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North America | 2020

JLL Research Report

Getting there: Commuting challenges in a post-pandemic world

*2020 Forecast Series
Part Five: Navigating Post-COVID-19*



New challenges with transit

Over the past several months, the world of commercial real estate has changed dramatically. Both occupiers and landlords have begun to adjust to the new realities of a contracting economy and workplaces that must integrate various degrees of social distancing and remote working.

While it is widely recognized that some of the recent changes will be temporary, others will have enduring impacts on buildings and cities for years to come, based on JLL's most recent [Workplace Experience Survey](#).

One of the most concerning workplace issues for employees is not the physical space where they will work, but how they will get there in a post-pandemic world.

While every employee's commute may be different for the foreseeable future, the transportation mode that has come under the most recent scrutiny is public transit. Many concerns have been raised by the millions of Americans

who rely on trains and buses to get to work, on issues ranging from cleaning and sanitation to interpersonal interaction and rider density.

Fully 34% of our survey respondents who previously took public transportation to work have stated that they will seek alternate forms of transportation after the pandemic.

Extrapolated on a national basis, that could represent several million people who are considering such alternatives.

This concern has led JLL to analyze the range of commute patterns across the country in order to determine which cities and regions may be most impacted in this new environment. As with our other research related to COVID-19, this transit study will be longitudinal and will continue throughout the year.

Our initial findings indicate that employees will be very cautious in every step of their journey back to their more traditional workplace arrangements, including how they get to work. Some highlights include:



Public transit usage across markets



Pre-pandemic commute times and post-pandemic commute challenges

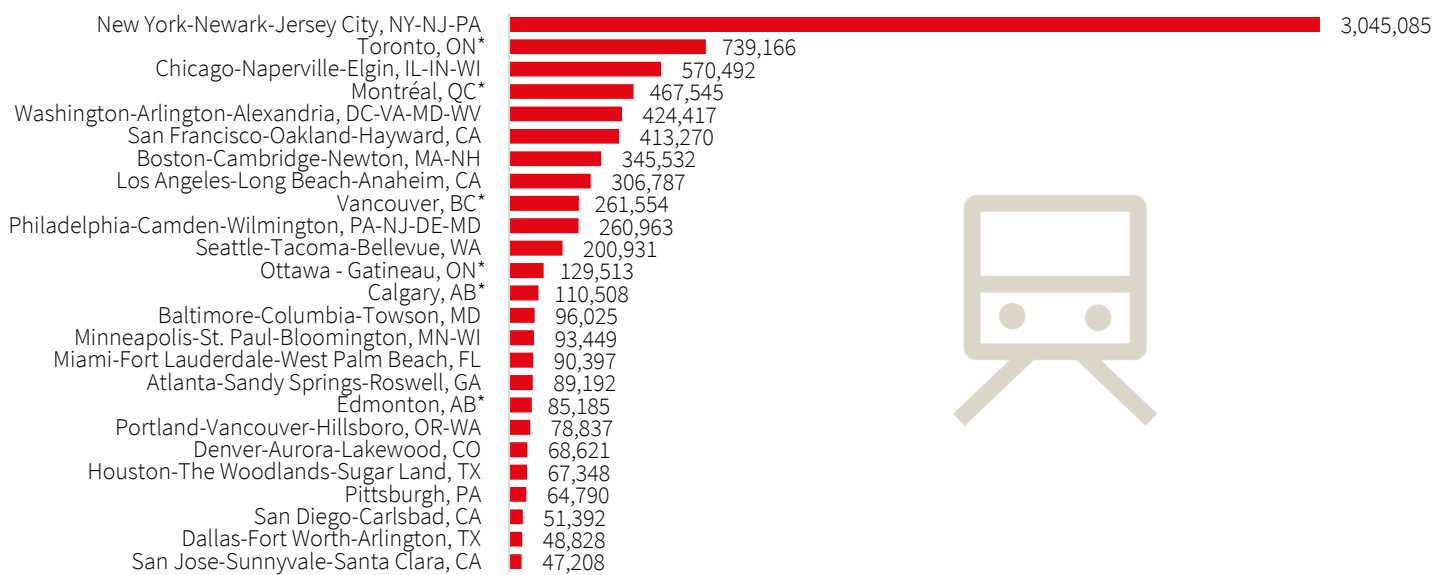


Looking forward: Potential solutions in the next normal

1 Comparing the largest markets by public transit usage

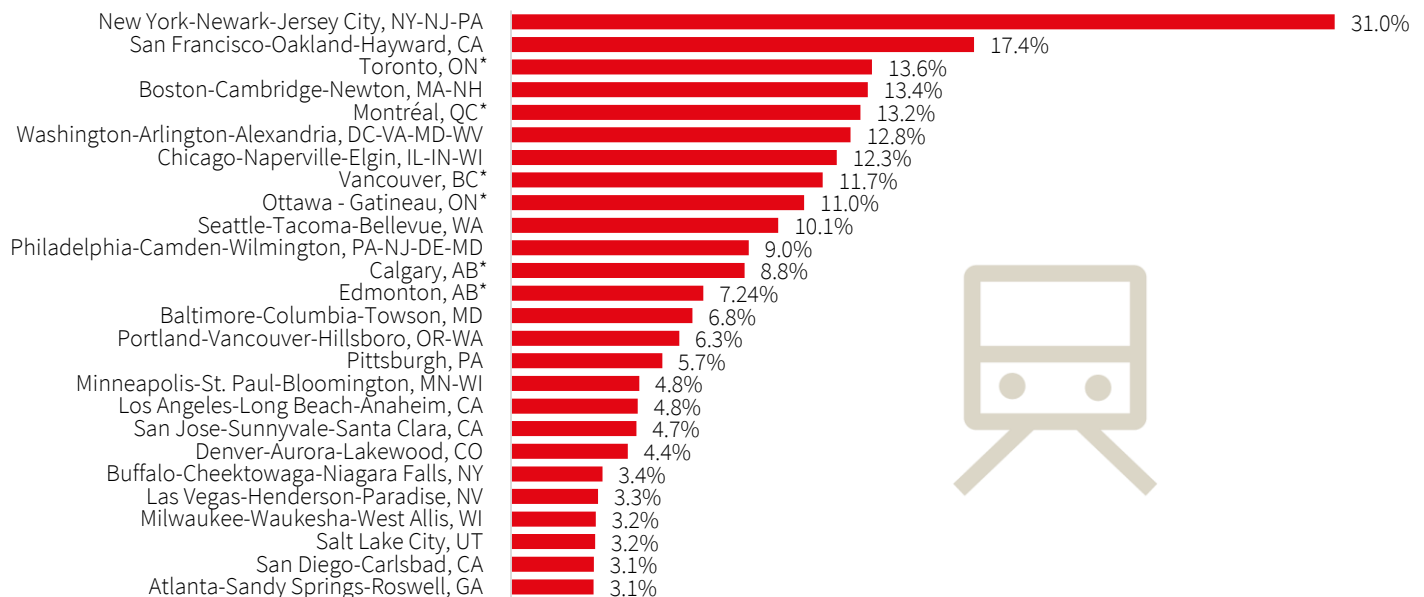
Public transit ridership and utilization statistics vary widely by city. While some city employee populations are almost completely reliant on public transit for access to job opportunities, other cities are more oriented toward automobile commuting. An analysis of the most recent census data on commuting patterns for the top 25 metropolitan areas illustrates this differential below.

Total workforce using public transit (number of employees)



Source: US Census ACS 2018 1-year estimates, BAO ESRI | *Data represents 2019 estimates of Census Metropolitan Areas (CMA)

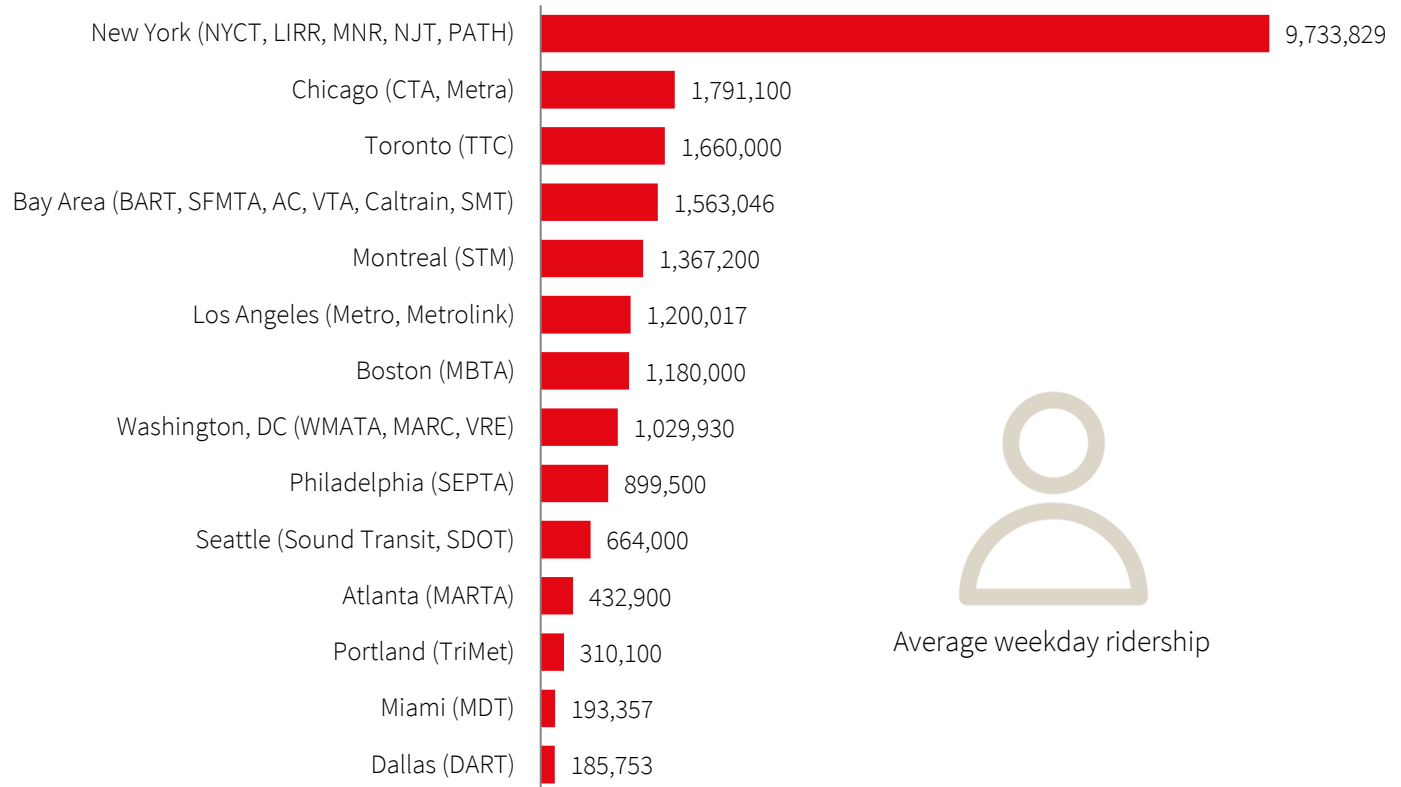
% of workforce using public transit



Source: US Census ACS 2018 1-year estimates, BAO ESRI | *Data represents 2019 estimates of Census Metropolitan Areas (CMA)

Information provided to JLL by the various city transit authorities further supports census data and highlights the significant numbers of transit-riding employees in regions that are traditionally assumed to be car-centric, such as Los Angeles and the Bay Area.

New York substantially leads weekday transit usage, but many other markets exceed 1 million per day



Source: JLL Research | Only markets with rail systems shown | One trip may involve multiple agencies

Average weekday ridership figures are inclusive of all public transit riders, not just those commuting to work, and capture ride segments (i.e.: round trips)

This implies that even in cities with lower percentages of transit ridership, any shift in commute patterns toward cars could further exacerbate previously existing challenges with congestion and traffic.

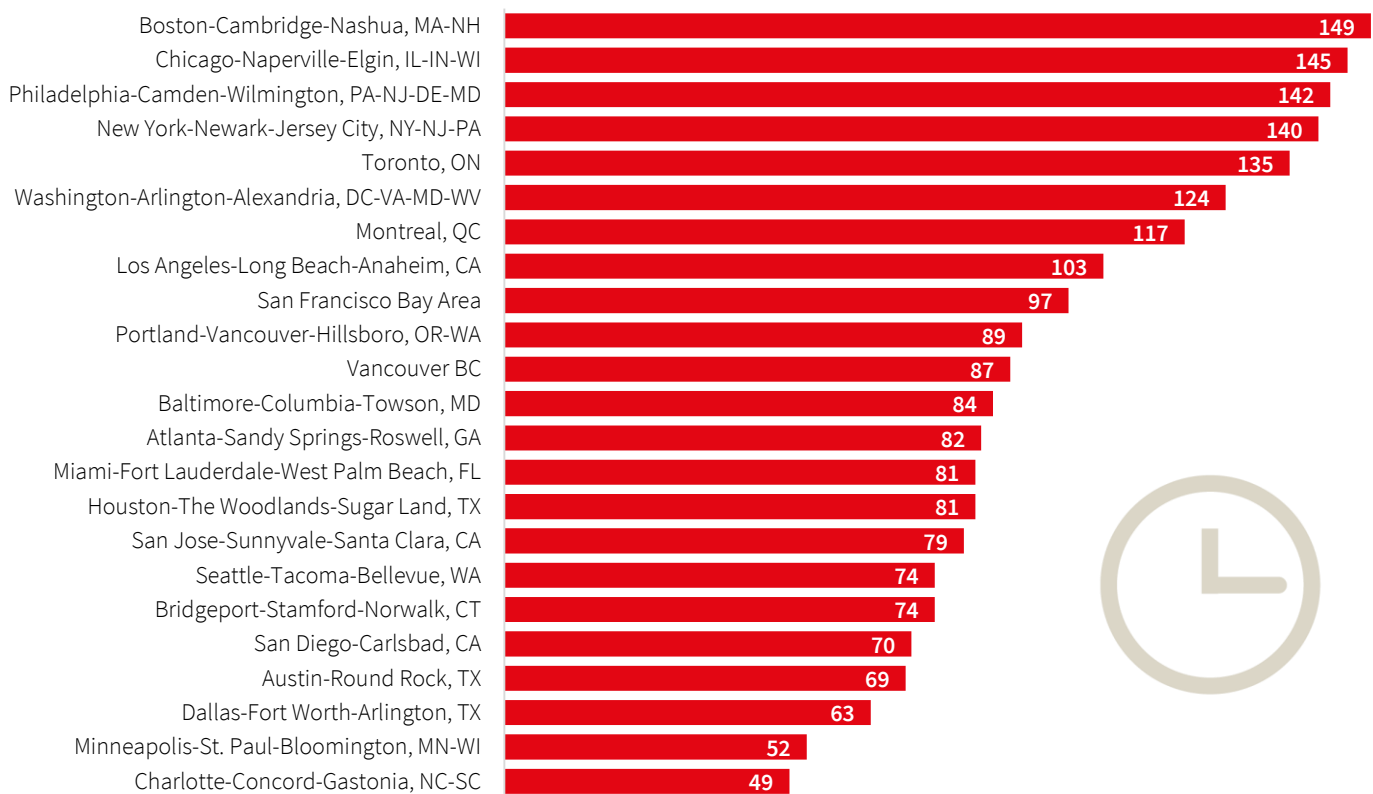
This challenge could also disproportionately impact low-income workers who do not own vehicles or have the option of driving to work.



2 Pre-pandemic commute pressures exacerbate post-pandemic commute challenges

Prior to COVID-19, several metro areas had excessive average commute times resulting from significant population and employment growth, furthered by a decade of urbanization. Interestingly, many of these regions are also heavily dependent on transit, indicating that any increase in drivers in these metros could make future commute times untenable.

Average annual hours lost in congestion



Source: INRIX

Additionally, a Brookings Institute study found that metro areas with the longest commutes were also the most expensive, presumably because affordability and homeownership becomes more attainable for average employees the farther from the central business district they move. In the study, it was found that more than 10 percent of households had a commute of one hour or more and that those households were largely found in the San Francisco Bay Area and Northeast.

In fact, two studies conducted in 2019 in the San Francisco Bay Area and Boston metro revealed that most respondents were considering relocating for a better commute. Of 1,500 people surveyed by the Silicon Valley Leadership Group, 44 percent said they were thinking about moving and more than 50 percent cited their commute as the reason. Likewise, a similar survey conducted by Massachusetts Biotechnology Council found that 60 percent of the 2,133 life sciences professionals

surveyed would change jobs for a better commute.

If the pressures of cost and commuting were raising questions for employees before the pandemic began, it could exaggerate the issues as many begin to consider returning to work now.

Unsurprisingly, the cost of parking in some of the most transit-dependent cities (New York, San Francisco, Boston, Washington, DC, Chicago and Seattle) is 55 percent higher than in the least dependent (Los Angeles, Atlanta, Houston and Dallas). What's more, the total land area of the cities of

San Francisco, Boston, Washington, DC, and Seattle averages just one-quarter that of the other top cities, meaning fewer available parking spaces for those who do want to drive.

Metro Area Comparisons: Scale, Congestion, Commuting, and Parking

Metro Area	2010 Metro land area (sqm)	City to metro land area	Avg. hours of congestion	Total employment	Total transit-using employment	% of public-transit-riding employment	% of transit-riding employment with a commute 60+ min	Avg. daily parking rate	Avg. monthly parking rate
New York-Northern New Jersey-Long Island, NY-NJ-PA Metro Area	6,687	4.5%	140	9,821,147	3,045,085	31.0%	39.5%	\$42	\$616
San Francisco-Oakland-Fremont, CA Metro Area	2,471	1.9%	97	2,371,803	413,270	17.4%	32.1%	\$28	\$322
Boston-Cambridge-Quincy, MA-NH Metro Area	3,487	1.4%	149	2,572,454	345,532	13.4%	36.2%	\$34	\$425
Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	5,598	1.1%	124	3,320,895	424,417	12.8%	35.6%	\$21	\$274
Chicago-Joliet-Naperville, IL-IN-WI Metro Area	7,197	3.2%	145	4,653,591	570,492	12.3%	37.1%	\$30	\$265
Seattle-Tacoma-Bellevue, WA Metro Area	5,872	1.4%	74	1,997,545	200,931	10.1%	33.1%	\$24	\$289
Los Angeles-Long Beach-Santa Ana, CA Metro Area	4,848	9.7%	103	6,434,177	306,787	4.8%	43.1%	\$16	\$190
Atlanta-Sandy Springs-Marietta, GA Metro Area	8,339	1.6%	82	2,868,251	89,192	3.1%	44.8%	\$14	\$105
Houston-Sugar Land-Baytown, TX Metro Area	8,827	6.8%	81	3,198,729	67,348	2.1%	36.1%	\$16	\$195
Dallas-Fort Worth-Arlington, TX Metro Area	8,928	3.8%	63	3,654,402	48,828	1.3%	34.2%	\$15	\$135

Sources: U.S. Census, Parkopedia, INRIX

3 Looking forward: Potential solutions in the next normal

Considerations for real estate **occupiers**

- 1. Dual-location strategies:** Following the current work-from-home mandates, many employers have recognized that individual productivity can remain elevated but that team productivity and collaboration are still critical components of enterprise success.

In order to create places for team meetings that may be more proximate to employees, some companies are evaluating dual-hub or remote-hub strategies, which may help offset employee commutes as well as real estate costs.

- 2. Extended remote working:** If a dual-location strategy can work for certain organizations, so can moving a portion of your employees to a full-time remote or “field” group by identifying those people who largely work independent of others or are primarily in the field meeting with clients and vendors for a majority of business hours.

Tenant sentiment has evolved over the past several weeks, and many are now focused on getting their essential employees back in the office but maintaining a significant presence of work-from-home employees until there is more clarity around overall public health conditions.

- 3. Flexible workspace solutions:** Whether short- or long-term in structure, a secondary flexible office solution provided by any number of service providers can help to reduce commuting challenges but may also provide a convenient drop-in location in the long term for employees who typically prefer to work in the main office but also occasionally require greater work-life balance with a shorter commute.
- 4. Shuttle services:** In the near term, employers offering shuttle services that provide greater spacing of employees versus densely packed public trains and buses could ensure that those who plan to return to the office have a way of doing so safely. Long-term, shuttle services to locations not served by transit can provide another benefit for employees. This could also help to address the lower-wage earners who do not have the option of traveling to work by car.

Private shuttles, which were pioneered by technology firms in the Bay Area, may become more common in other markets where employers want to provide their teams with controlled access to their offices.

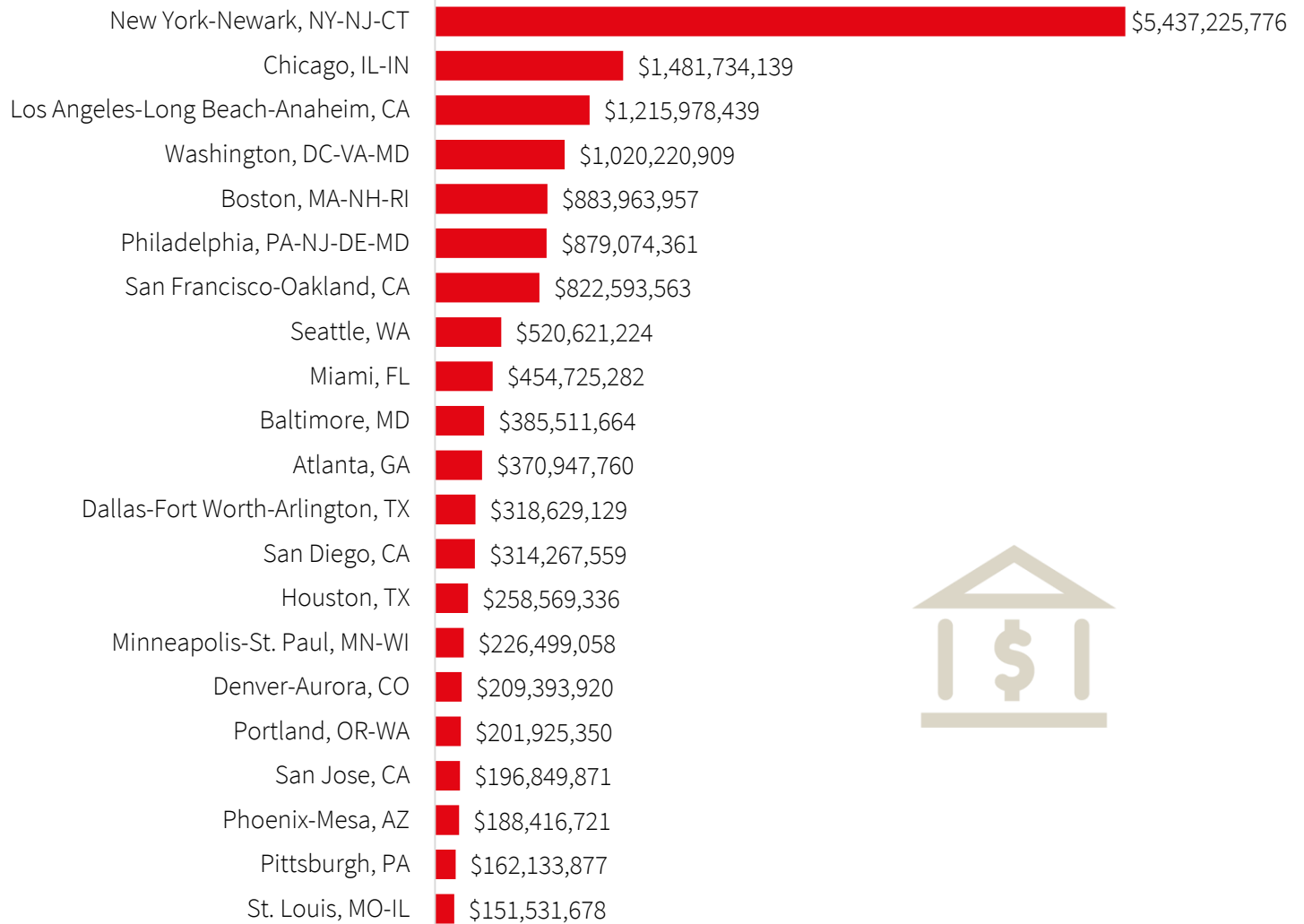
Considerations for real estate **owners, developers and municipal agencies**

- 1. Assess parking capacity and new modes of transportation:** Most commercial real estate discussions in recent years were focused on transit-oriented development and the growing need for public transit and the eventual focus on autonomous vehicles. For urban projects, this led to a net decline in structured parking in many major cities. While the long-term demand of transit-oriented developments is expected to persist, owners and developers should review existing parking capacity and take into consideration commuters who may want to take advantage of bike and scooter share programs to avoid trains and buses.
- 2. Improve sidewalk use:** Changes to the pedestrian path could encourage more walking if sidewalks are widened or cleared of obstructions, converted to pedestrian-only traffic or made safer through better sanitation and sidewalk lighting (to take advantage of alleyways). Some municipalities are already putting plans in place to modify high-traffic areas to allow for better physical distancing on narrow sidewalks. Pop-up walking and biking lanes (see below) are being considered as a temporary enhancement while permanent solutions are discussed.
- 3. Create new bike lanes:** Adding designated bike lanes and paths would allow for safer bike transit in metro areas. Especially in metro areas where bike commuting is already a feasible option, enhancing dedicated bikeways on streets could help to support this alternative to mass transit. These lanes could allow for an expansion of individual transportation options, with e-bikes, e-bike share and e-scooters all providing alternative modes of getting to the office.
- 4. Enhanced transit capacity and operations:** To encourage less crowded use of public transportation in the future, it must be able to accommodate more people. Both public and private organizations can work to enhance this capacity through new bus and shuttle service that is reliable and on time. Transit agencies will also need to enhance cleaning and maintenance, consider touch-less technology and facilities, and provide employees with personal protective equipment in the near term.

Outside of the considerations that both private and public organizations should examine, the biggest challenge remains in the form of federal spending on public transportation infrastructure that would enable greater employment accessibility and equity for people across the

country. While a significant amount of stimulus funding was provided in the CARES Act in the United States, much of that capital will help plug gaps in revenues resulting from the sharp decline in public transportation riders since the beginning of the crisis.

CARES Act funds allocated to transit



Source: Federal Transit Administration

In Boston, for example, ridership has declined by 90 percent and the Massachusetts Bay Transportation Authority (MBTA) is anticipating a decline in revenue of \$230 million. While the \$883 million allocated to Massachusetts–Rhode Island–New Hampshire will help fill those losses, the MBTA has spent \$30 million sanitizing its vehicles and plans to

spend \$1 million per week in sanitation moving forward. And in New York, the market most impacted by this crisis, the New York Metropolitan Transit Authority (MTA) has projected a \$10 billion loss in revenue, double that of the stimulus received. If we are to ensure the safety of our commuters as well as those who work for the transportation

agencies, federal funding of public transportation must become a higher priority. There must be additional thought and funding allocated that goes beyond maintaining systems in place, to improving those systems to accommodate physical distancing and the need for significantly enhanced cleaning.

Lessons from past disruptions

The COVID-19 pandemic is undeniably the most severe global crisis of this era and because of this it is difficult to compare its impact to past events, especially within the United States. Even those that have called the safety of public transportation into question, such as terrorist attacks, violent crimes, or other viral outbreaks, riders have come back. While it's impossible to fully understand how people may return to public transportation at the end of this crisis, events like 9/11 in New York City, the 2003 SARS outbreak in China, and the 2009 H1N1 flu outbreak in North America show us that people have returned to trains, subways, and buses. In fact, transit-oriented development emerged as one of the most important development trends of the past decade globally.

However, the magnitude and severity of COVID-19 is unlike anything we've experienced as a country in modern times and because of this, uncertainty remains around the amount of time people will need to regain comfort and confidence in travelling via public transportation.

Based on a 2013 study of the SARS outbreak in Taiwan titled, "How

Change of Public Transportation Usage Reveals Fear of the SARS Virus in a City," obtained from the **National Center for Biotechnology Information** and funded by the **National Central University** in Taiwan, there were two psychological impacts to public transportation riders: "fresh fear" and "residual fear." The study found that fresh fear was measured as the immediate impact to ridership upon the outbreak and its escalation and that residual fear was the length of time the fear endured after the virus was eradicated.

In the short term, implementing alternative solutions as noted above may help to offset residual fears and will ensure that people can return to work safely. Longer term, we may even see some new innovations emerge through autonomous vehicles and improvements to ride-sharing. However, the appeal of the efficiency, cost, and convenience of public transportation will ultimately endure and much of the current conversation may be reduced or eliminated by the time we have a vaccine.

The path forward

As we await the reopening of the broader economy and begin to welcome workers back into offices, it is important to consider all of the personal decisions that must be made to ensure that people can continue to support their families and contribute to their companies while protecting their health and well-being.

We believe that the solution is not a wholesale shift away from public transportation and toward individual cars, but we do know that there are real concerns related to public transportation that will need to be solved in the short term and improved over the long term.





Looking forward, JLL will continue to monitor the evolving nature of the workplace in light of changing external conditions. We anticipate that office occupant sentiment will continue to shift as the impacts and duration of the COVID-19 pandemic become clearer. Our teams will continue to focus on our client needs and on the critical balance between health and safety and commerce and connectivity.

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