak hour speeds were much slower than those observed in June.

Manhattan Inbound Traffic

Total average vehicles entering Manhattan CBD and Manhattan via river crossings and average weekday daytime travel speeds in Midtown



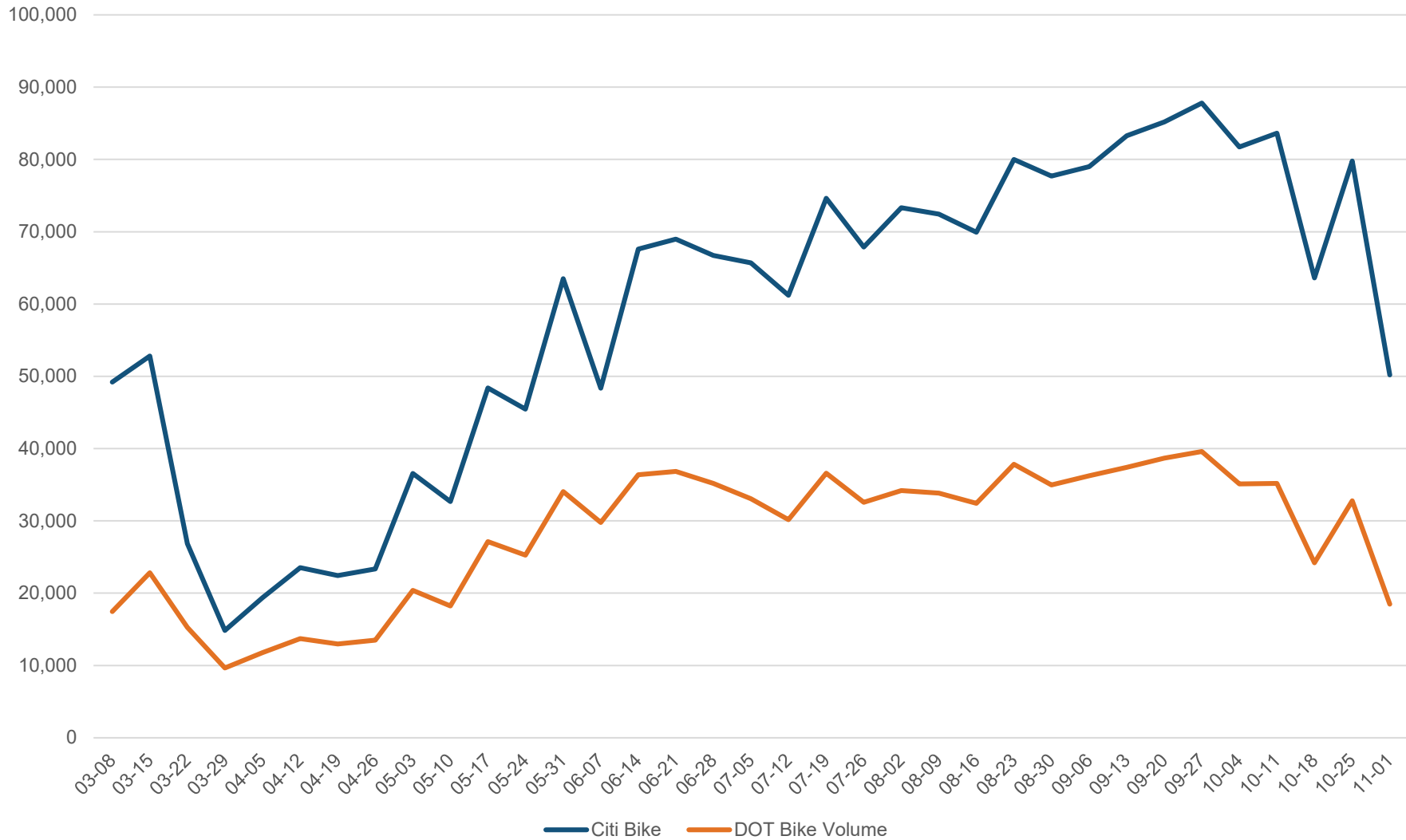
- Total average weekday daytime inbound vehicles to Manhattan and the Manhattan central business district are comparable to pre-pandemic levels.
- After peaking in early April at about 13 mph, average Midtown Manhattan speeds dropped sharply in early June and have held at about 8 mph in recent weeks.

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

Bicycles

Bike Ridership Changes

Average Weekly Bike Counts:
Citi Bike and CDOT Bike Volumes* at Select Locations



- Bike ridership as measured by total Citi Bike trips and by CDOT bike volume counts show a dip in ridership during the PAUSE period, with a fairly quick recovery through the spring and summer and a more recent drop-off with falling temperatures and precipitation.
- System-wide Citi Bike ridership appears to have greater variation than total bike counts, which presumably pick up a large share of bicycle owners who may be more dedicated riders.

*Bike Volumes:
Bike volumes are based on a subset of reliable bike counters, and do not represent total biking levels in NYC

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.governor.ny.gov/news/novel-coronavirus-briefing-governor-cuomo-declares-state-emergency-contain-spread-virus>)
- 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://www1.nyc.gov/office-of-the-mayor/news/151-20/new-york-city-close-all-school-buildings-transition-remote-learning>) Mayor de Blasio announces the **closure of schools, bars, and restaurants** (except takeout/delivery) effective the morning of the 17th (<https://www1.nyc.gov/office-of-the-mayor/news/152-20/statement-mayor-de-blasio-bars-restaurants-entertainment-venues>)
- March 18th: Governor Cuomo announces that **50% of non-essential employees** must work from home (<https://www.governor.ny.gov/news/no-2026-continuing-temporary-suspension-and-modification-laws-relating-disaster-emergency>)
- 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.governor.ny.gov/news/governor-cuomo-issues-guidance-essential-services-under-new-york-state-pause-executive-order>), travel on transit only when necessary
- March 24th: MTA announces service reduction to **Essential Service** plan (<http://www.mta.info/press-release/mta-headquarters/mta-implements-%E2%80%99Cny-essential-service-plan%E2%80%99D-move-healthcare-workers>)
- March 27th: The Governor halts **non-essential construction** (<https://thecity.nyc/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://www1.nyc.gov/office-of-the-mayor/news/306-20/open-streets-mayor-de-blasio-speaker-johnson-name-first-streets-be-used-social>)
- May 6th: Governor Cuomo enacts nightly 1am-5am subway shutdowns: (<http://www.mta.info/press-release/mta-headquarters/mta-announces-overnight-closure-subway-deep-cleaning-launches->)
- May 22nd: Mayor de Blasio announces 43 miles of **open streets**, the most in the nation, with the City to eventually reach 100 miles. (<https://www1.nyc.gov/office-of-the-mayor/news/370-20/mayor-de-blasio-surpasses-open-streets-target-13-more-miles-streets-be-opened-by>)
- May 29th: Governor Cuomo announces that New York City is expected to **begin Phase 1 of reopening on Monday, June 8th**. (<https://www.governor.ny.gov/news/governor-cuomo-announces-new-york-city-enter-phase-1-reopening-june-8-and-five-regions-enter>)
- 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://www.governor.ny.gov/news/governor-cuomo-and-mayor-de-blasio-announce-citywide-curfew-new-york-city-will-take-effect>)
- 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://www1.nyc.gov/assets/home/downloads/pdf/executive-orders/2020/eo-122.pdf>)



New York COVID19 Pandemic Timeline: Phase 1 to Phase 4

- 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://www1.nyc.gov/office-of-the-mayor/news/420-20/transcript-mayor-de-blasio-appears-inside-city-hall>)
 - 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.nyc.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://www1.nyc.gov/office-of-the-mayor/news/417-20/better-buses-restart-mayor-de-blasio-major-projects-speed-buses-during-city-s-phased>)
- 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.nyc.gov/office-of-the-mayor/news/449-20/open-restaurants-new-york-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.governor.ny.gov/news/video-audio-photos-rush-transcript-111th-day-covid-19-briefings-governor-cuomo-delivers-address>)
- 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://www1.nyc.gov/office-of-the-mayor/news/456-20/transcript-mayor-de-blasio-holds-media-availability>)
 - 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 states who are experiencing a rapid rise in Covid cases. (<https://www.governor.ny.gov/news/audio-rush-transcript-governor-cuomo-guest-cnns-newsroom-poppy-harlow-and-jim-sciutto>)
 - 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/interimguidance_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://www1.nyc.gov/office-of-the-mayor/news/482-20/transcript-mayor-de-blasio-holds-media-availability>)
- 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. (<https://www1.nyc.gov/office-of-the-mayor/news/497-20/transcript-mayor-de-blasio-holds-media-availability>)
 - 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://www1.nyc.gov/office-of-the-mayor/news/531-20/transcript-mayor-de-blasio-holds-media-availability>)
- August 7th: Governor Cuomo announces that schools in New York State can reopen in the fall, though it will be up to local districts to determine if and how to do so. (<https://www.governor.ny.gov/news/audio-rush-transcript-governor-cuomo-announces-based-each-regions-infection-rate-schools-across>)



New York COVID19 Pandemic Timeline: September 2020 – October 2020

- August 31st: MTA restarts front door bus loading and **fare collection** (<https://www.ny1.com/nyc/all-boroughs/transit/2020/08/18/mta-bringing-back-front-door-bus-boarding-and-fare-collection#:~:text=On%20August%2031%2C%20the%20MTA,the%20%242.75%20fare%20once%20again.>)
- September 9th: Governor Cuomo announces that restaurants can accommodate **indoor dining a 25% capacity** starting September 30th (<https://www.governor.ny.gov/news/governor-cuomo-announces-indoor-dining-new-york-city-allowed-resume-beginning-september-30-25>)
- September 12th: Citi Bike records over **100,000 rides in a single day**, setting a record for the service
- September 16th: Mayor De Blasio announces that Open Restaurants will expand to weekdays citywide: (<https://www1.nyc.gov/office-of-the-mayor/news/660-20/mayor-de-blasio-open-streets-restaurants-will-expand-weekdays-40-locations-citywide>)
- September. 21st: 3-K, Pre-K and District 75 schools reopen, and all students who opted into the all-remote program start their first full day of instruction.
- September 26th: An updated NYC Ferry Fall 2020 Schedule went into effect.
- October 4th: Mayor Bill de Blasio sends a proposal to the New York State government to close non-essential businesses, including public and private schools, in **nine new York City zip codes** where Covid-19 rates have remained over 3\$ for the past seven days. This would also include closing down high-risk activities in **11 additional New York City zip codes of concern**. (<https://www1.nyc.gov/office-of-the-mayor/news/693-20/mayor-de-blasio-sends-state-proposal-close-schools-non-essential-businesses-nine-new-york#/0>)
- October 6th: Governor Cuomo announces the **Cluster Action Initiative**, which will close or reduce capacity at non-essential businesses based on distance from Covid-19 infection hotspots. <https://www.amny.com/news/cuomo-to-enact-new-action-plan-to-target-covid-19-clusters/>
- October 15th: Mayor de Blasio describes test results in New York City hot spots as "**plateauing.**" <https://www1.nyc.gov/office-of-the-mayor/news/716-20/transcript-mayor-de-blasio-holds-media-availability>
- October 17th: Governor Cuomo outlines a new "**micro-cluster**" **strategy** to tackle COVID-19 hot spots that emerge in New York over the fall. <https://www.governor.ny.gov/news/governor-cuomo-outlines-new-micro-cluster-strategy-tackle-covid-19-hot-spots-arise-fall> He also announces that most **movie theaters**—though not movie theaters in New York City—can **re-open at 25% capacity** on October 23rd. <https://www.governor.ny.gov/news/governor-cuomo-announces-most-movie-theaters-outside-new-york-city-can-reopen-october-23>
- October 18th: Governor Cuomo announces a draft **New York State COVID-19 Vaccination Administration Program**. <https://www.governor.ny.gov/news/governor-cuomo-announces-draft-new-york-state-covid-19-vaccination-administration-program>
- October 27th: Governor Cuomo announces the MTA to launch a new **voluntary COVID-19 screening program** for frontline employees. <https://www.governor.ny.gov/news/governor-cuomo-announces-mta-launch-voluntary-covid-19-screening-program-frontline-employees>
- October 30th: Governor Cuomo releases guidelines on **testing protocol for schools to re-open** in red or orange micro-cluster zones: <https://www.governor.ny.gov/news/governor-cuomo-releases-guidelines-testing-protocol-schools-reopen-red-or-orange-micro-cluster>
- October 31st: Governor Cuomo announces new guidelines allowing out-of-state travelers to **test out of mandatory 14-day quarantine**. <https://www.governor.ny.gov/news/governor-cuomo-announces-new-guidelines-allowing-out-state-travelers-test-out-mandatory-14-day>