

Access Across America: Transit 2016

Final Report

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**ACCESSIBILITY
OBSERVATORY**

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Executive Summary

Accessibility is the ease and feasibility of reaching valuable destinations. Accessibility can be measured for a wide array of transportation modes, to different types of destinations, and at different times of day. There are a variety of ways to define accessibility, but the number of destinations reachable within a given travel time is the most comprehensible and transparent—as well as the most directly comparable between cities, and other geographic areas. This report focuses on accessibility to jobs by transit. Jobs are the most significant non-home destination, and job accessibility is an important consideration in the attractiveness and usefulness of a place or area. Transit is used for an estimated 5% of commuting trips in the United States nationwide, making it the second most widely used commute mode after driving.

This study estimates the accessibility to jobs by transit and walking for each of the United States' 11 million census blocks, and analyzes these data in 49 of the 50 largest (by population) metropolitan areas. Travel times by transit are calculated using detailed pedestrian networks and full transit schedules for the 7:00 – 9:00 AM period. The calculations include all components of a transit journey, including “last mile” access and egress walking segments and transfers, and account for minute-by-minute variations in service frequency.

Rankings are determined by a weighted average of accessibility, with a higher weight given to closer, easier to access jobs. Jobs reachable within ten minutes are weighted most heavily, and jobs are given decreasing weights as travel time increases up to 60 minutes. Based on this measure, the 10 metropolitan areas with the greatest accessibility to jobs by transit are:

1. New York
2. San Francisco
3. Chicago
4. Washington
5. Los Angeles
6. Boston
7. Philadelphia
8. Seattle
9. San Jose
10. Denver

Additionally, rankings based on 1-year changes in weighted average accessibility are also provided, comparing the results of *Access Across America: Transit 2015* with the results of the 2016 study. The 10 metropolitan areas with the greatest 1-year relative gains in accessibility to jobs by transit are:

1. Cincinnati

2. Orlando
3. Seattle
4. Providence
5. Charlotte
6. Phoenix
7. Riverside
8. Milwaukee
9. Hartford
10. New Orleans

This report presents detailed accessibility values for each metropolitan area, as well as block-level maps that illustrate the spatial patterns of accessibility within each area. A separate publication, *Access Across America: Transit 2016 Methodology*, describes the data and methodology used in this evaluation.

This analysis uses the same tools and techniques as *Access Across America: Transit 2015*, and at the same fully national scale; availability of GTFS data has increased in consistency. For these reasons, direct comparisons between transit accessibility results of 2015 and 2016 are possible, and comparisons and time-series analysis are included in these reports going forward.

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1 Introduction

Accessibility is the ease and feasibility of reaching valuable destinations. It combines the simpler metric of mobility with the understanding that travel is driven by a desire to reach destinations. Accessibility can be measured for a wide range of transportation modes, to different types of destinations, and at different times of day. There are a variety of ways to define accessibility, but the number of destinations reachable within a given travel time is the most comprehensible and transparent—as well as the most directly comparable across cities. This report focuses on accessibility to jobs by transit. Jobs are the most significant non-home destination, and economic accessibility is an important consideration in the attractiveness and usefulness of a place or area. Transit is used for an estimated 5% of commuting trips in the United States, making it the second most widely used commute mode after driving.¹ The commute mode share of transit can be higher in individual metropolitan areas: 31% in the New York metropolitan area; 11% in Chicago; 8% in Seattle.²

Accessibility is not a new idea.³ Historically, however, implementations of accessibility evaluation have typically focused on individual cities or metropolitan areas. Recent work has demonstrated the feasibility and value of systematically evaluating accessibility across multiple metropolitan areas by auto,⁴ and by transit.⁵

This study estimates the accessibility to jobs by transit and walking for each of the United States' 11 million census blocks, and analyzes these data in 49 of the 50 largest (by population) metropolitan areas using transit schedules from 2016. The city excluded from comparisons due to lack of available GTFS data is Memphis, TN, which ranks 41st by metropolitan area population. [Table 1](#) lists the included metropolitan areas, ordered by the total employment within each.

Travel times by transit are calculated using detailed pedestrian networks and full transit schedules for the 7:00 – 9:00 AM period. The calculations include all components of a transit journey, including “last mile” access and egress walking segments and transfers, and account for minute-by-minute variations in service frequency.

[Section 2](#) presents the accessibility values for the included metropolitan areas and ranks metropolitan areas by accessibility, as well as by 1-year gains or losses in weighted accessibility between 2016 and 2015. [Section 3](#) discusses these results and their implications, and [Section 4](#) provides data and maps describing patterns of accessibility in individual metropolitan areas. A separate document, *Access Across America: Transit 2016 Methodology*, describes the data and detailed methodology used in the evaluation.

¹[McKenzie \(2014\)](#)

²American Community Survey 2012 5-year estimates

³See [Hansen \(1959\)](#) for its origins, and [Geurs and Van Eck \(2001\)](#) and [Handy and Niemeier \(1997\)](#) for reviews.

⁴[Levinson \(2013\)](#) [Levine et al. \(2012\)](#)

⁵[Ramsey and Bell \(2014\)](#), [Tomer et al. \(2011\)](#)

Table 1: Metropolitan Areas Ranked by Total Employment

Rank	Area	Total Employment
1	New York	8,481,503
2	Los Angeles	5,497,078
3	Chicago	4,314,028
4	Dallas	3,085,425
5	Houston	2,787,374
6	Philadelphia	2,746,127
7	Washington	2,726,694
8	Boston	2,345,885
9	Atlanta	2,337,473
10	Miami	2,330,045
11	San Francisco	2,079,244
12	Detroit	1,815,609
13	Phoenix	1,787,019
14	Minneapolis	1,745,960
15	Seattle	1,657,841
16	Riverside	1,588,904
17	San Diego	1,331,123
18	Denver	1,294,386
19	St. Louis	1,289,829
20	Baltimore	1,272,040
21	Tampa	1,181,783
22	Pittsburgh	1,100,201
23	Portland	1,048,071
24	Orlando	1,016,960
25	Cincinnati	1,003,452
26	Kansas City	1,000,894
27	Cleveland	948,434
28	San Antonio	943,802
29	Columbus	884,839
30	Sacramento	884,636
31	San Jose	869,876
32	Austin	866,476
33	Las Vegas	859,408
34	Indianapolis	857,553
35	Charlotte	839,082
36	Nashville	768,750
37	Milwaukee	756,910
38	Providence	750,216
39	Virginia Beach	692,822
40	Louisville	615,025
41	Jacksonville	608,290
42	Richmond	602,972
43	Hartford	586,840
44	Raleigh	561,563
45	Oklahoma City	557,216
46	Salt Lake City	554,510
47	Buffalo	532,785
48	New Orleans	502,245
49	Birmingham	468,967

Employment totals are based on LEHD estimates and may not match other sources.

2 Accessibility to Jobs by Transit

Table 2 gives the accessibility values for each metropolitan area, in alphabetical order, based on January, 2016 transit schedules. The columns represent the number of jobs that a typical worker residing in the city can reach within 10, 20, 30, 40, 50, and 60 minutes of travel, between 7:00 and 9:00 AM, by transit and walking.

2.1 Metropolitan Area Rankings

The rankings of accessibility across U.S. cities for 2016 are shown in Table 3. The ranking is based on a weighted average, where the jobs reachable within each threshold are given a decreasing weight as travel time increases. A job reachable within 10 minutes counts more toward the ranking than a job reachable within 20, and so on. The 10 metro areas where workers can, on average, reach the most jobs are listed below. Within the specific time thresholds, the rankings vary.

1. New York
2. San Francisco
3. Chicago
4. Washington
5. Los Angeles
6. Boston
7. Philadelphia
8. Seattle
9. San Jose
10. Denver

2.2 Longitudinal Analyses

The 1-year relative gains and losses of weighted transit accessibility across U.S. cities between 2015 and 2016 are shown in Table 4. The differences detailed here are relative percentage changes in weighted accessibility. Following are the 10 metro areas which saw the largest gains in relative transit accessibility over 2015 are as follows.

1. Cincinnati
2. Orlando
3. Seattle

4. Providence
5. Charlotte
6. Phoenix
7. Riverside
8. Milwaukee
9. Hartford
10. New Orleans

Additional details about each metropolitan area, including block-level maps of accessibility, are presented in [Section 4](#).

Table 2: Number of Jobs Reachable by Number of Minutes, 2016

Area	10 min	20 min	30 min	40 min	50 min	60 min
Atlanta	309	1,985	7,203	18,811	38,728	68,045
Austin	419	2,786	10,390	25,338	47,363	75,635
Baltimore	625	5,103	17,601	40,183	73,335	115,047
Birmingham	185	891	2,678	6,032	11,074	17,544
Boston	1,509	12,176	43,576	102,492	184,399	272,600
Buffalo	454	3,302	11,026	25,402	46,308	71,149
Charlotte	357	2,051	6,828	16,690	31,949	51,301
Chicago	1,642	14,713	51,781	121,887	220,762	336,086
Cincinnati	333	1,999	6,503	15,288	29,026	46,669
Cleveland	392	2,386	8,502	22,093	44,111	73,471
Columbus	381	2,866	9,876	22,935	42,626	68,638
Dallas	442	2,936	10,088	25,639	53,541	95,790
Denver	771	5,711	19,405	47,526	96,589	168,733
Detroit	282	1,799	6,139	15,754	33,797	62,368
Hartford	421	3,169	10,551	22,593	39,717	61,570
Houston	445	3,467	13,053	32,242	63,907	110,065
Indianapolis	304	2,050	6,894	16,466	31,437	51,381
Jacksonville	273	1,272	4,068	10,079	20,249	34,755
Kansas City	310	1,735	5,600	13,414	25,610	42,066
Las Vegas	275	1,977	7,808	22,575	52,835	102,121
Los Angeles	1,232	10,493	40,898	104,061	211,938	372,112
Louisville	313	2,109	7,101	17,374	32,876	52,437
Miami	697	4,469	15,033	37,173	73,436	126,743
Milwaukee	643	4,827	18,167	45,468	85,587	133,466
Minneapolis	503	4,106	16,697	43,714	85,249	138,904
Nashville	302	1,530	5,180	11,800	20,991	32,607
New Orleans	559	3,215	9,655	20,329	33,026	46,008
New York	6,025	61,128	210,370	465,743	822,949	1,248,913
Oklahoma City	252	1,537	4,754	11,112	20,917	33,887
Orlando	278	1,572	5,102	12,506	25,791	46,697
Philadelphia	1,127	10,270	35,818	76,726	132,947	199,719
Phoenix	306	2,452	9,630	26,361	56,413	102,038
Pittsburgh	501	3,091	12,153	28,350	49,960	76,040
Portland	761	5,359	19,332	47,850	91,961	149,882
Providence	525	3,149	9,634	20,302	34,817	52,895
Raleigh	215	1,308	4,182	10,253	20,130	34,850
Richmond	334	2,108	6,414	13,326	21,843	31,852
Riverside	198	1,326	4,506	10,999	21,720	37,265
Sacramento	490	3,029	9,519	22,160	43,298	72,592
Salt Lake City	470	3,731	14,335	38,099	79,187	140,518
San Antonio	313	2,287	9,055	23,551	47,911	82,895
San Diego	645	3,667	11,763	29,497	60,689	107,724
San Francisco	2,491	23,234	73,572	156,803	265,410	390,871
San Jose	626	4,832	17,941	48,373	104,782	191,152
Seattle	1,411	9,190	28,988	68,195	125,986	201,446
St. Louis	347	2,045	7,029	18,175	36,633	62,116
Tampa	321	1,993	6,784	16,255	31,436	52,740
Virginia Beach	278	1,446	4,507	10,216	19,287	32,143
Washington	1,285	12,141	47,980	115,151	216,092	338,153

Table 3: Rank of Accessibility by Metropolitan Area, 2016

Rank	Weighted Average	10 min	20 min	30 min	40 min	50 min	60 min
1	New York	New York	New York	New York	New York	New York	New York
2	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco
3	Chicago	Chicago	Chicago	Chicago	Chicago	Chicago	Los Angeles
4	Washington	Boston	Boston	Washington	Washington	Washington	Washington
5	Los Angeles	Seattle	Washington	Boston	Los Angeles	Los Angeles	Chicago
6	Boston	Washington	Los Angeles	Los Angeles	Boston	Boston	Boston
7	Philadelphia	Los Angeles	Philadelphia	Philadelphia	Philadelphia	Philadelphia	Seattle
8	Seattle	Philadelphia	Seattle	Seattle	Seattle	Seattle	Philadelphia
9	San Jose	Denver	Denver	Denver	San Jose	San Jose	San Jose
10	Denver	Portland	Portland	Portland	Portland	Denver	Denver
11	Portland	Miami	Baltimore	Milwaukee	Denver	Portland	Portland
12	Milwaukee	San Diego	San Jose	San Jose	Milwaukee	Milwaukee	Salt Lake City
13	Minneapolis	Milwaukee	Milwaukee	Baltimore	Minneapolis	Minneapolis	Minneapolis
14	Baltimore	San Jose	Miami	Minneapolis	Baltimore	Salt Lake City	Milwaukee
15	Salt Lake City	Baltimore	Minneapolis	Miami	Salt Lake City	Miami	Miami
16	Miami	New Orleans	Salt Lake City	Salt Lake City	Miami	Baltimore	Baltimore
17	Houston	Providence	San Diego	Houston	Houston	Houston	Houston
18	San Diego	Minneapolis	Houston	Pittsburgh	San Diego	San Diego	San Diego
19	Dallas	Pittsburgh	Buffalo	San Diego	Pittsburgh	Phoenix	Las Vegas
20	Pittsburgh	Sacramento	New Orleans	Buffalo	Phoenix	Dallas	Phoenix
21	Phoenix	Salt Lake City	Hartford	Hartford	Dallas	Las Vegas	Dallas
22	Buffalo	Buffalo	Providence	Austin	Buffalo	Pittsburgh	San Antonio
23	Austin	Houston	Pittsburgh	Dallas	Austin	San Antonio	Pittsburgh
24	Las Vegas	Dallas	Sacramento	Columbus	San Antonio	Austin	Austin
25	San Antonio	Hartford	Dallas	New Orleans	Columbus	Buffalo	Cleveland
26	Sacramento	Austin	Columbus	Providence	Hartford	Cleveland	Sacramento
27	Columbus	Cleveland	Austin	Phoenix	Las Vegas	Sacramento	Buffalo
28	Hartford	Columbus	Phoenix	Sacramento	Sacramento	Columbus	Columbus
29	Cleveland	Charlotte	Cleveland	San Antonio	Cleveland	Hartford	Atlanta
30	Providence	St. Louis	San Antonio	Cleveland	New Orleans	Atlanta	Detroit
31	New Orleans	Richmond	Louisville	Las Vegas	Providence	St. Louis	St. Louis
32	Atlanta	Cincinnati	Richmond	Atlanta	Atlanta	Providence	Hartford
33	St. Louis	Tampa	Charlotte	Louisville	St. Louis	Detroit	Providence
34	Louisville	San Antonio	Indianapolis	St. Louis	Louisville	New Orleans	Tampa
35	Detroit	Louisville	St. Louis	Indianapolis	Charlotte	Louisville	Louisville
36	Charlotte	Kansas City	Cincinnati	Charlotte	Indianapolis	Charlotte	Indianapolis
37	Indianapolis	Atlanta	Tampa	Tampa	Tampa	Indianapolis	Charlotte
38	Tampa	Phoenix	Atlanta	Cincinnati	Detroit	Tampa	Orlando
39	Cincinnati	Indianapolis	Las Vegas	Richmond	Cincinnati	Cincinnati	Cincinnati
40	Kansas City	Nashville	Detroit	Detroit	Kansas City	Orlando	New Orleans
41	Orlando	Detroit	Kansas City	Kansas City	Richmond	Kansas City	Kansas City
42	Richmond	Orlando	Orlando	Nashville	Orlando	Richmond	Riverside
43	Nashville	Virginia Beach	Oklahoma City	Orlando	Nashville	Riverside	Raleigh
44	Oklahoma City	Las Vegas	Nashville	Oklahoma City	Oklahoma City	Nashville	Jacksonville
45	Riverside	Jacksonville	Virginia Beach	Virginia Beach	Riverside	Oklahoma City	Oklahoma City
46	Virginia Beach	Oklahoma City	Riverside	Riverside	Raleigh	Jacksonville	Nashville
47	Jacksonville	Raleigh	Raleigh	Raleigh	Virginia Beach	Raleigh	Virginia Beach
48	Raleigh	Riverside	Jacksonville	Jacksonville	Jacksonville	Virginia Beach	Richmond
49	Birmingham	Birmingham	Birmingham	Birmingham	Birmingham	Birmingham	Birmingham

Table 4: 1-Year Change in Weighted Accessibility

Rank	Area	1-Year Change in Weighted Accessibility
1	Cincinnati	+11.23%
2	Charlotte	+11.02%
3	Orlando	+10.83%
4	Seattle	+10.80%
5	Providence	+10.65%
6	Phoenix	+7.51%
7	Riverside	+6.59%
8	Milwaukee	+6.53%
9	Hartford	+6.44%
10	New Orleans	+6.18%
11	Las Vegas	+6.10%
12	San Jose	+5.45%
13	Atlanta	+5.43%
14	Denver	+5.14%
15	Detroit	+4.50%
16	Buffalo	+4.49%
17	San Francisco	+4.44%
18	Nashville	+4.35%
19	Salt Lake City	+3.42%
20	Birmingham	+3.21%
21	Los Angeles	+3.21%
22	Miami	+3.20%
23	Washington	+3.13%
24	Columbus	+2.98%
25	Portland	+2.82%
26	New York	+2.66%
27	Chicago	+2.59%
28	Louisville	+2.58%
29	Houston	+2.44%
30	Dallas	+1.66%
31	Philadelphia	+1.59%
32	Virginia Beach	+1.44%
33	Tampa	+1.42%
34	Indianapolis	+1.04%
35	Baltimore	+0.37%
36	Sacramento	+0.23%
37	Boston	-0.14%
38	San Diego	-0.77%
39	Oklahoma City	-1.28%
40	Cleveland	-1.58%
41	Minneapolis	-1.64%
42	St. Louis	-2.13%
43	Austin	-2.21%
44	Raleigh	-2.95%
45	San Antonio	-3.95%
46	Jacksonville	-4.09%
47	Richmond	-4.28%
48	Pittsburgh	-5.23%
49	Kansas City	-11.30%

3 Discussion

This report builds on the work begun in *Access Across America: Transit 2014* and continued in *Access Across America: Transit 2015*, which introduced a new methodology and datasets to enable inter-metropolitan comparisons of accessibility by transit in a way that is clearly understood and explainable, tracks with our experience and the available evidence, and incorporates the many factors that determine the usefulness of a transit system. Additionally, in 2015 the work expanded its scope to become fully national – accessibility data are calculated for every census block in the U.S.; data are aggregated and summarized within CBSAs for this report.

Not all jobs are the same. Some jobs are higher paying, some are lower skilled, and they exist in a variety of industries. Given sufficient data, one could differentiate accessibility by breaking down jobs by type and get different results. Accessibility to non-work locations (shopping, health care, education, etc.) is also important. Regardless of trip purpose, people who experience higher accessibility tend to travel shorter distances because origins and destinations are closer together.

But accessibility to jobs is not the only thing that people care about. If it were, cities would be situated on a minimum amount of space so people could live immediately adjacent to their jobs, or everyone would work from home. Measuring (and then valuing) accessibility to other opportunities and considering the trade-off between accessibility and living space are central problems of urban economics, regional science, and transportation and land-use planning. While being more accessible is generally better, there are costs as well as benefits associated with accessibility. If land is more valuable, its price is higher, and purchasers can afford less. Streets in places with more activities are inherently more crowded, and trips are less peaceful.

Accessibility is a function of both transportation networks and land use decisions, which has important policy implications. There are two broad avenues to increasing accessibility: improving transportation systems, and altering land use patterns. Neither of these things can be easily shifted overnight, but over time they do change—both through direct plans and action and through market forces.

It is important to recognize that aggregate metrics such as these are also affected simply by the size of the areas being studied. For example, residents of central Minneapolis enjoy greater accessibility than those of central Milwaukee, but the expansive Minneapolis–Saint Paul metropolitan area, which is over four times as large in land area, includes far more suburban and exurban areas (with little or no transit service) than does the Milwaukee area.

3.1 Transit Service Effects

Transit transportation improvements within existing infrastructure take the form of speed increases or frequency increases. Speed improvements increase accessibility by making destinations reachable in less time, but they are often difficult to achieve for transit vehicles operating in mixed traffic. Frequency improvements reduce the average amount of time spent waiting for transit vehicles at stops, leaving more time for travel toward valuable destinations. Speed and frequency are also linked: as average speeds increase, a fixed number of transit vehicles can serve the same route length with increasing frequency.⁶ Improvements involving construction of new transit infrastructure (additional bus stops,

⁶Walker (2012) provides a detailed and accessible exploration of transit service fundamentals.

rail line extensions, or entirely new transit lines) also can heavily influence accessibility by transit, by providing transit-based access to job centers and destinations previously unreachable. New transit lines which serve already-served areas do not expand the basin of reachable valuable destinations, but could serve to increase service frequency in aggregate.

This evaluation reflects the impact of transit service frequency by making the assumption that all departure times are equally valuable to users, and it includes full waiting times before each trip. This is an important difference relative to earlier national evaluations of transit accessibility, which typically use a single departure time and/or a fixed wait time.⁷ This approach provides two important benefits. First, it avoids the assumptions that transit service with 30-minute frequency is as valuable as service with 10-minute frequency, and that users suffer no inconvenience from adjusting their personal schedules to match transit schedules. Second, it allows more meaningful comparisons with accessibility evaluations for other transportation modes such as driving,⁸ which typically use average speeds over time periods—implicitly assuming an equal value of departure times. As a result of this methodological choice, the accessibility results presented here are far more sensitive to service frequency effects than those of earlier transit accessibility evaluations. Cities with robust transit coverage but low service frequency are generally ranked lower than cities with comparable networks but higher frequencies.

3.2 Land Use Effects

Land use-based approaches to improving transit accessibility revolve around proximity and density for both origins and destinations. Proximity to transit service is critical in overcoming both the low speed of pedestrian access to and from stops and stations, and the decrease in motivation to make the walking trip with greater distance. Density is the manifestation of the increasing value of more accessible locations. As residential areas become denser, more residents experience the local accessibility; as employment areas become denser, more jobs can be accessed through the same transit system.

Density is not determined solely by accessibility, however: land-use policies can restrict density where it would otherwise be high or encourage density where it might otherwise be low. Perhaps the most famous examples of such policies are Oregon's urban growth boundary laws, which encourage density by restricting the amount of land available for urban development, and the Height of Buildings Act of 1910, which restricts density in the District of Columbia by limiting building heights. Other notable areas with urban growth boundary laws in the U.S. include Seattle, San Jose, and Boulder; additionally, Boston limits building heights near its Common central park. Between these most salient examples lie a range of density-focused urban policies, typically embedded in zoning codes, which help enable (and hinder) each city's transit accessibility performance. In general, areas with higher residential and employment density can achieve greater transit accessibility given the same level of transit service.

At lower accessibility thresholds, and especially at the 10-minute threshold, the job accessibility experienced by a typical worker is determined primarily by local employment density and only secondarily, if at all, by transit service. With a 10-minute travel time budget, reaching a stop, waiting for a vehicle, and walking to the destination after alighting leave little time available for actually traveling on a transit vehicle. It is likely that most jobs within this threshold are reached solely by walking and do

⁷e.g. [Tomer et al. \(2011\)](#), [Ramsey and Bell \(2014\)](#)

⁸e.g. [Levinson \(2013\)](#), [Levine et al. \(2012\)](#)

not involve a transit vehicle at all. The results presented in [Table 3](#) for the 10-minute threshold look much like a ranking by employment and residential density. As the travel time threshold increases, so does the relative contribution of transit service and coverage to the rankings.

3.3 Comparisons With 2015 Data

This analysis uses the same tools and techniques as *Access Across America: Transit 2015*, and at the same fully national scale. GTFS data availability has steadily improved, and now is sufficiently consistent year-to-year in major metropolitan areas to allow meaningful comparisons of transit accessibility, and to inform discussions of transit coverage and land use changes. As detailed in *Access Across America: Transit 2016*, this report implements the most recent update to the U.S. Census LEHD dataset, LEHD 2014. *Access Across America: Transit 2015* relied on LEHD 2013 data. This update of data source, in combination with increased GTFS consistency, allows observation of significant land-use changes (namely, job growth and mixed-use densification in certain metropolitan areas), and the impact of land-use on how accessible a city will turn out to be. The precise disentanglement of accessibility changes due to land-use mix or transit improvements (and determining relative percentage apportionment) requires a significant increase in the amount of accessibility computations. However, absent significant restructuring of an entire transit system (e.g. Houston, TX ca. 2015), or the addition of new corridor lines (e.g. Metro Transit adding the Green Line LRT in the Twin Cities, MN in 2014), it is reasonable to suggest a majority of accessibility changes are due to evolving land use patterns.

3.4 Conclusions

The cities that make up the top 10 transit accessibility ranks all exhibit a combination of high density land use and fast, frequent transit service. However, there is still significant variation within this group. In New York, San Francisco, Washington, and Chicago, fast heavy rail systems connect both urban and suburban areas with a highly employment-dense core. It is instructive to compare these cities to Atlanta, which has a similar, but smaller, rail system but a much more decentralized job and population distribution, and lower accessibility. Seattle and Denver both have rapidly expanding light rail systems, supported by extensive and frequent bus networks. Though Portland is famous for its streetcar service, this covers only a small part of the city, and operates mostly in mixed traffic with very little access to proprietary right-of-way, limiting its service speed. Its urban growth boundary, combined with frequent bus service throughout core areas and light rail connections to suburban areas, likely plays a more important role in providing high accessibility: by encouraging both residents and employers to locate in parts of the city already well served by transit, each new resident enjoys high accessibility but imposes only a small marginal burden on the transit system's existing resources.

Additionally, the expanded scope of this report's focus toward analyzing accessibility for every census block in the U.S. affords a look at what impact public transit has on a national scale. The vast majority of the U.S. land mass is quite sparsely-populated outside of metropolitan areas, and the contained metropolitan areas are in many cases very far apart. Also, the type of transit service included in the analysis is strictly limited to public transit, most commonly found in urban areas—inter-city bus and rail services, such as Megabus, Greyhound, or Jefferson, and Amtrak, respectively, are not included. Further, such services operate on time-scales greater than the travel times involved in this analysis.

Given that mostly urban-centric systems are included, only a very small geographical area of the country enjoys mass transit services, and thus the total area experiencing transit accessibility benefits is quite small.

Transportation and land use systems are both dynamic, and this report presents the second annual national evaluation, following that detailed in *Access Across America: Transit 2015*. In constantly-evolving systems like these, it is critical to monitor changes over time. A city that adopts a goal of increasing transit accessibility should be evaluated based on how effectively it advances that goal relative to a baseline. *Access Across America: Transit 2014* served as a starting framework for inter-city accessibility evaluation, and *Access Across America: Transit 2015* expanded the scope and data availability to allow direct year-to-year comparisons; this report adds 2016 transit accessibility data, and begins the process of monitoring and comparing how accessibility in these metropolitan areas evolves in response to transportation investments and land use decisions.

4 Metropolitan Area Data and Maps

The following pages present summary accessibility data and maps for each of the 49 included metropolitan areas. Metropolitan areas are presented in alphabetical order. The maps show 30-minute accessibility values at the Census block level, averaged between 7:00 and 9:00 AM. On the data summary pages, three different chart scales are used to accommodate the wide range of accessibility values across metropolitan areas. All charts using the same scale are plotted in the same color.

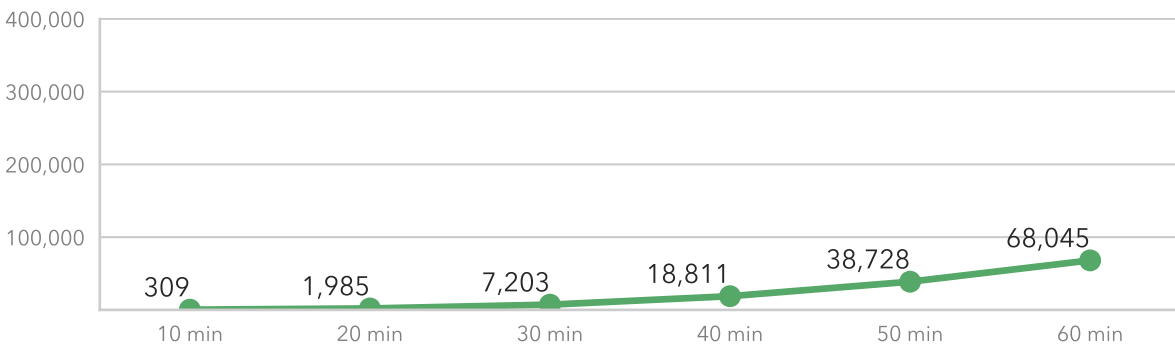
Atlanta

Atlanta-Sandy Springs-Marietta, GA

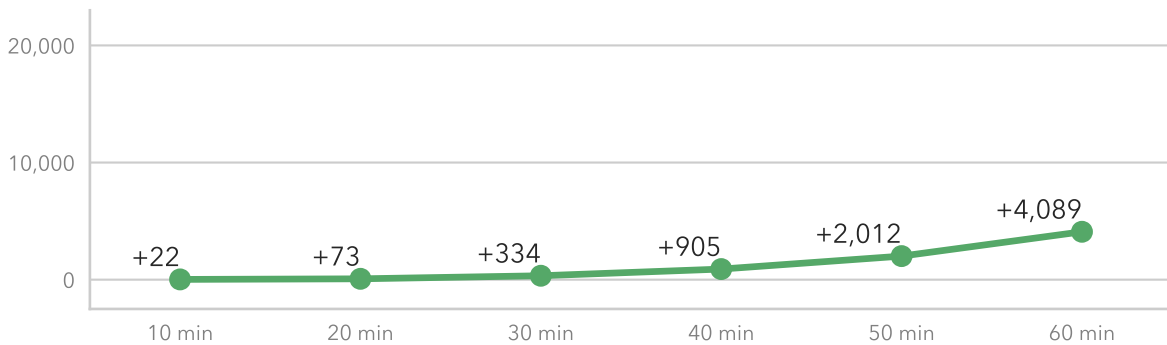
Rank by Weighted Accessibility	32
Rank by Total Employment	9
Rank by 1-Year Change in Weighted Accessibility	13
1-Year Change in Weighted Accessibility	+5.43%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	2,428,154
Average Job Density (per km ²)	112
Total Workers	2,337,473
Average Worker Density (per km ²)	108

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Atlanta

Atlanta-Sandy Springs-Marietta, GA

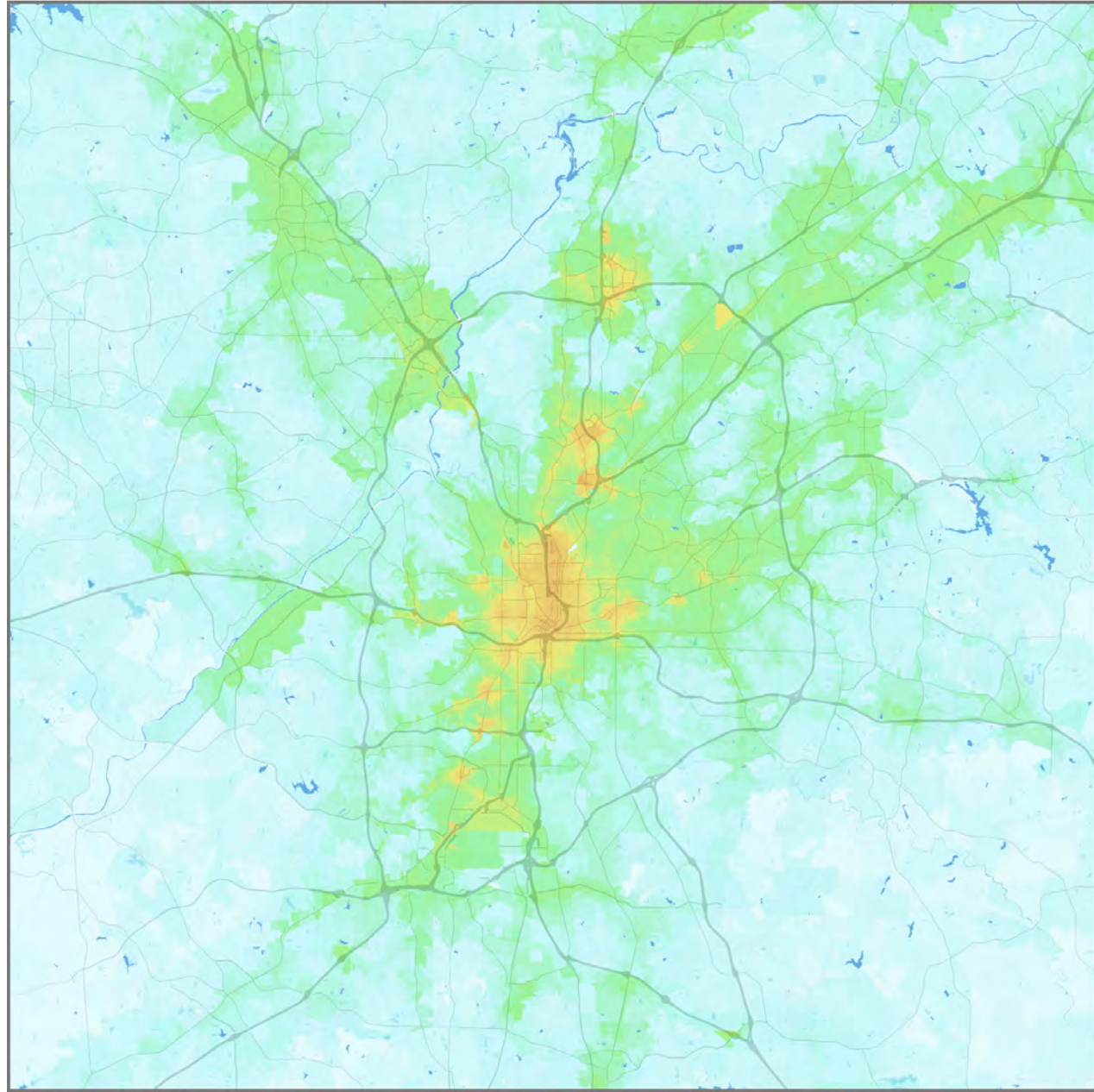
Transit Schedules Included

Agency	Dates
Atlanta Streetcar (two-way)	July 16, 2015 - July 16, 2016
Atlantic Station Shuttle	July 22, 2014 - July 21, 2015
Buc Shuttle	July 22, 2014 - July 21, 2015
Cherokee Area Transportation System (CATS)	July 22, 2014 - July 21, 2015
Cliff Shuttles/Emory University	July 22, 2014 - July 21, 2015
CobbAVL	June 25, 2015 - October 25, 2016
GRTA Xpress	May 10, 2014 - June 10, 2015
Georgia Tech Trolley & Stinger Shuttles	September 8, 2014 - May 30, 2015
Gwinnett County Transit	October 9, 2014 - April 29, 2015
Metropolitan Atlanta Rapid Transit Authority	March 21, 2015 - December 18, 2016

Atlanta

Atlanta-Sandy Springs-Marietta, GA

15



Jobs within 30 minutes
(Transit, AM peak)

0 - 1,000	
1,000 - 2,500	
2,500 - 5,000	
5,000 - 7,500	
7,500 - 10,000	
10,000 - 25,000	
25,000 - 50,000	
50,000 - 75,000	
75,000 - 100,000	
100,000 - 250,000	
250,000 - 500,000	
500,000 - 750,000	
750,000 - 1,000,000	
1,000,000 - 2,500,000	
2,500,000 - 5,000,000	
5,000,000 - 7,500,000	
7,500,000 - 10,000,000	
10,000,000 +	
State border	
MPO boundary	

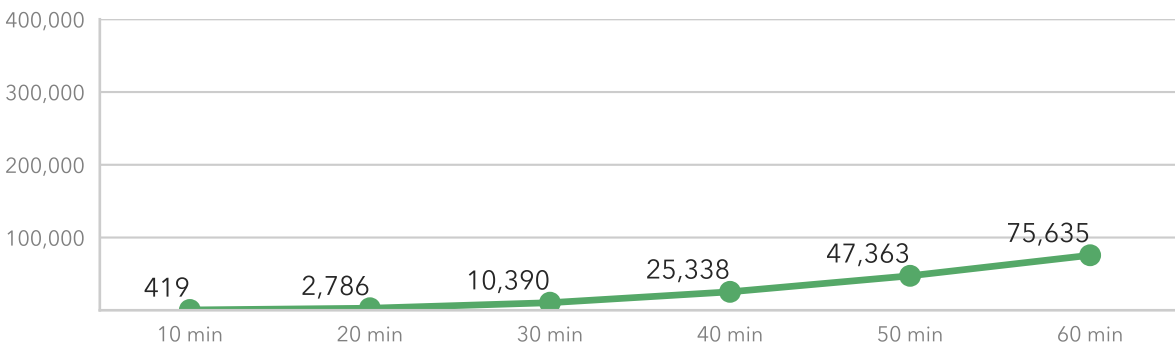
Austin

Austin-Round Rock-San Marcos, TX

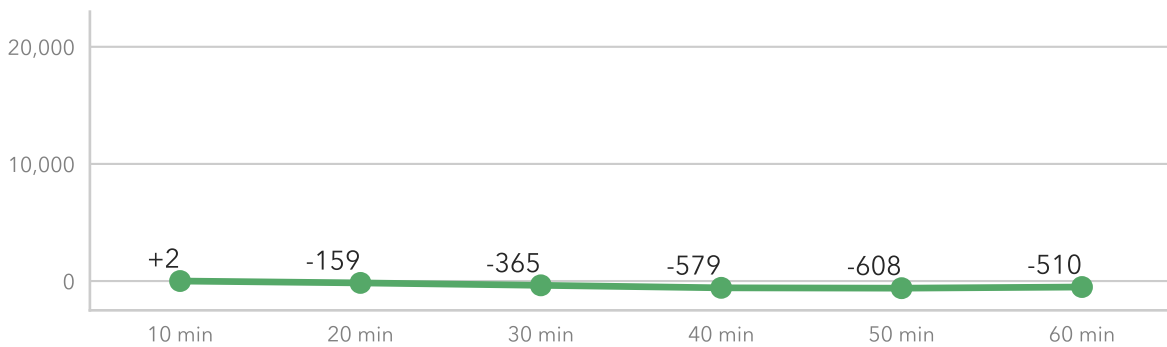
Rank by Weighted Accessibility	23
Rank by Total Employment	32
Rank by 1-Year Change in Weighted Accessibility	43
1-Year Change in Weighted Accessibility	-2.21%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	894,524
Average Job Density (per km ²)	82
Total Workers	866,476
Average Worker Density (per km ²)	79

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Austin

Austin-Round Rock-San Marcos, TX

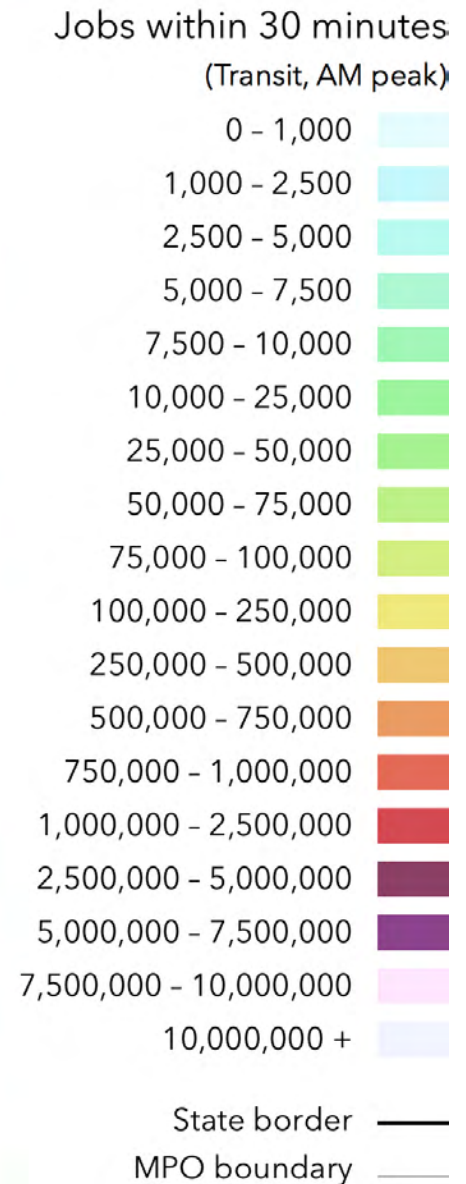
Transit Schedules Included

Agency	Dates
CapMetro	June 7, 2015 - August 22, 2015

Austin

Austin-Round Rock-San Marcos, TX

18



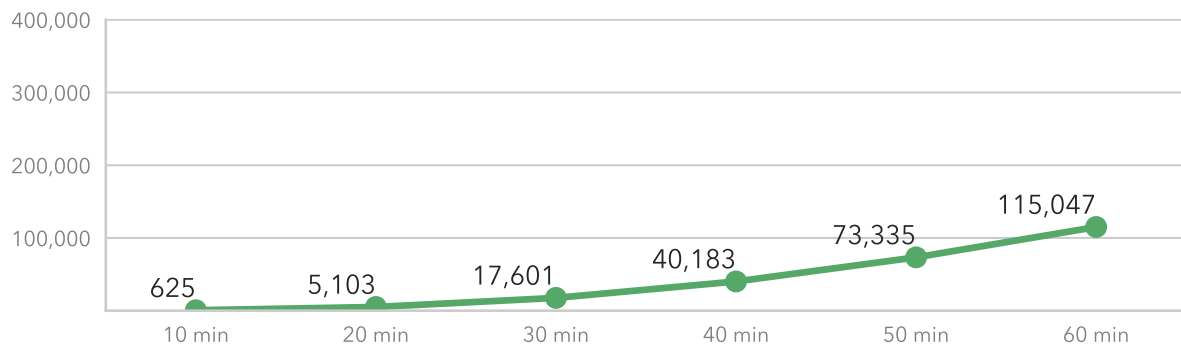
Baltimore

Baltimore-Towson, MD

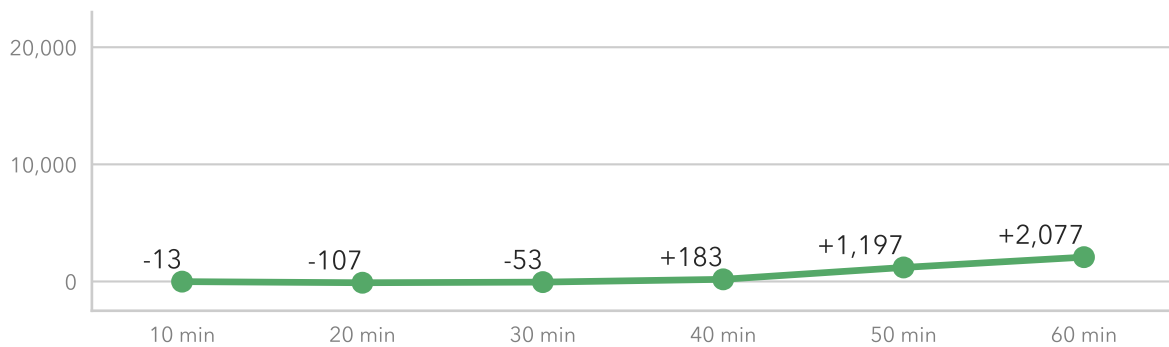
Rank by Weighted Accessibility	14
Rank by Total Employment	20
Rank by 1-Year Change in Weighted Accessibility	35
1-Year Change in Weighted Accessibility	+0.37%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	1,286,681
Average Job Density (per km ²)	191
Total Workers	1,272,040
Average Worker Density (per km ²)	189

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Baltimore

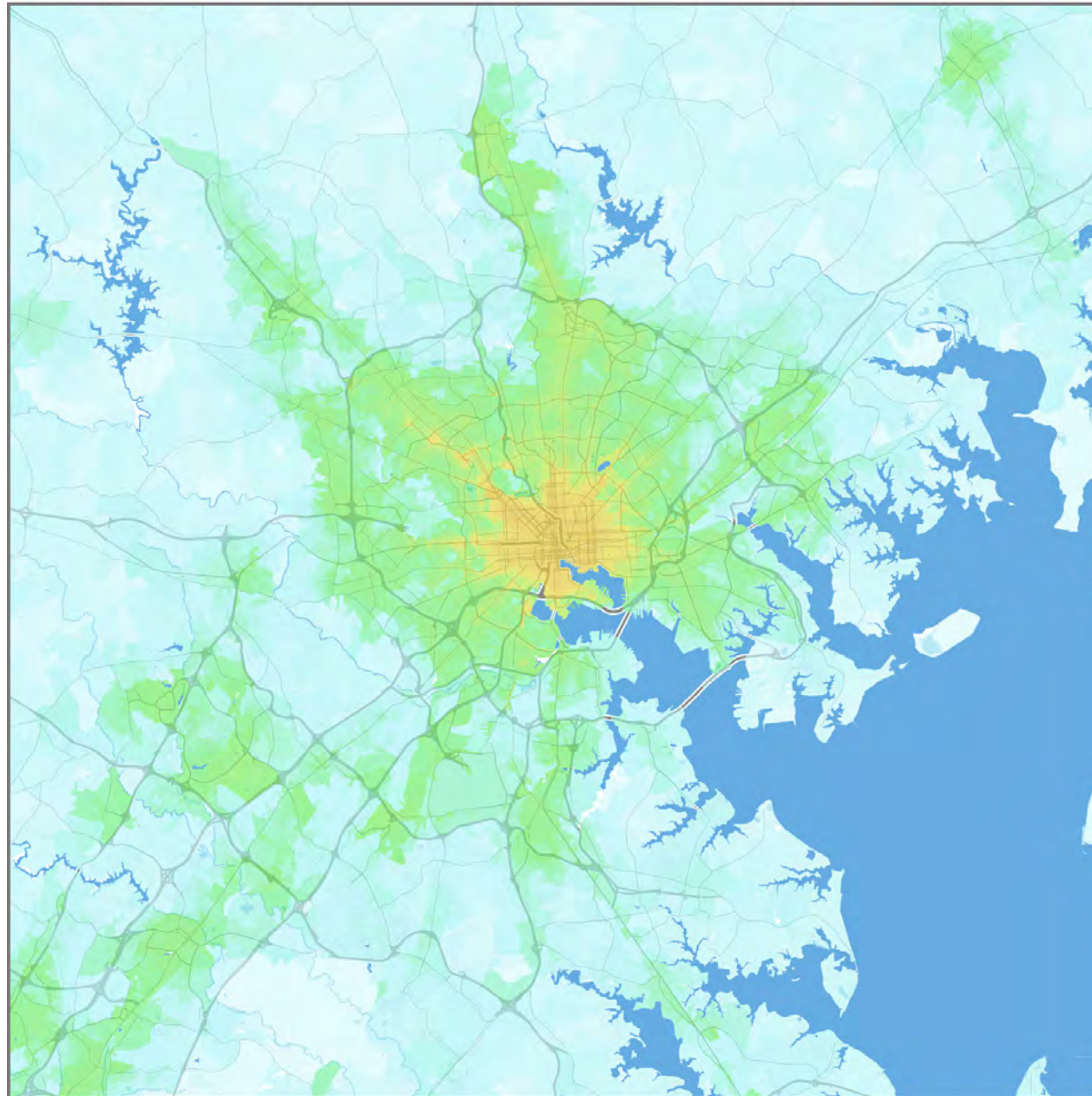
Baltimore-Towson, MD

Transit Schedules Included

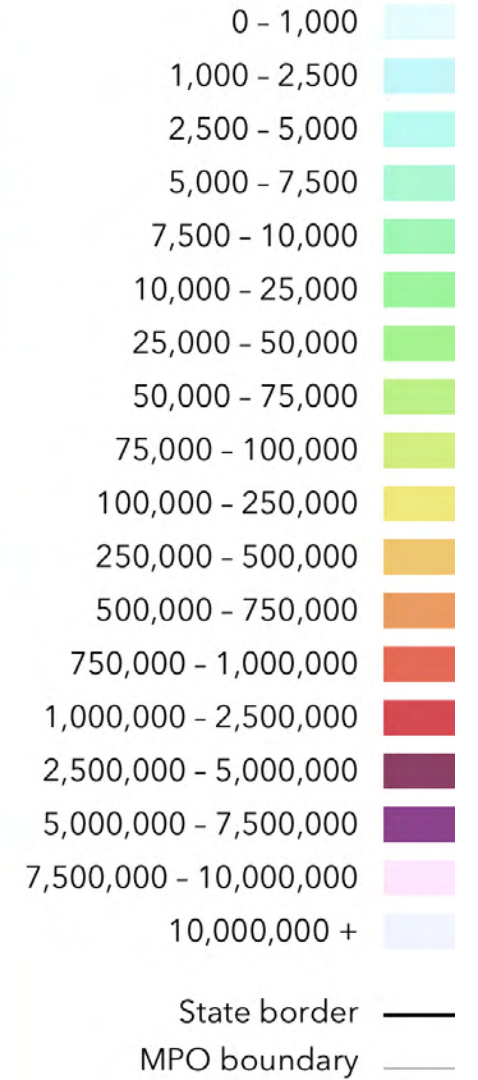
Agency	Dates
Annapolis Transit	January 1, 2015 - December 31, 2015
BWI Thurgood Marshall Airport	January 1, 2016 - December 31, 2016
Carroll Area Transit System (CATS)	January 1, 2016 - January 1, 2017
Charm City Circulator	May 1, 2016 - December 30, 2018
DC Circulator	December 1, 2015 - May 28, 2016
Delmarva Community Transit	August 1, 2014 - June 15, 2017
Harford Transit LINK	October 1, 2015 - December 31, 2016
MET	January 20, 2016 - July 17, 2016
MTA Office of Local Transit Support	October 30, 2015 - June 18, 2016
Maryland Transit Administration	October 30, 2015 - June 18, 2016
Montgomery County MD Ride On	January 10, 2016 - September 17, 2016
Queen Anne's County Ride	March 8, 2016 - December 31, 2016
Rabbit Transit	December 3, 2015 - December 1, 2016
Rabbit Transit	November 2, 2014 - December 31, 2015
Regional Transportation Agency of Central Maryland	January 1, 2016 - December 31, 2016

Baltimore

Baltimore-Towson, MD



Jobs within 30 minutes
(Transit, AM peak)



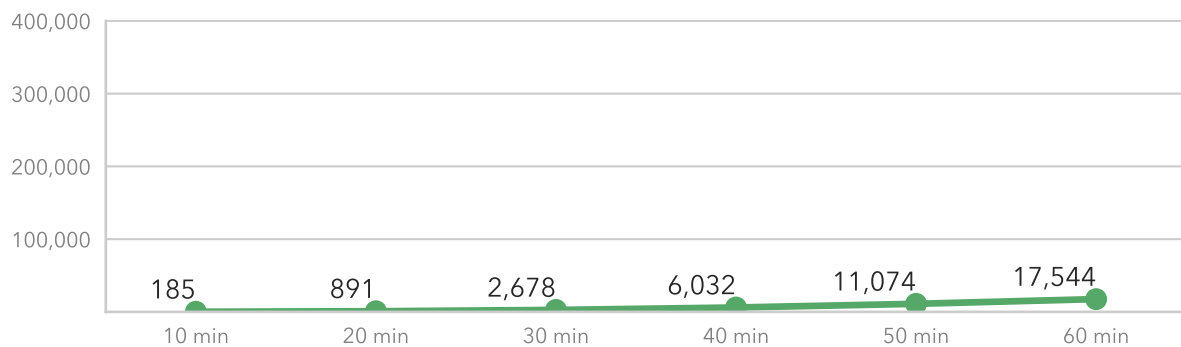
Birmingham

Birmingham-Hoover, AL

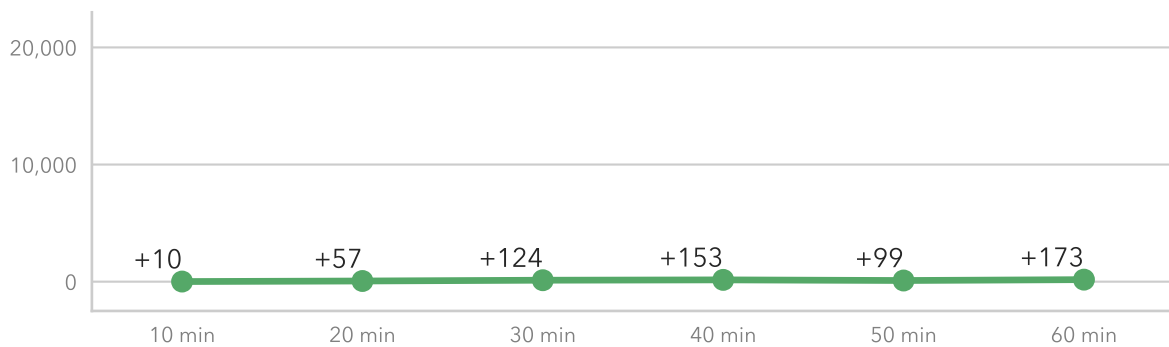
Rank by Weighted Accessibility	49
Rank by Total Employment	49
Rank by 1-Year Change in Weighted Accessibility	20
1-Year Change in Weighted Accessibility	+3.21%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	499,729
Average Job Density (per km ²)	37
Total Workers	468,967
Average Worker Density (per km ²)	34

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Birmingham

Birmingham-Hoover, AL

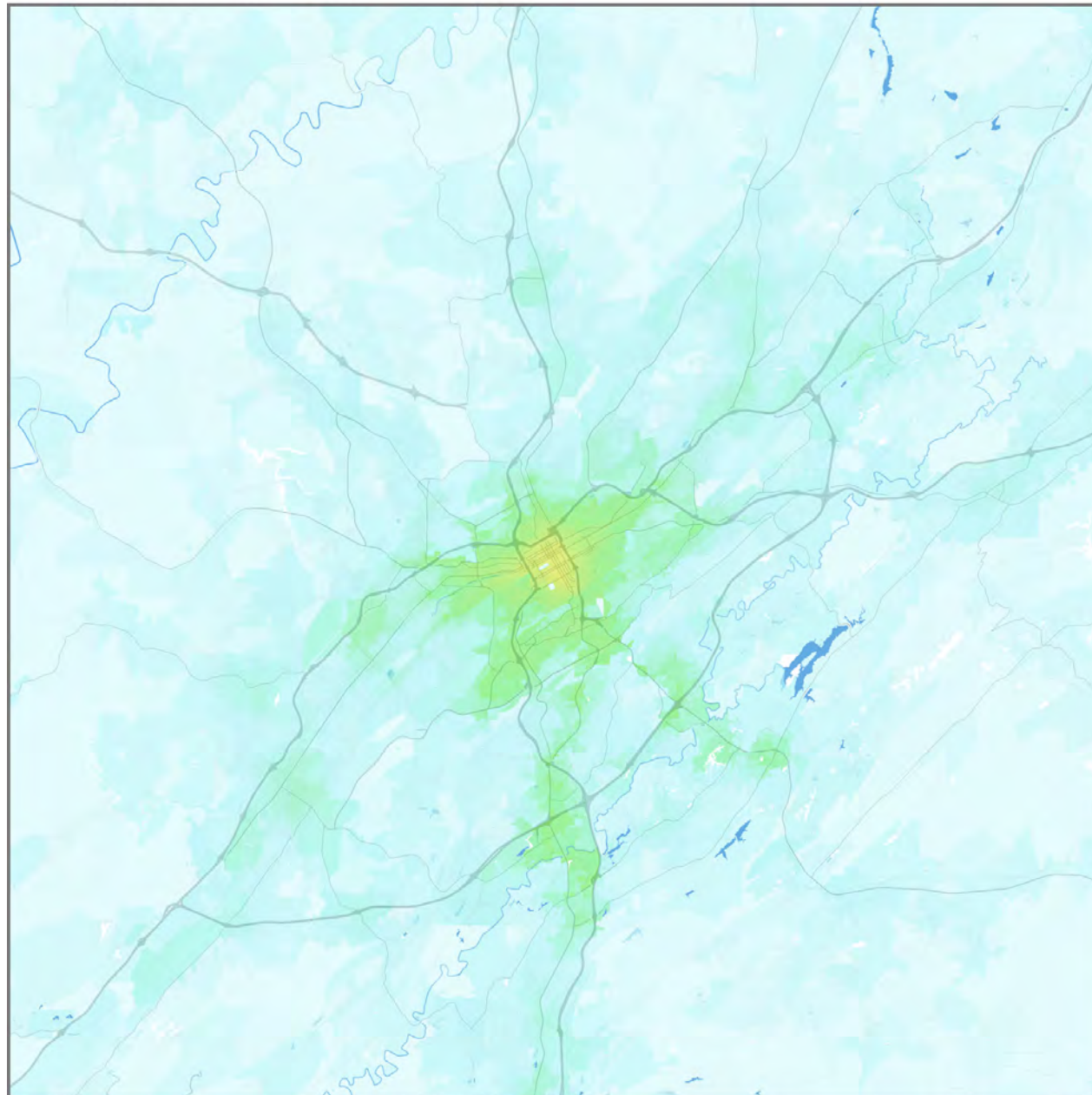
Transit Schedules Included

Agency	Dates
Birmingham Jefferson County Transit Authority	January 1, 2016 - December 31, 2016

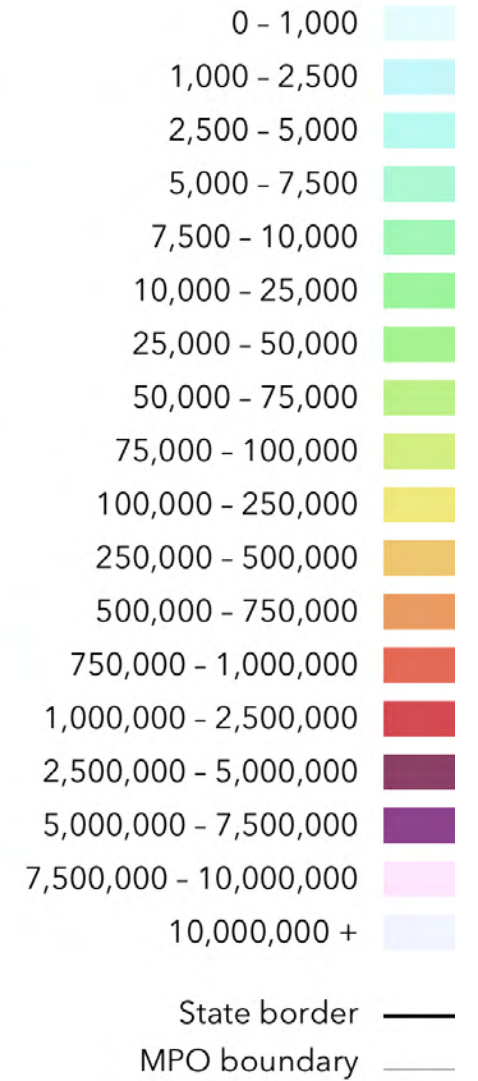
Birmingham

Birmingham-Hoover, AL

24



Jobs within 30 minutes
(Transit, AM peak)



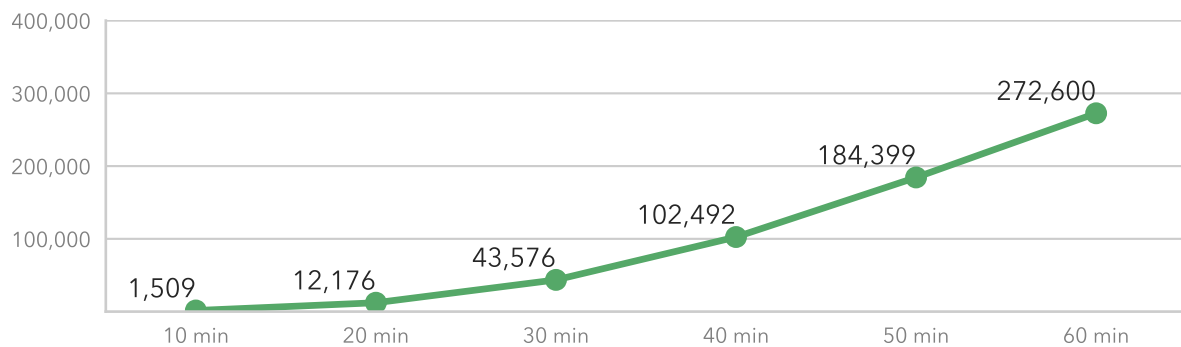
Boston

Boston-Cambridge-Quincy, MA-NH

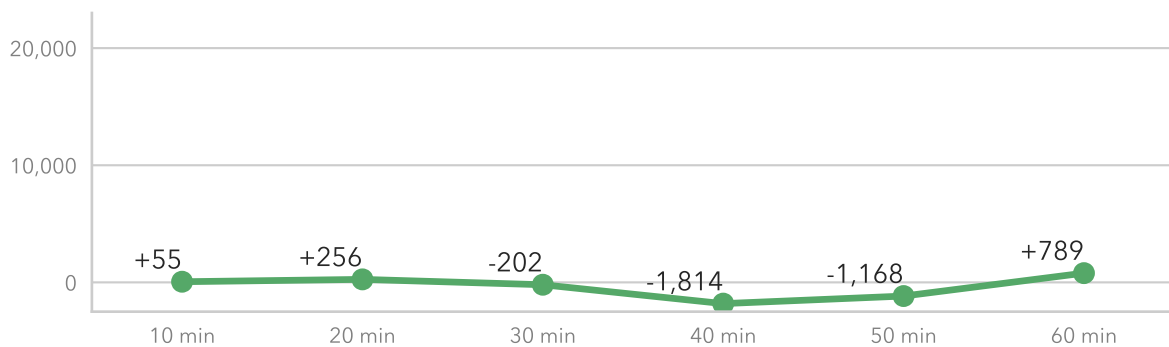
Rank by Weighted Accessibility	6
Rank by Total Employment	8
Rank by 1-Year Change in Weighted Accessibility	37
1-Year Change in Weighted Accessibility	-0.14%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	2,538,844
Average Job Density (per km ²)	281
Total Workers	2,345,885
Average Worker Density (per km ²)	260

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Boston

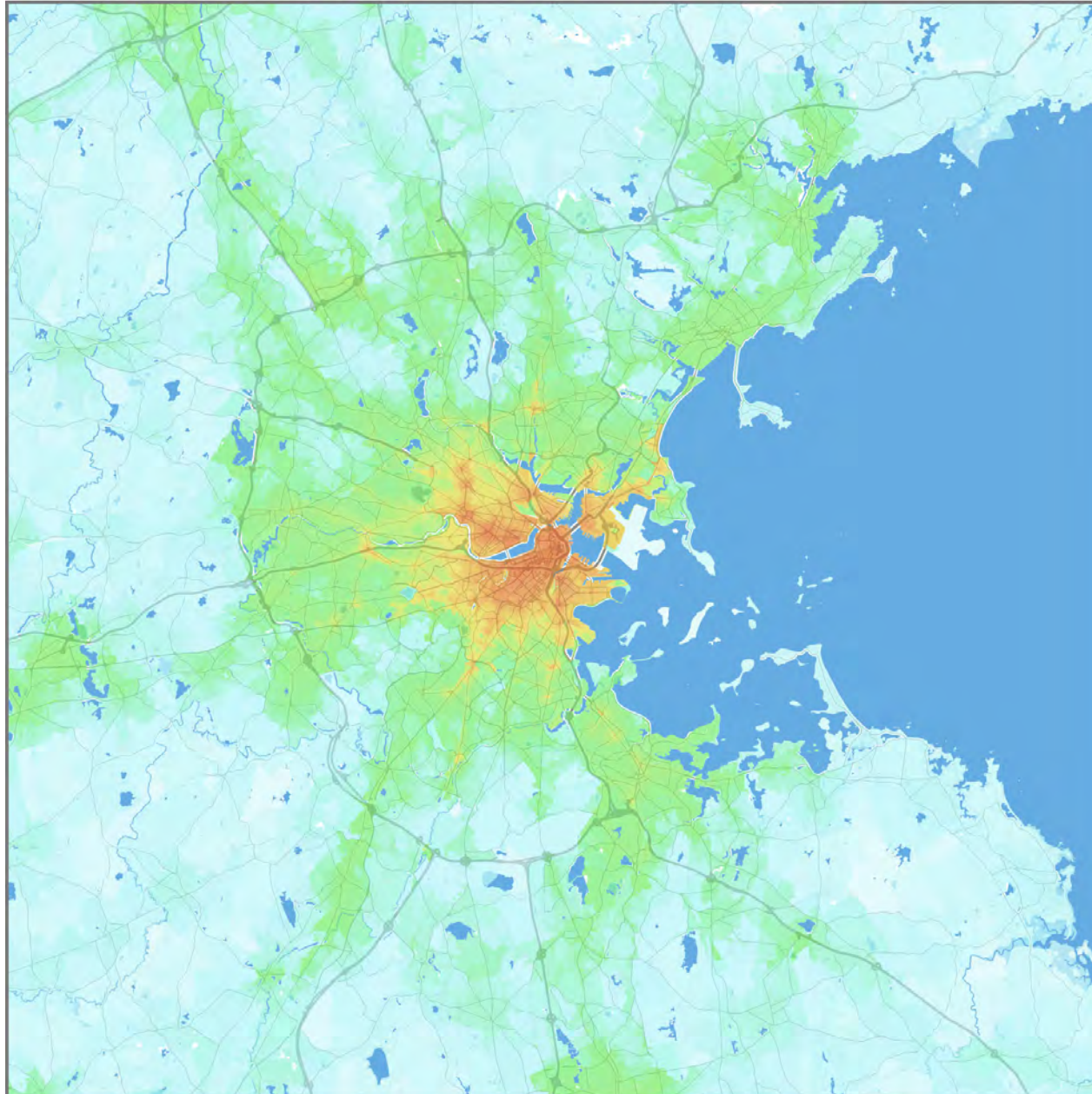
Boston-Cambridge-Quincy, MA-NH

Transit Schedules Included

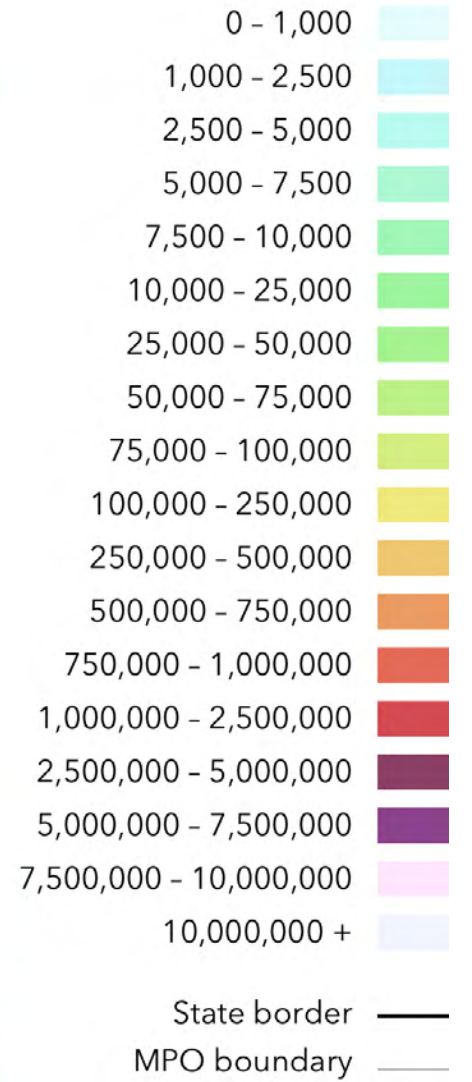
Agency	Dates
Bloom Bus	January 2, 2015 - January 2, 2016
Boston Harbor Islands National and State Park	June 19, 2015 - October 10, 2016
Brockton Area Transit Authority	April 21, 2014 - January 8, 2020
Cape Ann Transportation	January 1, 2015 - January 1, 2016
Cape Cod Regional Transit Authority	May 27, 2016 - September 4, 2016
DATTCO	January 2, 2015 - January 2, 2016
Lexpress Lexington MA	October 1, 2014 - June 30, 2016
Lowell Regional Transit Authority	January 1, 2015 - January 1, 2017
MBTA	December 2, 2015 - March 18, 2016
Massport	January 1, 2016 - December 31, 2016
Merrimack Valley Regional Transit Authority	December 20, 2014 - January 15, 2016
MetroWest Regional Transit Authority	September 24, 2013 - September 23, 2020
Plymouth & Brockton Street Railway Co.	June 28, 2014 - October 31, 2014
The Greater Attleboro Taunton Regional Transit Authority	January 1, 2016 - January 1, 2017

Boston

Boston-Cambridge-Quincy, MA-NH



Jobs within 30 minutes
(Transit, AM peak)



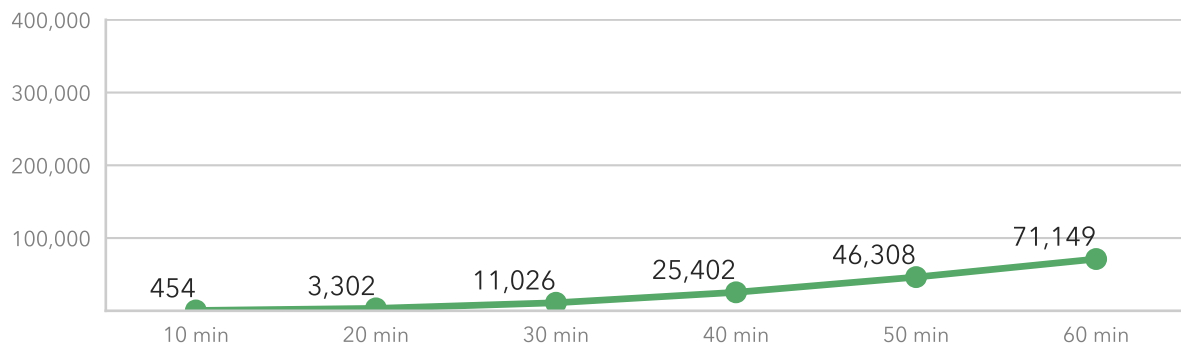
Buffalo

Buffalo-Niagara Falls, NY

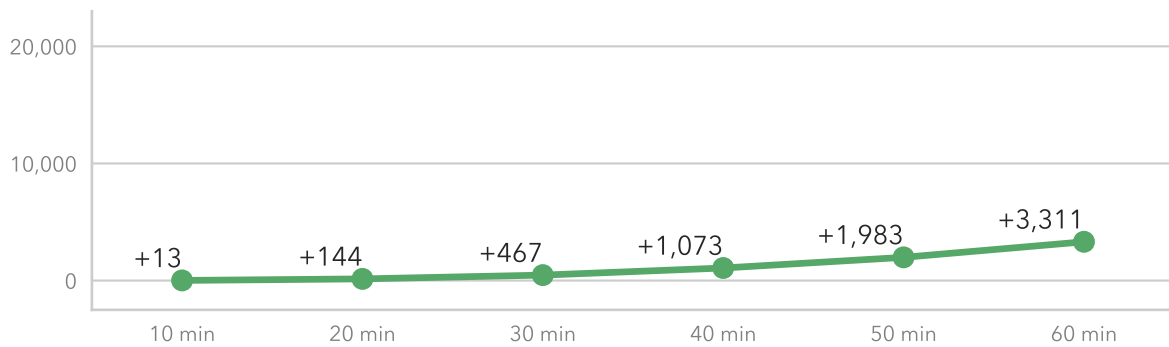
Rank by Weighted Accessibility	22
Rank by Total Employment	47
Rank by 1-Year Change in Weighted Accessibility	16
1-Year Change in Weighted Accessibility	+4.49%
1-Year Change in Weighted Accessibility Rank	+2
Total Jobs	555,621
Average Job Density (per km ²)	137
Total Workers	532,785
Average Worker Density (per km ²)	131

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Buffalo

Buffalo-Niagara Falls, NY

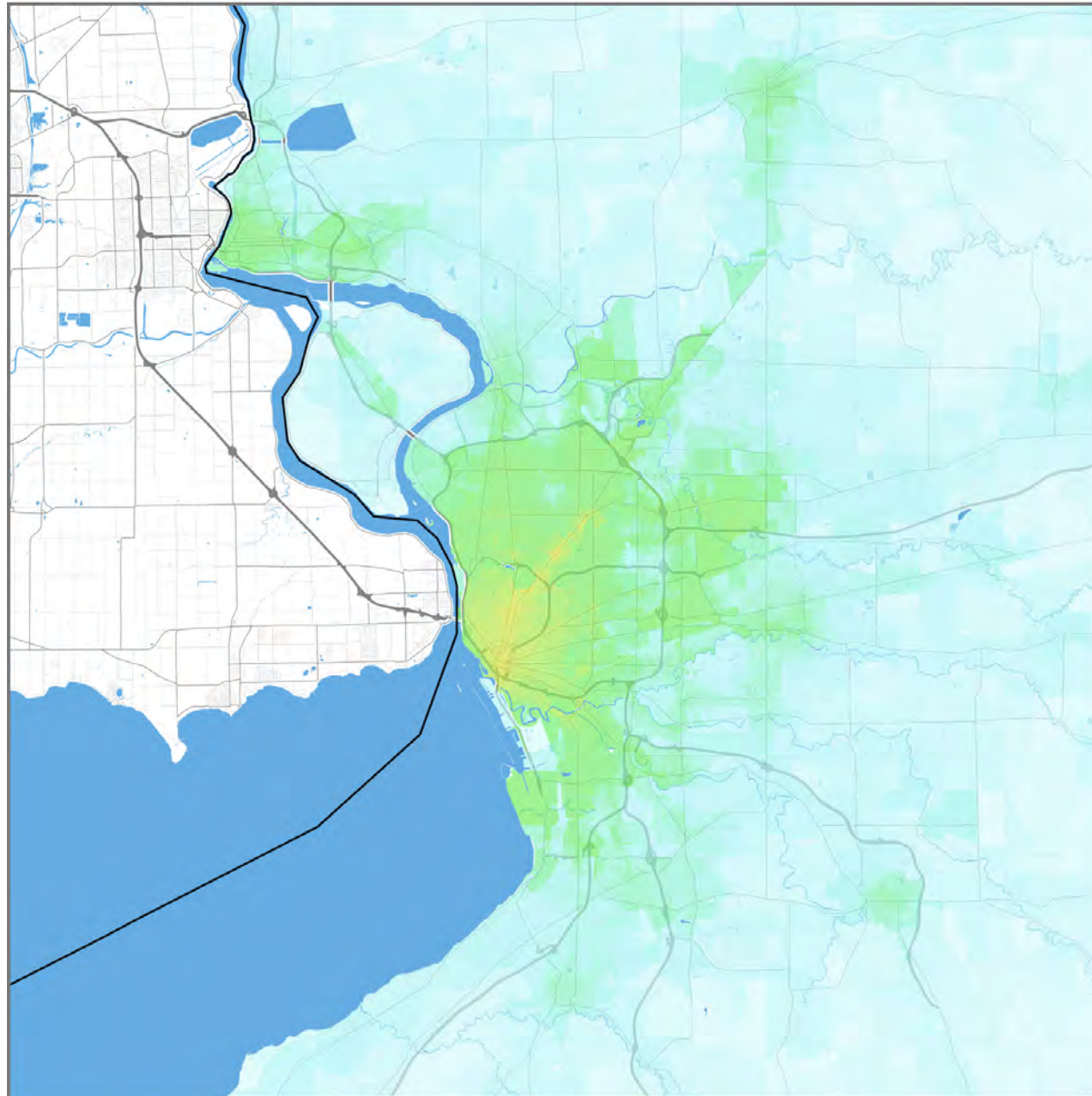
Transit Schedules Included

Agency	Dates
NFTA - Metro	December 17, 2015 - March 5, 2016

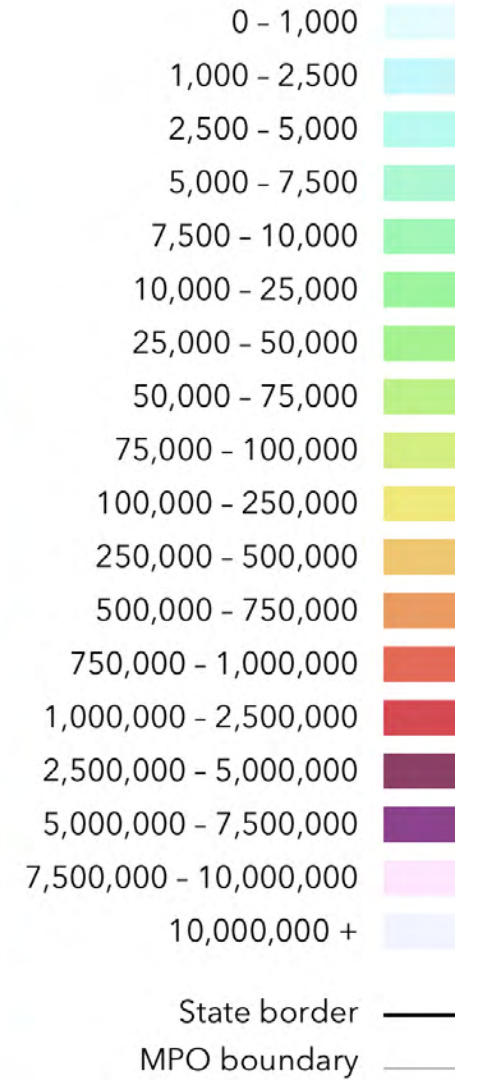
Buffalo

Buffalo-Niagara Falls, NY

30



Jobs within 30 minutes
(Transit, AM peak)



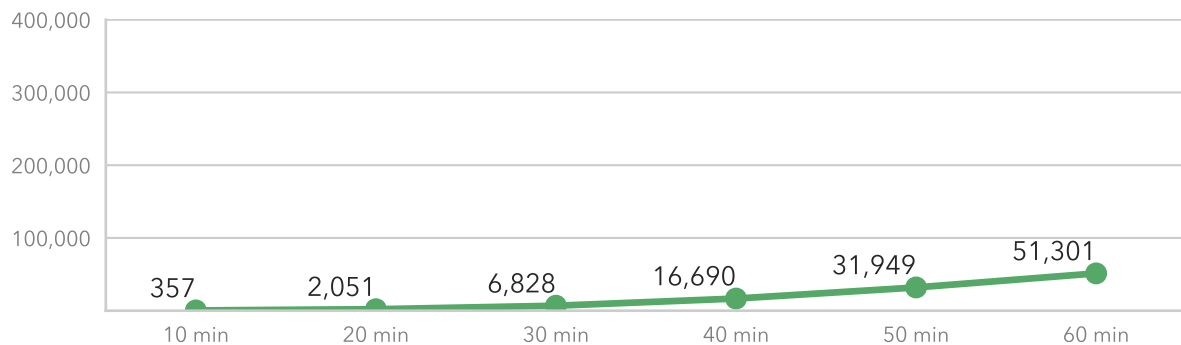
Charlotte

Charlotte-Gastonia-Rock Hill, NC-SC

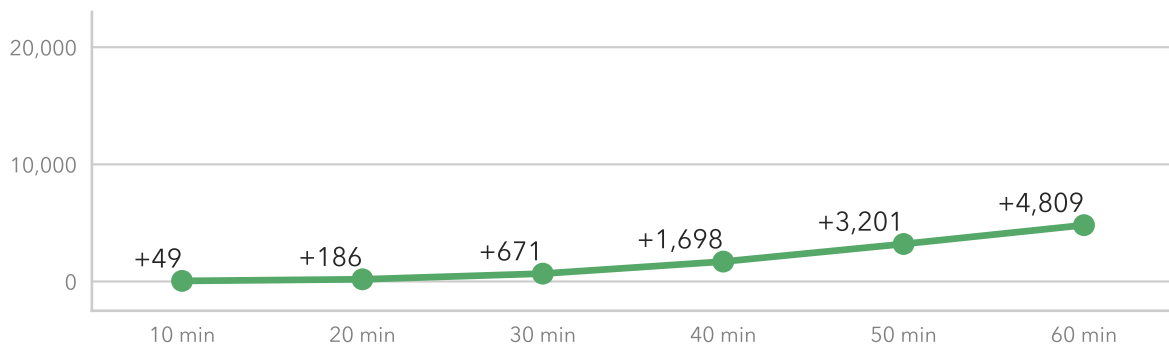
Rank by Weighted Accessibility	36
Rank by Total Employment	35
Rank by 1-Year Change in Weighted Accessibility	2
1-Year Change in Weighted Accessibility	+11.02%
1-Year Change in Weighted Accessibility Rank	+3
Total Jobs	928,257
Average Job Density (per km ²)	116
Total Workers	839,082
Average Worker Density (per km ²)	105

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Charlotte

Charlotte-Gastonia-Rock Hill, NC-SC

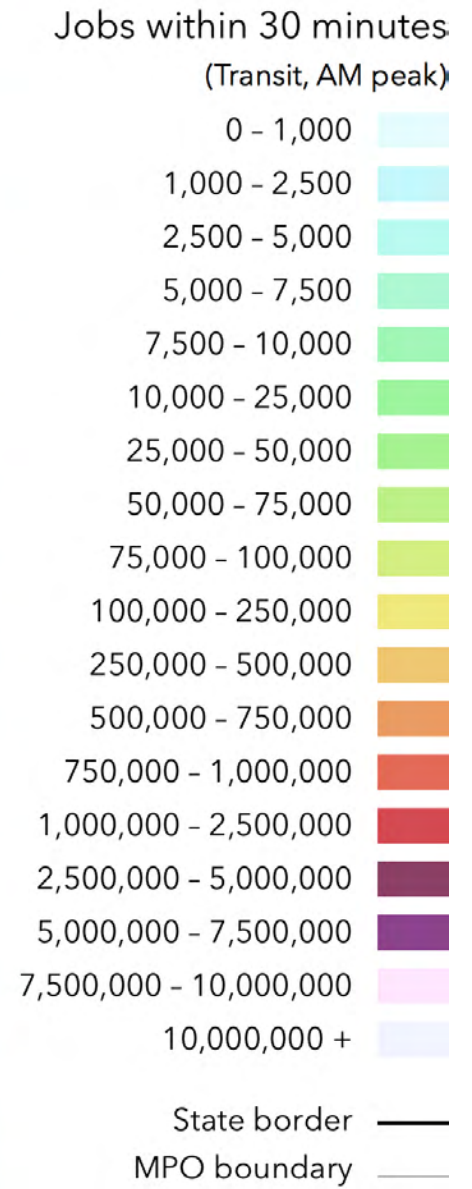
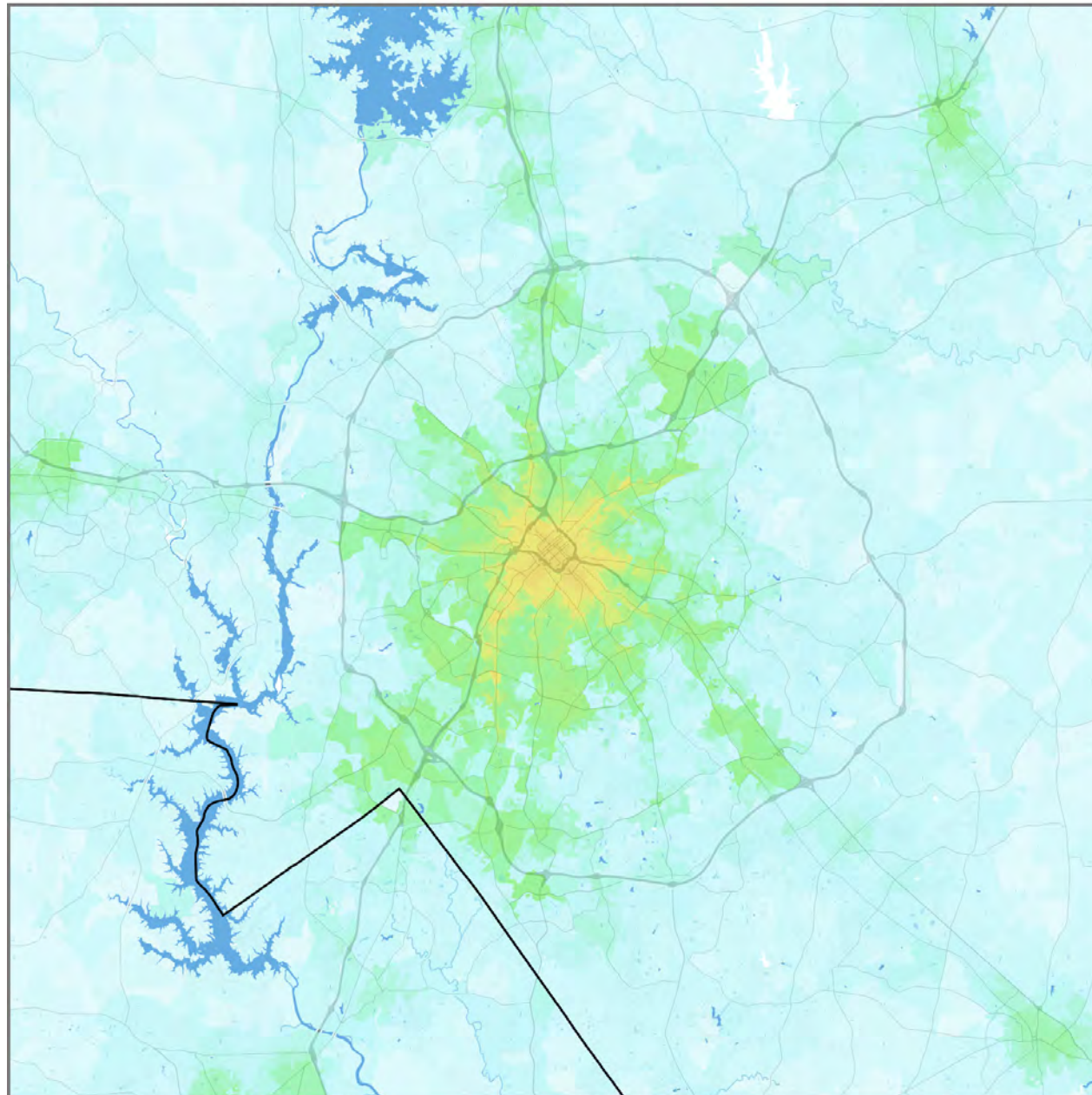
Transit Schedules Included

Agency	Dates
Charlotte Area Transit System	January 11, 2016 - June 5, 2016

Charlotte

Charlotte-Gastonia-Rock Hill, NC-SC

33



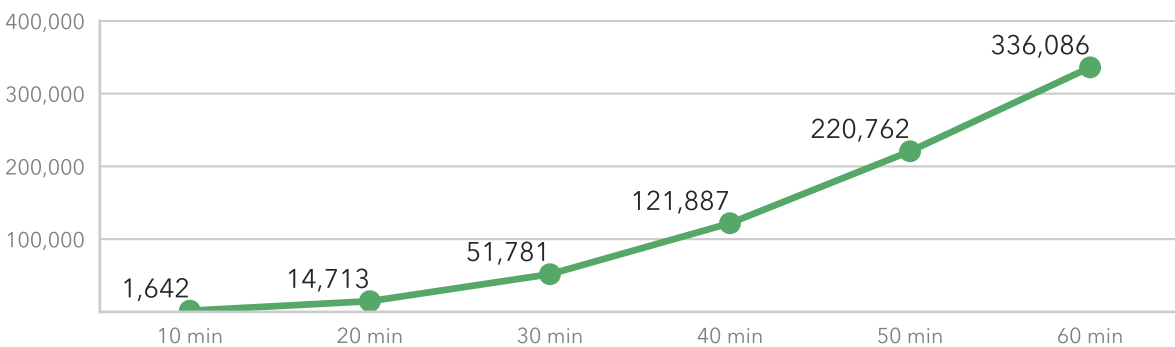
Chicago

Chicago-Joliet-Naperville, IL-IN-WI

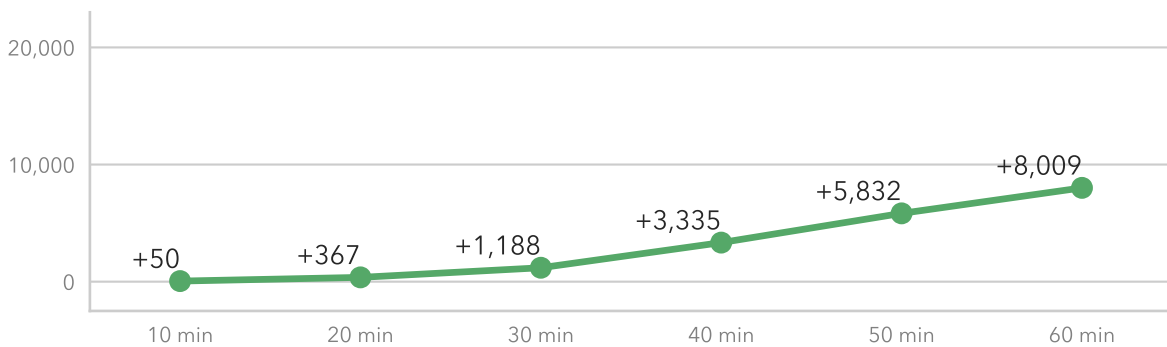
Rank by Weighted Accessibility	3
Rank by Total Employment	3
Rank by 1-Year Change in Weighted Accessibility	27
1-Year Change in Weighted Accessibility	+2.59%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	4,412,546
Average Job Density (per km ²)	237
Total Workers	4,314,028
Average Worker Density (per km ²)	231

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Chicago

Chicago-Joliet-Naperville, IL-IN-WI

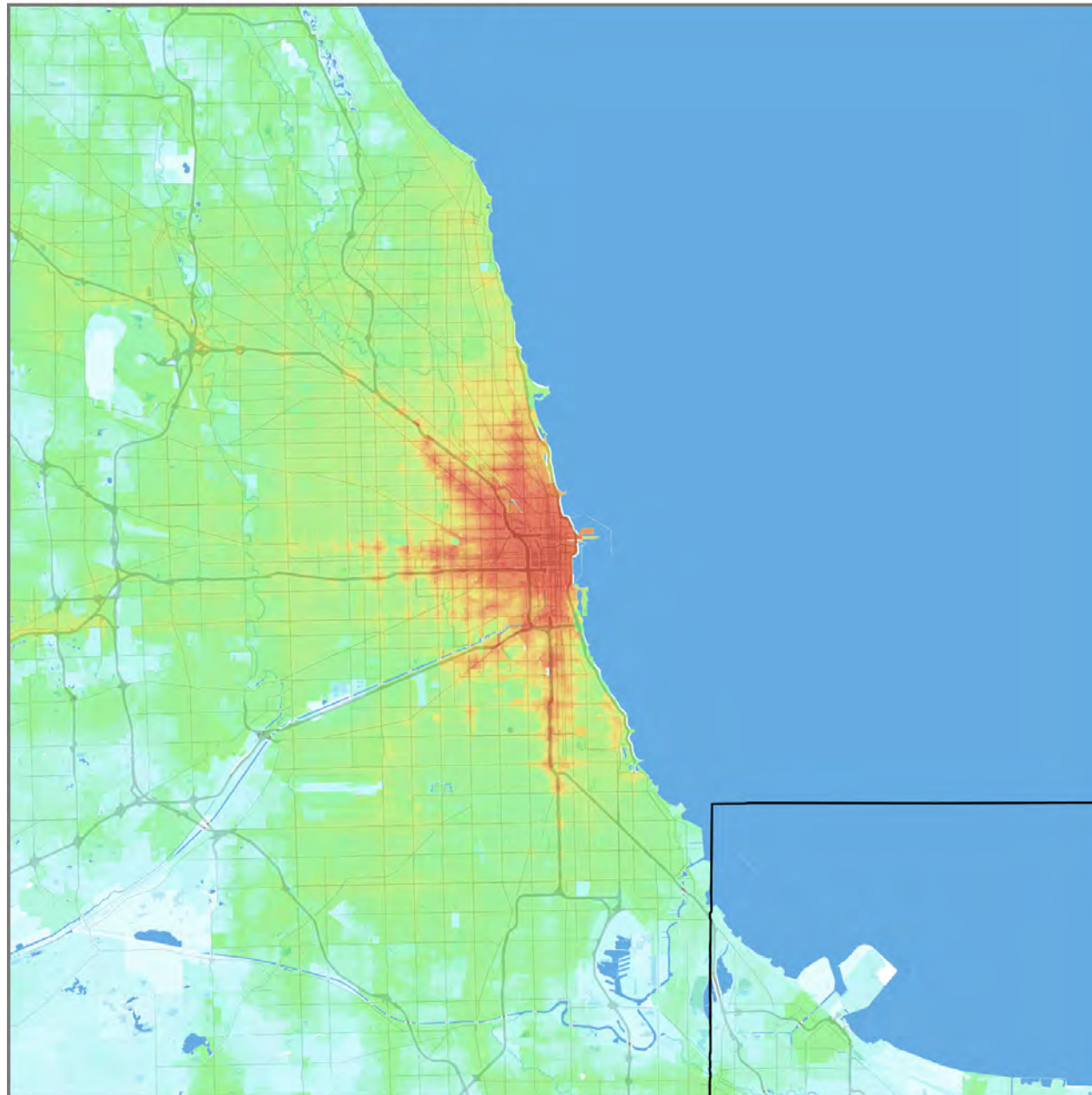
Transit Schedules Included

Agency	Dates
Chicago Transit Authority	January 7, 2016 - March 31, 2016
Metra	January 1, 2016 - October 31, 2016
PACE	January 18, 2016 - April 30, 2016

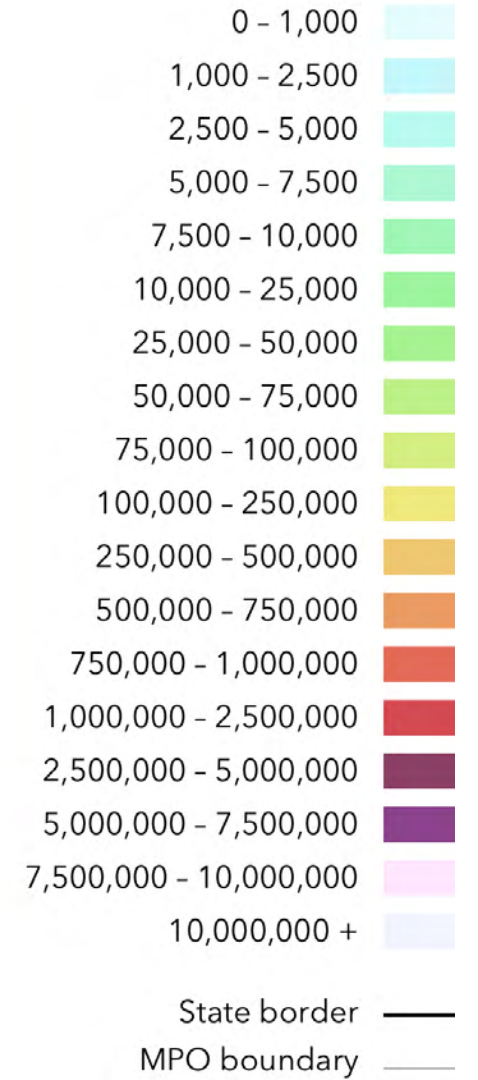
Chicago

Chicago-Joliet-Naperville, IL-IN-WI

36



Jobs within 30 minutes
(Transit, AM peak)



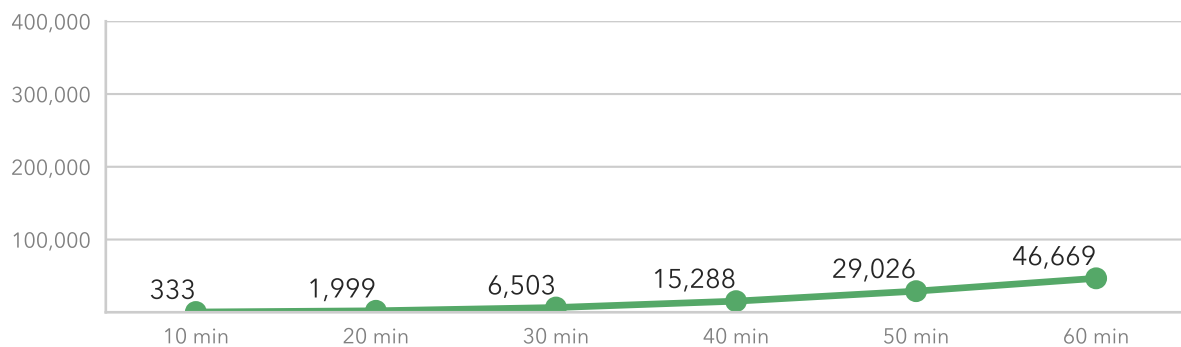
Cincinnati

Cincinnati-Middletown, OH-KY-IN

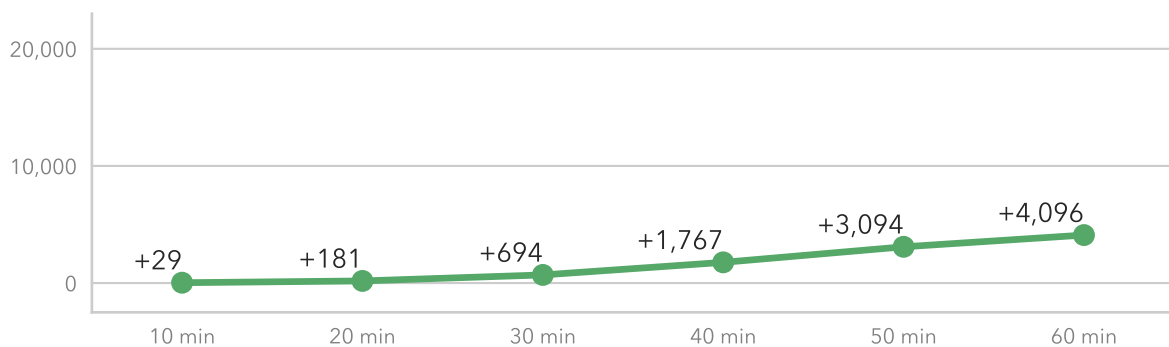
Rank by Weighted Accessibility	39
Rank by Total Employment	25
Rank by 1-Year Change in Weighted Accessibility	1
1-Year Change in Weighted Accessibility	+11.23%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	1,007,199
Average Job Density (per km ²)	89
Total Workers	1,003,452
Average Worker Density (per km ²)	88

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Cincinnati

Cincinnati-Middletown, OH-KY-IN

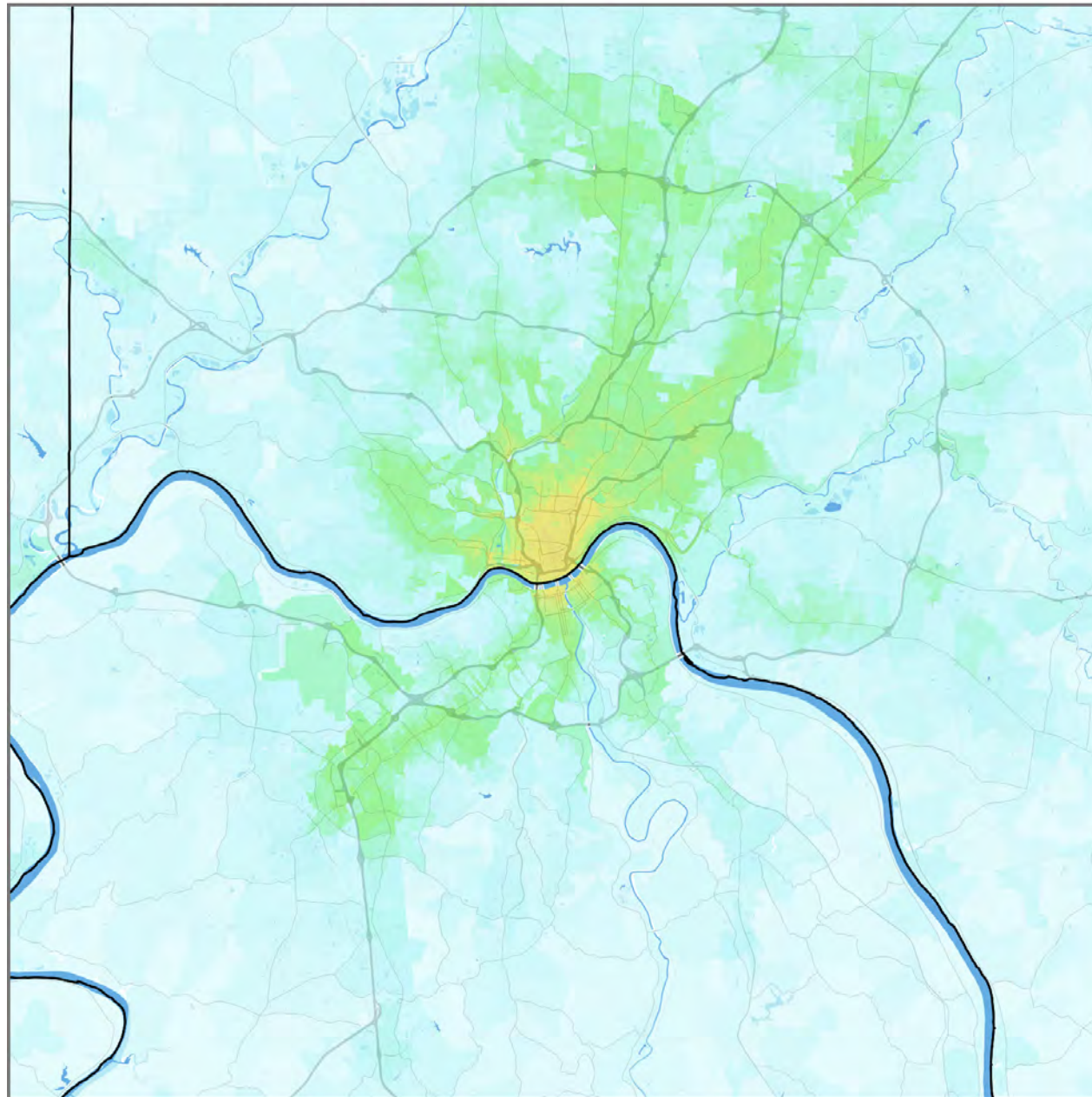
Transit Schedules Included

Agency	Dates
Southwest Ohio Regional Transit Authority	December 6, 2015 - May 28, 2016
Transit Authority of Northern Kentucky	October 24, 2014 - August 27, 2015

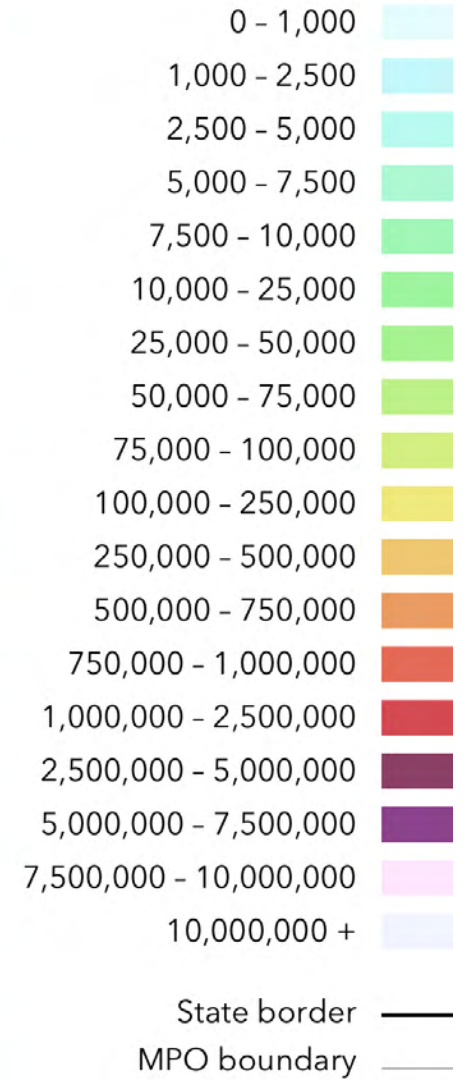
Cincinnati

Cincinnati-Middletown, OH-KY-IN

39



Jobs within 30 minutes
(Transit, AM peak)



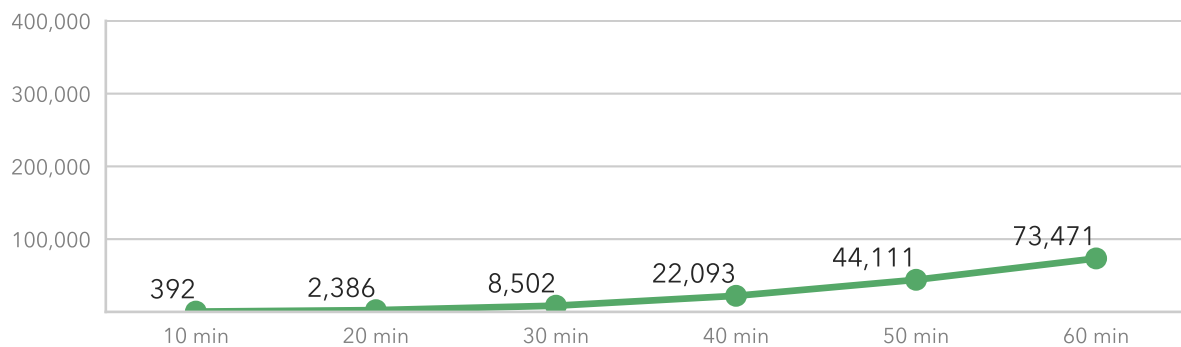
Cleveland

Cleveland-Elyria-Mentor, OH

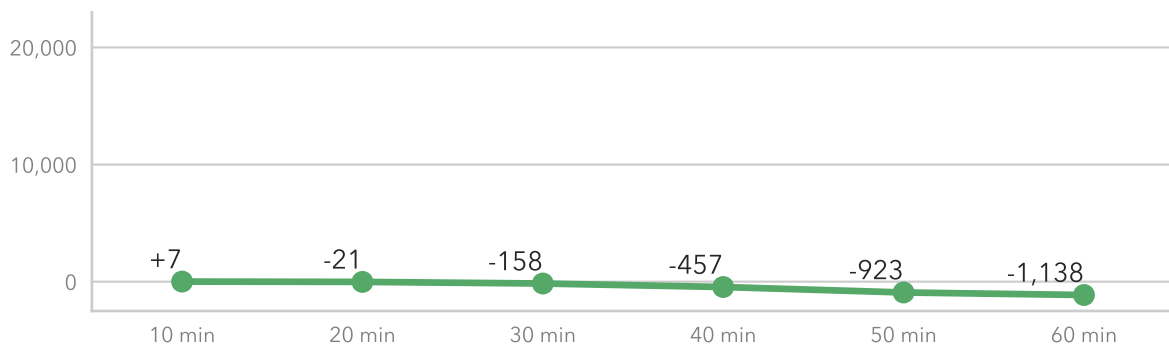
Rank by Weighted Accessibility	29
Rank by Total Employment	27
Rank by 1-Year Change in Weighted Accessibility	40
1-Year Change in Weighted Accessibility	-1.58%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	1,004,080
Average Job Density (per km ²)	194
Total Workers	948,434
Average Worker Density (per km ²)	183

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Cleveland

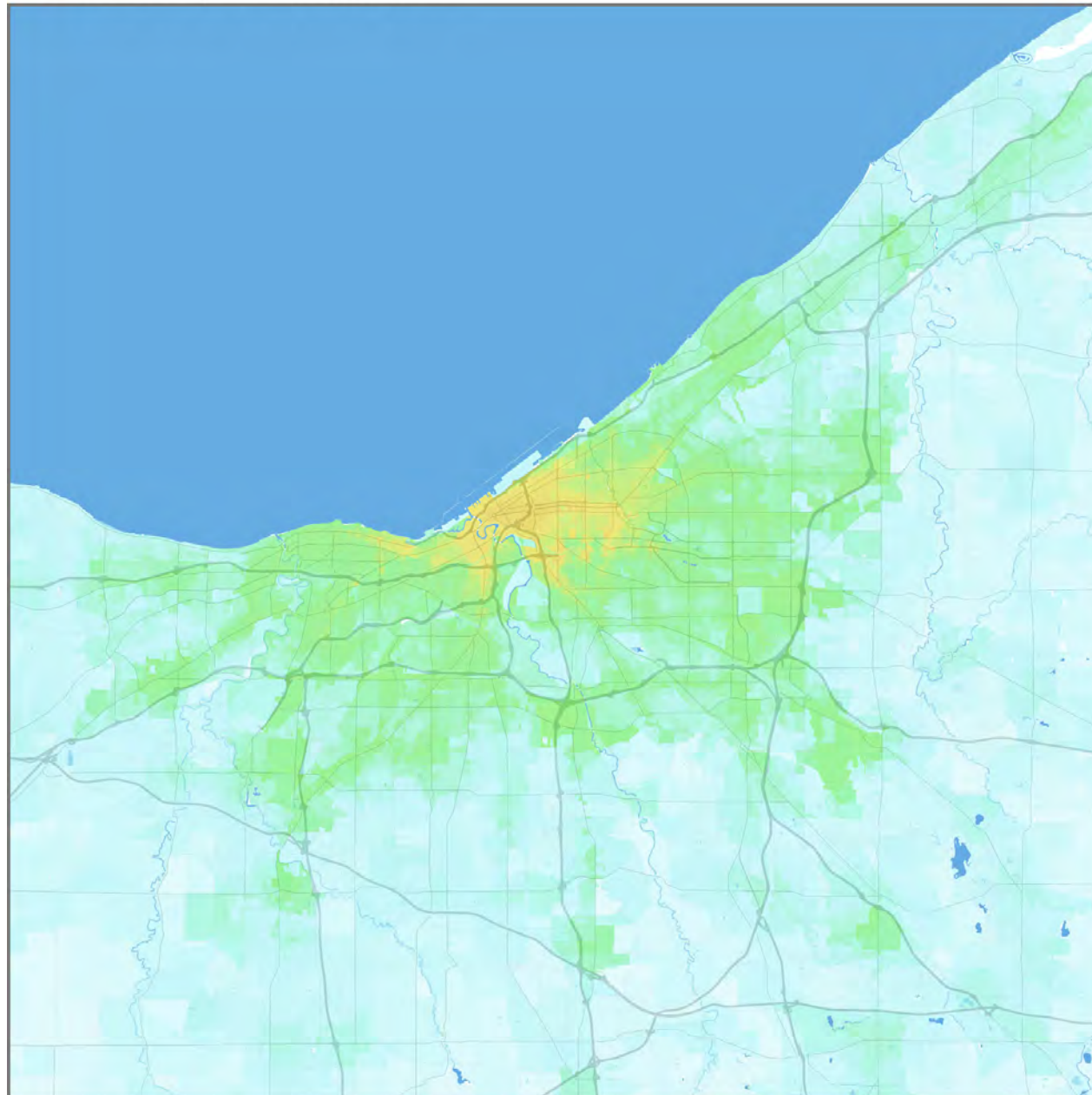
Cleveland-Elyria-Mentor, OH

Transit Schedules Included

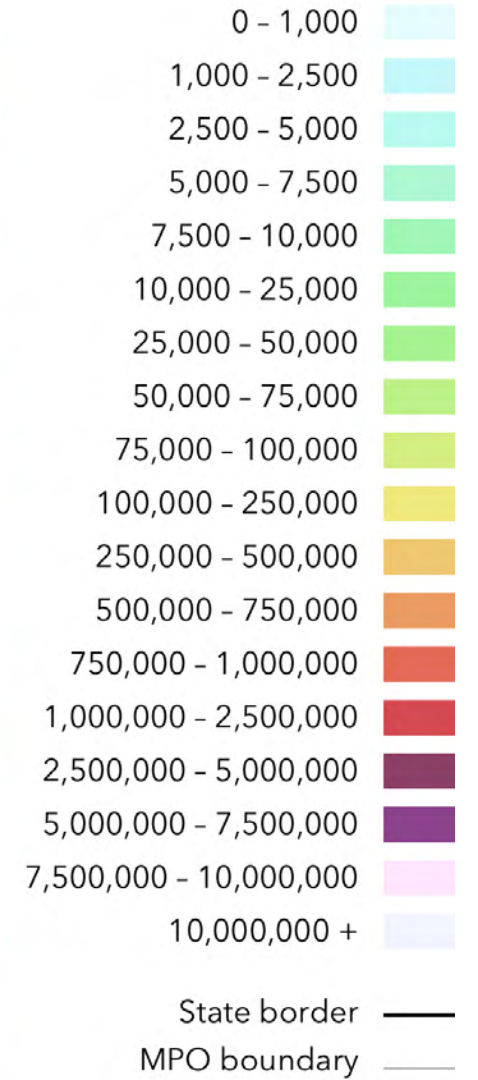
Agency	Dates
Cuyahoga Valley Scenic Railroad	January 16, 2016 - October 2, 2016
Greater Cleveland Regional Transit Authority	November 22, 2015 - April 9, 2016

Cleveland

Cleveland-Elyria-Mentor, OH



Jobs within 30 minutes
(Transit, AM peak)



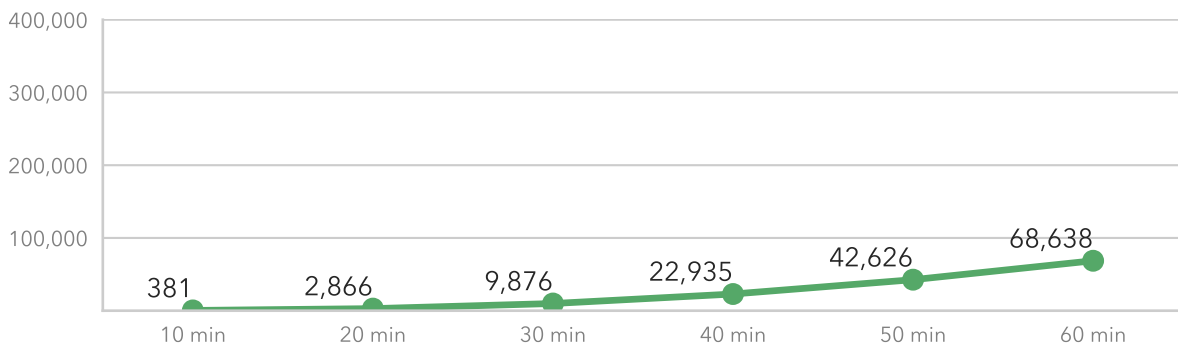
Columbus

Columbus, OH

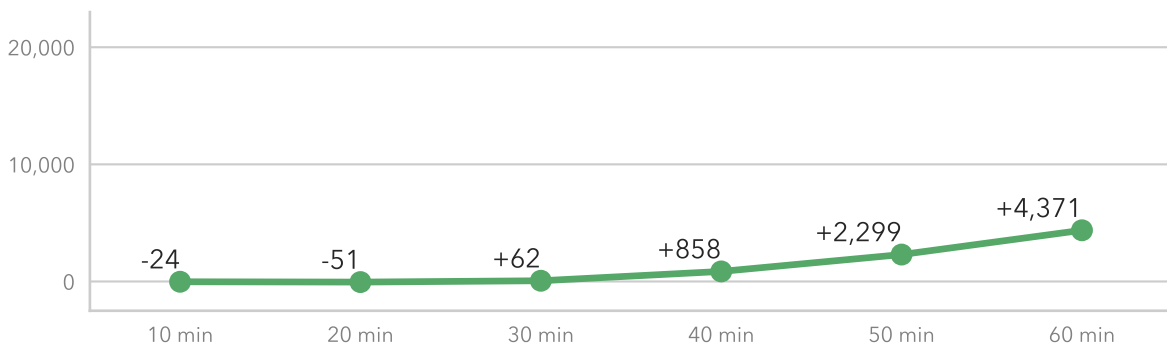
Rank by Weighted Accessibility	27
Rank by Total Employment	29
Rank by 1-Year Change in Weighted Accessibility	24
1-Year Change in Weighted Accessibility	+2.98%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	959,915
Average Job Density (per km ²)	93
Total Workers	884,839
Average Worker Density (per km ²)	86

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Columbus

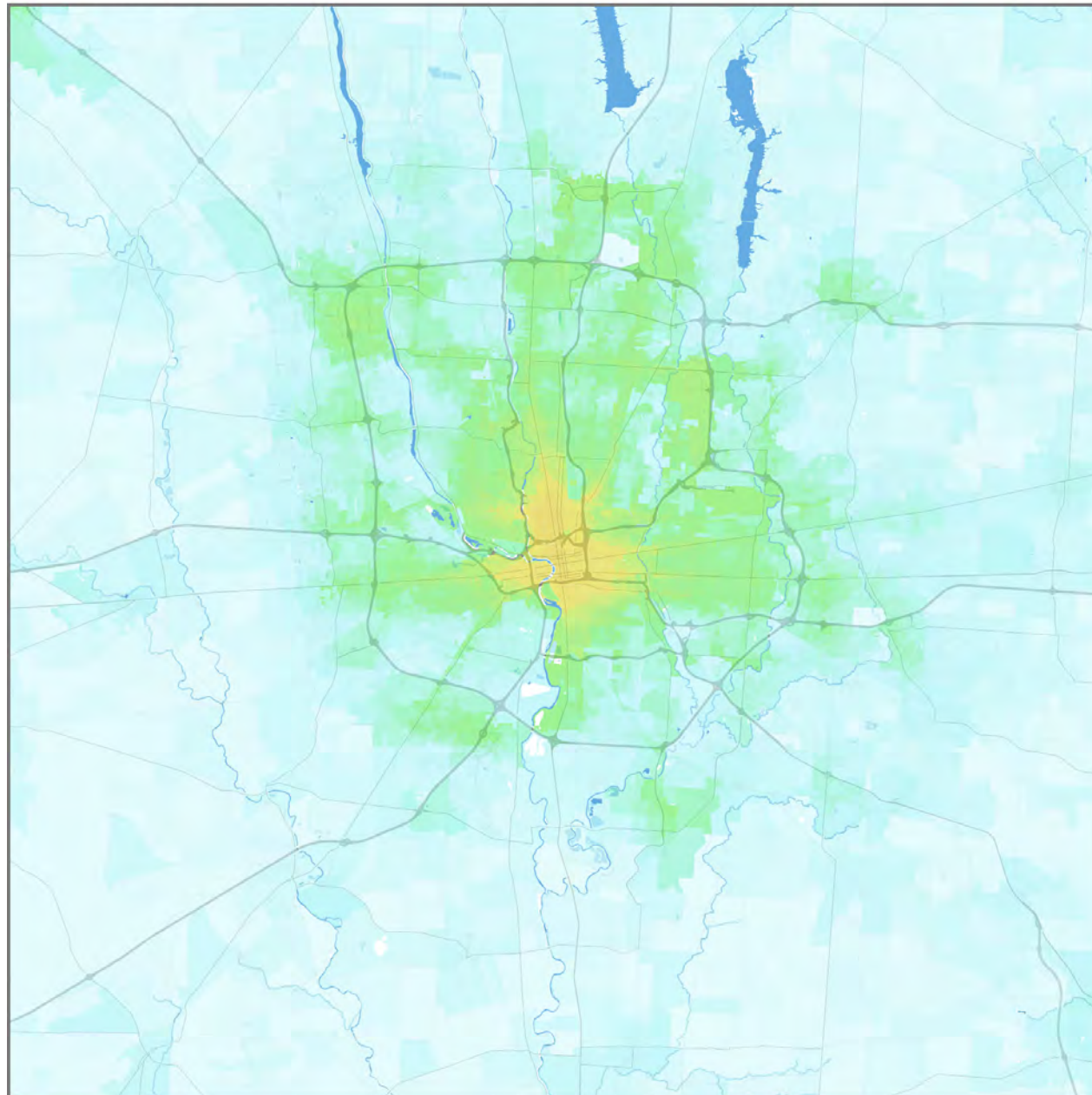
Columbus, OH

Transit Schedules Included

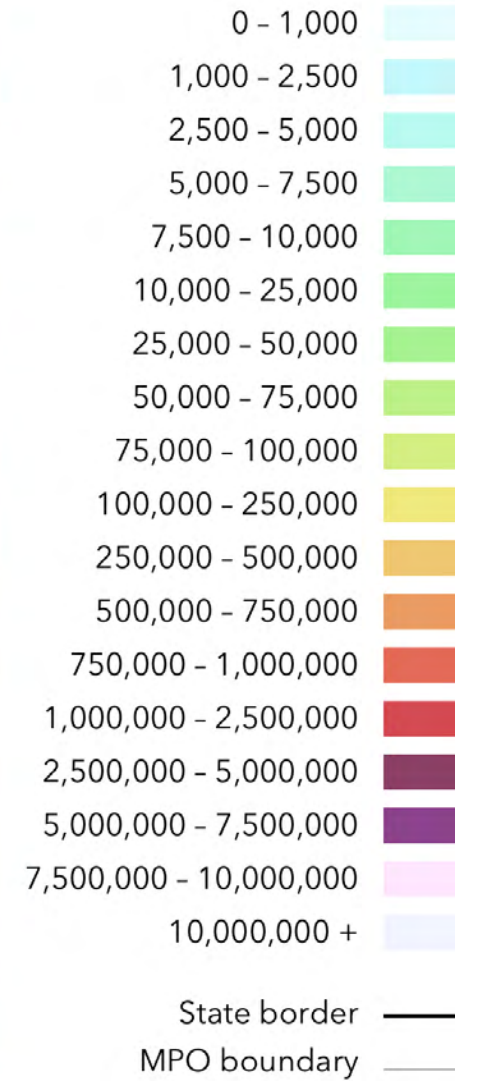
Agency	Dates
Central Ohio Transit Authority	January 4, 2016 - September 4, 2016

Columbus

Columbus, OH



Jobs within 30 minutes
(Transit, AM peak)



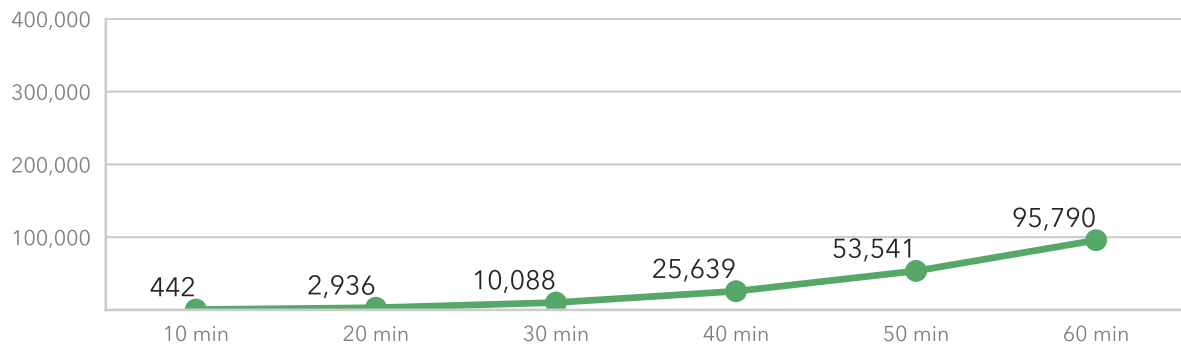
Dallas

Dallas-Fort Worth-Arlington, TX

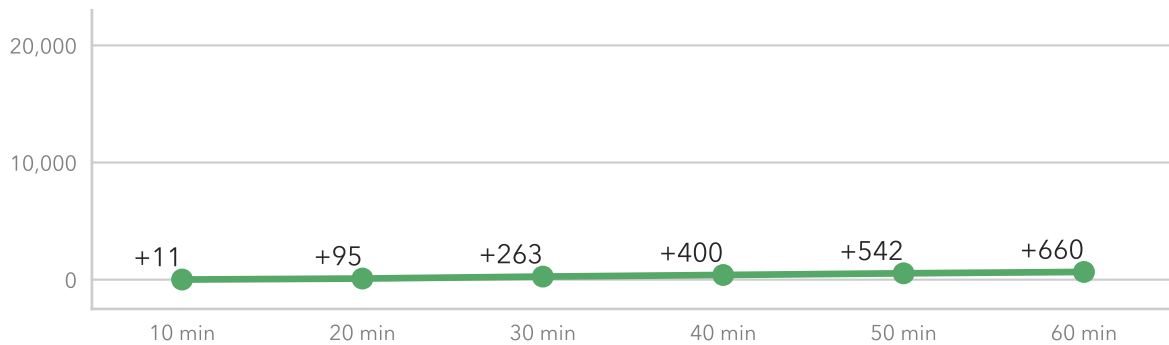
Rank by Weighted Accessibility	19
Rank by Total Employment	4
Rank by 1-Year Change in Weighted Accessibility	30
1-Year Change in Weighted Accessibility	+1.66%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	3,252,299
Average Job Density (per km ²)	141
Total Workers	3,085,425
Average Worker Density (per km ²)	133

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Dallas

Dallas-Fort Worth-Arlington, TX

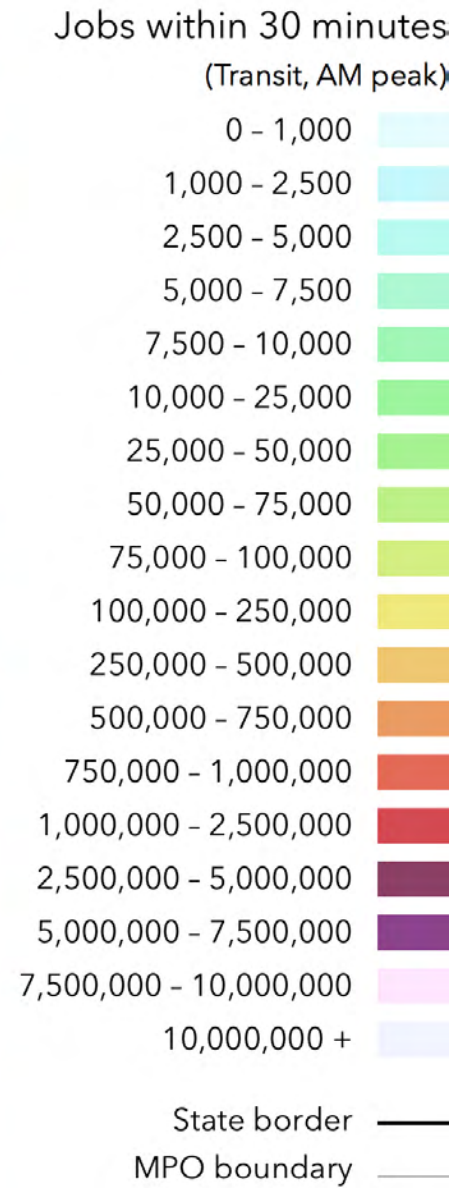
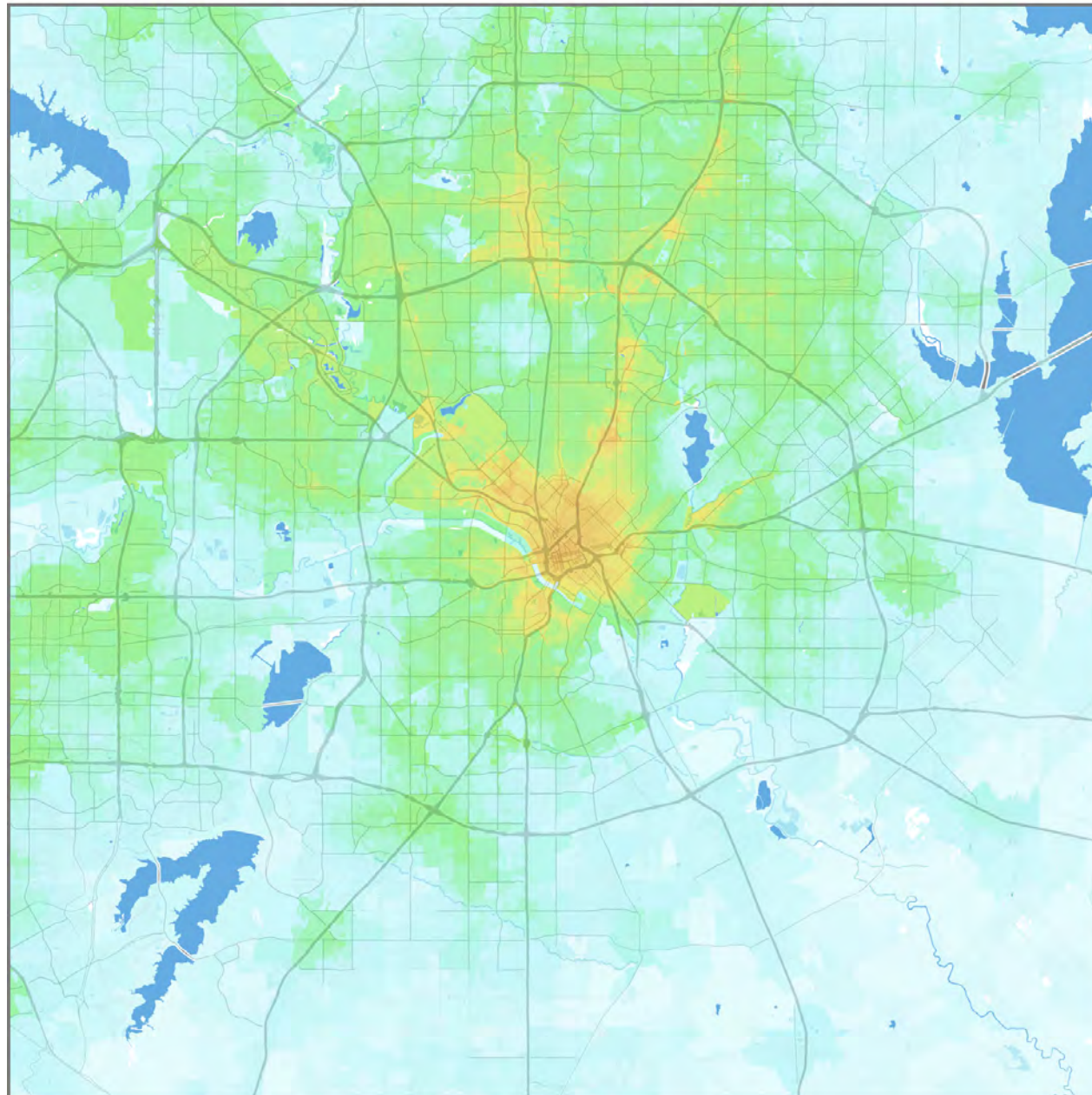
Transit Schedules Included

Agency	Dates
DALLAS AREA RAPID TRANSIT	November 9, 2015 - March 13, 2016
Fort Worth Transportation Authority	September 27, 2015 - January 30, 2016

Dallas

Dallas-Fort Worth-Arlington, TX

48



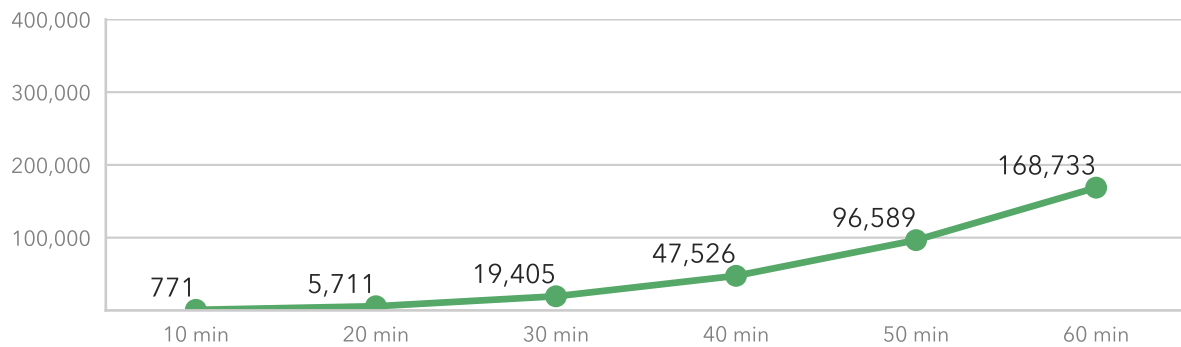
Denver

Denver-Aurora-Broomfield, CO

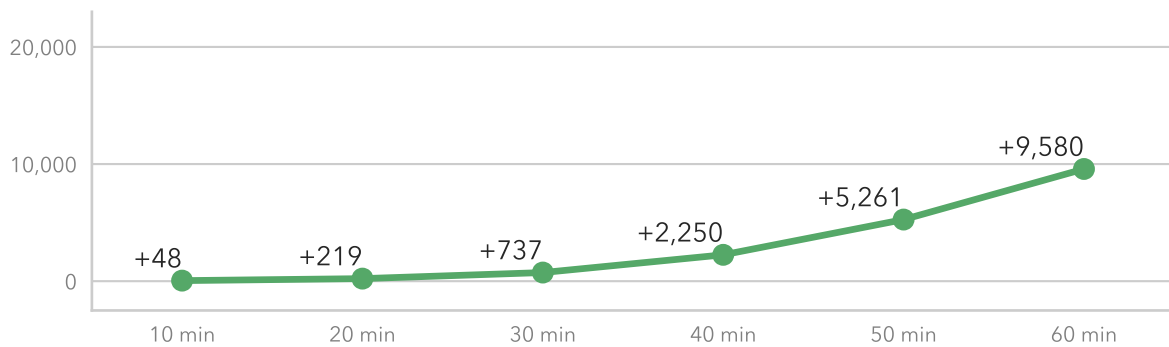
Rank by Weighted Accessibility	10
Rank by Total Employment	18
Rank by 1-Year Change in Weighted Accessibility	14
1-Year Change in Weighted Accessibility	+5.14%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	1,342,745
Average Job Density (per km ²)	62
Total Workers	1,294,386
Average Worker Density (per km ²)	60

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Denver

Denver-Aurora-Broomfield, CO

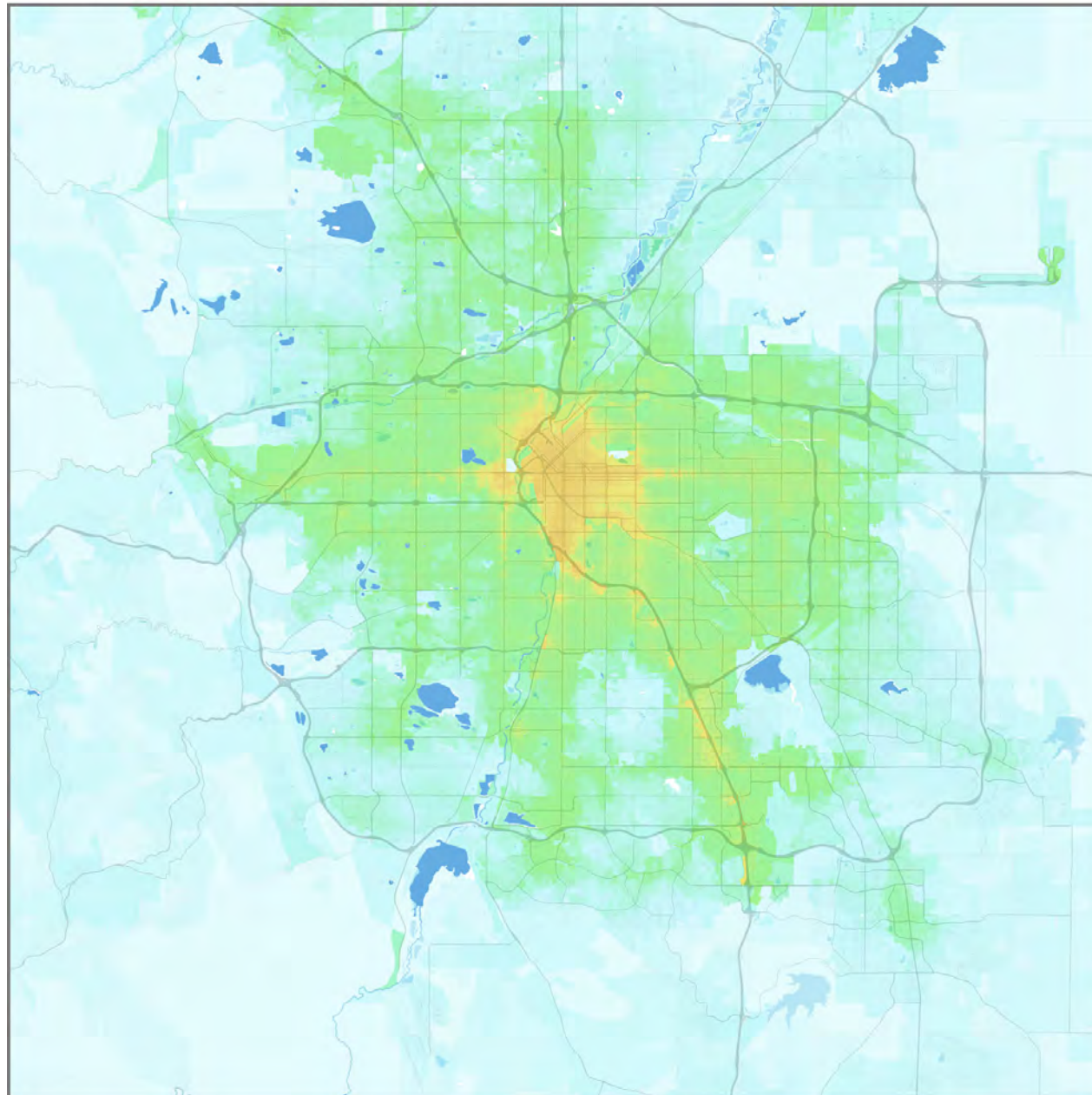
Transit Schedules Included

Agency	Dates
Regional Transportation District	January 3, 2016 - April 23, 2016

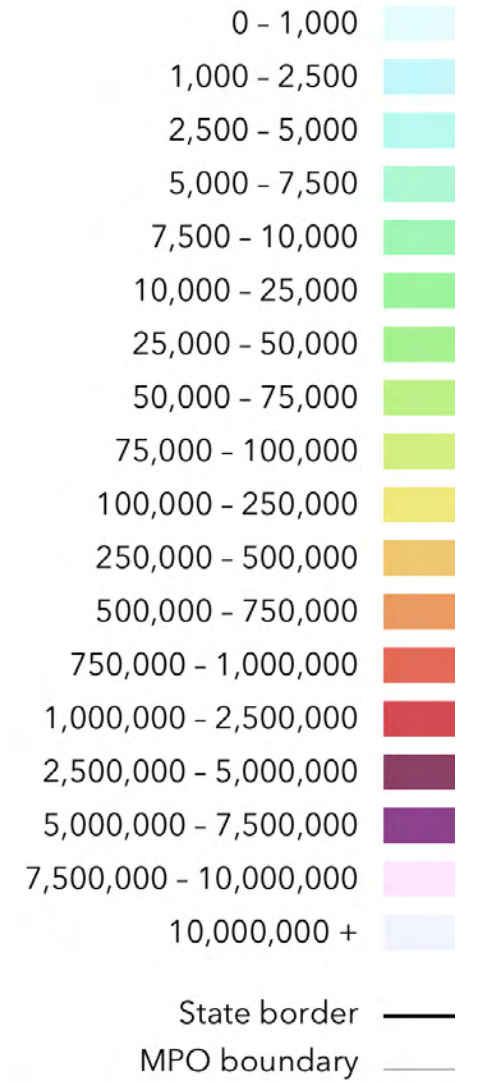
Denver

Denver-Aurora-Broomfield, CO

51



Jobs within 30 minutes
(Transit, AM peak)



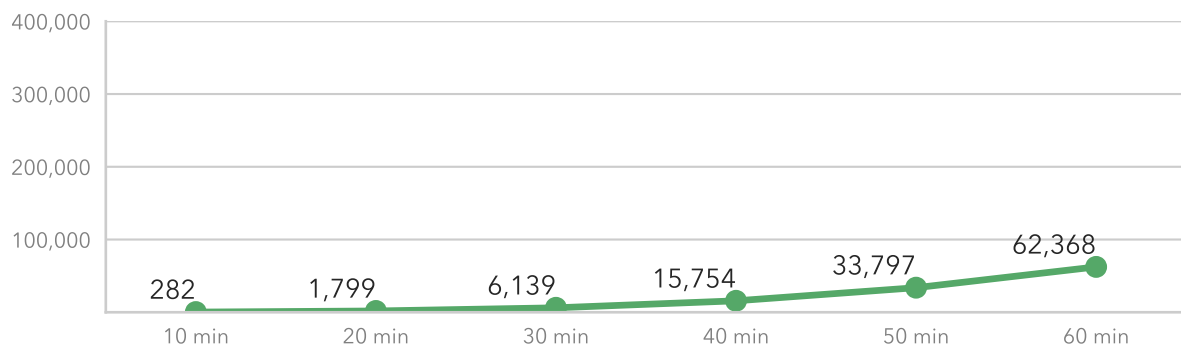
Detroit

Detroit-Warren-Livonia, MI

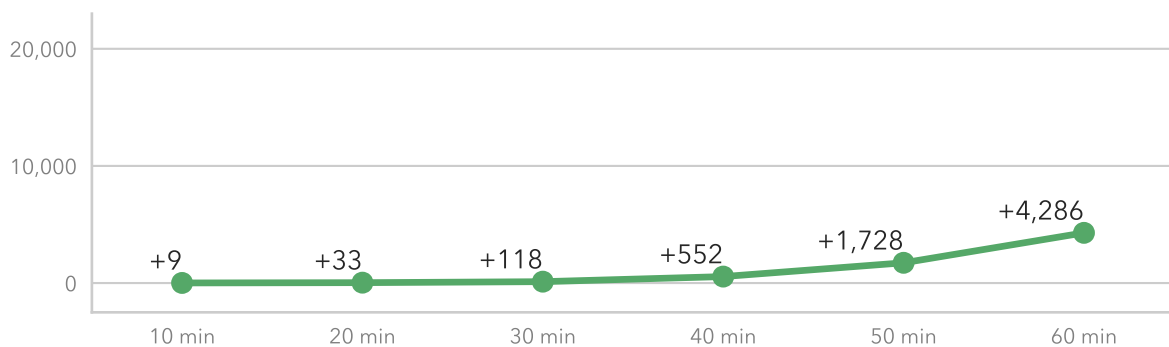
Rank by Weighted Accessibility	35
Rank by Total Employment	12
Rank by 1-Year Change in Weighted Accessibility	15
1-Year Change in Weighted Accessibility	+4.50%
1-Year Change in Weighted Accessibility Rank	+2
Total Jobs	1,816,190
Average Job Density (per km ²)	180
Total Workers	1,815,609
Average Worker Density (per km ²)	180

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Detroit

Detroit-Warren-Livonia, MI

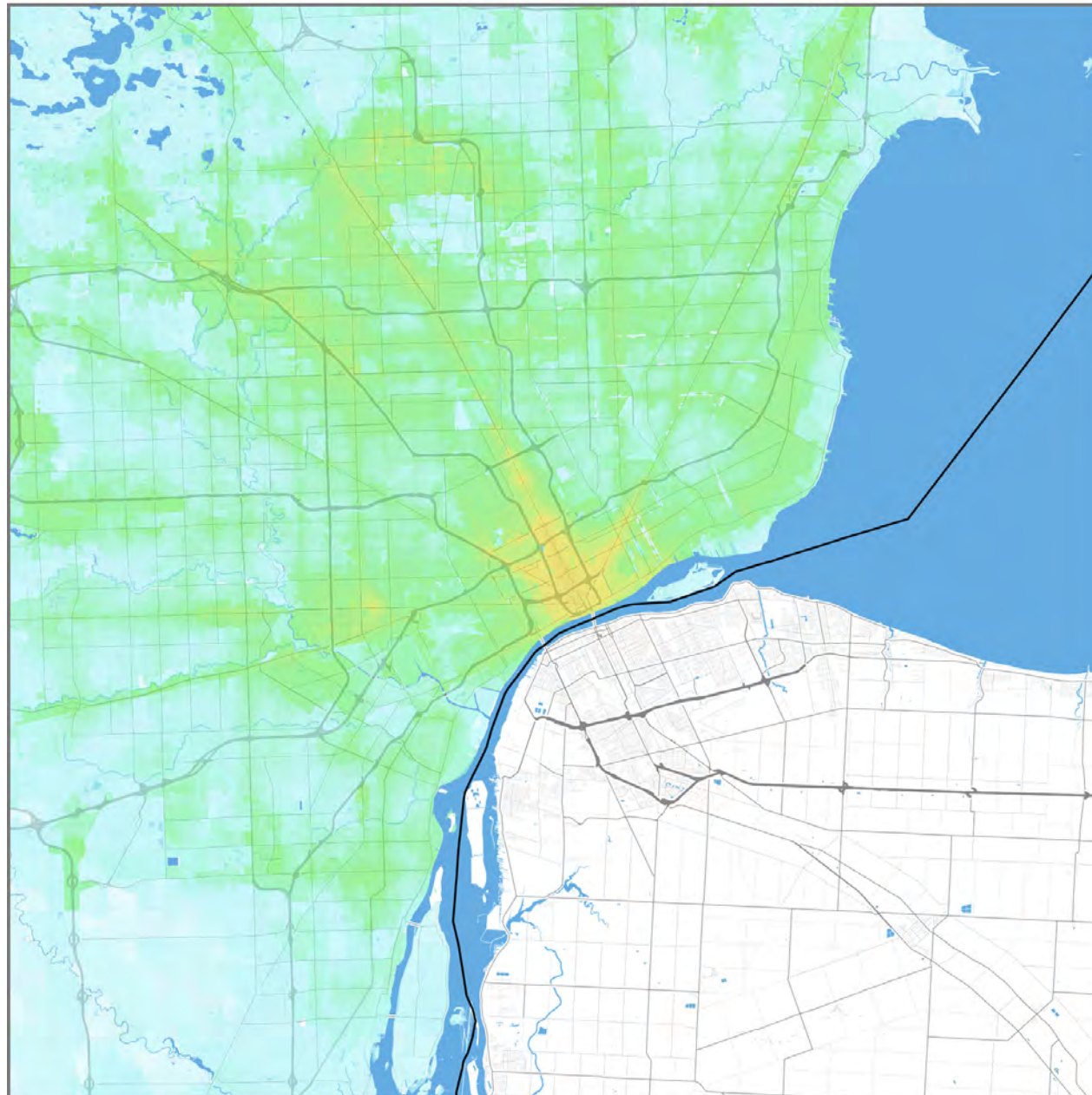
Transit Schedules Included

Agency	Dates
Ann Arbor Area Transportation Authority	August 23, 2015 - April 30, 2016
Detroit Department of Transportation	January 19, 2016 - June 1, 2016
SMART	November 17, 2014 - March 22, 2015

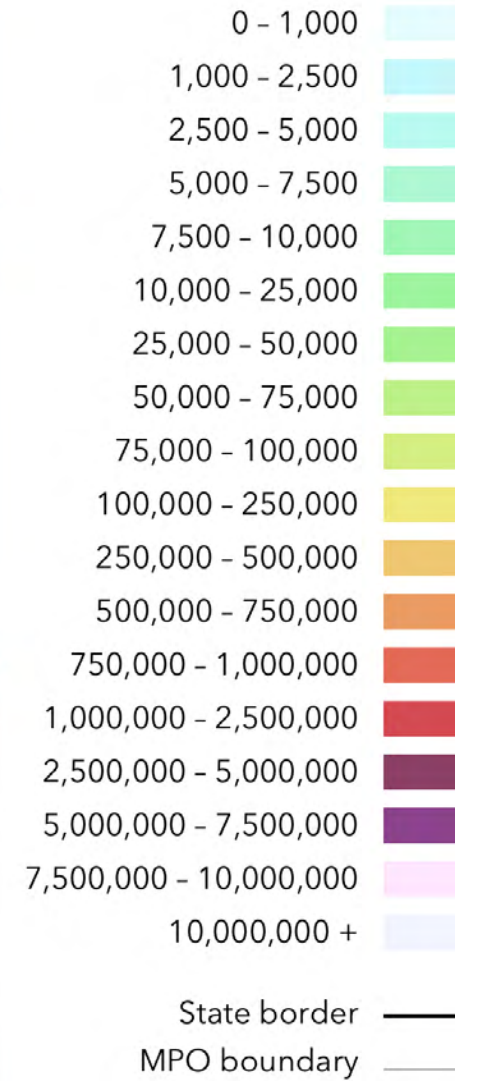
Detroit

Detroit-Warren-Livonia, MI

54



Jobs within 30 minutes
(Transit, AM peak)



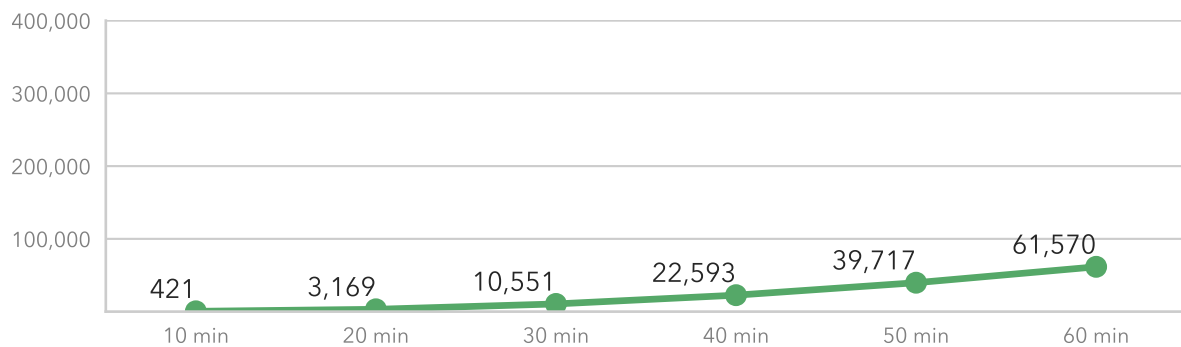
Hartford

Hartford-West Hartford-East Hartford, CT

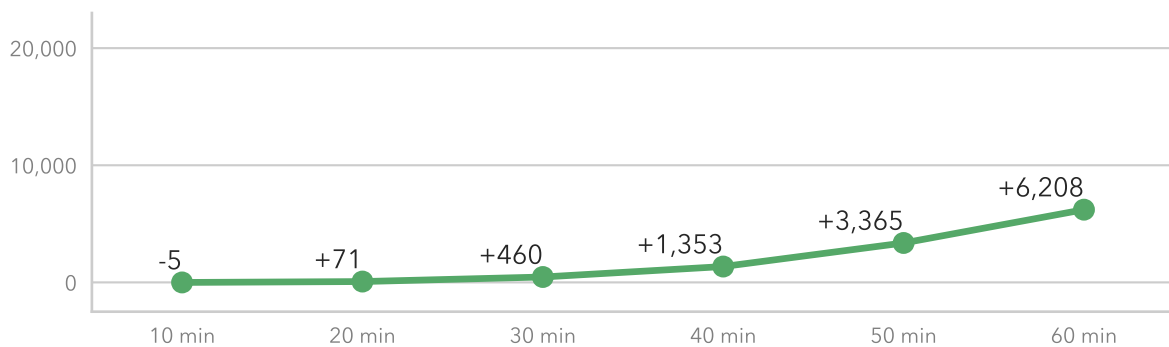
Rank by Weighted Accessibility	28
Rank by Total Employment	43
Rank by 1-Year Change in Weighted Accessibility	9
1-Year Change in Weighted Accessibility	+6.44%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	628,101
Average Job Density (per km ²)	160
Total Workers	586,840
Average Worker Density (per km ²)	150

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Hartford

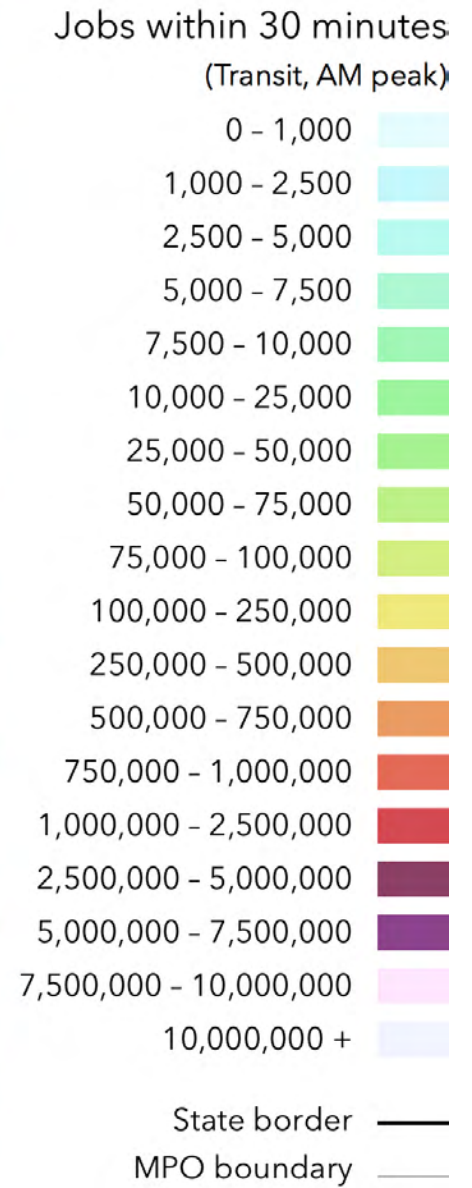
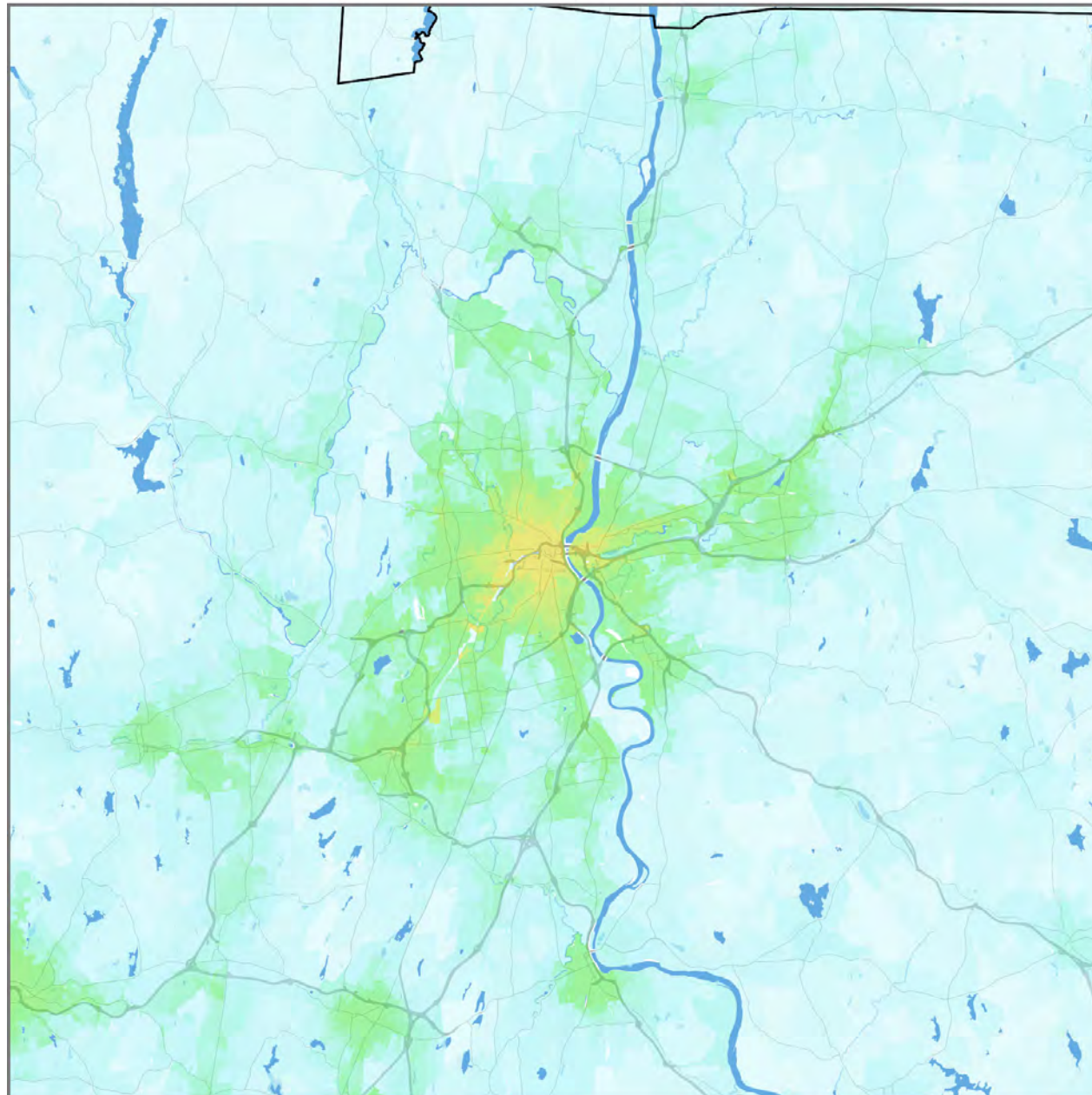
Hartford-West Hartford-East Hartford, CT

Transit Schedules Included

Agency	Dates
CTTransit- Hartford	December 13, 2015 - March 26, 2016
CTTransit- New Britain-Bristol	July 12, 2015 - November 19, 2016
CTTransit- Waterbury	October 24, 2011 - June 30, 2016
PVTA	October 5, 2015 - September 5, 2016
Shore Line East	November 2, 2015 - May 3, 2016

Hartford

Hartford-West Hartford-East Hartford, CT



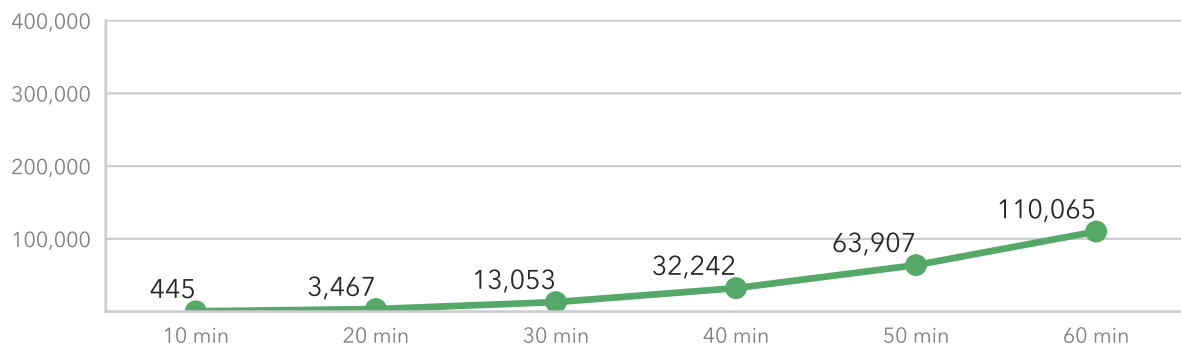
Houston

Houston-Sugar Land-Baytown, TX

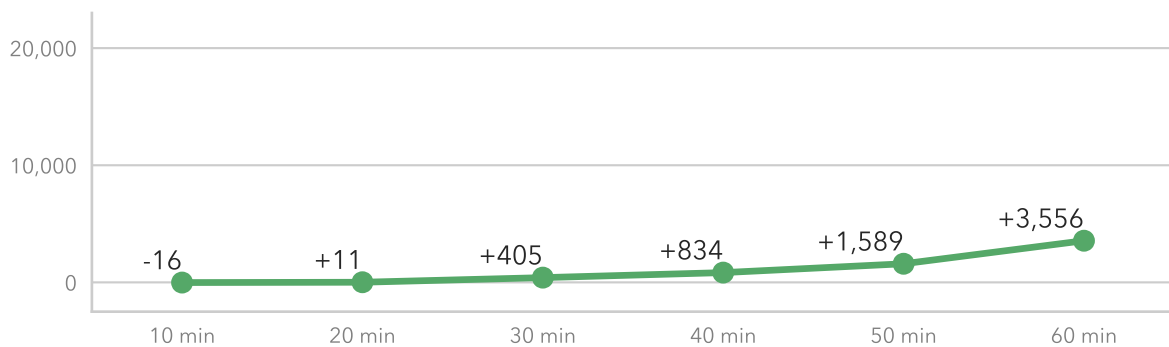
Rank by Weighted Accessibility	17
Rank by Total Employment	5
Rank by 1-Year Change in Weighted Accessibility	29
1-Year Change in Weighted Accessibility	+2.44%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	2,889,420
Average Job Density (per km ²)	126
Total Workers	2,787,374
Average Worker Density (per km ²)	122

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Houston

Houston-Sugar Land-Baytown, TX

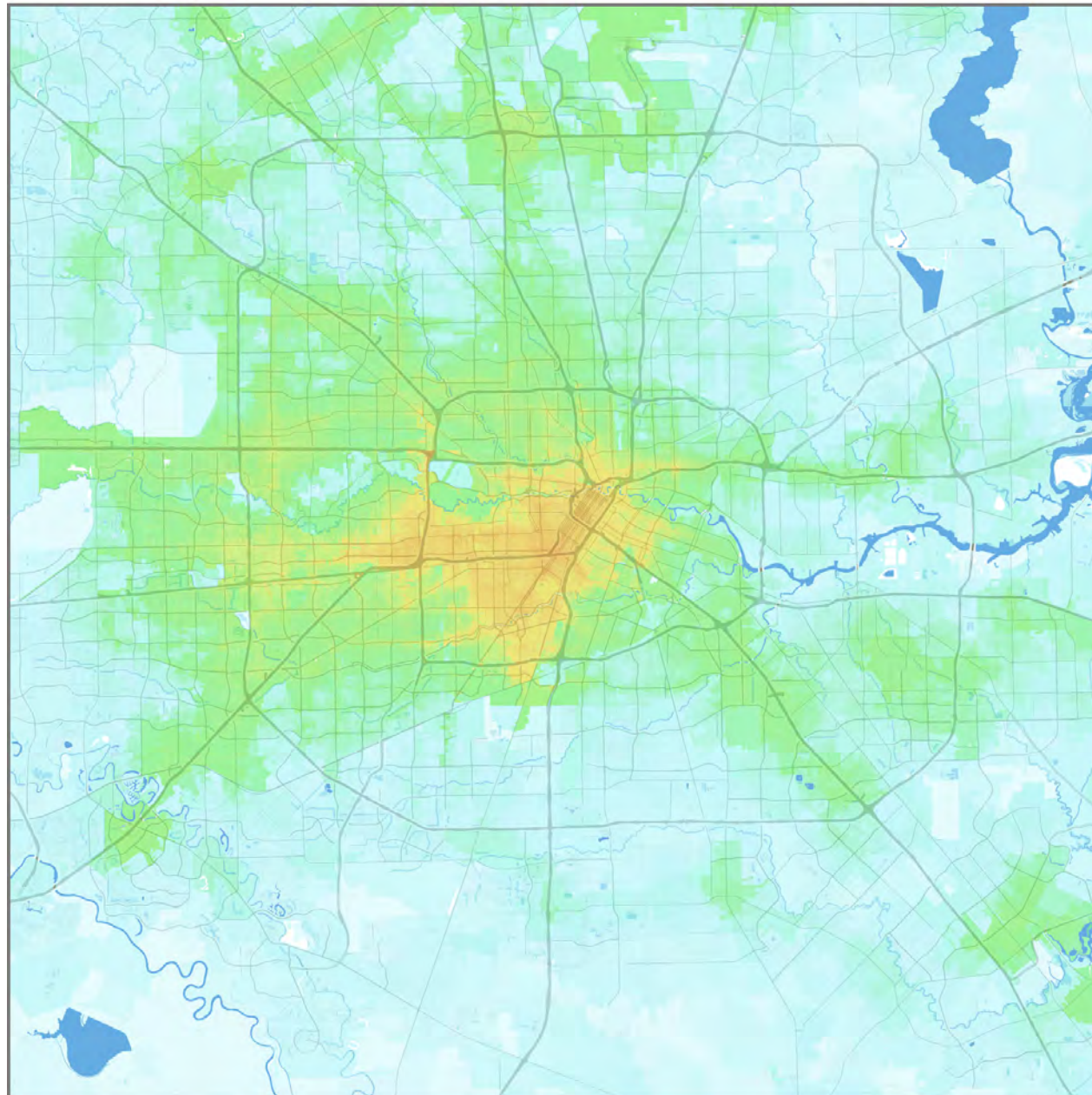
Transit Schedules Included

Agency	Dates
Metropolitan Transit Authority of Harris County	August 16, 2015 - January 23, 2016

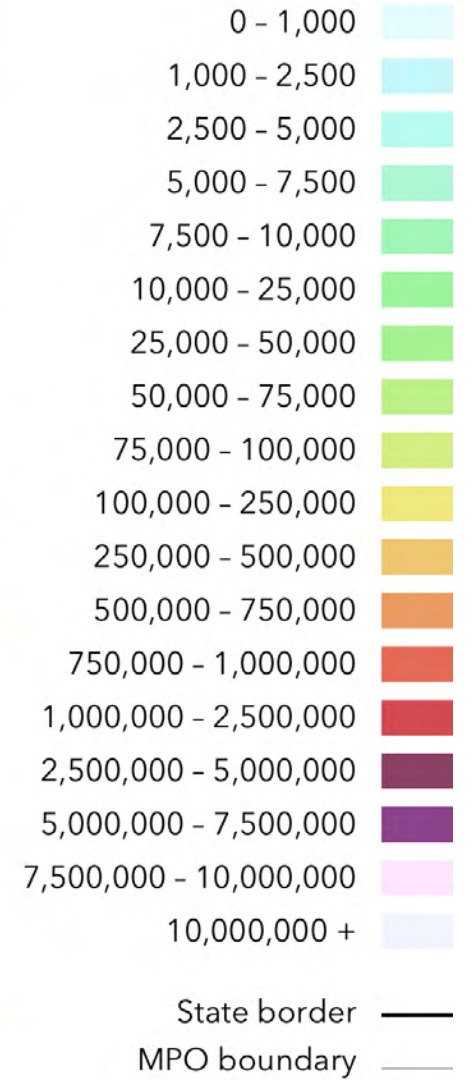
Houston

Houston-Sugar Land-Baytown, TX

60



Jobs within 30 minutes
(Transit, AM peak)



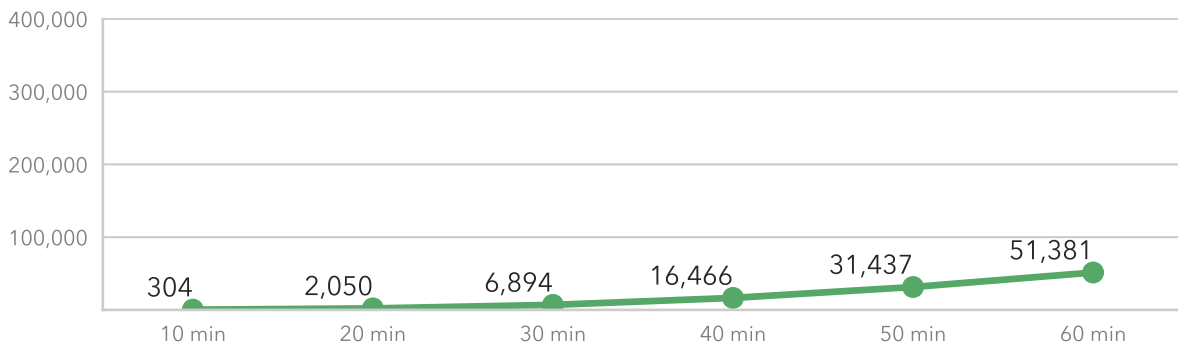
Indianapolis

Indianapolis-Carmel, IN

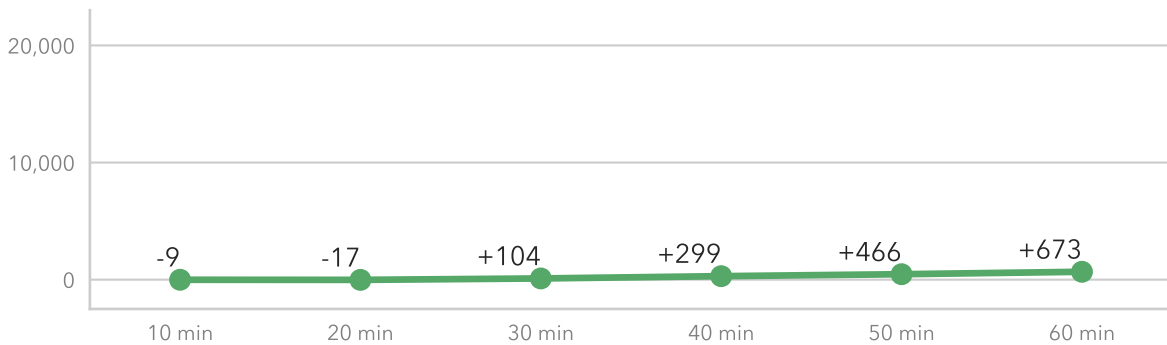
Rank by Weighted Accessibility	37
Rank by Total Employment	34
Rank by 1-Year Change in Weighted Accessibility	34
1-Year Change in Weighted Accessibility	+1.04%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	945,277
Average Job Density (per km ²)	95
Total Workers	857,553
Average Worker Density (per km ²)	86

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Indianapolis

Indianapolis-Carmel, IN

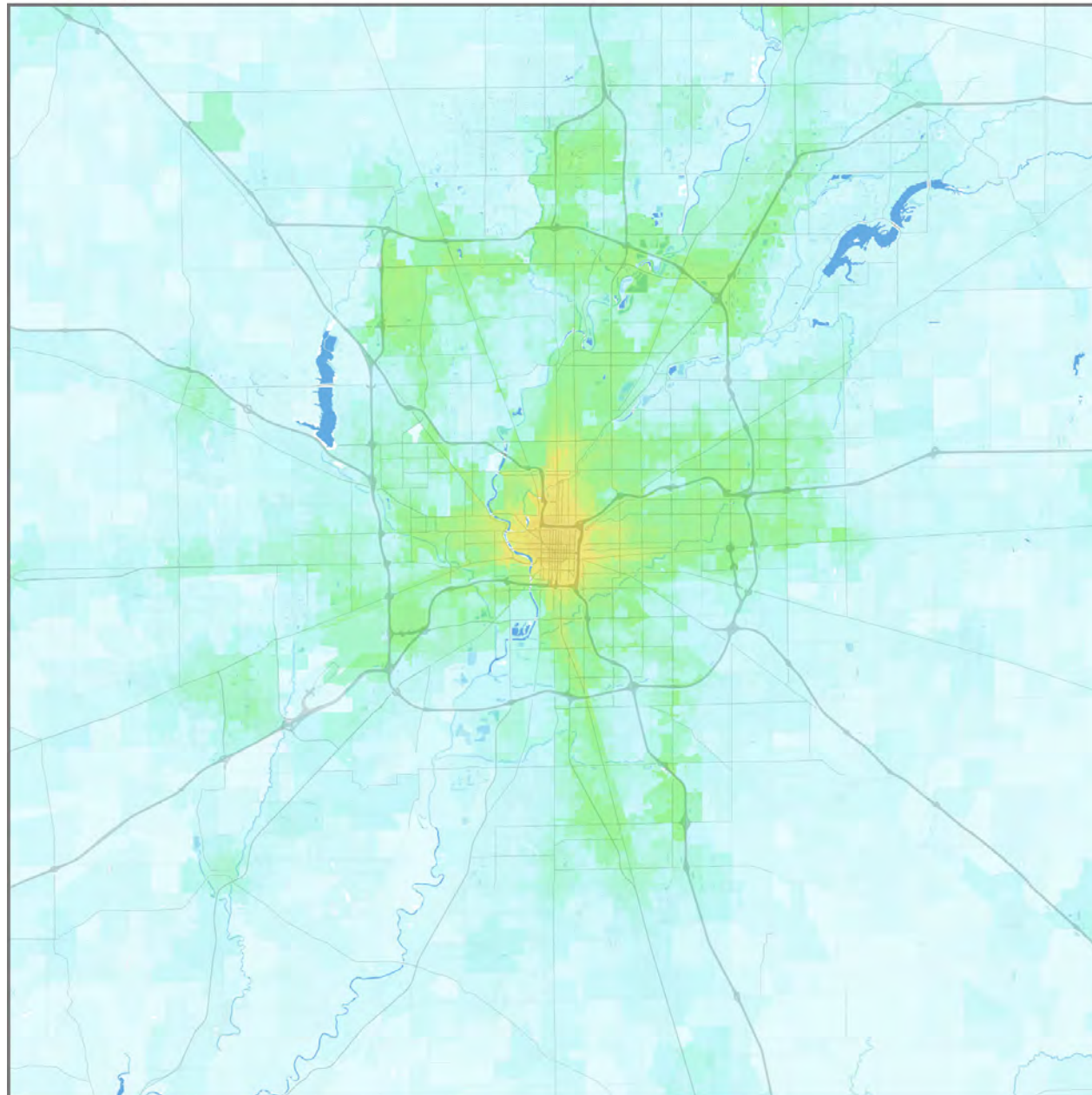
Transit Schedules Included

Agency	Dates
IndyGo	September 30, 2015 - February 13, 2016

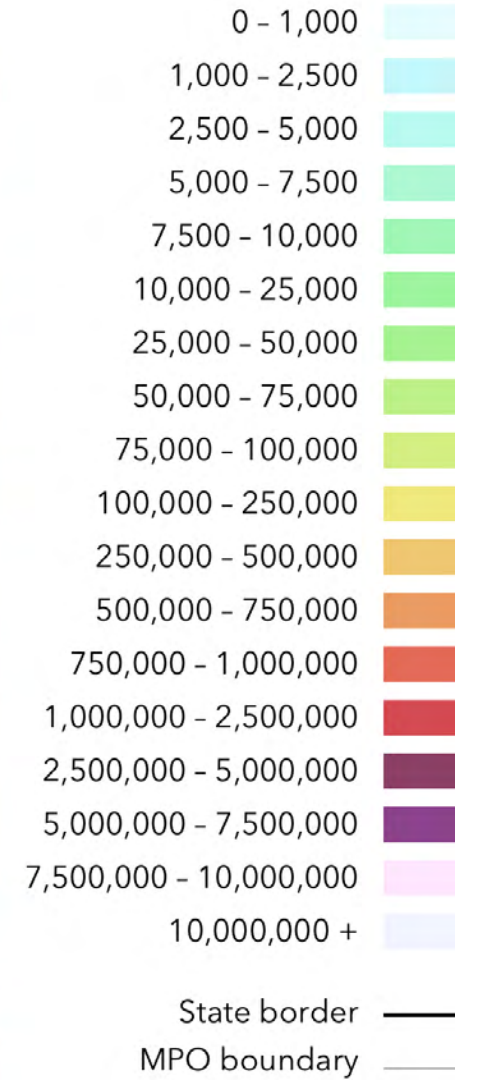
Indianapolis

Indianapolis-Carmel, IN

63



Jobs within 30 minutes
(Transit, AM peak)



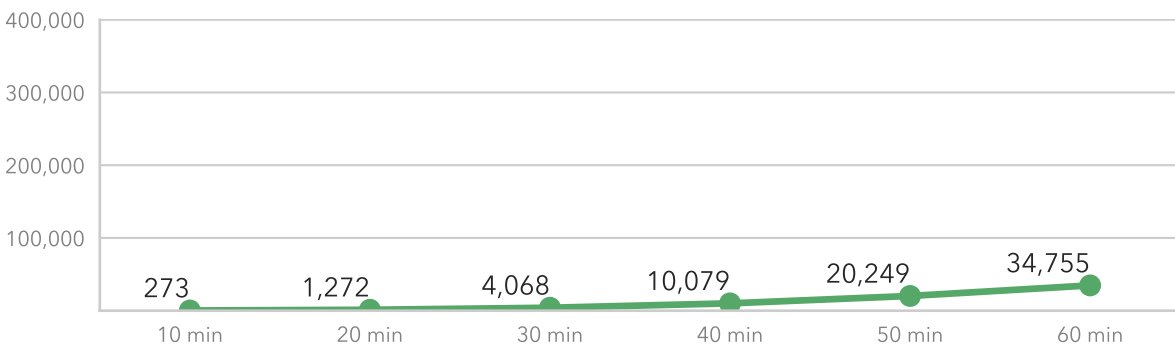
Jacksonville

Jacksonville, FL

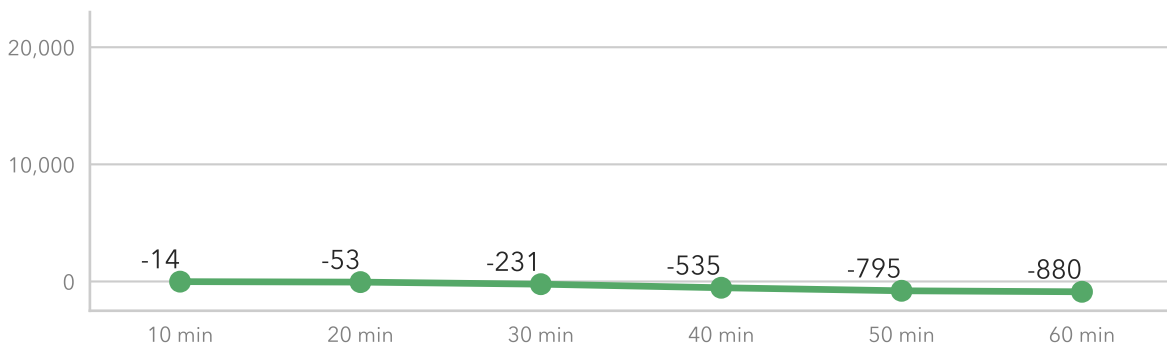
Rank by Weighted Accessibility	47
Rank by Total Employment	41
Rank by 1-Year Change in Weighted Accessibility	46
1-Year Change in Weighted Accessibility	-4.09%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	648,060
Average Job Density (per km ²)	78
Total Workers	608,290
Average Worker Density (per km ²)	73

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Jacksonville

Jacksonville, FL

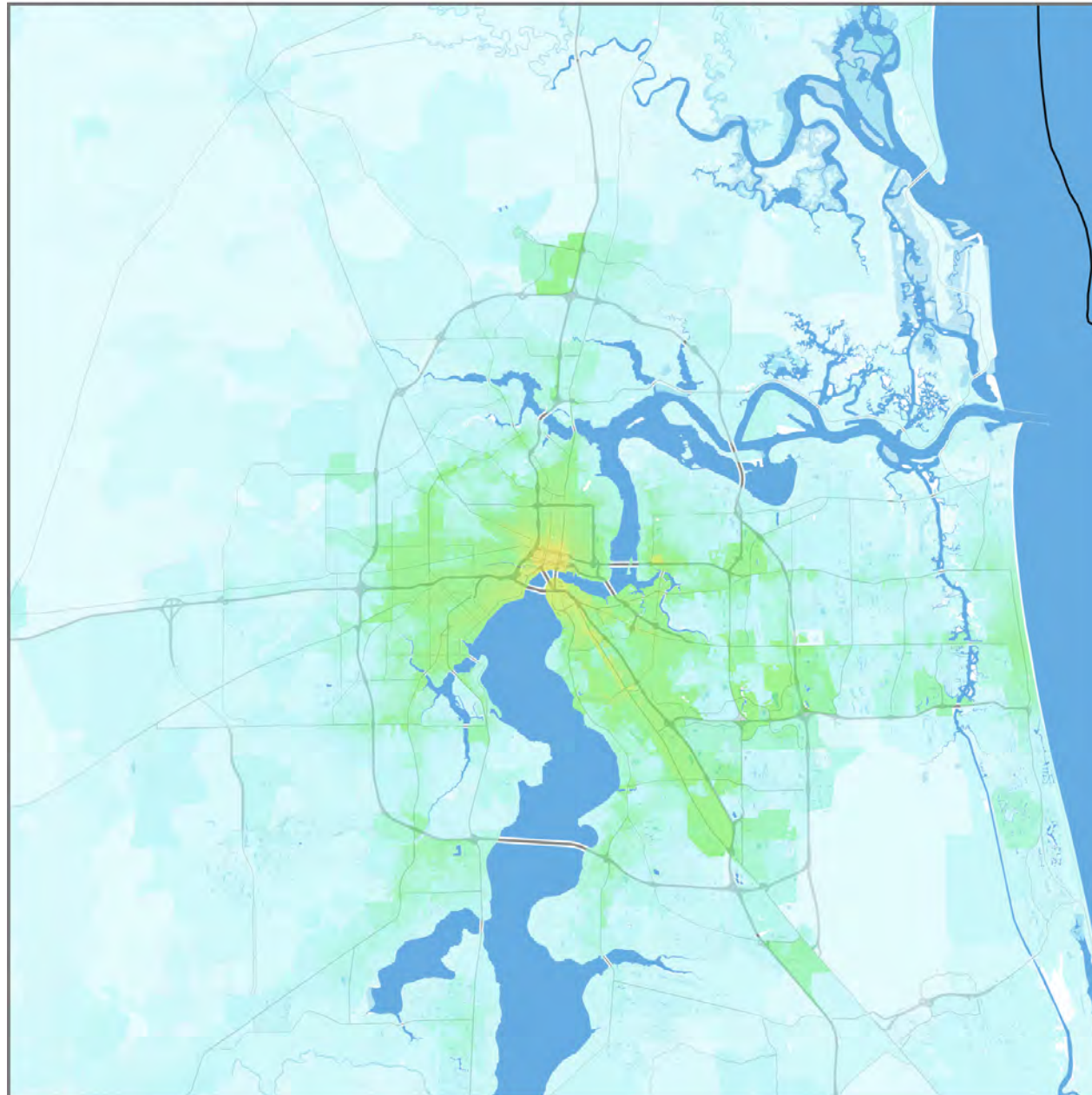
Transit Schedules Included

Agency	Dates
Jacksonville Transportation Authority	November 19, 2015 - April 3, 2016
Sunshine Bus Company	July 1, 2015 - July 1, 2017

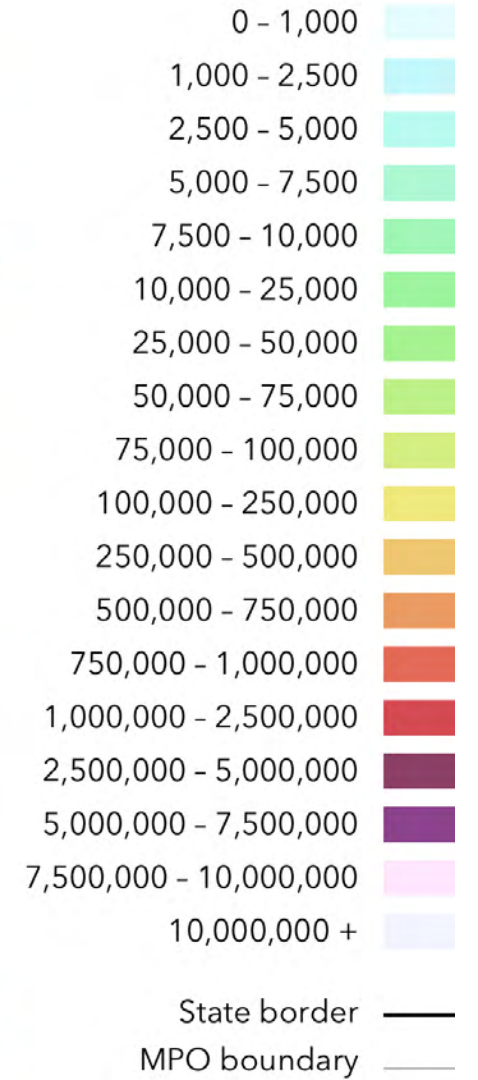
Jacksonville

Jacksonville, FL

99



Jobs within 30 minutes
(Transit, AM peak)



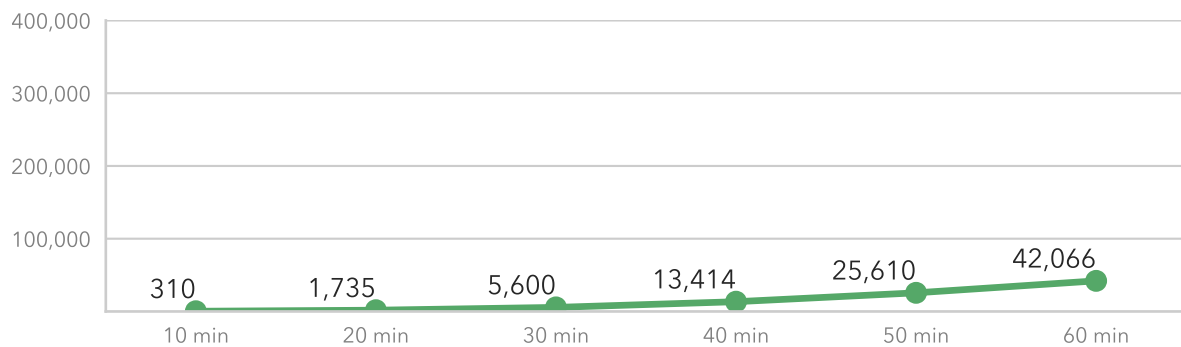
Kansas City

Kansas City, MO-KS

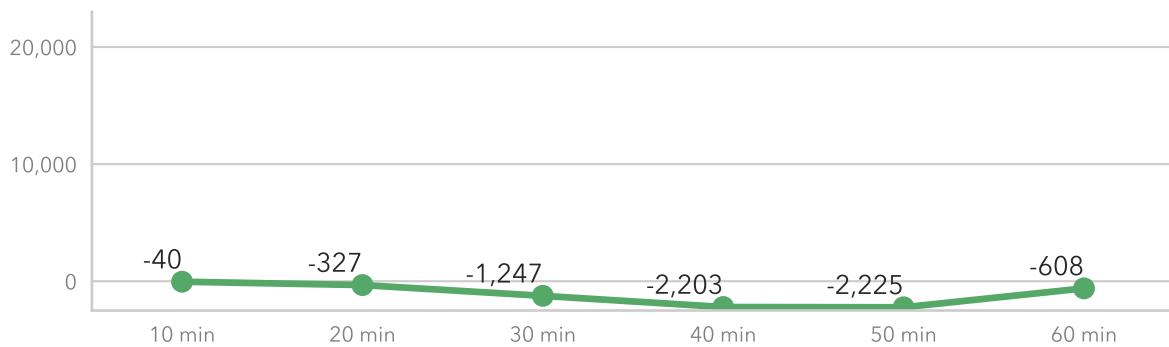
Rank by Weighted Accessibility	40
Rank by Total Employment	26
Rank by 1-Year Change in Weighted Accessibility	49
1-Year Change in Weighted Accessibility	-11.30%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	1,021,022
Average Job Density (per km ²)	50
Total Workers	1,000,894
Average Worker Density (per km ²)	49

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Kansas City

Kansas City, MO-KS

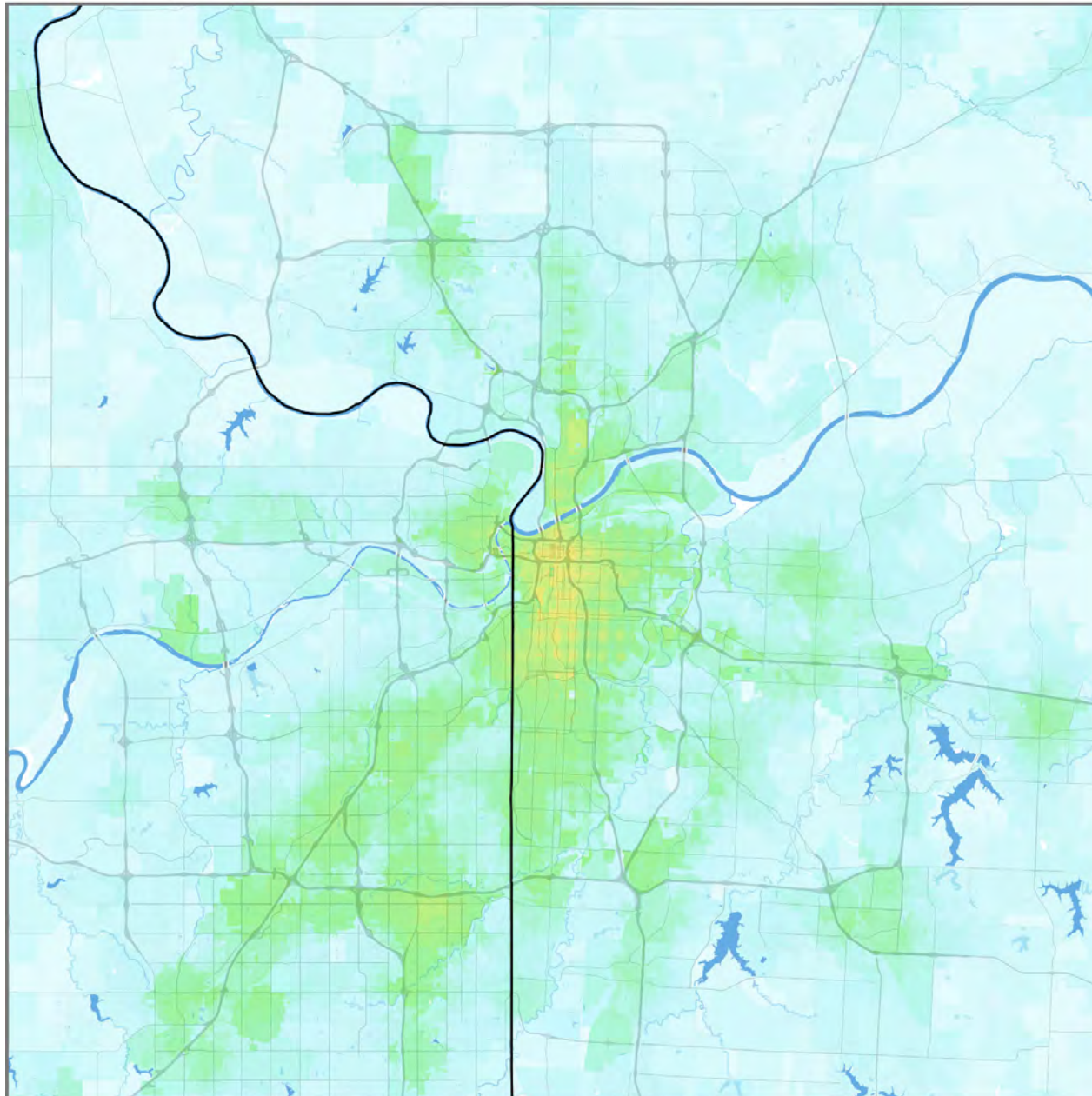
Transit Schedules Included

Agency	Dates
KCATA	September 15, 2015 - April 2, 2016
The JO	January 1, 2013 - May 31, 2019

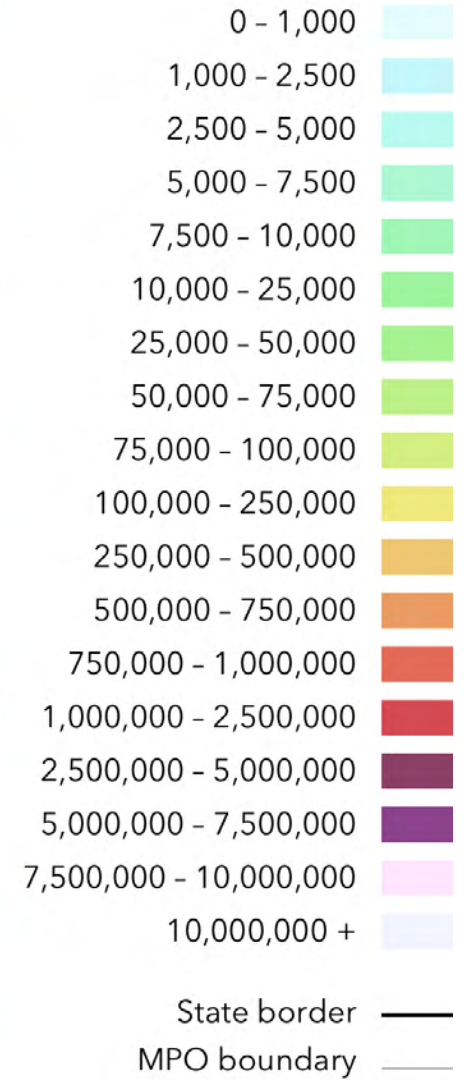
Kansas City

Kansas City, MO-KS

69



Jobs within 30 minutes
(Transit, AM peak)



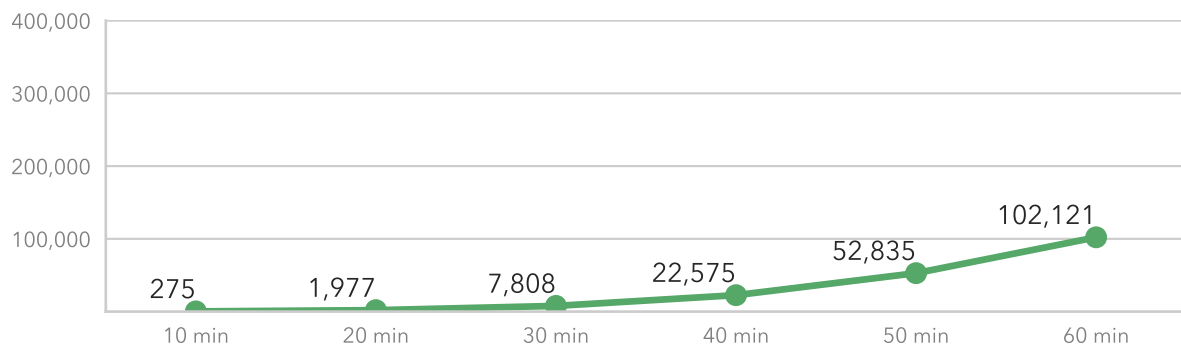
Las Vegas

Las Vegas-Paradise, NV

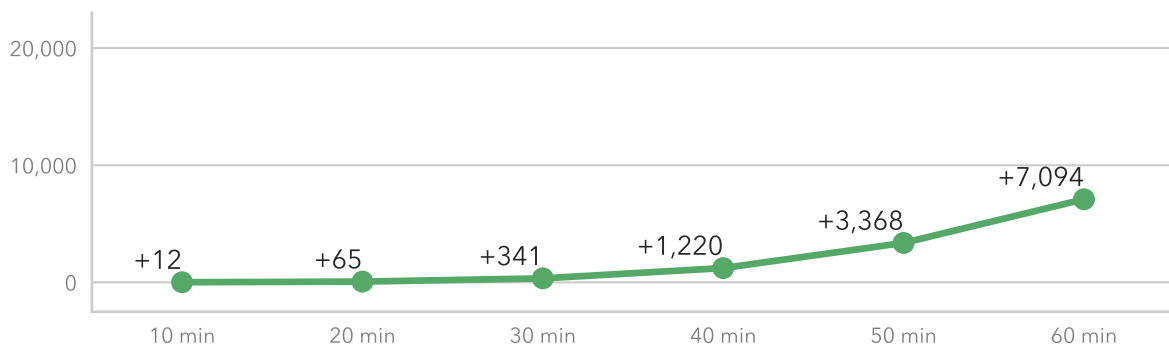
Rank by Weighted Accessibility	24
Rank by Total Employment	33
Rank by 1-Year Change in Weighted Accessibility	11
1-Year Change in Weighted Accessibility	+6.10%
1-Year Change in Weighted Accessibility Rank	+2
Total Jobs	874,555
Average Job Density (per km ²)	43
Total Workers	859,408
Average Worker Density (per km ²)	42

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Las Vegas

Las Vegas-Paradise, NV

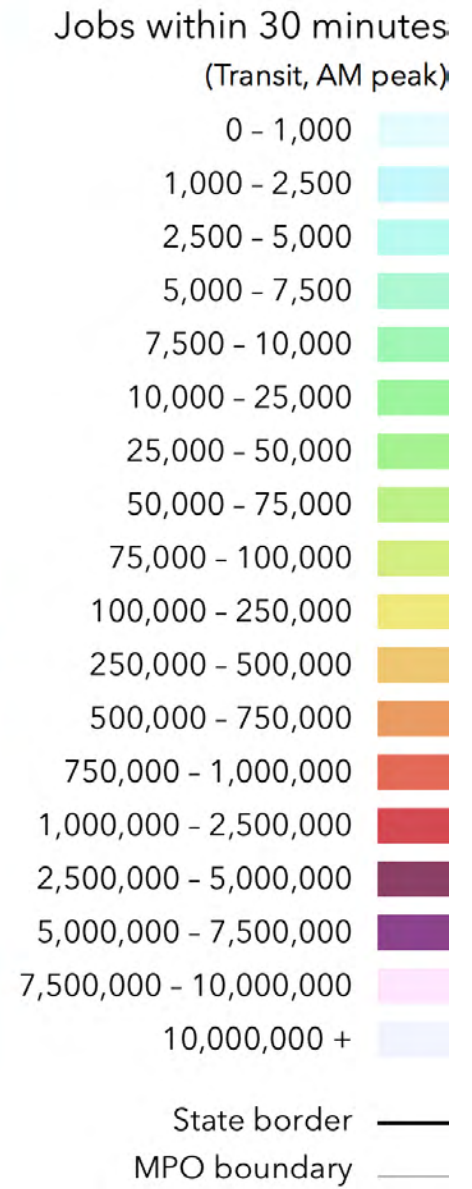
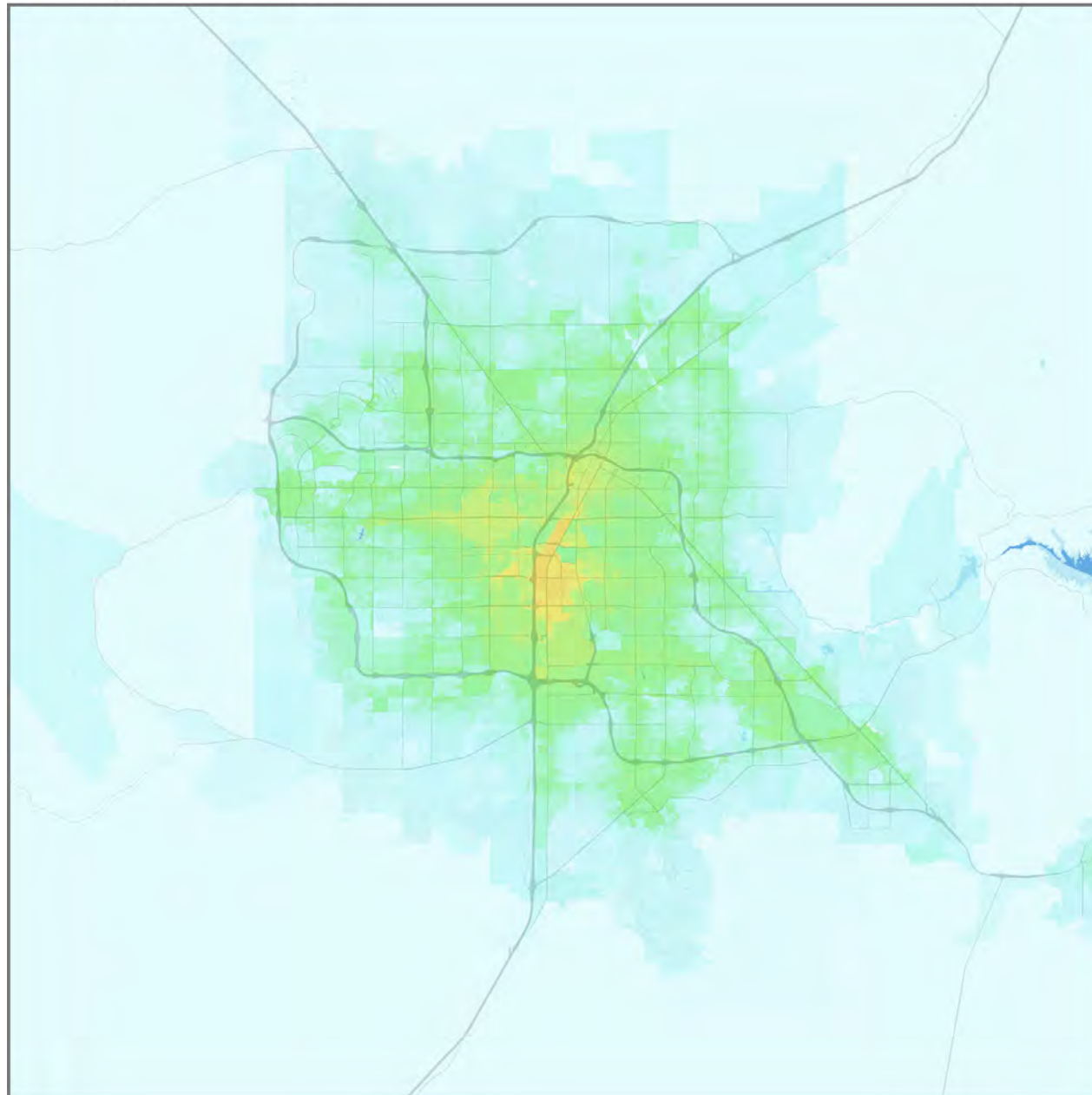
Transit Schedules Included

Agency	Dates
Regional Transportation Commission of Southern Nevada	November 8, 2015 - November 12, 2016

Las Vegas

Las Vegas-Paradise, NV

72



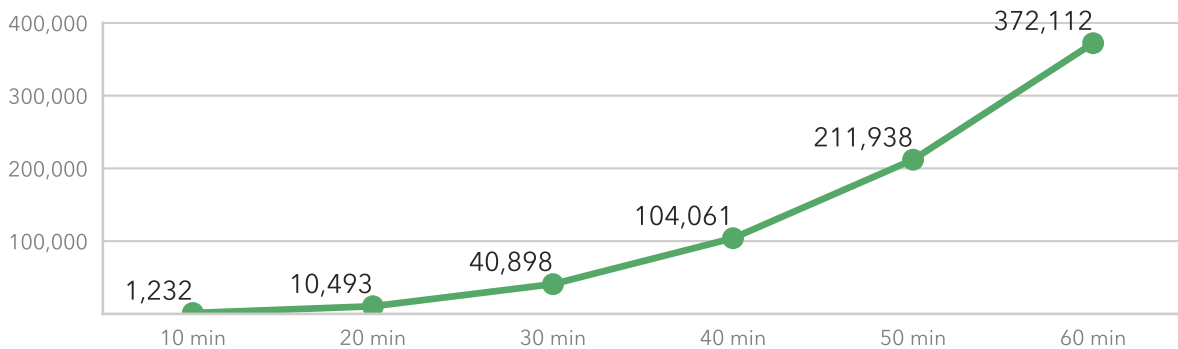
Los Angeles

Los Angeles-Long Beach-Santa Ana, CA

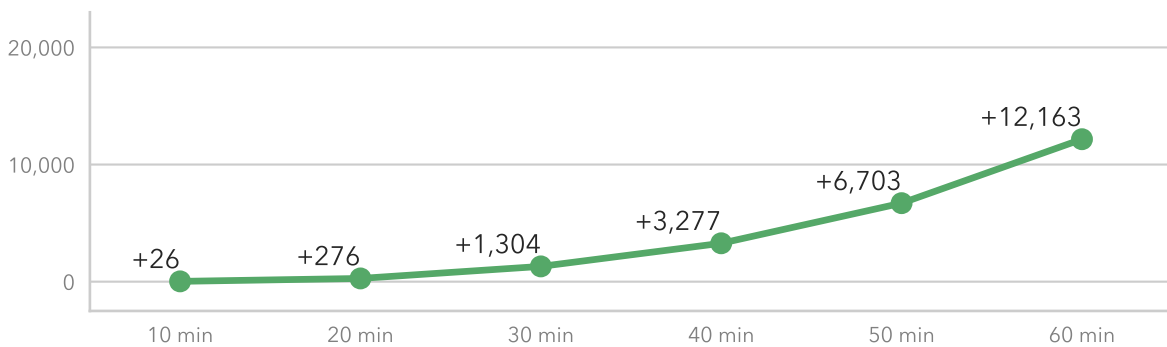
Rank by Weighted Accessibility	5
Rank by Total Employment	2
Rank by 1-Year Change in Weighted Accessibility	21
1-Year Change in Weighted Accessibility	+3.21%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	5,903,874
Average Job Density (per km ²)	470
Total Workers	5,497,078
Average Worker Density (per km ²)	438

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Los Angeles

Los Angeles-Long Beach-Santa Ana, CA

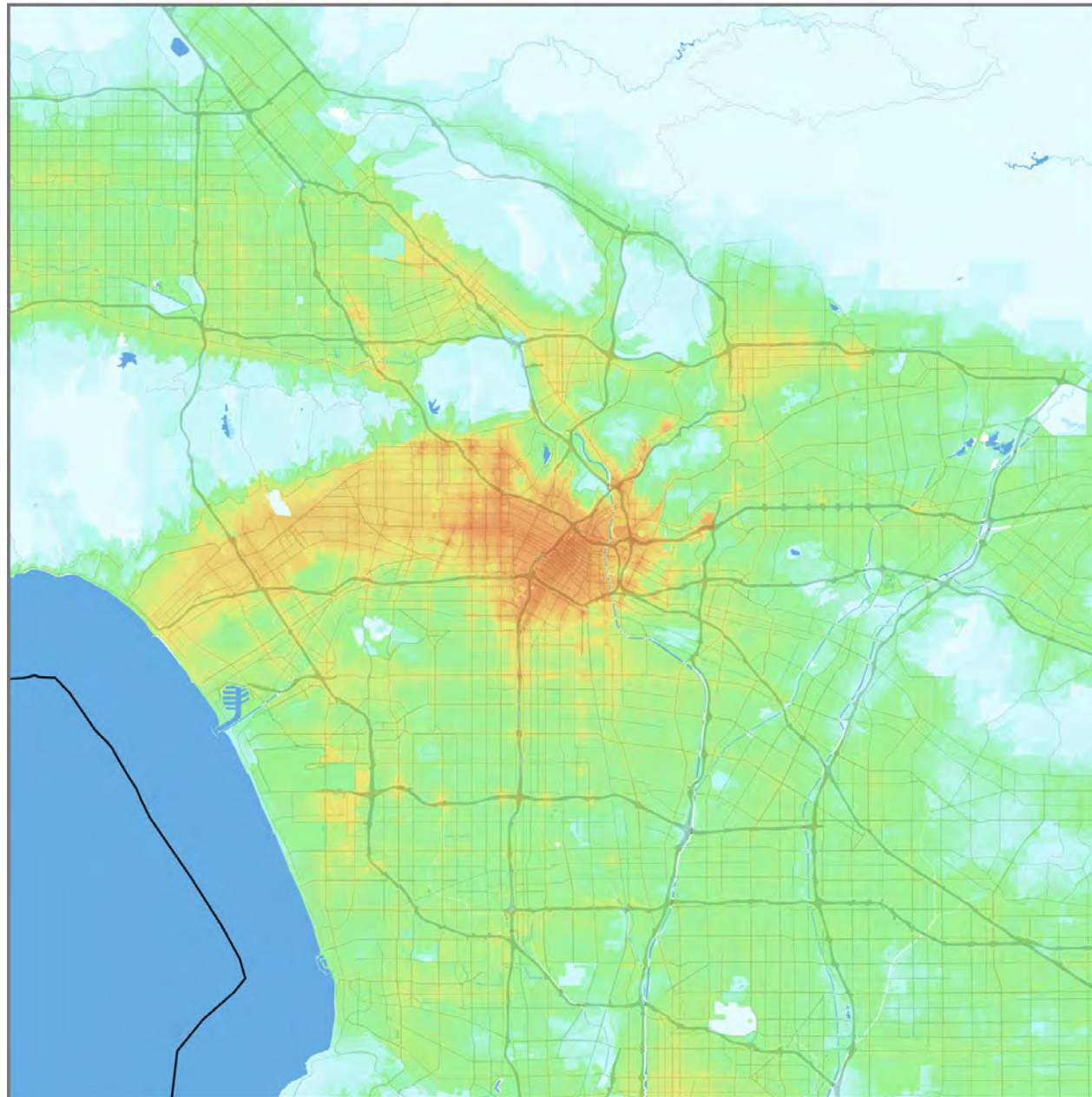
Transit Schedules Included

Agency	Dates
Anaheim Resort Transportation	January 1, 2015 - January 1, 2017
Big Blue Bus	February 4, 2014 - June 14, 2016
Culver CityBus	December 3, 2015 - May 15, 2016
Eastern Sierra Transit Authority	January 1, 2012 - January 1, 2017
Foothill Transit	July 12, 2015 - January 31, 2016
Glendale Beeline	October 19, 2015 - November 1, 2016
Irvine Shuttle	June 10, 2013 - December 31, 2015
Kern Transit	January 5, 2015 - January 1, 2017
LADOT	May 1, 2015 - December 25, 2016
Laguna Beach Transit	January 1, 2013 - January 1, 2017
Long Beach Transit	August 23, 2015 - February 6, 2016
Metro - Los Angeles	December 13, 2015 - July 2, 2016
Metrolink Trains	October 5, 2015 - December 1, 2016
OMNITRANS	January 4, 2016 - September 4, 2016
Orange County Transportation Authority	October 11, 2015 - June 10, 2016
Palos Verdes Peninsula Transit Authority	January 2, 2015 - January 1, 2017
Riverside Transit Agency	January 10, 2016 - May 7, 2016
Thousand Oaks Transit	August 15, 2013 - August 15, 2016
Torrance Transit	November 2, 2014 - October 2, 2016

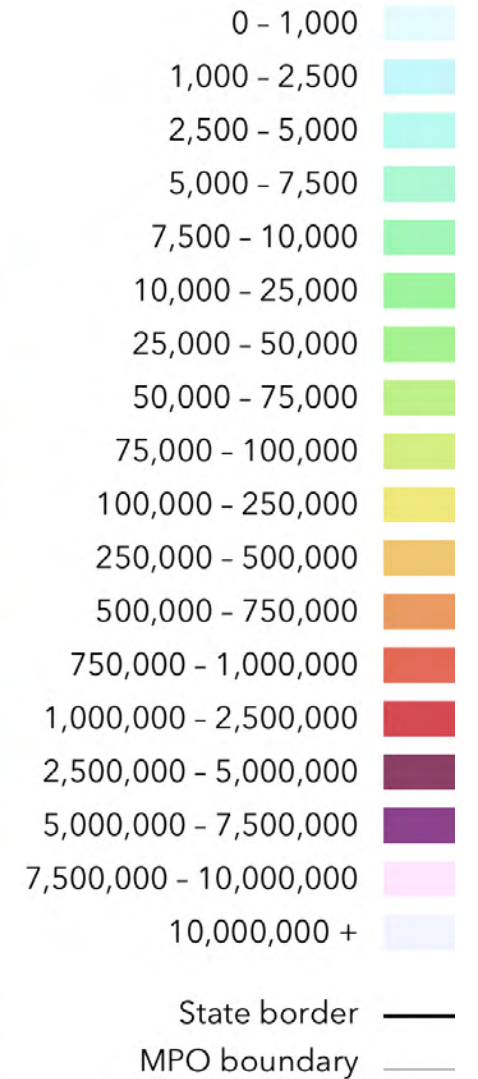
Los Angeles

Los Angeles-Long Beach-Santa Ana, CA

75



Jobs within 30 minutes
(Transit, AM peak)



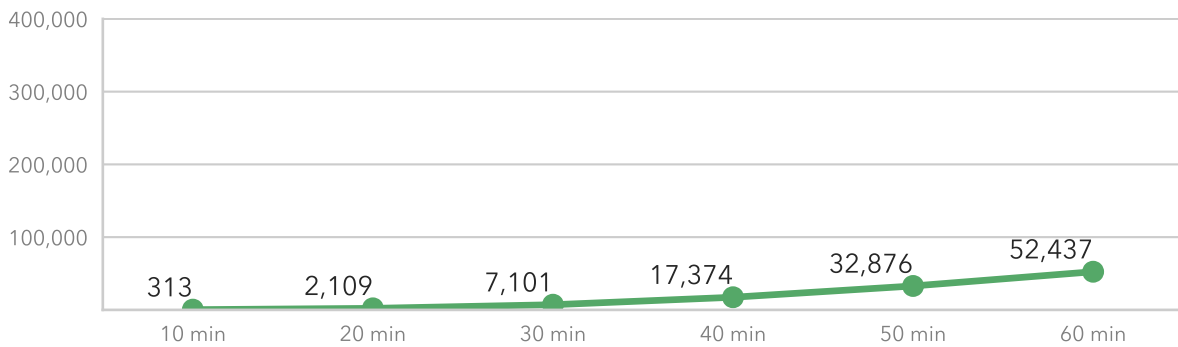
Louisville

Louisville/Jefferson County, KY-IN

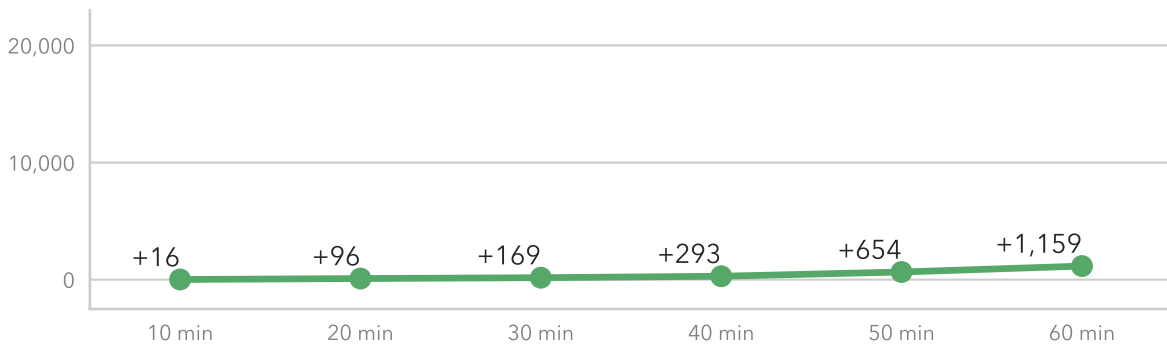
Rank by Weighted Accessibility	34
Rank by Total Employment	40
Rank by 1-Year Change in Weighted Accessibility	28
1-Year Change in Weighted Accessibility	+2.58%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	634,076
Average Job Density (per km ²)	60
Total Workers	615,025
Average Worker Density (per km ²)	58

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Louisville

Louisville/Jefferson County, KY-IN

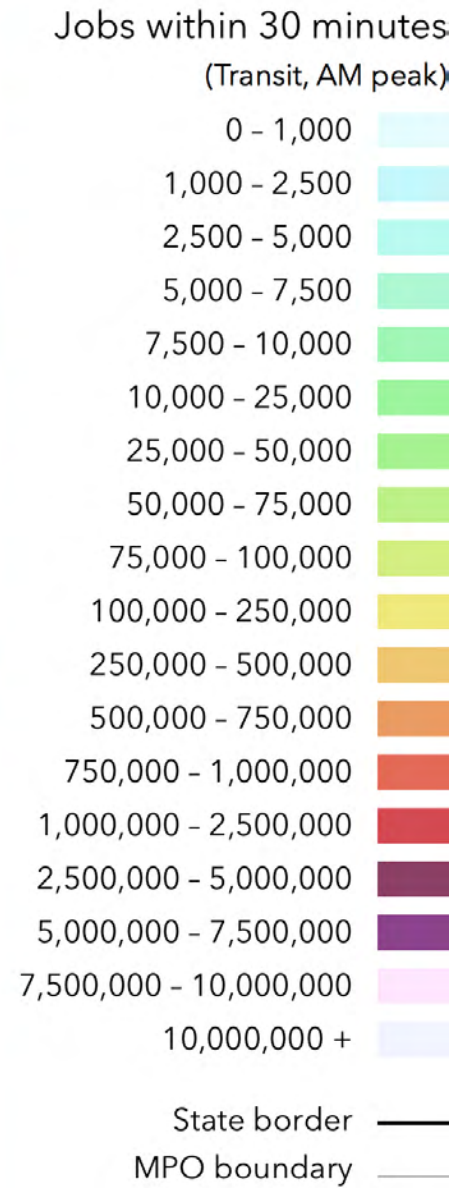
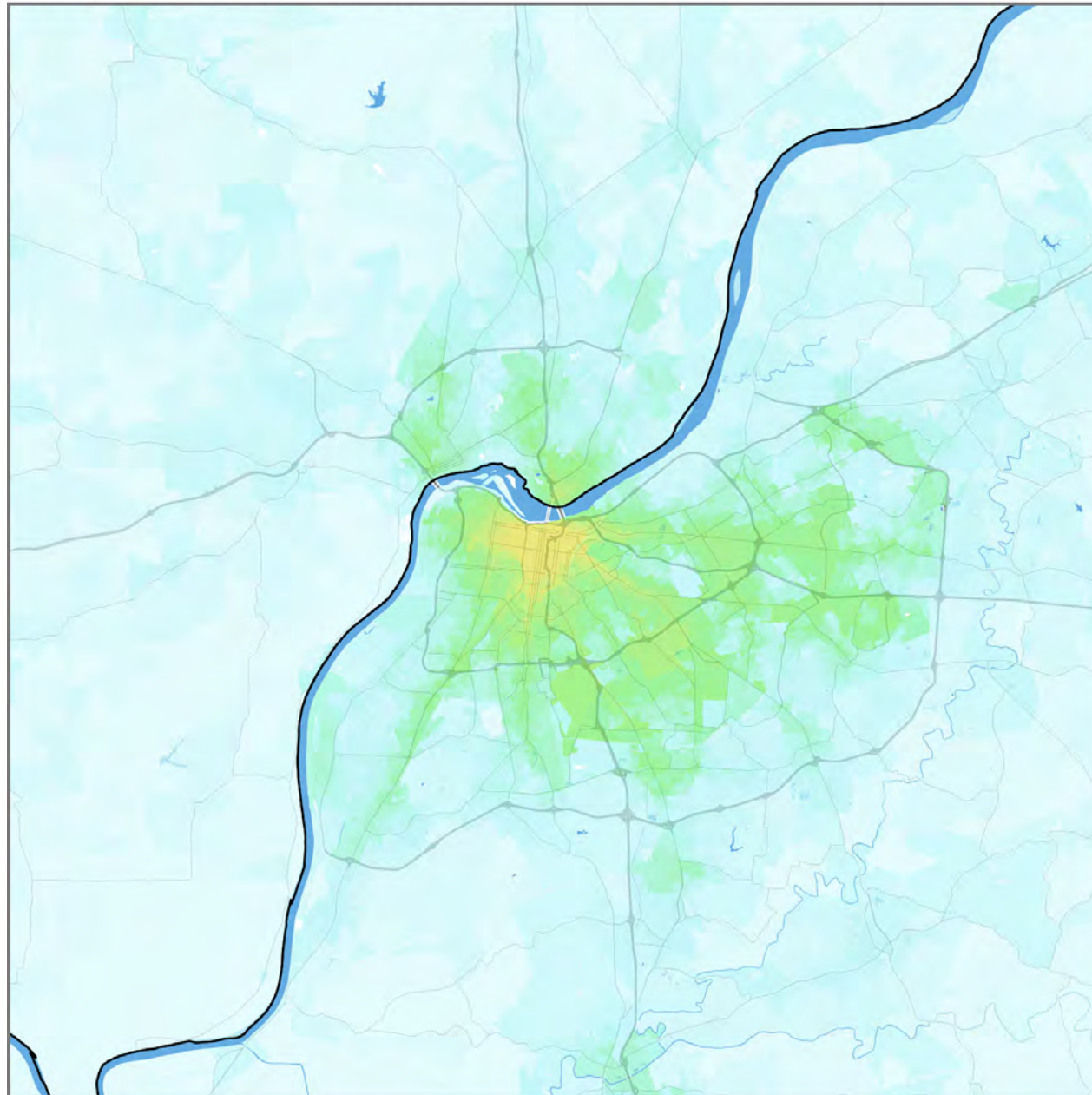
Transit Schedules Included

Agency	Dates
Transit Authority of River City	August 12, 2015 - February 28, 2016

Louisville

Louisville/Jefferson County, KY-IN

78



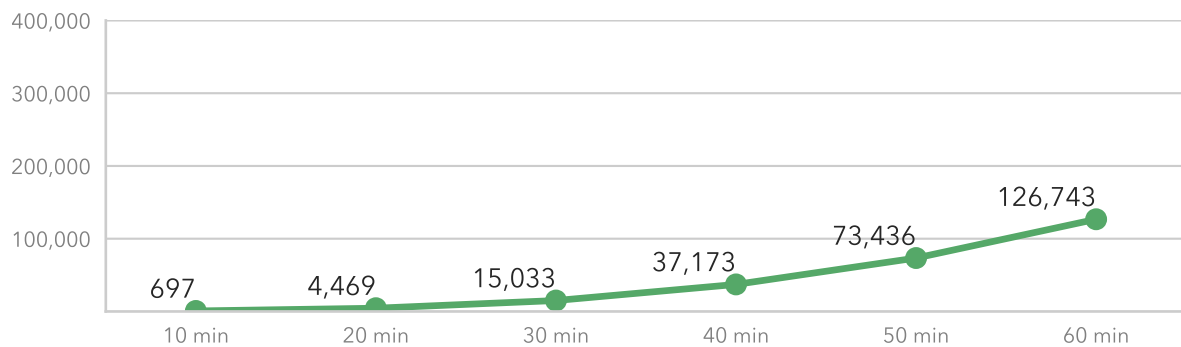
Miami

Miami-Fort Lauderdale-Pompano Beach, FL

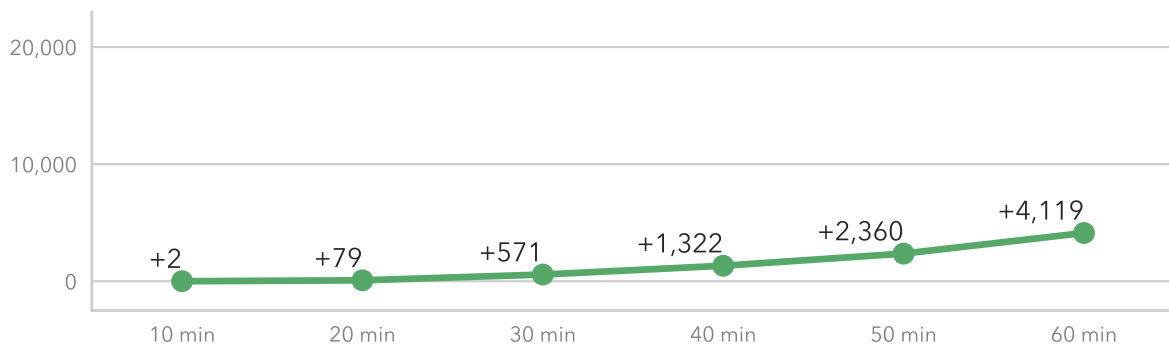
Rank by Weighted Accessibility	16
Rank by Total Employment	10
Rank by 1-Year Change in Weighted Accessibility	22
1-Year Change in Weighted Accessibility	+3.20%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	2,370,087
Average Job Density (per km ²)	180
Total Workers	2,330,045
Average Worker Density (per km ²)	177

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Miami

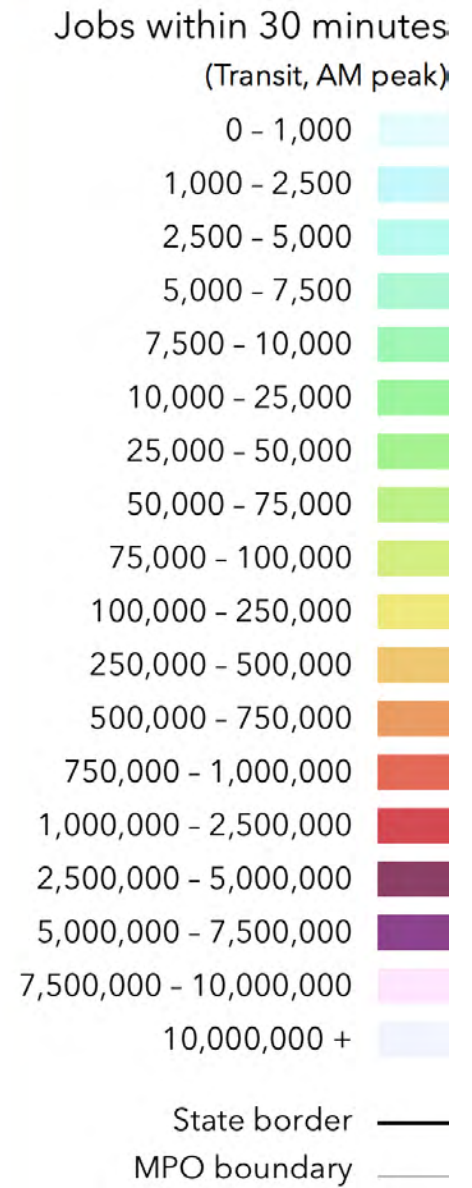
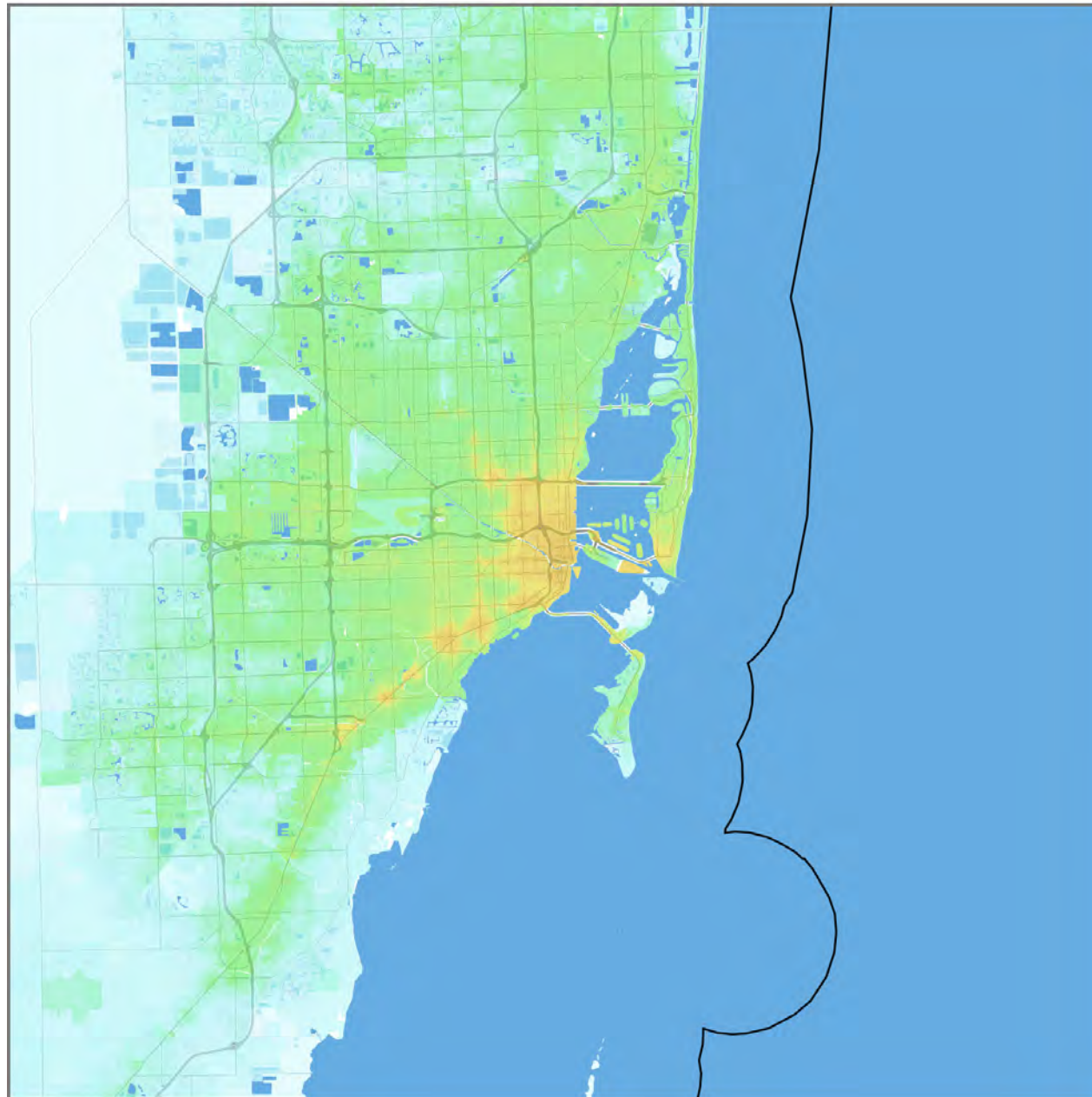
Miami-Fort Lauderdale-Pompano Beach, FL

Transit Schedules Included

Agency	Dates
Broward County Transit	December 13, 2015 - June 18, 2016
Miami Dade Transit	March 29, 2015 - December 31, 2015
Palm Tran	May 3, 2015 - December 31, 2016
SFRTA/Tri-Rail	April 20, 2012 - December 31, 2015

Miami

Miami-Fort Lauderdale-Pompano Beach, FL



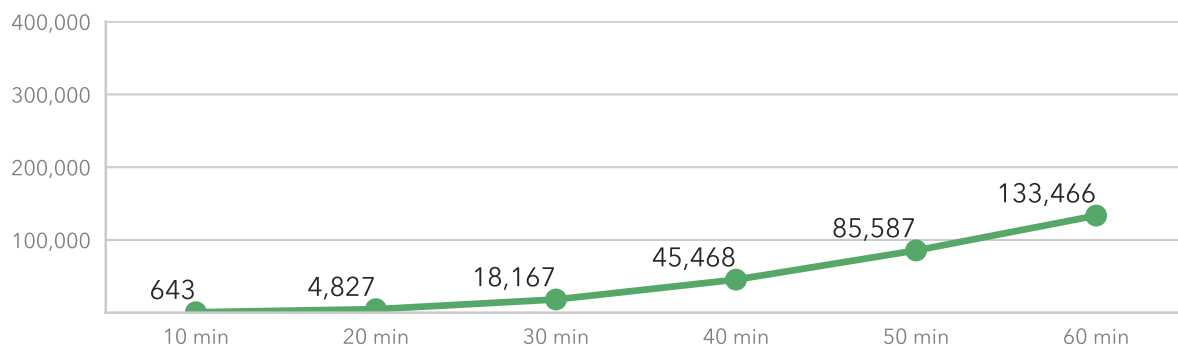
Milwaukee

Milwaukee-Waukesha-West Allis, WI

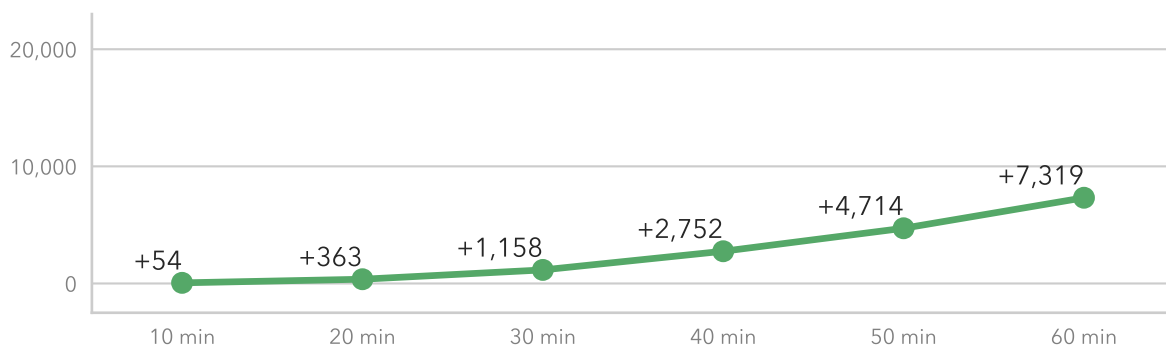
Rank by Weighted Accessibility	12
Rank by Total Employment	37
Rank by 1-Year Change in Weighted Accessibility	8
1-Year Change in Weighted Accessibility	+6.53%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	835,310
Average Job Density (per km ²)	222
Total Workers	756,910
Average Worker Density (per km ²)	201

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Milwaukee

Milwaukee-Waukesha-West Allis, WI

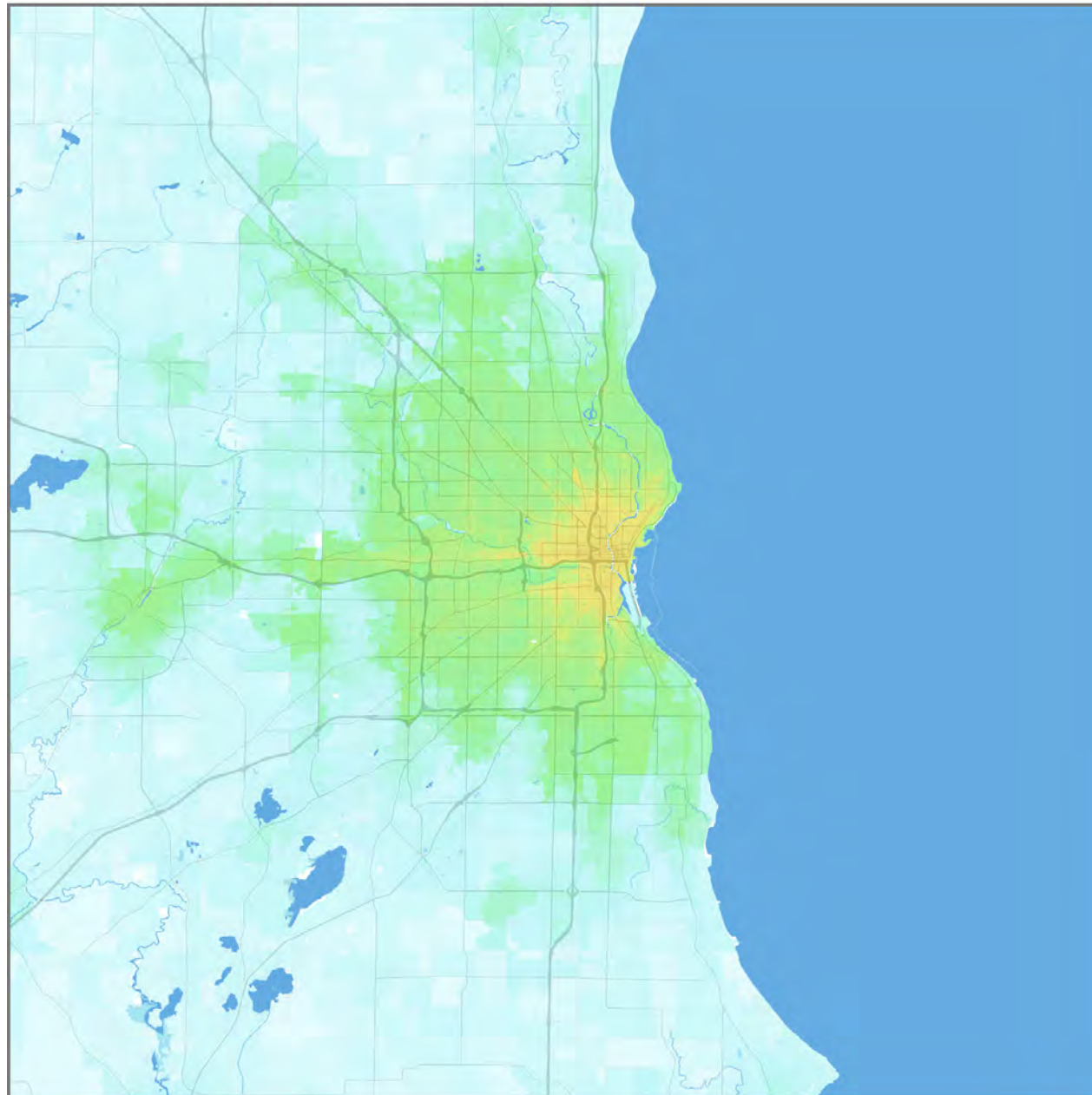
Transit Schedules Included

Agency	Dates
Milwaukee County Transit System	January 17, 2016 - March 20, 2016
Waukesha County Transit	November 1, 2014 - June 8, 2016

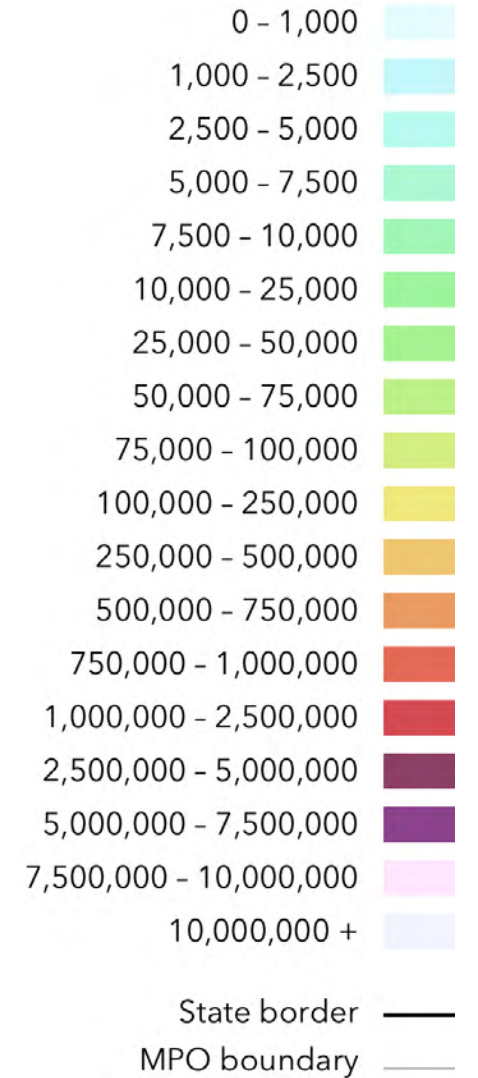
Milwaukee

Milwaukee-Waukesha-West Allis, WI

84



Jobs within 30 minutes
(Transit, AM peak)



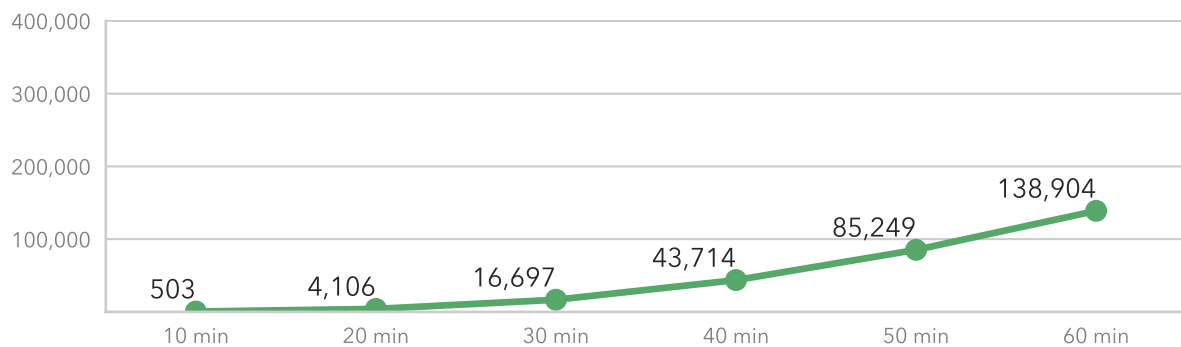
Minneapolis

Minneapolis-St. Paul-Bloomington, MN-WI

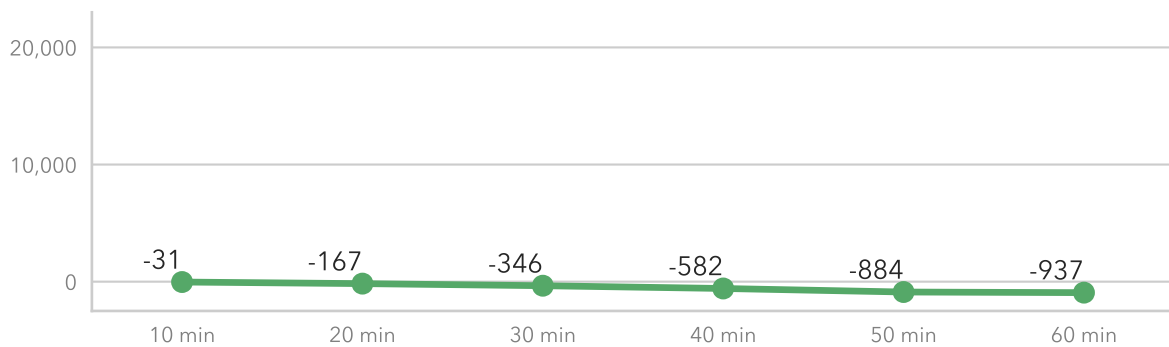
Rank by Weighted Accessibility	13
Rank by Total Employment	14
Rank by 1-Year Change in Weighted Accessibility	41
1-Year Change in Weighted Accessibility	-1.64%
1-Year Change in Weighted Accessibility Rank	-1
Total Jobs	1,792,445
Average Job Density (per km ²)	115
Total Workers	1,745,960
Average Worker Density (per km ²)	112

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Minneapolis

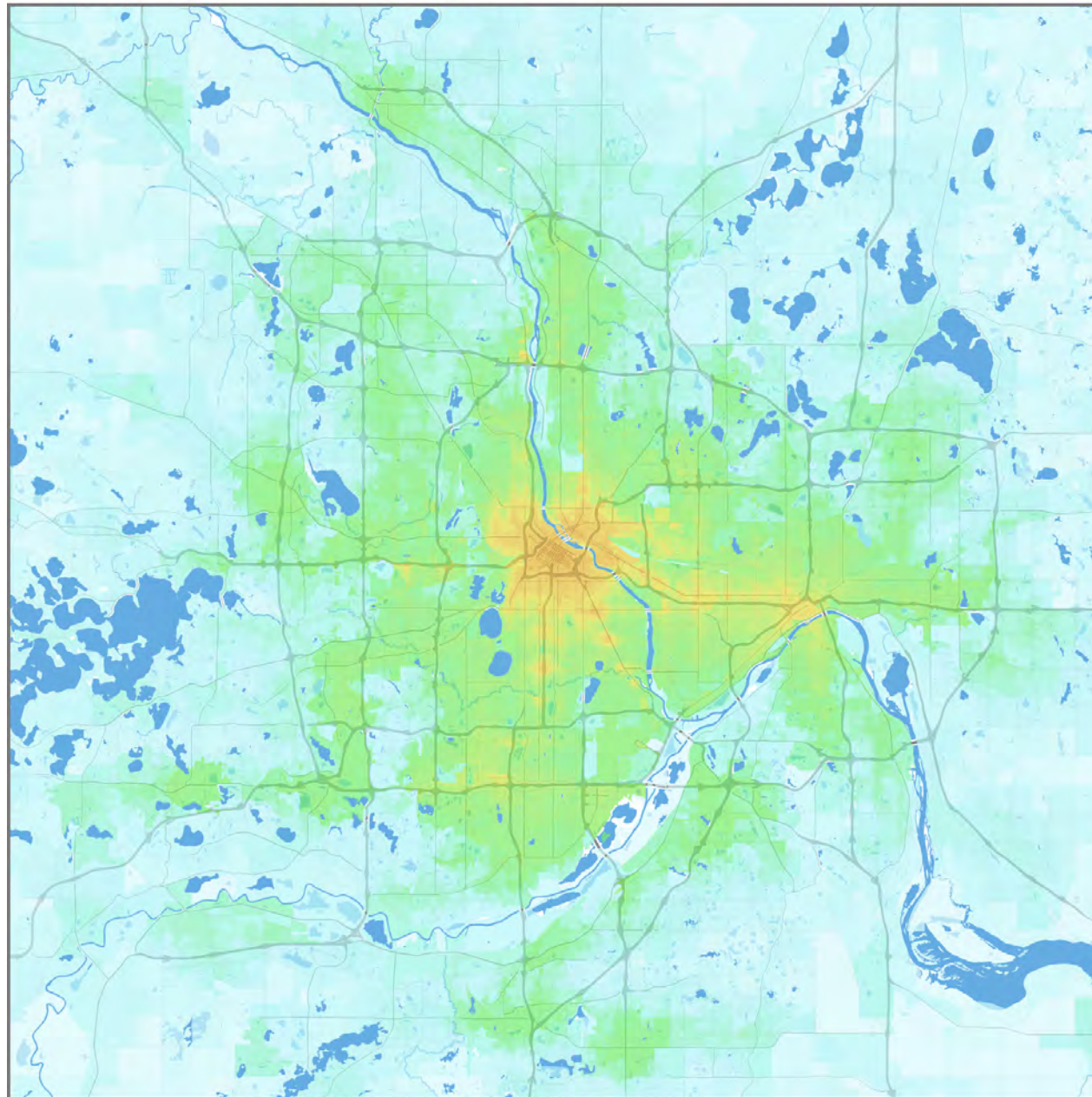
Minneapolis-St. Paul-Bloomington, MN-WI

Transit Schedules Included

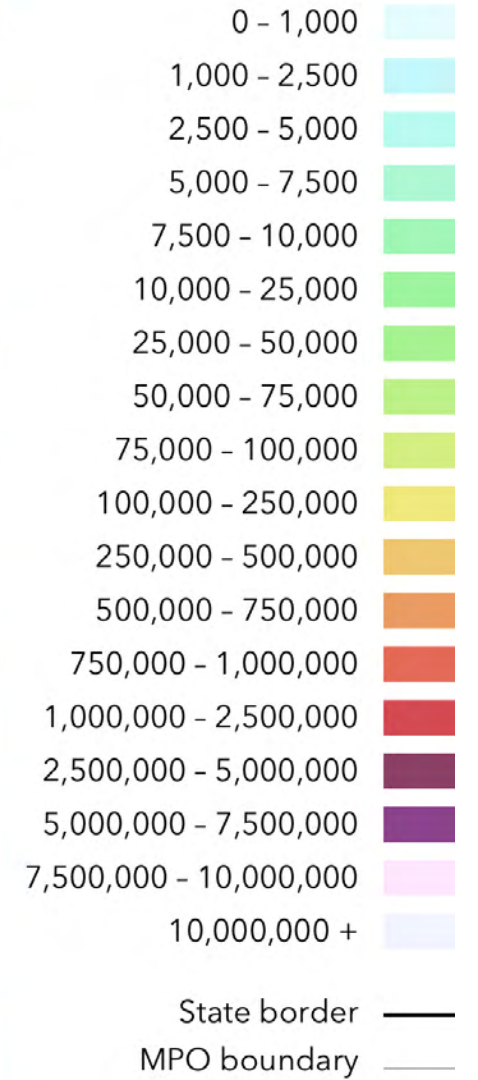
Agency	Dates
Airport (MAC)	November 19, 2015 - March 18, 2016
MVTA	January 4, 2016 - May 20, 2016
Maple Grove	November 30, 2015 - March 18, 2016
Metro	January 4, 2016 - May 20, 2016
Metro Bus	February 1, 2016 - May 7, 2016
Metro Transit	November 30, 2015 - March 18, 2016
Minnesota Valley	December 9, 2015 - March 18, 2016
Plymouth	November 19, 2015 - March 18, 2016
Prior Lake	December 8, 2014 - March 6, 2015
Scott County	December 30, 2014 - March 6, 2015
SouthWest Transit	November 19, 2015 - March 18, 2016
St. Cloud Link	November 24, 2015 - March 18, 2016
University of Minnesota	November 11, 2015 - March 18, 2016

Minneapolis

Minneapolis-St. Paul-Bloomington, MN-WI



Jobs within 30 minutes
(Transit, AM peak)



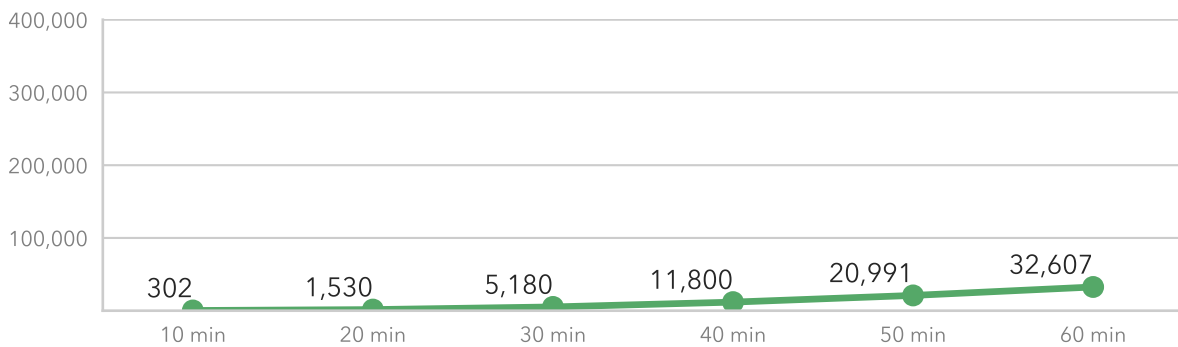
Nashville

Nashville-Davidson-Murfreesboro-Franklin, TN

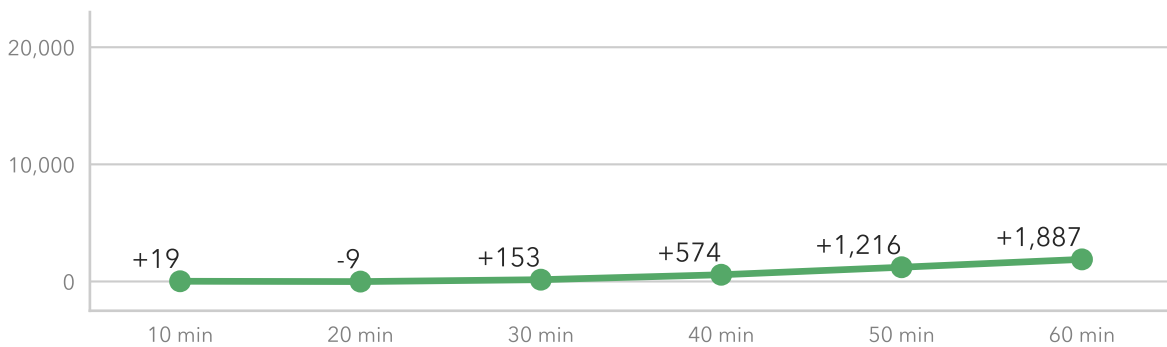
Rank by Weighted Accessibility	43
Rank by Total Employment	36
Rank by 1-Year Change in Weighted Accessibility	18
1-Year Change in Weighted Accessibility	+4.35%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	840,488
Average Job Density (per km ²)	57
Total Workers	768,750
Average Worker Density (per km ²)	52

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Nashville

Nashville-Davidson-Murfreesboro-Franklin, TN

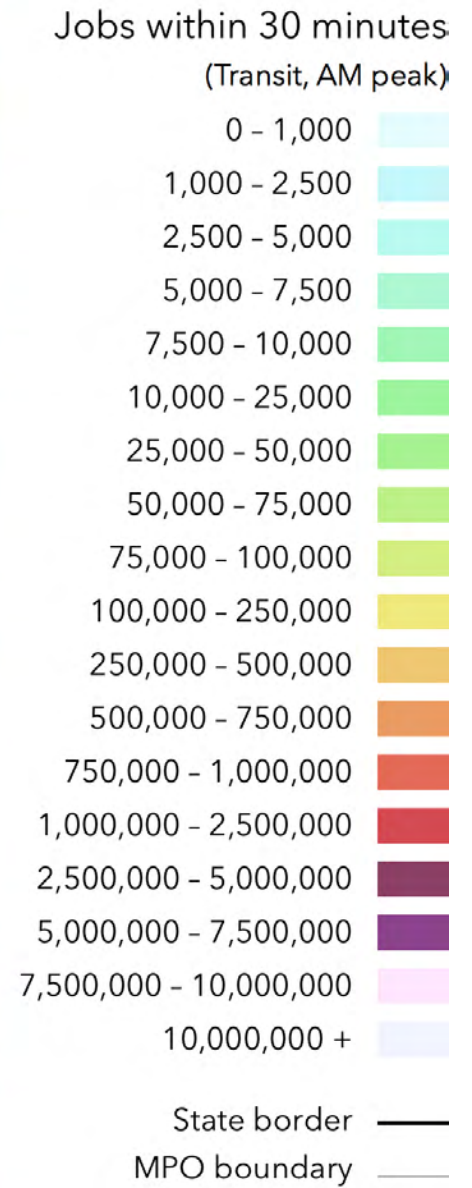
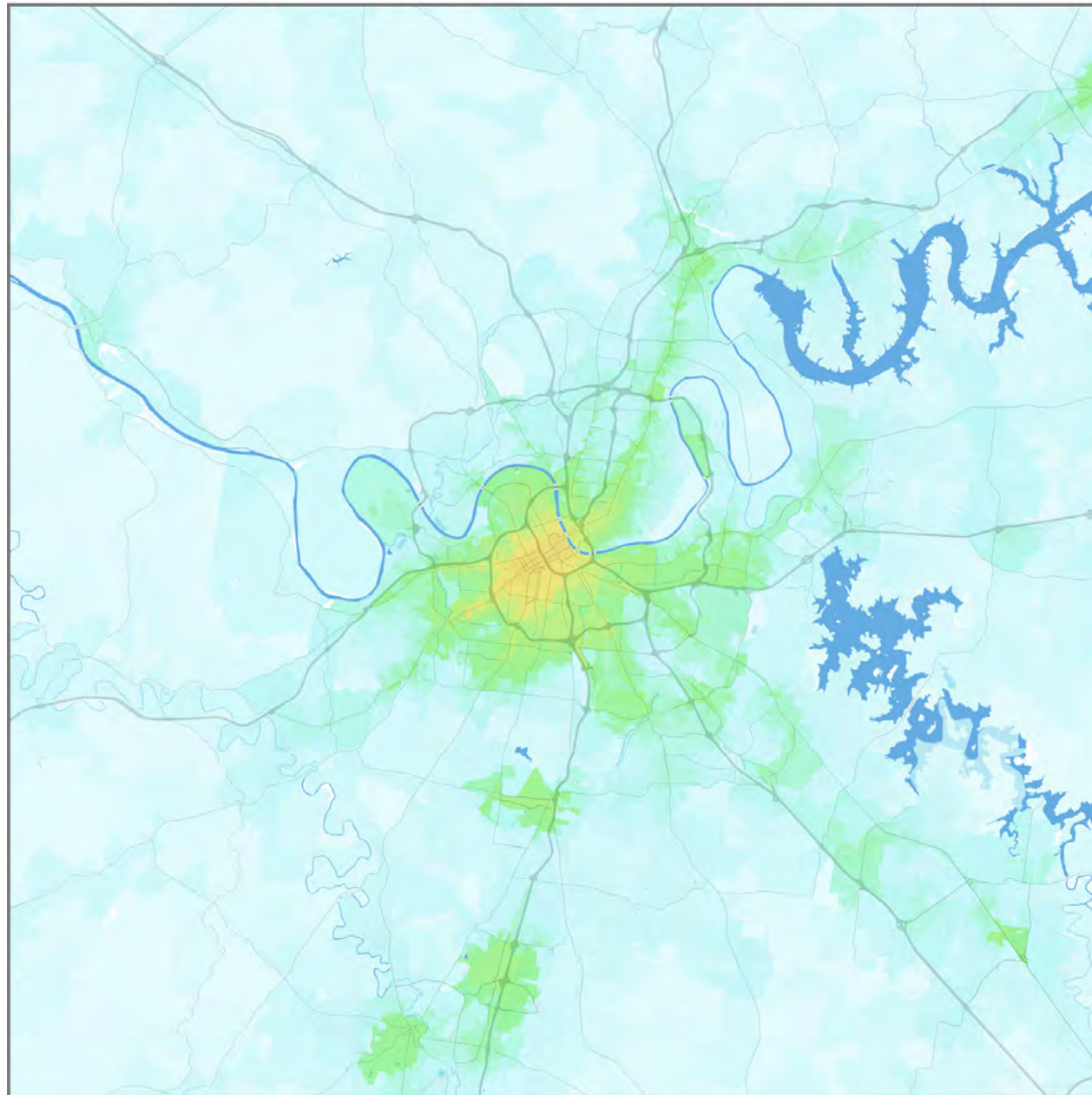
Transit Schedules Included

Agency	Dates
Nashville Metropolitan Transit Authority	September 27, 2015 - September 24, 2016
Regional Transportation Authority of Middle Tennessee	September 27, 2015 - September 24, 2016

Nashville

Nashville-Davidson--Murfreesboro--Franklin, TN

96



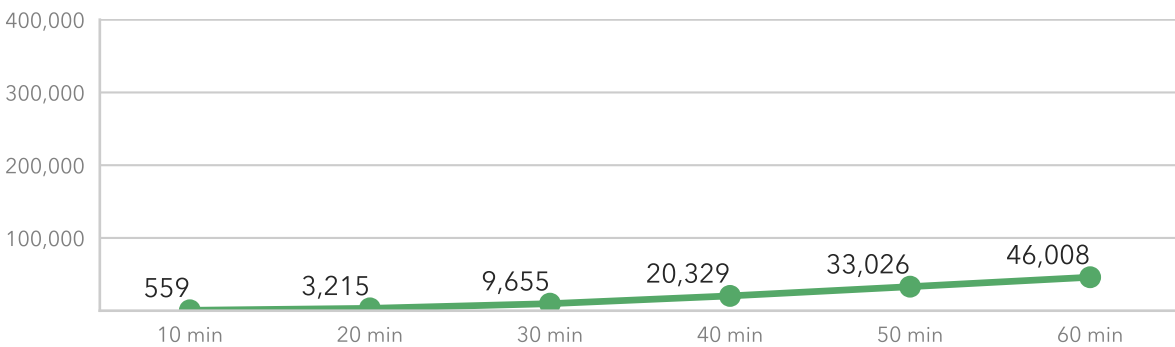
New Orleans

New Orleans-Metairie-Kenner, LA

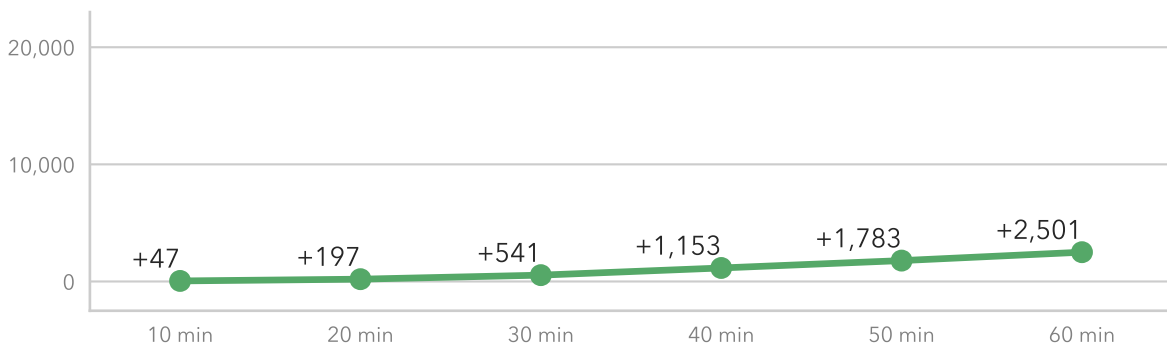
Rank by Weighted Accessibility	31
Rank by Total Employment	48
Rank by 1-Year Change in Weighted Accessibility	10
1-Year Change in Weighted Accessibility	+6.18%
1-Year Change in Weighted Accessibility Rank	-1
Total Jobs	530,139
Average Job Density (per km ²)	69
Total Workers	502,245
Average Worker Density (per km ²)	66

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



New Orleans

New Orleans-Metairie-Kenner, LA

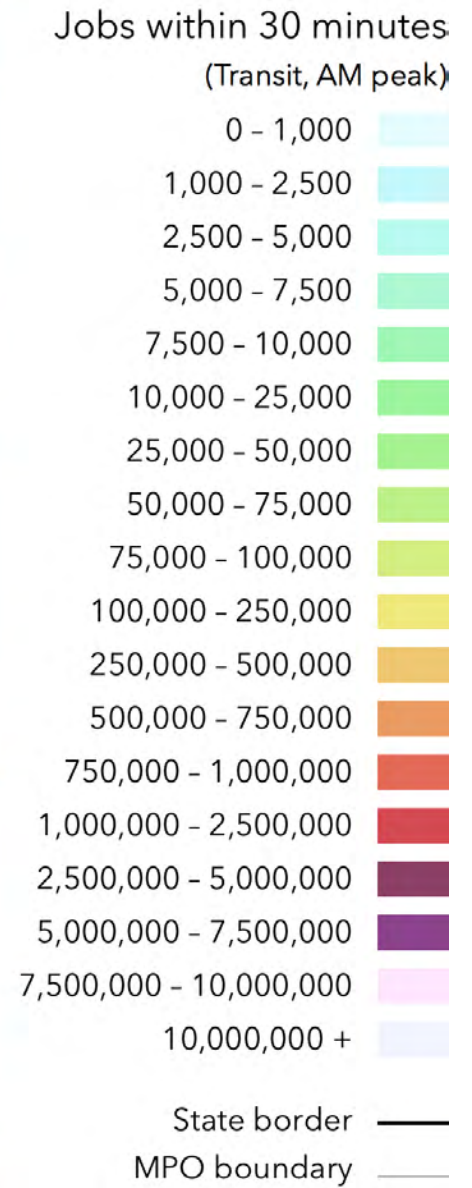
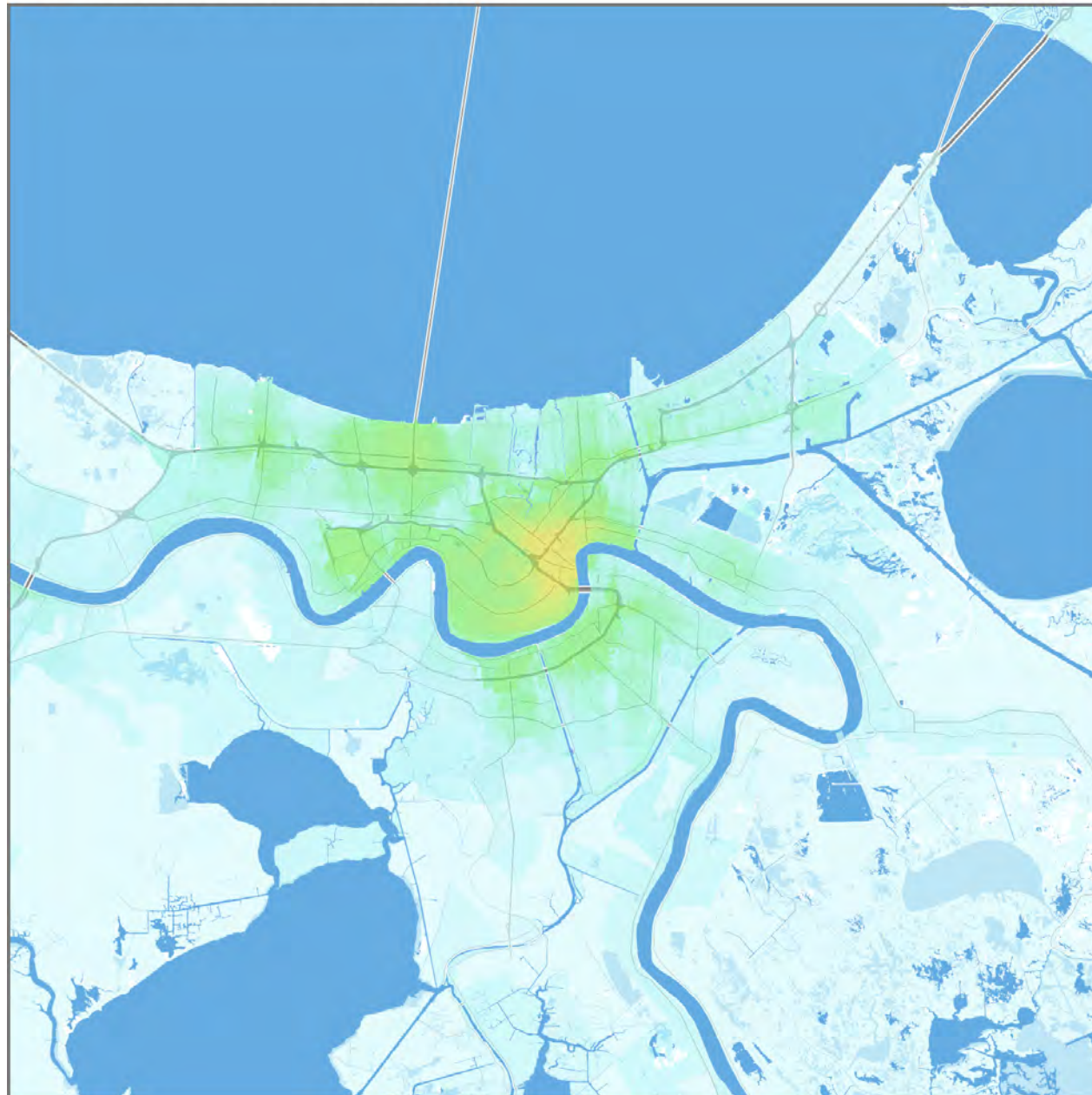
Transit Schedules Included

Agency	Dates
New Orleans RTA	January 10, 2016 - April 16, 2016

New Orleans

New Orleans-Metairie-Kenner, LA

93



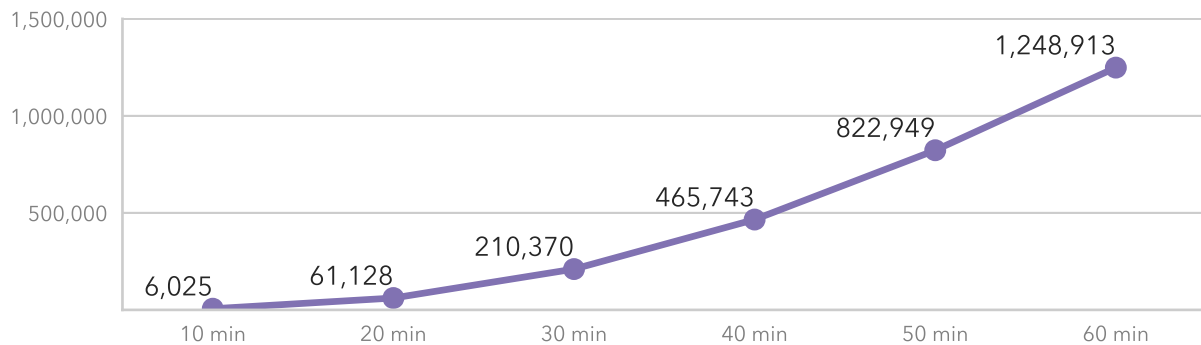
New York

New York-Northern New Jersey-Long Island, NY-NJ-PA

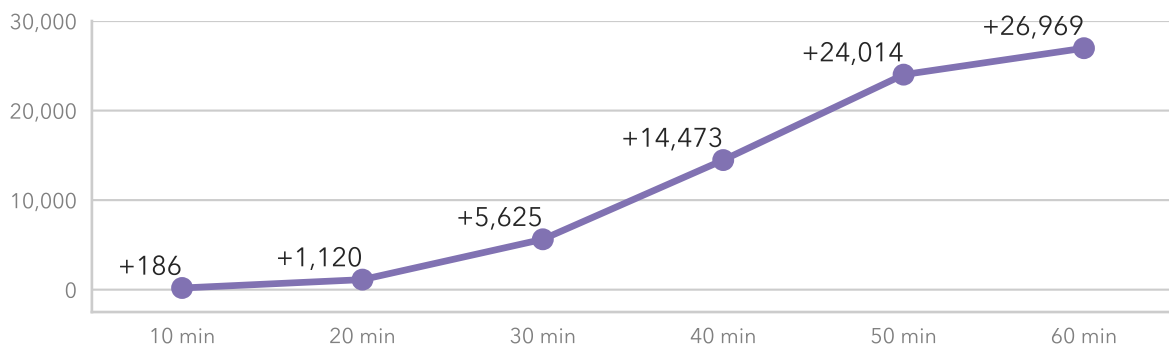
Rank by Weighted Accessibility	1
Rank by Total Employment	1
Rank by 1-Year Change in Weighted Accessibility	26
1-Year Change in Weighted Accessibility	+2.66%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	8,689,096
Average Job Density (per km ²)	502
Total Workers	8,481,503
Average Worker Density (per km ²)	490

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



The plot scales have been changed to accommodate the much larger number of jobs within New York City.

New York

New York-Northern New Jersey-Long Island, NY-NJ-PA

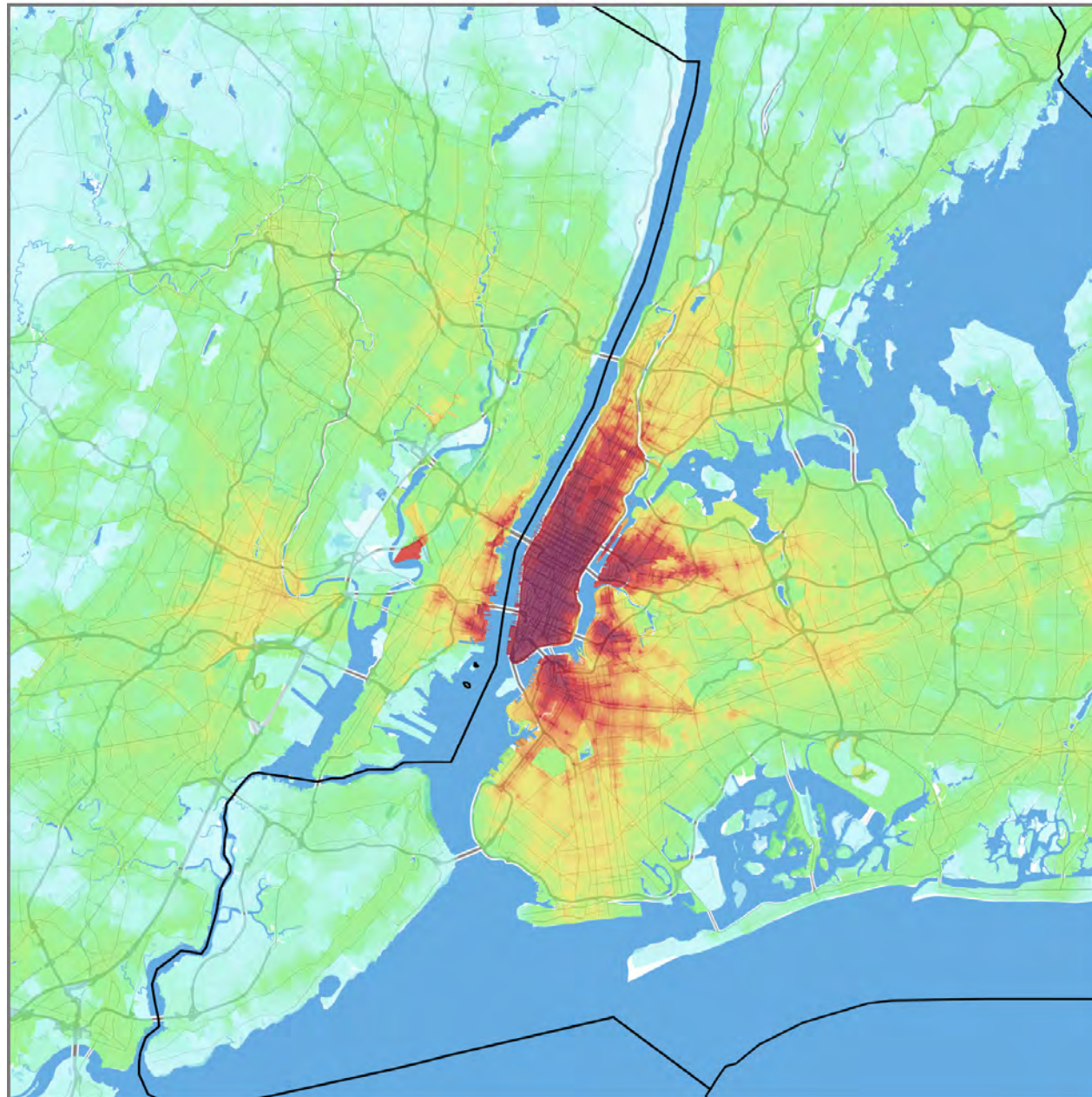
Transit Schedules Included

Agency	Dates
CTTransit- Stamford	November 12, 2015 - May 28, 2016
JFK Airtrain	July 21, 2015 - July 9, 2016
Long Island Rail Road	November 16, 2015 - May 22, 2016
MTA Bus Company	January 3, 2016 - April 2, 2016
MTA New York City Transit	May 10, 2015 - December 31, 2016
MTA New York City Transit - Bronx	January 3, 2016 - April 2, 2016
MTA New York City Transit - Brooklyn	January 2, 2016 - April 2, 2016
MTA New York City Transit - Manhattan	January 2, 2016 - April 2, 2016
MTA New York City Transit - Queens	January 2, 2016 - April 2, 2016
Metro-North Railroad	November 10, 2015 - April 3, 2016
NJ TRANSIT BUS	January 12, 2016 - July 9, 2016
NJ TRANSIT RAIL	December 28, 2015 - June 24, 2016
NY Waterway	November 10, 2015 - April 3, 2016
Nassau Inter-County Express	June 28, 2015 - January 16, 2016
New York City Department of Transportation	April 30, 2014 - December 31, 2021
Port Authority Trans-Hudson Corporation	April 26, 2015 - January 1, 2017
Seastreak	June 15, 2015 - November 6, 2016
Shore Line East	November 2, 2015 - May 3, 2016
Sussex County Skylands Ride	April 1, 2012 - January 2, 2018
Westchester County Bee-Line System	September 8, 2015 - June 26, 2016

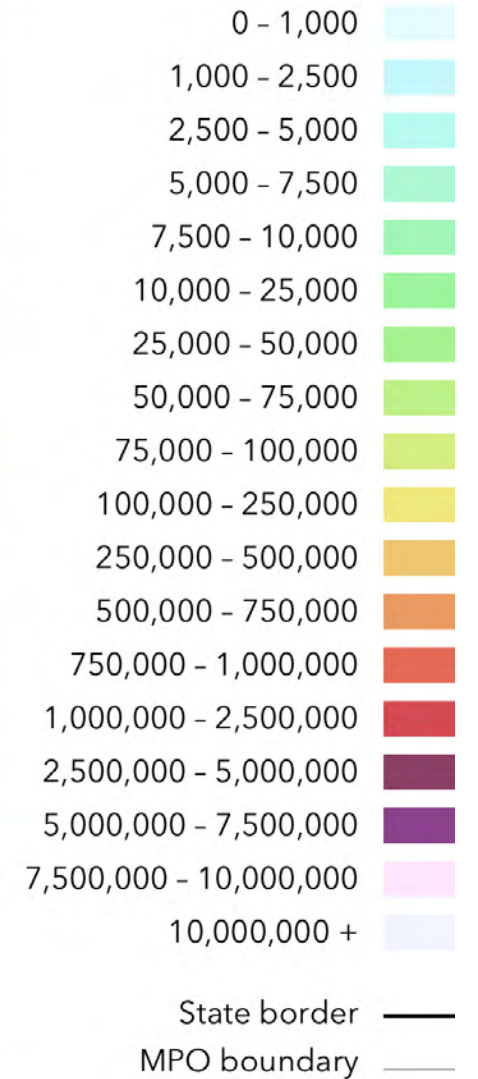
New York

New York-Northern New Jersey-Long Island, NY-NJ-PA

96



Jobs within 30 minutes
(Transit, AM peak)



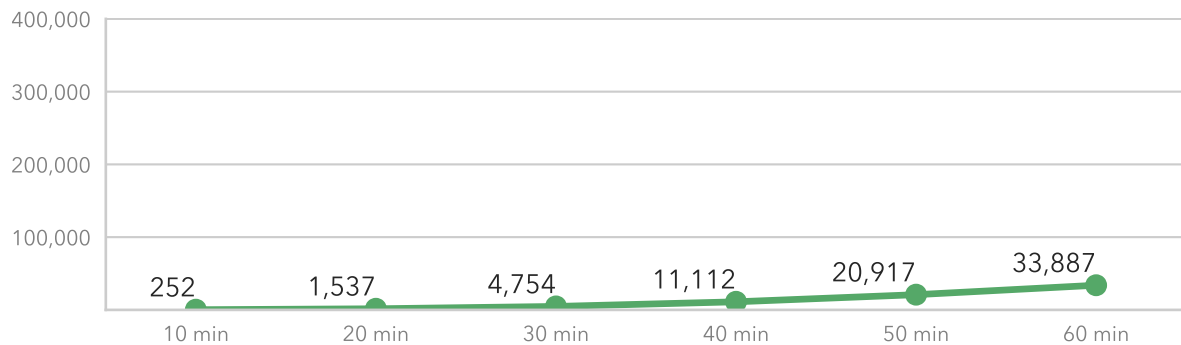
Oklahoma City

Oklahoma City, OK

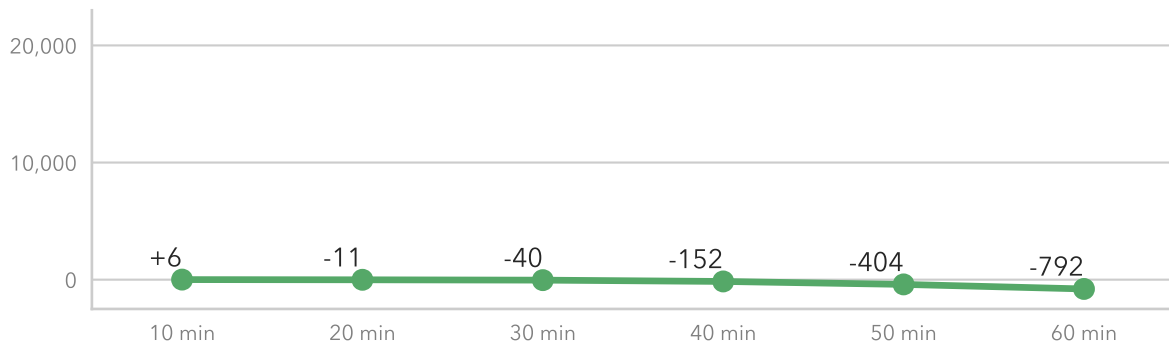
Rank by Weighted Accessibility	44
Rank by Total Employment	45
Rank by 1-Year Change in Weighted Accessibility	39
1-Year Change in Weighted Accessibility	-1.28%
1-Year Change in Weighted Accessibility Rank	-1
Total Jobs	596,985
Average Job Density (per km ²)	42
Total Workers	557,216
Average Worker Density (per km ²)	39

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Oklahoma City

Oklahoma City, OK

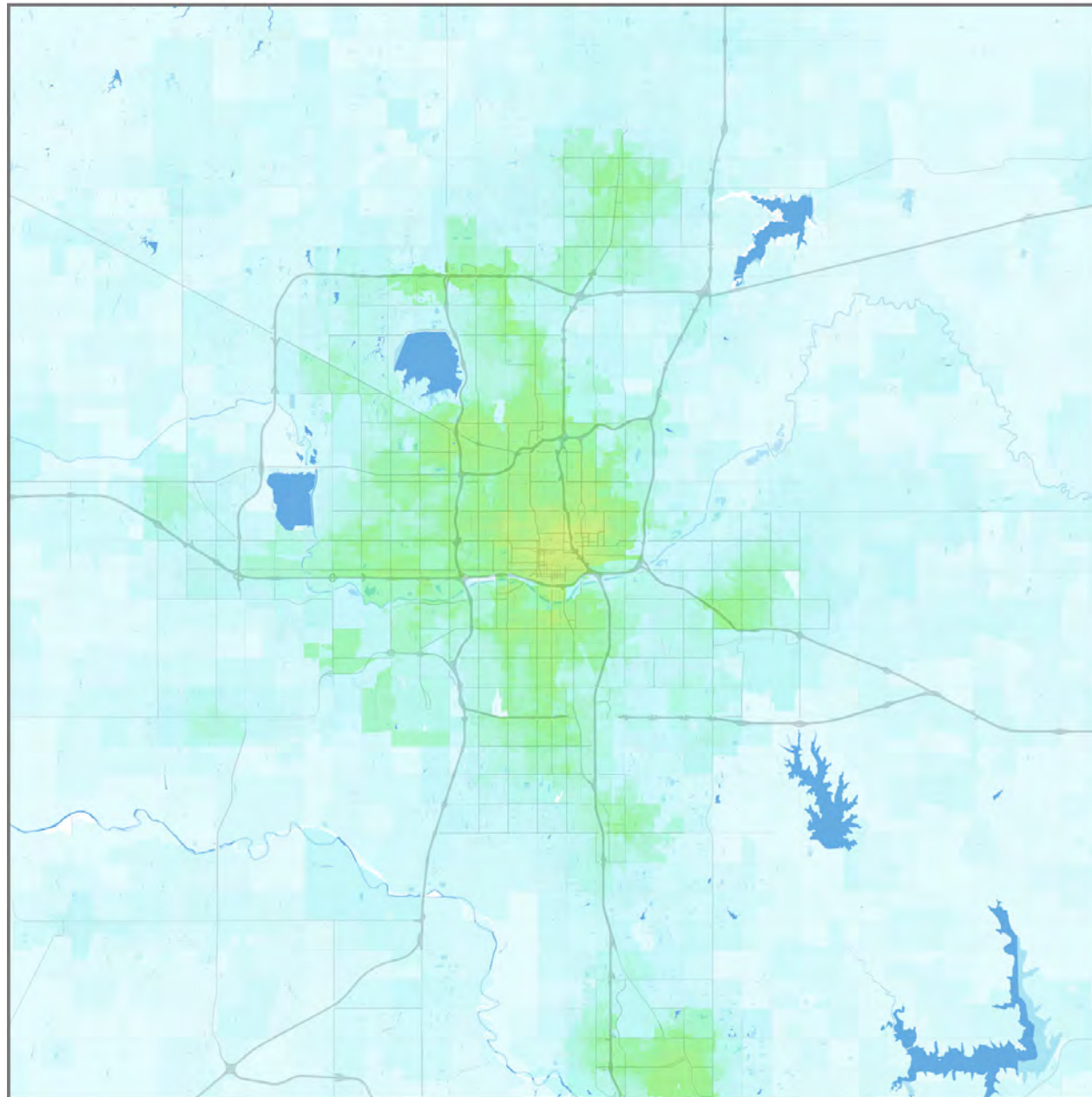
Transit Schedules Included

Agency	Dates
Embark	July 26, 2015 - July 23, 2016

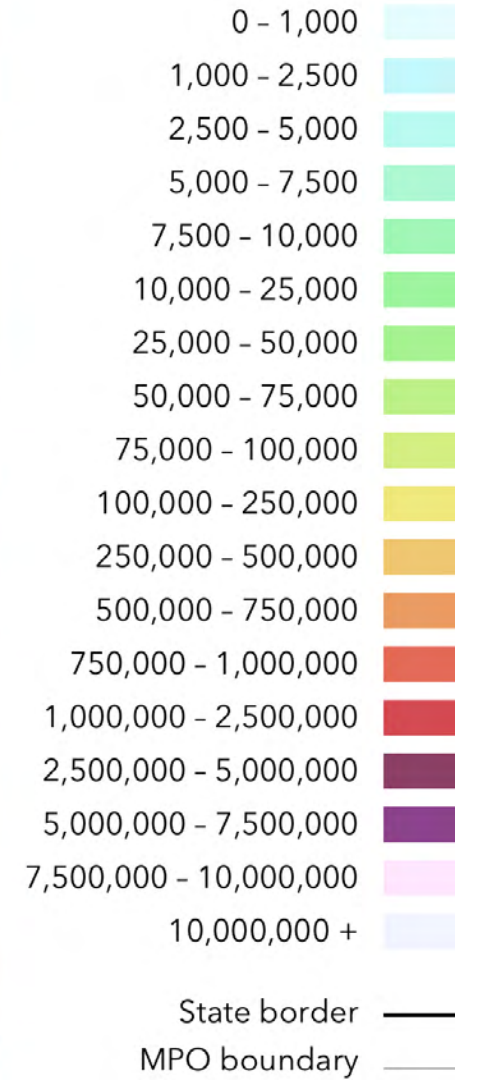
Oklahoma City

Oklahoma City, OK

69



Jobs within 30 minutes
(Transit, AM peak)



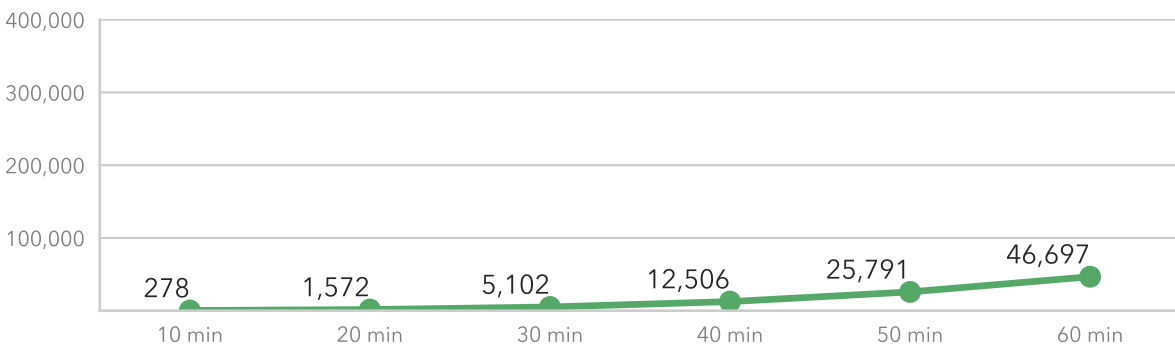
Orlando

Orlando-Kissimmee-Sanford, FL

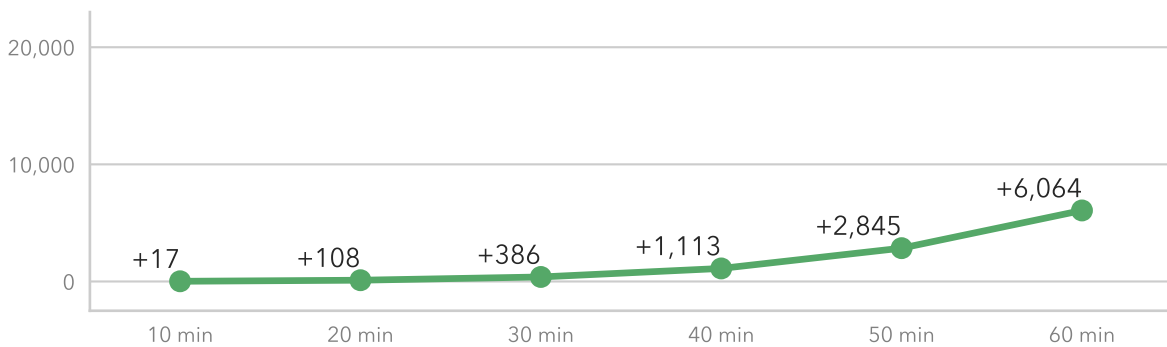
Rank by Weighted Accessibility	41
Rank by Total Employment	24
Rank by 1-Year Change in Weighted Accessibility	3
1-Year Change in Weighted Accessibility	+10.83%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	1,127,015
Average Job Density (per km ²)	125
Total Workers	1,016,960
Average Worker Density (per km ²)	113

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Orlando

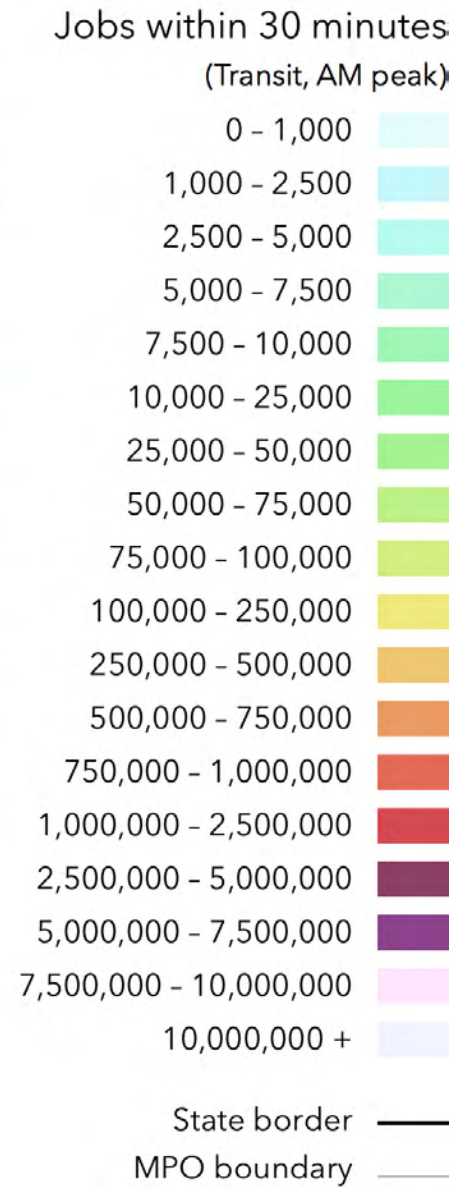
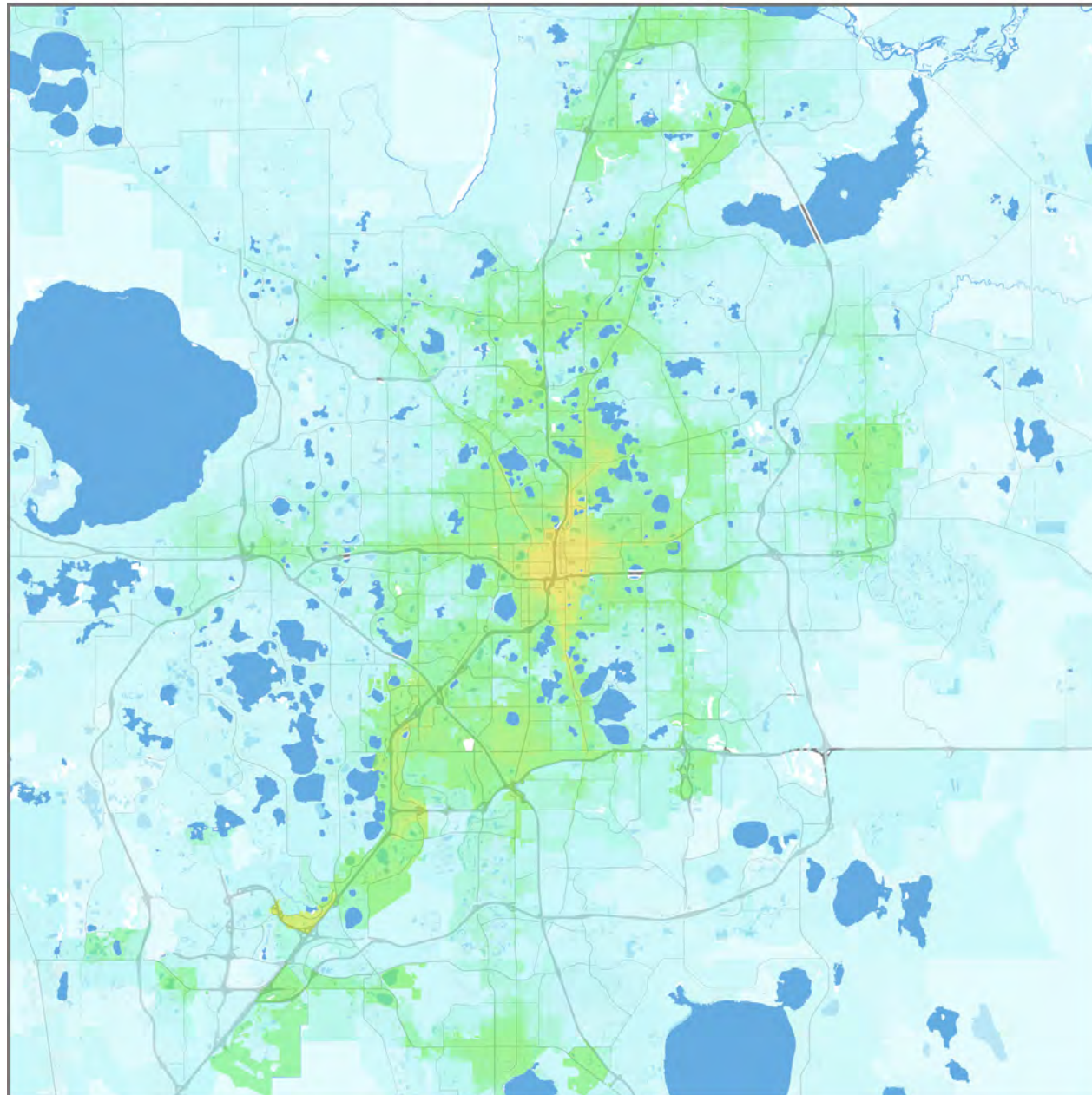
Orlando-Kissimmee-Sanford, FL

Transit Schedules Included

Agency	Dates
Central Florida Regional Transit Authority	December 22, 2015 - April 16, 2016
Florida Department of Transportation	December 21, 2015 - December 31, 2016

Orlando

Orlando-Kissimmee-Sanford, FL



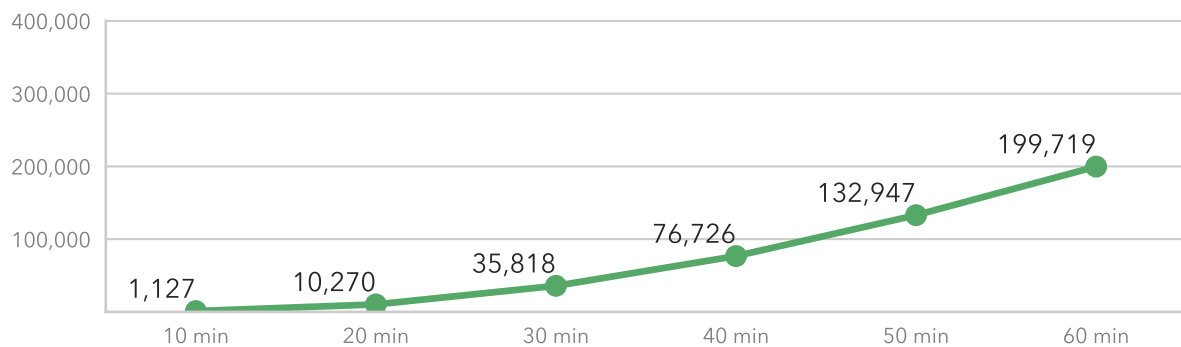
Philadelphia

Philadelphia-Camden-Wilmington, PA-NJ-DE-MD

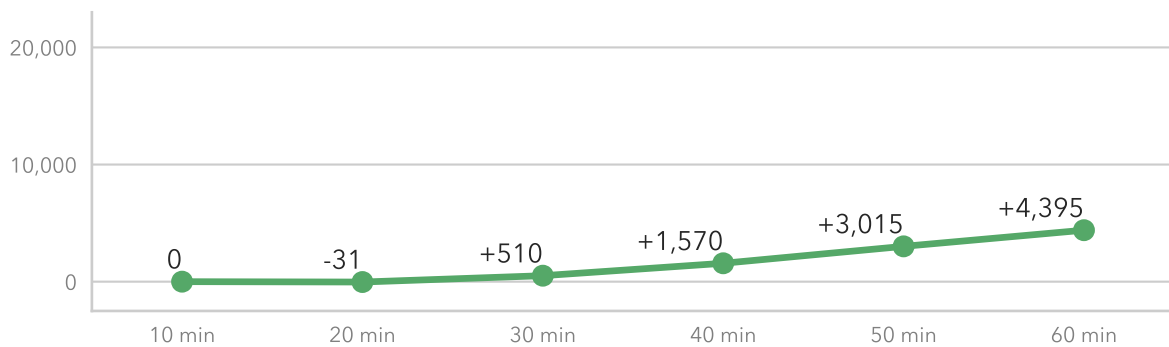
Rank by Weighted Accessibility	7
Rank by Total Employment	6
Rank by 1-Year Change in Weighted Accessibility	31
1-Year Change in Weighted Accessibility	+1.59%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	2,721,621
Average Job Density (per km ²)	228
Total Workers	2,746,127
Average Worker Density (per km ²)	230

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Philadelphia

Philadelphia-Camden-Wilmington, PA-NJ-DE-MD

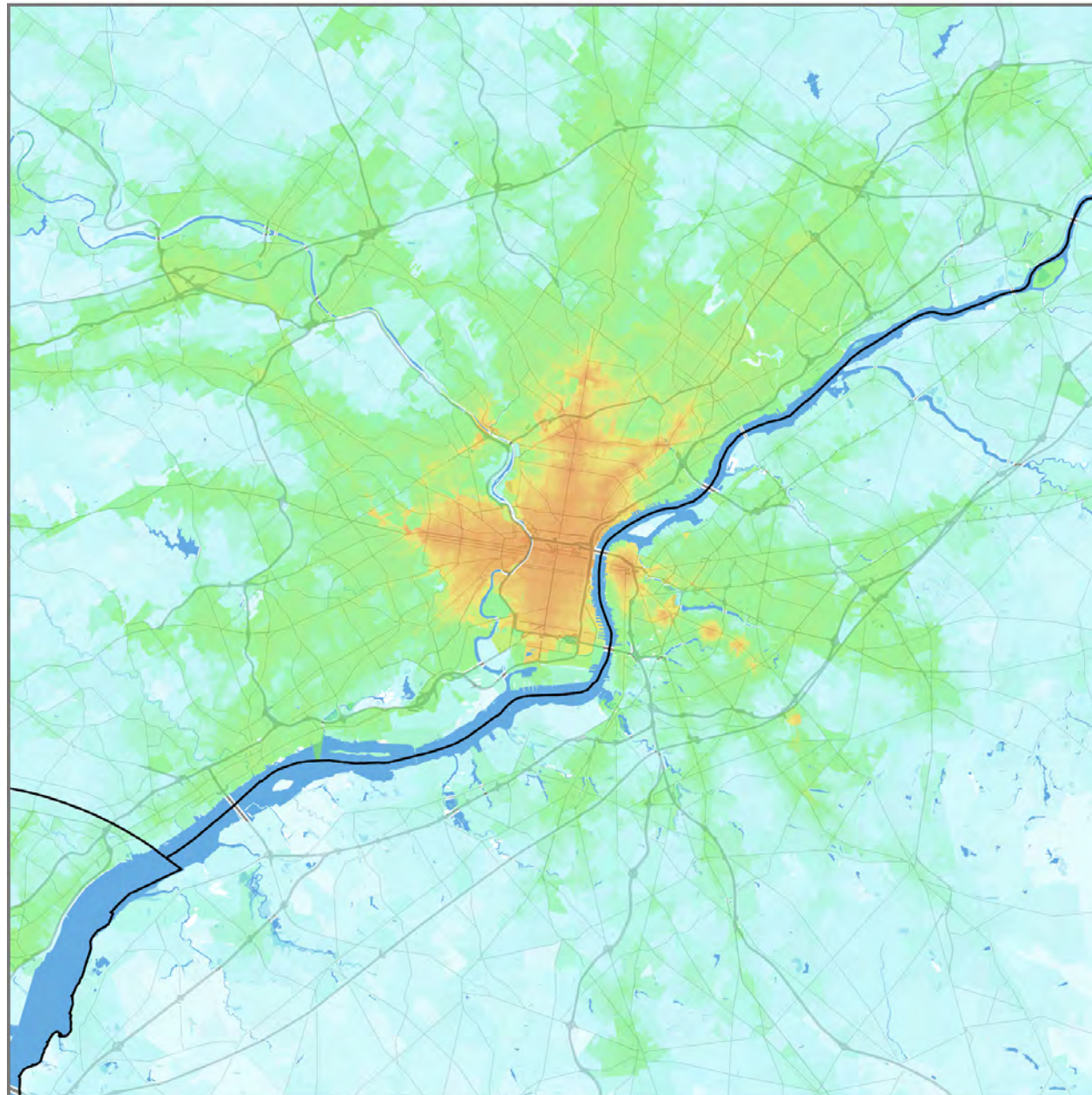
Transit Schedules Included

Agency	Dates
DART First State	September 13, 2015 - February 14, 2016
Harford Transit LINK	October 1, 2015 - December 31, 2016
MTA Office of Local Transit Support	October 30, 2015 - June 18, 2016
Maryland Transit Administration	October 30, 2015 - June 18, 2016
NJ TRANSIT BUS	January 12, 2016 - July 9, 2016
NJ TRANSIT RAIL	December 28, 2015 - June 24, 2016
Port Authority Transit Corporation	July 2, 2015 - November 29, 2016
SEPTA-bus	August 28, 2015 - February 20, 2016
SEPTA-rail	December 13, 2015 - April 16, 2016

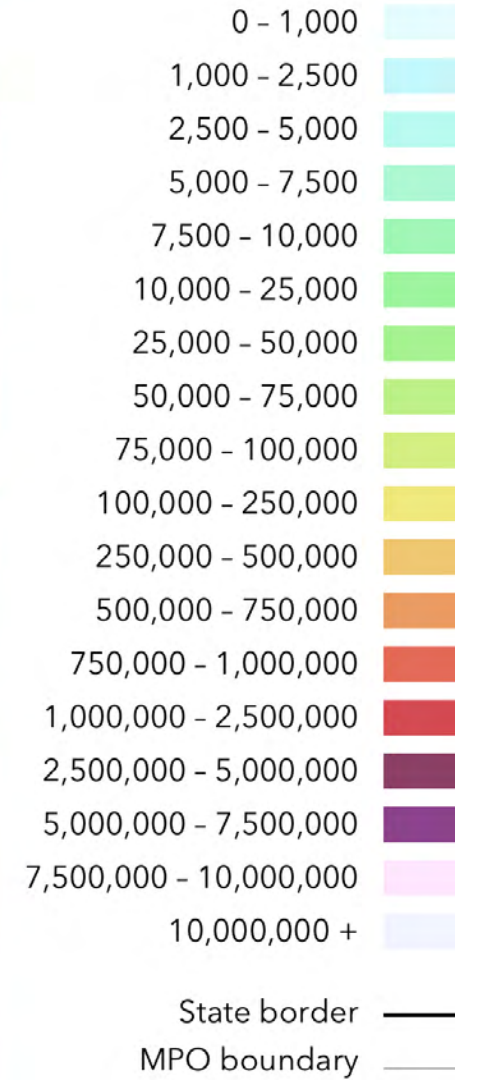
Philadelphia

Philadelphia-Camden-Wilmington, PA-NJ-DE-MD

105



Jobs within 30 minutes
(Transit, AM peak)



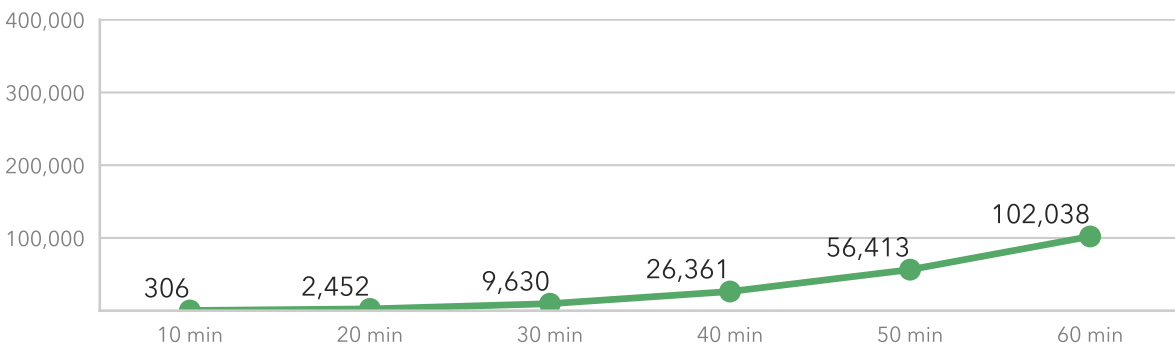
Phoenix

Phoenix-Mesa-Glendale, AZ

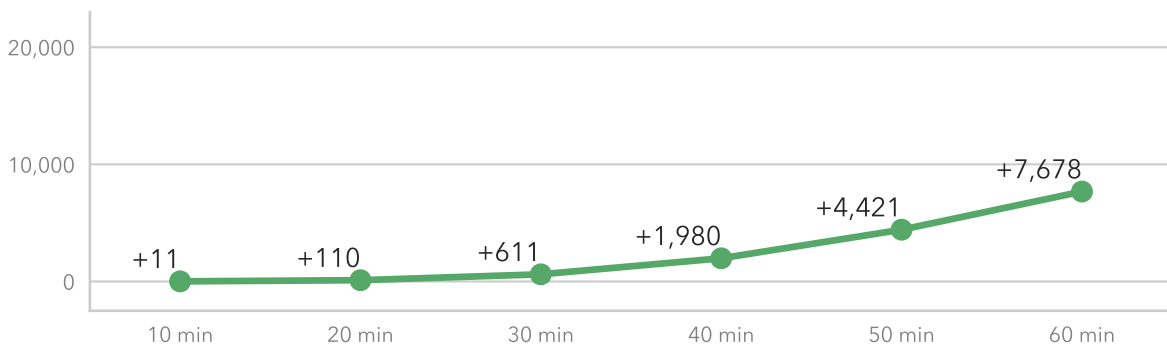
Rank by Weighted Accessibility	21
Rank by Total Employment	13
Rank by 1-Year Change in Weighted Accessibility	6
1-Year Change in Weighted Accessibility	+7.51%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	1,841,315
Average Job Density (per km ²)	49
Total Workers	1,787,019
Average Worker Density (per km ²)	47

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Phoenix

Phoenix-Mesa-Glendale, AZ

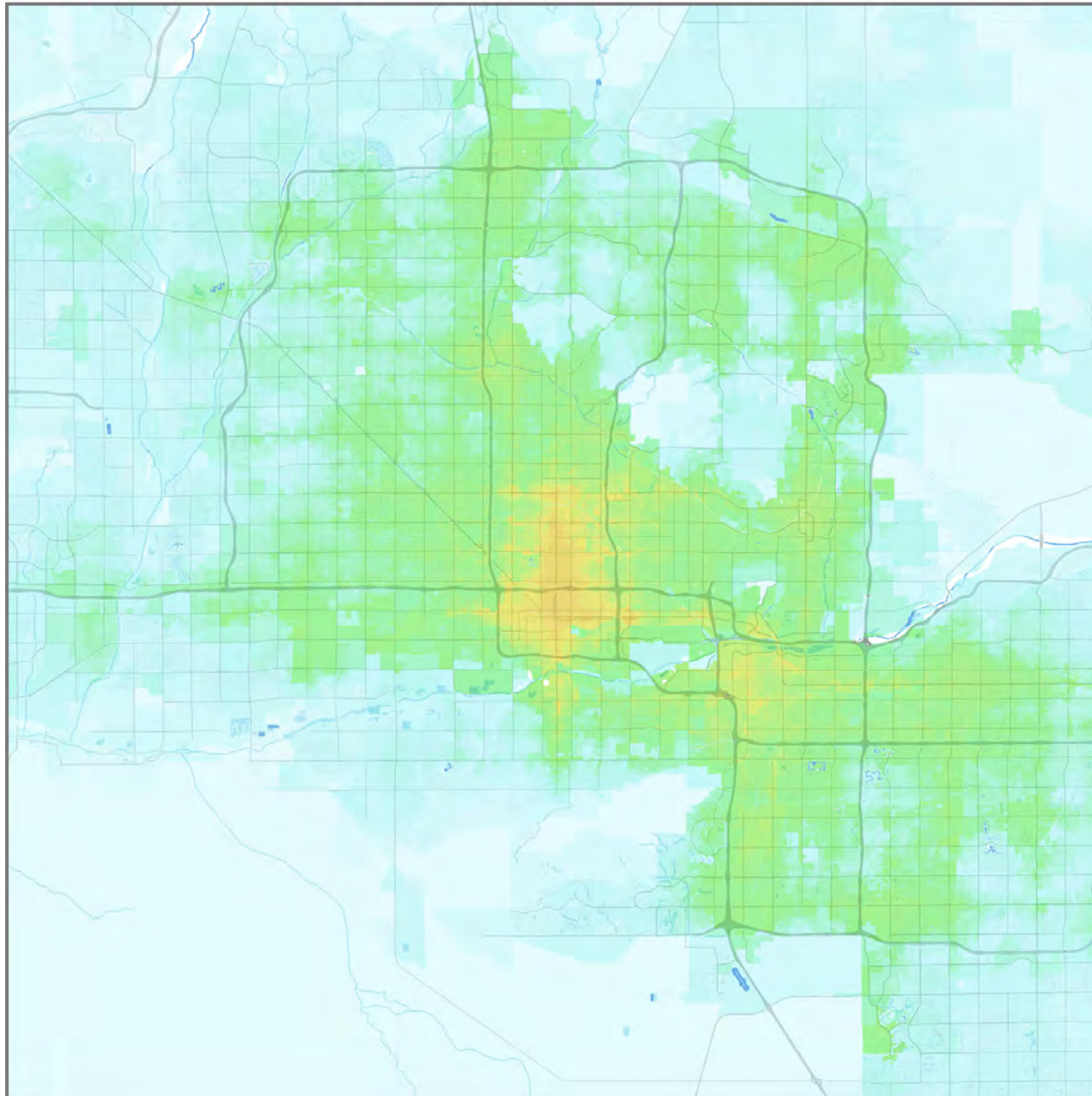
Transit Schedules Included

Agency	Dates
Valley Metro	October 26, 2015 - January 24, 2016

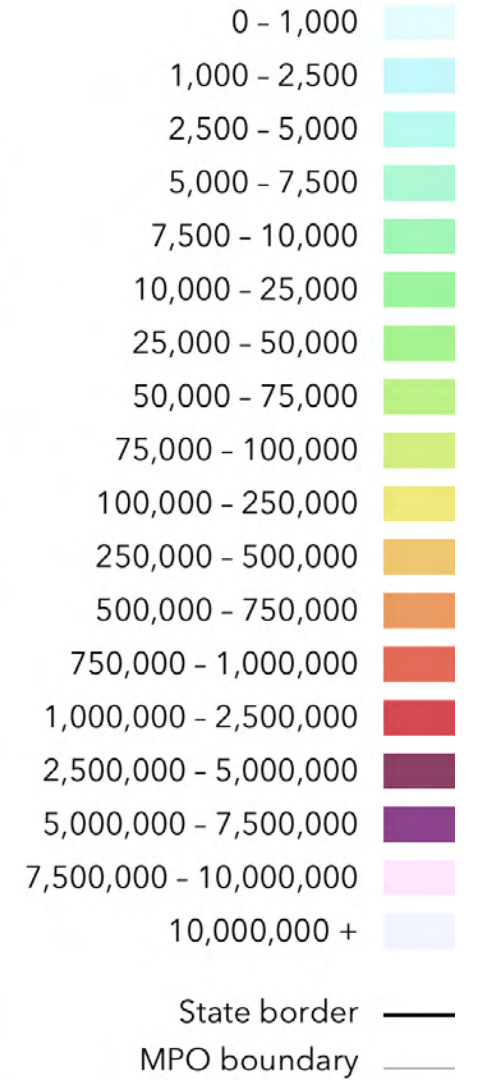
Phoenix

Phoenix-Mesa-Glendale, AZ

108



Jobs within 30 minutes
(Transit, AM peak)



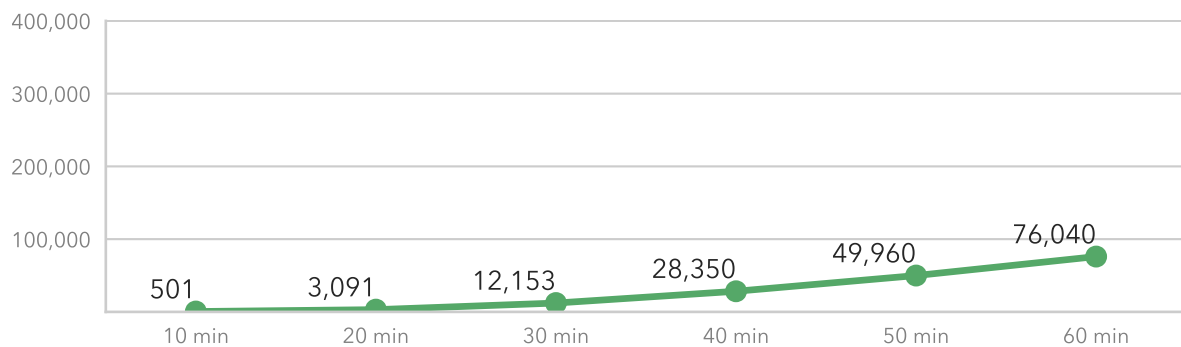
Pittsburgh

Pittsburgh, PA

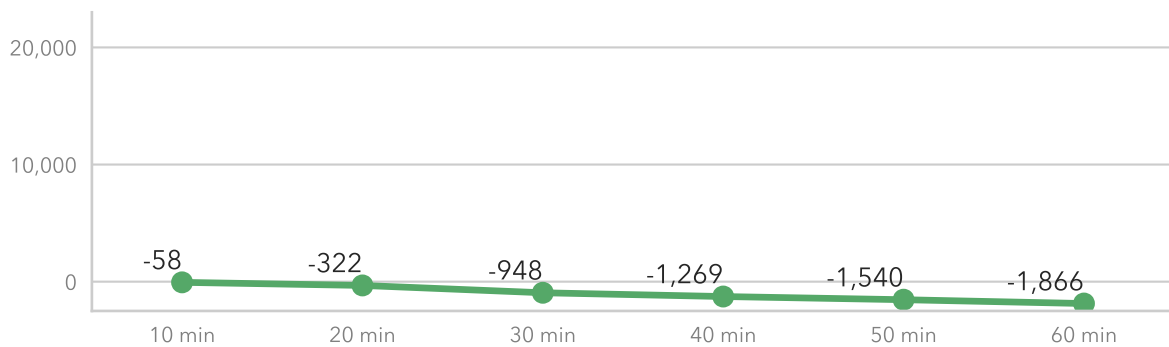
Rank by Weighted Accessibility	20
Rank by Total Employment	22
Rank by 1-Year Change in Weighted Accessibility	48
1-Year Change in Weighted Accessibility	-5.23%
1-Year Change in Weighted Accessibility Rank	-1
Total Jobs	1,124,574
Average Job Density (per km ²)	82
Total Workers	1,100,201
Average Worker Density (per km ²)	80

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Pittsburgh

Pittsburgh, PA

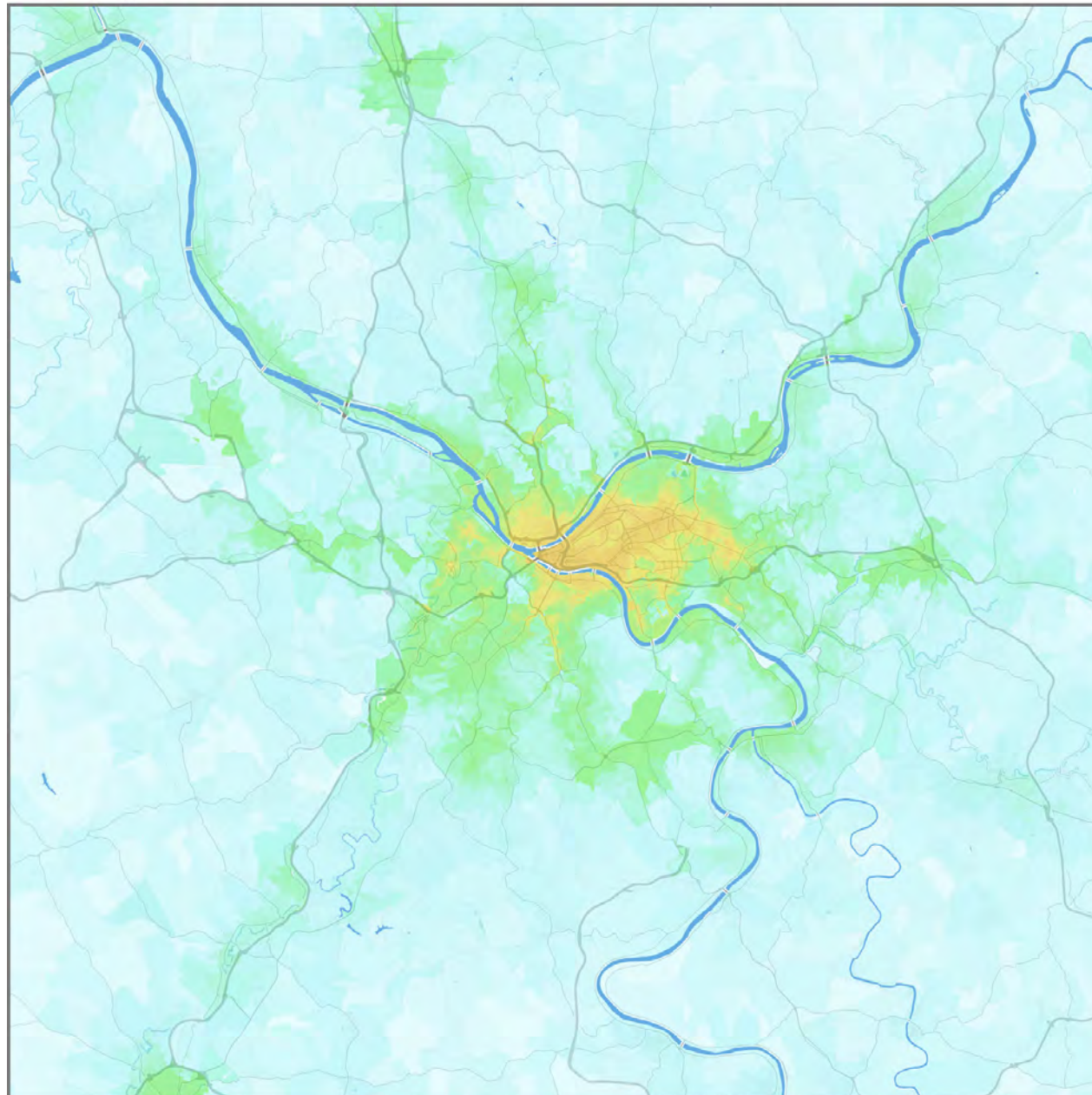
Transit Schedules Included

Agency	Dates
Port Authority of Allegheny County	November 22, 2015 - March 26, 2016

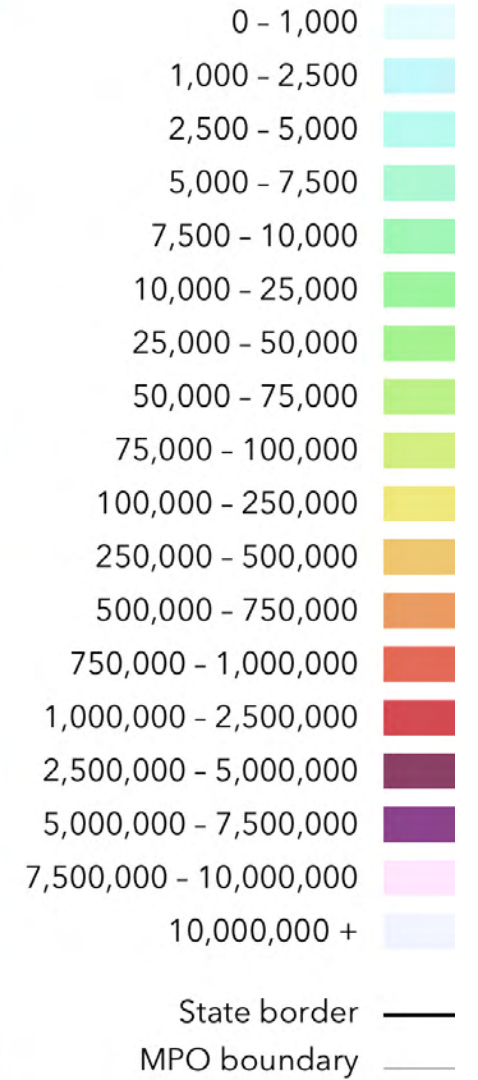
Pittsburgh

Pittsburgh, PA

111



Jobs within 30 minutes
(Transit, AM peak)



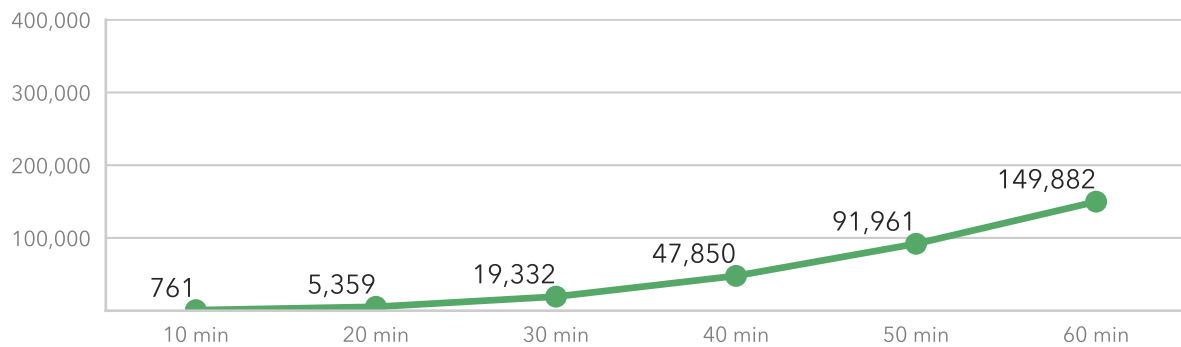
Portland

Portland-Vancouver-Hillsboro, OR-WA

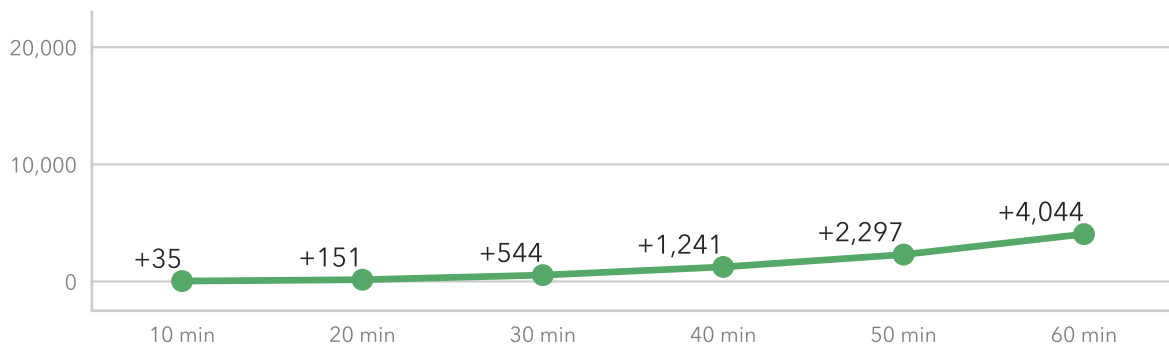
Rank by Weighted Accessibility	11
Rank by Total Employment	23
Rank by 1-Year Change in Weighted Accessibility	25
1-Year Change in Weighted Accessibility	+2.82%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	1,071,617
Average Job Density (per km ²)	62
Total Workers	1,048,071
Average Worker Density (per km ²)	61

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Portland

Portland-Vancouver-Hillsboro, OR-WA

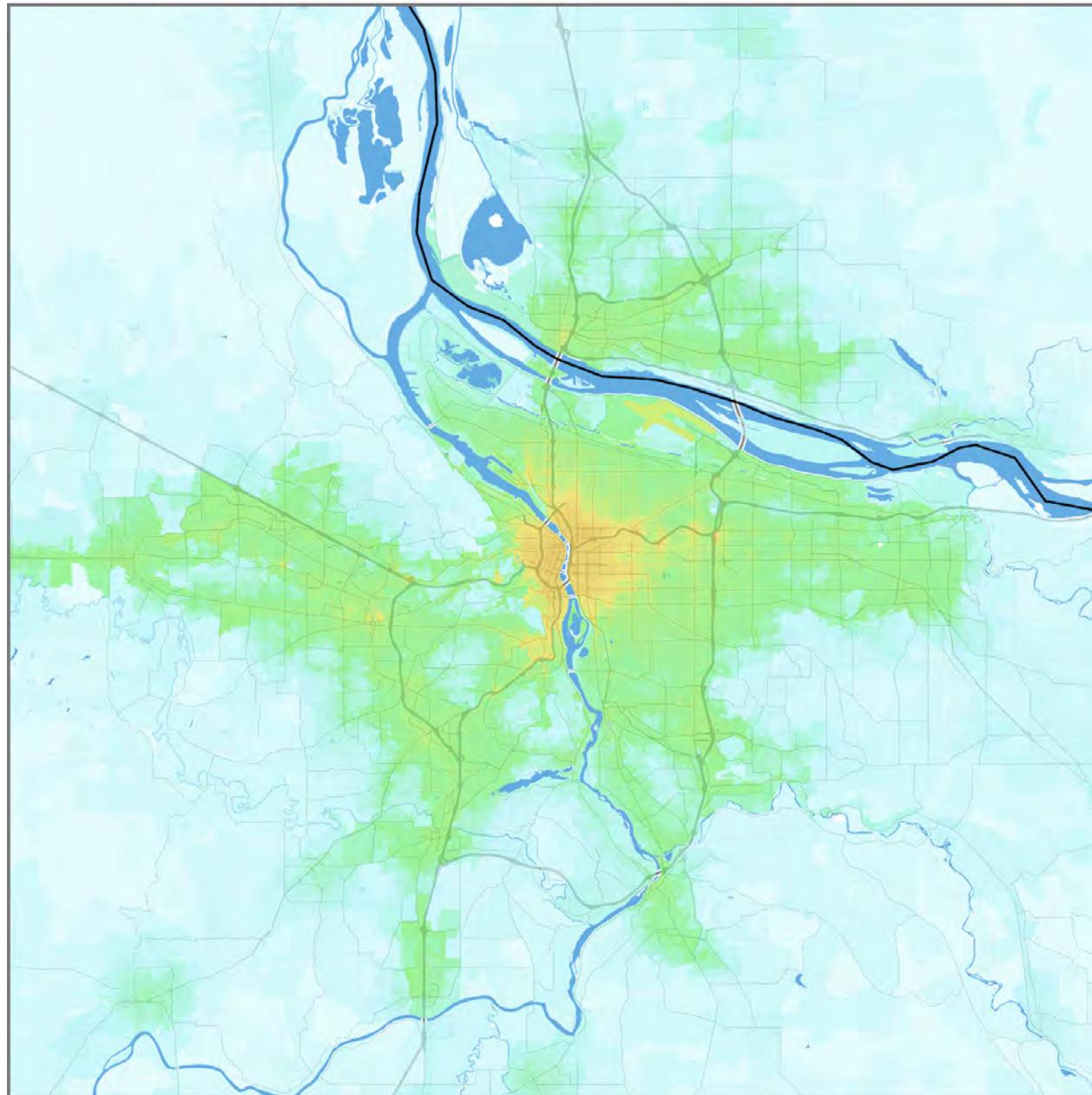
Transit Schedules Included

Agency	Dates
Blue Star Bus	January 1, 2013 - January 1, 2017
C-TRAN	September 9, 2015 - June 1, 2016
CCC Xpress	January 4, 2016 - December 2, 2016
Canby Area Transit	January 1, 2014 - January 1, 2017
Caravan Airport Transportation	January 1, 2015 - January 1, 2017
Cascades POINT	September 8, 2014 - January 1, 2017
Central Oregon Breeze	January 1, 2014 - August 13, 2017
Cherriots	March 4, 2012 - July 1, 2023
City2City Shuttle	January 1, 2015 - January 1, 2017
Columbia Area Transit	January 1, 2012 - January 1, 2017
Columbia County Rider	January 1, 2012 - January 1, 2017
Columbia Gorge Express	May 27, 2016 - September 25, 2016
HUT Airport Shuttle (Phone or web reservations required for this service)	January 1, 2012 - January 1, 2017
Mt. Hood Express	January 1, 2014 - July 1, 2017
NorthWest POINT	January 1, 2012 - January 1, 2017
Portland Aerial Tram	December 7, 2015 - June 4, 2016
Portland Streetcar	December 6, 2015 - June 4, 2016
Ride Connection	January 1, 2015 - January 1, 2017
Sandy Area Metro	January 1, 2014 - January 1, 2017
Skamania County Public Transit (Gorge WET Bus)	January 1, 2015 - January 1, 2017
South Metro Area Regional Transit	January 1, 2013 - January 1, 2017
Sunset Empire Transportation District	July 1, 2015 - January 1, 2018
Swan Island TMA	January 1, 2013 - January 1, 2017
Tillamook County Transportation District	January 1, 2014 - January 1, 2017
TriMet	December 20, 2015 - June 4, 2016
Valley Retriever	January 1, 2013 - January 1, 2017
Yamhill County Transit Area	January 1, 2015 - January 1, 2018

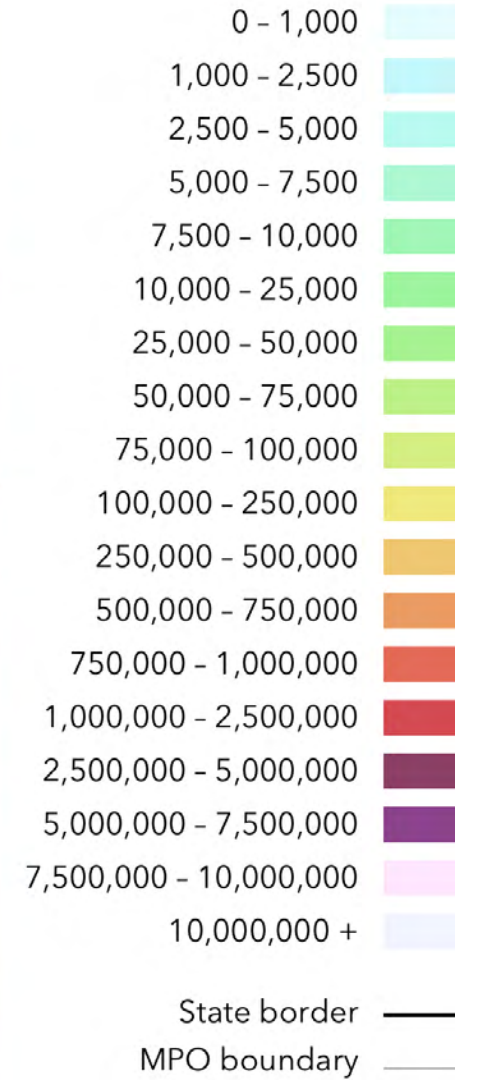
Portland

Portland-Vancouver-Hillsboro, OR-WA

114



Jobs within 30 minutes
(Transit, AM peak)



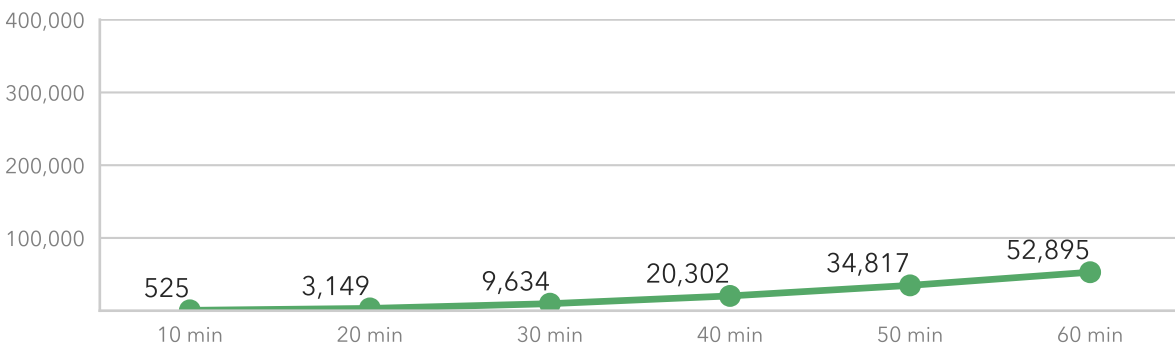
Providence

Providence-New Bedford-Fall River, RI-MA

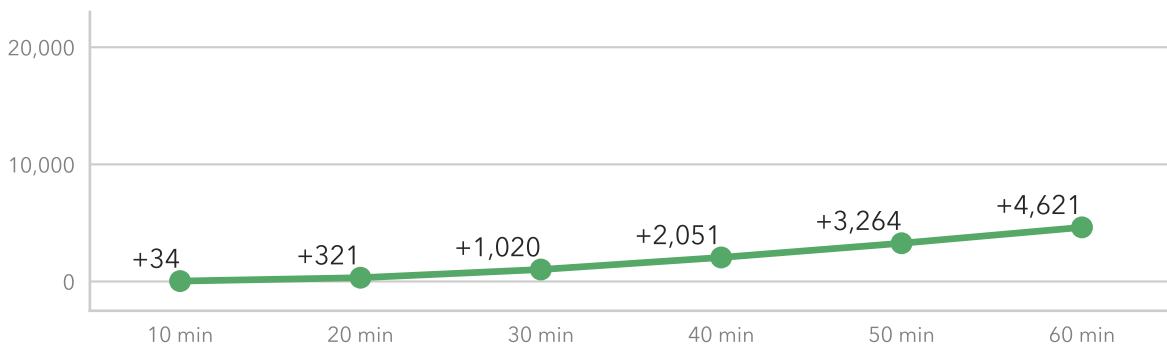
Rank by Weighted Accessibility	30
Rank by Total Employment	38
Rank by 1-Year Change in Weighted Accessibility	5
1-Year Change in Weighted Accessibility	+10.65%
1-Year Change in Weighted Accessibility Rank	+2
Total Jobs	676,287
Average Job Density (per km ²)	165
Total Workers	750,216
Average Worker Density (per km ²)	183

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Providence

Providence-New Bedford-Fall River, RI-MA

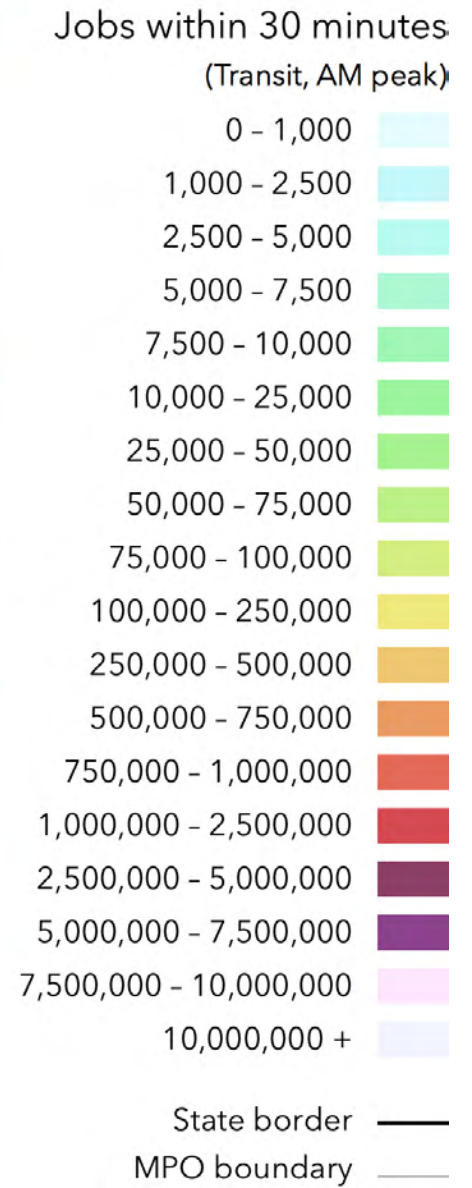
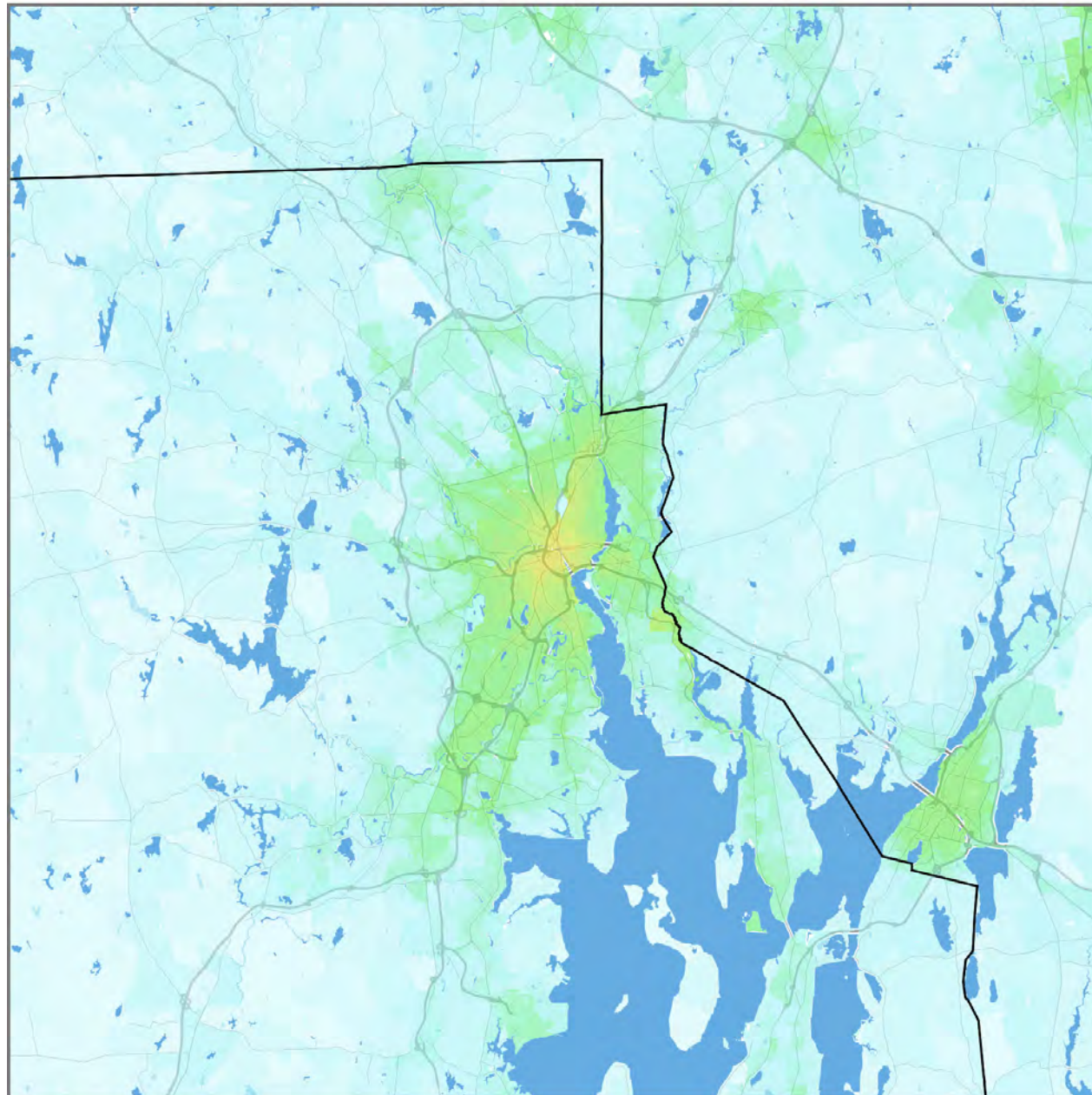
Transit Schedules Included

Agency	Dates
Block Island Ferry	March 21, 2016 - January 1, 2017
Bloom Bus	January 2, 2015 - January 2, 2016
Brockton Area Transit Authority	April 21, 2014 - January 8, 2020
Cuttyhunk Ferry Co.	October 19, 2015 - April 14, 2017
DATTCO	January 2, 2015 - January 2, 2016
MBTA	December 2, 2015 - March 18, 2016
MetroWest Regional Transit Authority	September 24, 2013 - September 23, 2020
Plymouth & Brockton Street Railway Co.	June 28, 2014 - October 31, 2014
Rhode Island Public Transit Authority	January 16, 2016 - August 26, 2016
Seastreak	June 15, 2015 - November 6, 2016
Southeastern Regional Transit Authority	January 1, 2015 - June 20, 2017
The Greater Attleboro Taunton Regional Transit Authority	January 1, 2016 - January 1, 2017
Vineyard Fast Ferry	May 27, 2016 - October 10, 2016

Providence

Providence-New Bedford-Fall River, RI-MA

117



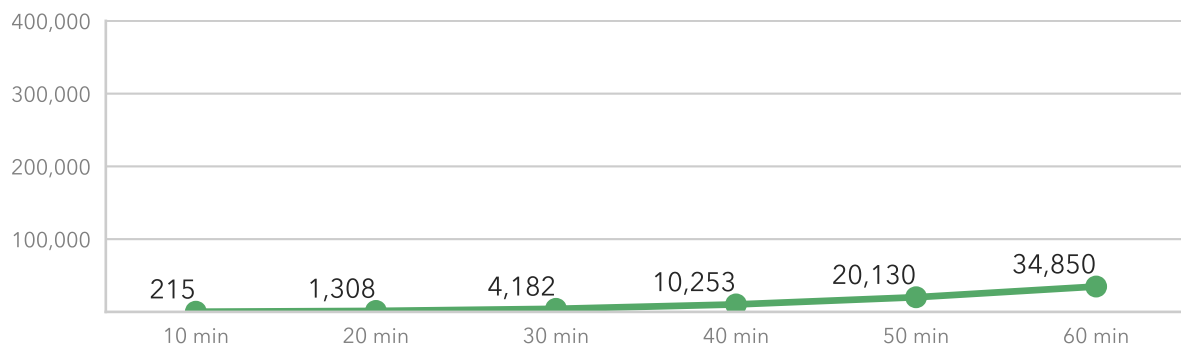
Raleigh

Raleigh-Cary, NC

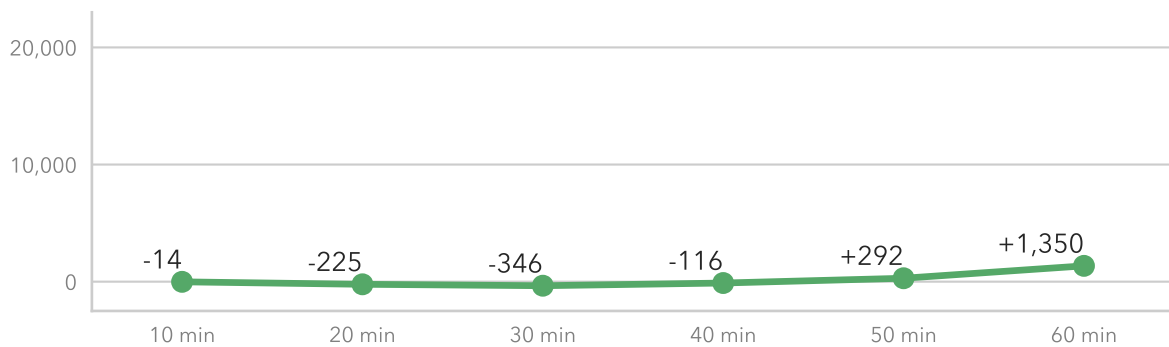
Rank by Weighted Accessibility	48
Rank by Total Employment	44
Rank by 1-Year Change in Weighted Accessibility	44
1-Year Change in Weighted Accessibility	-2.95%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	626,782
Average Job Density (per km ²)	114
Total Workers	561,563
Average Worker Density (per km ²)	102

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Raleigh

Raleigh-Cary, NC

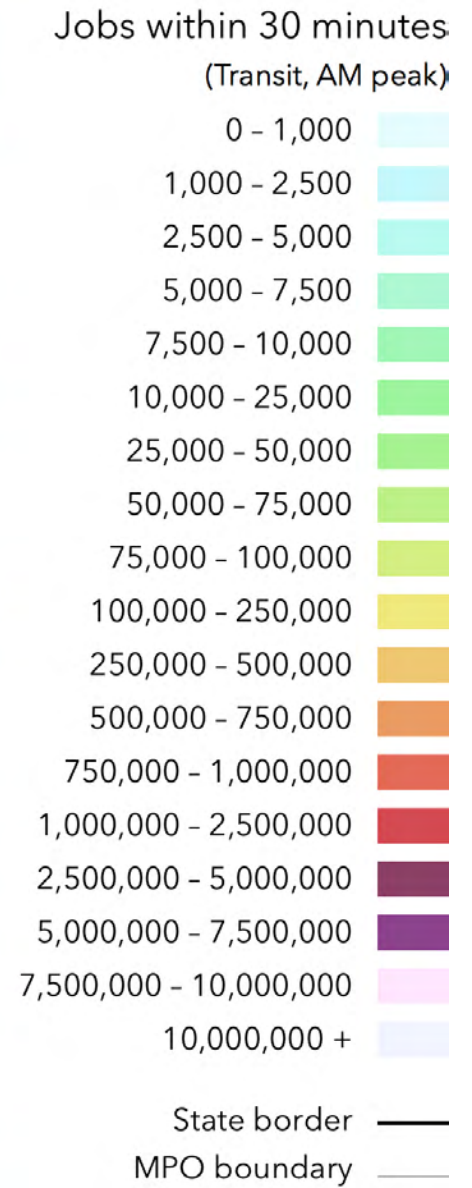
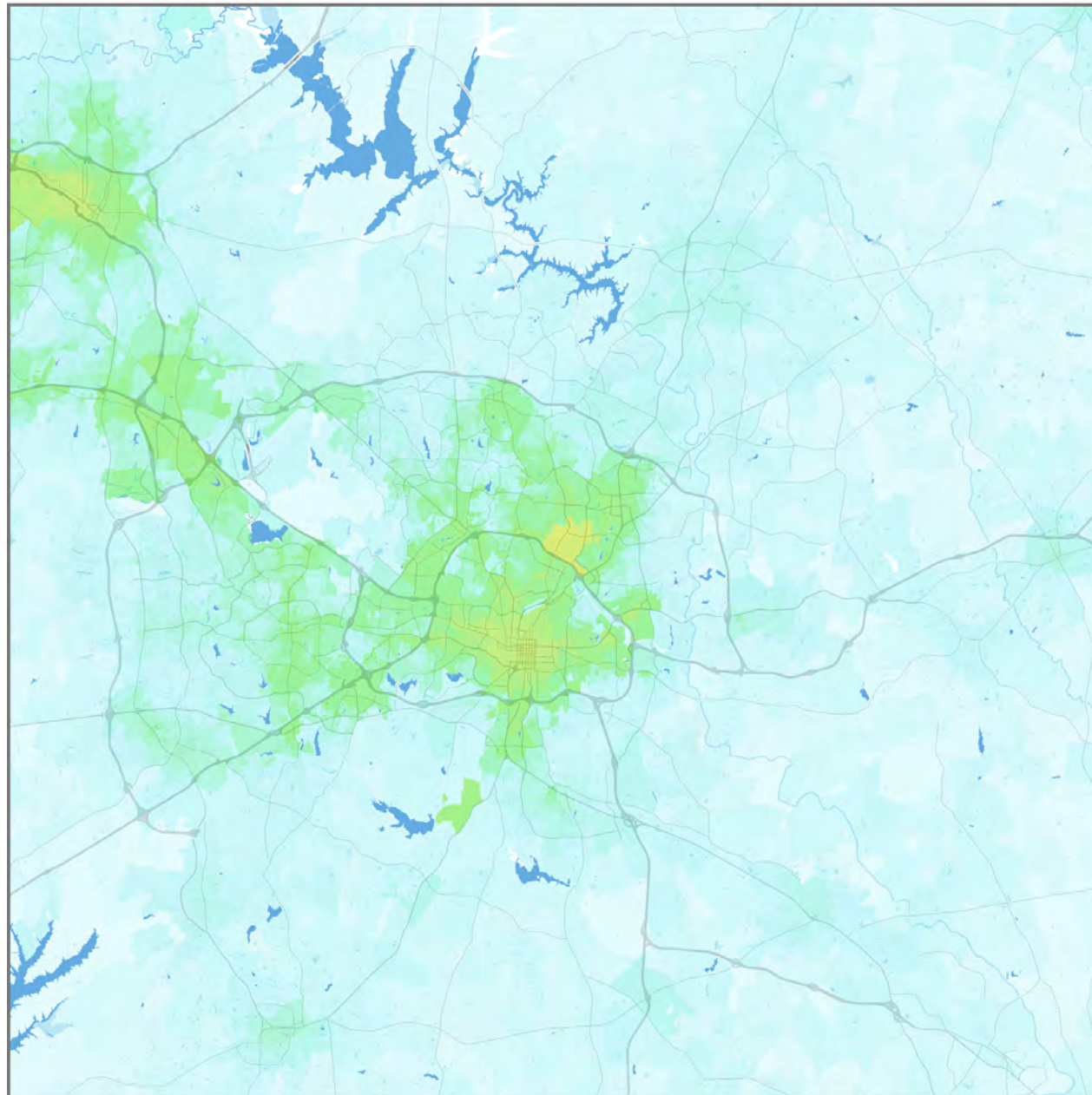
Transit Schedules Included

Agency	Dates
Cary Transit	January 1, 2015 - January 1, 2017
Durham Area Transit Authority	January 1, 2014 - January 1, 2016
GoRaleigh	January 1, 2014 - January 1, 2018
GoTriangle	January 1, 2014 - January 1, 2018
NCSU Wolfline	November 30, 2015 - October 10, 2016

Raleigh

Raleigh-Cary, NC

120



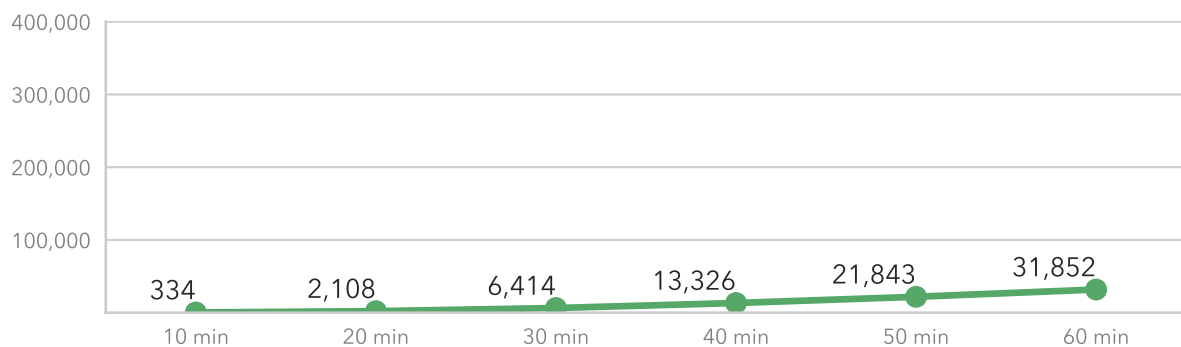
Richmond

Richmond, VA

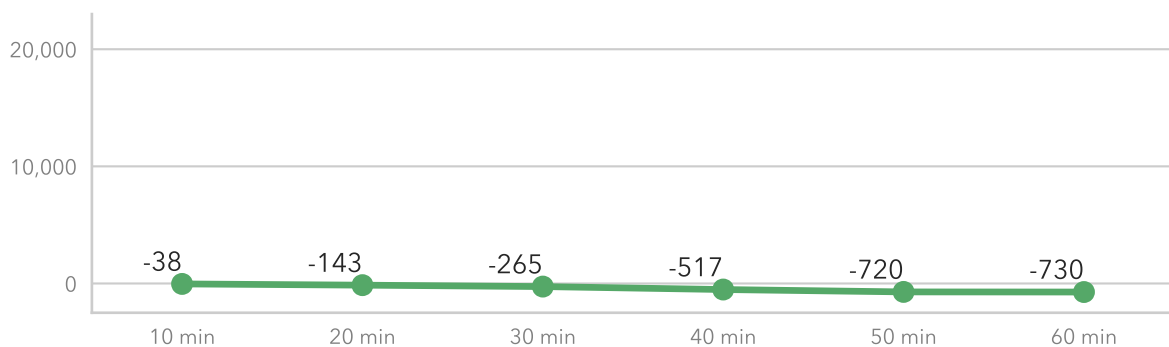
Rank by Weighted Accessibility	42
Rank by Total Employment	42
Rank by 1-Year Change in Weighted Accessibility	47
1-Year Change in Weighted Accessibility	-4.28%
1-Year Change in Weighted Accessibility Rank	-1
Total Jobs	619,128
Average Job Density (per km ²)	42
Total Workers	602,972
Average Worker Density (per km ²)	41

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Richmond

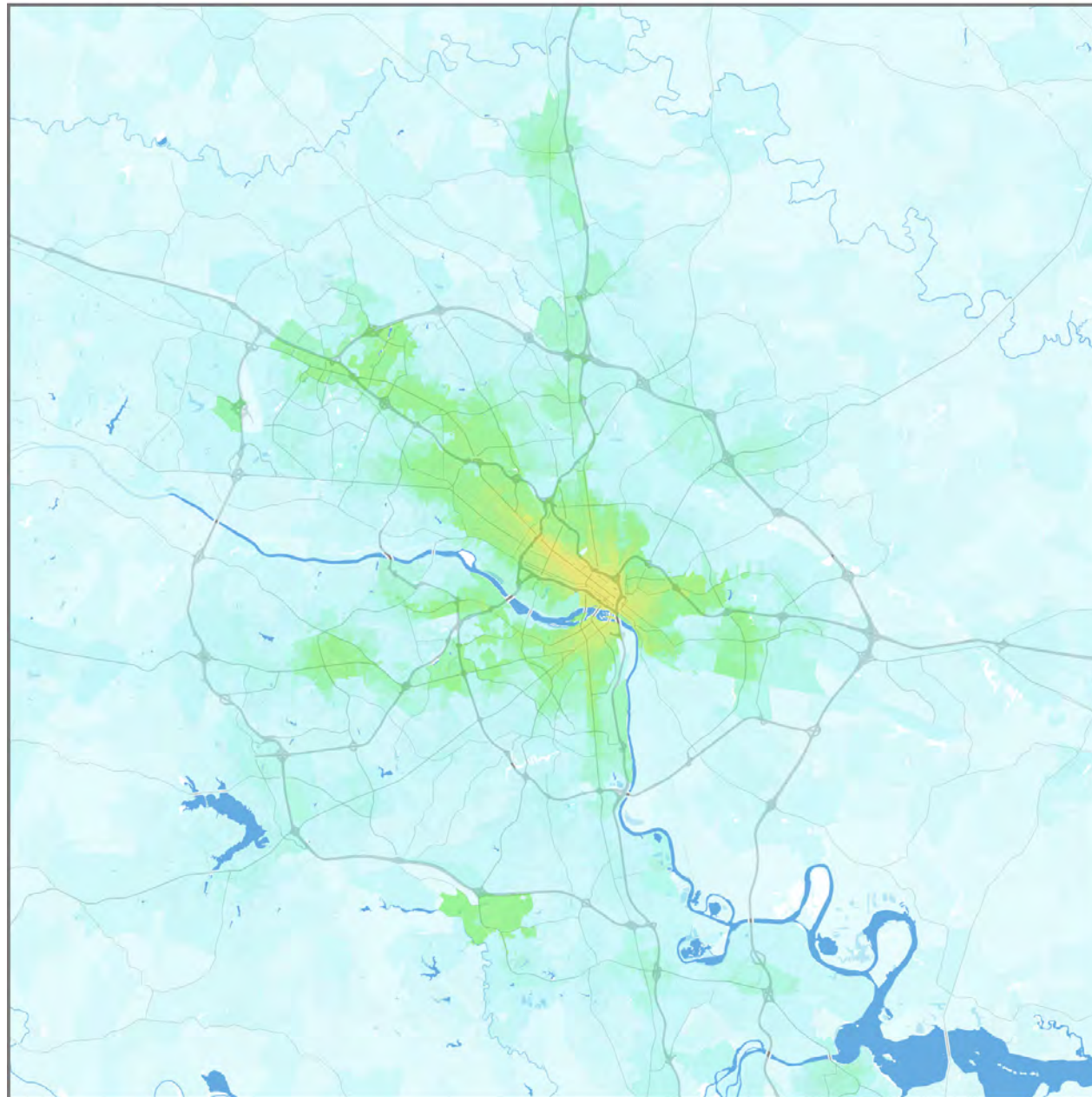
Richmond, VA

Transit Schedules Included

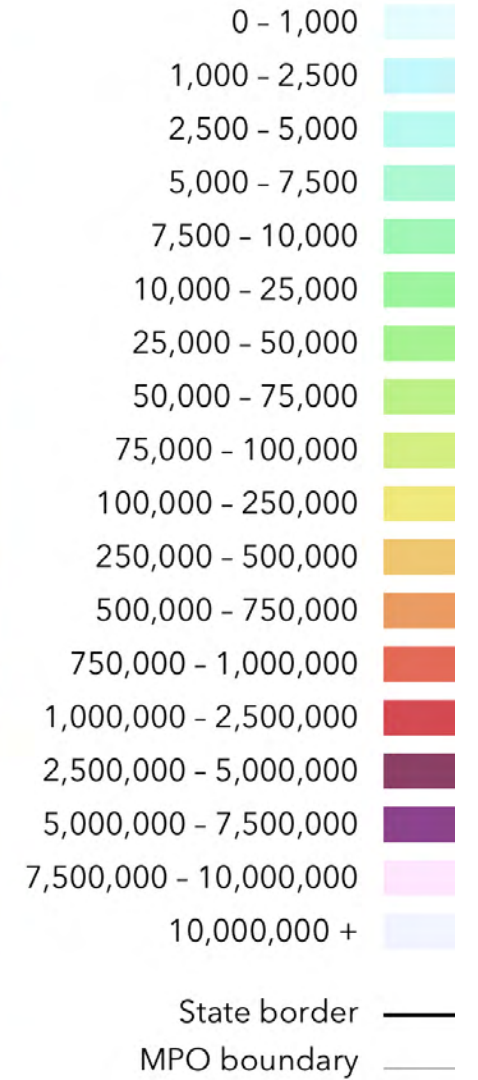
Agency	Dates
GRTC Transit System	January 25, 2015 - October 17, 2015

Richmond

Richmond, VA



Jobs within 30 minutes (Transit, AM peak)



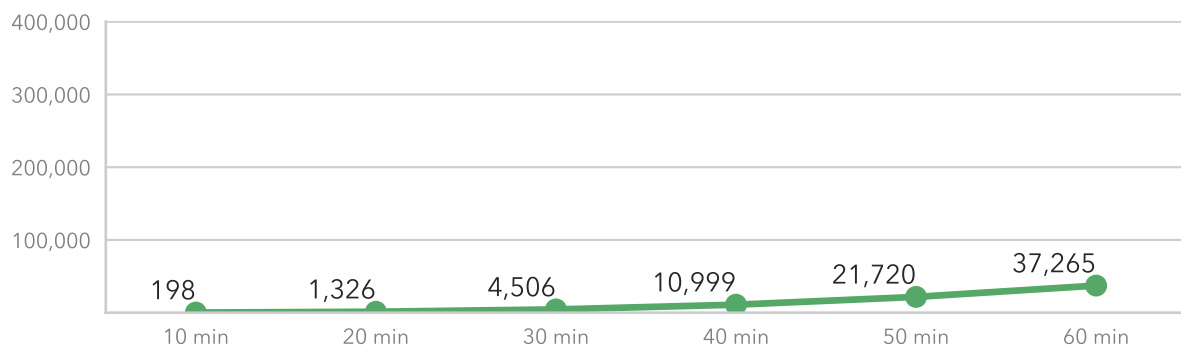
Riverside

Riverside-San Bernardino-Ontario, CA

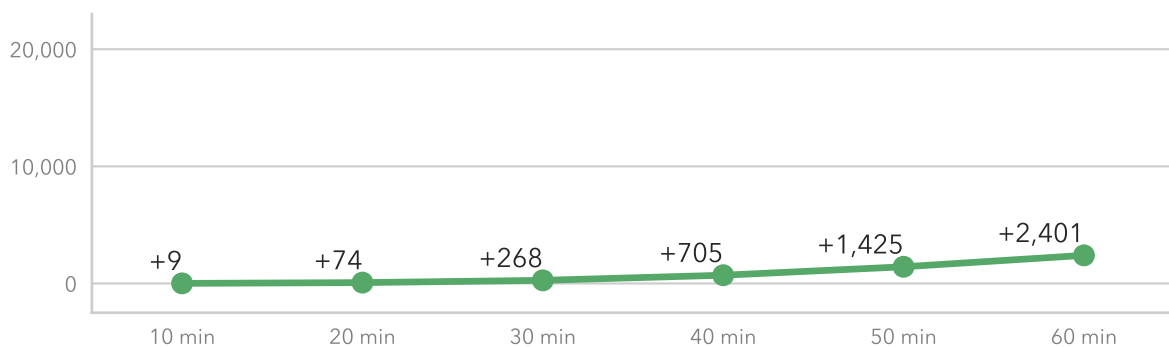
Rank by Weighted Accessibility	45
Rank by Total Employment	16
Rank by 1-Year Change in Weighted Accessibility	7
1-Year Change in Weighted Accessibility	+6.59%
1-Year Change in Weighted Accessibility Rank	+3
Total Jobs	1,281,097
Average Job Density (per km ²)	18
Total Workers	1,588,904
Average Worker Density (per km ²)	23

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Riverside

Riverside-San Bernardino-Ontario, CA

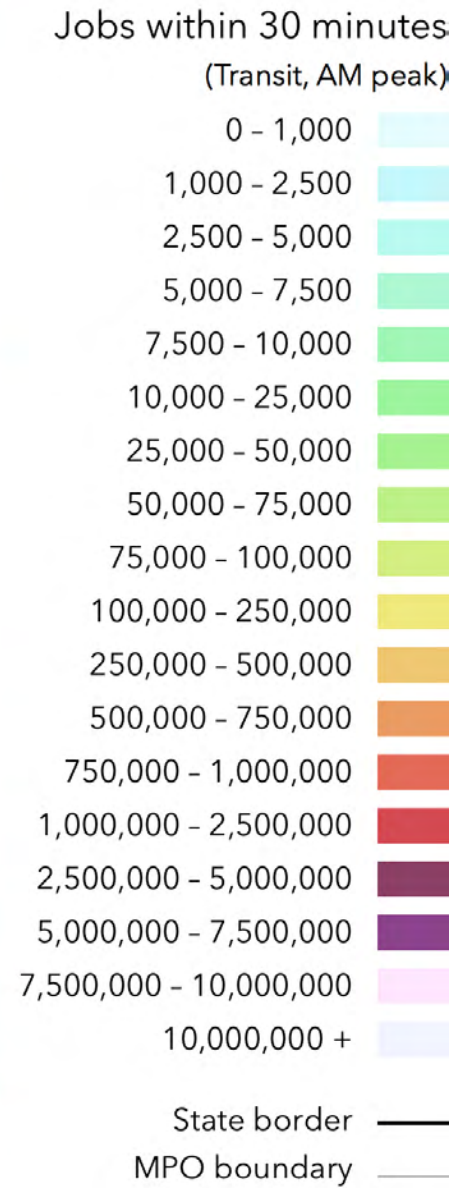
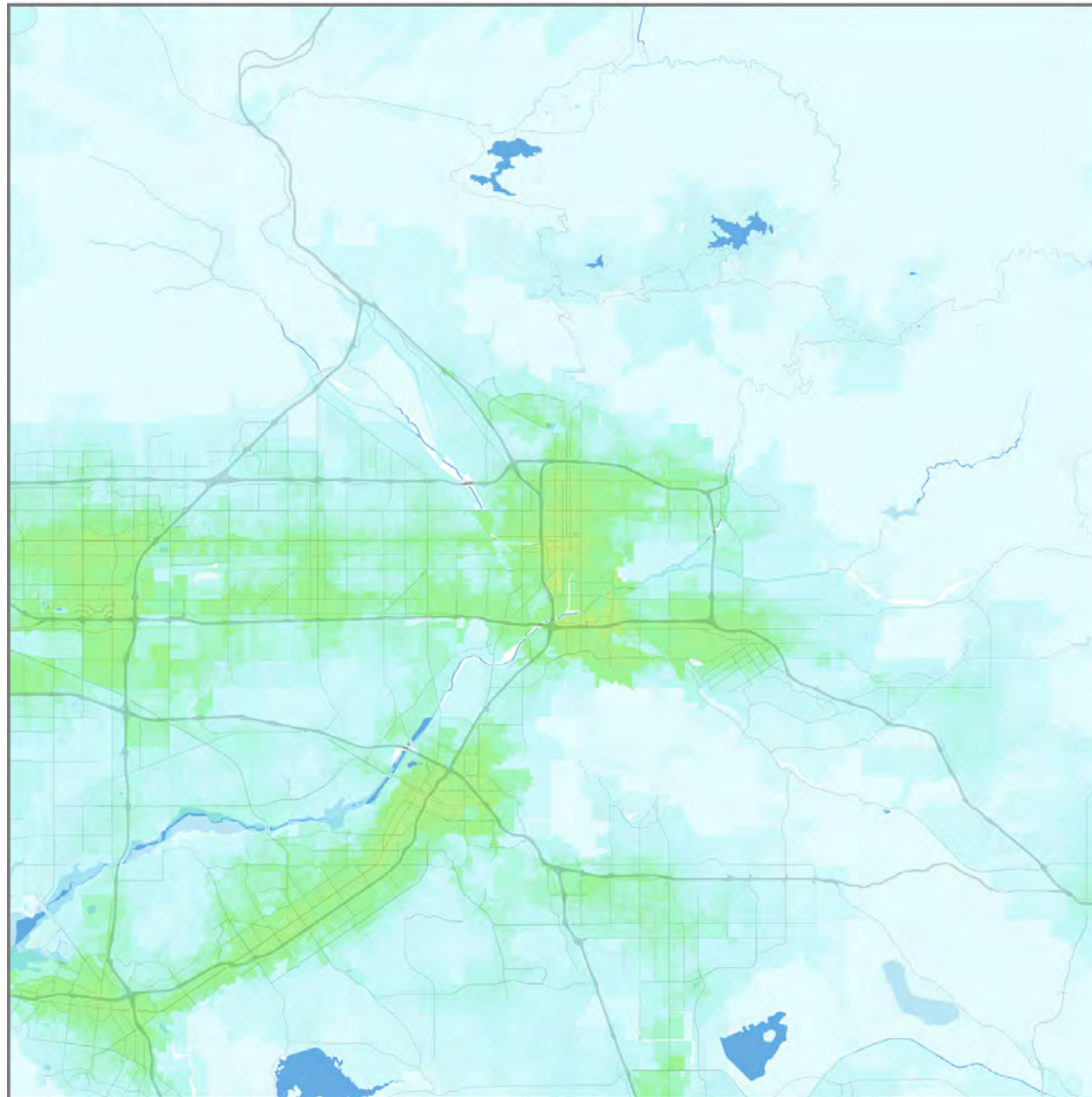
Transit Schedules Included

Agency	Dates
Beaumont Transit System	January 1, 2013 - January 1, 2017
Corona Cruiser	January 1, 2013 - January 1, 2017
Foothill Transit	July 12, 2015 - January 31, 2016
Metrolink Trains	October 5, 2015 - December 1, 2016
Mountain Transit	January 1, 2014 - January 1, 2017
OMNITRANS	January 4, 2016 - September 4, 2016
Orange County Transportation Authority	October 11, 2015 - June 10, 2016
Palo Verde Valley Transit Agency	January 1, 2013 - January 1, 2017
Riverside Transit Agency	January 10, 2016 - May 7, 2016
Sunline Transit Agency	September 6, 2015 - September 3, 2016
Victor Valley Transit Authority	January 1, 2016 - January 1, 2017

Riverside

Riverside-San Bernardino-Ontario, CA

126



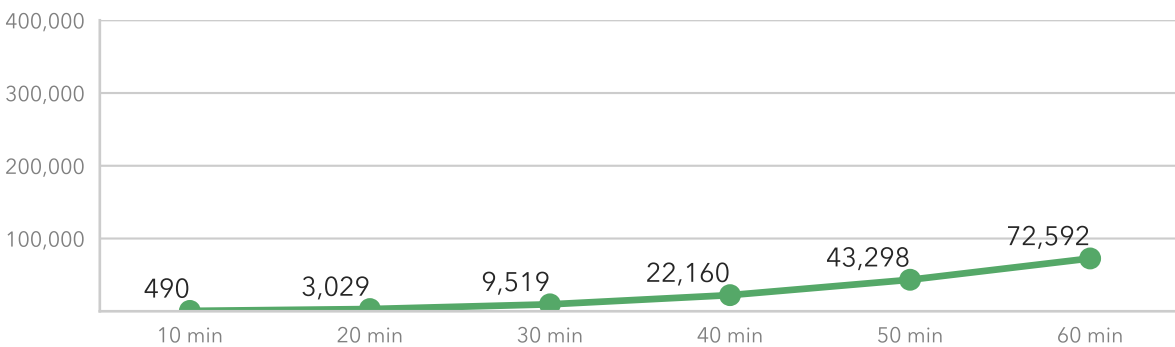
Sacramento

Sacramento-Arden-Arcade-Roseville, CA

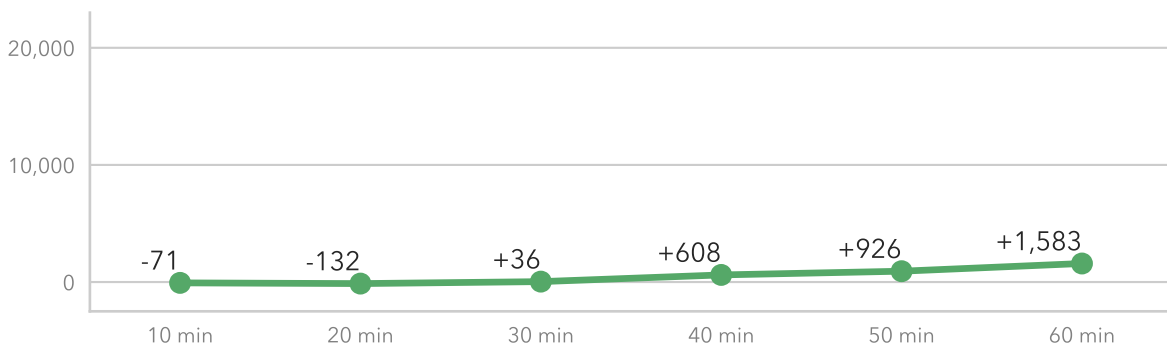
Rank by Weighted Accessibility	26
Rank by Total Employment	30
Rank by 1-Year Change in Weighted Accessibility	36
1-Year Change in Weighted Accessibility	+0.23%
1-Year Change in Weighted Accessibility Rank	-1
Total Jobs	894,621
Average Job Density (per km ²)	68
Total Workers	884,636
Average Worker Density (per km ²)	67

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Sacramento

Sacramento-Arden-Arcade-Roseville, CA

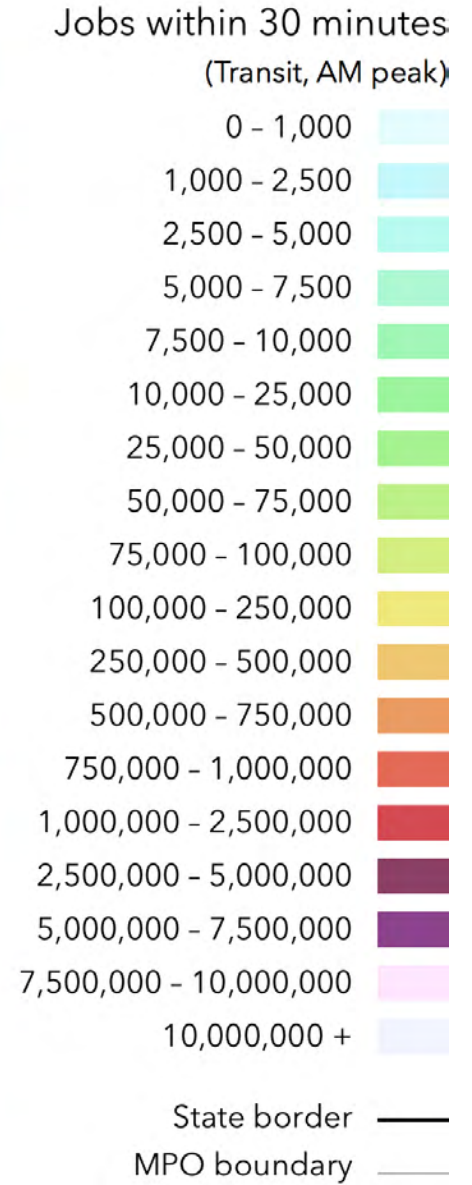
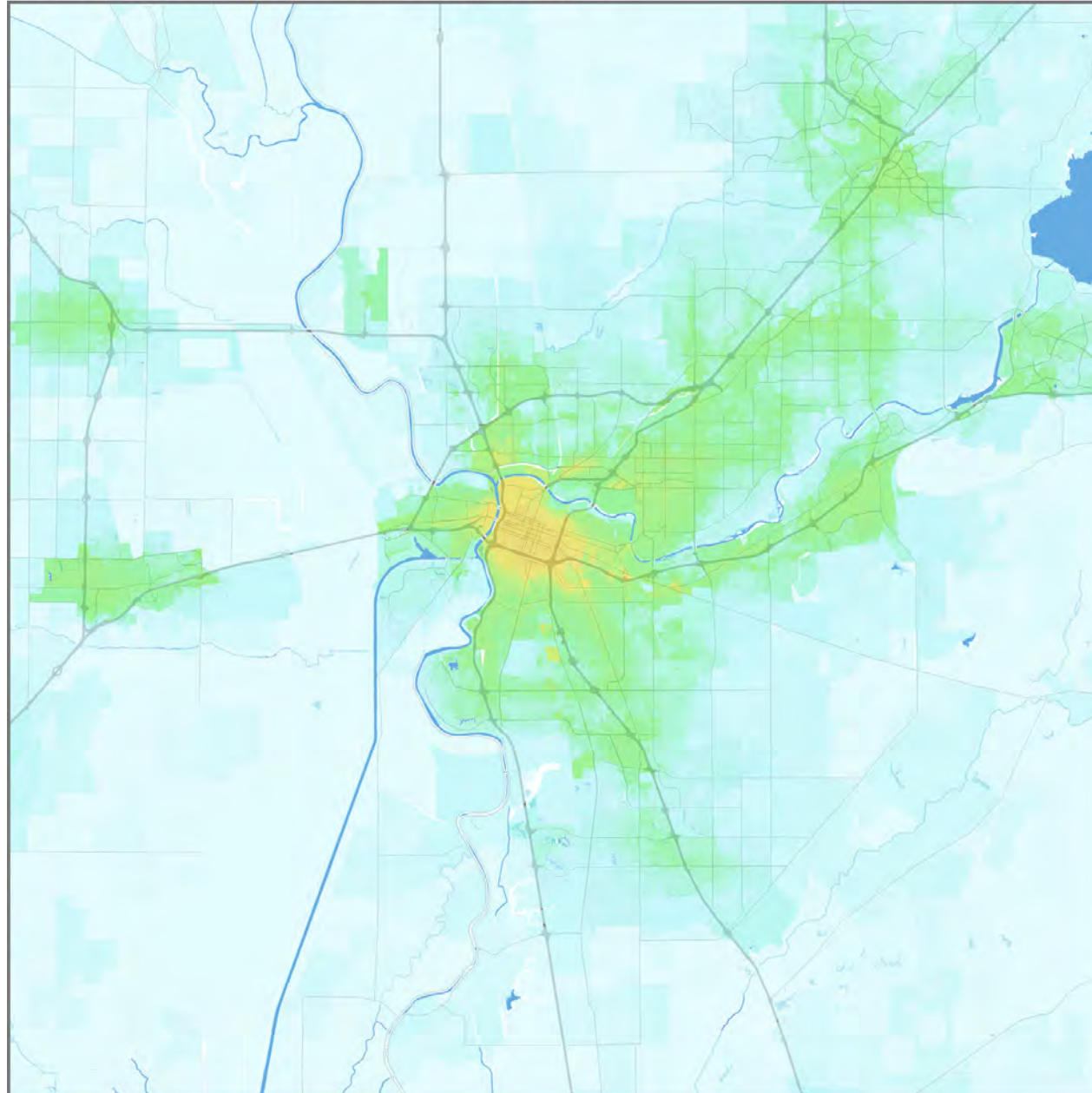
Transit Schedules Included

Agency	Dates
Amador Transit	January 1, 2012 - January 1, 2017
BlueGo	September 5, 2015 - January 1, 2017
Capitol Corridor Joint Powers Authority	May 1, 2016 - May 29, 2017
El Dorado Transit	January 1, 2015 - January 1, 2017
Fairfield and Suisun Transit	January 1, 2013 - June 8, 2017
Mountain Line	January 1, 2014 - January 1, 2017
Nevada County Gold Country Stage	July 6, 2015 - December 31, 2016
Night Rider (Airport Minibus)	July 1, 2015 - September 6, 2015
Rio Vista Delta Breeze	May 12, 2015 - January 1, 2017
Roseville Transit	October 26, 2015 - December 31, 2017
Sacramento Regional Transit	January 3, 2016 - June 18, 2016
Tahoe Area Regional Transit	September 8, 2015 - March 27, 2016
Unitrans (Davis)	January 4, 2016 - June 2, 2016
Verde Lynx	January 1, 2013 - January 1, 2017
Yolobus (Yolo County)	January 4, 2015 - December 31, 2016
Yuba-Sutter Transit	January 1, 2013 - January 1, 2017

Sacramento

Sacramento--Arden-Arcade--Roseville, CA

129



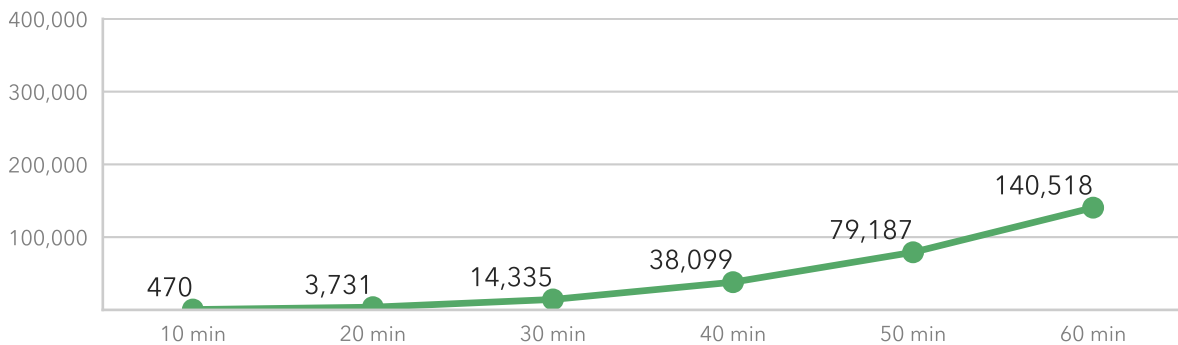
Salt Lake City

Salt Lake City, UT

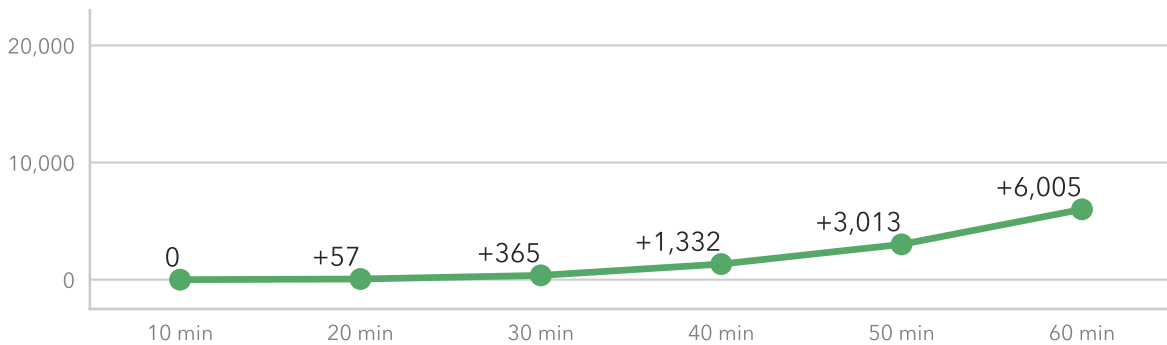
Rank by Weighted Accessibility	15
Rank by Total Employment	46
Rank by 1-Year Change in Weighted Accessibility	19
1-Year Change in Weighted Accessibility	+3.42%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	661,256
Average Job Density (per km ²)	27
Total Workers	554,510
Average Worker Density (per km ²)	22

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Salt Lake City

Salt Lake City, UT

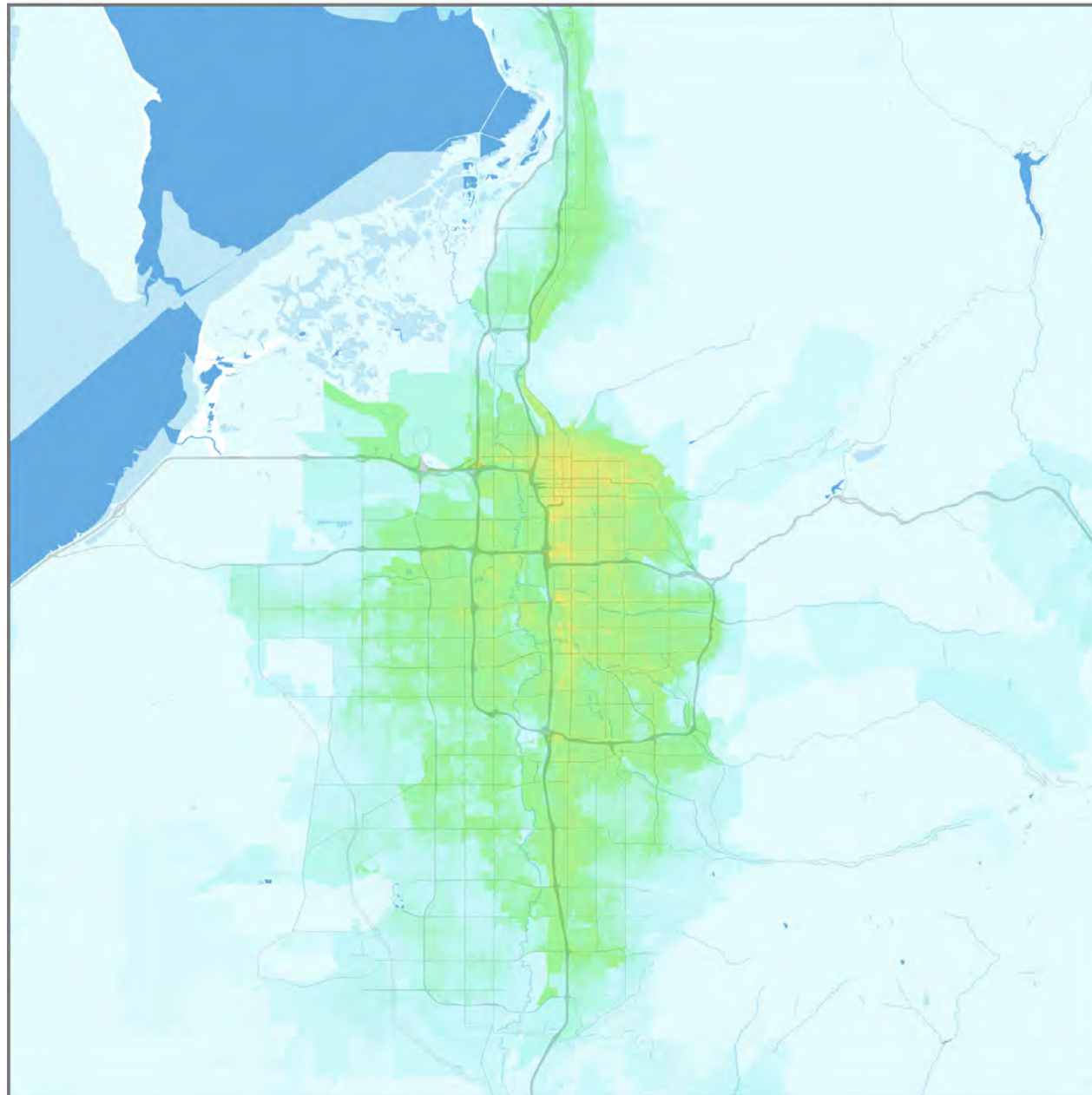
Transit Schedules Included

Agency	Dates
Elevated Transit	November 20, 2014 - January 1, 2017
Utah Transit Authority	December 6, 2015 - August 13, 2016

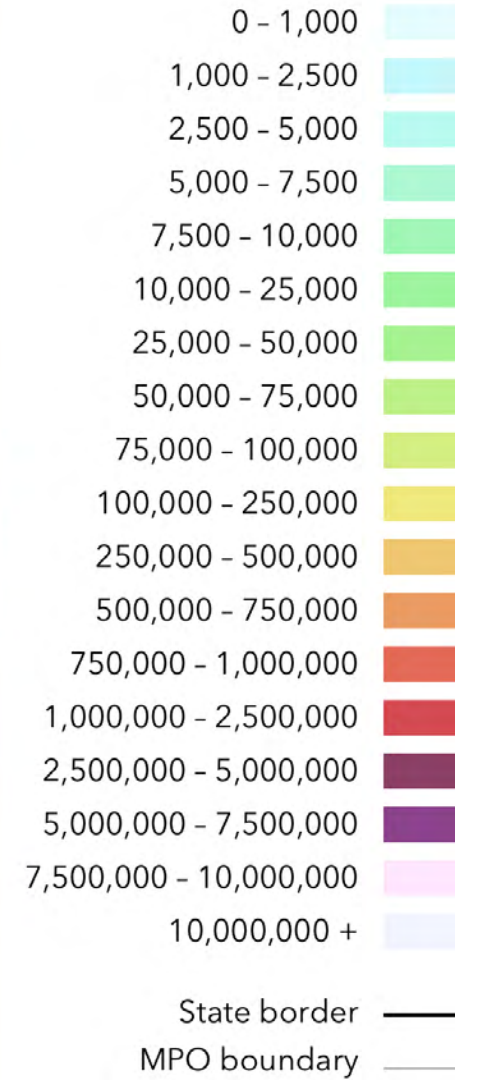
Salt Lake City

Salt Lake City, UT

132



Jobs within 30 minutes
(Transit, AM peak)



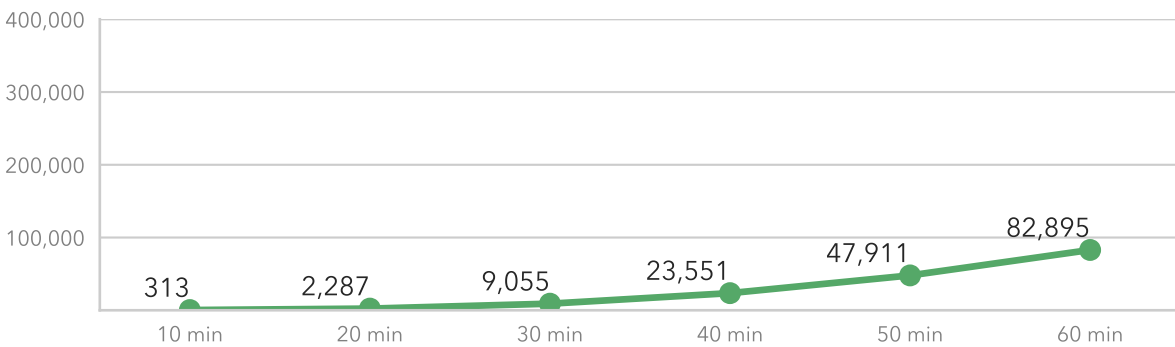
San Antonio

San Antonio-New Braunfels, TX

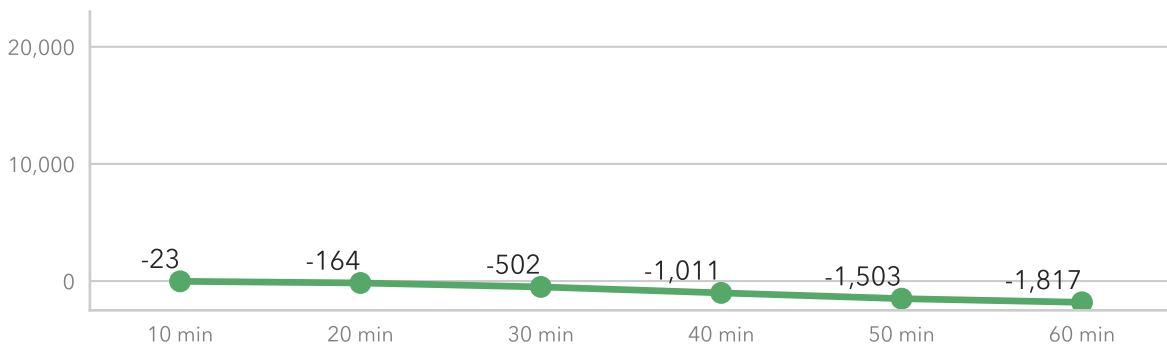
Rank by Weighted Accessibility	25
Rank by Total Employment	28
Rank by 1-Year Change in Weighted Accessibility	45
1-Year Change in Weighted Accessibility	-3.95%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	906,668
Average Job Density (per km ²)	48
Total Workers	943,802
Average Worker Density (per km ²)	50

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



San Antonio

San Antonio-New Braunfels, TX

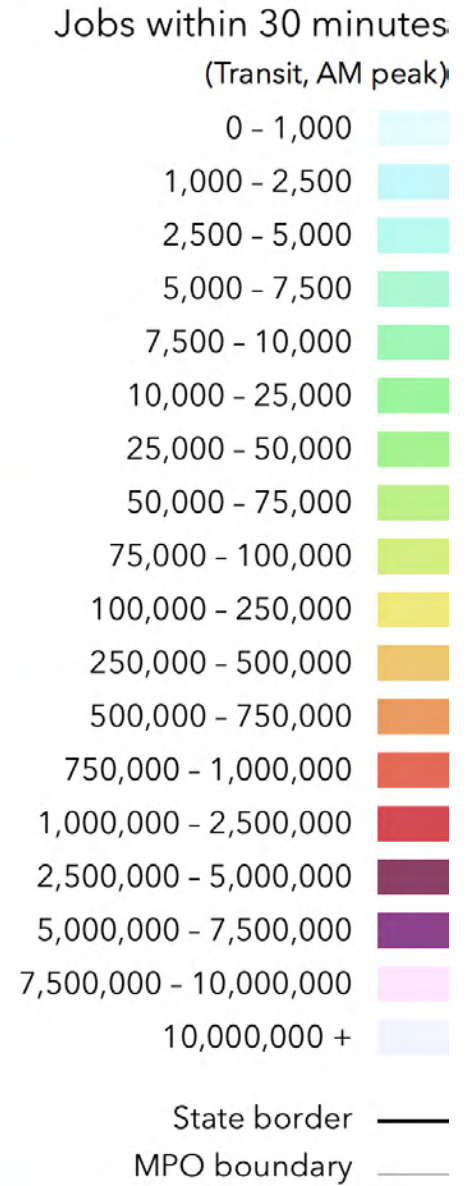
Transit Schedules Included

Agency	Dates
VIA Metropolitan Transit	January 11, 2016 - June 5, 2016

San Antonio

San Antonio-New Braunfels, TX

135



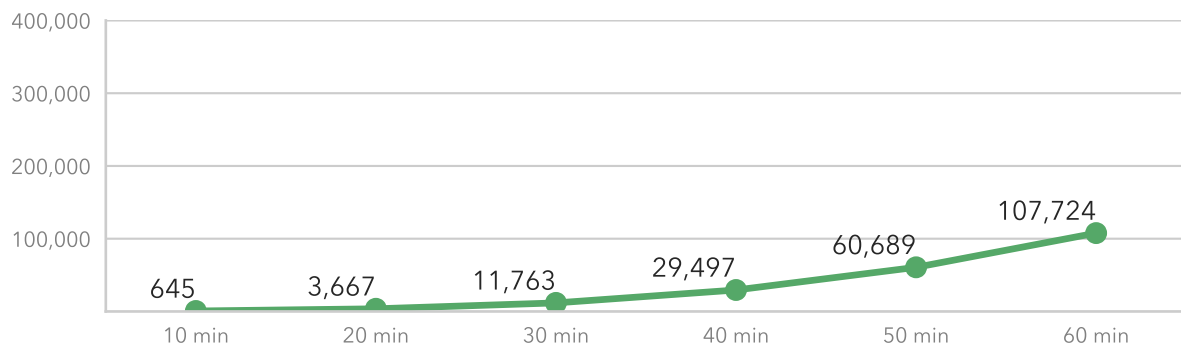
San Diego

San Diego-Carlsbad-San Marcos, CA

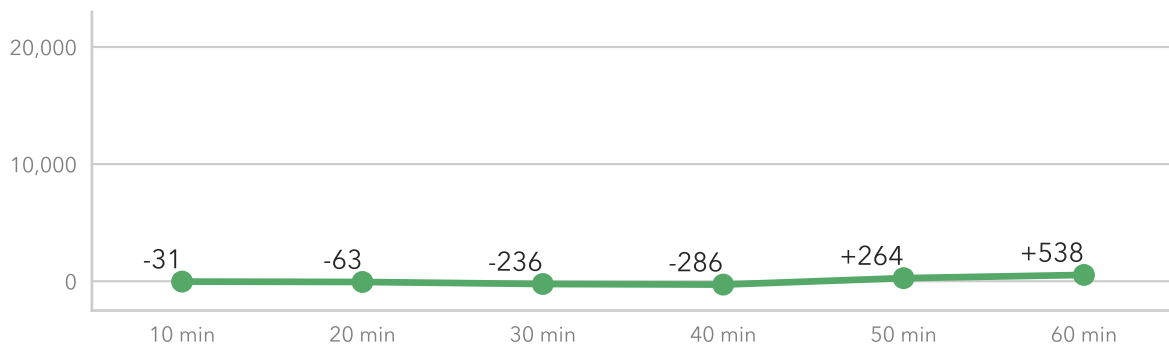
Rank by Weighted Accessibility	18
Rank by Total Employment	17
Rank by 1-Year Change in Weighted Accessibility	38
1-Year Change in Weighted Accessibility	-0.77%
1-Year Change in Weighted Accessibility Rank	-1
Total Jobs	1,309,371
Average Job Density (per km ²)	120
Total Workers	1,331,123
Average Worker Density (per km ²)	122

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



San Diego

San Diego-Carlsbad-San Marcos, CA

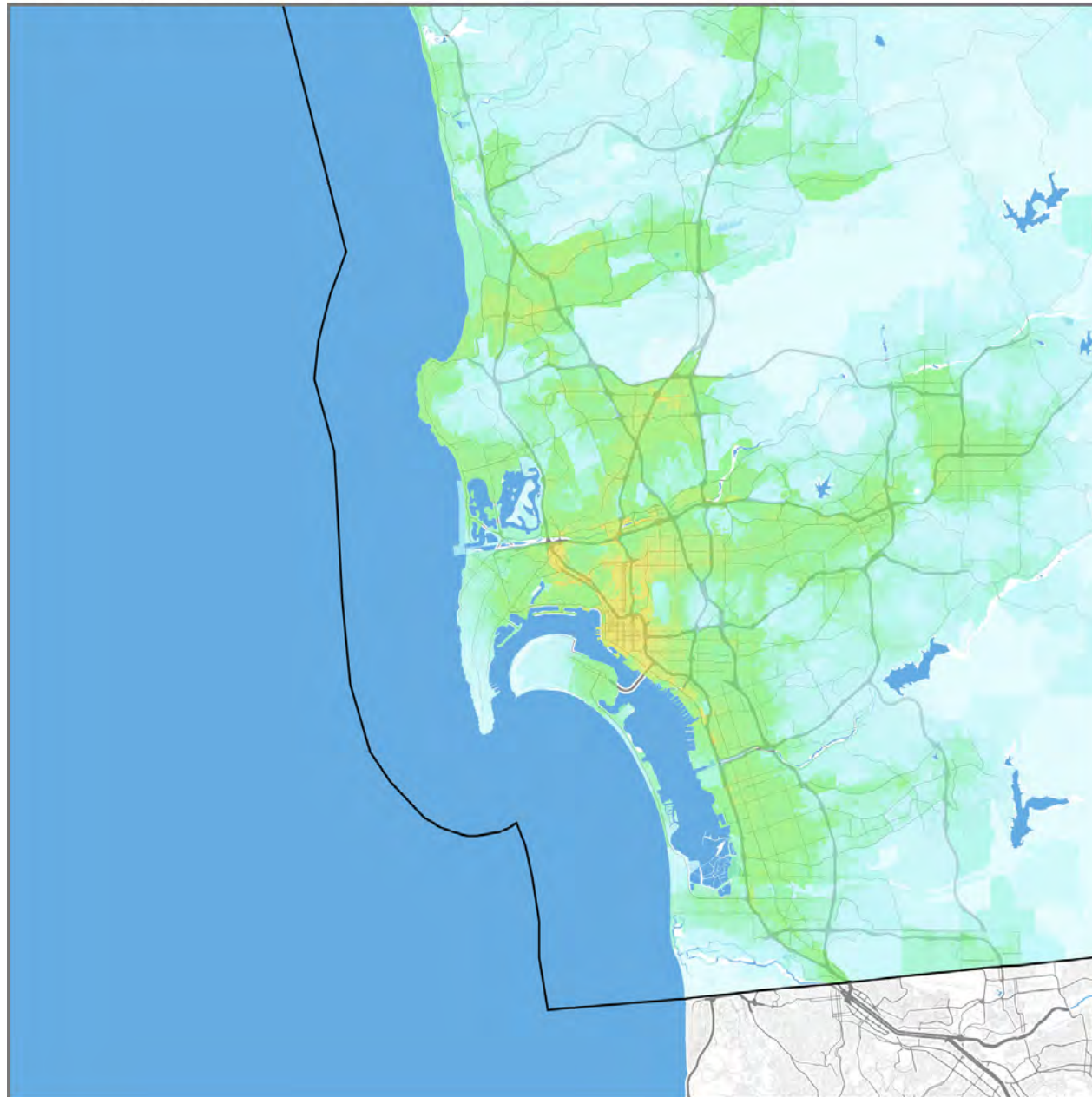
Transit Schedules Included

Agency	Dates
MTS	September 6, 2015 - June 11, 2016
Metrolink Trains	October 5, 2015 - December 1, 2016
North County Transit District	October 4, 2015 - April 2, 2016
Riverside Transit Agency	January 10, 2016 - May 7, 2016

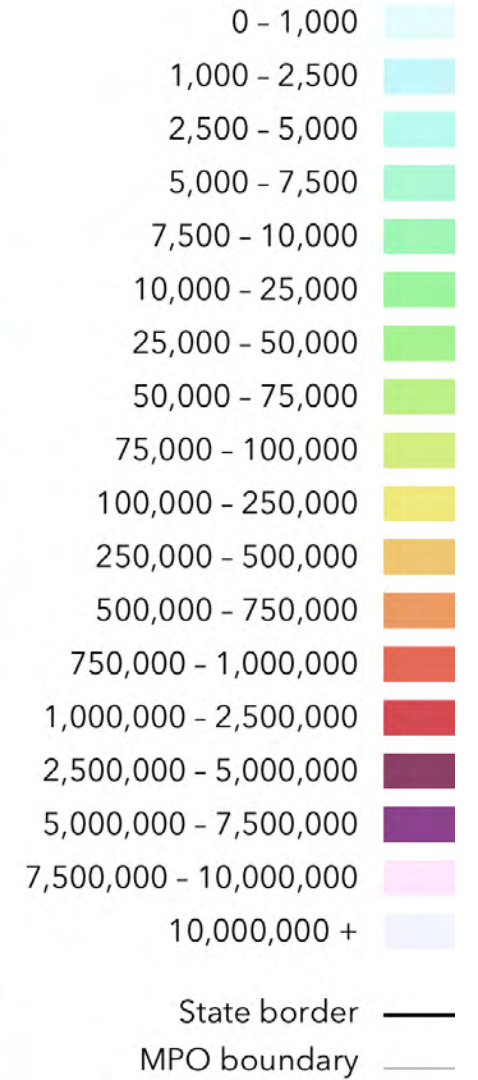
San Diego

San Diego-Carlsbad-San Marcos, CA

138



Jobs within 30 minutes
(Transit, AM peak)



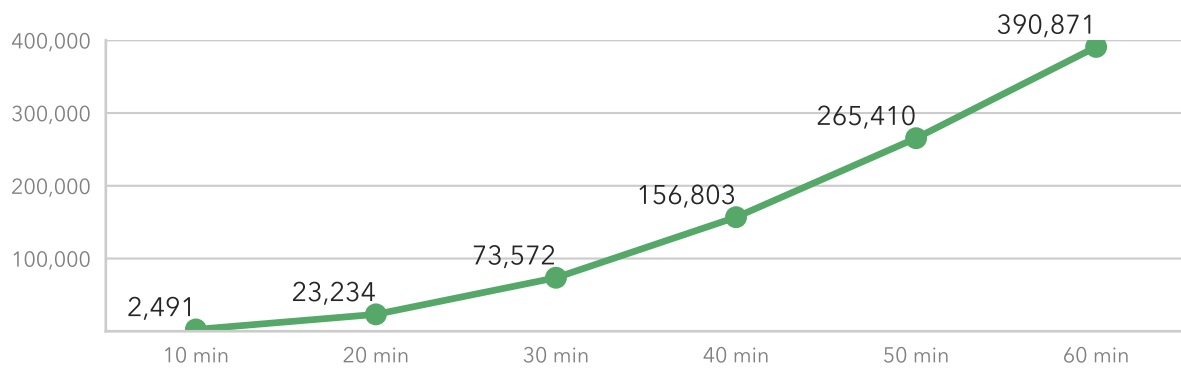
San Francisco

San Francisco-Oakland-Fremont, CA

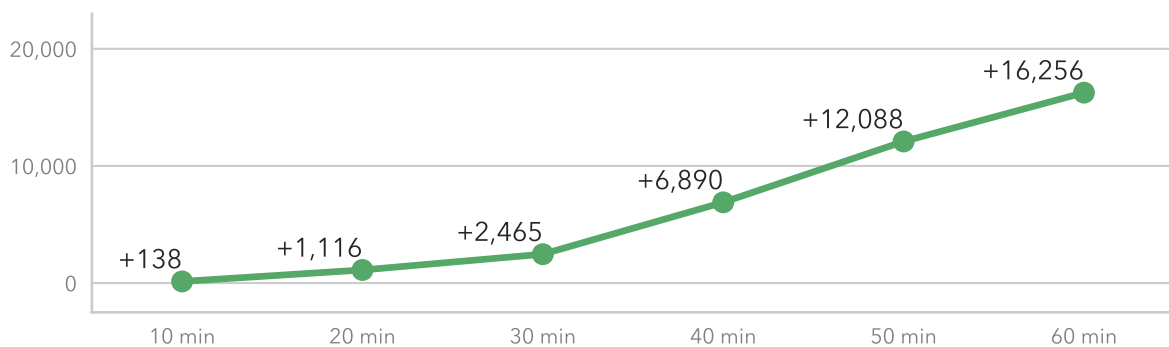
Rank by Weighted Accessibility	2
Rank by Total Employment	11
Rank by 1-Year Change in Weighted Accessibility	17
1-Year Change in Weighted Accessibility	+4.44%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	2,209,855
Average Job Density (per km ²)	345
Total Workers	2,079,244
Average Worker Density (per km ²)	325

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



San Francisco

San Francisco-Oakland-Fremont, CA

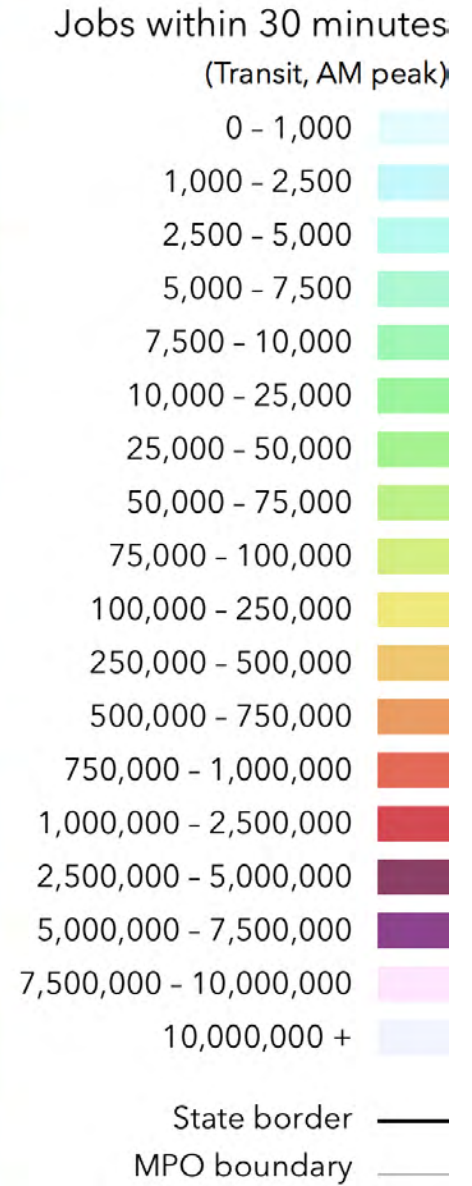
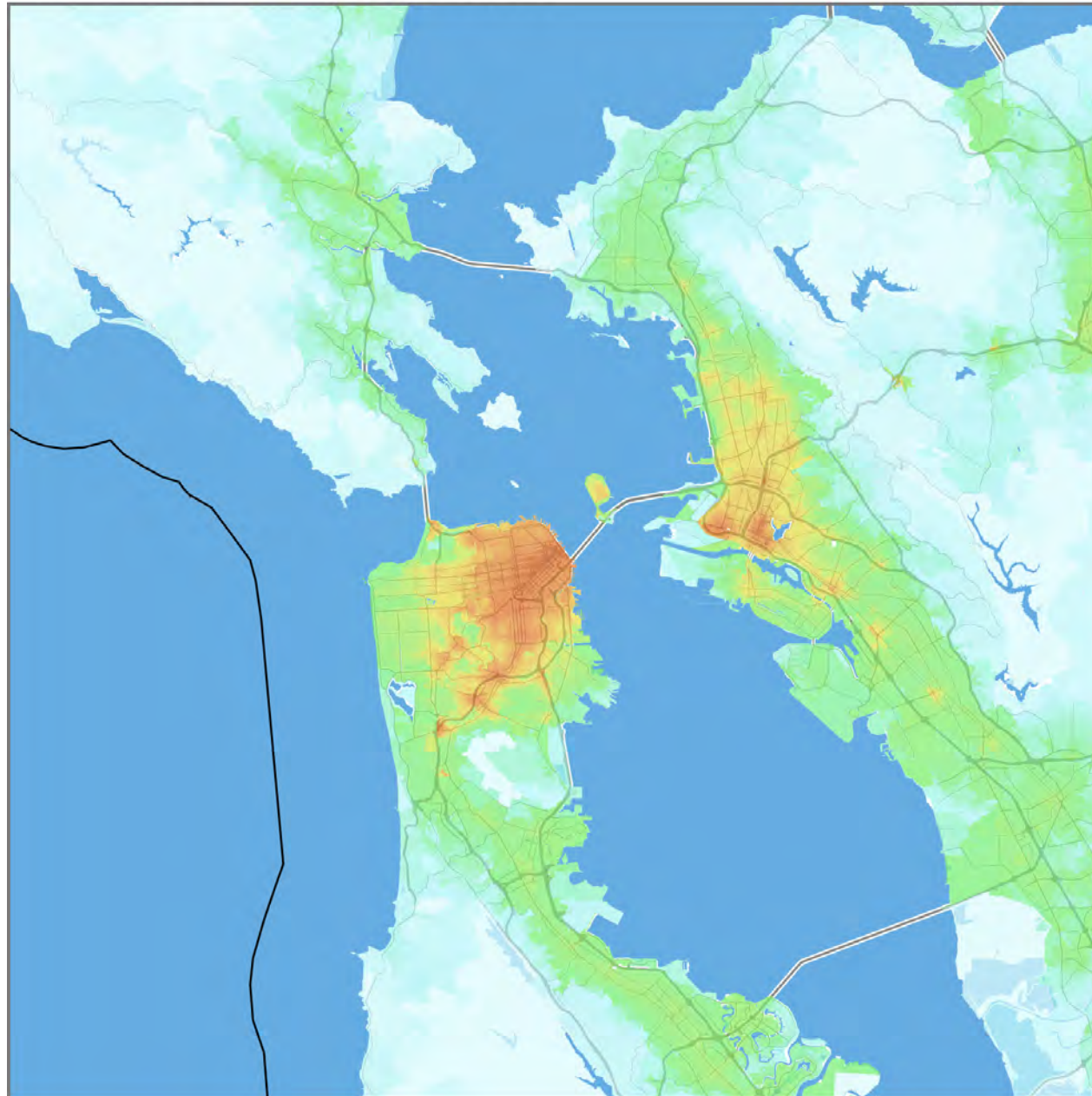
Transit Schedules Included

Agency	Dates
AC Transit	December 19, 2015 - March 19, 2016
AirBART	May 26, 2014 - September 16, 2015
Bay Area Rapid Transit	September 14, 2015 - January 1, 2017
Bear Transit - UC Berkeley Shuttle	January 7, 2015 - January 31, 2017
Caltrain	October 5, 2014 - October 5, 2024
Capitol Corridor Joint Powers Authority	May 1, 2016 - May 29, 2017
County Connection	November 22, 2015 - June 11, 2016
Fairfield and Suisun Transit	January 1, 2013 - June 8, 2017
Golden Gate Transit	December 13, 2015 - March 12, 2016
Marin Transit	December 13, 2015 - June 11, 2016
Menlo Park Midday Shuttle	January 26, 2013 - January 3, 2017
Modesto Area Express	January 1, 2014 - July 1, 2017
Rio Vista Delta Breeze	May 12, 2015 - January 1, 2017
SamTrans	November 29, 2015 - June 11, 2016
San Francisco Municipal Transportation Agency	September 26, 2015 - March 11, 2016
SolTrans	December 1, 2014 - December 31, 2017
Sonoma County Transit	August 16, 2015 - January 1, 2017
VTA	January 4, 2016 - April 10, 2016
WestCat (Western Contra Costa)	April 11, 2016 - June 1, 2017
Wheels Bus	January 23, 2016 - December 1, 2016

San Francisco

San Francisco-Oakland-Fremont, CA

141



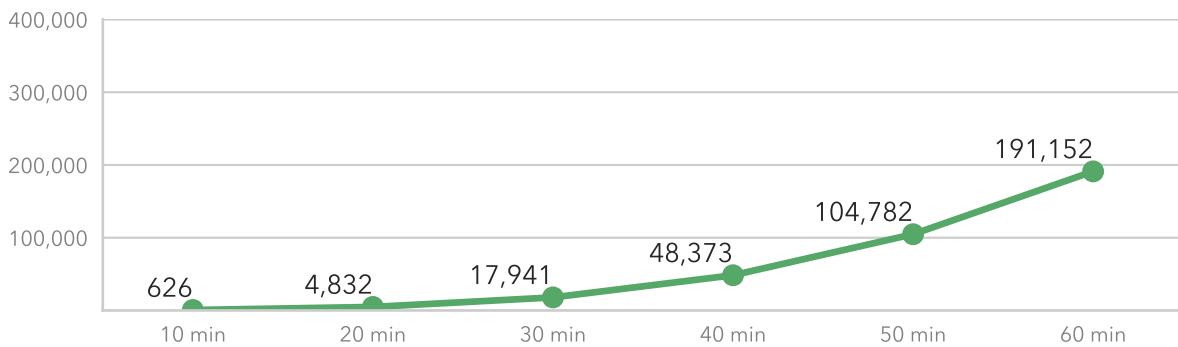
San Jose

San Jose-Sunnyvale-Santa Clara, CA

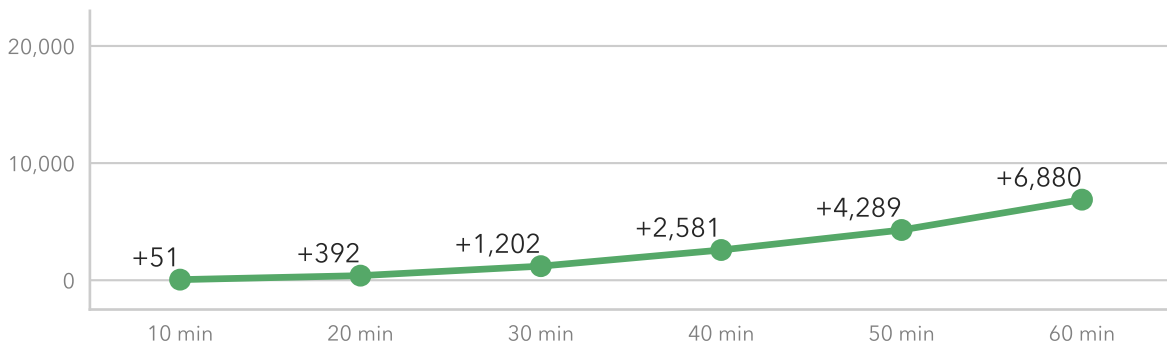
Rank by Weighted Accessibility	9
Rank by Total Employment	31
Rank by 1-Year Change in Weighted Accessibility	12
1-Year Change in Weighted Accessibility	+5.45%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	991,808
Average Job Density (per km ²)	143
Total Workers	869,876
Average Worker Density (per km ²)	125

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



San Jose

San Jose-Sunnyvale-Santa Clara, CA

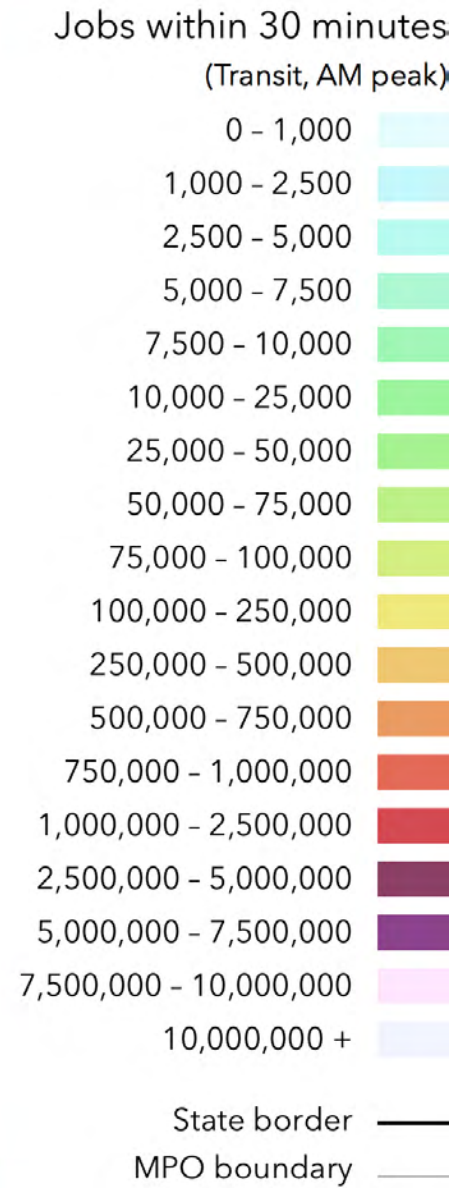
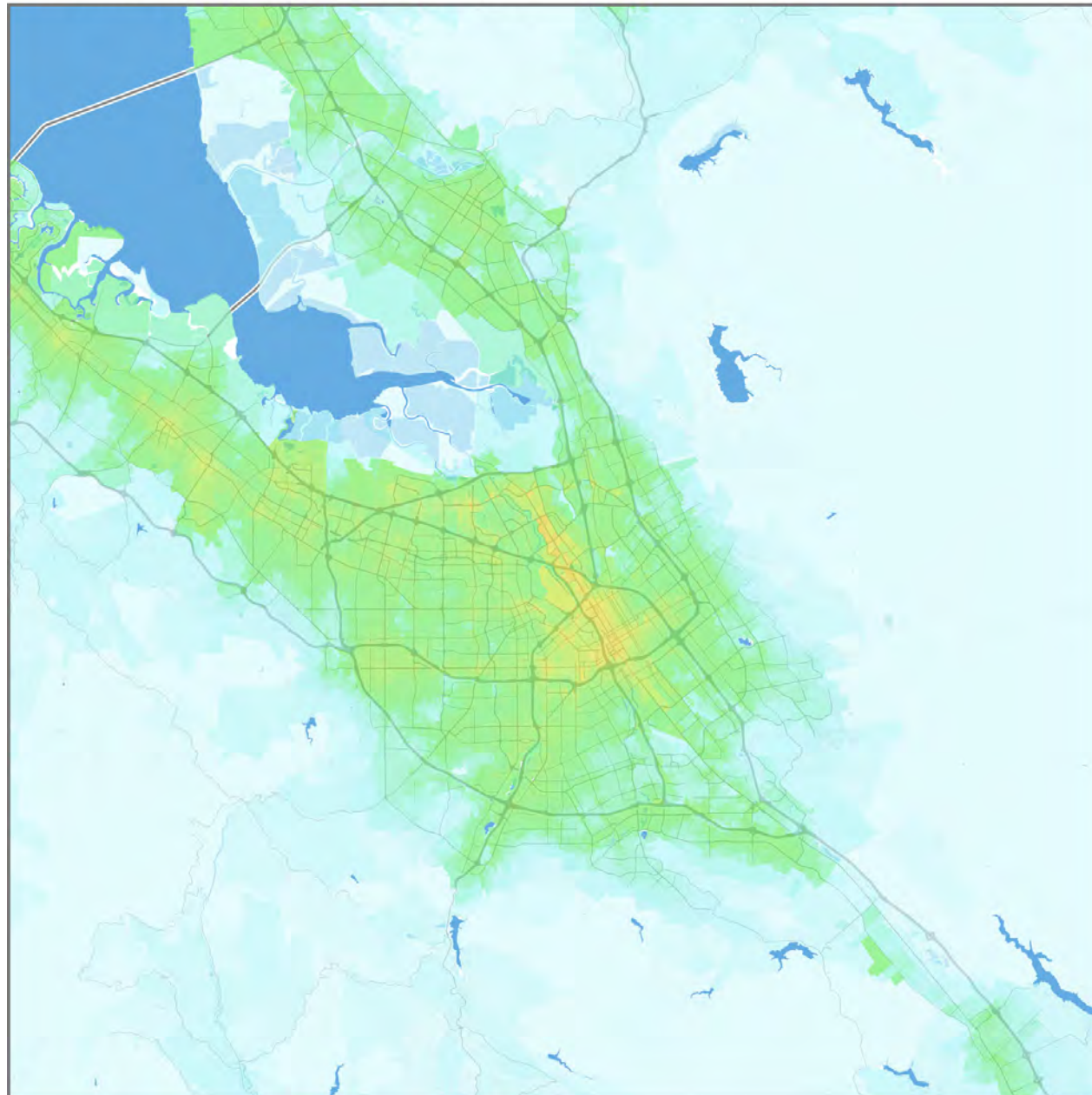
Transit Schedules Included

Agency	Dates
AC Transit	December 19, 2015 - March 19, 2016
Caltrain	October 5, 2014 - October 5, 2024
Capitol Corridor Joint Powers Authority	May 1, 2016 - May 29, 2017
Menlo Park Midday Shuttle	January 26, 2013 - January 3, 2017
SamTrans	November 29, 2015 - June 11, 2016
San Benito County Express	January 1, 2014 - January 1, 2017
Santa Cruz Metro	December 9, 2015 - March 9, 2016
VTA	January 4, 2016 - April 10, 2016

San Jose

San Jose-Sunnyvale-Santa Clara, CA

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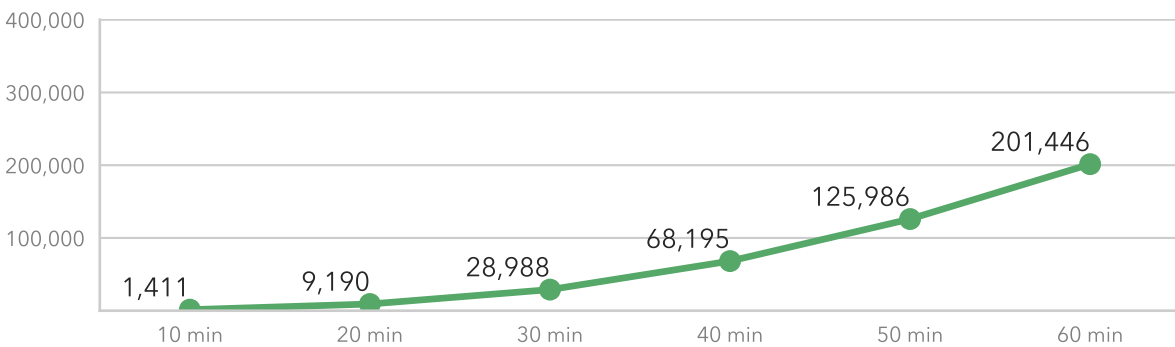
Seattle

Seattle-Tacoma-Bellevue, WA

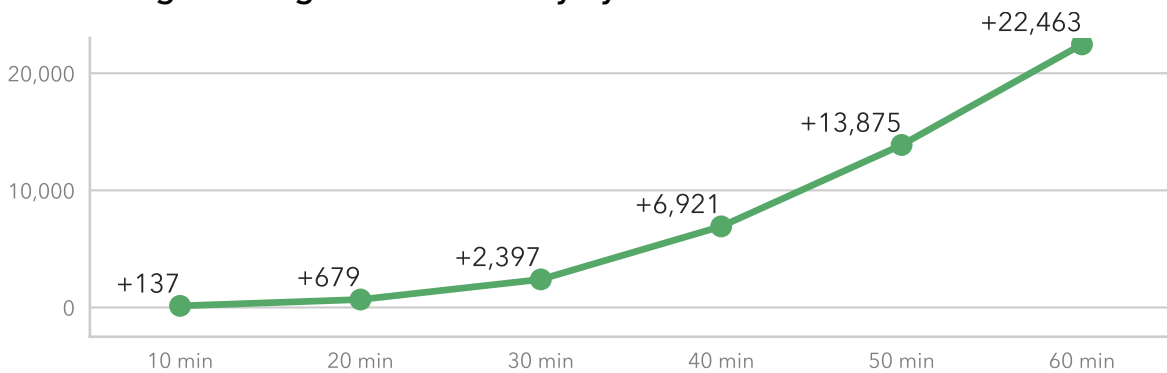
Rank by Weighted Accessibility	8
Rank by Total Employment	15
Rank by 1-Year Change in Weighted Accessibility	4
1-Year Change in Weighted Accessibility	+10.80%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	1,774,753
Average Job Density (per km ²)	117
Total Workers	1,657,841
Average Worker Density (per km ²)	109

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Seattle

Seattle-Tacoma-Bellevue, WA

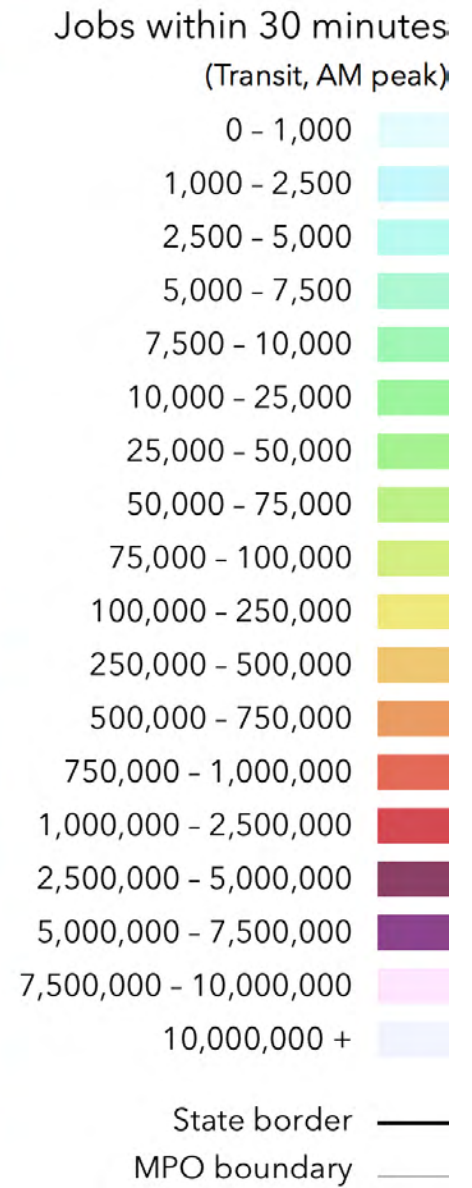
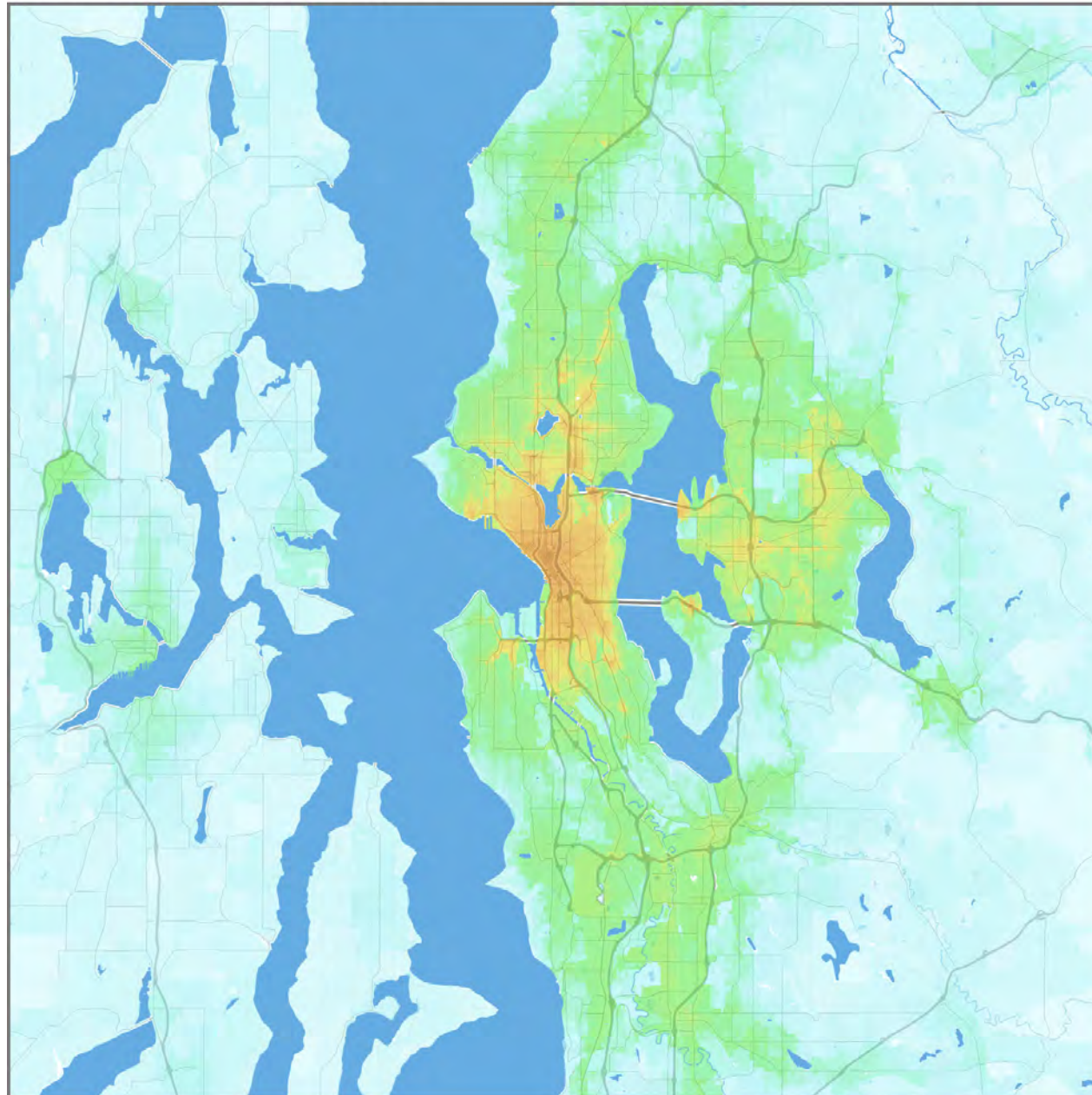
Transit Schedules Included

Agency	Dates
City of Seattle	December 9, 2015 - March 25, 2016
Community Transit	December 21, 2015 - February 13, 2016
Everett Transit	November 15, 2015 - March 20, 2016
Intercity Transit	December 17, 2015 - December 17, 2020
Island Transit	August 20, 2014 - May 31, 2015
King County Marine Division	December 9, 2015 - March 25, 2016
Kitsap Transit	July 1, 2015 - August 30, 2016
Metro Transit	January 27, 2016 - June 17, 2016
Pierce Transit	September 27, 2015 - February 13, 2016
Seattle Children's Hospital Shuttle	March 26, 2015 - December 31, 2016
Sound Transit	December 9, 2015 - March 25, 2016
Washington State Ferries	January 14, 2016 - March 19, 2016

Seattle

Seattle-Tacoma-Bellevue, WA

147



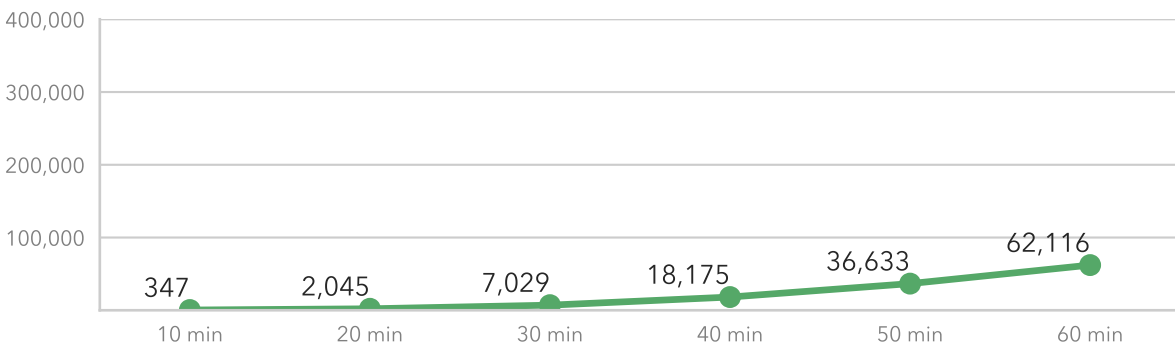
St. Louis

St. Louis, MO-IL

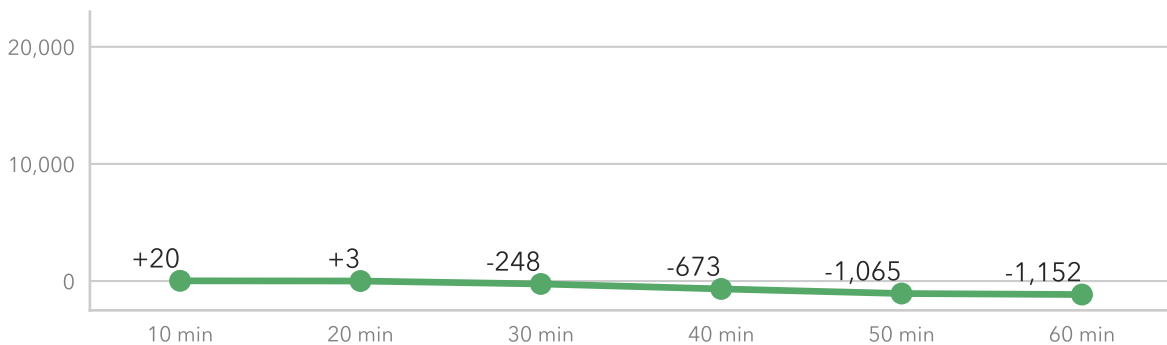
Rank by Weighted Accessibility	33
Rank by Total Employment	19
Rank by 1-Year Change in Weighted Accessibility	42
1-Year Change in Weighted Accessibility	-2.13%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	1,310,372
Average Job Density (per km ²)	59
Total Workers	1,289,829
Average Worker Density (per km ²)	58

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



St. Louis

St. Louis, MO-IL

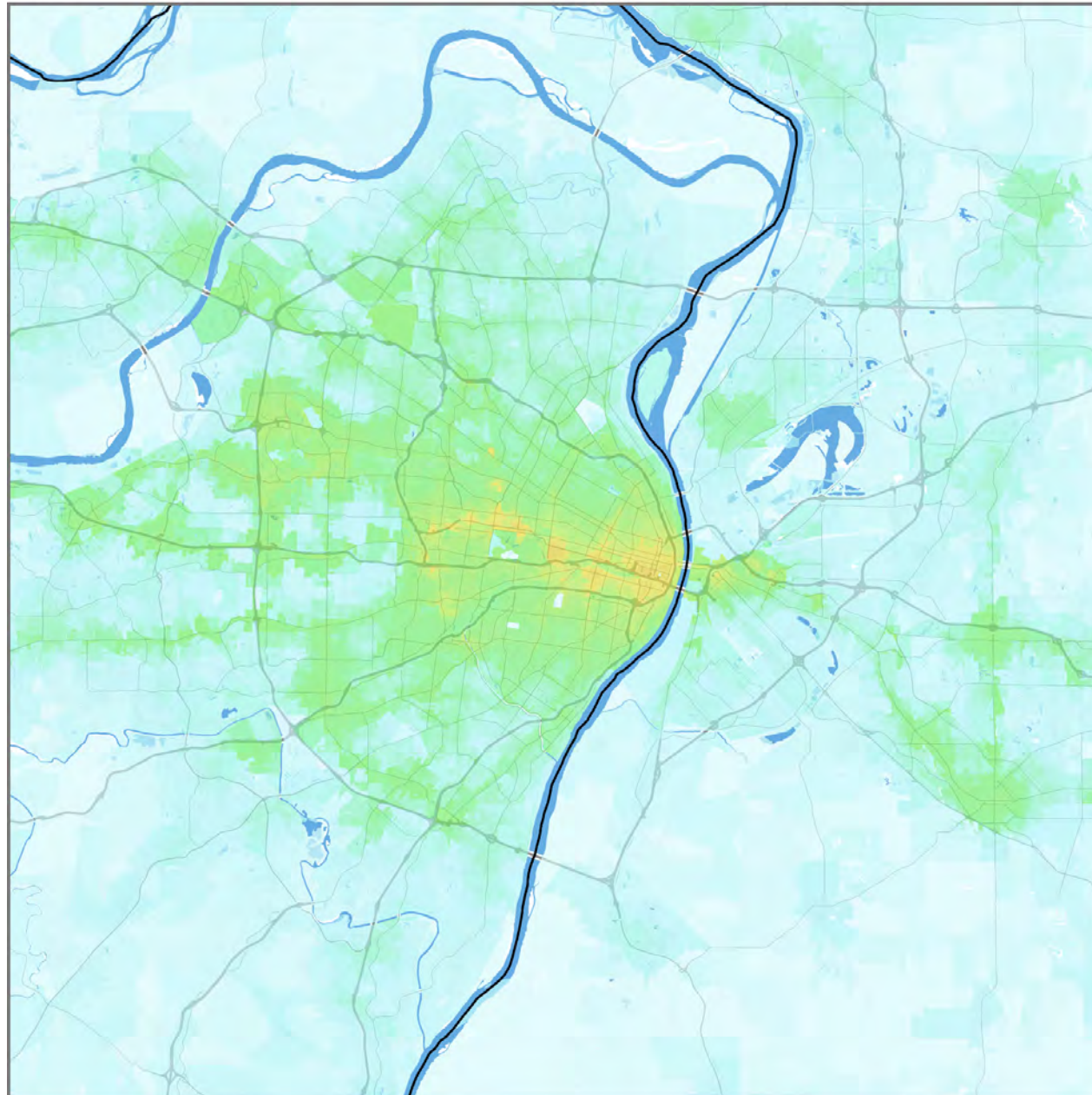
Transit Schedules Included

Agency	Dates
JeffCo Express	May 1, 2015 - January 1, 2017
Metro St. Louis	November 30, 2015 - April 17, 2016

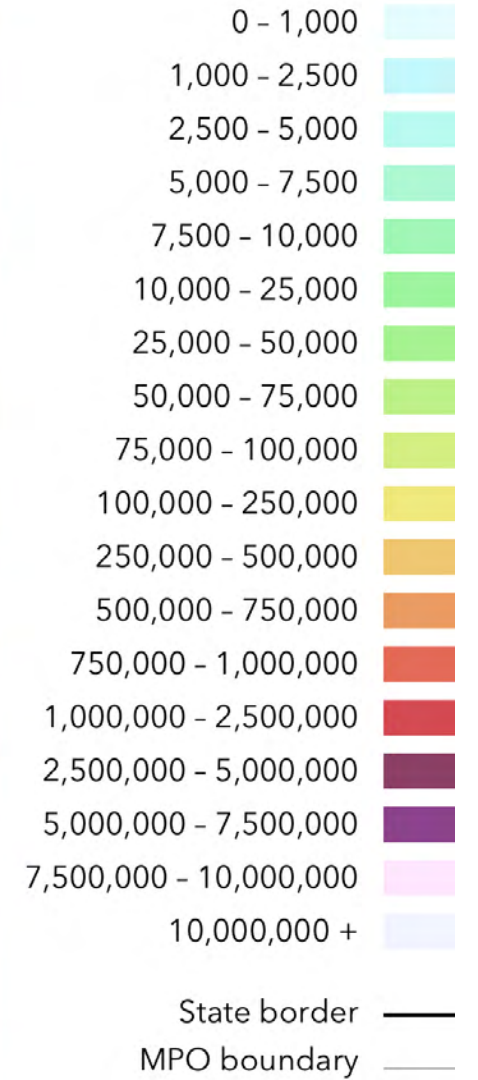
St. Louis

St. Louis, MO-IL

150



Jobs within 30 minutes
(Transit, AM peak)



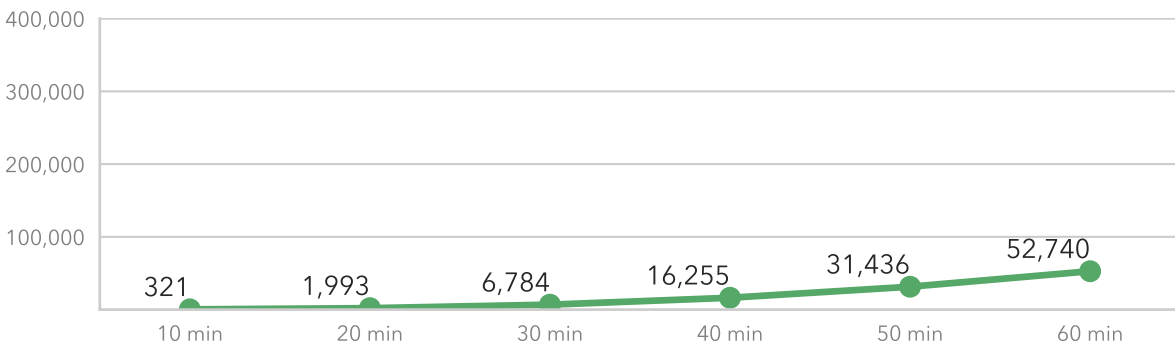
Tampa

Tampa-St. Petersburg-Clearwater, FL

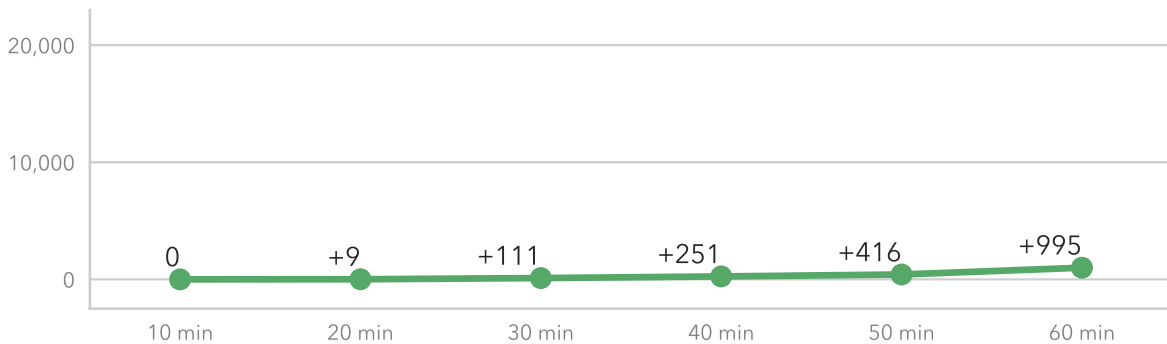
Rank by Weighted Accessibility	38
Rank by Total Employment	21
Rank by 1-Year Change in Weighted Accessibility	33
1-Year Change in Weighted Accessibility	+1.42%
1-Year Change in Weighted Accessibility Rank	-2
Total Jobs	1,197,623
Average Job Density (per km ²)	184
Total Workers	1,181,783
Average Worker Density (per km ²)	182

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Tampa

Tampa-St. Petersburg-Clearwater, FL

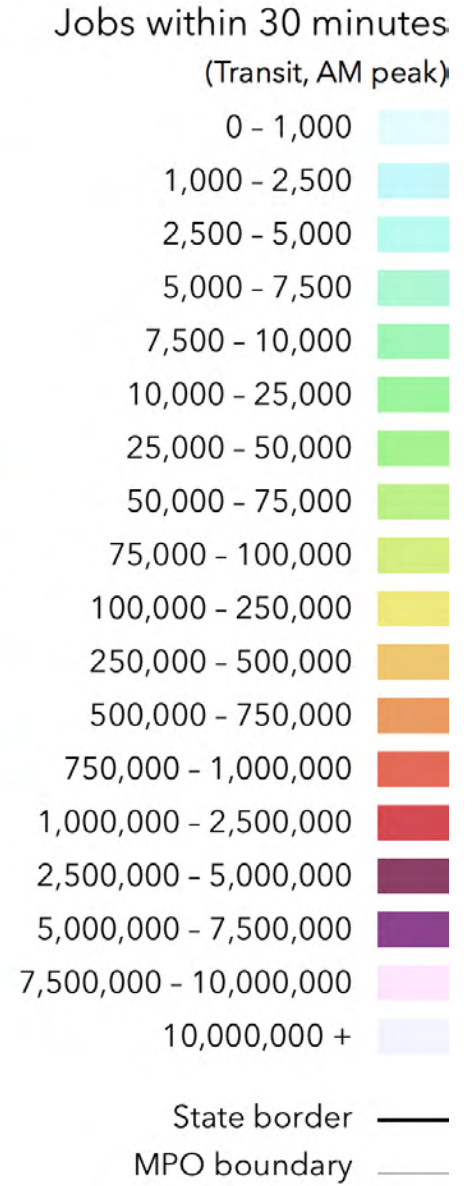
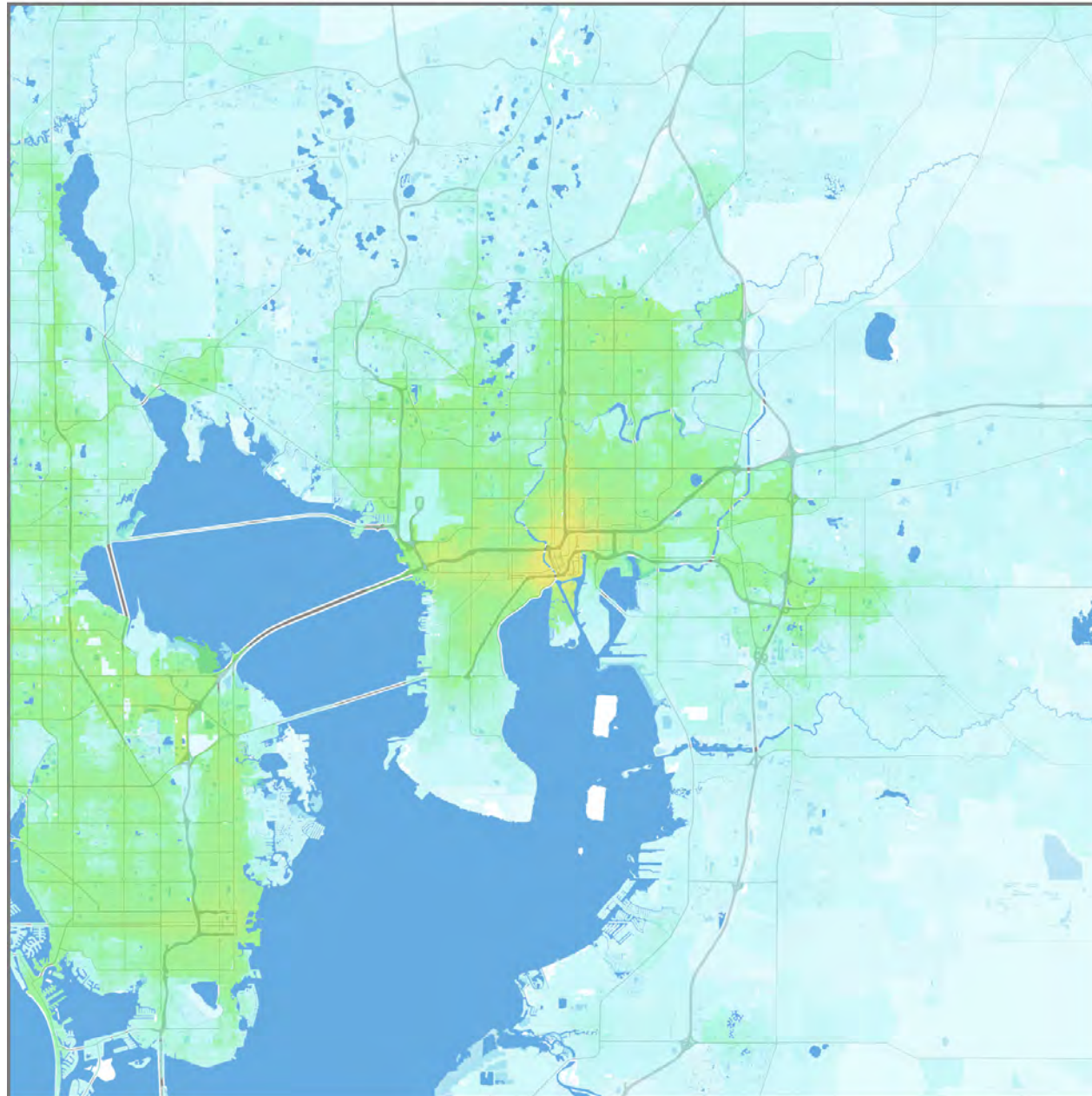
Transit Schedules Included

Agency	Dates
Hillsborough Area Regional Transit	December 6, 2015 - July 16, 2016
Manatee County Area Transit	January 1, 2013 - December 31, 2017
PSTA	December 20, 2015 - March 20, 2016
The Hernando Express	January 1, 2015 - January 1, 2017

Tampa

Tampa-St. Petersburg-Clearwater, FL

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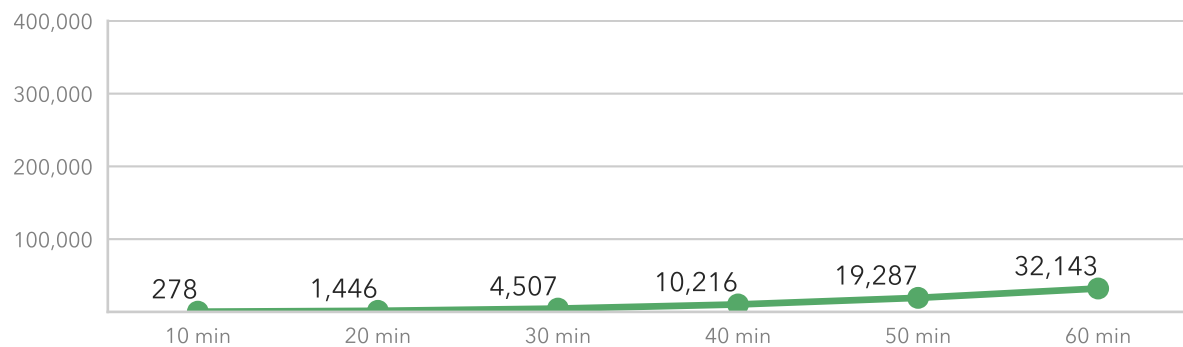
Virginia Beach

Virginia Beach-Norfolk-Newport News, VA-NC

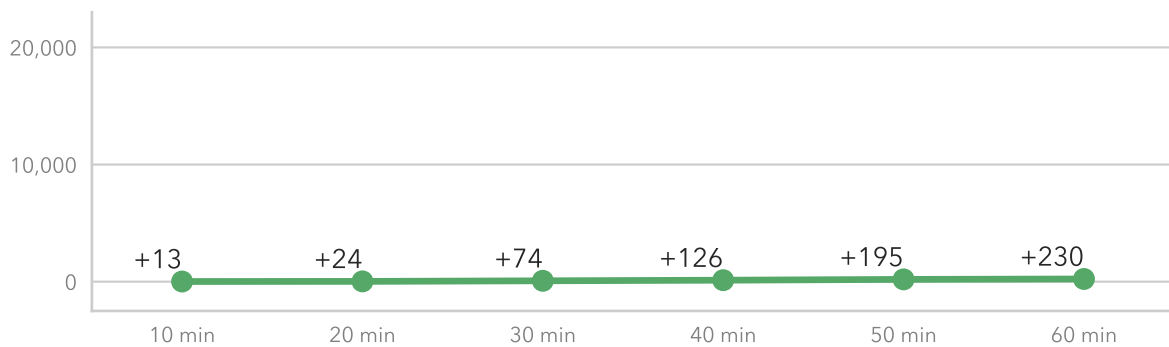
Rank by Weighted Accessibility	46
Rank by Total Employment	39
Rank by 1-Year Change in Weighted Accessibility	32
1-Year Change in Weighted Accessibility	+1.44%
1-Year Change in Weighted Accessibility Rank	+1
Total Jobs	696,380
Average Job Density (per km ²)	102
Total Workers	692,822
Average Worker Density (per km ²)	102

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Virginia Beach

Virginia Beach-Norfolk-Newport News, VA-NC

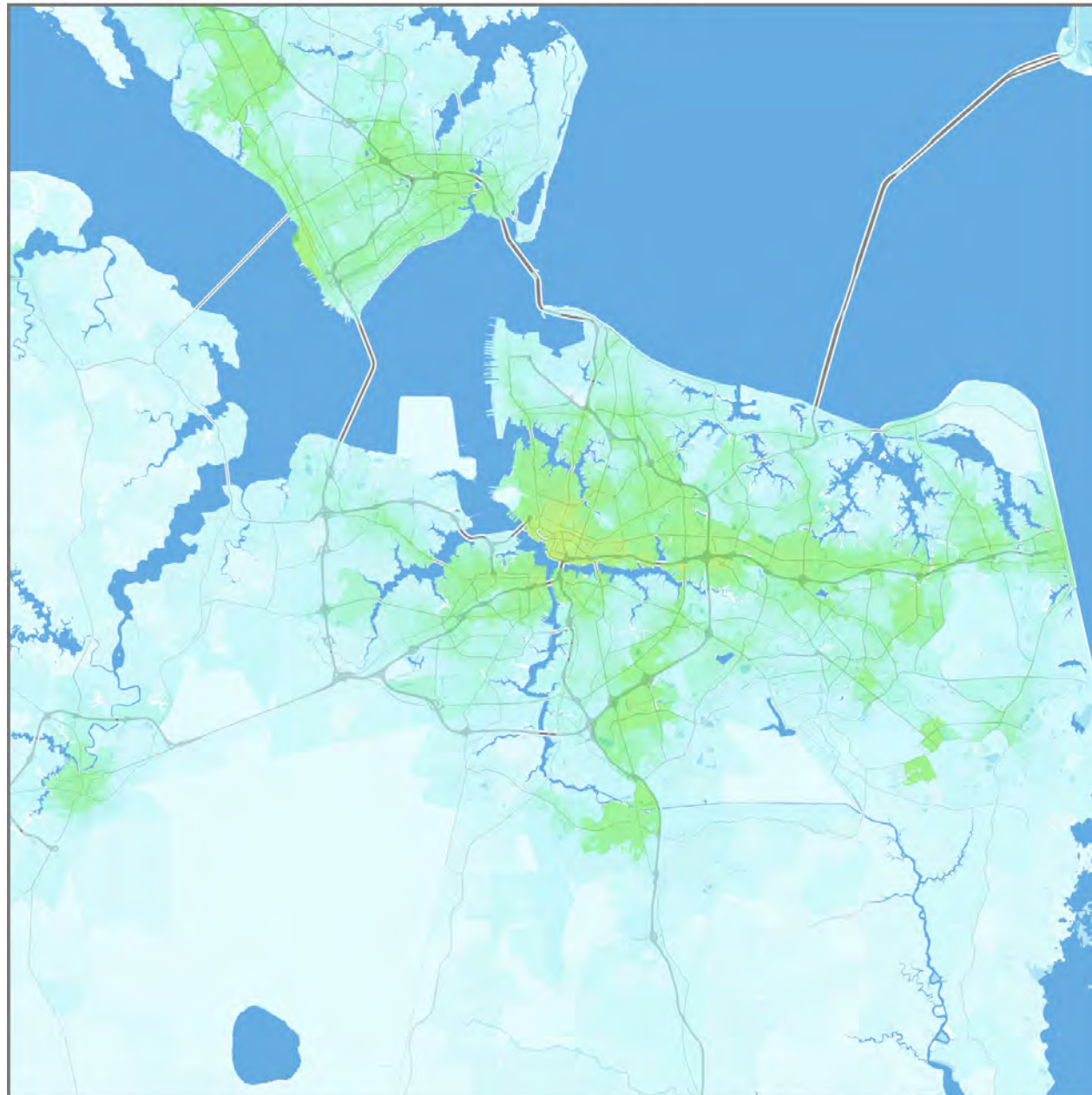
Transit Schedules Included

Agency	Dates
Hampton Roads Transit (HRT)	October 1, 2015 - April 30, 2016

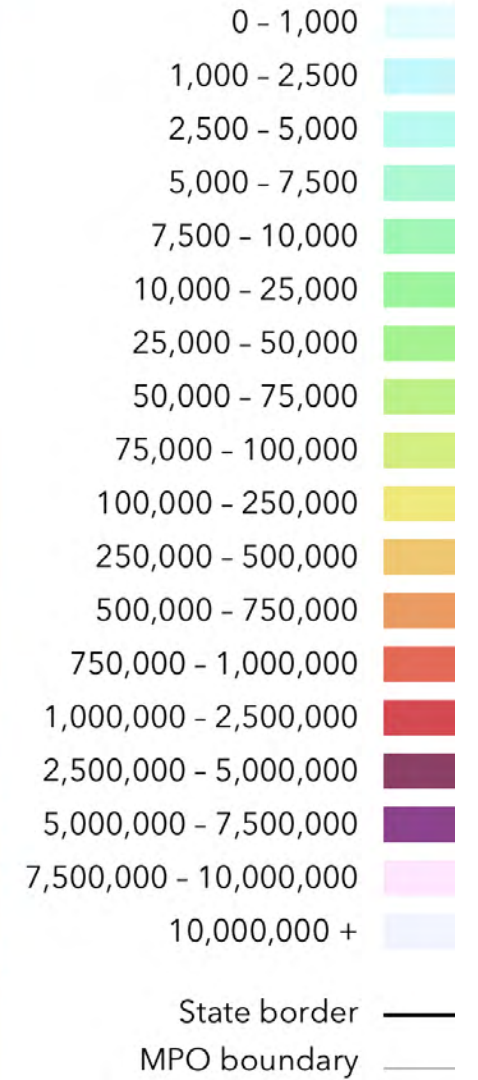
Virginia Beach

Virginia Beach-Norfolk-Newport News, VA-NC

156



Jobs within 30 minutes
(Transit, AM peak)



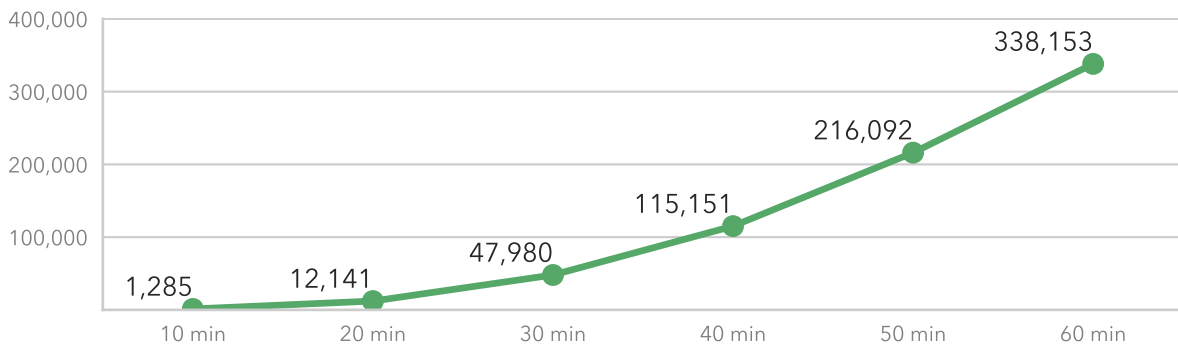
Washington

Washington-Arlington-Alexandria, DC-VA-MD-WV

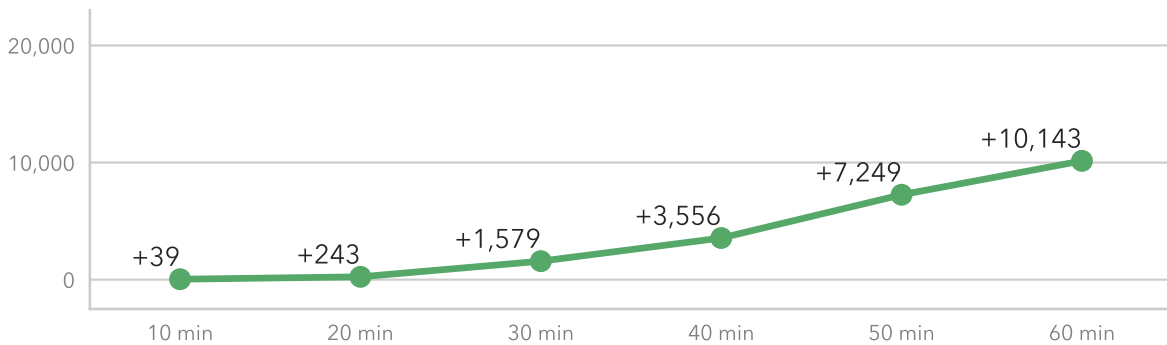
Rank by Weighted Accessibility	4
Rank by Total Employment	7
Rank by 1-Year Change in Weighted Accessibility	23
1-Year Change in Weighted Accessibility	+3.13%
1-Year Change in Weighted Accessibility Rank	0
Total Jobs	2,895,367
Average Job Density (per km ²)	200
Total Workers	2,726,694
Average Worker Density (per km ²)	188

Job and worker totals are based on LEHD estimates and may not match other sources.

Job Accessibility by Travel Time Threshold



1-Year Change in Weighted Accessibility by Travel Time Threshold



Washington

Washington-Arlington-Alexandria, DC-VA-MD-WV

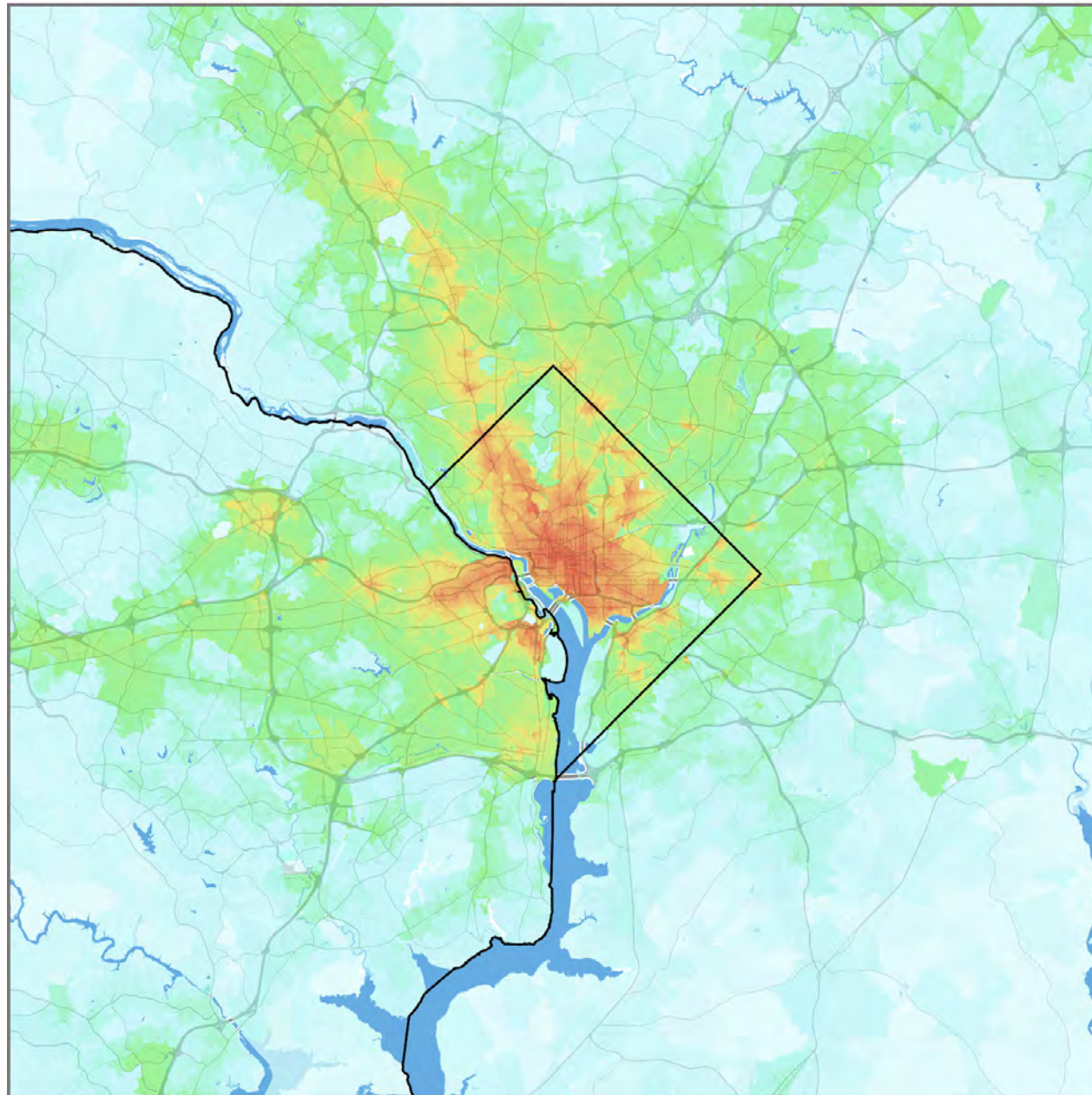
Transit Schedules Included

Agency	Dates
Alexandria Transit Company (DASH)	October 18, 2015 - August 20, 2016
Arlington Transit	January 2, 2016 - December 31, 2017
DC Circulator	December 1, 2015 - May 28, 2016
Fairfax Connector	September 28, 2013 - March 31, 2017
MET	January 20, 2016 - July 17, 2016
MTA Office of Local Transit Support	October 30, 2015 - June 18, 2016
Maryland Transit Administration	October 30, 2015 - June 18, 2016
Montgomery County MD Ride On	January 10, 2016 - September 17, 2016
Potomac and Rappahannock Transportation Commission	December 7, 2015 - July 3, 2016
Regional Transportation Agency of Central Maryland	January 1, 2016 - December 31, 2016
St. Mary's Transit System	August 1, 2014 - December 31, 2016
The Bus of Prince George's County	January 1, 2016 - December 31, 2016
Virginia Railway Express	November 30, 2015 - December 7, 2016

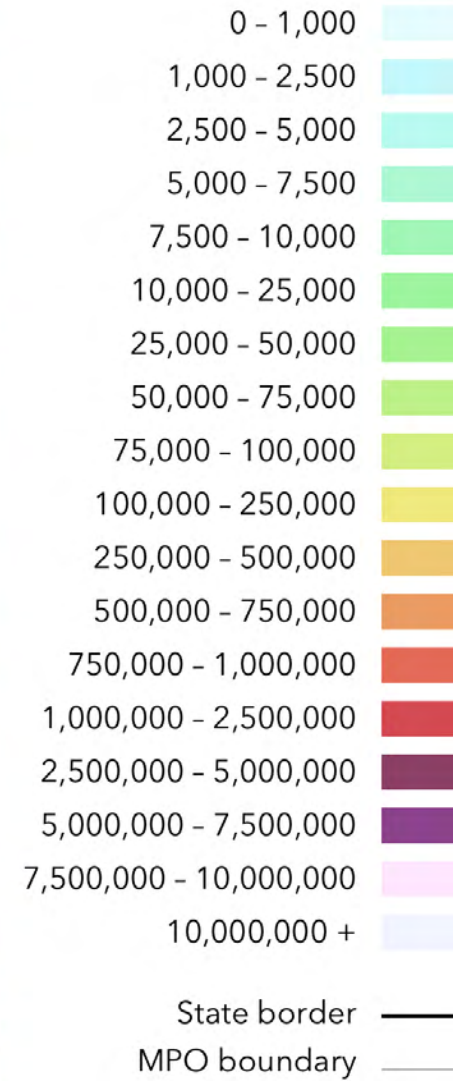
Washington

Washington-Arlington-Alexandria, DC-VA-MD-WV

159



Jobs within 30 minutes
(Transit, AM peak)



References

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