



THE DENVER REGIONAL EQUITY ATLAS

Mapping Access to Opportunity at a Regional Scale

EXECUTIVE SUMMARY



MileHighConnects

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Mile High Connects

Acknowledgements Page

About The Atlas

The Denver Regional Equity Atlas is a product of Mile High Connects (MHC), which came together in 2011 to ensure that the region's significant investment in new rail and bus service will provide greater access to opportunity and a higher quality of life for all of the region's residents, but especially for economically disadvantaged populations who would benefit the most from safe, convenient transit service. The Atlas visually documents the Metro Denver region's demographic, educational, employment, health and housing characteristics in relation to transit, with the goal of identifying areas of opportunity as well as challenges to creating and preserving quality communities near transit.

Primary Authors

The Atlas is a collaborative effort between two MHC members, Reconnecting America and the Piton Foundation. Additional support was provided by MHC's Research and Evaluation steering committee.

Reconnecting America

Reconnecting America is a national nonprofit that works to better communities – places where transportation choices make it easy to get from place to place, where businesses flourish, and where people from all walks of life can afford to live, work and visit. Reconnecting America conducts research, provides technical assistance, advocates for public policy, builds on-the-ground partnerships, and convenes the players necessary to accelerate decision-making. Reconnecting America is the managing partner of the Center for Transit-Oriented Development, the only national nonprofit effort dedicated to providing best practices, research and tools to support market-based transit-oriented development.

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Piton Foundation

The Piton Foundation provides opportunities for children and their families to move from poverty and dependence to self-reliance. The Foundation's Children's Corridor initiative, which overlaps significantly with the East Line transit corridor, aims to focus community resources, energy and ideas on more effective, accessible health and education services that help children grow into self-reliant and successful members of society.

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About Mile High Connects

What We Are

Mile High Connects is an emerging collaborative of nonprofit and philanthropic organizations working together to ensure that the creation of the region's \$6.7 billion FasTracks transit system benefits all communities in the region, including low-income populations.

Our Vision

Mile High Connects ensures that the Metro Denver regional transit system fosters communities that offer *all* residents the opportunity for a high quality of life.

Who We Are

Mile High Connects includes the following partners:

- Anschutz Family Foundation
- The Denver Foundation
- First Bank
- FRESC: Good Jobs, Strong Communities
- Housing & Homelessness Funders' Collaborative
- Kaiser Permanente
- Linda D. Campbell Fund
- Piton Foundation
- Rose Community Foundation
- Urban Land Conservancy
- Wells Fargo Bank
- The Colorado Health Foundation
- Enterprise Community Partners
- The Ford Foundation
- Gates Family Foundation
- J.P. Morgan Chase Foundation
- L.P. Brown Foundation
- Living Cities
- Reconnecting America
- Surdna Foundation
- U.S. Bank

As MHC evolves we will continue to build partnerships with private- and public-sector entities as well as other nonprofit and philanthropic organizations.

What We Do

Our primary goal is to ensure that the creation of FasTracks improves accessibility to affordable housing, good-paying jobs, essential services, educational opportunities, improved health, and other elements of a high quality of life for all of Metro Denver's residents, especially those with lower incomes. To do this, we are:

- Providing a vision and roadmap for FasTracks and the development around FasTracks stations to help improve opportunities for all communities, including low-income neighborhoods.
- Working across city and county lines to create a shared vision and build a movement for people throughout the eight-county Metro Denver area to improve the quality of life across the region.
- Convening private, public, and nonprofit leaders and community groups that have a stake in the build-out of the FasTracks system to ensure all communities, including lower income, benefit from its construction.
- Investing in various projects around the region that are designed to ensure equitable outcomes in the FasTracks build-out process.

Who Supports Us

Our work is made possible by the generous contributions of our members and by contributions from the Ford Foundation's Metropolitan Opportunity initiative, the Surdna Foundation, and Living Cities.

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Executive Summary

Introduction

The Metro Denver region has embarked on one of the most ambitious and extensive investments in new rail and bus service in the United States. This investment has the potential to expand the reach of opportunity for many people, providing better connections among housing, jobs and other essential destinations. New service will provide more transportation options to parts of the region where congestion and its effects have become costly and time-consuming. Other regions are watching closely to see how the network is built out and if transit can spur new development and redevelopment in station areas. In anticipation of transit service, many of the region's cities and counties have prepared land-use plans for new stations, with transit-oriented development (TOD) as the key outcome. Within walking distance of most transit stations, communities hope to build a mix of housing, office, shopping and other essential community resources to create a unique sense of place and to reduce reliance on automobiles.

Improving access to opportunity via transit is especially important to households with lower incomes, who spend a greater proportion of their income on housing and transportation. Ensuring that transit-oriented communities remain affordable and inclusive is a major concern for those segments of the population who rely on transit the most. Moreover, making the connection between transit and important issues such as education, health and economic development requires significant capacity building and collaboration to help stakeholders and decisionmakers understand how better transit service combined with TOD can benefit the entire Metro Denver region.

To help visualize the connections between the places people need to go and the transportation options available to them, Mile High Connects has created this Regional Equity Atlas, which maps the region's major origins and destinations in relation to the current and future transit network, emphasizing the enhanced access to opportunity that transit will provide. The goal of this document is to help raise awareness about the benefits and opportunities that a robust public transportation network can create, including how issues such as housing, jobs, education and health are integrally linked to transportation. The Atlas will also establish a baseline for measuring equitable outcomes as the transit network is built out. Finally, it will further build the case for why the Metro Denver region needs to focus on creating and enhancing access to opportunities through affordable transportation options and development oriented around these new transit lines.



RACTOD on Flickr.com / Creative Commons

The following five topics form the organizational structure for the atlas:

1. Population and Demographic Characteristics of the Region
2. Access to Affordable, Quality Housing Options
3. Access to Jobs and Economic Development Opportunities
4. Access to Educational Opportunities
5. Access to Health Care, Healthy Foods, and Recreational Facilities

Data was collected for seven counties in the Metro Denver region – Adams, Arapahoe, Boulder, Broomfield, Denver and Jefferson – and analyzed down to the lowest geography available. Geographic information system (GIS) software was used to spatially analyze the data and produce maps illustrating the findings. Each map shows the existing and proposed transit network.

This executive summary includes several maps per issue area that explore the relationship to transit in greater detail. Separate reports are available for each issue area that contain the full set of maps and further analysis.

Key Findings

The maps convey the following overarching messages for the Denver region:

The region has a tremendous opportunity to increase transportation options through transit expansion

When built out, the transit network will better connect people to jobs, health care providers, schools, grocery stores, parks and other essential destinations. Moreover, the enhanced transit connections will increase the number of walking and bicycling trips as people walk or bike to their nearest transit station, which will in turn connect them to even more destinations.



Denver Regional Transportation District

Last-mile connections are essential to make transit a viable transportation alternative

Many important destinations lie outside a comfortable walking distance from transit stations. Many people may still choose to drive if they cannot safely and conveniently take public transportation to work, school, the grocery store and other essential destinations. Communities need to invest in pedestrian and bicycle infrastructure that will connect people to the places they need to go within the station area and farther afield.

The region is interdependent

Opportunities and resources in the region are dispersed, and people need quality transportation infrastructure in order to access these goods and services. New rail and bus services will not by themselves connect everyone to every place they need to go, but they will improve access to many important destinations.

Many low-income and other economically disadvantaged populations cannot currently take advantage of affordable transit choices

Poverty is a regional problem, not a just central-city issue. Pockets of poverty in suburban communities lack adequate access to jobs, schools, and essential services. These areas, along with more urban, centralized communities, would benefit from better access to public transportation, as well as more supportive environments for walking and bicycling. Living near transit and in pedestrian- and bike-friendly neighborhoods can help low-income families keep costs down by reducing their reliance on automobiles. Driving less often can also lead to improved health outcomes.

Completion of the regional transit network will improve access to opportunities for low-income populations

The existing and future transit lines run through many neighborhoods with lower household incomes and lower levels of educational attainment, yet they also run through major employment and retail centers, many of which contain hospitals, grocery stores, schools, and other places that provide essential goods and services. Therefore, many of these economically disadvantaged groups will be better connected to jobs and other places of importance as the transit network grows.

Many of the region's affordable housing units are located near current or future transit stations, but increased demand for living near transit may cause gentrification and displacement pressures

The demand for housing near transit across the country is expected to grow exponentially in the coming decades. As a result, the cost to live in these neighborhoods is expected to rise. The region already has several mechanisms for this but more will be needed as the transit network expands.

This is a once-in-a-lifetime opportunity for the region

Unlike cities with long-established transit systems, Denver's system is still in its infancy. With major construction under way, now is the time to leverage this massive investment. Land-use decisions should align with the transportation plans to co-locate the elements of a prosperous, equitable, and sustainable region: affordable housing, job centers, educational institutions, quality-of-life amenities and community resources such as day care, markets, health centers, and commercial districts. Local transportation planning must also facilitate connections between different modes of transportation to make it safe and convenient for people to reach destinations by a means other than a personal automobile.

Connecting Dots Between Transit And Other Regional Priorities

The maps in this Atlas paint a picture of where people currently live and where the opportunities and challenges are to improving their quality of life. The maps also provide a vision of what the region might look like as new transit lines open and communities become better connected within the region. Thus the maps provide both a current and future look at access to opportunity. This document starts with a brief overview of public transportation, then discusses the issue areas in the following order: population and demographics, housing, jobs, education and health.

Public Transportation in Denver: Why Does It Matter?

Map EXS-1: Overview of Denver Region Transit System shows current and future transit network. It includes fixed-guideway transit – light rail, BRT and commuter rail – and high-frequency bus service, which is defined as having 10 to 15 minute frequencies during peak hours.

Effective transit networks reduce traffic congestion and air pollution and offer a cost-effective alternative to owning and maintaining an automobile. According to the American Public Transportation Association, the average driver in Denver could save \$834 a month by switching to transit, or about \$10,000 per year.¹ This is especially critical for lower income households, who often spend a disproportionate percentage of their income on their combined housing and transportation costs. For low-income households who already utilize public transit regularly, the expanded service can improve their access to education, jobs and other essential destinations. Public transportation also has health benefits derived from increased daily exercise as transit riders walk and bike to and from stops.

Population and Demographics

Maps in this section:

- Distribution of Race & Ethnicity in Denver Region
- Concentration of Low-Income Households in the Denver Region
- Distribution of Denver Residents Who Are 55 and Older

Overlaying population and demographic data with the transit network identifies locations of high and low access to opportunity. Often there is a mismatch between places with good transit service and those that need it most. This is especially true with lower income neighborhoods and communities of color.

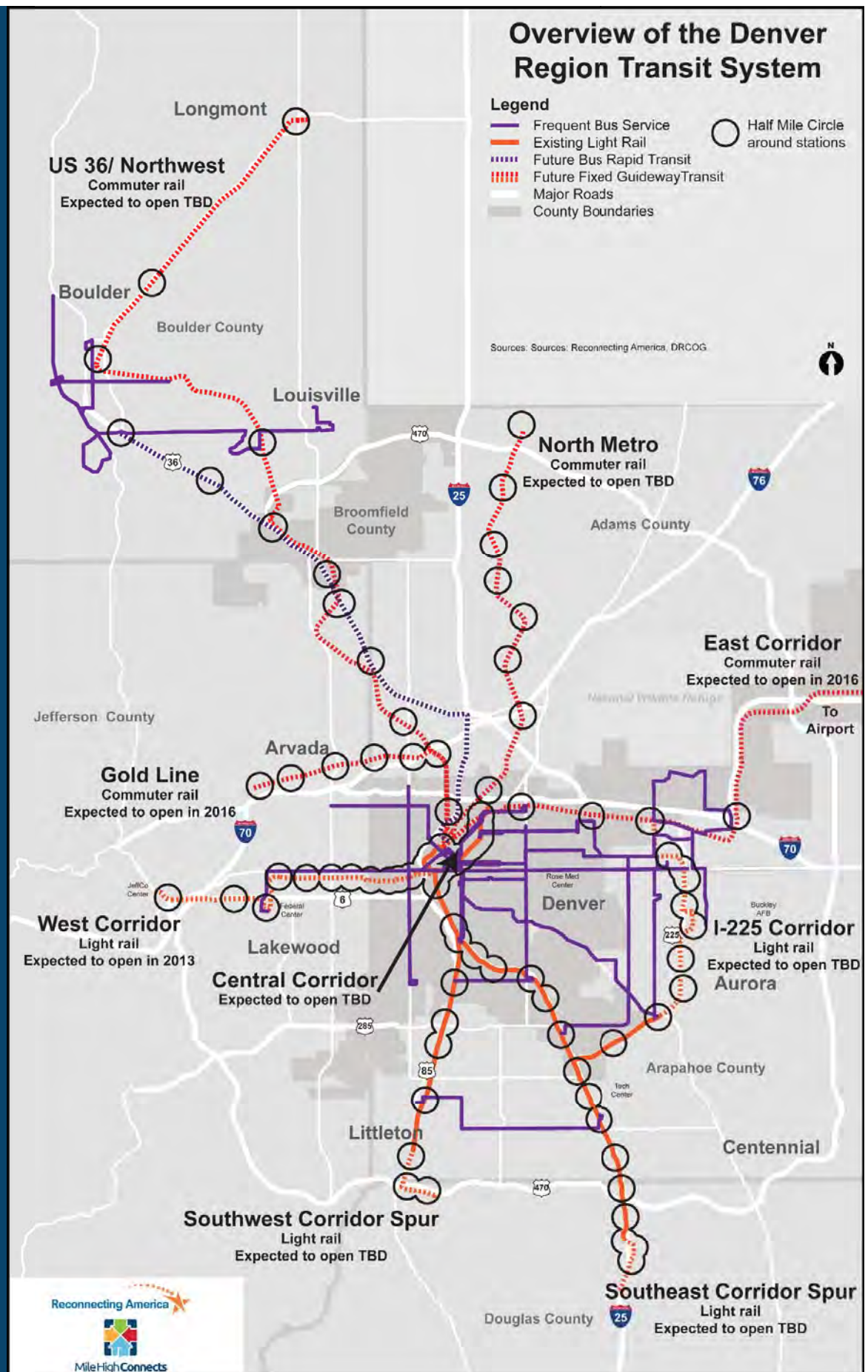
The following key findings describe some of the major population and demographic characteristics of the Metro Denver region:



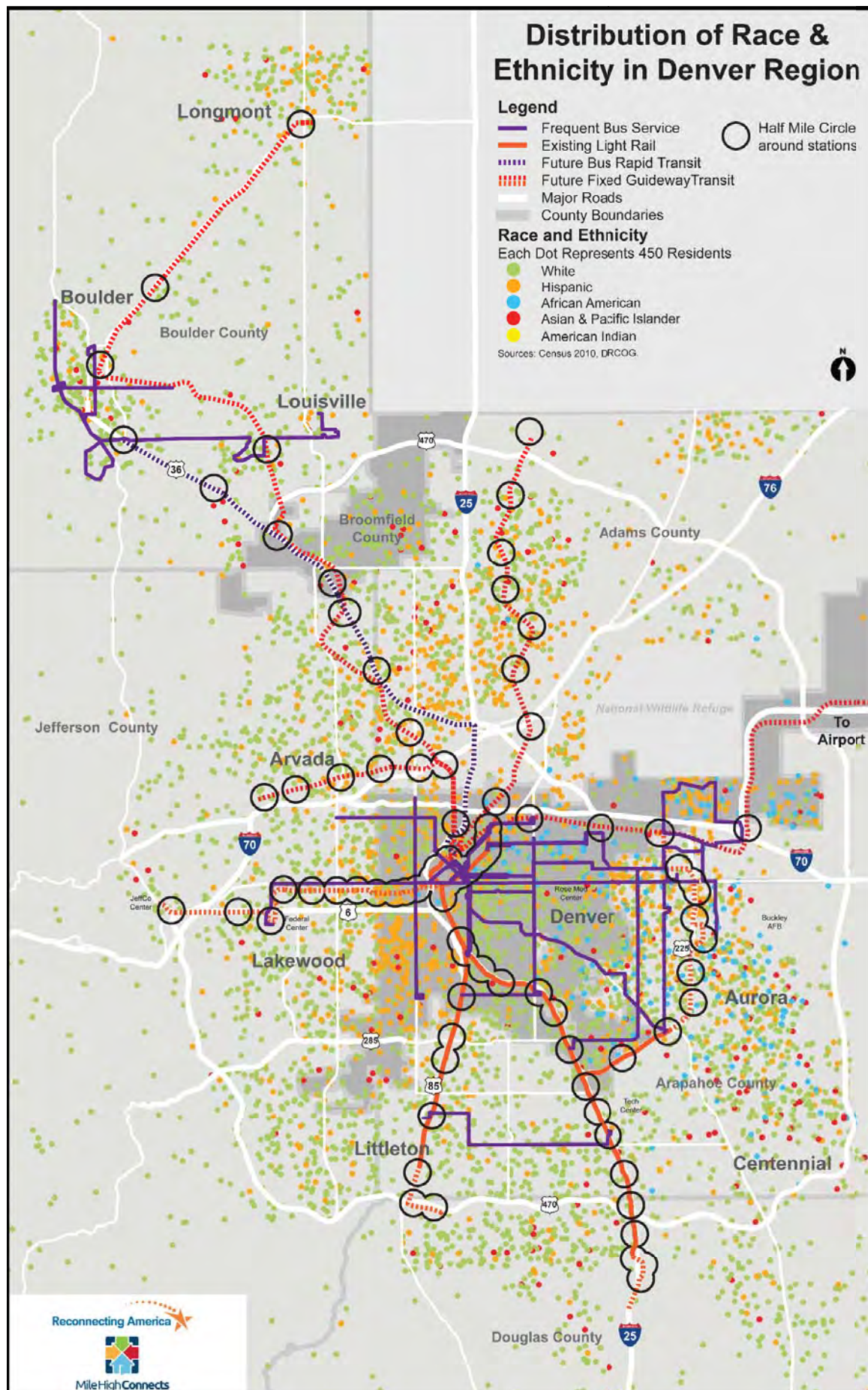
James Roy II / Creative Commons

The Metro Denver region's racial and ethnic populations are highly concentrated

Map EXS-2: Distribution of Race & Ethnicity in Denver Region illustrates the racial and ethnic breakdown of the Metro Denver region. The Hispanic population is most prevalent in western Denver and Lakewood, and the African American population is concentrated in Denver's northeast neighborhoods and northwest Aurora. There is also a large Hispanic population in



*Map EXS-1:
Overview of
Denver Region
Transit System*



*Map EXS-2:
Distribution of
Race & Ethnicity
in Denver Region*

the northern part of the region between the two planned rail lines, as well as in Aurora along the I-225 Corridor.

New transit service will provide better connections to the north, east, and west, but not to the southwest

Because many of the planned transit stations are extensions to the suburbs, the neighborhoods with more nonwhite residents may not benefit from direct connections to the fixed guideway system. While many of these neighborhoods do have high-frequency bus service connecting them to the regional transit network, the future rail and bus rapid transit network as a whole skips over many communities of color. Improving connections to stations will be critical to ensuring access to opportunities.

Many planned transit lines will traverse low-income neighborhoods, better connecting them to opportunity but also potentially disrupting them

Spatial income patterns often reflect racial and ethnic concentrations. **Map EXS-3: Concentration of Low-Income Households in the Denver Region** shows where low-income households are concentrated. Low-income households are defined as those earning 80% or less of the area median income (AMI), which is \$47,968.² The majority of transit station areas are in low-income neighborhoods, especially along the West Corridor, Gold Line, and I-225 Corridor. Longmont and Boulder also have a high percentage of low-income households. Completion of the system will provide greater access to opportunity for these residents, but it also raises concerns about gentrification and displacement as demand for housing near transit grows beyond the supply and puts pressure on housing costs.

Even at full build-out, many lower income neighborhoods will remain too far from frequent transit

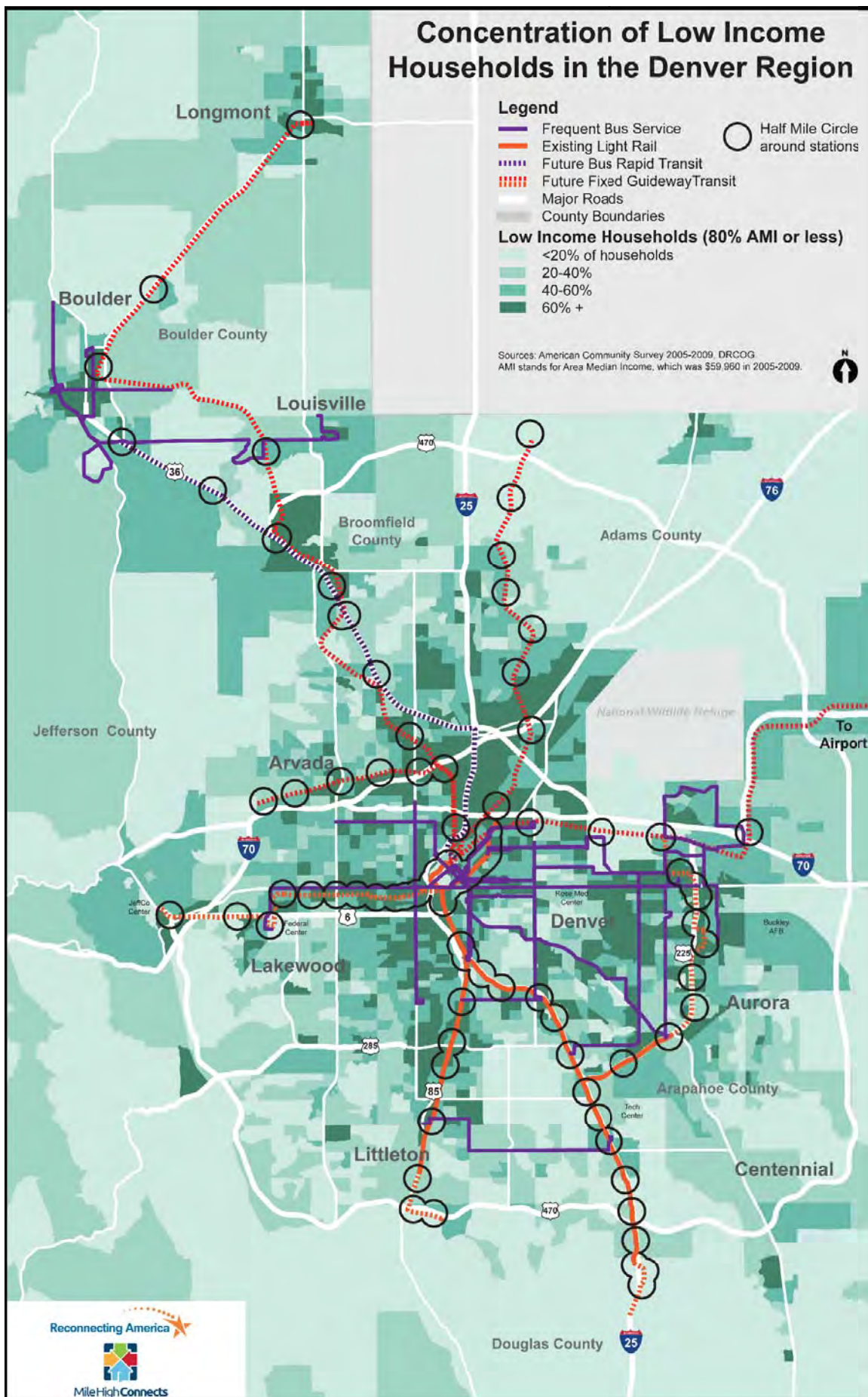
Many low-income neighborhoods in southwestern Denver and Aurora will still be far from quality transit service. While many low-income neighborhoods have high-frequency bus routes nearby, they will need stronger connections to light rail to be able to take advantage of the expanded network. These neighborhoods also need better pedestrian and bicycle connections to stations, as many neighborhoods lack sidewalks and bike lanes. Another area of concern is North Denver, where the Globeville and Elyria-Swansea neighborhoods are split by interstate highways. The presence of the highways and other busy roads will make access to the new stations difficult.

Poverty in Denver is a regional issue. It is not concentrated within Denver and Aurora

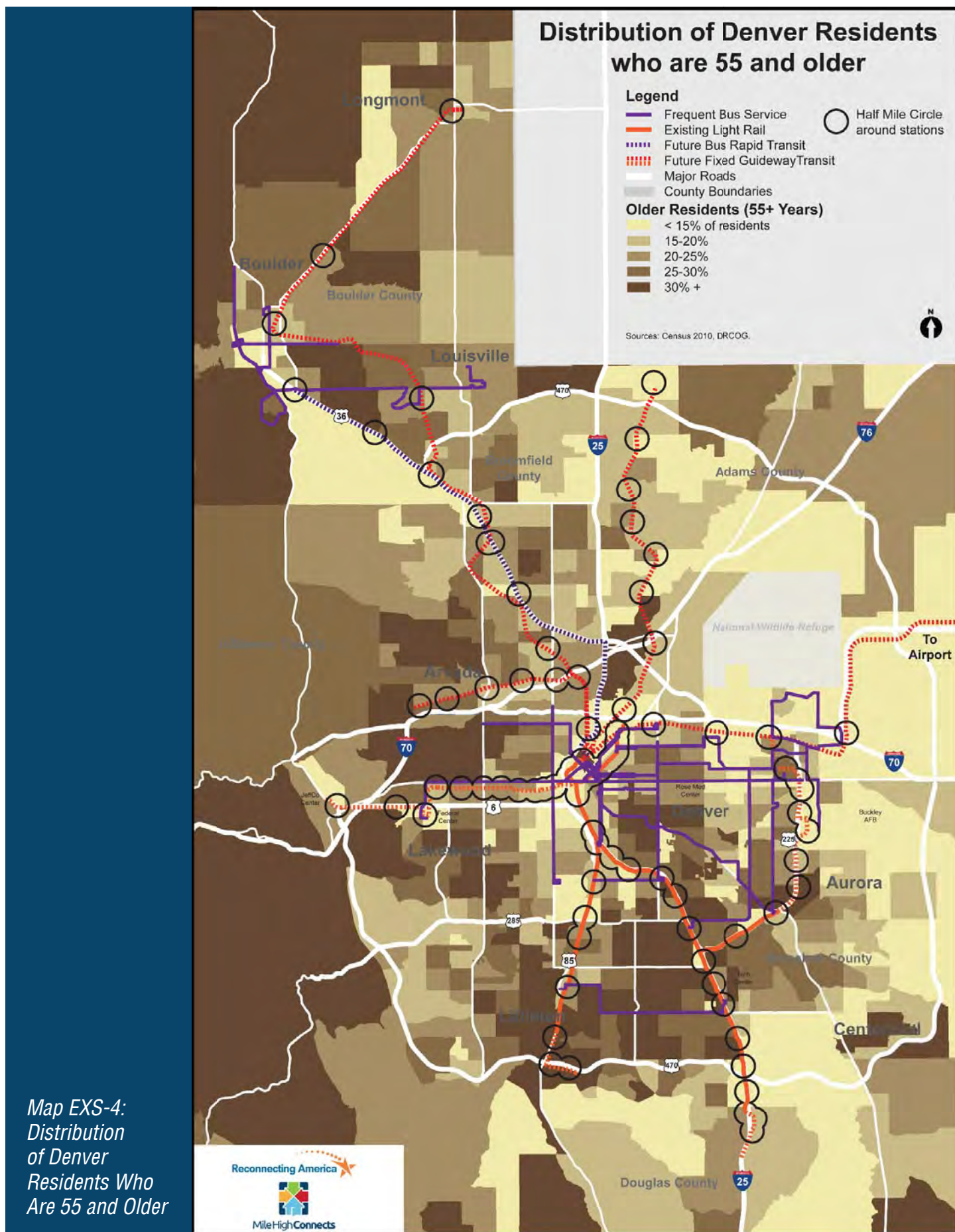
In the last decade, the poverty rate in Denver's suburbs rose 96.4%.³ This is a national trend that is a cause for concern, since communities that lack access to regional opportunities are likely to decline. In 1999, large U.S. cities and their suburbs had roughly equal numbers of poor residents, but by 2008 the number of suburban poor exceeded the poor in central cities by 1.5 million.⁴ Poverty rates are still higher in central cities (18.2% vs. 9.5% in 2008), but poverty rates are increasing at a quicker pace in suburban areas.

The region's aging population is growing in suburban areas that lack quality access to transit

Map EXS-4: Distribution of Denver Residents Who Are 55 and Older shows where Metro Denver's residents age 55 and older live. There are high numbers of these along the Southwest and Southeast corridors, which are already in service. Station areas along these lines may present opportunities for senior housing. There are also large numbers of older adults between the West and Gold Lines and in northern Denver on the North Metro Corridor. While connections to job opportunities are not as critical to this age cohort, service to health care centers, recreational options, and food and retail stores are important considerations. These areas will need a combination of connections to the regional transit network and neighborhood improvements making it safe for walking and accessing transit. The aging of the population will continue to be a challenge for the region and the state. Over the next five years, the number of Colorado residents 60 years and older will grow by 30%, rising to more than 1 million. By 2035, one of every four residents in the Denver region will be 60 years old or older.⁵



*Map EXS-3:
 Concentration
 of Low-Income
 Households
 in the Denver
 Region*



Housing

Maps in this section:

- Distribution of Federally Assisted Housing in the Denver Region
- Overview of Denver Region's Supply of Affordable Housing

Historically, housing has been considered affordable if it constitutes no more than 30% of a household's annual income.⁶ However, with the rise of transportation costs over the last 100 years, experts today agree that the combined cost of housing and transportation is a better measure. The combined cost gives a better sense for what a housing choice really means for a family. The amount of money a household spends on transportation is directly connected to the location of their home. When transportation costs are added to the cost of renting or owning a home, many places that seemed affordable are shown to be more expensive. Instead of using the metric of less than 30% income for housing, a better measure of affordability is that the combined housing and transportation cost constitutes no more than 45% of a household's income.⁷

While almost seven out of ten communities in the United States (69%) meet the 30% affordable housing cost threshold, only four out of ten (39%) meet the 45% affordable housing and transportation cost threshold. The Center for Neighborhood Technology estimates that for every dollar a working family saves on housing, it spends 77 cents more on transportation (as of 2006).⁸ This is especially true of places far from regional employment centers and local amenities – where driving long distances is the only way to get around.

One outcome of Metro Denver's transit investment will be new development in areas surrounding stations. This will help lower housing and transportation costs for people who choose to live there. Transit-oriented development (TOD) is generally defined as higher-density, mixed-use development within walking distance – a half-mile – of transit stations. But TOD is also about creating attractive, walkable, sustainable communities that allow residents to have housing and transportation choices and to live convenient, affordable, pleasant lives – with places to raise a family and retire comfortably.

In the Metro Denver region, demand for housing near transit could grow to 155,000 households by 2030, up from 45,000 in 2006.⁹ The Center for Transit-Oriented Development (CTOD) estimates that at least 40% of the demand for TOD in the Denver region will come from those making less than 80% of the area median income, which was \$51,600 for a family of three in 2006.¹⁰ The high demand for housing near transit may push the price of housing too high for those who would benefit financially from living in a compact, transit-oriented community. The potential for rents to rise as transit station areas are redeveloped poses displacement concerns for lower income residents who could be forced to move.

The following key findings describe some of the major opportunities and challenges related to housing and transit.

Affordable housing is plentiful near transit, but major gaps remain

Map EXS-5: Distribution of Federally Assisted Housing in the Denver Region displays the locations of federally subsidized affordable housing¹¹ within the Metro Denver region. A majority of this housing is close to existing or planned fixed-guideway transit, or along bus routes with frequent service, such as Parker Road and Colfax Avenue. A few outlying developments in places such as Golden, Brighton, Centennial and Thornton would benefit from better transit connectivity. The I-225 Corridor presents a major opportunity to connect low-income households to transit. There are numerous affordable housing units in Aurora, Glendale and southeast Denver that are within two to three miles of the planned light rail line, and enhanced bus service could provide necessary connections. This area also has a high concentration of jobs at either end – Fitzsimmons and the airport to the north and the Tech Center to the south – so it will also improve connections for people living along other corridors.

FIGURE 1 Trip Purpose - Transit Trips

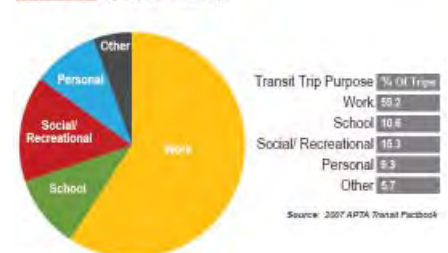
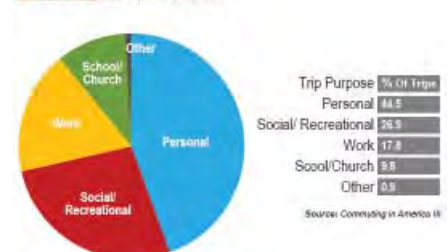


FIGURE 2 Trip Purpose - All Modes



SOURCE: Center for Transit-Oriented Development, 2008. Transit and Employment.

Affordable housing is available in more places than people realize, but the majority of it is not near transit

Map EXS-6: Overview of Denver Region's Supply of Affordable Housing shows the location of all types of affordable housing throughout the region. This includes:¹²

- Multifamily apartments with income restrictions or subsidized rents (via HUD's Section 8 vouchers and Low-Income Housing Tax Credits).
- Deed-restricted single-family homes available for ownership at reduced rates.
- Unrestricted market-rate units available for rent or for sale that are considered affordable to:
 - o Rentals: Those making less than 60% of the area median income.
 - o For-Sale: Those making less than 100% of the area median income for a family of four on for-sale units.

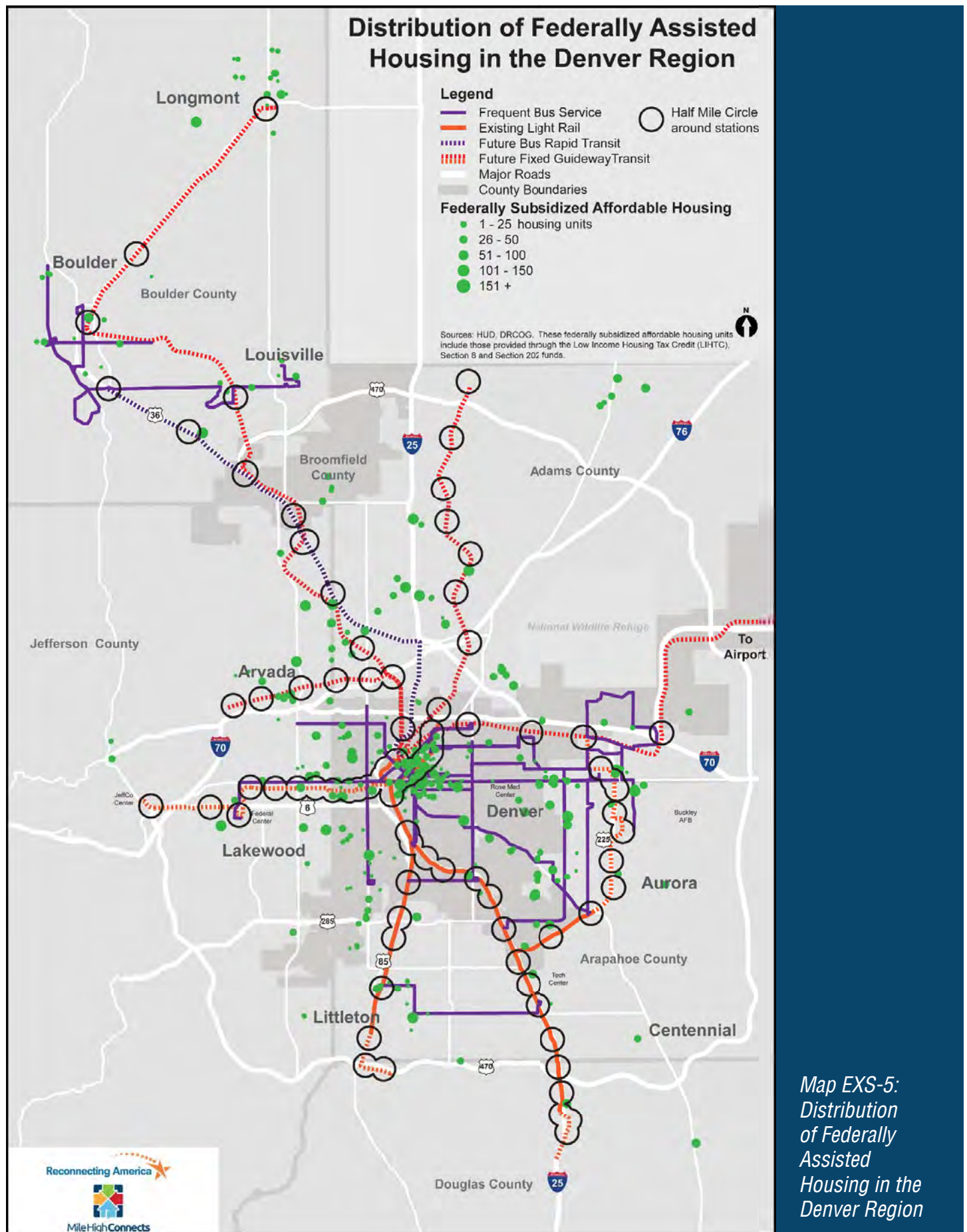
Some parts of the region have a good balance of affordable and market-rate housing, but many are largely unbalanced toward either extreme. Significant pockets of the region's affordable market-rate housing – particularly to the southwest, north, and southeast (Aurora) – are critically underserved by transit. Overall, while most federally subsidized affordable housing is near transit, the majority of affordable housing units are not. Rental units scattered across the region are far from quality transit service, especially in the southeastern and southwestern parts of the region. It is particularly evident that much of the affordable market-rate ownership housing is located well-outside of the transit system, with large pockets around the periphery. Many of the families who live in these outlying areas “drove ‘til they qualified” when buying these homes, not taking into account the substantial transportation cost they would incur. These households need enhanced bus service to connect them to the transit network.

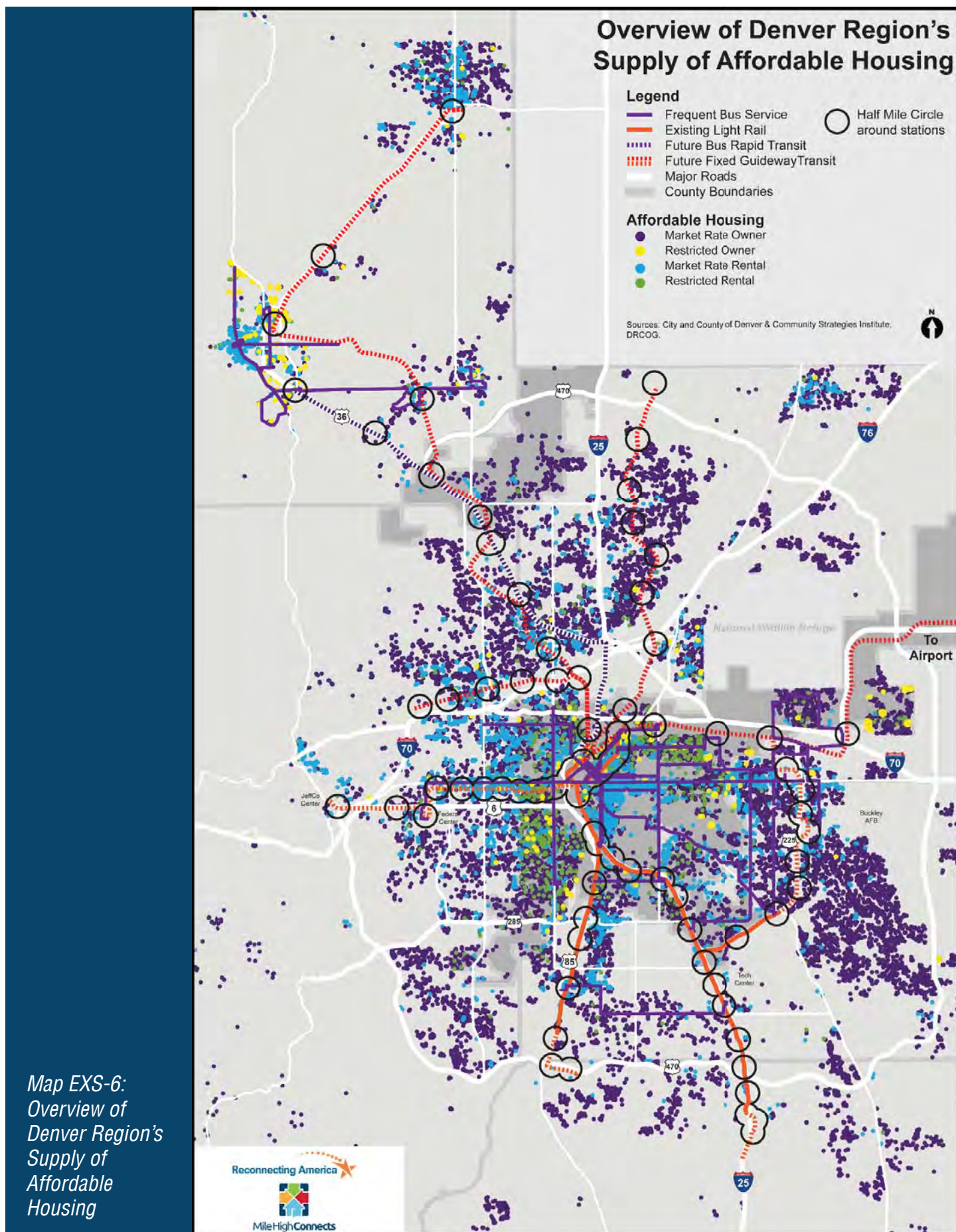


RACTOD on Flickr.com / Creative Commons

Preservation and creation of affordable housing opportunities near transit stations is a critical issue

Many rental units near transit stations are inherently affordable. Increases in demand for living near transit may create displacement and gentrification pressures. Ensuring that affordable and mixed-income housing remain near transit is essential to improving the health and quality-of-life of the Denver region's residents. A study by Enterprise Community Partners and Reconnecting America found that approximately 75% of the region's privately owned, federally subsidized affordable housing stock is located within a half-mile of an existing or proposed quality transit station.^{13 14} Denver developers pay an average of 25% more for properties within a quarter-mile of an existing or planned light rail station than for properties farther from transit.¹⁵ Many of the subsidized housing units are not permanently affordable. If owners do not take steps to renew the subsidies, they will expire and these affordable units could be turned into market-rate housing. Several mechanisms already exist to protect affordable housing, including Denver's “Early Warning System,” but more work is needed to ensure that what has happened in other regions does not happen in Denver.





Jobs & Economic Development

Maps in this section:

- Distribution of Subsidized Housing & Employment in the Denver Region
- Overview of Employment Clusters in Metro Denver
- Relationship of Educational Attainment to Employment Centers

The majority of trips by public transportation are job-related—59% of total transit trips are people commuting to and from work.¹⁶ This percentage is three times higher than the percentage of work trips taken by all modes of transportation.

Reaching jobs by public transportation is a major challenge in many metropolitan areas. A recent Brookings Institution report found that only about 30% of jobs are reachable within 90 minutes via public transportation.¹⁷ The percentage is even lower for less-skilled workers (25%). While Denver ranked sixth out of the 100 largest metro regions for job access via public transportation, major geographic, income and skill disparities still exist within the region.

The following key findings describe the Metro Denver employment characteristics in relation to transit.

There is a mismatch between major job centers and affordable housing

Map EXS-7: Distribution of Subsidized Housing & Employment in the Denver Region looks at the proximity of federally assisted housing units to the region's dense employment clusters. Outside of downtown Denver, a spatial mismatch exists between major job centers and the location of affordable housing, especially in the Denver Tech Center. The I-225 Corridor emerges as a critical link between jobs and affordable housing in the eastern part of the region, and the West Corridor will provide better connections for those in the western part of the region. Jobs and housing are more dispersed in the northern part of the region, but the transit lines will provide better connections between origins and destinations. The mismatch may grow over time. Many of today's affordable units are not permanently affordable, and the contracts that make these units affordable will expire over the next five years. As well-connected units become more attractive for market-rate development, property owners may choose not to renew their contracts.



Jefferson County administration center
Rick Kimpel / Creative Commons

FasTracks will improve connections between housing and jobs, especially for many low-income households

A recent report by Reconnecting America¹⁸ found that 17.6% (216,406) of the Metro Denver region's jobs are near fixed-guideway transit. FasTracks has the potential to increase this percentage to 26.2% (341,025), a 57.6% increase in jobs near fixed-guideway transit. **Map EXS-8: Overview of Employment Clusters in Metro Denver** shows how future lines will connect some of the region's largest job centers to the neighborhoods most in need of enhanced transit service. While new lines will not touch all low-income neighborhoods, they will improve the current situation. Last mile connections will be needed to provide better access to opportunity for those in outlying areas.

Jobs for low- and middle-skill workers often far from where they live

Map EXS-9: Relationship of Educational Attainment to Employment Centers shows the difference between the location of jobs and the educational attainment of residents. Areas with low educational attainment tend to be farther from major job centers. These residents are often lower income and are more likely to rely on public transportation. Denver's western and northern sides have the lowest levels of educational attainment in the region and very few jobs compared with nearby areas. The northern part of Aurora also lacks many job opportunities for its less-educated residents. Educational attainment is higher outside of

Denver. It is highest in Broomfield, Boulder, and Douglas counties and lowest in Denver and Adams. The Southeast Corridor is one of the few places where jobs and educational attainment match, but these are primarily higher income, higher skill jobs requiring advanced degrees. The East Line will significantly improve access to opportunities for many Denver and Aurora residents, but southwestern Denver and parts of Thornton will remain without quality transit access even after all the lines open.

Education



John M. Cropper / Creative Commons

Maps in this section:

- Change in School Free & Reduced Price Lunch by School District
- Access to Quality Schools for School Aged Children in the Denver Region
- Access to Quality Preschools for Children Under 5 in Metro Denver

As with employment, families must consider distance and transportation options when choosing early childhood and K-12 education for their children. Quality educational programming is not equally distributed across the Metro Denver region. In many cases, parents are forced either to settle for a less-than-optimal educational setting nearby or to make the sacrifices necessary to reach distant schools. Meanwhile, the student-age population in Metro Denver suburbs is diversifying, bringing new opportunities and challenges to creating a supportive education environment for all children.

Transportation presents significant barriers to school choice

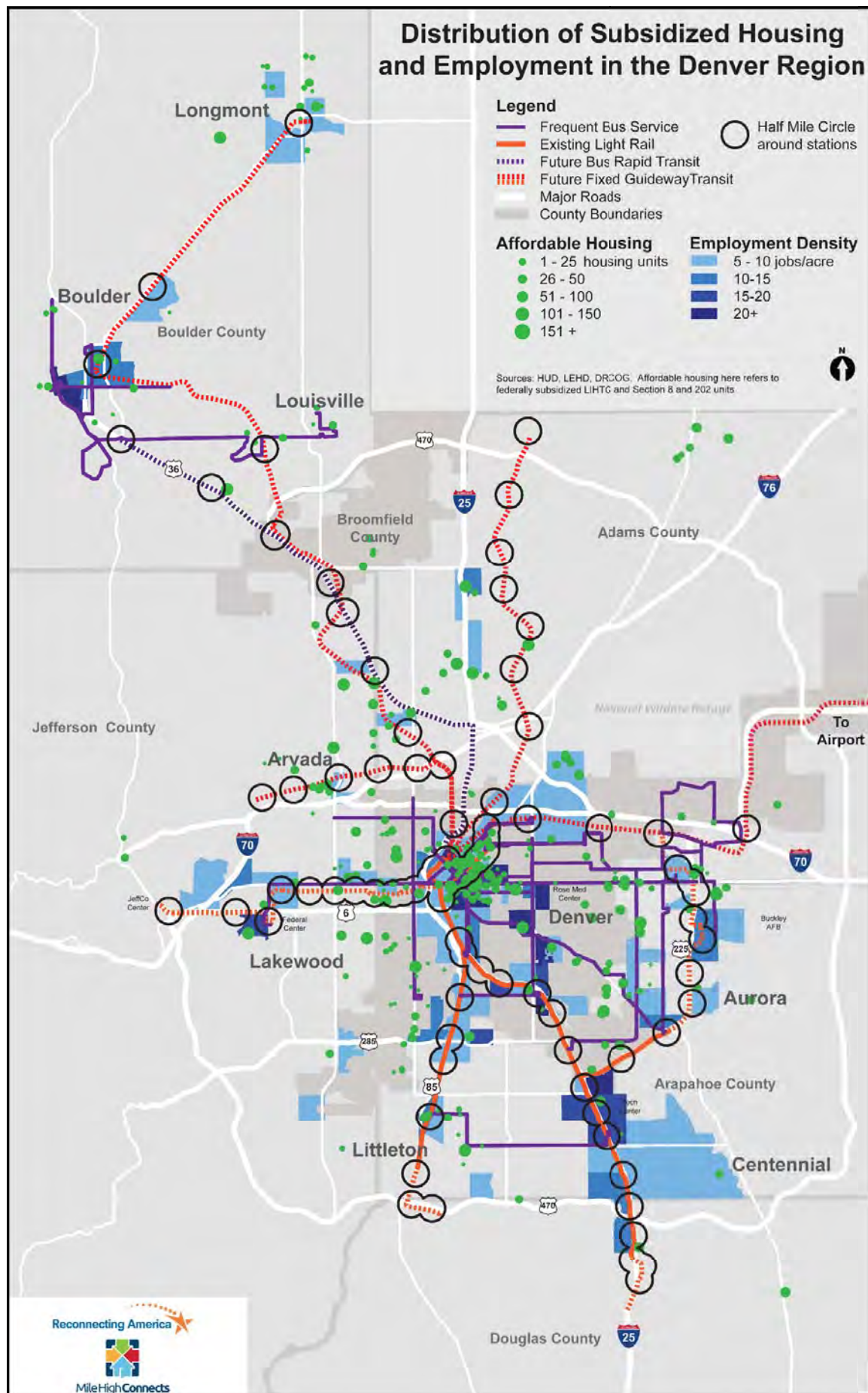
The Public Schools of Choice Act of 1990 allowed students in Colorado to choose to attend a school outside of their neighborhood school attendance boundaries, either in their school district of residence or another Colorado public school district. On the surface, increasing school choice opens the door for more equitable access to high quality schools. However, a major barrier for low-income families is the cost of transportation associated with choosing schools far from their homes. A 2009 report “Drivers of Choice: Parents Transportation, and School Choice”¹⁹ issued by the University of Colorado’s Center on Reinventing Public Education found that transportation created a significant barrier for families earning less than \$20,000 annually.

Increasing participation in free and reduced price school lunch program reflects suburbanization of poverty

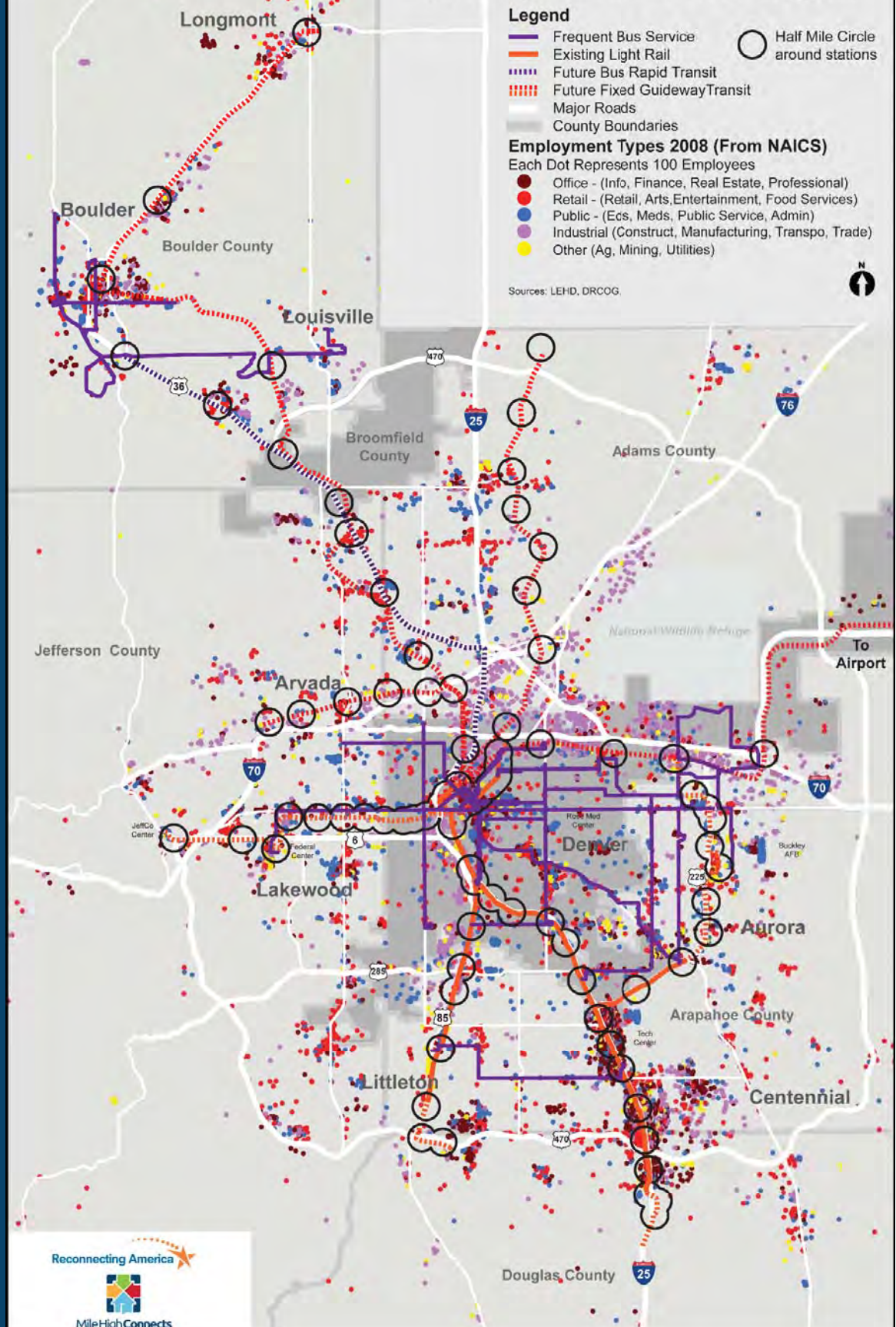
Map EXS-10: Change in School Free & Reduced Price Lunch by School District shows the change in FRL participation for each metro school district since 2001. As Denver’s inner suburbs have diversified over the past decade, many inner suburban school districts have experienced significant increases in free and reduced price lunch participation. While Denver Public Schools, at 73%, still has one of the highest FRL participation rates in the region, districts in Mapleton, Englewood and Aurora are rapidly catching up. Inner suburban school districts in Westminster, Commerce City and Sheridan all have higher FRL participation rates than Denver. With respect to transit service, many areas with a high percentage of FRL students lack adequate service. There is a large void in transit service in the southwestern part of the region near the Denver-Lakewood border. This area has one of the highest percentages of FRL participation in the entire region. Longmont also has a high percentage of FRL students.

Many of the region’s highest quality schools are not located near frequent transit

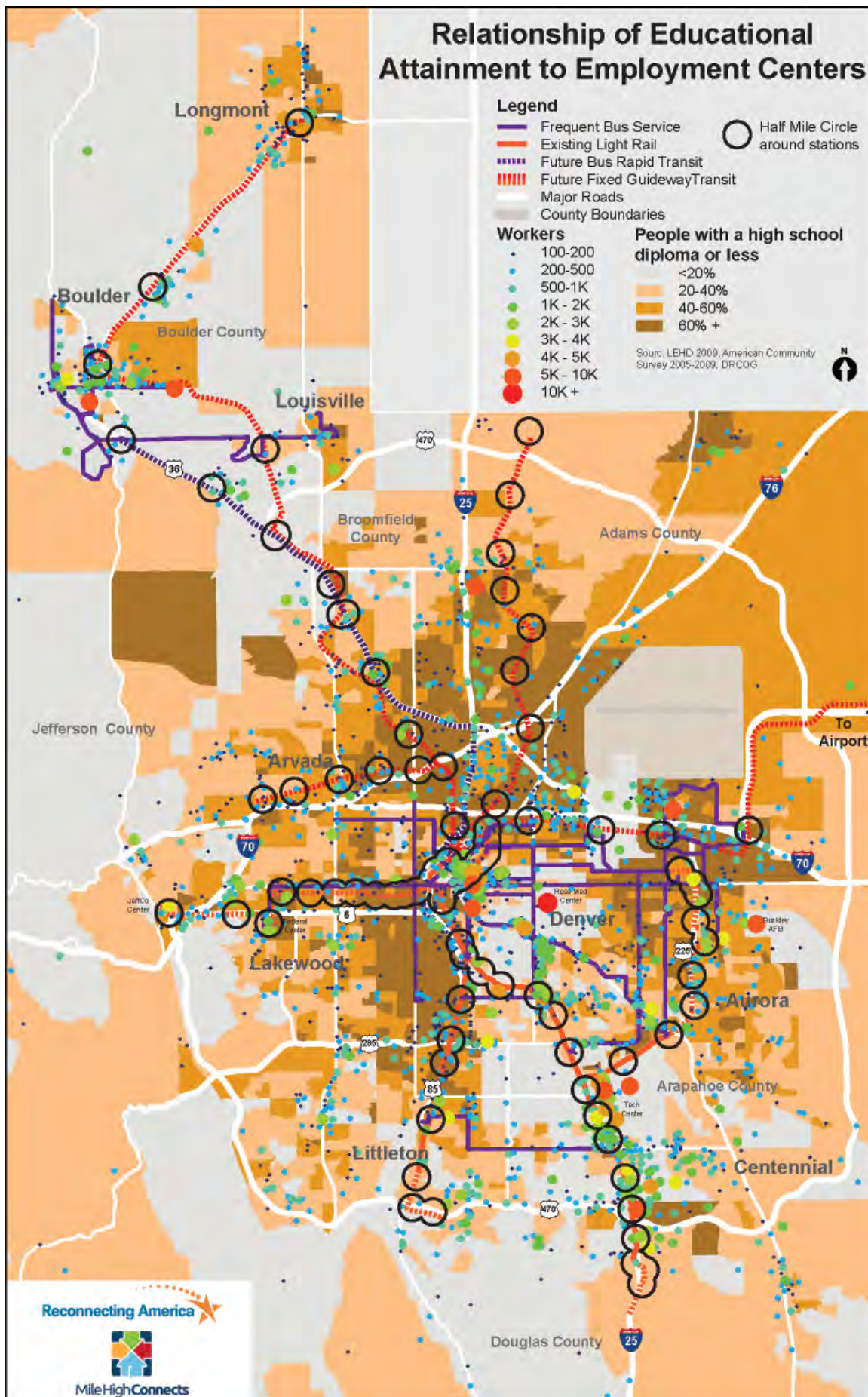
Of the 787 public schools in the Metro Denver region, 24.5% are located within a mile of existing or planned FasTracks



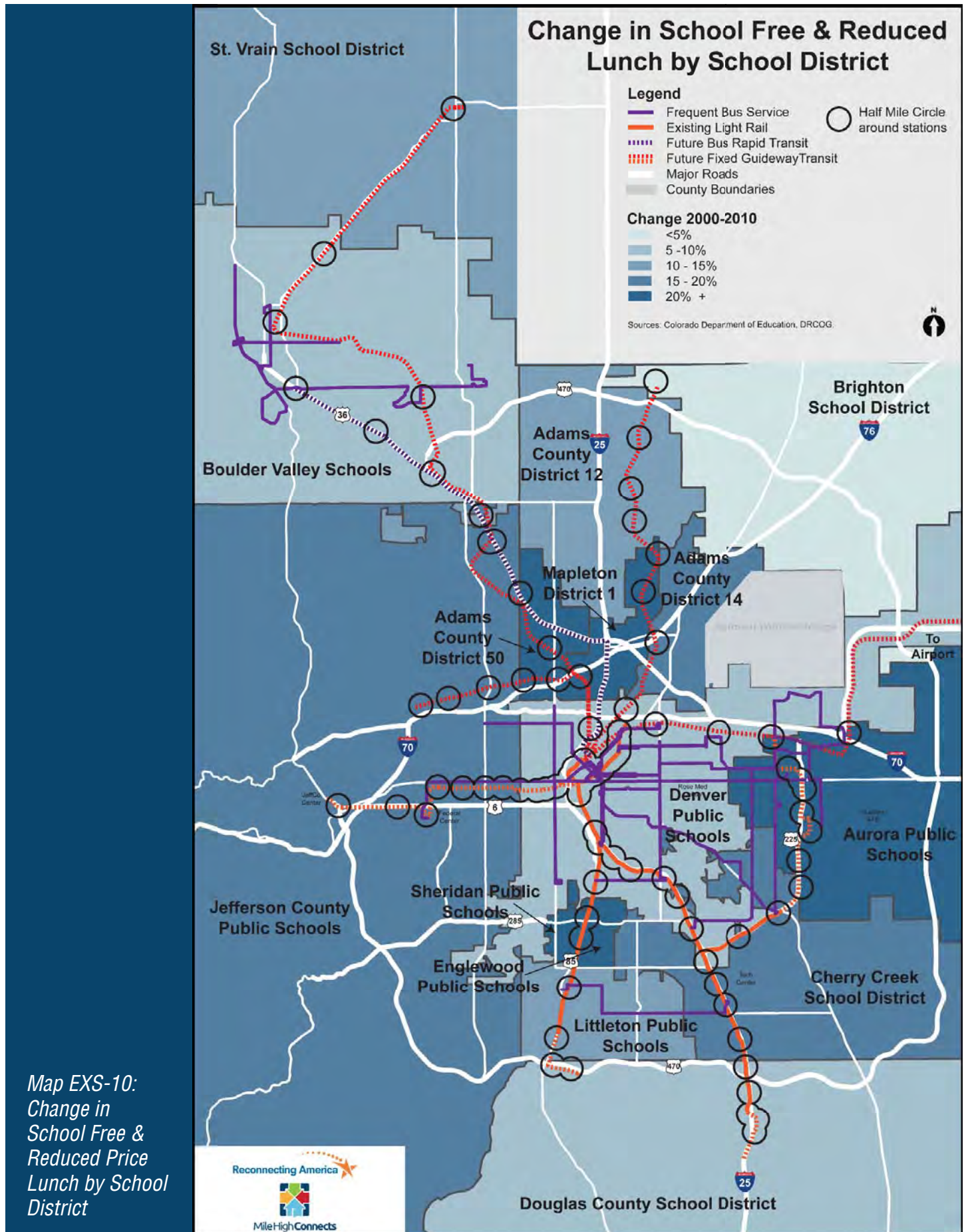
Overview of Employment by Industry for the Denver Region



Map EXS-8:
Overview of
Employment
Clusters in Metro
Denver



Map EXS-9:
Relationship
of Educational
Attainment to
Employment
Centers



stations. But the quality of those schools as measured by the state's School Performance Framework (SPF) is generally lower than the region as a whole:

- For all public schools, 85.4% are rated as “Performance” or “Improvement,” the two highest categories in the SPF. But for schools within one mile of stations, only 76% are in the top two categories.
- Among the top quarter of schools, only 15.4% are within a mile of stations.

Map EXS-11: Access to Quality Schools for School Aged Children in the Denver Region shows that school quality is not uniform across the Metro Denver region. Outer suburbs have a large number of schools receiving high ratings, while inner suburbs have a high concentration of low-performing schools. Adams County, which contains northwest Aurora and Thornton, has an average SPF score of 57.1%. Outlying Boulder County, however, has an average score of 70%. In the central city, Denver's higher performing schools are located in the southeastern portion of the district, while Northeast and Southwest – which have the city's densest youth population – have struggling schools. While transit cannot directly impact school performance, increasing access to schools via active transportation options can make it easier for students to get to school and for parents to drop them off. School performance also affects the location decisions of parents. Areas with better-performing schools will be preferable, and often these are areas in the suburbs far from transit. Many transit station areas will be less attractive to families because of the quality of nearby schools, and this could lead to underinvestment in those station areas.

Few preschools or other early childhood care centers are located near transit

Less than 10% of the Metro Denver region's 5,251 preschools are located within a mile of planned or existing FasTracks stations. Fewer than 3% are within a half-mile. For parents with young children who rely on public transit to commute to work, accessing preschools far from transit service created significant challenges. While preschools are dispersed evenly across the region, **Map EXS-12: Access to Quality Preschools for Children Under 5 in Metro Denver** shows very few preschools, and virtually no Qualistar-rated three- or four-star preschools²⁰, are within a half-mile radius of existing and planned FasTracks stations. In the southwestern part of the region near Federal Boulevard, an area with a significant number of low-income residents and a high number of small children attending preschool, this disparity is especially striking.

Health

Maps in this section:

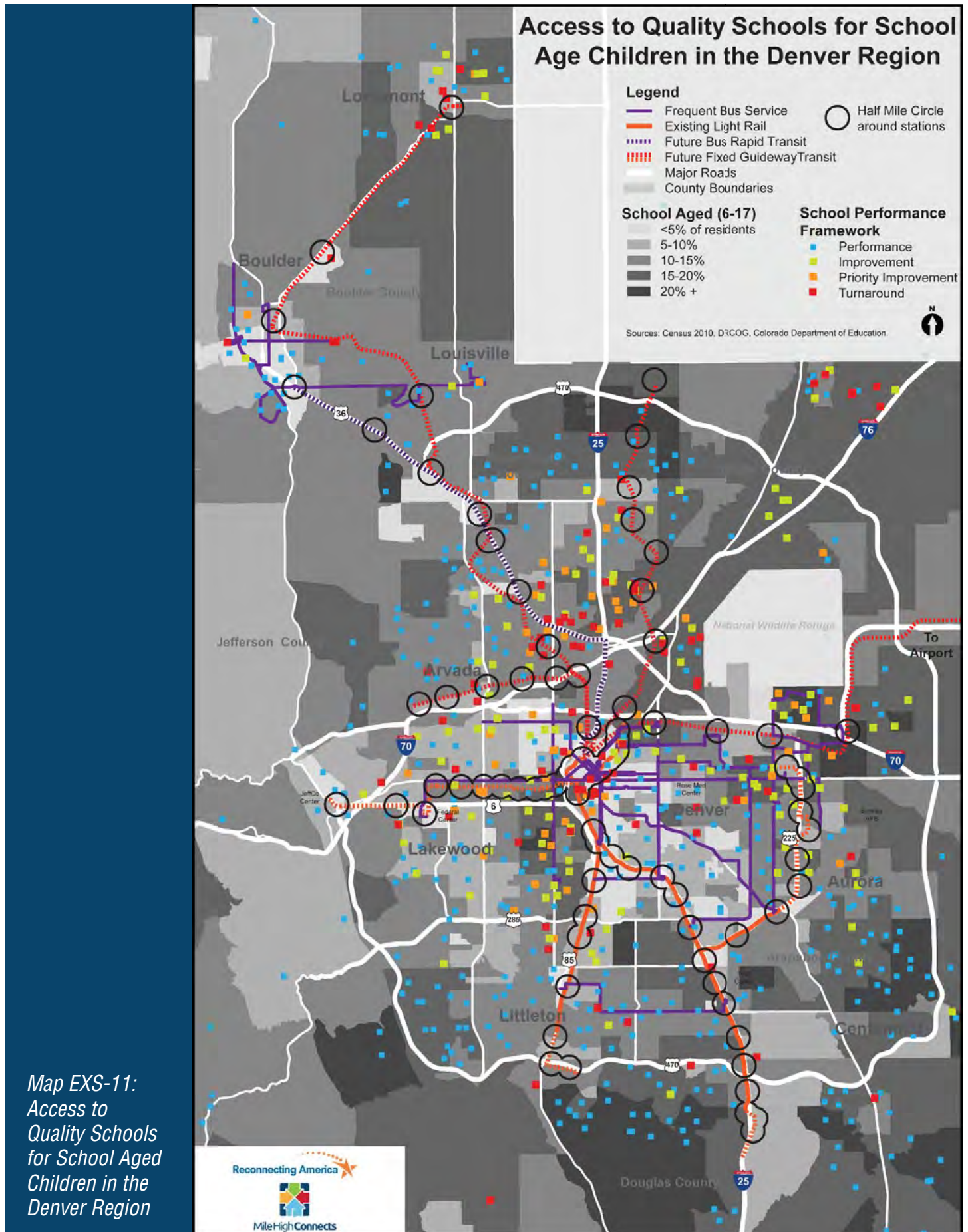
- Major Hospitals & Health Centers in the Denver Region
- Access to Healthy Food for Residents of Subsidized Housing

Expansion of Metro Denver's transit system has the potential to promote the health of all residents living in the region and to help reduce the burden of chronic disease. Colorado has the lowest adult obesity rate in the country, but about one in five adults is obese. The state's childhood obesity rate is among the fastest growing in the nation; Colorado fell from 3rd lowest to 23rd lowest in the past three years. The burden of obesity varies across counties in the Metro Denver area, and there are significant disparities by race and income.

The health benefits of using public transportation are well-documented. Using public transportation promotes physical activity in a number of research studies. Transit users on average take 21% to 30% more steps per day than people who drive to work. They are also more likely to be physically active and maintain a healthy weight.^{21 22 23} Transit riders walk more since they travel on foot to and from transit stops. Using U.S. National Household Travel Survey data, researchers found 29% of public transit users walked more than 30 minutes per day just getting to and from the station, thereby meeting the government's recommended levels of daily physical activity.²⁴



Kaiser Permanente



A recent study also found that people can lose weight by switching from driving to transit. Charlotte light rail riders lost an average 6.45 pounds after switching from driving to transit for a year.²⁵

Moreover, living in a walkable neighborhood allows traveling to more places by bike or on foot, and thus reduces the stress associated with commuting from place to place by car. Twice as many people in walkable environments engage in moderate amounts of physical activity compared to those in less walkable communities. In addition, an increased use of transit can help reduce adverse health outcomes associated with asthma and other chronic diseases by reducing driving and greenhouse gas emissions. This in turn can improve air quality for those engaging in walking, biking and other outdoor physical activity.

The following are key health findings for the region as they relate to transit.

Many major health care centers are located near frequent transit

Map EXS-13: Major Hospitals & Health Centers in the Denver Region displays the location of major hospitals, trauma centers, and community health care facilities in the Metro Denver region. Expansion of the regional transit system has the potential to improve access to health care services for many residents. Major health centers such as Anschutz Medical Campus, Medical Center of Aurora, Sky Ridge Medical Center and the new St. Anthony's Hospital in Lakewood are close to planned light rail corridors. The Swedish Medical Center and North Suburban Medical Center are not along rail lines, but coordinated bus service could make those facilities more accessible. A range of health care services may be located in these major centers, including primary, specialty and tertiary care, pediatric care, mental health and other services.

Smaller health care centers are not as well-connected to transit

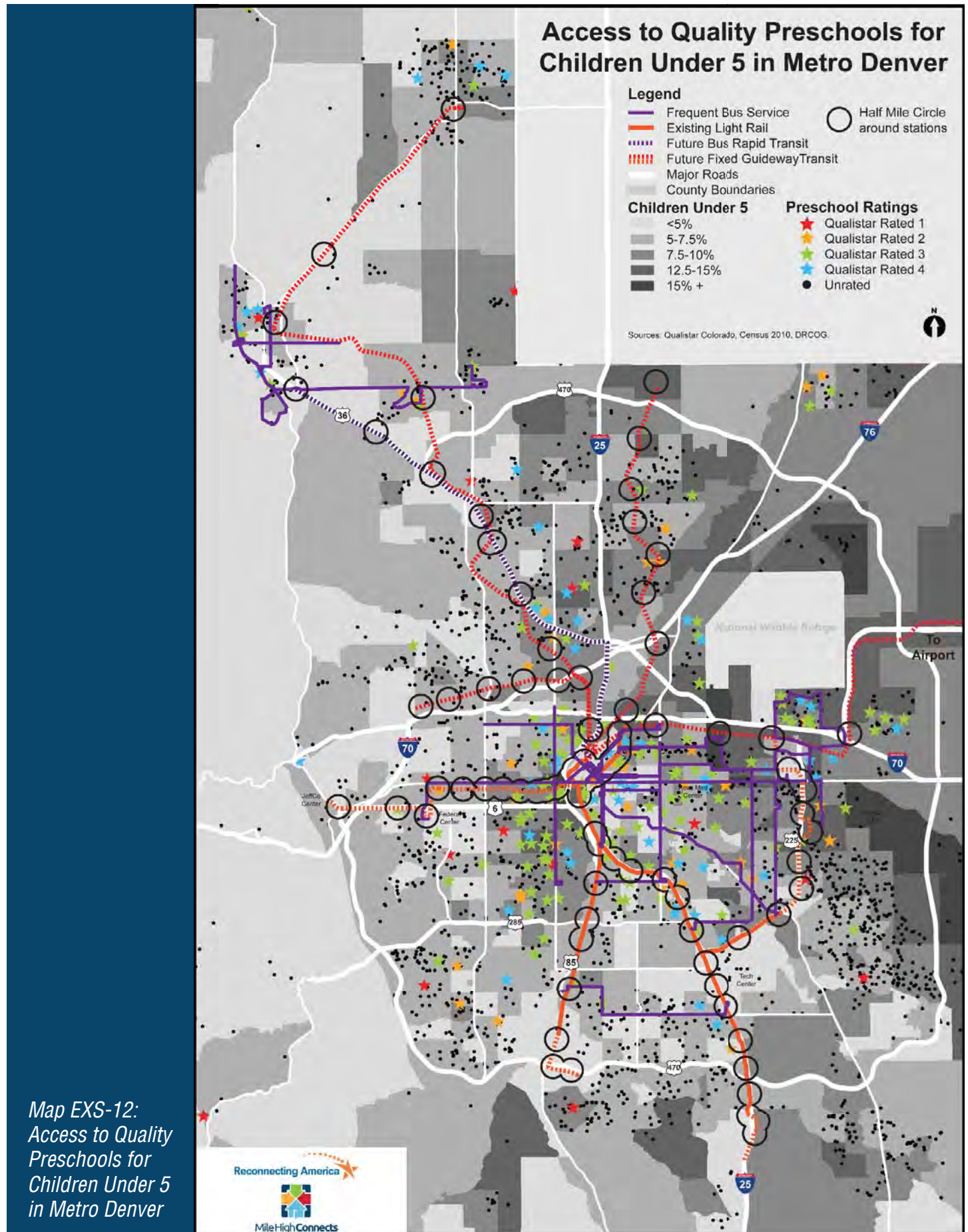
Community health care facilities provide primary, oral and mental health care primarily to individuals who are low-income, uninsured or enrolled in Medicaid and other public health insurance programs. While some of these facilities appear to be located on or near high-frequency bus lines or existing or planned rail corridors, many (particularly those outside Denver) are not easily accessible by rail or bus transit. Significant improvements in last-mile connections, including improved bus service, coordinated bus and rail connections and bike and pedestrian infrastructure, are critical to ensuring convenient access to health care for all residents of the region.

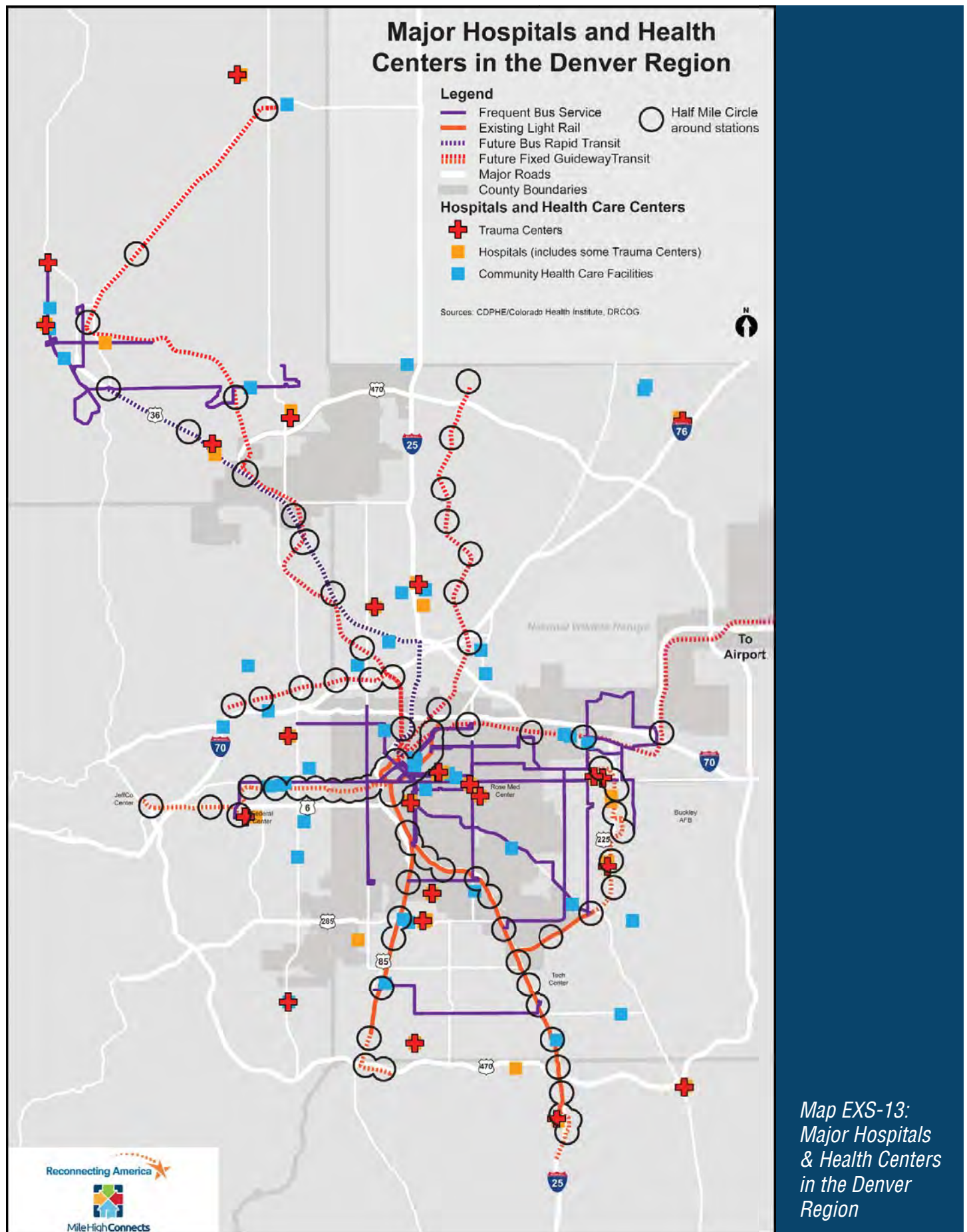
Healthy food options are limited along many transit corridors

Map EXS-14: Access to Healthy Food for Residents of Subsidized Housing shows places with low food access, defined as census tracts that are more than one mile from a grocery store. The map also identifies farmers markets and federally subsidized affordable housing units. There are "food deserts" all over the region, but especially along future transit corridors. Denver has a major food desert in its northern neighborhoods, which are primarily lower income. These residents will benefit from improved transit service, but they will still be quite far from most grocery stores. Many affordable housing units are located in food deserts as well, including those on the Gold, West, East, I-225, and North Metro lines. Currently, several high-frequency bus routes serve a large number of affordable housing units, but it is difficult to know from these maps whether residents are utilizing this service. Taking the bus is a huge sacrifice of time compared to going to nearby convenience stores and fast-food outlets. The build-out of FasTracks presents the opportunity to be thoughtful about aligning food access to transit. Recently, Denver convened a food-access taskforce and identified policy recommendations for facilitating grocery retail development, including economic development policies and practices and financing strategies. As much as possible, this and other efforts to facilitate development of healthy food retail across the Metro Denver region should be coordinated with transit planning and station area development, as there may be many opportunities to locate food retail within station areas.

There is a need for more localized health data

Most health data is available only at the county level, so it is difficult to examine many of the region's challenges and disparities. While this is a larger challenge that needs to be addressed at the national level, local agencies should study some of the region's lowest income neighborhoods to understand their needs better and to establish a baseline for tracking health outcomes over time.



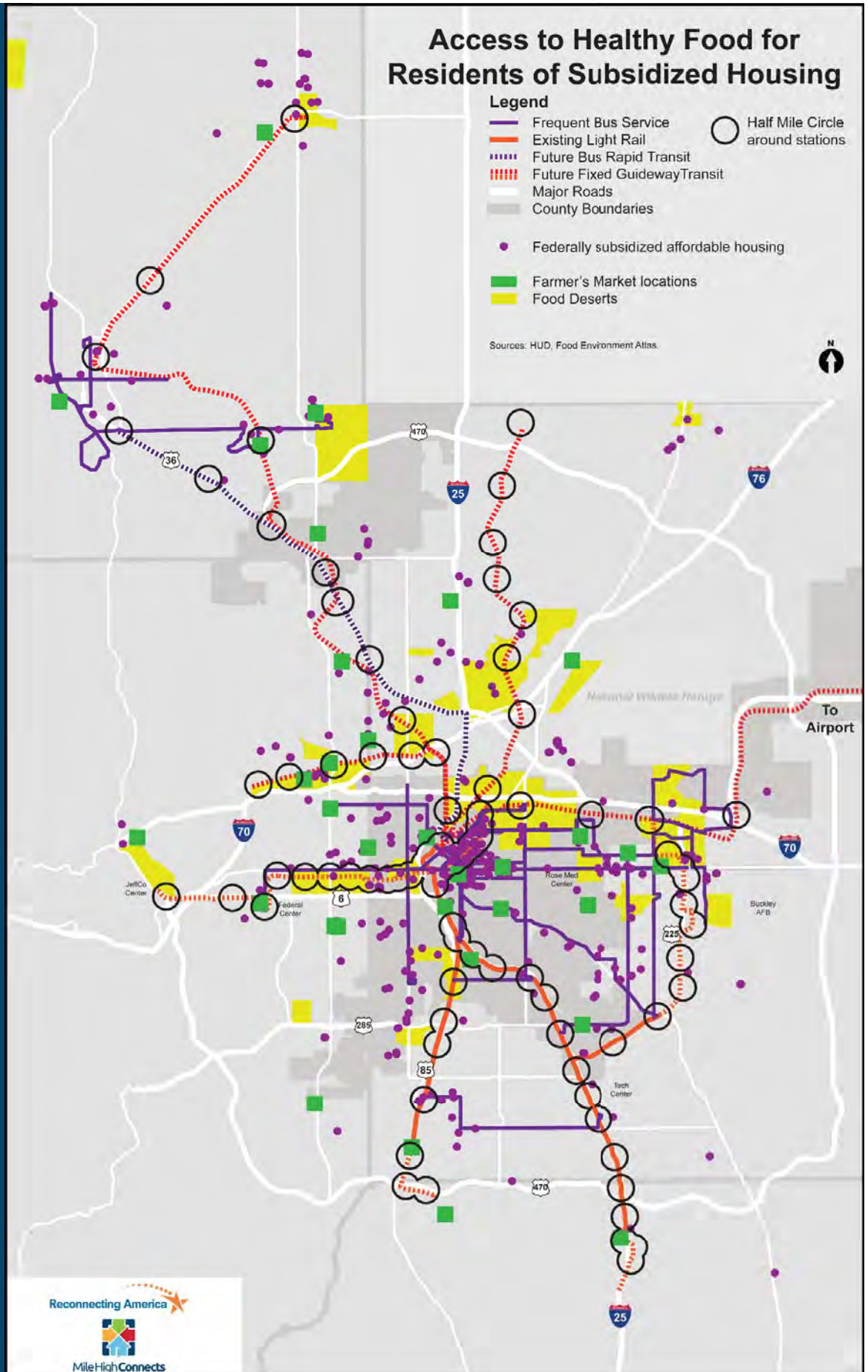


Access to Healthy Food for Residents of Subsidized Housing

Legend

- Frequent Bus Service
- Existing Light Rail
- Future Bus Rapid Transit
- Future Fixed Guideway Transit
- Major Roads
- County Boundaries
- Half Mile Circle around stations
- Federally subsidized affordable housing
- Farmer's Market locations
- Food Deserts

Sources: HUD, Food Environment Atlas.



Map EXS-14:
Access to
Healthy Food
for Residents
of Subsidized
Housing

Action Steps

Transportation Access

- **Provide last-mile transportation options to destinations that are too far to walk from transit stations.** Many destinations are simply too far to walk from existing or new transit stations. Yet cities, employers, RTD and other groups have the ability to increase connectivity between stations and the places people need to go by improving sidewalks, crosswalks, bicycle facilities, bus service and other supportive infrastructure.
- **Support Transportation Demand Management (TDM) programs and employer-provided shuttle services.** Transportation demand management (TDM) programs and employer-provided shuttle services are two highly successful methods of providing alternative transportation options and filling in that last mile. The Denver region already has many existing TDM programs that can assist with providing information about transportation options. Employers can also work together to provide shuttle services between transit stations and places of work to increase access and reduce the need for employees to spend the money driving to work everyday.
- **Support policy changes such as the adoption of complete streets policies that make walking, bicycling and public transportation safer and more convenient transportation options.** Many cities around the country have been adopting complete streets policies to ensure that streets are made safe for all users of all abilities, whether they walk, bike, take public transportation or drive. Complete streets policies also benefit individuals with disabilities or other mobility challenges. These policies ensure that the most vulnerable users of the road have safe, convenient pathways to get to where they need to go and require cities to include sidewalks, bike lanes and other improvements when redesigning roads. Many cities in the Denver region, as well as the State of Colorado, have passed complete streets policies, but have not yet implemented them on a large scale. Using the areas surrounding station areas as test sites for complete streets would ensure that these destinations become walkable, vibrant destinations that are also great, healthy places to live.
- **Improve sidewalk and crosswalk conditions near transit stations.** Many people feel unsafe walking in their neighborhood because there are no sidewalks or crosswalks. Identifying gaps in the sidewalk network, especially in places where there is heavy foot traffic, can make walking to transit stations safer and more convenient, while also increasing ridership.
- **Upgrade bicycle facilities and extend the B-Cycle Program throughout the transit system.** The Denver region is known for its great bicycling culture, but conditions in many neighborhoods are unsafe. Constructing bicycle lanes or painting shared lane markings can go a long way to improve the bicycling environment, especially near transit stations, where bicycling may be a way to get to a job, store or school that is too far to walk. Cities in the region should also explore bicycle sharing at stations, which would allow people to rent bikes at stations and drop them off at their destination. The City of Denver already has B-Cycle, and other communities could potentially add stations to this existing network if funding can be identified.
- **Prioritize improvements in communities with the highest need.** Many transit lines run through communities with transit-dependent populations, but that does not necessarily mean that cities will prioritize investments in these neighborhoods.



Denver Metro Living Streets Initiative / Creative Commons

These communities can benefit the most from safe, well-connected sidewalks, bicycle routes and other last-mile connections to the places they need to go.

Housing

- **Develop and implement an early warning system to alert when existing income-restricted housing developments (Section 8, Low Income Housing Tax Credits, City restrictions, etc.) are nearing expiration of their affordability**



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restrictions. In many instances, these properties are owned by private investors/developers. In high-demand locations in particular, these owners may be incentivized to re-tenant, redevelop, or sell these properties as unrestricted, meaning existing low-income residents are unlikely to be able to afford to remain in their homes. Armed with this information, Mile High Connects and our affordable housing partners will be better prepared to prevent this from happening by purchasing these properties or otherwise ensuring that they remain in the hands of mission-driven owners who will preserve their long-term affordability. Once these units are preserved, they can be renovated and/or redeveloped to ensure that they remain attractive, safe, and sustainable.

- **Preserve existing affordable housing near stations.** Many low-income residents in the region live in areas that are already served by the existing transit system or soon will be via the FasTracks expansion. Households who use public transportation rather than drive save thousands of dollars every year, thereby increasing their net worth and quality of life. A top priority of MHC will be to ensure that existing housing options near transit stations remain and that more are created. We will accomplish this through a combination of property acquisition, affordable housing finance programs, and collaboration with various state, regional, and local agencies and municipalities to create/modify policies that incent preservation and development of affordable housing near transit stops.

- **Enforce existing and enact new policies to promote affordable housing.** In the near future, many municipalities and organizations, including DRCOG and the City of Denver, will be updating their housing plans. MHC will work diligently to ensure that these housing plans address the full spectrum of housing options, with a particular focus on disadvantaged populations (very low-income, seniors, disabled). In addition, we will work to ensure that these policies are aligned at the local, regional, and state level, and that they drive the allocation of increasingly scarce resources.
- **Expand the Denver TOD Fund to a Regional tool.** The Denver TOD Fund, a creative financing tool developed through a partnership between the City of Denver, Enterprise Community Partners, the Urban Land Conservancy (ULC) and public, private, and foundation investors, seeks to catalyze the development of efficiently located, high quality affordable housing and community amenities for our region's low-income residents. Since the Fund closed in April 2010, it has allowed ULC to acquire six different properties throughout Denver. These properties, all located in close proximity to light rail and/or high frequency bus service, will ultimately provide over 350 affordable rental units, a new public library, non-profit office space, and retail and commercial space that provide community benefit. We believe the TOD Fund can have an equally positive impact in communities surrounding Denver, so we are working with local municipalities and agencies to structure an investment that will be leveraged 10+ times over with capital from local and national foundations, CDFIs, and banks.

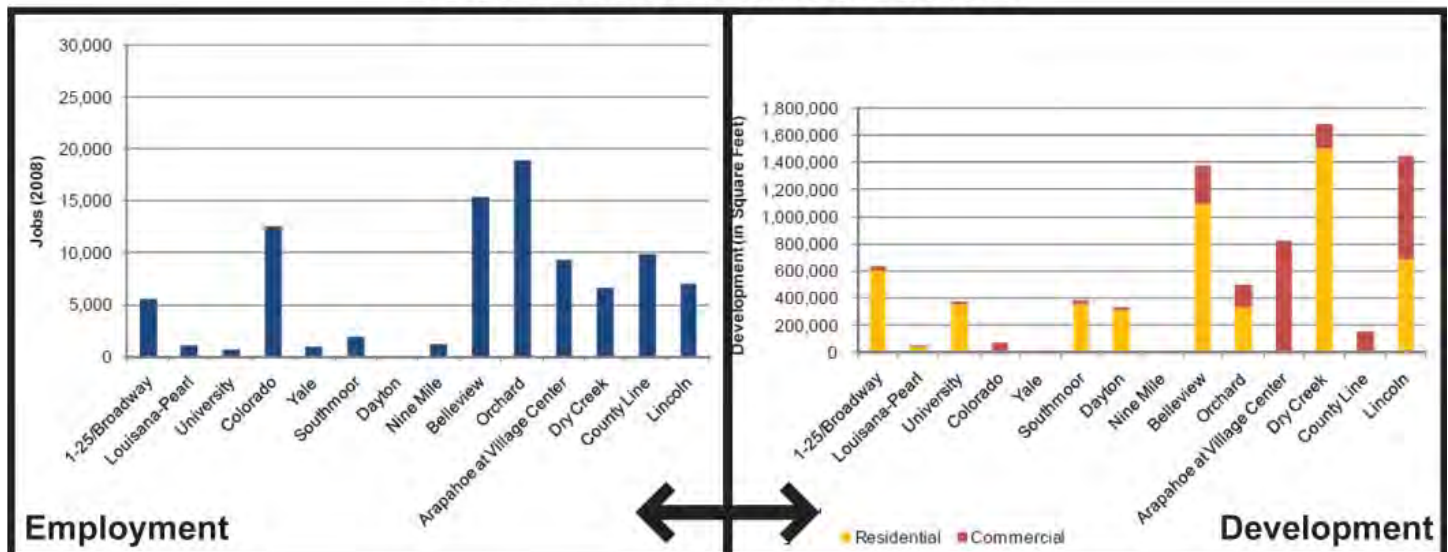
Jobs

- **Conduct additional research to understand the firms, industries, and types of jobs located along major transit corridors to understand how we can best leverage transit access to promote employment.** The analysis completed by this Atlas only scratches the surface in our understanding of the relationship between jobs and trained workers. We recommend additional research to better understand the placement of firms along the lines, and the barriers and incentives for facilitating business locations by transit, especially those firms that offer employment to our region's "middle skill"²⁶ workers.
- **Encourage our regional employers to offer transit passes to workers as a core benefit.** RTD offers corporate pass programs to employers to subsidize the cost of transit. Work with RTD to increase awareness and usage of these programs.
- **Support the creation of employer-assisted housing.** In communities as diverse as Chicago and Cleveland, key employers are offering employer-assisted housing programs to help lower the cost of housing as well as promote "live where you work" strategies to reduce commuting times. Additional research should be done to explore these and other national models to determine the feasibility of offering a Mile High program for our local businesses.
- **Consider location incentives for employers and small businesses to locate by transit.** As new or expanding firms make site decisions in the region, regional economic development agencies should ensure that their incentive programs reward an prioritize those employers choosing to locate within a half-mile of a high-frequency transit stop and/or that are offering "last mile" connections between their workplace and major transit connections.
- **Prioritize locating workforce training centers along high frequency transit corridors.** Future decisions about investing in workforce training programs should consider location as a key criteria for funding to foster better accessibility to transit.
- **Preserve affordable commercial space along transit corridors to ensure retention of local businesses.** As our regional transit system is completed, national trends have shown land prices along these lines will increase. In order to preserve our local identity and culture, safeguards should be put in place to preserve affordability of commercial space for local small businesses, especially those providing neighborhood services. A scan of national best practices should be done to identify what the most effective strategies are that preserve a "buy local" ethos without stunting the overall market.

Education

- **Increase outreach to education decision-makers to reinforce the importance of transit.** While the value of public transit has been long-recognized in connecting families to quality jobs, there has been less dialogue regarding its role in linking families to quality education opportunities. Similarly, decision-makers should examine the relationship between quality

The "Virtuous Cycle" Between Housing and Employment Denver T-Rex/Southwest Corridor



Source: Center for Transit-Oriented Development



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ECE and childcare facilities and transit.

- **Encourage brick-and-mortar investments in early childhood centers and K-12 schools to locate near transit lines.**

As student-age poverty moves out from the central city, suburban school districts will have new opportunities to connect its students to quality options through transit. School districts, government and foundations should develop incentives to encourage developers to site new education-oriented facilities near transit. Cross-sector, joint developments, where partners plan, site, design or build facilities should also be explored.

- **Prioritize improving school performance for schools located within a half-mile of transit.** Since low-income students are more likely to rely on transit to journey to school, state agencies and local school districts could consider focusing more resources to increase performance for schools located close to stations, increasing quality choice options for all students.

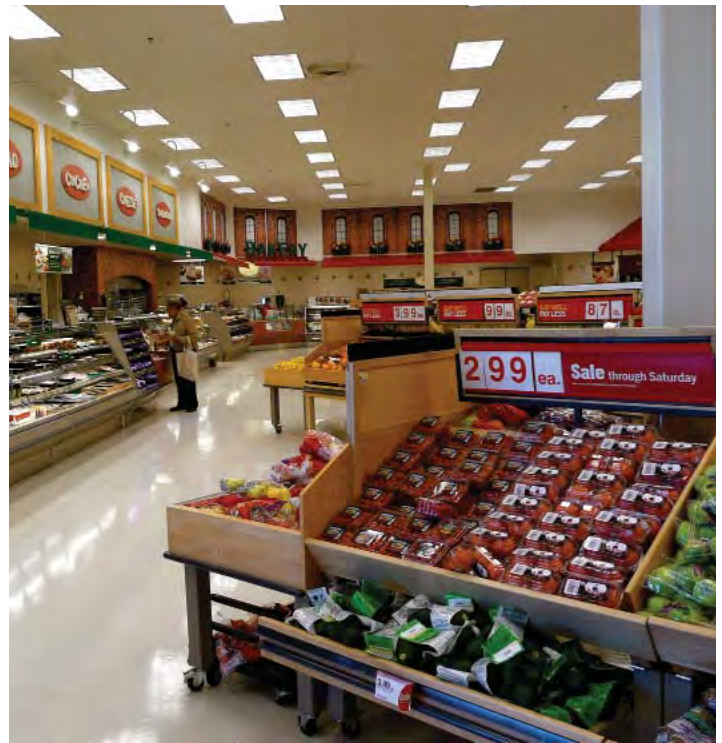
- **Create intergovernmental relationships between school districts to plan for highly-mobile, low-income students.** Children in poor families are more likely to move into new homes across the region over the course of their childhood. School districts should seek to better understand student mobility and leverage transit to allow for cross-district student commutes.

- **Provide last-mile connections between schools and transit stations.** A number of the region's high quality schools are located outside of walking distance but could be accessed if last-mile connections are enhanced to connect transit-reliant students to schools. School districts should consider expanding the number of intra-district circulators, anchored to RTD transit stations to increase choice.

Health

- **Increase and improve transit service to existing grocery stores to people living in food deserts.** Many communities are too far from a grocery store selling healthy food, but the odds of a grocery store locating in their neighborhood are low. Therefore, RTD and other transit providers should study options to improve coordination of existing routes or add transit services where access currently does not exist to get low income and economically disadvantaged populations to grocery stores, whether it be permanent bus routes, dial-a-ride shuttles or other models.
- **Provide incentives (funding, zoning, one-stop permitting) to grocers to locate in station areas.** Currently there are limited options for financing grocery stores specifically in low-income neighborhoods, but tools such as a fresh food financing fund are in the early stages of development, so more opportunities are to come. Communities can also revise their zoning laws to permit grocery stores in places where they would fit within the existing neighborhood fabric. Communities can also provide incentives for corner stores or convenience stores to offer fruits, vegetables and other healthier food choices than what they typically provide.
- **Provide access to existing park space near transit stations and encourage the setting aside of green space nearby.** Consider the development of a regional "green necklace" of pocket parks, trails, and open spaces along the FasTracks build out to promote healthy living and give people from all neighborhoods a safe place to play.
- **Improve last-mile connections across the transit system so people walk and bike more.** Public transportation not only gets people to the places they need to go, but it also encourages physical activity since people typically walk or bike to and from a station. Policies supporting walking and biking, as well as funding to actually implement these policies, can go a long way in encouraging healthier lifestyles.

- **Allow farmer's markets and other green markets at station areas.** When people are waiting for or getting off of a bus or train, they usually have a few minutes to spare. If they can take care of errands at the same time, it allows them more time to spend doing other things. Farmer's markets or other green markets can provide goods and services right at the station, and also support local businesses. Communities should study the feasibility of these types of markets near station areas.
- **Obtain more localized data or conduct research studies of certain neighborhoods to better understand the health issues for neighborhoods served by transit.** The Atlas only scratches the surface of many health issues of critical importance for the Denver region. Local level data is simply not available to illustrate many of the disparities that communities worry about on a daily basis. There is a need for local and state public health departments to conduct additional research at a neighborhood level so that better data and mapping can be done to better understand the challenges and opportunities faced by each community.



Scorpions and Centaurs on Flickr.com / Creative Commons

Endnotes

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