



# LEVERAGING THE INVESTMENT IN TRANSIT TO ACHIEVE COMMUNITY AND ECONOMIC VITALITY

June 2015

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Outcomes | Assessment | Knowledge | Sharing

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A Report to the  
Denver Regional Council of Governments

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Sustainable Communities Initiative

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# LEVERAGING THE INVESTMENT IN TRANSIT TO ACHIEVE COMMUNITY AND ECONOMIC VITALITY

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This report was prepared for the Sustainable Communities Initiative Executive Committee as part of the Denver Regional Council of Government's Sustainable Communities Initiative program.

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Copies of this document may be obtained by contacting Denver Regional Council of Governments.

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## EXECUTIVE SUMMARY

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### Overview

This report, *Leveraging the Investment in Transit to Achieve Community and Economic Vitality* is an action plan for advancing transit oriented development and complete communities along the Regional Transportation District's FasTracks rail system, which links jurisdictions throughout the metro Denver region. It was commissioned as part of the Denver Regional Council of Government's Sustainable Communities Initiative, a three-year project funded by a grant from the U.S. Department of Housing and Urban Development, as part of the Sustainable Communities Partnership with the U.S. Department of Transportation and the U.S. Environmental Protection Agency.

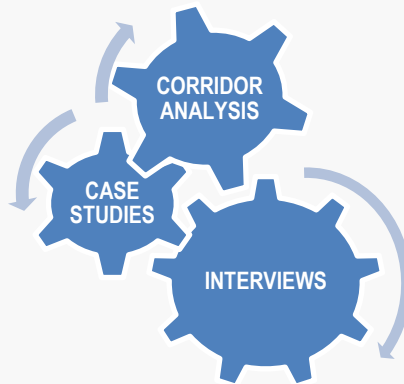
To ensure success of the \$7 billion investment the voters of the region have made to rail transit, much needs to happen at the stations themselves, and in their immediate vicinity. This report provides information on where the region currently is in creating vibrant and healthy communities around transit stations, and what needs to happen to attract additional housing, jobs, entertainment, and goods and services to station areas for generations to come.

The recommendations presented in this report are based upon recent data on housing, accessibility, jobs, and development opportunities. The data are drawn from three different analytical exercises. First, evaluations of 46<sup>1</sup> station locations were conducted along the four FasTracks lines that are currently operating – the Central, Southwest, Southeast, and West lines. These evaluations relied on field work, assessor's data, zoning maps, census data, local planning documents, and geographic information systems. Second, a series of 65 interviews with developers, financiers, nonprofit organizations, planners, and other officials on the ground working on creating transit communities at stations along these corridors. The interviews were designed to allow participants to provide honest and candid observations on “what is working,” “what is not working,” and “what still needs to happen” to create successful communities around transit stations. Finally, three case studies were performed from peer urban regions; Dallas, Portland (Oregon), and San Diego. These provided additional information on opportunities and challenges, best practices, and various tools being used to advance transit oriented development.

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<sup>1</sup> Note: 46 stations are located along the corridors evaluated in this study. In some instances, information was compiled for 44 of the stations.

The tagline – *Outcomes | Assessment | Knowledge | Sharing* – indicates that this report is meant to be much more than a study; it is designed to be a resource and implementation tool for planners, decision-makers, developers and investors, and the public at large.



## Key Findings

The corridor analysis revealed that no two stations areas are in the same place in terms of transforming into transit communities. Interviews with planners, developers, and transit experts concluded that housing is in short supply and home prices continue to rise, that housing and jobs are out-of-balance (that is, not proximal to each other, resulting in the need to commute), that bicycle and pedestrian facilities are in need of major funding, and that more services and amenities, such as day care and shopping, are needed in the vicinity of rail stations. The case studies of Dallas, Portland, and San Diego show that those regions are wrestling with many of the same issues. They provide examples of both similar and different approaches for addressing collaboration, real estate acquisition programs, and marketing transit oriented development as a core part of their regional economic strategies.

## Summary of Recommendations

There are 19 recommendations put forward in this report (see table on the following page), that give voice to what we learned through interviews, case studies, and data analysis. The recommendations are evidence-based and draw directly on the research analysis and findings. These findings support a broad consensus on moving forward with transit oriented development as a means to support the growth of the region’s transit system. They also advance the regional goals of the Denver Region Council of Government’s Metro Vision long-range growth and transportation plan. The recommendations serve as a *call-to-action* for moving the region and localities forward in accommodating growth and development at station areas.

The recommendations are loosely grouped according to four major themes: (1) **housing**, (2) **accessibility**, (3) **jobs and economic development**, and (4) **site development**. There is also a large group of cross-cutting – or **general** recommendations that address more than one theme. The cross-cutting recommendations address topics such as **collaboration, integrated planning, education and outreach**, and **monitoring**. Recommendations for housing address **funding, changing demographics**, and the need to take a **regional approach to housing**. Accessibility focuses primarily on **first and last mile connections**, as well as on **managing parking** in station areas. The recommendations related to economic development build on the increasing popularity of living in more **compact and convenient**



**areas** with shopping, services, jobs, and entertainment within walking distance. Finally, the site development recommendations are geared toward identifying opportunities for transit oriented development and the development of **complete communities** around FasTracks rail stations.

The table that follows highlights the recommendations presented in the report.

### Housing

- Enhance Funding for Housing
- Expand Real Estate Acquisition
- Integrate Changing Demographics into Planning
- Develop a Regional Approach to Housing



### Accessibility



- Prioritize First- and Final-Mile Connections
- Reduce Fare Rates as an Obstacle to Ridership
- Manage Parking in Station Areas

### Jobs and Economic Development

- Market Transit-Oriented Communities as Economic Catalysts



### Site Development



- Streamline Development Review
- Leverage Funding for Necessary Infrastructure

### General

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Embrace Collaboration as a Foundation for Success</li> <li>• Clarify Relationship between Urban Centers and Station Areas</li> <li>• Develop and Make Available Best Practices &amp; Tools</li> <li>• Monitor Investment and Development</li> <li>• Plan for Station Areas as Complete Communities</li> </ul> | <ul style="list-style-type: none"> <li>• Adopt Holistic, Integrated Planning Approach</li> <li>• Integrate Adjacent Neighborhoods in Station Area Planning</li> <li>• Expand Education, Outreach and Community Engagement</li> <li>• Plan Future Corridors</li> </ul> |
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## INTRODUCTION

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The Denver Region has received national recognition for its ambitious FasTracks program, which – upon completion – will provide a network of eight rail corridors, along with a freeway bus rapid transit corridor, throughout the urbanized area. With 46 stations already operating, and more than a dozen and a half additional stations coming on-line by 2018, the Denver Regional Council of Governments initiated this study and report on opportunities and challenges related to transit-oriented development at FasTracks rail stations.

A key focus of the project was an evaluation of the current state of planning and development along four existing rail transit corridors operated by the Regional Transportation District – Central, Southwest, Southeast, and West. The project organized information around themes: (1) housing, (2) accessibility, (3) jobs and economic development, and (4) site development.

Using the findings from the research efforts, the study team developed a detailed set of evidence-based recommendations and action steps to help communities and the region evolve vibrant and healthy communities around transit stations and continue along the path of implementing the region’s long-range growth and development strategy, DRCOG’s Metro Vision plan.

### Project Overview

The project launched in July 2014 with three broad tasks.

**Station Area Evaluations:** Students in the Department of Planning and Design Fall 2014 Planning Project studio in the College of Architecture and Planning at the University of Colorado Denver worked with the research team to conduct a thorough evaluation of each of the existing station areas using on the ground observations and analysis, and existing data on businesses, zoning, development, and demographics.

**Interviews:** Throughout late 2014 and early 2015, the team interviewed 65 individuals throughout the metro area with expertise in transit and transit oriented development. Through the interviews, a broad range of issues, concerns, and ideas were discussed, as well as opportunities and challenges related to housing, access, site development, and economic development.

**Case Studies:** The research team conducted case studies for the three peer urban regions. The team selected Dallas, Portland (Oregon), and San Diego. These three different regions were selected because: (1) they are in the western U.S., (2) they have newer transit systems with

similar transit technologies (e.g., light rail transit), (3) they represent a collection of states with planning laws and funding sources that have both similarities to and differences with Colorado, and (4) they are in growing regions. Portland and Dallas are also economic competitors with Denver. This analysis included document review, data analysis, and phone interviews.

## Organization of This Report

The report is divided into four sections.

Part I provides a context on where we have been as a region, where we are now, and where we are headed. Key challenges facing the region are presented, along with desired characteristics of transit communities. The research methodologies used in the report are described.

Part II consists of an analysis of each of the current transit corridors: (1) Central corridor, including the spur into the Central Platte Valley, (2) Southeast corridor (including a spur of the I-225 Line), (3) the Southwest corridor, and (4) the recently opened West Line. The analysis and findings presented in this section reflect a synthesis of two components of the research: (a) the corridor-by-corridor analysis of housing, accessibility, economic development, and site assessment, as well as (b) interviews with planners, elected officials, developers, and other experts in transit oriented development.

Part III provides information from case studies of three urban regions in the U.S.; Dallas, Portland, and San Diego. These three regions have expanding rail systems and are working to advance transit oriented development.

Part IV of the report includes a set of recommendations which draw on outcomes from the research. The recommendations include implementation actions, as well as monitoring steps to help track the steps to advance transit oriented development along the FasTracks corridors.

Three appendices provide more detail on the data and information compiled for this study.

Appendix A. This appendix provides information on the corridor-by-corridor analysis, as well as information for each station area.

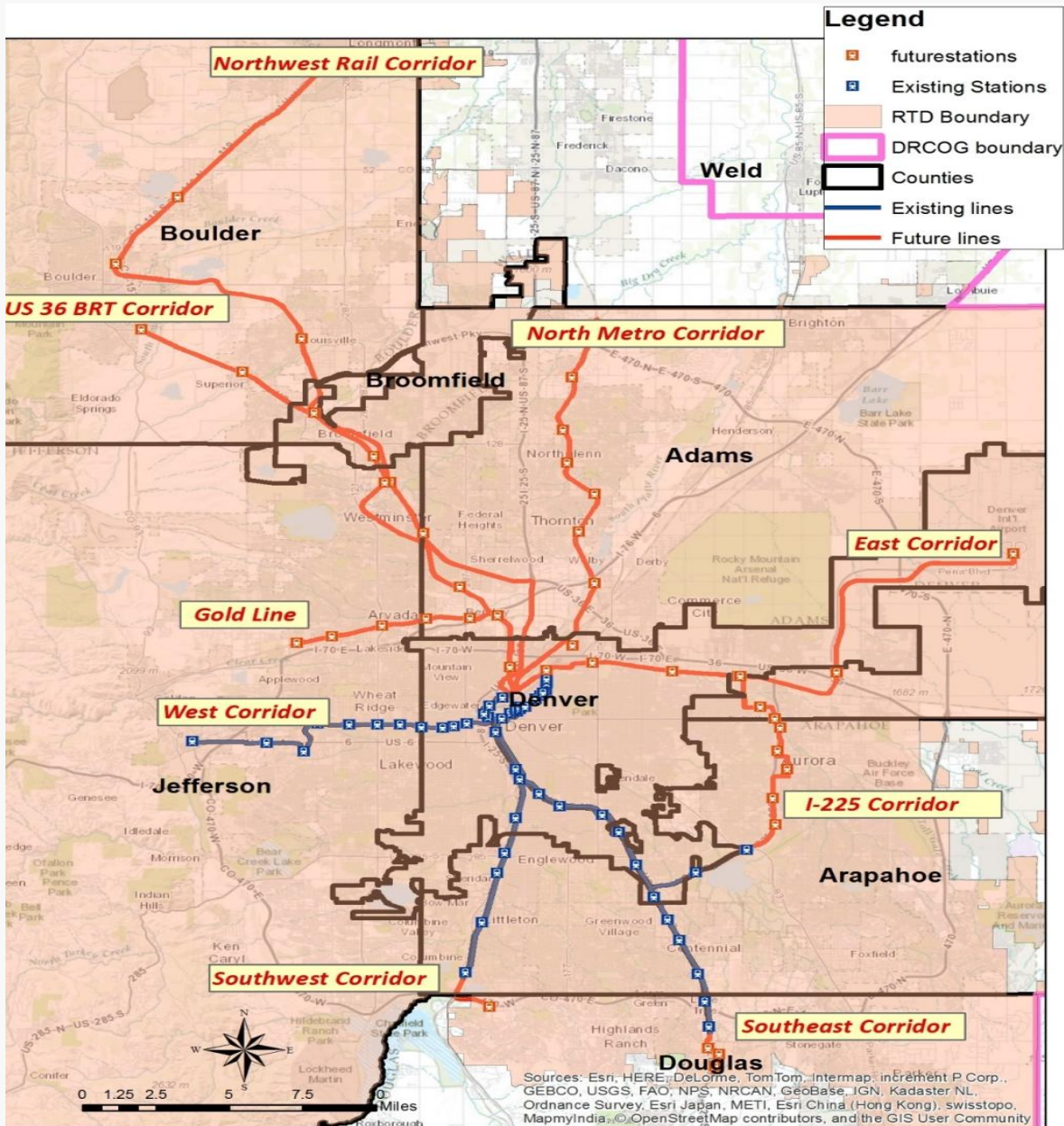
Appendix B. This appendix describes the approach used for the interview research. The interview tool is described, along with information shared by the interviewees.

Appendix C. The final appendix provides additional data and information on the three case study regions.

# PART I: A REGION IN TRANSITION

## The Regional Context

The Denver metropolitan area's \$7 billion FasTracks project is already having and will continue to have a significant influence on the social, economic and physical development of the region. The Denver area recently passed the 3 million mark in population and is expected to continue to grow in coming decades.

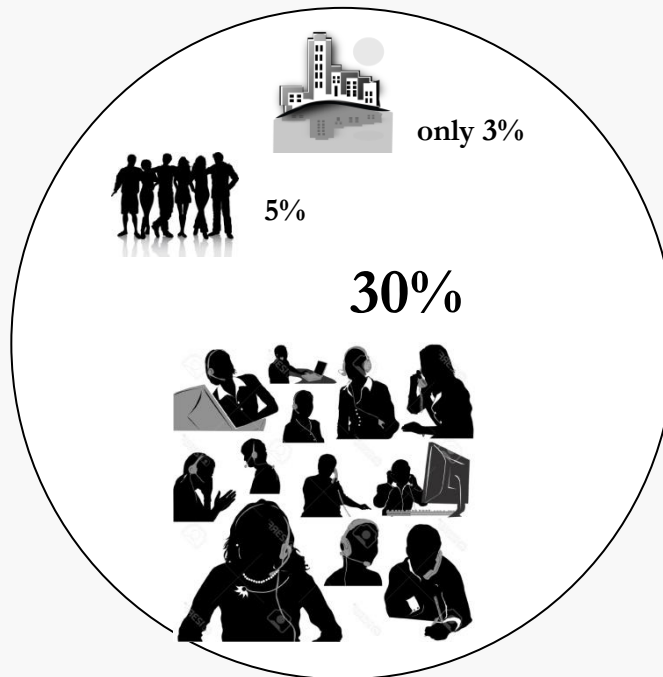


As the FasTracks system continues to evolve, metro Denver has the opportunity to engage in proactive planning and decision-making. Taking advantage of this new infrastructure by surrounding it with complete communities that include a range of housing options, jobs and retail, and community facilities and services, is the next major opportunity for the region and will contribute to the region's pursuit of Metro Vision, the integrated long range growth and transportation plan for metro Denver. The plan offers a strategy to locate 50 percent of new residents and 75 percent of new jobs in centers that are connected to the entire region.

## Where have we been?

The region's first light rail stations opened along the Central corridor in 1994. Since then extensions were added to the original line, including the Southwest corridor, and the spur into the Central Platte Valley to Denver Union Station. The Southeast line, with its spur along I-225, opened in 2006. In 2013, the West corridor from downtown Denver to Golden opened. Collectively, these operating lines have 46 rail stations.

These stations areas (i.e., the area within a ½ mile radius from the platform) comprise only three percent of the total urbanized area of metro Denver, but as of 2010 include five percent of the population. At the same time, 30 percent of the region's total jobs are located in these station areas.



**How Transit Station Areas Compare to the Urbanized**

## Where are we now?

With the opening of additional FasTracks corridors between 2016 and 2018 – the Gold, East, Northwest, and North Metro lines, along with the US Highway 36 Bus Rapid Transit Line – an additional 5 percent of the region’s jobs (bringing the total to 35 percent) will be within a half mile of high-capacity transit stations. There will continue to be a need to develop connections to stations both within the half mile and mile transit areas, and from adjacent neighborhoods, districts, and regions beyond the one mile area. Frequent bus service, and options to walk, bike, and carpool from these areas to stations will be essential to provide fuller mobility options that are more convenient and help to reduce household transportation costs. These transit corridors – both existing and new – provide an opportunity for communities throughout the growing and changing metropolitan areas to accommodate existing residents and newcomers to the region, and at the same time, develop more complete communities that are vibrant, healthy, and prosperous places for residents, workers, and visitors.

### **What is Affordable Housing?**

We live in an urban region with people at various stages of life and differing demands for housing types. Affordable housing is most commonly defined in terms of housing costs as a percentage of household income. Housing is considered unaffordable when a household’s monthly housing costs exceed a certain threshold – the most commonly used figure is 30 percent of gross income – thereby reducing the budget available for basic necessities and other amenities. In many instances, people seeking affordable housing includes two of the largest growing population sectors in our region: young people just entering the housing market, as well as senior citizens. However, these are not the only groups. Affordable housing supply must also meet the needs of households of all structures, sizes and generations.

### **Housing for All**

A successful sustainable community is one that has a stable mix of residents and workers at different income levels, living and working in or close to the community. Housing in such communities includes a variety of residential densities and types, both owner-occupied and rental homes. Every community requires workers at a variety of low- to middle-wage levels, including civil servants, educators, public safety professionals, and service industry employees, to thrive. Providing affordable housing options near jobsites and transit allows employers to be more successful in recruiting and retaining workers.

### **Workforce Housing**

This refers to housing that is affordable to families with at least one full-time worker that— given local housing market conditions — have difficulty affording market-rate prices.

### **Housing and Transportation**

Paying a mortgage or rent is only a portion of the overall cost of housing. It is also critical to consider insurance and taxes, repair and maintenance, and utility costs.

Transportation-related expenses for commuting to and from work, as well as travel to school and services are also important factors for determining the full costs of housing.

## Complete Communities as a Framework

The metro area's investment in FasTracks represents a significant change in how we get around. It also represents new opportunities for how we live and work. Each station area is unique with its own characteristics and features, and has unique opportunities for a mix of housing, jobs, and services. A mix of uses is both instrumental and key for making transit communities more complete. For transit communities to be successful, they need to be walkable and bikable. A full range of housing types and prices also makes station areas more complete.

All types of housing are needed near transit, whether directly adjacent to the station area, or within walking or connecting-bus service distance. Providing a full range of housing types does often require changes to comprehensive plans, subarea plans, and zoning regulations, as well as providing the necessary infrastructure.<sup>2</sup>

Station areas in industrial areas provide different challenges and opportunities. While industrial uses are not typically envisioned for transit communities, they often provide skilled and well-paid jobs. The focus in these settings should be on land use compatibility. With buffering, building and landscape designs, and other methods, these uses can be integrated into the transit community. However, incorporating various types of jobs and commercial uses with different building and land needs in transit station areas requires research, planning, and innovative urban design.

To further complete station areas, those areas can serve as focal points for the arts, civic activity, commerce, and recreation, including museums, music venues, libraries, and parks.

Public agencies serving residents and businesses are also appropriate in station areas, including workforce training and opportunity agencies, health and human services, schools, and city offices.

Each corridor has the potential to develop into a chain of communities that provide housing, employment, shopping, dining, entertainment, and health care opportunities for households at each stage of their life and with a wide range of incomes. But to capture this opportunity, it is necessary to have a strategy backed up by a detailed action plan. Establishing complete communities requires

### Complete Transportation

Complete transportation refers to a built environment in which residents, workers, and visitors have choices for how they travel and get around. This includes safe and convenient options for pedestrians, bicyclists, persons in wheel chairs, and transit riders of all ages and abilities. Streets, walkways, transit-facilities, and bicycle paths are designed and operated in a manner that improves mobility by avoiding expensive expansions, encouraging physical activity, and creating more vibrant communities for all.

### One Third of Population Does Not Drive

The Federal Transit Administration has estimated that nearly one-third of the country's population does not drive a car. Estimates for the Denver region are similar – meaning that with a population of 3 million residents, more than 1 million people in the metro area do not drive. Included in this estimate are people with disabilities, seniors who no longer have licenses, children under the driving age, lower-income individuals and families who cannot afford an automobile, and those who chose not to drive. For these citizens, transit and alternatives to driving, are particularly important.

<sup>2</sup> Making it easier for multifamily owner-occupied housing in metro Denver transit communities is also key, something currently difficult to develop due to current state law related to construction defects. Addressing this barrier and others will help to ensure that station areas are developed with a range of housing types for individuals and families at all income levels and with diverse preferences in homes.

advanced coordination over a long period of time among a range of partners in the public, private and nonprofit sectors.

## **Complete Communities as Healthy Communities**

How we live and how we get around are inextricably linked to our health and well-being. This is true for transit communities as well. Over the last decade we have more and more information on how our built environment and the ways in which we travel affect our health. There is a growing body of research linking the obesity epidemic in part to how our communities are built, as well as access (or lack of access) to nutritious foods. Several studies link environments that are less conducive to walking to certain chronic illnesses that can shorten life. More and more communities are advancing a mix of land uses, better connected by sidewalks and bicycle facilities and transit to provide options for increased walking and physical activity.

## **Characteristics of Complete Communities**

To advance the development of vibrant and healthy transit communities along the FasTracks corridors, an integrated set of characteristics were identified to guide planning and decision-making. These characteristics describe development objectives to ensure (a) that a sufficient number and diversity of housing units are being built where needed, (b) amenities and infrastructure are in place where they are needed the most, and (c) resources are being leveraged to advance mixed-use development and vibrant employment opportunities in and around transit stations.

**Housing** – Preserve, improve, and expand the housing stock in FasTracks corridors, especially in and around station areas, to provide a range of affordable and healthy housing choices to every individual and family.

**Mobility and Accessibility** – Continue to develop a safe, integrated, and highly efficient multimodal transportation system that supports development in and around station areas, is less polluting, and promotes economic vitality.

**Economy** – Support business and job creation, investing in all people, by creating complete communities at station areas.

**Land Use** – Focus growth into centers and station areas to create walkable and transit oriented communities that maintain and create locally inspired community character. Identify opportunities and challenges for infill and redevelopment.

**Environment** – Protect and restore natural systems, improving water quality and reducing air pollutants. Consider the impacts of land use, development patterns, resource intensiveness (including energy), and transportation on the ecosystem.

**Other Services** – Support development at station areas with adequate public facilities and services in a coordinated, efficient, and cost-effective manner.

These characteristics for complete communities inform aspects of the research conducted for this report. They also inform the recommendations advanced in the report, along with implementation actions, and measures for monitoring implementation and performance.



## **Housing for All**

### **The Metro Area's Housing Gap**

Information from local sources, including Piton Foundation and Metro Homebuilders, states that the metro area currently has a shortage of 58,000 affordable housing units. And indications are that this figure will continue to grow. The shortfall especially impacts working families with more modest incomes and a large percentage of senior households.

A share of this demand is coming from new entrants into the housing market, existing residents as they move through life stages – from teen to young adult, to family, and to senior—and from newcomers to the region. In addition, demographic composition of households is changing. According to national research in housing trends by 2035, more people will be living in single-person dwelling units, and there will be more seniors, start-up households, and single-parent homes. Together, these four groups will outnumber traditional family households, i.e., the home with two adults plus children.

### **Housing at Transit Stations**

By the year 2040, one million new residents are expected in metro Denver. How does the region best accommodate additional people and jobs, while maintaining the character of existing neighborhoods and communities, and providing housing that is attainable for all households? Homes near transit are key to meeting these housing needs.

## **The Economic Benefits of Transit Oriented Development**

Evolving areas around rail stations from automobile-oriented areas into more complete communities with a range of housing options, job opportunities, interesting retail and entertainment, and shops and services is a significant economic development opportunity. Coupled with the region's commitment through Metro Vision to focus population growth and a majority of new jobs in urban centers, the FasTracks station areas are well-positioned to be the focus of the region's 21<sup>st</sup> century economy. Leveraging development opportunities along transit lines needs to play a critical role in successfully accommodating this expected growth while enhancing quality of life or economic prosperity. The recommended policies, tools, and action steps in this report are focused on facilitating this type of development in transit communities.

## **Research Methodology: What We Did**

To understand the constraints and opportunities facing the region-wide transit system the following three 'levels' of analysis were conducted:

- 1) Transit zone evaluations for 46 existing FasTracks stations
- 2) Interviews with 65 stakeholders, and
- 3) Case studies for three other U.S. urban regions

These analytical efforts resulted in a substantial amount of data, from different sources, perspectives and at different scales. The task was to systematically summarize, compare, and interpret the findings from these data to provide insights on how the transit system in the Denver region is achieving housing,

accessibility, site development, and jobs and economic development<sup>3</sup> objectives that will move the region toward more *complete communities*.

The benefit of this data collection effort is that it provides support for findings, using multiple data-points that can be triangulated against one another to test for validity; and applied to different aspects of the development process. Subsequently, this data analysis and interpretation led to recommendations that are supported by ample evidence based on different types of analysis. In the interest of transparency all of the data used has been summarized in the extensive appendices to this report

### Transit Zone Evaluations

The transit zone evaluations were based on data collected on site visits to the transit zones – the half-mile radius surrounding a given station. Each transit zone was scored on the 24 different measures listed below. These measures relate to the four major themes: affordable housing, accessibility, jobs and economic development, and site development. (See Appendix A for detail on scoring methodology). For each of these scores a transit zone was identified as “performing,” “improving” or “needs improvement.” These categories are defined as follows:

- “Performing” means that the basic building blocks for a station area are in place.
- “Improving” means that some features for station area are in place, others are still needed.
- “Needs improvement” means that basic features for a station area are not yet in place.

### STATION EVALUATION CRITERIA

Platform & Immediate Station Area	Half –Mile Transit Zone
1. Way finding	9. Wayfinding
2. Parking utilization	10. Safety
3. Station design	11. Walkability / quality of walk
4. Infrastructure connectivity/barriers to station	12. Connection to buses
5. Safety	13. Major destinations / attractions
6. Quality of Access in terms of American with Disabilities Act requirements	14. Jobs & businesses
7. Bicycle infrastructure and amenities	15. Commute to work by mode of transit
8. Connection-to buses	16. Mixed or segregated uses
	17. Net residential (housing) density
	18. Housing affordability
	19. Public amenities
	20. Zoning
	21. Bicycle infrastructure
	22. Vibrancy
	23. Infrastructure Connectivity/barriers
	24. Sub-area plans for transit oriented development

<sup>3</sup> These four themes - housing, accessibility, site development, and jobs and economic development – are based on the overarching goals of the Denver Regional Council of Governments Sustainable Communities Initiative.

Scores were determined through on-site fieldwork and data analysis using multiple datasets. These station area and transit zone evaluations provided micro-level data on current development. The results of these evaluations are summarized along with the interviews in Part III: Findings.

### **Interviews**

The interviews with planners, officials, developers, and transit experts provided important data regarding the history of transit development in the region, perceptions on the impacts on the community, challenges and obstacles that need to be overcome, and areas where the region is doing well.

### **Case Studies**

Three case studies were conducted; Dallas, Portland (Oregon), and San Diego. The case studies provided broader context by which to assess and consider the degree to which there are unique conditions in metro Denver. The case studies had several objectives. First, the areas were assessed on their performance in terms of ridership and development near their stations. Second, they were studied for (1) best practices, as well as (2) challenges – and even failures. Third, they were used to inform the evaluation of development and operations of metro Denver station areas. Lastly, these findings were summarized to offer some of the supporting evidence for the recommendations in this report.

# PART II: CORRIDOR-by-CORRIDOR ANALYSIS

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## Introduction

This section provides information from both the corridor analysis and interviews. The information is arranged by corridors, starting with the oldest operating corridors, the Central and Southwest corridors, then the Southeast Corridor, and finally with the newest corridor, the West Corridor, which opened in 2013. At the end of the section, a summary is provided on outcomes and key findings. For each corridor, information is provided on each of the four themes: housing, accessibility, economic development, and site development.

### CENTRAL CORRIDOR, including PLATTE VALLEY SPUR

At the Broadway Station in south central Denver, the Southeast and Southwest corridors come together and follow a single alignment to the Auraria campus in downtown Denver, where two rail alignments separate again. One spur goes through the heart of downtown along California and Stout streets, and then continues north into the City’s historic Curtis Park and Five Points neighborhoods. The other spur heads into the central Platte River valley and terminates at Union Station. The Regional Transportation District refers to this segment of the system as the Central Corridor.

#### **Central Corridor Housing**

	Performing	Improving	Needs Improvement	Total
Number of Stations	0	5	9	14
Percent of Stations	0%	36%	64%	100%

While the Central Corridor scored highly in many categories, such as accessibility, this corridor does not currently score as well on housing affordability. While nine of the stations have subsidized rental units, the market rate rental stock is low in seven of the corridor stations. Rising construction costs have made housing in the area out-of-reach for households with low and moderate incomes. Interviewees identified various strategies for addressing this issue, such as strengthening the City and County of Denver’s affordable housing preservation ordinance. The City’s recently launched *3 by 5* initiative – three thousand new units each year for five years – was also noted as a positive action, but many question whether there is funding and capacity to meet the goal. Support from nonprofit organizations, the private sector, citizens, development professionals, and other public agencies at each level of government will be necessary to achieve the initiative’s goal.

Another important constraint identified by stakeholders in this area is the limited pool of 9 percent Low Income Housing Tax Credits (LIHTC), making this source of funds extremely competitive. Because much is changing in Central Corridor station areas, there is concern that time will be lost waiting for increased tax credits and future affordable housing development will be even more challenging in a higher cost real estate environment.

The *transit oriented development* or TOD Fund, was initially started as a tool for the City and County of Denver in the Central and other rail corridors. It has expanded to include other parts of the metropolitan region providing another useful and necessary tool as it helps to acquire land at lower prices to use for future development. However, the fund stipulates that development must occur within five years of purchase of the land. While the reasoning for the five years is understood – given the limited amount of equity in the fund and the need for the lender to be taken-out in a reasonable amount of time – several stakeholders pointed to the time requirement as inhibiting earlier acquisition. The more appropriate time period is 10 years in advance of development for properties in areas considered to be more of a risk. A land acquisition fund that could hold land for longer than five years was suggested as a supplement to the current TOD Fund. The two funds could work together to create a longer term strategy and pipeline of land for development.

### **Central Corridor Accessibility**

	Performing	Improving	Needs Improvement	Total
Number of Stations	6	6	2	14
Percent of Stations	43%	43%	14%	100%

The Central Corridor stations were the highest scoring on accessibility of all of the corridors, with 43 percent scoring in the “performing” category. The stations in this corridor are characterized by a high degree of connectivity with other transit options, many pedestrian amenities, high pedestrian traffic, and street level commercial along most of the walks. That said, access to the Pepsi Center and Sports Authority stations require pedestrians to walk through unimproved intersections, parking lots, and along unimproved paths. This variation across station areas within this corridor demonstrates that multi-modal access to *all* stations must be assessed and addressed, regardless of the jurisdiction and/or context. To support these efforts, several interviewees pointed to the importance of creating and employing a series of metrics for prioritization of these improvements.

Though station areas in the Central Corridor consistently had good bus connectivity, interviewees identified the importance of first and last mile connections to ensure continued success. For example, several stakeholders pointed to the increased pedestrian activity and ridership at the 10<sup>th</sup> & Osage station as a success due to first and last mile connection solutions implemented in that station area.

### **Central Corridor Economic Development**

	Performing	Improving	Needs Improvement	Total
Number of Stations	2	8	4	14
Percent of Stations	14%	57%	29%	100%

Many of the station areas in the Central Corridor (57 percent) scored “moderate” on the economic development scale, largely due to the proximity and density of jobs in the transit zones. Some stakeholders feel that greater emphasis could be placed on providing job seekers access to employers and/or career development centers. Several stakeholders cautioned that the area would be better served if job creation were integrated into the planning process.

### **Central Corridor Site Development**

	Performing	Improving	Needs Improvement	Total
Number of Stations	7	4	3	14
Percent of Stations	50%	29%	21%	100%

The Central Corridor has the highest performing stations with respect to site development. Seven of the eight well-performing stations (in the region) are in the Central Corridor, and this corridor has the fewest in need of substantial improvement. Still, interviewees noted the planning process, and subsequent plans, could be more comprehensive in their scope.

Another area that stakeholders identified as underemphasized in site plans was child care. Linking this community service to station area and site development is important for ridership, accessibility to jobs, and time and cost savings for parents. The Mariposa child care facility at the Osage station area is an exception and uniquely supported through free rent from a nonprofit provider. The importance of childcare in station areas that are supported through public or nonprofit sources was also substantiated in the San Diego case study.

Finally, interviewees in this corridor emphasized the importance of *early* planning to current success. Having a plan in place creates a template for development and signals to developers what the jurisdiction desires, and where. Having a plan in place *early* means that communities can identify designs that will facilitate transit usage before the station is completed. A number of interviewees noted that the Regional Transportation District’s rail alignment and station planning took place before local jurisdictions began their subarea plans for stations. They shared that it is hard to go back and retrofit areas without advance planning.

## **SOUTHWEST CORRIDOR**

### **Southwest Corridor Housing**

	Performing	Improving	Needs Improvement	Total
Number of Stations	1	3	4	8
Percent of Stations	13%	37%	50%	100%

Along the Southwest Corridor there is one station that is currently performing higher than the others for housing. Several interviewees reported that the affordability largely results from the presence of market rate affordable housing – housing that is often older, smaller, and often in need of maintenance. For example, most of the housing stock in Englewood is mid-century housing and has not been renovated. Until recently the City offered a no interest, silent second mortgage housing rehabilitation loan program. The program was supported with the City’s Community Development Block Grant from the county, approximately \$250,000 annually. Operating the loan program in-house allowed the City to avoid bank processing fees. Resuming the program could be key to upgrading market rate housing in need of repair or updating without adding substantial costs.

Additionally, technical assistance to jurisdictions through best practices, data, and toolkits could help jurisdictions attract and enable development. There is also a need for an affordable housing messaging campaign that expands the current understanding of affordable housing: what it is, who needs it, and the positive impact it has on the local and regional economy.

**Southwest Corridor Accessibility**

	Performing	Improving	Needs Improvement	Total
Number of Stations	0	6	2	8
Percent of Stations	0%	75%	25%	100%

On accessibility, the majority of Southwest Corridor stations (75 percent) are in the “improving” category. The orientation of the light rail line along Interstate I-25, as well as heavy freight rail lines, creates significant physical barriers in these station areas.

Creating “first and last mile connections” is important, also, for increasing transit ridership in this corridor. First and last mile connections refers to mobility and accessibility improvements for transportation infrastructure that makes it easier to walk, bike, or use local transit to get to rail stations. Several interviewees pointed to the importance of improving these connections. An example of a good multi-modal connector in this corridor is the City of Englewood’s ART shuttle. This is a shuttle that runs with 15 minute headways from 6:30 a.m. to 6:30 p.m., and links Englewood station to the Broadway business district, and several hospitals. ART was originally funded with a combination of federal Congestion Mitigation and Air Quality (CMAQ) funds, City, and Regional Transportation District (RTD) funds (80 percent CMAQ, 10 percent Englewood, 10 percent RTD), and is now majority funded by RTD (80 percent RTD, 20 percent Englewood). The ART provides first/last mile connection and offers a transit link to major employment centers in, and just beyond, the transit zone.

**Southwest Corridor Economic Development**

	Performing	Improving	Needs Improvement	Total
Number of Stations	2	6	0	8
Percent of Stations	25%	75%	0%	100%

For the economic development evaluation, two of the eight Southwest corridor stations performed well, while the other six were in the moderate or improving category, signifying a moderate range of jobs, services and amenities at these stations.

One way to begin to address development opportunities is to monitor and evaluate data more strategically, including information on job seekers (including their transit dependence and job search region), employers, skill level and wage levels of jobs. Identification of these gaps coupled with needed land for commercial and industrial space, could help to focus transit connections and economic development practices. Some of these data are already being collected by workforce centers, economic development organizations, and/or jurisdictions, but collected data needs to be paired with transit agency plans for bus and rail operations and jurisdictions’ plans for zoning densities, uses, public facilities, and infrastructure investments.

**Southwest Corridor Site Development**

	Performing	Improving	Needs Improvement	Total
Number of Stations	0	6	2	8
Percent of Stations	0%	75%	25%	100%

In the Southwest Corridor, six of the eight stations received an “improving” score for site development and two were identified as “needs improvement.” The corridor has some positive examples of planning and collaboration. For example, at the Alameda station, the developer, D4 Urban, has partnered with the City and County of Denver, the Regional Transportation District, and the Denver Urban Renewal Authority to:

- 1) Prepare the site (bus circulation, and reintroduction of the street grid) and its infrastructure (storm water, pedestrian and bicycling infrastructure, and amenities),
- 2) Marshal public and private funding, and
- 3) Craft a development plan to convert the station to an employment district.

This example of public-private partnership was identified by several interviewees as a model for the region. The partnership was created through a request for proposals by the City and County of Denver that specified high performing transit oriented development according to the City’s principles in its transit oriented development overlay zone. Other examples along this corridor include the City of Englewood and the City of Sheridan, who are jointly undertaking a station area planning effort for Oxford-City of Sheridan. The City of Littleton provides an example of zoning’s potential for realization of transit oriented development goals. The City recently streamlined and refined the regulatory requirements for transit oriented development.

**SOUTHEAST CORRIDOR**

**Southwest Corridor Housing**

	Performing	Improving	Needs Improvement	Total
Number of Stations	1	1	11	13
Percent of Stations	8%	8%	84%	100%

The Southeast Corridor has one station that is performing and one station that is improving with regard to housing. The remaining stations fall in the “needs improvement” category.

Funding was identified as a barrier to affordable housing development; in particular tied to the low income housing tax credit. Another issue is that the housing stock may be characterized by housing that is “affordable” in terms of their cost; however, the prices reflect a more modest product. Given the concentration of jobs at many of the stations along this line, addressing housing development in the Southeast Corridor is a key issue.



### ***Southeast Corridor Accessibility***

	<b>Performing</b>	<b>Improving</b>	<b>Needs Improvement</b>	<b>Total</b>
Number of Stations	1	7	5	13
Percent of Stations	8%	54%	38%	100%

One station area in this corridor scores at the “performing” level, while five are in the “needs improvement” category. Generally speaking, the closer-in stations along the corridor (e.g., University of Denver) are characterized by higher street connectivity (with more regular grid patterns), while the stations further out (e.g., County Line) generally are less connected (with more dead ends and cul-de-sacs). Further, some stations have significant barriers from highways and large lot land uses that create connectivity issues, even when households are in close proximity to the station. Other accessibility challenges included non-contiguous sidewalks, poor lighting, and sizable surface parking lots.

As it relates to other modes of transit, most stations along the Southeast line had bicycling infrastructure at the station platform, but lacked bicycling infrastructure connecting into the station area (e.g., Colorado, Yale, and Nine Mile). Denver South Economic Development Partnership is planning to create a sub-regional bike and trail system that would connect to the areas parks and open spaces and to other regional trail systems.

Finally, interviewees acknowledged that multiple efforts would be needed to resolve the first and last mile connectivity issues. One of these efforts, which is receiving a lot of attention in the Denver region, is the Lone Tree Link. This service is funded through a public-private collaborative between Charles Schwab & Co., Inc., Kaiser Permanente, ParkRidge Corporate Center, Sky Ridge Medical Center, the City of Lone Tree, and the Denver South Transportation Management Association. This service provides a free, ten minute headway, shuttle service between the Lincoln station and the primary employers (Sky Ridge Medical Center, Schwab, and Kaiser) and secondary employers (Park Meadows Mall) within and adjacent to the transit zone.

### ***Southeast Corridor Economic Development***

	<b>Performing</b>	<b>Improving</b>	<b>Needs Improvement</b>	<b>Total</b>
Number of Stations	1	6	6	13
Percent of Stations	8%	46%	46%	100%

Several interviewees suggested that local transit connections are needed to connect households to living wage jobs. Attracting career training centers to the transit zones could also help increase resident wages. Despite these challenges there are important examples of economic development efforts. For example, over the past five years, the Southeast Public Improvement Metropolitan District has invested more than \$7 million for economic development, which includes transportation and accessibility improvements. The transportation management agency (TMA) also does extensive outreach to employees in the area; they provide one-on-one transit coaching and information (including fares) and conduct surveys to better understand employee commute challenges. The funding capacity for this effort is generated through a metropolitan district with taxing authority (a 2 mil levy against commercial

and retail property within its defined boundaries). This dedicated funding source could serve as a model for the region.

***Southeast Corridor Site Development***

	Performing	Improving	Needs Improvement	Total
Number of Stations	1	8	4	13
Percent of Stations	8%	61%	31%	100%

With respect to site development issues, eight stations in the corridor received a medium score of “improving”, four stations received a low score of “needs improvement” and only one station is performing. Lincoln and Perry stations are examples of the station areas receiving lower scores due to factors such as low density, segregated uses and zoning, challenging station design, and limited access to attractions and amenities.

As with other corridors, stakeholders in this corridor identified the benefits of creating station area plans *early*. Early planning would help foster the alignment with the Regional Transportation District’s station design and development, help establish clear expectations and desires to developers, and identify jurisdictional needs.

**WEST CORRIDOR**

***West Corridor Housing***

	Performing	Improving	Needs Improvement	Total
Number of Stations	0	4	7	11
Percent of Stations	0%	36%	64%	100%

The West Corridor has 7 of its 11 transit zones categorized as “needs improvement” for affordable housing. As the most recently opened light rail line, it will be important to monitor changes in housing prices in this area and take action to maintain affordability. The high share of households paying more than 30 percent of their incomes for housing may indicate housing prices are beginning to rise. It may also be due to lower incomes, or a combination of the two.

A key issue to arise, particularly in this corridor, was the state’s *construction defects law*. Many interviewees suggested that this law was inhibiting homeownership and the diversification of housing products along the corridor, and more broadly, in the region. Another interviewee identified a link between the defects law and the shortage of affordable housing issue stating tenants who could and would otherwise purchase an entry-level home, such as a condominium or attached single family residence, are staying in affordable housing units longer due to a lack of supply. The converse is also true; seniors in single family homes might be more willing to sell and move to a smaller attached unit if there were more ownership opportunities available.

### West Corridor Accessibility

	Performing	Improving	Needs Improvement	Total
Number of Stations	1	4	4	9
Percent of Stations	11%	45%	44%	100%

Along the West Corridor, nearly all stations (8 out of 9) are in the categories of “improving” or “needs improvement.” Those in the improving category scored well on quality of walk and disability amenities. Stations such as Knox have excellent bike lanes and pedestrian paths directly near the station, but completely lack sidewalks on several streets within the transit zone. Pedestrians are forced to walk in the street on several routes, causing these stations to lose disability access and walkability points.

Although many of the stations along this corridor have bus connections, many of these buses run infrequently or by demand (“call-n-ride”). Among the several stations along the West Corridor that did have bus connections, bus schedules were reduced to every hour on weekends and at non-peak hours.

A particular concern along this corridor is the current oversupply and underutilization of parking.

### PARKING PROVIDED – BY STATION

Station	Parking Type (Garage, Surface)	Number of Spaces	Utilization Rate (percent)
<i>Decatur-Federal</i>	Surface	1,900	4%
<i>Knox</i>	n.a.	n.a.	n.a.
<i>Perry</i>	n.a.	n.a.	n.a.
<i>Sheridan</i>	Garage	800	11%
<i>Lamar</i>	n.a.	n.a.	n.a.
<i>Lakewood-Wadsworth</i>	Surface	1,000	30.2%
<i>Garrison</i>	n.a.	n.a.	n.a.
<i>Oak</i>	Surface	200	57%
<i>Federal Center, Lakewood</i>	Surface	1,000	58%
<i>Red Rocks College</i>	n.a.	n.a.	n.a.
<i>Jefferson County</i>	Surface	705	22%

#### Provided parking and its utilization rate, by station area

Interviewees advocated for post light rail completion analyses of parking utilization at stations and pedestrian connectivity. Jurisdictions generally planned for pedestrian and bicycling infrastructure, but because of the lack of funds, relied on new development to provide it. This approach, however, was observed in transit zone evaluations to limit pedestrian connectivity within the transit zone, and also limit connectivity to trip generators outside of the quarter mile zone.

### ***West Corridor Economic Development***

	Performing	Improving	Needs Improvement	Total
Number of Stations	4	4	3	11
Percent of Stations	36%	37%	27%	100%

More than one-third of West Corridor stations performed well overall, signifying a range and availability of jobs and level of services and amenities at these stations. Additionally, nearly 40 percent of West stations received moderate scores. Given the recent introduction of the light rail line in the region, the expectation is that these positive indicators will persist. Indeed a number of interviewees noted the development processes are just beginning in the corridor, but key actors have emerged to help facilitate positive economic development. For example, the West Line Corridor Collaborative (WLCC) was identified as important to the current and future success of the West Corridor. Given its mission of attracting investment and support for livable communities along the West Line Corridor through advocacy and collaboration, it could emerge as a factor in economic development. That said, the City of Lakewood has not been as focused on jobs and economic development around the stations because these areas are primarily located in residential neighborhoods. In contrast, The City and County of Denver has undertaken a number of economic studies and looked at some job creation that would result from light rail. The City of Golden is looking to revitalize an office and manufacturing area near the station, improve connectivity with neighborhoods and link to new downtown development.

### ***West Corridor Site Development***

	Performing	Improving	Needs Improvement	Total
Number of Stations	0	4	5	9
Percent of Stations	0%	44%	56%	100%

Some jurisdictions created plans specific to individual stations, reflecting each station’s strengths and weaknesses. Some station area plans use typologies, which are used to determine and prioritize the jurisdiction’s station area investments, such as pedestrian, streetscape, and/or bike infrastructure and improvements. Some station areas lacked specific subarea plans. In one case, an adopted plan was cited as providing the basis for city council members to approve an affordable housing project over the objections of residents. In another case, a station area plan was not in place and the planning department ended up advising a developer to scale back the density of a proposed development out of concern for resident resistance.

Some station areas require infrastructure improvements, from drainage to pedestrian and cycling facilities. Some infrastructure improvements, such as drainage, fall to jurisdictions to undertake. One interviewee posed the question about factoring in the costs of infill development.

## **OTHER FASTRACKS CORRIDORS: Commuter Rail and Bus Rapid Transit Corridors**

While outside the scope of this report, it is useful to briefly mention the other FasTracks rail and bus rapid transit corridors currently under construction by the Regional Transportation District, as well as aligned activities underway to fully leverage those investments. Many of the findings and recommendations from this study have applicability for transit oriented development along those alignments as well.

### **Gold Line**

A parallel research effort was conducted in 2014 on the Gold Line, a corridor currently under construction serving north Denver, southern Adams County, the City of Arvada, and the City of Wheat Ridge. While there were similar issues studied along this corridor, including housing, accessibility, and site assessment, special emphasis was placed on affordable housing and on identifying specific sites at each station area along the line for development opportunities. The product of this study is the *Gold Corridor Housing Strategy*. In addition to the research findings and conclusions, the Strategy includes a set of policies, with implementation actions and monitoring recommendations. The Strategy also includes the framework for a toolkit of practices and strategies to help achieve affordable housing at transit station areas. Copies of the *Gold Corridor Housing Strategy* are available through the Denver Regional Council of Governments.

### **Other Lines**

Four other rail lines are currently under construction as part of the FasTracks system – the East Line, the I-225 Line, the North Metro Line, and the Northwest Line – in addition to a freeway bus rapid transit line along U.S. Highway 36 (Denver to Boulder). These corridors were not included in this study and report. The East Line will primarily run through the City and County of Denver, with two stations near the Denver/Aurora city limits. It will connect Union Station in downtown Denver with Denver International Airport and is slated to open in 2016. The North Metro Line will connect Union Station with communities in Adams County, including Commerce City, Thornton, and Northglenn. There will also be a station in Denver's Elyria neighborhood near the National Western Stock Yards Complex. The Northwest Line will leave Union Station along the same alignment as the Gold Line and then split at Pecos Junction in south Adams County. From there it will extend to Westminster, which will be a temporary terminus station. The FasTracks plan calls for that alignment to extend into Boulder County, connect with the City of Boulder, and terminate in the City of Longmont.

## Summary of Findings

In this section, key findings from the corridor analysis above are summarized. The section is arranged by “current strengths” and “current challenges” Under each of those headings, findings are further organized around the themes: housing accessibility, jobs and economic development, and site development.

Summary of Performance – for Existing Stations			
Performing	Improving	Needs Improvement	Total
<b>Housing</b>			
2	13	31	46
4%	29%	67%	<b>100%</b>
<b>Accessibility</b>			
2	34	9	45
4%	76%	20%	<b>100%</b>
<b>Jobs and Economic Development</b>			
8	23	13	44
18%	52%	30%	<b>100%</b>
<b>Site Development</b>			
6	25	14	45
13%	56%	31%	<b>100%</b>

Note: Housing analysis was conducted for all 46 stations. For the other areas of analysis one or two stations along the West Line were not surveyed.

In general, the majority of station areas are categorized as showing “improvement” in efforts to become transit communities. Housing remains a significant challenge.

### Current Strengths

**Accessibility:** Based on station area walking tours (three were conducted at each station), within the half mile radius the average walk time was about nine to ten minutes. However, there were several stations with lengthy walking times, which greatly add to one’s commute time or deter use of transit for other trips. In all corridors there were some walking trip times longer than the nine minute average estimated time to walk a half-mile.

### Number of Minutes to Walk a Half-Mile to Transit

Corridor	Lowest	Highest	Average
Central	8	20	12
Southwest	8	21	11
Southeast	7	20	13
West	9	17	12

Source: Autumn 2014 Architecture and Planning Studio, University of Colorado-Denver

**Jobs and Economic Development:** As noted earlier, a high share of the region’s jobs and businesses are clustered in the half mile transit zones. This provides the opportunity for current employees and job seekers to access these jobs by transit. However, many households do not live near a rail station or adjacent to direct and frequent bus routes needed to initiate a transit trip. The last mile from the station to the business is also challenging.

#### Findings

- 30 percent of metro jobs are within half mile of 46 stations (corridor analysis)
- Metro Denver’s economy is strong now – timing is right to create new funding for station area initiatives (interview)

**Site Development:** Site development opportunities were evaluated based on eight factors related to station design, area zoning, uses and density, proximity to amenities and station area planning. Several stations performed well in all categories. Stations with detailed and prescriptive station area plans and mixed permitted uses and zoning are higher performers.

#### Findings

- Nearly 18 percent of the stations were rated “high”
- Transit oriented development – mixed-use developments are popular and in demand (interview)

### *Current Challenges*

**Housing:** Of the more than 35,000 residential units constructed in station areas since the late 1990s, approximately 1700 (five percent) have been affordable units. Two of the 46 station areas score in the “performing category,” and 13 are in the “needs improvement” category.

#### Findings

- Development is happening, but little to no affordable housing (corridor analysis)
- Affordable housing is under stress (interviews)
- There is a need for more diversified housing (corridor analysis and interviews)
- There is little funding for affordable housing from the State of Colorado (interviews)
- Some communities and their elected officials oppose affordable housing (interviews)

**Accessibility:** The quality of the walking environment varies greatly around stations and along corridors. The assessment tool used for this study resulted in 22 percent of the walking routes rated as “poor.” Key challenges include navigating vehicular traffic, safe routes, and barriers.

#### Findings

- Auto-centric land uses are the dominant pattern – therefore planning and zoning regulations need to actively guide transit oriented development and land uses (corridor analysis)
- Roads within and connecting station areas are not designed for all users (corridor analysis)
- Pedestrian and bicycle facilities funding is currently too little and too limited, given the magnitude of need (interviews)
- Other infrastructure is lacking at station areas (interviews)
- Connectivity to stations incomplete – complete first and last mile connections, complete the grid, complete sidewalks, and improve local bus connections (interview)

**Jobs and Economic Development:** By and large office uses and employment are further developed around stations than housing. There continues to be a great deal of capacity for even more job-related uses around station areas along all corridors.

#### Findings

- Job locations and housing locations are out-of-balance (both within corridors and region-wide) – that is, concentrations of housing are removed from employment locations, resulting in moderate or significant commutes (corridor analysis and interviews)
- Needed services are currently lacking in transit communities, such as child care, workforce centers, and bus connections (corridor analysis and interviews)
- The Regional Transportation District’s rates and fare structure is problematic for low income individuals and for attracting new riders (interviews)

**Site Development:** According to this evaluation, about half of the station areas were rated as having moderate opportunities for site development. About a third were rated “challenging.” A large share of the challenging station areas are along the West and Southeast corridors.

#### Findings

- Parking is not coordinated or managed in station areas (corridor analysis)
- Some station areas have been unprepared for or are hesitant about transit oriented development (interviews)
- There are too many centers designated in Metro Vision and there is a wide variety of center types; there is too little money to support their diverse needs; the focus should be on those centers with transit (interviews)



# PART III: CASE STUDIES – DALLAS, PORTLAND, SAN DIEGO

To complement the corridor assessments and interviews, the project team, in consultation with the Denver Regional Council of Governments (DRCOG), selected three comparison regions for case study analysis: Dallas, Portland (Oregon), and San Diego. The review of the data on each region’s transit system and service provided a base for additional research. Plans, policies, and supporting documentation were reviewed to identify commonalities and differences associated with transit oriented development at station areas and in transit corridors. These efforts were informed by and supported the project team’s corridor assessments and interviews. As such, the project team focused specific attention on the peer regions’ approaches to housing, accessibility, jobs and employment, and site development.

## Transit Service and Related Information in Denver and the Case Study Regions

Region	Transit Service Area	Transit Region Population	% of Households near Transit <sup>4</sup>	Annual Household Vehicle Miles Traveled	Transit Journey-to-Work Mode Share	Transit Oriented Development or Joint Development Policy in Place
Denver	both urban and rural	2,784,000	5%	17,000	4.7%	Yes
Dallas	a portion of overall urban area	6,437,000	3.25%	21,000	1.6%	Yes
Portland	urbanized area only	2,215,000	13.5%	18,000	6.3%	Yes
San Diego	urbanized area only	3,095,000	11%	17,000	3.7%	Yes

Note: “Transit” includes streetcar and commuter rail

Transit agencies self-report longitudinal data on ridership, number of passenger trips, total hours and miles of scheduled service by mode, and revenue and operating costs to the American Public Transportation Association. These data were used to further compare and contrast the Denver region with the three case study regions.

## Comparison Case Study Regions & Denver 2012 Annual Ridership by Light Rail & Bus

(Source: APTA)

Region	Light Rail	Bus
Denver	20,639,100	38,358,500
Dallas	27,653,900	38,378,900
Portland	42,227,700	59,509,200
San Diego	32,654,600	25,897,900

<sup>4</sup> Source: Reconnecting America, “Are We There Yet?”

The Portland region leads in both rail and bus ridership. San Diego has the second greatest rail transit ridership. Denver and Dallas serve roughly equal numbers of bus patrons, and Dallas had roughly seven million more rail riders. However, per capita, Denver has greater light rail and bus ridership than Dallas (Transit Journey-to-Work metric). Since Denver's transit service area includes outlying rural areas and has a greater amount of scheduled bus hours of service, it has the highest cost per trip compared to the other regions.

# Dallas

## Overview

The Dallas region provides a useful context against which to consider transit issues in Denver. Like Denver, the Dallas region faces significant growth pressures and its transit planning infrastructure is still somewhat new. Indeed, with some important exceptions, many of the planning ‘tools’ have only recently been formalized.

The transit system is operated by the Dallas Area Rapid Transit Authority (DART). The Authority operates the light rail system, commuter rail lines, buses and the high-occupancy vehicle (HOV) lanes in Dallas and its 12 suburbs. The light rail system consists of four lines over approximately 90 miles of tracks (Figure below). Between 2010 and 2012, the system saw an increase in ridership of over 80 percent. The system also has three commuter lines, one of which connects Dallas and Fort Worth. Finally, the Authority operates approximately 120 fixed-bus routes and several circular and shuttle routes.

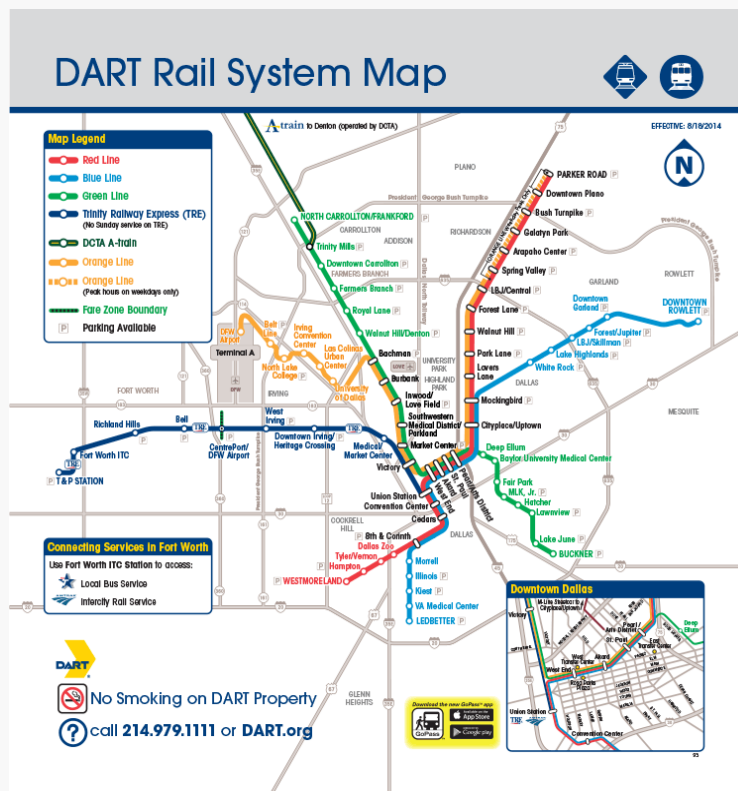


Figure: Dallas Area Rapid Transit Authority light rail map

(Source: <https://www.dart.org/maps/printrailmap.asp>)

While the North Central Texas Council of Governments – the metropolitan planning organization (MPO) for the region – is involved in transit (it has a regional transit council and offers some funding to support transit oriented developments) it is not nearly as influential as its counterparts in Portland and San Diego. Subsequently, a great deal of the planning around transit and development happens at the

local level through and with the transit authority's real estate development arm. The transit authority, then, plays an important role in educating and supporting transit oriented planning and development.

## Housing

Until recently, the type and mix of housing around transit in Dallas was, almost entirely, market driven.<sup>5</sup> More recently, however, there is a conscious effort to leverage transit development opportunities specifically to enhance the housing supply. The City of Dallas' Office of Economic Development published a study in 2008 that advocated for using transit oriented development to encourage a diversity of housing. In this housing study, an important distinction was made between 'market supplied' affordable housing versus "planned" affordable housing options. In this case, market supplied affordable housing refers to that part of the housing stock which was not originally intended as "affordable housing," but, over time, due to age and other factors, the housing stock has not appreciated at the same rate as the rest of the housing stock and subsequently is more "affordable." In contrast, "planned" affordable housing refers to those units that are deliberately developed with affordability in mind. Thus, the distinction is not about the agency involved in the development as much as the intentionality in the development process. The City's comprehensive plan, titled *forwardDallas!*, calls for:

- 1) Establishing design standards that promote a variety of quality of housing.
- 2) Encourage higher density housing within a quarter-mile of transit stations.
- 3) Use economic development incentives, such as tax increment financing to encourage mixed-use developments and mixed income housing developments near transit stations.
- 4) Encourage independent living retirement housing as a viable opportunity for housing within close proximity of transit stations.

## Accessibility

In 2008, the Dallas Area Rapid Transit Authority established a set of transit oriented development policies, as well as a set of design guidelines. Both the policies and the guidelines encourage connectivity between land-uses, and modes of transit. The issue of connectivity and accessibility is particularly fostered by the local level planning agencies. For example, supported by a U.S. Department of Housing and Urban Development Community Challenge Grant, Dallas has completed transit oriented development plans for five station areas based upon the principles of accessibility and connectivity. Similarly, other localities are adopting strategies to ensure transit oriented development improves access to transit more generally. For example, in historic downtown Plano, the Eastside Village transit oriented development plan guides development around the district's light rail station. The development was built around a parking garage that served commuters and residents, but it also involved several pedestrian improvements around downtown, including an off-street bike and pedestrian trail from two adjacent transit stations passing through downtown Plano. This station is also unique because it has been in the works for more than a decade, including several years before the transit was planned. The developer created a "transit-ready" development around the bus hub in anticipation of future light rail. This long-term planning, development, orientation and patient model has helped this area to invest in accessibility strategies that can take several years to fund, and implement.

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<sup>5</sup> Ohland, G (2004). The Dallas Case Study: Mockingbird Station and Addison Circle. In H. Dittmar and G. Ohland (eds). *The New Transit Town: Best Practices in Transit Oriented Development* (156-173). Washington, DC: Island Press.

## Jobs and Employment

In 2005, the Dallas Office of Economic Development released its economic development plan – “Strategic Engagement: Dallas’ Economic Development Plan.” Within this plan, transit oriented development is explicitly identified as an important part of the overall strategy. The City’s comprehensive plan frames much of the economic development objectives in terms of fostering a more equitable distribution of growth.

An example of this plan in action is the Southern Dallas Economic Growth Plan titled “GrowSouth.” More precisely, the mayor of Dallas, in an effort to revitalize the disenfranchised section of south Dallas, is advocating for transit oriented development efforts along the Lancaster Corridor to facilitate economic development along the stations in this part of the city. For example, the city has targeted – and supported with public funds and public private partnerships – the development of Lancaster Urban Village. This project consists of 193 housing units and 14,000 square feet of retail.

Recently, the transit authority commissioned a study by the University of North Texas to examine the degree to which transit oriented development has impacted the property values within a quarter mile of the transit rail stations. The study showed that, generally speaking, the value of property near transit stations was higher than those farther away.

## Site Development

As in many urban regions, the lack of integrated region level planning for transit oriented development leaves the planning responsibilities for station, corridor and system-wide transit communities to be handled the local level, with some support from the transit authority for real estate development. Given this context, two important things have emerged.

First, there are several communities – along with the Dallas Area Rapid Transit Authority – that have embraced the importance of planning for transit oriented development. That is, there is an explicit recognition that to capture the full value of transit oriented developments, the development must be well planned. And such planning is not likely to occur if left entirely to the market. The Authority does have a real estate division.

Second, public-private partnerships offer a unique opportunity to capture the strengths from both the private sector and the public sector to facilitate transit oriented development investments. For example, the Dallas region’s Mockingbird Station transit community (north of downtown Dallas) was developed with only limited public involvement. At the time of development, there were no official transit oriented development regulations. However, the site happened to be zoned for a mixed-use development, which allowed the developer to pursue a transit oriented development scenario. The outcome of this development is that the cities in the Dallas area are open to engaging the private sector when developing transit oriented development plans.

## Key Insights from Dallas

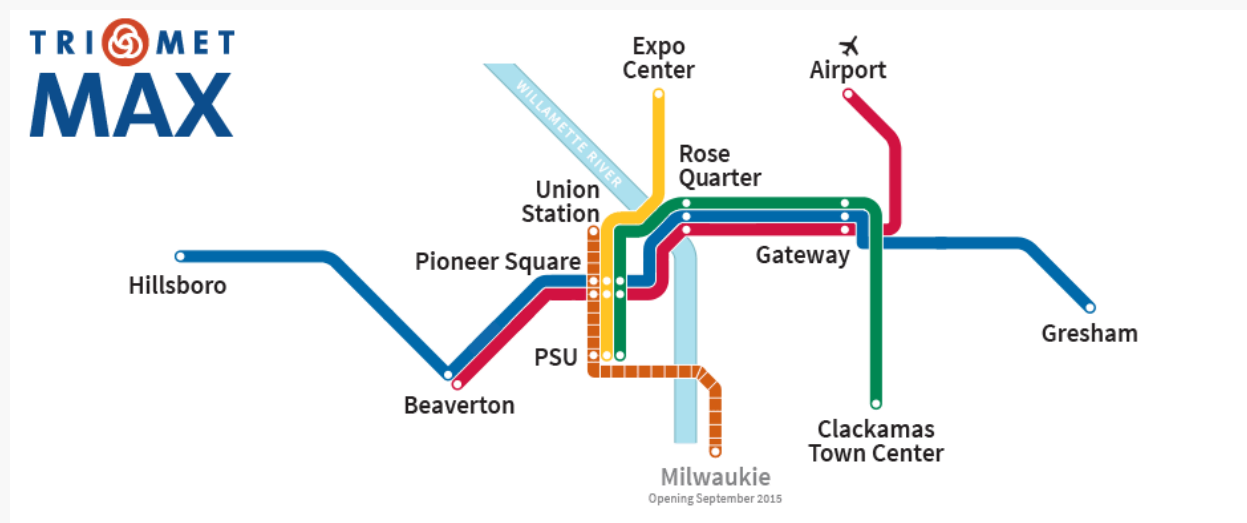
- 1) Public-private partnership among the transit authority, developers, and nonprofit organizations is an effective tool for the realization of transit oriented development objectives.
- 2) Education and outreach help to provide information to elected officials, developers, and the public about the benefits of transit oriented development.
- 3) Regional plans emphasize the importance of connecting centers.
- 4) Streamlining/expediting the development review process for developments that achieve adopted policies and objectives

## Portland, Oregon

### Overview

The Portland region is regarded as one of the national leaders with respect to urban planning, particularly as it relates to transit issues. The region has undertaken several transportation and transit oriented planning efforts that can offer important insights for the Denver region.

The transit system is operated by the Tri-County Metropolitan Transportation District of Oregon (TriMet). It serves the three counties of Multnomah, Clackamas, and Washington and operates (1) the light rail system, (2) the region's bus system, and (3) service for the transportation dependent (paratransit). The light rail system consists of four light rail lines (with a total of 87 stations and more than 52 miles of track, with 127 light rail vehicles). The completion of the Orange Line will add an additional seven miles and ten stations to the system. Regarding bus service, TriMet operates 79 bus routes, with 17 bus transit centers served by multiple bus routes. Eleven of these transit centers are also connected to the light rail system. TriMet also operates more than 200 paratransit vehicles.



**Figure: TriMet simplified light rail map**

(Source: <http://trimet.org/max/index.htm>)

TriMet, the region's transit authority, and Metro, the regional government and metropolitan planning organization, have a transit oriented development program that provides developers with financial incentives to create higher-density, mixed-use projects served by transit. This program supports Metro's 2040 Growth Concept that is based around walkable neighborhoods and station areas linked by transit.

The Portland region case study is notable because of the role of 'third party' collaborative arrangements that support transit and planning in the region. For example, 1000 Friends of Oregon is a non-profit organization formed in 1975 that works "to enhance (the) quality of life by building livable urban and rural communities, protecting family farms and forests, and conserving natural areas." This organization has been cited as being instrumental to the creation and maintenance of regional and local land use policies by acting "as a counterweight to the interests of private business"

(Bianco and Adler, 2001).<sup>6</sup> In 2010, 1000 Friends aided in the passage of Senate Bill 1059, *An Act Relating to Greenhouse Gas Emissions*, which seeks to limit greenhouse emissions through integrated comprehensive planning efforts that linked transportation and land use policies.

## Housing

The Portland region is somewhat constrained in the ways in which it can support the development of affordable housing. In particular, in 1999, the state passed an inclusionary zoning ban that prohibits mandates requiring that affordable housing be incorporated into development projects. Subsequently, the region has adopted incentive programs to encourage such development. For example, the City of Portland, had previously initiated a new transit-supportive residential or mixed-use development tax exemption program in 1996. This program provides an incentive for the construction of higher density, mixed-income housing near transit. Another, more recent example is the adoption by the Portland Development Commission of tax increment financing “set-aside rules” for affordable housing (February 2007). These rules required that 30 percent of tax increment financing proceeds be set aside for affordable housing development within the associated urban renewal area. These funds are used to incentivize or provide gap funding to developers to create housing affordable to those earning 80 percent or less of the region’s area median income. At the state level, Oregon’s Department of Housing and Community Services administers various grant programs that support the development of affordable rental housing throughout the state. For example, the Housing Development Grant Program (“Trust Fund”) provides support to cities, counties, housing authorities, and non-profits, to develop or rehabilitate existing structures for affordable housing. Finally, Metro (the regional authority for the Portland Metropolitan Area) offers different grants that incentivize and support the development of affordable housing. In particular, they offer a transit oriented development grant program which explicitly supports development around transit that also offers new affordable housing units.

## Accessibility

A defining characteristic of metropolitan Portland’s planning efforts is its focus on connectivity between land-uses and transit. For example, in 1995, the Oregon Department of Transportation developed a *Bike and Pedestrian Plan* provision to be included in all road construction and/or reconstruction. More recently, as part of its 2014 Transportation Plan, the Department explicitly outlined the importance of the connecting “conventional transit” (trains and buses) to “active” modes of transportation (biking and walking). This provision encourages the urban design of spaces to encourage, among other things, housing and commercial development near transit. The connection of different modes of transit, was, at least in part, based upon their 2011 *Oregon Household Active Transportation Survey*. This report identified that (1) 85 percent of the Portland region’s transit trips start as a bike or walk trip, (2) 45 percent of all trips in the region are three miles or less, and (3) active transportation trips increase as the infrastructure that supports them (sidewalks and bike lanes) increase.

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<sup>6</sup> Bianco M.J. and Adler S. (2001). The Politics of Implementation. *The Journal of Planning Education and Research*. 21(1) pgs. 5 -16

## Jobs and Employment

Greater Portland, Inc. is a public-private regional partnership focused on economic and job development at the regional scale. Its objective is to recruit and retain employers in seven counties in the region. It has developed a regional recruitment and marketing program to that end.

Beyond its collaborative nature, economic development activities in the region are comprehensive in their scope. For example, the economic development efforts of the City of Portland's Development Commission are focused on (1) the trade sector and its clusters, and (2) small business capacity building, with specific focus on areas lacking business associations and/or facing issues of inequity.

## Site Development

As noted above, a defining characteristic of the Portland area is the fact that it plans under a state growth management framework. Subsequently, local planning and regional planning are both required under state law. As early as 1995, Metro adopted the *2040 Growth Concept*, which guides the intensity and character of development for areas of its region, such as the central city (Portland), and regional centers (for example, Gateway and Beaverton). The regional plan also defined station area communities. These communities are transit oriented, accessible to pedestrians, bicyclists, and automobiles, and include retail and services. More recently, Metro developed the *Transit oriented Development Strategic Plan* (2011) to assess and create action plans that address transit oriented development at stations outside of Portland and the need for affordable housing in transit communities. Additionally, the plan established metrics to evaluate transit corridor conditions and readiness for transit oriented development projects based on people, places, physical form, performance, and pedestrian/bike connectivity. This assessment is then used by Metro to target project approval and funding.

## Key Insights from Portland

- 1) Collaboration across the region – and across sectors – will help facilitate regional development objectives.
- 2) Third-party organizations – non-profit entities – are critical for supporting transit oriented development objectives, in part through advocacy that encourages supportive legislation
- 3) Affordable housing objectives should be facilitated at the regional level.
- 4) Regional financing tools can support the development community in its efforts to develop affordable housing.
- 5) Accessibility is improved with active transportation infrastructure that is integrated into plans for surface and public transport.



# San Diego

## Overview

The San Diego region has both similarities to and distinctions from the Denver area in several ways. The San Diego area has a larger population and its transit system predates Denver's. San Diego has more households near transit, and has a higher ridership per capita. Moreover, California has state policies in place that advance transit oriented development. Despite a larger population, San Diego's transit system size is similar in size to Denver's current system with four lines, 53 stations and 103 miles of track.

The transit system is operated by the San Diego Metropolitan Transit System (MTS). The System operates the light rail system, the bus system, and paratransit. The bus system includes three bus rapid transit routes, commuter and express bus service, as well as local routes. The System also supports paratransit services throughout the service area that provides point-to-point service upon request to passengers that qualify for assistance.



Figure: San Diego Metropolitan Transit System trolley map

(Source: <http://www.sdmts.com/Trolley/Trolley.asp>)

The Metropolitan Transit System serves approximately 3-million people over a 570 square mile urbanized area of San Diego County. The System is funded through several sources including: funds from the Federal Transit Administration, a half cent local sales tax, and fare box recovery (approximately 40 percent of annual operating costs).

While the Metropolitan Transit System is the lead agency for the day-to-day management and operation of the system, the associated planning and development issues are governed by multiple agencies. The metropolitan planning organization, the San Diego Association of Governments (SANDAG), includes all the municipal and county governments in the region and has advisory representatives from several other stakeholder entities, including from the Metropolitan Transit System. The Association is responsible for creating regional plans, distributing transportation funding and other resources, and for providing planning data and analysis. The Association developed the 1998 *Regional Planning and Growth Control Measure*. This measure identified opportunities for increased development in “transit focus areas” and called for nearly all growth in the region to occur within one half mile of transit stations. It recommended changes to land use and density that would bring the highest density development within walking distance of transit stations and along bus corridors, while encouraging mixed use, compact development in transit station areas.

## Housing

Discussions with San Diego area planners and stakeholders suggest that most believe that transit oriented development in the region has been successful in achieving its goals for housing, relative to other transit-related objectives. For example, transit oriented development is thought to be particularly successful at improving housing choices and neighborhood quality.

At the regional level, the San Diego Association of Governments has been active in promoting strategies to increase the supply of, and ensure access to, a variety of housing choices for all residents of the region. One example of their efforts, relevant to the recent issues in Colorado involves the construction defect laws. Notably, in 2001, the Association took the lead in researching and working with stakeholders to better understand to what degree, and in which ways the construction defect law was impeding the development of housing. Another example includes their adoption of the *Regional Housing Needs Assessment Plan* (2011). This plan allocates the total number of housing units by income category – very low, low, moderate, and above moderate – that the 18 cities and county will need to plan for in their 2013 – 2020 comprehensive plan housing elements.

Another organization that has supported housing in the City of San Diego is the San Diego Housing Commission (SDHC). The mission of the Commission is to preserve and increase affordable housing in the City of San Diego. Among its various efforts, the Commission recently developed a work plan (2011) to facilitate transit oriented affordable housing developments for workforce families and seniors.

## Accessibility

The San Diego region is very aware that the success of transit development is related to the degree to which the system is accessible. In 2002, the San Diego Association of Governments published *Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region*. These guidelines explicitly address accessibility, particularly as it relates to street design standards. It calls for developing policies in local jurisdictions (with the assistance of the Association) to support access to public transit via mixed land uses, network connectivity, bicycle facilities, improved streetscapes and street crossings. Additionally, *Mobility 2030* – the Association’s regional transportation plan (2003) – calls for:

- 1) Measuring certain benchmarks with regard to transit oriented development, including “homes within half a mile of transit stop” and “jobs within half a mile of transit stop,”

- 2) Local jurisdictions to establish neighborhood centers around transit stations that mix retail, office, and residential to “improve livability” and maximize the number of potential transit users, and
- 3) More bicycle- and pedestrian-friendly communities, especially around transit stations.

## Jobs and Employment

Economic development, particularly as it relates to marginalized groups, is a key objective within *Mobility 2030*. The plan advances strategies to ensure that transit development takes place in such a way as to enhance access to jobs. The plan also sets forth metrics to help monitor equity variables by comparing low-income and non-low-income populations, as well as minority and non-minority populations, in terms of average general travel times to employment.

## Site Development

Beyond the efforts of the San Diego Association of Governments, the San Diego Metropolitan Transit System and the City of San Diego have published a series of transit oriented development design guidelines. The guidelines have been used to: (1) support parking reductions in mixed use projects, (2) define the city’s Urban Village Overlay Zone, and (3) establish small-lot residential areas. A key outgrowth of these guidelines is the recognition that, to support different housing options, these ‘urban villages’ require a mix of amenities. To support this objective, the City offers various incentives. For example, the City provides density bonuses to developers of transit oriented projects, if they offer child-care centers near light rail stations. In its zoning code, the City of San Diego offers an expedited permit process for developments – including transit oriented developments – that include urban affordable housing developments of 10 units or more. Additionally, the City has worked with developers to streamline the Environmental Impact Reviews on neighborhood scale plans.

San Diego area agencies have also proactively examined areas for infill and redevelopment opportunities. For example, the Metropolitan Transit System owns property in at least 15-20 station areas and has rated each in a matrix in terms of its potential for joint development. The Metropolitan Transit System has decided to focus on siting new stations so as to capitalize on private sector investment already planned or underway.

San Diego Association of Governments has developed a matrix that establishes thresholds for transportation and land-use that should exist in different “growth areas,” including: (1) metropolitan center, (2) urban center, (3) town center, (4) community center, (5) special use center, (6) transit corridor, and (7) rural community. These designations establish a basis for identifying specific areas where existing or planned development could occur. More precisely, the 200 or so areas are placed on a map – the *Smart Growth Concept Map* – that serves as a planning tool but also as a foundation for showing eligible locations for smart growth incentive projects for developers.

## Key Insights from San Diego

- 1) A strong regional presence will support local transit oriented development efforts (e.g., collecting, analyzing and sharing standardized data, and supporting it with funding).
- 2) Real-estate acquisition – or coordinating among agencies for acquisition – will help foster transit oriented development objectives.
- 3) Need to take concrete actions to provide amenities at transit oriented development locations that can support equity objectives, such as through provision of space or funding for child care facilities.
- 4) Streamlining/expediting the development review process for developments that achieve transit oriented development objectives.
- 5) Establish a regulatory framework at the local jurisdiction that fosters and encourages transit oriented development.

## Summary of Findings

In this section, key findings from the case studies are presented. The previous section highlighted strengths and challenges after each case was presented. Below the findings are organized by key issues that cut-across the different case studies and themes.

**Collaboration, particularly between the public and private sector, was highlighted in each of the three cases.**

### Findings

- In the Dallas region, the lack of strong regional planning has increased responsibility of local jurisdictions, with respect to transit oriented development planning. Public-private partnerships have come to characterize these local planning efforts.
- In the Portland region, the 1000 Friends of Oregon have been critical to facilitating collaborations for land-use and transportation issues at a regional level.
- In San Diego, strong connections between the cities, county, MPO and transit district has resulted in smart growth planning and funding that targets station areas.

**Successful transit oriented development is based on the leveraging and integration of multiple types of land-uses and planning processes. Subsequently, planning efforts must embrace this type of integration.**

### Findings

- Urban design can serve as a framework for an integrated systems approach to planning transit communities.
- Housing, housing affordability, and equity need to be better integrated.
- It is important to collaborate with affordable housing investors and developers, who may be facing the pragmatic dilemmas of land and construction costs.

**Demographics are changing and have implications on housing types and demand. It is important to understand and anticipate those changes.**

### Findings

- Demographic and housing data are important for decision-making and planning processes.
- Housing issues are best understood at the regional level – the level of the housing market.

**Having regional funding mechanisms offers opportunities for facilitating the development of affordable housing in transit communities.**

### Findings

- Within the City of Portland, multiple funding sources exist that support housing within the region. For example, the City's Development Commission has adopted a tax increment financing set-aside to provide incentives or gap funding to developers for creation of affordable housing. Additionally Metro – the regional authority – offers various grant opportunities (some of which are federally funded) to facilitate affordable housing. Finally,

the State – through its Trust Fund – provides support for affordable housing to cities, counties and other agencies.

**Transit oriented development is focused around regionally designated (or regionally recognized) centers and/or central places.**

Findings

- From a system perspective, there is value in thinking strategically about where true centers can and should exist.
- Some stations clearly play a regional role, while others may be more neighborhood oriented.
- Becoming an urban center or station community does not happen overnight; it is a long-term commitment.

**Real-estate acquisition is important for achieving transit oriented development goals.**

Findings

- The San Diego Metropolitan Transit System owns property in at least 15-20 station areas and has rated each in a matrix in terms of its potential for joint development.

**Streamlining Development Review can be a valuable tool.**

Findings

- In the San Diego region, streamlining the review process enabled transit oriented development that achieved established planning and policy goals to happen more quickly.

**Education and outreach are key to achieving the support of elected-officials, the public, and the development community.**

Findings

- The Dallas Area Regional Transit Authority has ongoing efforts to educate and reach out to communities and developers.
- Outreach can promote the potential benefits of transit oriented development and a better understanding of density and compact urban form.

**Transit oriented development is an ongoing effort. It is important to understand what is working and what can be done differently. This happens by monitoring performance and implementation.**

Findings

- The San Diego Association of Governments monitors previous public and private investments to understand how to best guide future investments.

Portland and Dallas are also developing monitoring systems. In Dallas, the regional planning agency has a development monitoring program, which tracks new development throughout the region.

This data is supplemented with land-use data that is collected at the parcel level.

# PART IV: RECOMMENDATIONS

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The recommendations provided below draw from the evaluation of planning and development within Denver area rail corridors and the case study comparisons of peer urban regions. In many instances, the recommendations represent a convergence of outcomes from the corridor analysis, stakeholder interviews, and case studies. The recommendations provide guidance and direction for further developing vibrant, complete, and prosperous transit communities at rail stations. Associated with the recommendations is a series of specific actions and steps for moving forward with successful transit oriented development. In addition, an initial set of measures is provided, which are designed to help planners, decision-makers, and citizens measure progress, determine what is working, and consider what may need improvement.

Collectively, the recommendations serve as a call-to-action to a host of regional and local agencies, interest groups, and stakeholders responsible for transit oriented development within each Regional Transportation District FasTracks corridor.

- Local jurisdictions are responsible for land use planning and regulations at individual station areas.
- The Denver Regional Council of Governments is well positioned to play a coordination role for planning and decision-making across corridors throughout the metropolitan area, as well as providing data and other technical support.
- The Metro Denver Economic Development Council is recognized both locally and nationally for its successful role in advancing collaboration in the Denver area.
- The Regional Transportation District also has a major responsibility as the primary agency responsible for corridor alignments, the siting of stations, and the design of rail stops.
- Mile High Connects (MHC) is recognized as a leader and collaborator that brings together diverse stakeholders to tackle the region's most intractable problems around education, housing, accessibility, jobs and economic development, and equity.

In addition, there are other key players with important roles in ensuring successful development at transit stations, including special service districts, state and federal agencies, workforce agencies, transportation management associations, academic institutions, investors and developers, community and interest groups, and professional associations.

## **Implementing the Recommendations**

The recommendations, actions, and measures put forward in this report intentionally differ in level of detail and responsibility. There are recommendations that call for concrete next steps, such as the call for a process to monitor progress on developing transit communities around station areas, while other recommendations do not yet advance a specific outcome, such as the call to study fare structures. Many of the recommendations call on the Denver Regional Council of Governments and/or the Regional Transportation District to be responsible for initiating next steps, while other recommendations are geared to local jurisdictions.

The guidance and directives in the actions related to the recommendations recognize that regional planning in metropolitan Denver remains largely voluntary. While the Denver region boasts nearly a half-century of cooperative planning through the Denver Regional Council of Governments, the voluntary nature of the cooperation has remained largely unchanged. Thus the actions were crafted in a manner that would allow the region to collaborate with more intention, or continue to rely on voluntary compliance. As time passes, existing actions and potential additional mechanisms may be implemented in response to better information, evolving circumstances, and changing needs.

Finally, the measures for monitoring performance reflect reasonable metrics that can begin to be evaluated today. As the recommendations and actions are implemented, it is anticipated that the measures will be further refined and adapted to assess progress.

The case study regions provide some interesting contrasts to metropolitan Denver's voluntary approach to regional planning. The Dallas region probably parallels Denver the most in terms of planning and governance at the regional level. Its regional body, the North Central Texas Council of Governments is also a voluntary association with limited authority for oversight. To advance more integrated long-range planning, a collaborative partnership of the University of Texas Arlington, Urban Land Institute, and the Council of Governments established Vision North Texas, with a series of both public and private sector sponsors to supplement the voluntary planning efforts of the North Central Texas Council of Governments. Vision North Texas has become a multi-faceted, multi-disciplined effort to address development.

San Diego's regional planning body, the San Diego Association of Governments has itself evolved from a more voluntary approach to regional planning, to taking on collaborative oversight of coordinating regional and local implementation of long-range plans. The Association's long-range planning policies are required to be addressed in each local jurisdiction's comprehensive plan. A formal certification process ensures consistency of local plans with regional policies, including policies addressing transit oriented development. Work is currently underway to continue to evolve local and regional coordination through the development of a regional "comprehensive plan," that would provide a common policy framework for development patterns, housing, environmental issues, transportation, and other infrastructure.

In the 1970s, the Portland region replaced its voluntary regional planning body with a directly elected regional government, Metro. (A similar ballot measure in the mid-1970s in metropolitan Denver failed by about 600 votes.) Many planning issues that transcend individual municipal and county boundaries in Oregon's largest urban region are now the responsibility of Metro, including growth management, regional parks and open space, transportation, and more. Metro has allowed for the reduction of numerous special districts, resulting in cost savings for residents. It also works directly with localities to implement plans and projects for transit oriented development.

While regional governance and decision-making were not explicit themes identified for evaluation as part of this study, a number of individuals interviewed offered their assessment for the need to



evolve regional planning in metropolitan Denver beyond the current voluntary model. Proposals generally fall in three categories.

- (1) Expand the role of the Denver Regional Council of Governments to provide a degree of oversight for achieving transit oriented development at Region Transportation District FasTracks rail stations.
- (2) If that role does not occur at the Council of Governments, then it should be assigned to another existing agency or organization.
- (3) Create a parallel regional planning body with specific responsibilities to advance transit oriented development that complements the work of the Council of Governments.

The Denver region is at a crossroads as it continues to open up new FasTracks transit lines and rail stations in jurisdictions all across the metropolitan area. Answering the question of what planning and decision-making mechanisms make sense to reinforce development around the multi-billion dollar investment in transit is key to ensuring successful implementation of the many recommendations and measures put forward in this report.

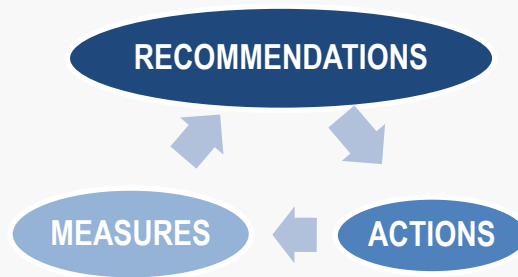
## Recommendations, Actions and Measures

The recommendations are presented in a three-part framework with: (1) recommendations, (2) actions, and (3) measures.

The **recommendations** provide strategic direction for planning processes and decision-making throughout the region, within corridors, and at station areas. Among the recommendations are strategies that are crosscutting and others that are more focused on specific issues. Given the strong integration across the themes of housing, accessibility, economy, and site development, the full set of recommendations is to be considered in decision-making for various related programs, projects, and planning processes.

The **actions** are intended to guide implementing each of the recommendations. The actions include a wide range of steps to take to create more complete communities at transit station areas. In many instances, the actions focus on preliminary steps that need to be taken in order to develop a more tailored action agenda to achieve transit community planning and development objectives. Responsibilities and tasks for implementation are identified or proposed. Some actions are directed at the Denver Regional Council of Governments, others geared to jurisdictions, and others to partner agencies and groups. Short-term generally refers to a one- to two-year time period. Mid-term refers to a three- to five-year time period.

The **measures** are designed to assess how the intent for recommendations is being met. The purpose of these measures is to track whether actions are occurring and whether the region is achieving desired results. This information will assist policymakers as they assess policies and actions over time.



*Recommendations provide direction for actions; actions are assessed by measures; and measures inform how recommendations are working.*

## Summary of Recommendations, Actions and Measures

### Recommendation 1: Collaboration lays the foundation

Collaborate locally, corridor-wide, and regionally to ensure the success of the region’s \$7 billion investment in rail connectivity. Collaborate to direct a significant portion of the region’s projected population and employment growth successfully to the approximately 70 stations that will eventually be built along the Regional Transportation District’s FasTracks corridors in the near term. Collaborate on decisions about workforce investments and supports, housing funding, surface transport, public transit schedules, routes, and fares, water, and storm water through metropolitan-wide dialogue and coordinated planning.

### Recommendation 2: An integrated approach leads to successful communities

Fully integrate regional and local goals and policies to address the interrelated issues associated with land use, housing, infill and redevelopment, transportation, economic development, environmental restoration, and sustainability.

### Recommendation 3: Ensure that subarea plans support transit oriented development in transit communities

Ensure that station areas are developed to advance “complete communities” with a range of housing types for individuals and families at all income levels and with diverse preferences in homes. Planning and development of complete communities in the vicinity of stations also must consider the inclusion of the arts, civic activity, commerce, and recreation. It recognizes that each station area is unique and the mix of housing, businesses, employment, services and amenities will vary. Give priority to station areas when considering regional and local investments in infrastructure and services that are critical for supporting inclusive, integrated development and expanded mobility choices.

### Recommendation 4: Streamline development review in transit communities

To encourage development in station areas, jurisdictions should streamline processes related to the review of development proposals and projects in transit communities, including project review and permitting. Jurisdictions should also review and – where necessary – update regulatory and taxing practices so that they incentivize development in station areas.

### **Recommendation 5: Address nearby neighborhoods and districts adjacent to the station area**

Address connectivity to adjacent neighborhoods and districts, as well as to other close-in areas that can be served by frequent transit. Subarea plans for transit communities should address all modes of travel and connectivity, and provide choices for accessing the transit station other than driving.

### **Recommendation 6: Prioritize first and last mile connections**

Advance pedestrian, bicycle, and transit investments as regionally significant and necessary to ensure the success of the region's immense investment in FasTracks, as well as local and regional goals for jobs access, housing, congestion, health and environmental quality. Recognize investments in mobility and connectivity as key for attracting development in station areas and building ridership. Prioritize investments that improve overall mobility and accessibility in and to station areas and other major destinations.

### **Recommendation 7: Parking management**

Reduce and mitigate the impacts of parking in station areas by developing a parking management strategy for the transit community.

### **Recommendation 8: Evolve the centers concept in Metro Vision to address station areas**

Assess the current set of designated centers and transit station areas with a view toward advancing continued progress in achieving the regional growth vision for accommodating housing and employment in urban center locations. Assess centers in terms of jurisdictional commitments and goals – through adopted policies and programs – to accommodate additional population and jobs in centers and station areas.

### **Recommendation 9: Establish and strengthen programs for real estate acquisition within transit communities**

Develop mechanisms – including, but not limited to, funding, legal, configuration, entity, and location identification process – for acquiring real estate at station areas along the entire FasTracks network.

### **Recommendation 10: Expand housing funding within the region**

Create a regional housing funding program to:

- a. Provide technical assistance in pursuing grants and other funding sources for local housing projects,
- b. Support legislation and policy changes that benefit the state, region, and local governments with housing production,
- c. Become a catalyst for additional, flexible sources of funding for housing units, and
- d. Sponsor discussions about sources of funding for housing development.

### **Recommendation 11: Address changing demographics (as they relate to housing)**

Adapt housing plans and regulations to ensure that home types reflect the demands of a changing population.

### **Recommendation 12: Develop a coordinated regional effort to meet housing needs**

Create a regional housing strategic plan that provides regionally adopted policies and implementation actions to address the need for more diverse housing options, including workforce housing, in major employment centers and around transit stations. This plan will build on existing programs to create mixed income housing in desired locations close to jobs and services. In addition, it will support expansion of efforts of the region's innovative, successful organizations and programs that are already catalysts to affordable housing creation. Finally, the strategy will be a foundation for seeking legislative action to

ensure that housing production is able to meet housing needs and that jurisdictions have the support they need to provide a sufficient and diverse supply of housing to meet the region's demand.

**Recommendation 13: Establish infrastructure funding for transit communities (in addition to transportation infrastructure)**

Create an infrastructure funding program to finance water supply and treatment, parks and open space, and other public facilities.

**Recommendation 14: Market transit oriented development as a catalyst for economic prosperity**

Enhance and advance partnerships with economic development experts and local jurisdictions to market development opportunities along FasTracks corridors.

**Recommendation 15: Affordable fare**

Develop programs and incentives to promote the use of the Regional Transportation District FasTracks system for travel throughout the metropolitan area. Programs should include public campaigns, transit passes, and reduced fare incentives.

**Recommendation 16: Education and outreach**

Develop outreach programs to address the benefits of infill and redevelopment; advance appropriate densities in the right places; maintain community character; provide attractive, innovative and inviting designs; address funding needs; and meet the diversity of housing needs. Incorporate the benefits of transit use – including financial benefits to the household budget – as important issues for outreach programs.

**Recommendation 17: Further monitor investments and development in transit communities**

Track progress on various aspects of development along FasTracks corridors and at station areas, including, but not limited to, investments, housing production, economic development, infrastructure improvements, public health, environmental quality, and job growth. Distribute information for planning, assessment, and decision-making.

**Recommendation 18: Planning for complete transportation – begin advance planning for future transit corridors**

Begin advance planning for future high-capacity transit corridors in the Denver metropolitan area, focusing on putting the planning and regulatory framework in place for developing complete transit communities in these locations as the FasTracks system and other transit options expand.

**Recommendation 19: Adding capacity to local and regional planning – best practices toolkit**

Develop resources and tools for jurisdictions to use to support planning for and attracting development to transit communities. The toolkit would cross-reference other toolkits and resources available, but would be tailored specifically to assist jurisdictions in metro Denver.

## Recommendations by Theme

### Housing

- Enhance Funding for Housing
- Expand Real Estate Acquisition
- Integrate Changing Demographics into Planning
- Develop a Regional Approach to Housing



### Accessibility



- Prioritize First- and Final-Mile Connections
- Reduce Fare Rates as an Obstacle to Ridership
- Manage Parking in Station Areas

### Jobs and Economic Development

- Market Transit-Oriented Communities as Economic Catalysts



### Site Development



- Streamline Development Review
- Leverage Funding for Necessary Infrastructure

### General

- Embrace Collaboration as a Foundation for Success
- Clarify Relationship between Urban Centers and Station Areas
- Develop and Make Available Best Practices & Tools
- Monitor Investment and Development
- Plan for Station Areas as Complete Communities
- Adopt Holistic, Integrated Planning Approach
- Integrate Adjacent Neighborhoods in Station Area Planning
- Expand Education, Outreach and Community Engagement
- Plan Future Corridors

## Summary of Recommendations, Actions & Measures

Recommendation	Action/Time Frame/ Proposed Responsibility	Measures
<p>1. <b>Collaboration lays the foundation</b> (Page # 53)</p>	<p>Convene representatives of local governments, DRCOG, RTD, other special service districts, state and federal agencies, workforce agencies, transportation management associations, academic institutions, investors, professional associations, and community and interest groups to evolve the partnerships necessary to advance the development of residential units, jobs, and community facilities at transit stations along the FasTracks system.</p> <p>Short-term – 1 to 2 years</p> <p>DRCOG – convener. DRCOG, another existing partner agency, or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing collaboration.</p>	<ul style="list-style-type: none"> <li>• Regional, corridor, topical and other collaborative frameworks in place.</li> <li>• Collaborative efforts producing quantitative results.</li> </ul>
<p>2. <b>An integrated approach leads to successful communities</b> (Page # 54)</p>	<p>Amend or update adopted regional and local plans and their implementing provisions (i.e., zoning code, development regulations, urban design standards) to ensure consistency of transit community housing strategies, economic development programs, health impact assessments, and the provision of infrastructure and services.</p> <p>Short-term – 1 to 2 years</p> <p>Local jurisdictions, special districts, and other agencies or groups responsible for planning and regulations in and around transit station areas</p>	<ul style="list-style-type: none"> <li>• Station area plans have been revised or updated to address multiple goals and objectives for transit communities.</li> <li>• Plans for station areas are integrated and internally consistent.</li> </ul>
<p>3. <b>Ensure that subarea plans support transit oriented development in transit communities</b> (Page # 55)</p>	<p>(3-1) Ensure that subarea plans and zoning for station areas specifically allow for and support (1) mixed use development, (2) a range of housing types, (3) a range of commercial development, (4) the provision of infrastructure and amenities, such as grocers, clinics, libraries, and day-care, and (5) a pedestrian-friendly and transit oriented transportation network that supports walking, bicycling, and transit use instead of automobile-oriented development. Subarea plans should also address the maintenance, restoration, and introduction of various amenities and services within transit communities.</p> <p>Short-term – 1 to 2 years</p> <p>Local jurisdictions, together with special districts and other agencies</p>	<ul style="list-style-type: none"> <li>• Local jurisdictions produce subarea plans for station areas.</li> <li>• Subarea plans allow for and support development specific to complete communities in transit station areas including: <ul style="list-style-type: none"> <li>○ Full array of uses and housing types</li> <li>○ Variety of employment opportunities</li> <li>○ Infrastructure to enhance access station areas and adjacent neighborhoods</li> <li>○ Infrastructure for water management</li> <li>○ Services, assets &amp; amenities – identified thresholds/benchmarks</li> </ul> </li> <li>• Subarea plans include implementation.</li> </ul>

## Summary of Recommendations, Actions & Measures

Recommendation	Action/Time Frame/ Proposed Responsibility	Measures
<p><b>3. Ensure that subarea plans support transit oriented development in transit communities</b> (Page # 55) <i>(continued from previous page)</i></p>	<p>(3-2) Establish criteria for a review and comment process for subarea plans at FasTracks station areas.</p> <p>Short-term – 1 to 2 years</p> <p>DRCOG should establish these criteria, per its plan review role through the Mile High Compact. Other options could include RTD, another existing partner agency, or a new agency or organization created to advance transit oriented development.</p>	<ul style="list-style-type: none"> <li>• Process established for review and comment on subarea plans.</li> <li>• Criteria established for review and comment on subarea plans.</li> </ul>
<p><b>4. Streamline development review in transit communities</b> (Page # 57)</p>	<p>Examine local jurisdiction development review processes for station areas and update these processes to streamline the evaluation of projects located in transit communities.</p> <p>Short-term – 1 to 2 years</p> <p>Local jurisdictions should undertake this examination. The Denver Regional Council of Governments and other partner agencies should support this process by providing guidance (including best practices) and convene opportunities through which local jurisdictions can share information and experience.</p>	<ul style="list-style-type: none"> <li>• Procedures for project review in station areas have been streamlined.</li> <li>• Time required for development review has been shortened.</li> </ul>
<p><b>5. Address nearby neighborhoods and districts adjacent to the station area</b> (Page # 58)</p>	<p>As part of subarea plans for transit communities, develop a comprehensive mobility plan that also addresses connectivity to adjacent neighborhoods and districts.</p> <p>Short-term – 1 to 2 years</p> <p>Local jurisdictions</p>	<ul style="list-style-type: none"> <li>• Adopted plans and improvement programs address mobility and accessibility connections between station areas and adjacent neighborhoods and districts.</li> <li>• Alternate transportation access (including bicycle, pedestrian and transit) infrastructure and systems linking the station area with adjacent neighborhoods and districts are included in planning and completed as part of development.</li> </ul>
<p><b>6. Prioritize first and last mile connections</b> (Page # 59)</p>	<p>Convene a technical group charged with identifying best practices and funding sources (federal, state, local, and other) to supplement local and regionally-managed funds for implementing first and last mile connectivity solutions and mode-split strategies, including public/private partnerships.</p> <p>Short-term – 1 to 2 years</p> <p>DRCOG – convener. DRCOG, another existing partner agency, or a new agency or organization created to advance first and last mile connection should carry out ongoing guidance and oversight for this action.</p>	<ul style="list-style-type: none"> <li>• Funding strategies and sources in place to improve first and last mile connections included in plans.</li> <li>• Funding programs, including capital improvement projects, in place for improving first and last mile connections during project implementation.</li> <li>• Completeness of streets, sidewalks, bicycle facilities, and bus connections at all transit stations.</li> </ul>

## Summary of Recommendations, Actions & Measures

Recommendation	Action/Time Frame/ Proposed Responsibility	Measures
<p><b>7. Parking management</b> (Page # 60)</p>	<p>Develop and implement a comprehensive parking management strategy for each station area. The strategy should be coordinated with station area design guidelines that encourage active street-level uses in buildings, such as retail or commercial uses. It should also be coordinated with the station area mobility plan to provide safe and convenient pedestrian and bicycle access to the station platform and other destinations within the transit community.</p> <p>Short-term – 1 to 2 years</p> <p>Local jurisdictions, working with local business-owners, residents, and property management groups, as well as with RTD, DRCOG or another partner agency could develop a model parking management strategy or a template for jurisdictions to use.</p>	<ul style="list-style-type: none"> <li>• A parking management plan is in place for every station area.</li> <li>• Parking is managed throughout the day, providing access for motorists, without being overbuilt.</li> <li>• Parking is adequate for residents and visitors to the center. Incentives are provided to residents and employees to use alternatives to driving.</li> <li>• Parking is in structures or provided through on-street innovations. There is less impervious surface dedicated to parking.</li> </ul>
<p><b>8. Evolve the centers concept in Metro Vision to address station areas</b> (Page # 61)</p>	<p>Evolve the centers concept in Metro Vision to define the distinct roles of (1) centers with station areas, (2) centers without station areas, and (3) station areas that are not in designated centers. The Council should consider whether to establish a “hierarchy and/or typology of centers” to acknowledge the various types of centers throughout the Denver region.</p> <p>Short-term – 1 to 2 years</p> <p>DRCOG</p>	<ul style="list-style-type: none"> <li>• The list of centers has been revised and updated to reflect changes.</li> <li>• Population and employment growth is occurring in designated centers in a manner that will achieve Metro Vision targets by the horizon year.</li> </ul>
<p><b>9. Establish and strengthen programs for real estate acquisition within transit communities</b> (Page # 62)</p>	<p>Convene representatives of local governments, the Denver Regional Council of Governments, the Regional Transportation District, state and federal agencies, transportation management associations, and investors to develop recommendations for real estate acquisition at transit stations. Determine what types of projects (e.g., residential, commercial, retail), time requirements, and legal considerations are appropriate for this program.</p> <p>Short-term – 1 to 2 years</p> <p>DRCOG – convener. DRCOG, other existing partner agencies (for example, local jurisdictions), or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing real estate acquisition.</p>	<ul style="list-style-type: none"> <li>• Real estate acquisition programs are in place.</li> <li>• Number of real estate transactions occurring through the acquisition programs.</li> <li>• Real estate transactions at station areas are advancing transit oriented development at FasTracks stations.</li> </ul>



## Summary of Recommendations, Actions & Measures

Recommendation	Action/Time Frame/ Proposed Responsibility	Measures
<p>10. <b>Expand housing funding within the region</b> (Page # 63)</p>	<p>Convene representatives of local government, housing authorities, housing finance interests, regional and state agencies, and real estate professionals to develop funding recommendations. The representatives should also work with the banking and investment community to develop an understanding of the multiple benefits of transit oriented development in order to increase their willingness to lend and/or invest in such products.</p> <p>Short-term (1-2 years) to mid-range (3-5 years)</p> <p>DRCOG – convener for this task. DRCOG, other existing partner agencies (for example, local jurisdictions), or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing funding programs for housing.</p>	<ul style="list-style-type: none"> <li>• Housing at all income levels is being funded</li> <li>• Affordability gaps are eliminated</li> </ul>
<p>11. <b>Address changing demographics (as they relate to housing)</b> (Page # 64)</p>	<p>Work with housing authorities, homebuilders, housing advocacy groups, and other partners to ensure that housing provisions in transit station subarea plans and related regulations provide for a range of housing types and choices to reflect demographic changes.</p> <p>Short-term – 1 to 2 years</p> <p>Local jurisdictions. DRCOG could play a role, along with other partners and agencies.</p>	<ul style="list-style-type: none"> <li>• Housing targets established based on need identified by demographic analysis</li> <li>• Number of units of various sizes and types, at various price points – including affordable housing, and for sale as well as rental.</li> </ul>
<p>12. <b>Develop a coordinated regional housing effort to meet housing needs</b> (Page # 65)</p>	<p>Convene representatives of local government, housing authorities, housing developers, housing advocacy groups, and other housing providers to develop a process for creating a regional housing strategic plan.</p> <p>Mid-range (3-5 years)</p> <p>DRCOG – convener. The process itself could take place under the auspices of an existing agency or organization, or under a new collaborative effort to be determined.</p>	<ul style="list-style-type: none"> <li>• Denver regional housing strategic plan developed (with numeric targets)</li> <li>• Achievement of targets – number of units of housing including single family/multifamily, rental or owner occupied, cost in relation to household budget</li> </ul>
<p>13. <b>Establish infrastructure funding for transit communities (in addition to transportation infrastructure)</b> (Page # 66)</p>	<p>Convene representatives of local government, housing authorities, housing finance interests, and real estate professionals to develop funding recommendations. The representatives should also work with the banking and investment community to develop an understanding of the multiple benefits of transit oriented development.</p> <p>Short-term (1-2 years) to mid-range (3-5 years)</p> <p>DRCOG – convener. DRCOG, other existing partner agencies, or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing funding programs for infrastructure.</p>	<p>Infrastructure is being funded in station areas</p>

## Summary of Recommendations, Actions & Measures

Recommendation	Action/Time Frame/ Proposed Responsibility	Measures
<p><b>14. Market transit oriented development as a catalyst for economic prosperity</b> (Page # 67)</p>	<p>Work with regional and sub-regional planning and economic development agencies and groups, including the Metro Denver Economic Development Council and other local councils, as well as transportation management associations, to strengthen the relationship between region-wide planning functions for economic development, residential and employment development patterns, and transportation. Create information and materials to promote development in transit communities.</p> <p>Short term (1-2 years)</p> <p>DRCOG – convener. DRCOG, other existing partner agencies (such as the Metro Denver Economic Development Council and RTD), or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing the economic benefits of transit oriented development.</p>	<ul style="list-style-type: none"> <li>• The region’s economic development efforts are integrated and mutually supportive of common goals and objectives for guiding future development, especially development in station areas.</li> <li>• Businesses created, attracted or expanded in station areas</li> <li>• Number of jobs created in station areas</li> </ul>
<p><b>15. Affordable fares</b> (Page # 68)</p>	<p>Convene representatives of local governments, transportation strategists, social service providers, public school liaisons, workforce agencies, and transit oriented development experts to develop a comprehensive program to incentivize use of the FasTracks system. Focus should be on residents and businesses within transit communities along the system.</p> <p>Short term (1-2 years)</p> <p>RTD should incorporate this task into its work on fares. DRCOG could serve as the convener on this task. Other alternatives could include academic institutions, professional associations, or research agencies.</p> <p>(Note: The Regional Transportation District currently has work underway to review fare structures.)</p>	<ul style="list-style-type: none"> <li>• Increased overall ridership numbers producing additional revenue.</li> <li>• Increase in ridership numbers for transit dependent individuals and families.</li> </ul>
<p><b>16. Education and outreach</b> (Page # 68)</p>	<p>Convene representatives of local governments, communication strategists, and transit oriented development experts to develop an outreach and education program for messaging the benefits of transit oriented development and increasing technical capacity and skills throughout the region for development at FasTracks transit stations. To support these efforts, provide developer training, tools, and information to enhance the capacity of local developers that are less familiar with transit oriented development.</p> <p>Short term (1-2 years)</p> <p>DRCOG – convener. DRCOG, other existing partner agencies (such as RTD), or a new agency or organization could carry out ongoing guidance and oversight for advancing the education and outreach.</p>	<ul style="list-style-type: none"> <li>• Creation of outreach and engagement efforts associated with station area development.</li> <li>• Number of stakeholders contacted through outreach and engagement efforts.</li> <li>• Demonstrated impact of outreach and engagement efforts.</li> </ul>

## Summary of Recommendations, Actions & Measures

Recommendation	Action/Time Frame/ Proposed Responsibility	Measures
<p><b>17. Further monitor investments and development in transit communities</b> (Page # 70)</p>	<p>Convene representatives of local governments, regional agencies, academic institutions, professional associations (such as, Urban Land Institute and the American Planning Association), and community and interest groups to address collaboration on monitoring investments and development in station areas, along with investments in services and amenities, transit ridership and mode-split.</p> <p>A portion of the monitoring effort should result in the creation of a land use and development data base built from a regional system of permits, entitlements and certificates of occupancy to show the evidence of interest, and opportunities for transit oriented development. It should identify and analyze buildable land in station areas. It should also inform marketing efforts to communicate the economic benefits of transit oriented development</p> <p>Short term (1-2 years)</p> <p>DRCOG – regional data and information. As an alternative, this recommendation could be undertaken by RTD. Other alternatives include an existing or new agency or organization, or a local academic institution.</p>	<ul style="list-style-type: none"> <li>• A coordinated monitoring process is in place</li> <li>• Regional and local planning agencies have data and information from monitoring efforts through a common data collection and analysis framework</li> <li>• Regional and local planning agencies have standardized and consistent data</li> <li>• System in place to distribute data</li> </ul>
<p><b>18. Planning for complete transportation – Begin advance planning for future transit corridors</b> (Page # 71)</p>	<p>Begin the process to plan for these alignments and to develop corridor planning efforts to help guide residential and employment growth already occurring in these corridors.</p> <p>Mid-range (3-5 years)</p> <p>DRCOG and RTD should undertake this task in collaboration with communities associated with these developments. Other alternatives include existing or new partner agencies or organizations, or a local academic institution.</p>	<p>Regional agencies and localities are addressing future high-capacity transit corridors in their long-range plans.</p>
<p><b>19. Adding capacity to local &amp; regional planning – best practices toolkit</b> (Page # 72)</p>	<p>Work with local jurisdictions, regional agencies, professional associations, academic institutions, interest groups, and others to develop tools and resources for use to support planning and development in station areas.</p> <p>Short term (1-2 years)</p> <p>DRCOG and RTD should undertake this task. Other alternatives include existing or new partner agencies or organizations, or a local academic institution.</p>	<p>A station area toolkit has been created and is regularly used by local jurisdictions and their partners in planning and developing transit oriented communities.</p>

## Action Agenda

The following table provides a summary of the actions listed above as a schedule of “next steps.” Short term actions are provided first, followed by mid-range actions.

Action	Time Frame	Notes
Convene representatives to work on evolving partnerships to advance collaborative approach to developing transit communities	short-term (year 1)	Denver Regional Council of Governments is positioned to convene individuals and groups on collaboration <i>(Relates to Recommendation 1)</i>
Convene representatives to work on housing funding	short term (year 1)	Denver Regional Council of Governments is positioned to convene individuals and groups on housing funding <i>(Relates to Recommendation 10)</i>
Convene representatives to work on a long-range regional housing strategy	short term (year 1)	Denver Regional Council of Governments is positioned to convene individuals and groups to work on a regional housing strategy <i>(Relates to Recommendation 12)</i>
Convene representatives to work on strengthening programs that market transit oriented development	short term (year 1)	Denver Regional Council of Governments, the Regional Transportation District, and/or the Metro Denver Economic Development Council are positioned to convene individuals and groups on marketing transit oriented development <i>(Relates to Recommendation 14)</i>
Convene representatives to develop an outreach and education program	short term (year 1)	Denver Regional Council of Governments and/or the Regional Transportation District are positioned to convene individuals and groups to develop outreach strategies <i>(Relates to Recommendation 16)</i>
Convene representatives to work on establishing and strengthening programs for real estate acquisition	short term (year 1)	Denver Regional Council of Governments and/or the Regional Transportation District are positioned to convene individuals and groups on real estate acquisition <i>(Relates to Recommendation 9)</i>
Convene representatives to work on fare structures	short term (year 1)	Regional Transportation District is positioned to convene individuals and groups on affordable fares <i>(Relates to Recommendation 15)</i>
Convene representatives to work on a regional monitoring program for transit oriented development	short term (year 1)	Denver Regional Council of Governments is positioned to convene individuals and groups to work on a monitoring program; alternatively, the Regional Transportation District, or a local academic institution to develop and maintain a monitoring program <i>(Relates to Recommendation 17)</i>

Action	Time Frame	Notes
Convene representatives to work on developing a best practices toolkit for transit oriented development	short term (year 1)	Denver Regional Council of Governments is positioned to convene individuals and groups to work on a monitoring program; alternatively, the Regional Transportation District, or a local academic institution to develop and maintain a monitoring program <i>(Relates to Recommendation 19)</i>
Review and update as needed the centers provisions and criteria in Metro Vision	short term (year1 or 2)	Denver Regional Council of Governments <i>(Relates to Recommendation 8)</i>
Address changing demographics and their implications on housing and jobs forecasts and targets	short term (year1 or 2)	Denver Regional Council of Governments, together with local jurisdictions, and other partner agencies <i>(Relates to Recommendation 8)</i>
Prioritize first and last mile connections	short term (year1 or 2)	Denver Regional Council of Governments, Regional Transportation District, local jurisdictions <i>(Relates to Recommendation 6)</i>
Amend and/or update local subarea plans and/or comprehensive plans to fully address integrated planning for land use, housing, economic development, mobility, and infrastructure	short term (year 1or 2)	Local jurisdictions <i>(Relates to Recommendation 2)</i>
Take steps to ensure that subarea plans and zoning support mixed use development, housing, and infrastructure in station areas	short term (year 1or 2)	Local jurisdictions, together with special service districts and other agencies <i>(Relates to Recommendation 3)</i>
Address connectivity to adjacent neighborhoods and districts in subarea plans	short term (year 1 or 2)	Local jurisdictions <i>(Relates to Recommendation 5)</i>
Parking management	short term (year 1 or 2)	Local jurisdictions (collaborating with Regional Transportation District) <i>(Relates to Recommendation 7)</i>
Streamline development review in station areas	short term (year 1 or 2)	Local jurisdictions <i>(Relates to Recommendation 4)</i>
Convene representatives to work on funding for infrastructure (beyond transportation)	short term to mid-range (years 2-4)	Denver Regional Council of Governments is positioned to convene individuals and groups on funding infrastructure <i>(Relates to Recommendation 10)</i>
Begin advance planning for future transportation corridors	mid-range (3-5 years)	Denver Regional Council of Governments, Regional Transportation District, local jurisdictions <i>(Relates to Recommendation 18)</i>

## Recommendation 1: Collaboration Lays the Foundation

*Collaborate locally, corridor-wide, and regionally to ensure the success of the region’s \$7 billion investment in rail connectivity. Collaborate to direct a significant portion of the region’s projected population and employment growth successfully to the approximately 70 stations that will eventually be built along Regional Transportation District FasTracks corridors in the near term. Collaborate on decisions about workforce investments and supports, housing funding, surface transport, public transit schedules, routes, and fares, water, and storm water through metropolitan-wide dialogue and coordinated planning.*

### Background

In urban regions with successful transit oriented development (including Dallas, Portland, and San Diego), local station areas are accruing benefits from collaboration – both at the corridor level and regionally. Where collaboration takes place, it makes a difference in attracting development to station areas and in creating more complete transit communities with a mix of uses and services. Here in metro Denver, we are witnessing successful transit oriented development in several corridors, while other corridors are just beginning to see development in their station areas.

#### Collaboration at All Levels

Collaboration needs to take place at several levels: (1) regionally, i.e., the 9-county metropolitan region and the Regional Transportation District’s service area, (2) on a corridor basis, and (3) locally, not only with the local jurisdiction, but with special districts, transportation management associations, community groups (local and regional), investors, workforce agencies, and other relevant players. Collaboration should lead to consensus on a concrete approach to address major current issues, including the affordable housing shortage, the provision of infrastructure and services, and improved accessibility.

Metro Denver is a region that has proven that it can come together to address common issues that transcend municipal and agency boundaries. Whether it is lifting up economic development as an urban region to compete globally or to support investments to expand mobility, such as the Regional Transportation District FasTracks program, the metro area has demonstrated that it can work together to make a difference. Corridor collaboration and partnerships helped to offer solutions for locating stations along the FasTracks alignments. Current economic development and affordable housing planning for the West Line are being jointly planned by the cities of Denver and Lakewood and their respective housing authorities.

### Action

Convene representatives of local governments, the Denver Regional Council of Governments, the Regional Transportation District, other special service districts, state and federal agencies, workforce agencies, transportation management associations, academic institutions, investors, professional associations, and community and interest groups to evolve the partnerships necessary to advance the development of residential units, jobs, and community facilities at transit stations along the FasTracks system.

#### South Denver Economic Development Partnership

One metro area example is the collaborative relationships that have developed along the Southeast Corridor to cooperate on economic development, workforce, and mobility and accessibility issues.

Other corridors also have similar efforts, such as the West Corridor Collaborative and the Economic Development Strategy in Aurora (along the I-225 corridor).

*The Denver Regional Council of Governments could serve as convener for this task. The Council, another existing partner agency, or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing collaboration.*

**Timeframe:** short-term (1-2 years)

### Measures

1. Regional, corridor, topical and other collaborative frameworks in place.
2. Collaborative efforts producing quantitative results.

## Recommendation 2: An Integrated Approach Leads to Successful Communities

***Fully integrate regional and local goals and policies to address the interrelated issues associated with land use, housing, infill and redevelopment, transportation, economic development, environmental restoration, and sustainability.***

### Background

Planning for station areas is most successful when integrating housing with land use planning, transportation planning, environmental planning, health impact assessment, economic development, and urban design. Integrated or holistic station area planning not only ensures that the transit community will be walkable and bikable, but also allows for more efficient delivery of services. Given the interrelationship of each of these aspects of creating a successful transit community, a holistic approach to planning and developing the station area is critical. The peer regions examined in the case studies provide examples of urban areas taking a more holistic approach to planning for transit communities.

#### **Building Complete Communities**

Transit communities are ideal locations for services, including neighborhood libraries, medical care offices, daycare centers, and learning centers. Connections to open space, including regional green space networks, should be promoted. Community gardens could be an appropriate use in many station areas as well.

### Action

Amend or update adopted regional and local plans and their implementing provisions (i.e., zoning code, development regulations, urban design standards) to ensure consistency of transit community housing strategies, economic development programs, health impact assessments, and the provision of infrastructure and services.

*Local jurisdictions, special districts, and other agencies or groups responsible for planning and regulations in and around transit station areas.*

**Timeframe:** short-term (1-2 years)

### Measures

- Station area plans have been revised or updated to address multiple goals and objectives for transit communities.
- Plans for station areas are integrated and internally consistent.

## Recommendation 3: Ensure That Subarea Plans Support Transit Oriented Development in Transit Communities

*Ensure that station areas are developed to advance “complete communities” with a range of housing types for individuals and families at all income levels and with diverse preferences in homes. Planning and development of complete communities in the vicinity of stations also must consider the inclusion of the arts, civic activity, commerce, and recreation. It recognizes that each station area is unique and the mix of housing, businesses, employment, services and amenities will vary. Give priority to station areas when considering regional and local investments in infrastructure and services that are critical for supporting inclusive, integrated development and expanded mobility choices.*

### Background

Metro area jurisdictions are in various phases of developing subarea plans for communities adjacent to transit. As station area plans are drafted, amended and/or updated for subareas around stations, they should be both complete and fully integrated plans that address all policies and principles relevant to the station area. The case study regions provide examples of urban areas that have benefitted from adopting integrated plans for station areas.

Station area plans should also intentionally seek to evolve regulatory environments from more traditional Euclidian and auto-centric land use and zoning, to more transit oriented and pedestrian - friendly land use and development guidelines. (This point is reinforced by information provided in the corridor analysis and interviews.)

It is also desirable for relevant zoning and regulations to be cross-referenced or formally included in the station area plan document as well. Ideally, creating a unified planning document for a station area would allow decision-makers, citizens, and developers to work from a single planning resource to understand, goals and expectations for development within transit communities.

#### What to Address in a Station Area Plan

*Priming-the-Pump for Transit oriented Development.* Jurisdictions should do advance planning usually required of developers as part of streamlining plan review and permitting in transit communities.

*Phasing Development, Infrastructure and Services.* Recognize that evolving from the current automobile-oriented built environment into transit communities is a long-term process. Both public and private investments in station areas will happen over various phases. Station areas that are in early phases of evolving into transit communities will likely require additional assistance – not only from the Denver Regional Council of Governments and the Regional Transportation District, but also from other partners, such as Urban Land Institute, to advance development and investments.

*Intermodal Connectivity.* Mobility and accessibility within station areas involves more than rail transit. A complete approach to planning for mobility requires an integrated strategy for all modes of travel: walking, bicycling, bus and rail transit, and vehicle, as well as freight and goods access.

*Zoning for Transit oriented Development.* Past development regulations often favored automobile-oriented development. Zoning should be updated in station areas to support transit oriented development patterns.



### Action (3-1)

Ensure that subarea plans and zoning for station areas specifically allow for and support (1) mixed use development, (2) a range of housing types, (3) a range of commercial development, (4) the provision of infrastructure and amenities, such as grocers, clinics, libraries, and day-care, and (5) a pedestrian-friendly and transit oriented transportation network that supports walking, bicycling, and transit use instead of automobile-oriented development. Subarea plans should also address the maintenance, restoration, and introduction of various amenities and services within transit communities.

*Local jurisdictions, together with special districts and other agencies*

Timeframe: short-term (1-2 years)

### Measures

1. Local jurisdictions produce subarea plans for station areas.
2. Subarea plans allow for and support development specific to complete communities in transit station areas including:
  - Full array of uses and housing types
  - Variety of employment opportunities
  - Infrastructure to enhance use of alternative transportation to access station areas and adjacent neighborhoods
  - Infrastructure for water management
  - Services, assets & amenities – identified thresholds/benchmarks
3. Subarea plans include implementation mechanisms.

#### Densities that Support Transit

There is extensive research showing that residential densities greater than seven or eight homes per gross acre best support regular local transit service. For areas at or around transit stations, residential densities should, at minimum, be 10 to 20 dwelling units per gross acre. For higher-frequency, high-capacity transit service, residential densities should exceed 15 to 20 homes per acre, with employment densities of 50 jobs per acre and higher.

#### Benefits of More Compact Urban Development

When housing, jobs, shopping, services, and entertainment are in closer proximity, there are a number of benefits in addition to creating a more pedestrian-friendly built environment. For example, there is a reduced demand on public infrastructure and services (such as water supply and treatment), there are fewer impervious surfaces (which helps to reduce urban runoff), and infill and redevelopment create economic development opportunities.

#### Say “Yes” to Transit oriented Development

An integrated station area plan informs the community, developers, and decision-makers about goals and expectations for the type of development that is appropriate in a station. Keep in mind that station areas are a small percent (4 percent) of the total urbanized area of the metropolitan region, and are often a small percent of the developable area in any given jurisdiction. Ensuring that development occurs in a manner that supports the vision and goals for the station area will attract additional development and investment. When development is proposed that is different in character from what is envisioned for the station area, the jurisdiction should take steps to request refinements to the proposal to make it fit a transit oriented environment. Or perhaps there is another location outside of the station area for a proposal that does not fit the station area context.

### Action (3-2)

Establish criteria for a review and comment process for subarea plans at FasTracks station areas.

*The Denver Regional Council of Governments should establish these criteria, per its plan review role through the Mile High Compact. Other options include the Regional Transportation District, another existing partner agency, or a new agency or organization created to advance transit oriented development.*

Timeframe: short-term (1-2 years)

#### Measures

1. Process established for review and comment on subarea plans.
2. Criteria established for review and comment on subarea plans.

#### Siting Facilities in Station Areas

Capital facilities include a range of services that are essential to communities, commerce, and quality of life, such as recreation, education, human services, water, sewer, power stations, and similar facilities. Such facilities can be an amenity, while others can impact the environment and areas that are adjacent. Adding amenities that attract people, such as arts centers, plazas, parks, and other civic facilities, is an excellent way to support the vitality of station areas. On the other hand, siting treatment facilities, power stations, and utilities presents challenges. Facilities that have adverse impacts should be sited and designed in a manner that allows station areas to develop as vibrant, attractive, and livable transit communities.

## Recommendation 4: Streamline Development Review in Transit Communities

*To encourage development in station areas, jurisdictions should streamline processes related to the review of development proposals and projects in transit communities, including project review and permitting. Jurisdictions should also review and – where necessary – update regulatory and taxing practices so that they incentivize development in station areas.*

#### Background

Streamlining permitting processes and development regulations can eliminate unnecessary costs and barriers and facilitate development of affordable or innovative housing types. Regulatory and taxing practices should also be designed to encourage transit oriented development in station areas, rather than putting additional financial burden on potential development. (Comments received through the interviews, as well as information from the case studies, reinforce this point.)



*The City of Aurora is working to streamline development review for transit communities along the I-225 light rail line.*

## Action

Examine local jurisdiction development review processes for station areas and update these processes to streamline the evaluation of projects located in transit communities.

*Local jurisdictions should undertake this examination. The Denver Regional Council of Governments and other partner agencies should support this process by providing guidance (including best practices) and convene opportunities through which local jurisdictions can share information and experience.*

Timeline: short-term (1-2 years)

## Measures

1. Procedures for project review in station areas have been streamlined.
2. Time required for development review is shortened.

## Recommendation 5: Address Nearby Neighborhoods and Districts Adjacent to the Station Area

***Address connectivity to adjacent neighborhoods and districts, as well as to other close-in areas that can be served by frequent transit. Subarea plans for transit communities should address all modes of travel and connectivity, and provide choices for accessing the transit station other than driving.***

### Background

Not only is it important to address housing, jobs, and infrastructure within the immediate station area, it is also important to address the relationship of the transit area to adjacent neighborhoods and districts – especially opportunities for connectivity and accessibility. Areas adjacent to station areas should have convenient connections for accessing concentrations of jobs, shopping and entertainment, whether that access is by bicycle or walking, or by local transit. Even when walking is not an option, if a person can travel easily to their nearest station area, and to other parts of the region, their mobility and accessibility are greatly improved. Addressing the relationship of station area with adjacent neighborhoods and districts somewhat further removed from the train platform was emphasized in case studies, corridor analysis, and many of the interviews.

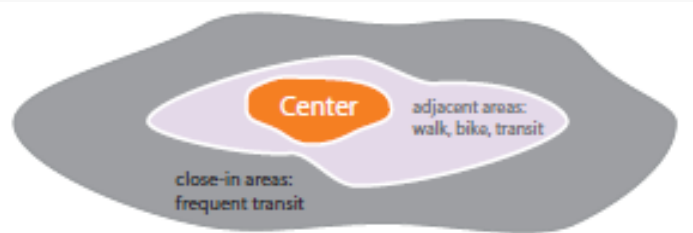


Image: Courtesy of Puget Sound Regional Council

### Station Areas and Their Adjacent Neighborhoods

What happens in the neighborhoods and districts near a transit station area or urban center is also important. Easy access from nearby communities just beyond the station area should make it convenient for residents of those neighborhoods to get to the concentrations of jobs, shopping, and entertainment at the transit station. The most important connections to provide are bicycle and pedestrian facilities, as well as reliable local transit service. If a person can easily travel to their nearest station area – whether by walking, bicycling, or using transit, and from there connect to other parts of the corridor or region by rail transit, overall mobility and accessibility are greatly improved.

## Action

As part of subarea plans for transit communities, develop a comprehensive mobility plan that also addresses connectivity to adjacent neighborhoods and districts.

*Responsibility: Local jurisdictions*

Timeframe: short term (1-2 years)

## Measures

1. Adopted plans and improvement programs address mobility and accessibility connections between station areas and adjacent neighborhoods and districts.
2. Alternate transportation access (including bicycle, pedestrian and transit) infrastructure and systems linking the station area with adjacent neighborhoods and districts are included in planning and completed as part of development.

## Recommendation 6: Prioritize First and Last Mile Connections

***Advance pedestrian, bicycle, and transit investments as regionally significant and necessary to ensure the success of the region's immense investment in FasTracks, as well as local and regional goals for jobs access, housing, congestion, health and environmental quality.***

***Recognize investments in mobility and connectivity as key for attracting development in station areas and building ridership. Prioritize investments that improve overall mobility and accessibility in and to station areas and other major destinations.***

## Background

To maximize opportunities for people to use alternatives to driving alone, transit communities need to be walkable and bikable, and provide easy access for transit-users. Transportation planning within station areas and along corridors throughout the region, beyond the FasTracks lines, needs to be wide-ranging and advance multimodal solutions. Priorities need to be established for phasing mobility and accessibility investments in and to station areas. This recommendation is drawn from information in the corridor analysis, interviews, and case studies.

### Complete Streets

Complete streets are designed and operated to enable safe and convenient access for all road users. Pedestrians, bicyclists, motorists, and transit riders of all ages and abilities can safely move along and across a complete street. By designing and operating streets to be complete, transportation agencies increase capacity, avoid expensive retrofits, encourage physical activity, and help create walkable communities.

## Action

Convene a technical group charged with identifying best practices and funding sources (federal, state, local, and other) to supplement local and regionally-managed funds for implementing first and last mile connectivity solutions and mode-split strategies, including public/private partnerships.

### Mode Split Goals for Station Areas

*Mode split* is a measure for the various means of transportation used for daily trips. A *mode split goal* is a quantitative statement used to plan for increasing the proportion of trips using alternatives to driving alone, such as transit, walking and biking. Reducing the percentage of driving trips in station areas results in less pollution and greenhouse gas emissions, reduced congestion, improved health, and more efficient use of streets.

*The Denver Regional Council of Governments could serve as convener for this task. The Council, another existing partner agency, or a new agency or organization created to advance first and last mile connection should carry out ongoing guidance and oversight for this action.*

**Timeframe:** short term (1-2 years)

### Measures

1. Funding strategies and sources in place to improve first and last mile connections included in plans.
2. Funding programs, including capital improvement projects, in place for improving first and last mile connections during project implementation.
3. Completeness of streets, sidewalks, bicycle facilities, and bus connections at all transit stations.

## Recommendation 7: Parking Management

***Reduce and mitigate the impacts of parking in station areas by developing a parking management strategy for the transit community.***

### Background

In station areas and centers, large areas dedicated to surface parking create unfriendly environments especially for walking to buildings or the rail station platform. Walkable streets – with street parking, smaller lots placed behind buildings, or structured parking – support ground floor retail and commerce, provide better access to building entrances, and result in a more interesting urban environment.

Typically, because of the availability of transit and other modes of travel, including walking and bicycling, station areas do not require the same ratio of parking that might make sense elsewhere in a local jurisdiction. Moreover, because of the proximity of uses, and the change in activity in station areas throughout the course of the day – from a workplace during the day to an entertainment district in the evening – there are opportunities for more creative solutions for managing parking. A number of the interviews focused on the challenges of parking in station areas. The

### Parking Management

Given the broad range of mobility options for traveling to and within transit communities, as well as a wider mix of uses and housing types, parking needs in station areas are different from other built up areas. Each transit community should have a parking management strategy that integrates public and private parking to maximize efficiency through shared utilization and other strategies.

### Station Area Parking Strategy Components

- Reduce parking ratios for station-area development
- Allow on-street parking to be factored into parking requirements, especially for businesses
- Encourage innovative street parking configurations, such as angle parking
- Ensure that short-term parking areas that serve businesses are not used by commuters or for long term parking
- Place parking behind retail structures and allow for direct pedestrian and transit-rider access to businesses
- Provide dedicated paths that are safe and well identified for pedestrians in parking facilities
- In above-ground parking structures, provide retail or commercial uses at street level
- Implement adaptive management and active management techniques, such as shared parking

corridor analysis also provided evidence on the problems surface parking lots create for walkability in station areas. Parking management solutions are advocated in a number of urban regions, including Portland and San Diego.

### Action

Develop and implement a comprehensive parking management strategy for each station area. The strategy should be coordinated with station area design guidelines that encourage active street-level uses in buildings, such as retail or commercial uses. It should also be coordinated with the station area mobility plan to provide safe and convenient pedestrian and bicycle access to the station platform and other destinations within the transit community.

*Local jurisdictions, working with local business-owners, residents, and property management groups, as well as with the Regional Transportation District. The Denver Regional Council of Governments or another partner agency could develop a model parking management strategy or a template for jurisdictions to use.*

Timeframe: short-term (1-2 years).

### Measures

1. A parking management plan is in place for every station area.
2. Parking is managed throughout the day, providing access for motorists, without being overbuilt.
3. Parking is adequate for residents and visitors to the center. Incentives are provided to residents and employees to use alternatives to driving.
4. Parking is in structures or provided through on-street innovations. There is less impervious surface dedicated to parking.

## Recommendation 8: Evolve the Centers Concept in Metro Vision to Address Station Areas

*Assess the current set of designated centers and transit station areas with a view toward advancing continued progress in achieving the regional growth vision for accommodating housing and employment in urban center locations. Assess centers in terms of jurisdictional commitments and goals – through adopted policies and programs – to accommodate additional population and jobs in centers and station areas.*

### Background

The Denver region is recognized as one of several urban regions to have pioneered the benefits of guiding housing and employment growth to urban centers. More and more urban regions across the U.S. are now incorporating urban centers into their integrated regional growth and transportation strategies.

With the development of FasTracks and its transit stations, a new aspect of center-type places is becoming part of metro Denver's landscape. We now have situations where there are centers with transit stations, centers without transit stations, and transit stations outside of centers.

Several individuals interviewed stated that it is time for the Metro Vision centers concept to be refined. The peer regions examined as part of the case studies have developed typologies to recognize different types of central places in their regional development plans.

## Action

Evolve the centers concept in Metro Vision to define the distinct roles of (1) centers with station areas, (2) centers without station areas, and (3) station areas that are not in designated centers. The Council should consider whether to establish a “hierarchy and/or typology of centers” to acknowledge the various types of centers throughout the Denver region.

*Because of its association with Metro Vision, the Denver Regional Council of Governments should perform this task.*

Timeframe: short term (1-2 years)

## Measures

1. The list of centers has been revised and updated to reflect changes.
2. Population and employment growth is occurring in designated centers in a manner that will achieve Metro Vision targets by the horizon year.

## Recommendation 9: Establish and Strengthen Programs for Real Estate Acquisition within Transit Communities

***Develop mechanisms – including, but not limited to, funding, legal, configuration, entity, and location identification process – for acquiring real estate at station areas along the entire FasTracks network.***

### Background

Urban regions around the country, including the peer regions studied in this report, that have had success with growing transit oriented development in and around high-capacity transit station areas have established a real estate acquisition program, in particular a program operated by a public sector agency, such as a transit provider or municipality. Programs such as the Denver Regional Transit Oriented Development Fund target the acquisition of key properties in station areas and then market them for development that supports transit. A number of individuals interviewed called for having more robust programs in place for acquiring real estate in station areas.

### Action

Convene representatives of local governments, the Denver Regional Council of Governments, the Regional Transportation District, state and federal agencies, transportation management associations, and investors to develop recommendations for real estate acquisition at transit stations. Determine what types of projects (e.g., residential, commercial, retail), time requirements, and legal considerations are appropriate for this program.

*The Denver Regional Council of Governments should serve as convener for this task. The Council, other existing partner agencies (for example, local jurisdictions), or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing real estate acquisition.*

Timeframe: short term (1-2 years)

## Measures

1. Real estate acquisition programs are in place.
2. Number of real estate transactions occurring through the acquisition programs.
3. Real estate transactions at station areas are advancing transit oriented development at FasTracks stations

### Land Banking

Land banking is a process by which a local jurisdiction or other public authorities acquires vacant properties. The properties can then be developed or held for the future. A land bank can eliminate barriers to infill and redevelopment. Typically the property is transferred to a new owner who supports the local community's goals and priorities for development.

## Recommendation 10: Expand Housing Funding within the Region

Create a regional housing funding program to:

- a. Provide technical assistance in pursuing grants and other funding sources for local housing projects,*
- b. Support legislation and policy changes that benefit the state, region, and local governments with housing production,*
- c. Become a catalyst for additional, flexible sources of funding for housing units, and*
- d. Sponsor discussions about sources of funding for housing development.*

## Background

To ensure that regional demands for housing near transit are met, especially for more affordable housing options – from deep subsidies to workforce and moderate-income, funding programs need to be established. Other urban regions and states around the U.S. have programs that provide funds for creating and maintaining affordable housing. Funding programs can include urban renewal authorities, special districts, loan funds, trust funds, local and state general obligation bonds, and land banks. For example, as noted in the case studies, the City of Portland, initiated a transit-supportive residential or mixed-use development tax exemption program in 1996. This program provides an incentive for the construction of higher density, mixed-income housing near transit.

Another, more recent example is the adoption by the Portland Development Commission of tax increment financing “set-aside rules” for affordable housing (February 2007). These rules required that 30 percent of tax increment financing proceeds be set aside for affordable housing development within the associated urban renewal area. These funds are used to incentivize or provide gap funding to developers to create housing affordable to those earning 80 percent or less of the region’s area median income. Given the high level of demand for housing, and that existing sources are over-

### Urban Land Conservancy

The Urban Land Conservancy (ULC) was described by one interviewee as “the glue for affordable housing development in the region.” The Conservancy proactively acquires land for housing, community service, and employment opportunities in station areas and transit zones; and bridges the gap between affordable housing developers and jurisdictions (a valuable and necessary role). The success of their efforts demonstrates their model’s efficacy. The region could benefit from an expansion of land acquisition and banking practices, and from the greater development of the technical capacity to undertake affordable housing and transit oriented development.



subscribed – and largely from federal sources; a mix of several sources is necessary; no one strategy will meet the need.

While there are efforts underway in the Denver region, including initiatives through the Colorado Housing Finance Agency and other local agencies, much more is needed to address ongoing housing needs. This was emphasized in the interviews conducted as part of this report.

### Action

Convene representatives of local government, housing authorities, housing finance interests, regional and state agencies, and real estate professionals to develop funding recommendations. The representatives should also work with the banking and investment community to develop an understanding of the multiple benefits of transit oriented development in order to increase their willingness to lend and/or invest in such products.

*The Denver Regional Council of Governments should serve as convener for this task. The Council, other existing partner agencies (for example, local jurisdictions), or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing funding programs for housing.*

**Timeline:** short-term (1-2 years) to mid-range (3-5 years)

### Measures

Housing at all income levels is being funded; affordability gaps are eliminated.

## Recommendation 11: Address Changing Demographics (as they relate to housing)

***Adapt housing plans and regulations to ensure that home types reflect the demands of a changing population.***

### Background

By the next decade, the majority of households will consist of (1) single persons, (2) start-ups (young couples entering the housing market), (3) seniors, or (4) single-parent families. In addition, there are households in these four groups as well as other population groups that have lower household incomes. This is a result of their smaller household sizes, fewer number of workers per household, and life stage, either early in, or after, their careers. Housing types need to adapt to the home preferences these populations' desire. Updated policies and regulations will be needed to make it easier to develop, preserve, retrofit, and upgrade homes to meet these demographic changes. The transit communities along the FasTracks system provide excellent opportunities for new home construction to meet the needs of the changing demographics in the region. With investments in infrastructure and planning, station areas could be well positioned to provide home types to meet the needs of future residential demand.

### Action

Work with housing authorities, homebuilders, housing advocacy groups, and other partners to ensure that housing provisions in transit station subarea plans and related regulations provide for a range of housing types and choices to reflect demographic changes.

*Responsibility: Local jurisdictions. The Denver Regional Council of Governments could play a role, along with other partners and agencies.*

Timeframe: short term (1-2 years)

### Measures

1. Housing targets established based on need identified by demographic analysis
2. Number of units of various sizes and types, at various price points – including affordable housing, and for sale as well as rental.

## Recommendation 12: Develop a Coordinated Regional Effort to Meet Housing Needs

*Create a regional housing strategic plan that provides regionally adopted policies and implementation actions to address the need for more diverse housing options, including workforce housing, in major employment centers and around transit stations. This plan will build on existing programs to create mixed income housing in desired locations close to jobs and services. In addition, it will support expansion of efforts of the region’s innovative, successful organizations and programs that are already catalysts to affordable housing creation. Finally, the strategy will be a foundation for seeking legislative action to ensure that housing production is able to meet housing needs and that jurisdictions have the support they need to provide a sufficient and diverse supply of housing to meet the region’s demand.*

### Background

The housing market in the metro area is regional – and a regional approach is needed to address needs and demands. In the Denver area, we are witnessing a widening gap between the price of new housing units coming on line, and affordability. There is an increasing shortage in the number of affordable housing units available. A regional approach requires engagement by local jurisdictions, area housing authorities, state agencies, members of the real estate and development community, financial institutions, housing advocates, economic development groups, data analysts, and non-profit groups. A regional approach would address housing policy, implementation actions, funding, target locations in relation to job centers, and monitoring efforts. This recommendation comes directly from comments received in the interviews, as well as from the peer review in case studies.

#### Targets for Housing and Jobs

More and more urban regions are working with their local jurisdictions to establish targets for housing and employment. Indeed, the Metro Vision long-range plan for the Denver area advances housing and job targets for designated centers. Where such target setting has occurred (San Diego, Portland and Seattle), it has increased predictability, helped set community goals and vision, and prioritized where limited public dollars should best be invested. In an environment where target setting is intentionally designed to help every jurisdiction be all it can be as a vibrant, healthy and prosperous community, the process can also help to turn local government rivalries into collaborative relationships.

## Action

Convene representatives of local government, housing authorities, housing developers, housing advocacy groups, and other housing providers to develop a process for creating a regional housing strategic plan.

*The Denver Regional Council of Governments should serve as convener for this task. The process itself could take place under the auspices of an existing agency or organization, or under a new collaborative effort to be determined.*

**Timeline:** mid-range (3-5 years)

## Measures

1. Denver regional housing strategic plan developed (with numeric targets)
2. Achievement of targets – number of units of housing including single family/multifamily, rental or owner occupied, cost in relation to household budget.

## Recommendation 13: Establish Infrastructure Funding for Transit Communities *(in addition to transportation infrastructure)*

***Create an infrastructure funding program to finance water supply and treatment, parks and open space, and other public facilities.***

### Background

Adequate infrastructure at station areas is important for attracting development and creating more complete communities, with a full range of jobs, services and housing types. Funding is needed for infrastructure, site clean-up, and public facilities. The lack of such infrastructure can raise the total cost of development, which complicates the development of market-rate and affordable housing. This point was made in the interviews conducted for this report.

### Action

Convene representatives of local government, housing authorities, housing finance interests, and real estate professionals to develop funding recommendations. The representatives should also work with the banking and investment community to develop an understanding of the multiple benefits of transit oriented development.

*The Denver Regional Council of Governments should serve as convener for this task. The Council, other existing partner agencies, or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing funding programs for infrastructure.*

**Timeline:** short-term (1-2 years) to mid-range (3-5 years)

### Measures

Infrastructure is being funded in station areas

#### **Funding for Non-transportation Infrastructure**

Existing programs, such as those provided through Colorado's Department of Local Affairs, Great Outdoors Colorado, etc., provide opportunities for local jurisdictions to supplement their general funds to provide desired infrastructure, such as parks, trails, and drainage projects. Metro districts can be formed to provide such infrastructure. Jurisdictions can be intentional about providing infrastructure for station areas in their local capital improvement programs. Public-private partnerships, along with developer agreements, are additional sources.

## Recommendation 14: Market Transit Oriented Development as a Catalyst for Economic Prosperity

*Enhance and advance partnerships with economic development experts and local jurisdictions to market development opportunities along FasTracks corridors.*

### Background

Transit communities are a “brand” that can be creatively marketed. Complete communities have become a positive alternative in the metropolitan housing market to detached single-family household neighborhoods. This point was emphasized by a number of individuals interviewed for this report.

Economic development – at a regional level, within specific transit corridors, and at individual station areas – is most successful through coordinated, collaborative marketing efforts. Collaboration in marketing FasTracks corridors allows the region to work together to ensure the metro Denver region remains economically healthy and prosperous. Economic prosperity includes maintenance of our transportation network and other infrastructure, supporting education and workforce development institutions, a healthy and functioning natural environment, ensuring quality development in the built environment, and housing affordability and choice. Such marketing has already occurred along several FasTracks corridors, including the Southeast Corridor and the Aurora Corridor (I-225 Light Rail Line).

### Action

Work with regional and sub-regional planning and economic development agencies and groups, including the Metro Denver Economic Development Council and other local councils, as well as transportation management associations, to strengthen the relationship between region-wide planning functions for economic development, residential and employment development patterns, and transportation. Create information and materials to promote development in transit communities.

*The Denver Regional Council of Governments should serve as convener for this task. The Council, other existing partner agencies (such as the Metro Denver Economic Development Council and the Regional Transportation District), or a new agency or organization created for this purpose, should carry out ongoing guidance and oversight for advancing the economic benefits of transit oriented development.*

Timeframe: short term (1-2 years)

### Measures

- The region’s economic development efforts are integrated and mutually supportive of common goals and objectives for guiding future development, especially development in station areas.
- Businesses created, attracted or expanded in station areas
- Number of jobs created in station areas

## Recommendation 15: Affordable Fares

*Develop programs and incentives to promote the use of the Regional Transportation District's FasTracks system for travel throughout the metropolitan area. Programs should include public campaigns, transit passes, and reduced fare incentives.*

### Background

To maximize the use of the FasTracks system by residents, employees, and visitors in station areas, fare programs and incentives need to be developed to increase the number of transit users. Such programs should be designed specifically for businesses and households within transit communities and corridors. This issue was brought forward in several of our interviews. The issue of fares (and subsidies for transit in general) has implications for economic equity. Often, those who most rely on the use of transit cannot afford to use it. This point was made by a number of individuals who were interviewed.

### Action

Convene representatives of local governments, transportation strategists, social service providers, public school liaisons, workforce agencies, and transit oriented development experts to develop a comprehensive program to incentivize use of the FasTracks system. Focus should be on residents and businesses within transit communities along the system.

*The Regional Transportation District should incorporate this task into its work on fares. The Denver Regional Council of Governments could serve as the convener on this task. Other alternatives could include academic institutions, professional associations, or research agencies.*

Note: The Regional Transportation District currently has work underway to review fare structures.

Timeframe: short term (1-2 years)

### Measure

1. Increased overall ridership numbers producing additional revenue.
2. Increase in ridership numbers for transit dependent individuals and families.

## Recommendation 16: Education and Outreach

*Develop outreach programs to address the benefits of infill and redevelopment; advance appropriate densities in the right places; maintain community character; provide attractive, innovative and inviting designs; address funding needs; and meet the diversity of housing needs. Incorporate the benefits of transit use – including financial benefits to the household budget – as important issues for outreach programs.*

### Examples of Outreach

- Workshops and discussion to provide information on transit oriented development, housing, and land use.
- Information sharing on expedited development review and reducing barriers to housing production
- Engagement with disadvantaged populations
- Information sharing with developers and investors to address challenges and incentives for producing housing and transit oriented development.
- Visualization programs – “Visualize density”

## Background

For successful implementation of station area planning – and for successful community support for transit oriented development – local jurisdictions and their partners should establish education and outreach programs. Such programs should be designed to engage decision-makers, planning commissioners, jurisdictional agencies, developers, architects, designers, business groups, and various community groups, as well as citizens. This recommendation comes from information provided in the interviews, as well as the case studies.



**16 DU/acre**



**100 DU acre**

## Action

Convene representatives of local governments, communication strategists, and transit oriented development experts to develop an outreach and education program for messaging the benefits of transit oriented development and increasing technical capacity and skills throughout the region for developing at FasTracks transit stations. To support these efforts, provide developer training, tools, and information to enhance the capacity of local developers that are less familiar with transit oriented development.

*The Denver Regional Council of Governments should serve as convener for this task. The Council, other existing partner agencies (such as the Regional Transportation District), or a new agency or organization could carry out ongoing guidance and oversight for advancing the education and outreach.*

**Timeframe:** short term (1-2 years)

### **Outreach and Education: The Transit Alliance**

Transportation, as one regional stakeholder stated, is the “quiet crisis.” Funding shortages; significant infrastructure needs; lacking pedestrian, bicycle, and first and last mile connections; and transit affordability are at the forefront of the minds of many, but not most, of the region’s residents. It is paradoxical to have this “crisis” during the region’s multi-billion transportation investment. Yet, many who are long tenured in both the region and its transportation history relate the development of both capacity and will in politicians and the public to bring FasTracks to fruition. Today, the Transit Alliance leads the way. Its model Transit Academy creates transit advocates equipped with knowledge and a plan to further the capacity and will of the region to face its “quiet crisis.” The Transit Alliance is a model worth holding up, supporting, and replicating – and could more greatly achieve the goals of the Sustainable Communities Initiative.

## Measures

1. Creation of outreach and engagement efforts associated with station area development.
2. Number of stakeholders contacted through outreach and engagement efforts.
3. Demonstrated impact of outreach and engagement efforts.

## Recommendation 17: Further Monitor Investments and Development in Transit Communities

*Track progress on various aspects of development along FasTracks corridors and at station areas, including, but not limited to, investments, housing production, economic development, infrastructure improvements, public health, environmental quality, and job growth. Distribute information for planning, assessment, and decision-making.*

### Background

Metro Denver would benefit from an expanded and ongoing monitoring effort to assess development activity and public investments in the station areas along the FasTracks system, including tracking housing, jobs, services and amenities, transit ridership, and mode-split. The monitoring program should be twofold: (1) are we doing what we said we would do (that is, monitoring implementation), and (2) are we getting the desired results (monitoring performance)? Monitoring could be overseen by an existing agency, or a new collaborative effort charged with the task. The information gathered through the monitoring process would be used for further refinement or adjustment of policies, implementation actions, and/or programs related to station area development. This recommendation is based on the interviews and case studies.

#### Thoughts on Monitoring

The monitoring effort should measure development at station areas, as well as last mile connections.

Metrics should measure qualitative and quantitative urban design characteristics, and quantitative market and economic measures of transit oriented development and how it “performs” at stations. Metrics include mode of travel to stations, travel times to stations, miles of sidewalk, miles of bike lanes and off-street paths, street grid density, walk and bicycle access scores, and socioeconomic statistics, and development trends captured by permits and related information.

#### Standardize information to address the following:

(1) identifying which data to track, at what scale, and in what form, (2) identifying how the data is acquired, in what format, and how often, (3) identifying where it is located, i.e., which agency or institution is responsible for keeping and updating the data, and (4) distribution of the data and information to those responsible for station area planning and development, accompanied by technical assistance, when appropriate, on how to use the data for marketing, outreach in the community, education, planning, and monitoring.

The types of information to support planning and development at station areas includes (a) permit data, (b) sidewalk and bicycle facilities, (c) jobs, and (d) housing sales, prices, types and conditions for single-family and multifamily, owner-occupied or rental, and all types of affordable housing.

## Action

Convene representatives of local governments, regional agencies, academic institutions, professional associations (such as, Urban Land Institute and the American Planning Association), and community and interest groups to address collaboration on monitoring investments and development in station areas, along with investments in services and amenities, transit ridership and mode-split.

A portion of the monitoring effort should result in the creation of a land use and development data base built from a regional system of permits, entitlements and certificates of occupancy to show the evidence of interest, and opportunities for transit oriented development. It should identify and analyze buildable land in station areas. It should also inform marketing efforts to communicate the economic benefits of transit oriented development.

*As the agency with the primary responsibility for regional data and information, the Denver Regional Council of Governments is well suited for this task. As an alternative, this recommendation could be undertaken by the Regional Transportation District. Other alternatives include an existing or new agency or organization, or a local academic institution.*

**Timeframe:** short term (1-2 years)

## Measures

1. A coordinated monitoring process is in place
2. Regional and local planning agencies have data and information from monitoring efforts through a common data collection and analysis framework
3. Regional and local planning agencies have standardized and consistent data
4. System in place to distribute data

### **Existing Monitoring Efforts – Regional Transportation District**

The Regional Transportation District's currently maintains several monitoring programs, including the Transit oriented Development Project Database, Quality of Life reports, Customer Satisfaction; parking utilization, and Transit oriented Development Status and Lessons Learned reports. However, the District does not set the agenda for communities, and therefore these reports are not benchmarked against broader goals, beyond the District's mission. The Regional Transportation District's goals are to balance transit needs with regional growth; increase mode share during peak times, and improve transportation choices.

### **Denver Regional Council of Governments**

The Denver Regional Council of Governments has a survey called "Who is TOD?" It looks at attitudes toward transit, which also are important to track in terms of information on travel demand.

### **Monitoring Elsewhere**

Several regions (e.g., California, Minnesota, and New Jersey) have collected, tracked, and reported data on supply and demand for developable land near transit. Studies have found that when these are done, intended outcomes have been achieved – such as directing growth and development to station areas and transit corridors – and not achieved when not tracked. Currently, the Piton Foundation is creating a system for collecting, tracking, and reporting on the supply side of development: entitlements, permits, and certificates of occupancy.



## Recommendation 18: Planning for Complete Transportation: Begin Advance Planning for Future Transit Corridors

*Begin advance planning for future high-capacity transit corridors in the Denver metropolitan area, focusing on putting the planning and regulatory framework in place for developing complete transit communities in these locations as the FasTracks system and other transit options expand.*

### Background

FasTracks is a nationally-recognized effort to provide alternatives to driving in the Denver area. High-capacity transit will continue to be needed to meet the growing transportation demands of a growing region. The Regional Transportation Plan already includes alignments under consideration for future investment in high-capacity transit in the Denver area. Even though decisions are yet to be made about the precise technology or transportation mode that will be constructed in these corridors, now is the time to begin planning for how growth and development should occur to best accommodate future mobility investments. A number of individuals interviewed emphasized the need to be planning in advance for the future.

### Action

Begin the process to plan for these alignments and develop corridor planning efforts to help guide residential and employment growth already occurring in these corridors.

*The Denver Regional Council of Governments and the Regional Transportation District should undertake this task in collaboration with communities associated with these developments. Other alternatives include existing or new partner agencies or organizations, or a local academic institution.*

Timeframe: mid-range (3-5 years)

### Measures

Regional agencies and localities are addressing future high-capacity transit corridors in their long-range plans.

## Recommendation 19: Adding Capacity to Local & Regional Planning: Best Practices Toolkit

*Develop resources and tools for jurisdictions to use to support planning for and attracting development to transit communities. The toolkit would cross-reference other toolkits and resources available, but would be tailored specifically to assist jurisdictions in metro Denver.*

### Background

Most of the recommendations advanced in this section require a great deal of time, attention, and expertise from planners, technical experts, developers, decision-makers, investors, and many others. Strengthening the

#### Contents of a Transit oriented Development Toolkit

- (a) Model policies and codes | compact urban form, green design, sustainable practices
- (b) Information on urban design and successfully integrating transit oriented development into existing communities.
- (c) Parking management strategies: modeling parking demand, sharing parking
- (d) Documentation on programs and practices with successful housing outcomes, including well integrated, racially/ethnically and economically diverse communities.

capacity of jurisdictions and their local and regional partners can help to achieve success early and regularly.

Along with financial resources and technical expertise, information on best practices and useful tools can be quite beneficial. A best practices toolkit for transit oriented development can be a resource for housing, mixed-use development, mobility investments, economic development, and other aspects of creating vibrant and healthy transit communities.

### **Action**

Work with local jurisdictions, regional agencies, professional associations, academic institutions, interest groups, and others to develop tools and resources for use to support planning and development in station areas.

*The Denver Regional Council of Governments and the Regional Transportation District should undertake this task. Other alternatives include existing or new partner agencies or organizations, or a local academic institution.*

**Timeframe:** short term (1-2 years)

### **Measures**

A station area toolkit has been created and is regularly used by local jurisdictions and their partners in planning and developing transit oriented communities.

## **Conclusion**

The recommendations and actions advanced here provide a framework for taking specific steps to advance developing more complete, vibrant, and prosperous transit communities. As initial actions take place, additional implementation steps will need to be identified and pursued. The measures provided here also should continue to be refined and updated to ensure that planners, decision-makers, and citizens have the best information for understanding what is working, and what may need to be improved.

# Appendix A: Corridor-By-Corridor Analysis

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The research team performed an extensive study of each of the 4 corridors that comprise the existing Denver regional transit system: the Central Line, West Line, Southeast Line, and Southwest Line. Data was collected from multiple sources on key characteristics related to: accessibility, site development, jobs and economic development and affordable housing.<sup>7</sup>

First, primary data was collected through site visits of each station area. The site analysis required an evaluator (or small team of evaluators) to walk from a point a half-mile out from the station and back. Along the return walk, the evaluator(s) documented the conditions of the station and the walking route. Conditions were documented using qualitative comments, and quantitative criteria (see site analysis methodology, below).

Secondary data on businesses, jobs, demographics, commute modes, ridership, parking utilization, zoning, and parcels were collected from a variety of sources, including: the Esri Business Info, InfogroupUSA, Census data, RTD TOD Projects Database, RTD ridership, and the RTD parking utilization data, and the DRCOG's GIS layers on zoning, land use, and property assessments.

Third, we conducted a content analysis of jurisdiction websites as well as plans and reports on station areas, including station area or TOD plans. Finally, we undertook an inspection of satellite and street view imagery through Google Maps to evaluate open space, parks, streets, buildings and urban form beyond the site analysis.

This appendix summarizes our data collection efforts and the related findings for the different transit corridors. After describing our methodology for the site analysis, which was a very detailed effort, this appendix offers an overview of the findings for each corridor based on the primary areas of study: accessibility, site development, jobs and economic development and affordable housing.

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<sup>7</sup> These four themes- accessibility, site development, jobs and economic development and affordable housing – are based on the overarching goals of the Denver Regional Council of Governments Sustainable Communities Initiative.

## Site Analysis Methodology

The evaluation criteria for the site analysis were based on 23 scoring categories that provided insights into the four areas of study: affordable housing, site development, jobs and economic development, and accessibility. Seven scoring categories were used to assess the station areas and 16 scoring categories were used to assess the broader transit zone. These categories and the scoring guidelines are summarized in Table 1A (below). When summed, the 23 categories were worth a maximum of 100 points. The station area could receive up to 29 points, while the broader half-mile transit zone could receive 71 points.

The station scores were ‘curved’ relative to the system. For example, if the highest scoring station was 94 then we divided the total scores into three final bins - Needs Improvement, Moderate, and Performing – based off the 94, not the 100 potential points.

**Table 1A. Scoring Criteria**

Criteria	Definition and Value of Points
<b>STATION AREA</b>	
Way finding (5 points)	0: No way finding 1: Minimal Signage (1) and/or low station visibility 2: Moderate Signage (2) and/or moderate station visibility 3: Adequate Signage (3) and/or adequate station visibility 4: Good Signage (4) and/or good station visibility 5: Excellent Signage (5+) and excellent station visibility
Parking utilization (3 points)	0: 0-25% utilized 1: 26 - 50% utilized 2: 51 - 75% utilized or overburdened (spilling into neighborhood) 3: 76 - 100% utilized, OR parking not needed or exceeding on-street availability
Station design (3 points)	0: Very poor (example: the station is on a different level than the street and sidewalks, it is difficult to get to on foot and services are poorly located within the station) 1: Adequate (example: you can get there and don't feel too unsafe. Things are working and present, but not extras and it's not easy or enjoyable) 2: Good (example: easy to navigate by at least two methods of travel, all services functioning and feeling of safety, station may NOT be visually appealing) 3: Excellent (example: services are convenient locations, it is easy to navigate to the station by car, on foot and on bike, the station is at the same level as the surrounding area)

Criteria	Definition and Value of Points
Infrastructure Connectivity/Barriers to station (5 points)	<p>0: All directions (N,E,S,W) have barriers, difficult to find routes to surrounding areas</p> <p>1: The station has at least one point of connection to surrounding area that makes it possible to navigate to surrounding community</p> <p>2: The station has connectivity on at least two sides, but connections are difficult to find or of poor quality.</p> <p>3: The station has adequate connectivity on at least two sides and offers some connection to the surrounding community.</p> <p>4: The station has good connectivity on at least three sides and it is generally easy to navigate to surrounding area.</p> <p>5: Very easy to navigate from station to surrounding area. Very minimal or no barriers exists in all directions</p>
Quality of ADA (5 points)	<p>0: Impossible for some ADA users to safely use</p> <p>1: Very poor: Many barriers for users or very unsafe design present, lack of transit information</p> <p>2: Poor: Some barriers for users or inconvenient design, poor options for transit information</p> <p>3: Adequate: Minimal barriers for users or inconvenient design, adequate options for transit information</p> <p>4: Good: Convenient design and no more than one barrier for users, strong variety of options for transit information</p> <p>5: Excellent: Very easy for ADA users to navigate station, use station amenities and receive transit information. No barriers present.</p>
Safety (5 points)	<p>0: Very poor (for example: very poor lighting, low use, low visibility, busy roadways to cross, vandalism)</p> <p>1: Poor (example: inadequate lighting, moderate use, poor lighting, some disrepair, heavy or fast traffic though crosswalk signals may be present)</p> <p>2: Adequate (example: lighting is functional, no vandalism, moderate traffic, crosswalks or signals present, moderate use)</p> <p>3: Good (example: consistent users present, no vandalism, extra/human scale lighting, no traffic concerns)</p> <p>4: Very good (example: high level of use, human scale lighting, no vandalism, good traffic control, station activated majority of day)</p> <p>5: Excellent (for example: vibrant area with great lighting, safe pedestrian routes, no vandalism, these conditions are present throughout station area)</p>

Criteria	Definition and Value of Points
Bicycle infrastructure & amenities (3 points)	0: Poor (example: No bike infrastructure in surrounding areas. Amenities at station are a poor design or inadequate) 1: Adequate (example: Some bike infrastructure in area, but no striped bike lanes, few bike racks) 2: Good (example: at least one bike route with striped lane/or divided lane, adequate bike racks) 3: Excellent (example: bike connections from multiple routes to station with well-placed and sufficient bike amenities at station and more than one striped or divided lane)
<b>TRANSIT ZONE</b>	
Way finding (5 points)	0: No way finding 1: Poor Signage (1-2) and/or low station visibility 3: Adequate Signage (3-4) and/or adequate station visibility 5: Excellent Signage (5+) and/or excellent station visibility
Safety (5 points)	0: Very poor (for example: very poor lighting, low use, low visibility, busy roadways to cross, vandalism) 1: Poor (example: inadequate lighting, moderate use, poor lighting, some disrepair, heavy or fast traffic though crosswalk signals may be present) 2: Adequate (example: lighting is functional, no vandalism, moderate traffic, crosswalks or signals present, moderate use) 3: Good (example: consistent users present, no vandalism, extra/human scale lighting, no traffic concerns) 4: Very good (example: high level of use, human scale lighting, no vandalism, good traffic control, transit area activated majority of day) 5: Excellent (for example: vibrant area with great lighting, safe pedestrian routes, no vandalism, these conditions are present throughout transit area)
Quality of Walk (7 points)	0: Walking Route Impossible: Barriers obstruct pedestrians from reaching station 1: Very poor (example: sidewalks, if they exist, disappear or are of very poor quality, the routes to amenities are inconvenient and roadway crossings are dangerous) 2: Poor (example: sidewalks are of poor quality, routes are somewhat inconvenient and crossings uncomfortable) 3: Adequate (example: sidewalks are consistently present, but too narrow or poor quality, routes are sometimes inconvenient, no landscaping present) 4: Good (example: routes are logical, sidewalks are wide enough, intermittent landscaping, active uses along routes) 5: Very Good (example: multiple route options with landscaping that offers shade, active uses and lots of pedestrians, no traffic concerns) 7: Excellent (example: well shaded with wide sidewalks protected from roadway, other peds are out and the routes are convenient, enjoyable walk)

Criteria	Definition and Value of Points
Connections to buses (5 points)	0: Very poor: No bus routes are within the transit zone. 1: Poor: Very few bus routes are within the transit zone and they are far away from the light rail station. 2: Adequate: Several bus routes are within the transit zone, though they may be far from the station. 3: Good: At least one route is available at the station and there are additional routes in the transit zone 4: Very Good: Several routes are available at the station and there are additional routes in the transit zone 5: Excellent: Many routes are available and the bus stations are near or at the light rail station. The buses arrive frequently.
Major Destinations/attractions (3 points)	1: Poor: No identified major destinations 2: Adequate: Several major destinations or attractions 3: Good: Many major destinations or attractions
Jobs & Businesses (3 points)	<b>Jobs: Population</b> Primarily Residential: 1: $0 < .2$ ; 2: $.2 < .4$ ; 3: $> .4$ Mixed Use: 1: $0 < .8$ ; 2: $.8 < 1.4$ ; 3: $> 1.4$ Primarily Business: 1: $0 < 3$ ; 2: $3 < 8$ ; 3: $> 8$ <b>Low-, Middle-, and High- Skill Jobs Scores:</b> <b>Low Skill:</b> Primarily Residential: 1: $0 < .1$ ; 2: $.1 < .3$ ; 3: $> .3$ Mixed Use: 1: $0 < .3$ ; 2: $.3 < 1$ ; 3: $> 1$ Primarily Business: 1: $0 < .4$ ; 2: $.4 < 2$ ; 3: $> 2$ <b>Middle Skill:</b> Primarily Residential: 1: $0 < .04$ ; 2: $.04 < .11$ ; 3: $> .11$ Mixed Use: 1: $0 < .25$ ; 2: $.25 < .6$ ; 3: $> .6$ Primarily Business: 1: $0 < .45$ ; 2: $.45 < 1.7$ ; 3: $> 1.7$ <b>High Skill:</b> Primarily Residential: 1: $0 < .02$ ; 2: $.02 < .1$ ; 3: $> .1$ Mixed Use: 1: $0 < .125$ ; 2: $.125 < .5$ ; 3: $> .5$ Primarily Business: 1: $0 < .2$ ; 2: $.2 < 1$ ; 3: $> 1$
Commute to Work by Transit, Walk, Bike (3 points)	Percent of station area residents who commuted to work by public transit, walking, or biking 1: 5-10% 2: 11-20% 3: >20%

Criteria	Definition and Value of Points
Mix of uses, segregated uses (5 points)	<p>0: Does not support TOD (example: Uses are very segregated, zoning promotes segregation and/or low density, disconnected sidewalks and no bus connections)</p> <p>1: Supports TOD poorly (example: very few bus connections, very few destinations within walking distance, segregated uses)</p> <p>2: Moderately supports TOD (example: at least one bus connection, several destinations within walking distance, light mix of uses)</p> <p>3: Adequately supports TOD (example: multiple bus connections, variety of destinations within walking distance, connected sidewalks, light mix of uses)</p> <p>4: Supports TOD well (example: many bus connections, variety of uses, mixed with residential are within walking distance and sidewalk connections are consistent)</p> <p>5: Supports TOD very well (example: zoning allows for high density and lower parking rates, uses are mixed, including high density residential and heavily used commercial)</p>
Housing density (5 points)	<p>0: &lt; 7 units/acre</p> <p>1: &gt; or equal to 7 units/acre &lt;12</p> <p>2: &gt; or equal to 12 units/acre &lt; 20</p> <p>3: &gt; or equal to 20 units/acre &lt; 30 units/acre</p> <p>4: &gt; or equal to 30 units/acre &lt; 60 units/acre</p> <p>5: &gt; or equal to 60 units per acre</p>
Affordable housing (5 points)	<p>0.5: Households earning &lt;\$19,000 are at least 10%</p> <p>0.5: Households earning &lt;\$20-\$49K are at least 22%</p> <p>0.5: Households earning \$50K-\$74.9K are 32% +/- 5%</p> <p>0.5: Households earning &gt;\$75K are &lt;36%</p> <p>1: Rentals are 40%-75% of total housing units</p> <p>0.5: HHS paying &gt;30% of income are less than 30% of all households</p> <p>1: at least 80 of the housing units are subsidized rental units</p> <p>0.5: Net residential density is at least 12 d.u./acre</p>
Public amenities (5 points)	<p>0: None present in transit zone</p> <p>1: Poor</p> <p>2: Adequate</p> <p>3: Good</p> <p>4: Very Good</p> <p>5: Excellent</p>
Zoning (4 points)	<p>0: Poor (example: mixed uses are not allowed or zoning is ill align with permitted uses that promote TOD)</p> <p>1: Adequate</p> <p>2: Good</p> <p>4: Excellent (example: the zoning includes parking maximums and allows for mixed uses. Higher densities are allowed around the transit area)</p>



Criteria	Definition and Value of Points
Bicycle infrastructure (3 points)	0: Very poor (example: No roadways with striped bike lanes were observed, bike racks were not present) 1: Poor 2: Adequate 3: Excellent (example: Multiple roadways have striped bike lanes, bike racks are not overburdened and were present along all walking point routes)
Vibrancy and utilization (5 points)	0: Very poor (example: there are very few people and those present are passing through) 1: Very Poor 2: Poor 3: Adequate 4: Good 5: Excellent (example: the area is activated from the majority of the day due to the mix of uses, there are many people present)
Infrastructure Connectivity/ Barriers to station (5 points)	0: All directions (N,E,S,W) have barriers, difficult to find routes to surrounding areas 1: The station has at least one point of connection to surrounding area that makes it possible to navigate to surrounding community 2: The station has connectivity on at least two sides, but connections are difficult to find or of poor quality. 3: The station has adequate connectivity on at least two sides and offers some connection to the surrounding community. 4: The station has good connectivity on at least three sides and it is generally easy to navigate to surrounding area. 5: Very easy to navigate from station to surrounding area. Very minimal or no barriers exists in all directions
Sub-area or station plans with goals (5points)	0: No plans exist. 1: TOD is mentioned in their comp plan, but there are few specific and no teeth 3: There's a sub-area or TOD plan with station goals, but no changes in zoning, etc. 5: One or more plan exists that sets strong station goals and includes information on implementation and/or action steps to reach goals

The scoring categories are associated with each of the study’s areas of focus – accessibility, site development, jobs and economic development and affordable housing. First, for accessibility, the study employed a composite of eleven indicators: four from the immediate station area, and seven from the half-mile transit zone. In particular, the station area indicators included: way finding, infrastructure connectivity, quality of disability access, and bicycle infrastructure. The transit zone indicators included: way finding, quality of the walk, connection to buses, major destinations/attractions, commute to work by transit/walk/bike, bicycle infrastructure and infrastructure connectivity. The total possible score was a 47 and actual scores ranged from 15 to 43.

Second, the site development scores were a composite of eight indicators from the station area and the half-mile transit zone, including: station design, major destinations and attractions, mix of uses or segregated uses, housing density, public amenities, zoning, vibrancy and utilization and sub-area or station plans with goals. The total possible score was a 35 and actual scores ranged from 6 to 33.

Third, to score the station areas on affordable housing several criteria, in addition to the total number of subsidized rental units, were employed. In particular, stations could receive a total of 5 points based on the following five indicators:

- a. Subsidized units (1 pt): Stations received 1 point if they had at least 80 units of subsidized housing. The number 80 was used for two reasons. First, was to determine what percentage of a station’s existing housing units as subsidized would be appropriate given the demand for affordable housing and the distribution of incomes. We set the bar at approximately 20% of units. The station with the fewest housing units currently is the Federal Center. If this station had 80 units of subsidized affordable housing, they would only be 23% of all units. The second reason for using the number 80 is that it is a high enough number of units to make a tax credit-financed affordable housing project feasible.
- b. Net residential density (0.5 pts): Net residential density was used as an indicator because greater densities allow more homes per acre, reducing the total development costs, thereby allowing savings to be passed on to the renter or owner. Each station received a score of 0 to 4 depending on the level of density. The density levels were determined by the densities recommended to support different types of transit as shown in the following table. Stations were given 0.5 points if they scored at least a 2, i.e. at least 12 units / acre.

Points	Density Threshold (dwelling units per residential acre)
0	< 7 units/acre
1	> or equal to 7 units/acre <12
2	> or equal to 12 units/acre < 20
3	> or equal to 20 units/acre < 30 units/acre
4	> or equal to 30 units/acre < 60 units/acre
5	> or equal to 60 units per acre

- c. Share of rental units (1 pt.): Rental housing generally is also more affordable since renting does not require a significant down payment, a high enough income to secure a loan or purchase the house, etc. and therefore the end rent or price is reflected in the affordable housing scores. To determine the appropriate percentage of rentals to make a station area’s housing stock more affordable, we started with the existing share of rental housing in the region, which was 33% in 2010, and then adjusted it for the percent of households with an income more suited to renting. Stations received 1 point if they had between 40% and 75% of the stock as rentals. The range is quite large, from 16% at the Littleton-Mineral station, to 92% at the Belleview station. The median is 69%.

- d. Housing-to-income-expenditure ratio (0.5 pts): The frequently used affordability measure, “housing income-to-expenditure ratio” reported by the Census is another way to measure whether current households are able to afford their rental unit or home. The rule of thumb is that households can afford their housing and all other necessities if housing is less than 30% of the household expenditures. Stations received 0.5 points if less than 30% of households were allocating more than 30% of their expenditures to afford housing.
- e. Mix of incomes (2 pts): The fifth scoring criteria, mix of incomes, is based on stated preference theory. If households of lower and moderate incomes are living in the zone, then we assume that is an expressed preference and that preference is based on affordability. The mix of incomes may also show the tolerance of the community for affordable housing. Stations scored 0.5 points for each of the following criteria regarding the percentage of households by income:
- Households <\$19,000 are at least 15%
  - Households <\$20-\$49K are at least 20%
  - Households \$50K-\$74.9K are 30% +/- 5%
  - Households >\$75K are <30%

Finally, to determine the jobs and economic development score, each site was first categorized as primarily residential, mixed, or primarily business based on the Center for Transit Oriented Development (CTOD) performance measure of: (workers/(workers+resident)), where primarily residential stations are  $\leq 33.3\%$ ; mixed use stations are  $>33.3\%$ - $66.7\%$ ; and primarily business stations are  $>66.7\%$ : employment.

To assess the ability of FasTracks to connect the region’s range of skilled workforce to corresponding skilled jobs, the region, and its corridors and stations, were assessed for the presence of jobs across the skill spectrum. Using three-digit National Industry Classification System (NAICS) codes by industry, the types, proportions, and incomes of jobs in each station area were analyzed. NAICS codes were grouped into Low, Middle, and High skill classifications based on the job description, and the perceived skill level, education, or training needed to complete the duties of the job. The associated income of each position was also considered.

## Data and Results

As shown in Figure 1 (below), the total scores for the system ranged from 28.5 to 86.5, with the highest frequency of scores falling between 51 and 70 points. The highest scoring transit zones were concentrated in the Central Business District; however there were also high scoring transit zones in suburban areas and low scoring transit zones in Central Business District zones. Stations that earned less than 43 total points were rated Needs Improvement (red bars); those earning 43 to 72 points were rated Moderate (yellow bars); and those earning 72 points or more were rated Performing (green bars). This sub-section summarizes the data - for affordable housing, site development, jobs and economic development, and accessibility - at the level of the entire transit system.

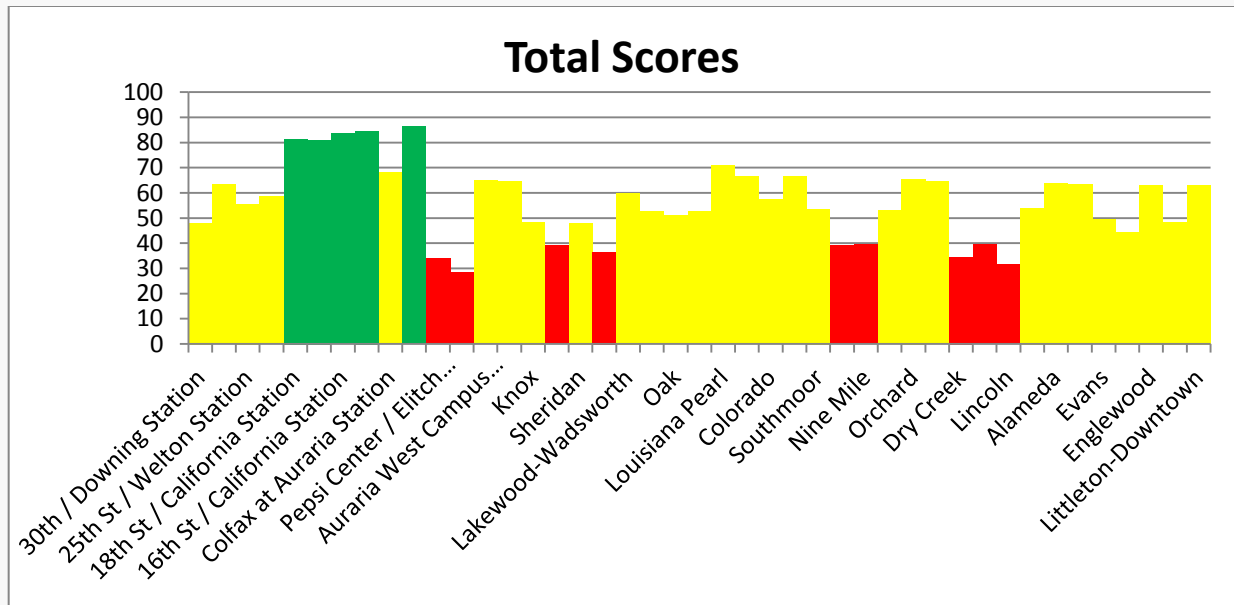


Figure 1A: System total scores

### Accessibility

Of the 44 stations evaluated, In general, over half (52%) of all station areas in the region were rated Improving for accessibility, suggesting that the stations are showing moderate performance and may be moving toward higher performance. Eighteen percent were rated well-performing. However, almost one-third (30%) of all station areas in the region were rated Needs Improvement. The higher accessibility scores were more common for some of Central Corridor stations, followed by the West Corridor. More variability and lower scores were found in the southwest and southeast corridors.

One of the inputs to the accessibility analysis was the time it took for a pedestrian to walk a half mile from the outer edge of the transit zone to the station

While the average walking point time was relatively the same along the corridors, the walks themselves were very different. The walk times alone did not account for the walkability of the transit zone. Some transit zones with high levels of accessibility featured longer walking routes, while some transit zones that fared poorly on accessibility had short walking times.

Contributing factors to these differences were the presence or lack of contiguous sidewalks,

heavy traffic flows, way finding signage, ADA compliant infrastructure, and/or the types and number of lanes of traffic at crossings.

An important part of accessibility is how safe one feels accessing the station, both from the neighborhood and at the immediate station area.

The Safety scores were based on safety perception data collected by the student surveyors in both the immediate station area as well as the half-mile transit zone. The total possible points were 10 (5 for the immediate station area and five for the transit zone) and actual scores ranged from 2 to 10. The highest scoring areas were in the heart of the Central Business District, where the “eyes on the street” and “safety in numbers” factors played a large role in the higher scores. In most cases, the transit zone received a slightly higher score than the station area, though in a few areas, the station was perceived as safer than the surrounding transit area. The average difference between the station and the surrounding area was 0.7 points.

Factors contributing to low safety scores included low or lack of lighting, poor and unsafe pedestrian infrastructure and lack of other pedestrians. Transit zones with fast-paced traffic, wide streets and discontinuous sidewalks resulted in lower safety scores.

In addition, stations located along highways, for example in the Southeast Corridor, required long highway bridge crossings and traversing large parking lots to access surrounding neighborhoods, which contributed to a low sense of safety and security in the station area and half mile transit zone.

Safety was impacted at stations with elevated train access from the ground and parking levels. Difficulty accessing the train level, low lighting and lack of foot traffic contributed to lower safety ratings in these cases.

### **Central Line**

- 43% Performing, 43% Moderate, 14% Needs Improvement

The average walk time in this corridor was, 11.7 minutes. Some of the higher walk times reported in the Central Corridor were due to signalized intersections, curving routes, and high pedestrian traffic. These were factors that did lengthen the walk time. However, the quality of these walks were balanced by wide or detached sidewalks, shade, and other pedestrian amenities.

### **West Line**

- 11% Performing, 44% Moderate, 44% Needs Improvement

The West Corridor walk times averaged at 11.5 minutes. Although the walk times, were relatively low, this did not translate to higher levels of accessibility. A significant portion of the ½ mile transit zones along the West Corridor had extremely poor sidewalk conditions or sections with no sidewalks at all on one side or both sides of the street.

### **Southeast Line**

- 8% Performing, 54% Moderate, 38% Needs Improvement

The shortest walk time was in the Southeast Corridor. This walk took only 7 minutes to reach the Louisiana Pearl Station from Louisiana and Franklin Street. The mixed-use residential and commercial corridor featured an easy to navigate grid with detached

sidewalks. This transit zone featured some of the most walkable streets that were analyzed. However, the rest of the corridor didn't fare as well. The average walk time for this corridor was 13.1 minutes. Many of the walks were over 15 minutes long, and featured confusing street patterns and low density land use.

### Southwest

- 0% Performing, 75% Moderate, 25% Needs Improvement

The longest walk time was in the Southwest Corridor. This was from Tennessee Avenue and South Platte River Drive to the 1-25/Broadway Station.

The primary factor for this walking time (21 minutes) was due to having to circumvent 1-25 to access the station area. The other two points for this transit zone were 13 minutes or under, and featured easier to navigate grid patterns. This station walk seemed to be an anomaly in the corridor with the average walking score for the Southwest Corridor being 10.7 minutes.

### Site Development

With respect to the site development, 18% of stations were performing well. Fifty percent of stations fell in the Moderate category, meaning the station was performing satisfactorily and was showing signs of improvement. Thirty-two percent of stations were rated as poor, needing improvement. The Central Corridor had the highest performing stations, followed by the southwest corridor where 6 out of 8 stations received a moderate score. The West Corridor had the lowest rating with 5 out of 9 stations needing improvement.

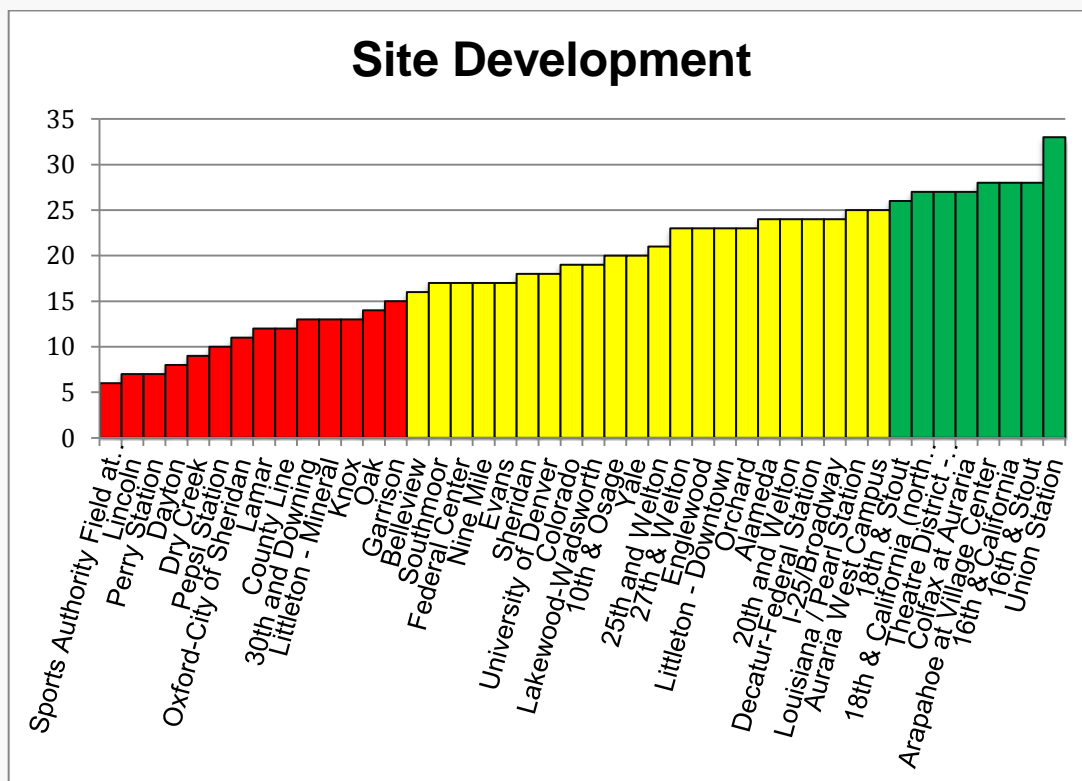


Figure 2A: Site Development Scores by station

Table 2A (below) provides a summary of the number of stations that fall into each of the three categories - needs improvement, moderate and well-performing for the site development metrics.

**Table 2A: Site Development Metrics by Corridor**

Corridor	Needs Improvement		Improving		Performing	
	Number	% of Total	Number	% of Total	Number	% of Total
Central	3	21%	4	18%	7	88%
West	5	36%	4	18%	-	-
Southwest	2	14%	6	27%	-	-
Southeast	4	29%	8	36%	1	13%
<b>Total</b>	<b>14</b>	<b>100%</b>	<b>22</b>	<b>100%</b>	<b>8</b>	<b>100%</b>

Eight stations (18% of all stations) received a high score for site development and are performing well. However, twenty-two stations (50% of all stations) received a “moderate” score and 14 stations (32% of all stations) received a “needs improvement” score.

The Central Corridor has the highest performing stations. Seven of the eight well-performing stations are in the Central Corridor. Central Corridor stations represent the lowest share of stations in the needs improvement and improvement categories at 21% and 18% respectively.

There is more variability in the other corridors. In the southeast corridor, eight stations received a medium score of “improvement”, four stations received a low score of “needs improvement” and only one station is well-performing. Performance is relatively low in the West Corridor; five of the nine stations received a “needs improvement” score (36% of the category total) and the other four stations received an “improvement” score. Similarly, in the southwest corridor, six of the eight southwest stations received an “improvement” score and two received a “needs improvement” score.

Central Corridor stations have favorable features, such as proximity to amenities and mixed uses and zoning, that improved scores. Whereas Lincoln and Perry stations received lower scores due to factors such as low density, segregated uses and zoning, challenging station design and limited access to attractions and amenities. Neither station had station nor sub-area plans.

The following tables provide an analysis of the scoring for each sub-category under site development by transit region and corridor.

**Table 3A: Sub-area or Station Plans with Goals**

<b>Sub-area Plan and Goals Score<sup>8</sup></b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>Total Stations</b>
<b>Central</b>	6	2	3	3	<b>14</b>
<b>West</b>	0	1	4	4	<b>9</b>
<b>Southwest</b>	1	1	2	4	<b>8</b>
<b>Southeast</b>	3	3	5	2	<b>13</b>
<b>Number of Stations</b>	<b>10</b>	<b>7</b>	<b>14</b>	<b>13</b>	<b>44</b>

A score of 3 or 5 was most frequent, meaning 27 stations have at least a sub-area plan or TOD plan with station goals. However, ten stations have no plan at all and in seven stations TOD is only mentioned in a comprehensive plan with no specific details.

Eight out of 14 stations in the Central Corridor received a score of 0 or 1, meaning no sub-area or station plan exists or TOD is only referenced in a comprehensive plan. Given high scores for site development and accessibility in Central Corridor stations it is likely that the range of City and County of Denver plans, including the *2000 Comprehensive Plan*, *Blueprint Denver*, the *2006 TOD Strategic Plan* and *Denver Moves 2011*, are adequately addressing development, housing, accessibility and station design.

Conversely, 8 of the 9 stations in the West Corridor received a score of 3 or 5. Despite the existence of station area plans, some of the stations in the West Corridor received particularly low scores of site development and accessibility. Six out of 8 Southwest Corridor stations received a score of 3 or 4 as did 7 out of 13 southeast corridor stations.

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<sup>8</sup> Scoring: 0 = no plan exists; 1 = TOD is mentioned in their comprehensive plan but there are few specifics; 3 = there is a sub-area plan or TOD plan with station goals but no changes in zoning; 5 = one or more plan exists that sets strong station goals and includes information on implementation



**Table 4A: Station Design**

<b>Station Design Score<sup>9</sup></b>	<b>0</b>		<b>1</b>		<b>2</b>		<b>3</b>		<b>Total Stations</b>
<b>Central</b>	0	-	4	24%	4	27%	6	55%	<b>14</b>
<b>West</b>	1	100%	5	29%	1	7%	2	18%	<b>9</b>
<b>Southwest</b>	0	-	2	12%	5	33%	1	9%	<b>8</b>
<b>Southeast</b>	0	-	6	35%	5	33%	2	18%	<b>13</b>
<b>Total Transit Region</b>	<b>1</b>	<b>100%</b>	<b>17</b>	<b>100%</b>	<b>15</b>	<b>100%</b>	<b>11</b>	<b>100%</b>	<b>44</b>

The majority of the stations have adequate and good station designs (17 and 15 stations respectively) and 11 have excellent station designs. Six of the 11 excellent station designs are in the Central Corridor (43% of Central Corridor stations are ranked excellent) There is a fairly even split in good station designs between the Central, Southwest and Southeast Corridors.

Fifty-six percent of West Corridor stations and 46% of Southeast Corridor stations were ranked adequate. Sheridan Station in the West Corridor received a poor score for station design.

Stations with elevated access to train level from the ground and parking levels and designs requiring track, parking lot and bus lane crossings received lower scores by surveyors.

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<sup>9</sup> Scoring: 0 = “very poor” (e.g. the station is difficult to get to by foot and services are poorly located within the station); 1 = “adequate” (e.g. access is good but safety is not, or vice versa); 2= “good” (e.g. easy to get to by different modes of travel but may not be visually appealing); 3 = “excellent” (e.g. not limitations found)

**Table 5A: Major Destinations/Attractions**

Major Destinations/ Attractions Score <sup>10</sup>	1		2		3		Total Stations
<b>Central</b>	1	10%	3	19%	10	56%	<b>14</b>
<b>West</b>	3	30%	3	19%	3	17%	<b>9</b>
<b>Southwest</b>	2	20%	5	31%	1	5%	<b>8</b>
<b>Southeast</b>	4	40%	5	31%	4	22%	<b>13</b>
<b>Total Transit Region</b>	<b>10</b>		<b>16</b>		<b>18</b>		<b>44</b>

Eighteen stations received a good score, followed by 16 stations with an adequate score. Ten of the 18 (56%) stations with a good score are from the Central Corridor (71% of Central Corridor stations). West Corridor and Southeast Corridors are evenly split between categories, whereas the majority of stations in the Southwest Corridors received an adequate score.

**Table 6A: Mix of Uses/ Segregated Uses**

Mix of Uses/ Segregated Uses <sup>11</sup>	0	1	2	3	4	5	Total Stations
<b>Central</b>	0	2	0	2	2	8	<b>14</b>
<b>West</b>	0	3	2	2	2	0	<b>9</b>
<b>Southwest</b>	0	2	1	1	4	0	<b>8</b>
<b>Southeast</b>	1	2	2	5	1	2	<b>13</b>
<b>Total Transit Region</b>	<b>1</b>	<b>9</b>	<b>5</b>	<b>10</b>	<b>9</b>	<b>10</b>	<b>44</b>

<sup>10</sup> Scoring: 1 = “poor” (e.g. no identified major destinations); 2 = ”adequate” (e.g. several major destinations or attractions; 3 = “good” (e.g. many major destinations and attractions)

<sup>11</sup> Scoring: 0 = Uses are very segregated; 1 = very few bus connections and very few destinations within walking distance; 3 = multiple bus connections and a variety of destinations within walking distance; 4 = variety of connections, multiple land uses mixed with residential and connected sidewalks; 5 = zoning allows for high density across uses.

Ten stations received 5 out of 5; eight out of ten are from the Central Corridor. An additional ten stations received an adequate score and nine stations received 4 out of 5, signifying that 19 stations (43% of all stations) support TOD well or very well.

A number of stations featured segregated uses and low densities. For example, Dayton Station received a 0 for mix of uses. The entire transit zone is zoned low density residential, despite the availability of TOD zoning in the City of Aurora.

**Table 7A: Housing Density**

<b>Housing Density Score<sup>12</sup></b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total Stations</b>
<b>Central</b>	2	3	1	4	4	0	<b>14</b>
<b>West</b>	7	2	0	0	0	0	<b>9</b>
<b>Southwest</b>	3	4	1	0	0	0	<b>8</b>
<b>Southeast</b>	7	5	1	0	0	0	<b>13</b>
<b>Total Transit Region</b>	<b>19</b>	<b>14</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>44</b>

Nineteen stations (43% of all stations) have a housing density of less than 7 units per acre, followed by 14 stations (32%) with a housing density of greater than or equal to 7 units/acre and less than 12. Only eight stations have housing densities equal to or above 20 units/acre and they are all from the Central Corridor.

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<sup>12</sup> Scoring: 0 = “ less than 7 units/acre; 1 = greater than or equal to 7 units/acre but less than 12 units/ acre; 2 = greater than or equal to 12 units/acre but less than 20 units/acre; 3 = greater than or equal to 20 units/acre but less than 30 units/acre; 4 = greater than or equal to 30 units/acre but less than 60 units/acre; 5 = greater than or equal to 60 units/acre.

**Table 8A: Public Amenities**

<b>Public Amenities Score<sup>13</sup></b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total Stations</b>
<b>Central</b>	1	2	1	4	5	1	<b>14</b>
<b>West</b>	1	3	2	3	0	0	<b>9</b>
<b>Southwest</b>	0	0	4	3	1	0	<b>8</b>
<b>Southeast</b>	1	4	2	2	3	1	<b>13</b>
<b>Total Transit Zone</b>	<b>3</b>	<b>9</b>	<b>9</b>	<b>12</b>	<b>9</b>	<b>2</b>	<b>44</b>

The largest share of stations (12) is in the good category, but an additional 9 stations in each of poor, adequate and very good. The highest scores are for the Central Corridor and low scores were assigned for the West Corridor (4 out of 9 stations received poor or none present) and the Southeast Corridor (5 out of 13 stations received poor or none present). The Southwest Corridor ranked fairly well; all stations received scores from adequate to very good.

Despite the presence of amenities and services in some transit zones, scores were low due to difficulty accessing amenities from the station, for example when highway and busy street crossings were required.

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<sup>13</sup> Scoring: 0 = No amenities in the transit zone; 1 = Some amenities, but not adequate; 2 = Adequate number of amenities; 3 = Adequate number of amenities and though some are difficult to access; 4 = Lots of easy to access to adequate number of amenities; 5 = high number of amenities and all are easy to access.

**Table 9A: Zoning**

<b>Zoning Score<sup>14</sup></b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>Total Stations</b>
<b>Central</b>	0	3	2	9	<b>14</b>
<b>West</b>	0	2	6	1	<b>9</b>
<b>Southwest</b>	0	2	2	4	<b>8</b>
<b>Southeast</b>	0	5	4	4	<b>13</b>
<b>Total Transit Zone</b>	<b>0</b>	<b>12</b>	<b>14</b>	<b>18</b>	<b>44</b>

All stations received at least an adequate score and eighteen stations received an excellent score. Sixty-four percent of Central Corridor stations received an excellent score for zoning, as did half of Southwest Corridor stations. Twelve stations received adequate scores; 5 out of 12 stations (38%) were adequate in the Southeast Corridor. As shown in Table 9A (above), some stations featured predominantly low density residential zoning in the transit zone despite the availability of higher density or TOD zoning for use around the transit zone.

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<sup>14</sup> Scoring: 0 = mixed uses are not allowed or zoning does not promote TOD; 1 = zoning allows for mixed uses but, densities are low; 2 = zoning allows for mixed uses and some higher densities but, does not fully promote TOD; 4 = zoning promotes TOD through parking maximums, mixed uses and higher densities.

**Table 10A: Vibrancy and Utilization**

<b>Vibrancy and Utilization Score<sup>15</sup></b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total Stations</b>
<b>Central</b>	1	0	1	5	0	7	<b>14</b>
<b>West</b>	0	2	5	2	0	0	<b>9</b>
<b>Southwest</b>	0	0	4	2	1	1	<b>8</b>
<b>Southeast</b>	0	1	2	6	2	2	<b>13</b>
<b>Total Transit Zone</b>	<b>1</b>	<b>3</b>	<b>12</b>	<b>15</b>	<b>3</b>	<b>10</b>	<b>44</b>

Adequate and poor scores were the most frequent categories. Half of Central Corridor stations received an excellent score, whereas 5 out of 9 West Corridor stations received a poor score, with two very poor and two adequate. The Southwest Corridor performed slightly better than the West Corridor with half the stations between adequate and excellent and half rated as poor

### *Affordability*

The evaluation considered the data in different contexts; primarily residential, mixed use and primarily business. Primarily Residential and Primarily Business contexts had one station each rated Performing, while both Primarily Residential and Mixed Use contexts each had greater than 85% of their stations rated Performing. Not surprisingly, the Primarily Business context had the greatest number of stations rated Needs Improvement. These stations represent opportunity for affordable housing infill development to provide greater access to workers of all skill levels to jobs, and living wage jobs specifically.

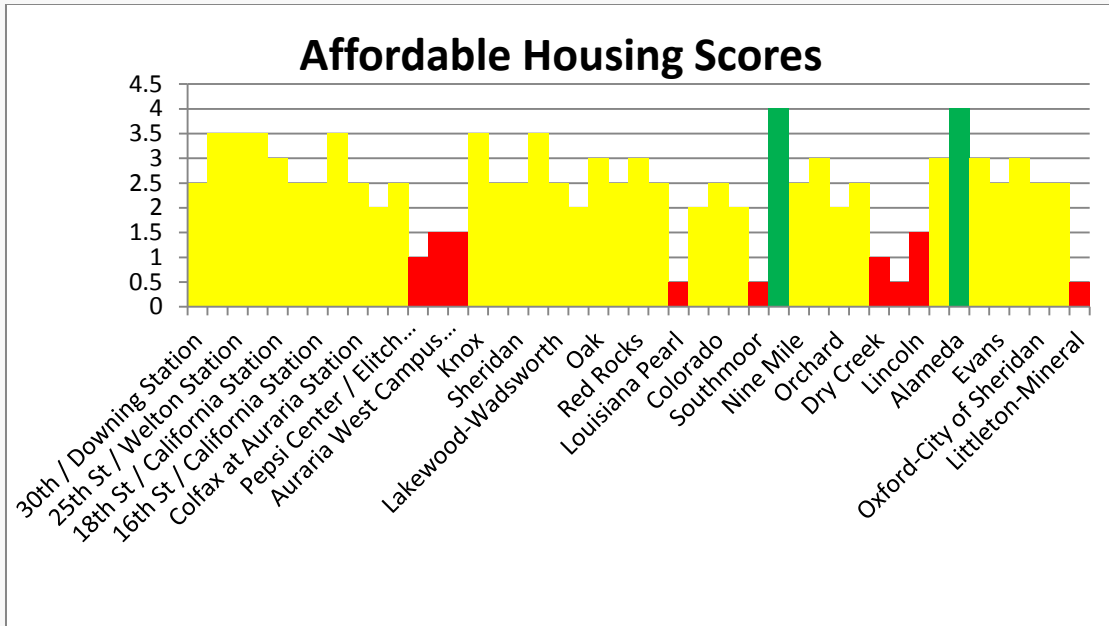
Data analysis conducted for the affordable housing score revealed many cost burdened households, paying more than 30% of income on housing costs, in transit zones throughout the region, particularly in the Central and Southeast Corridors particularly. Low median income, combined with the rising cost of housing in the Central Business District suggests the need for a dedication to the provision and preservation of affordable housing in the area.

Station evaluations noted that the station area plans had minimal reference to building new or maintaining existing affordable housing. Although comprehensive plans, sub-area and station

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<sup>15</sup> Scoring: 0 = very few people present throughout the day; 1 = very few people throughout the day, but those that are present are not just 'passing through'; 2 = some people present but, still mostly passing through; 3 = some people present at some points during the day and some are using the amenities in the area; 4 = some people present at some points during the day, but amenities are well accessed; 5 = the area is activated' through the majority of the day due to a mix of uses.

specific plans often reference the importance of affordable housing for the station area’s future success, specific affordable housing targets and implementation plans were limited.



**Figure 3A: Affordable housing scores for all stations in the region**

As seen in Figure 3A (above) and 4A (below), the moderate and higher performing scores are located in diverse areas of the metro region, including the outskirts of the Central Business District, along the West Line, and inner suburbs along the Southwest Line, while the lower affordability scoring transit areas are primarily clustered in the more expensive Central Business District as well as along the Southeast Line.

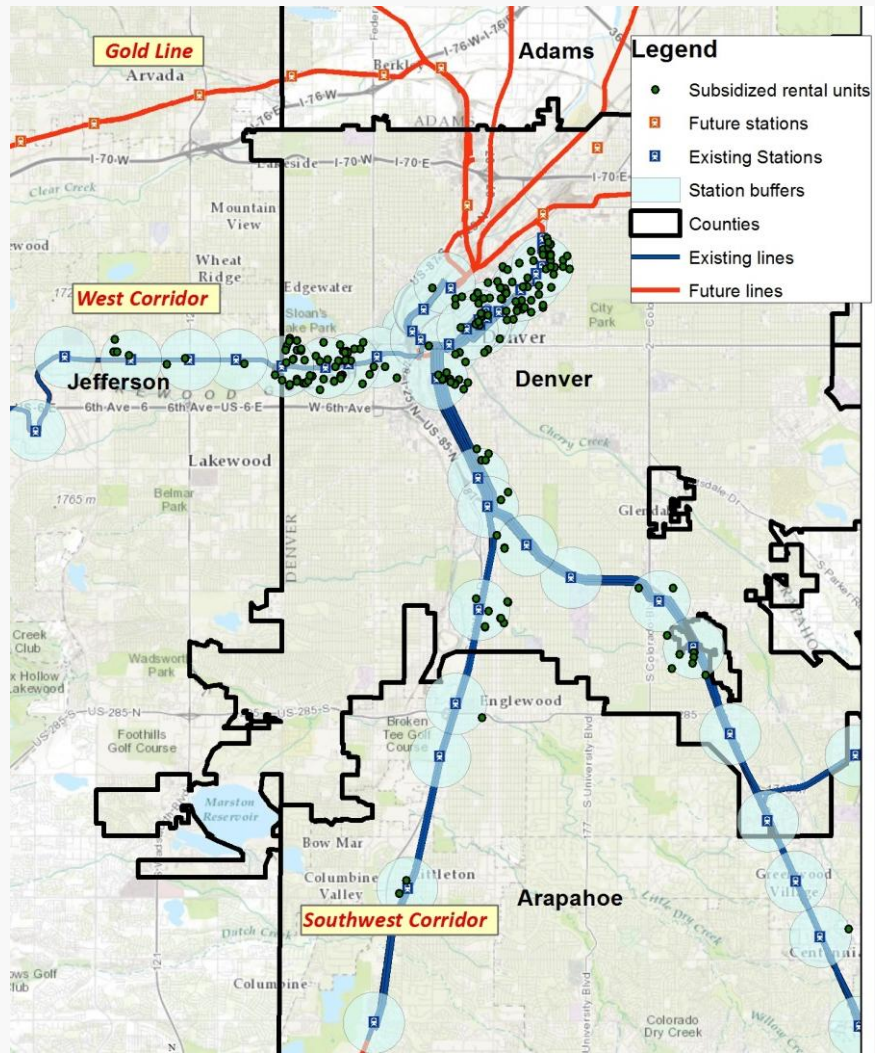


Figure 4A: Location of subsidized rental units along transit lines

Table 11A (next page) provides a detailed overview of the scoring for each station



**Table 11a: Detailed overview of scoring for each station**

Station Name	Subsidized Rental Units	Subsidized Units Score	% w/ a mortgage paying >30% of income	HHS paying >30% of income Score	Net Residential Density Category 2010	Density score >=2	% HH <\$25,000	% HH \$25,000 & \$49K	% HH \$50,000-\$74,999	% HH >=\$75,000 (8)	Households <\$19,000 Score	Households <\$20-\$49K Score	Households \$50K-\$74.9K Score	Households >\$75K Score	% Renter Occupied	% Rental Score	Total Score
Littleton / Mineral Ave Station	4	0	36%	0	0	0.0	10.83	24.44	18.81	45.91	0	0.5	0	0	16%	0	0.5
Oxford - City of Sheridan Station	273	1	35%	0	1	0.0	32.65	31.84	18.26	17.25	0.5	0.5	0	0.5	20%	0	2.5
Sports Authority Field at Mile High	0	0	62%	0	0	0.0	66.14	17.43	2.43	14	0.5	0	0	0.5	23%	0	1
Yale Station	228	1	37%	0	1	0.0	17.38	29.25	18.54	34.83	0.5	0.5	0	0	30%	0	2
Southmoor Station	74	0	44%	0	1	0.0	12.44	22.53	15.09	49.94	0	0.5	0	0	34%	0	0.5
Jefferson County Government Center	351	1	49%	0	1	0.0	29.41	31.99	23.5	15.1	0.5	0.5	0	0.5	35%	0	2.5
Louisiana Station	0	0	28%	0.5	0	0.0	11.81	18.71	20.42	49.06	0	0	0	0	38%	0	0.5
Evans Station	0	0	40%	0	0	0.0	18.12	38.15	20.19	23.55	0.5	0.5	0	0.5	43%	1	2.5
Red Rocks	483	1	51%	0	0	0.0	17.69	29.24	19.62	33.45	0.5	0.5	0	0	49%	1	3
Dayton Station	593	1	26%	0.5	1	0.0	22.07	31.72	17.26	28.94	0.5	0.5	0	0.5	49%	1	4
Garrison	68	0	53%	0	0	0.0	51.77	16.51	12.03	19.7	0.5	0	0	0.5	50%	1	2
Pepsi Center/Elitch	550	1	45%	0	1	0.0	23.87	15.78	13.97	46.38	0.5	0	0	0	53%	1	2.5
Alameda Station	100	1	25%	0.5	1	0.0	31.46	22.32	17.72	28.5	0.5	0.5	0	0.5	57%	1	4
University of Denver Station	0	0	38%	0	0	0.0	28.31	22.46	15.29	33.94	0.5	0.5	0	0	57%	1	2
Arapahoe at Village Center Station	0	0	30%	0.5	0	0.0	25.24	23.07	13.54	38.15	0.5	0.5	0	0	58%	1	2.5
Oak	0	0	37%	0	0	0.0	31.08	24.98	29.4	14.54	0.5	0.5	0.5	0.5	60%	1	3

Station Name	Subsidized Rental Units	Subsidized Units Score	% w/ a mortgage paying >30% of income	HHS paying >30% of income Score	Net Residential Density Category 2010	Density score >=2	% HH <\$25,000	% HH \$25,000 & \$49K	% HH \$50,000-\$74,999	% HH >=\$75,000 (8)	Households <\$19,000 Score	Households <\$20-\$49K Score	Households \$50K-\$74.9K Score	Households >\$75K Score	% Renter Occupied	% Rental Score	Total Score
Hwy I-25 & Broadway Stn	56	0	38%	0	2	0.5	26.11	27.36	19.65	26.88	0.5	0.5	0	0.5	60%	1	3
30th & Downing Station	67	0	39%	0	0	0.0	34.61	26.48	16.44	22.47	0.5	0.5	0	0.5	61%	1	2.5
Nine Mile Station	0	0	46%	0	1	0.0	33.47	25	15.52	26.02	0.5	0.5	0	0.5	63%	1	2.5
27th & Welton Station	228	1	33%	0	1	0.0	35.94	21.2	16.44	26.42	0.5	0.5	0	0.5	65%	1	3.5
Union Station LRT	0	0	43%	0	4	0.5	20.95	15.9	15.26	47.89	0.5	0	0	0	66%	1	2
Knox	110	1	55%	0	0	0.0	46.68	21.9	19.2	12.22	0.5	0.5	0	0.5	66%	1	3.5
Perry	0	0	55%	0	0	0.0	45.16	26.93	15.87	12.03	0.5	0.5	0	0.5	67%	1	2.5
Colorado Station	0	0	36%	0	0	0.0	32.44	34.14	14.34	19.07	0.5	0.5	0	0.5	70%	1	2.5
Sheridan	0	0	43%	0	0	0.0	40.04	30.68	15.98	13.3	0.5	0.5	0	0.5	71%	1	2.5
Lamar	221	1	53%	0	0	0.0	41.23	31.31	12.74	14.72	0.5	0.5	0	0.5	71%	1	3.5
10th & Osage Station	631	1	62%	0	1	0.0	57.68	19.76	10.39	12.17	0.5	0	0	0.5	72%	1	3
Littleton / Downtown Station	0	0	40%	0	0	0.0	33.38	27.12	20.36	19.13	0.5	0.5	0	0.5	72%	1	2.5
25th and Welton Station	327	1	32%	0	1	0.0	34.99	21.67	15.5	27.85	0.5	0.5	0	0.5	73%	1	3.5
Orchard Station	0	0	26%	0.5	0	0.0	13.38	26.18	14.18	46.27	0	0.5	0	0	73%	1	2
Theatre District/Convention Ctr Stn	127	1	47%	0	3	0.5	41.37	16.37	13.17	29.09	0.5	0	0	0.5	74%	1	3.5
Englewood Station	9	0	28%	0.5	1	0.0	35.09	29.41	19.96	15.55	0.5	0.5	0	0.5	75%	1	3
Colfax at Auraria	25	0	48%	0	2	0.5	47.1	16.76	12.22	23.92	0.5	0	0	0.5	75%	1	2.5

Station Name	Subsidized Rental Units	Subsidized Units Score	% w/ a mortgage paying >30% of income	HHS paying >30% of income Score	Net Residential Density Category 2010	Density score >=2	% HH <\$25,000	% HH \$25,000 & \$49K	% HH \$50,000-\$74,999	% HH >=\$75,000 (8)	Households <\$19,000 Score	Households <\$20-\$49K Score	Households \$50K-\$74.9K Score	Households >\$75K Score	% Renter Occupied	% Rental Score	Total Score
Station																	
County Line Station	0	0	30%	0.5	0	0.0	11.6	18.5	22.49	47.41	0	0	0	0	77%	0	0.5
Dry Creek Station	43	0	32%	0	2	0.5	14.12	23.48	17.55	44.84	0	0.5	0	0	77%	0	1
16th & California Station	1515	1	41%	0	4	0.5	40.88	19.78	13	26.33	0.5	0	0	0.5	78%	0	2.5
16th & Stout Station	2137	1	41%	0	4	0.5	39.58	18.81	12.98	28.63	0.5	0	0	0.5	78%	0	2.5
Lakewood-Wadsworth	110	1	49%	0	1	0.0	45.89	22.85	14.7	16.56	0.5	0.5	0	0.5	78%	0	2.5
18th & Stout Station	1595	1	36%	0	3	0.5	37.83	19.75	13.81	28.61	0.5	0	0	0.5	78%	0	2.5
18th & California Station	100	1	36%	0	4	0.5	39.85	20.59	13.66	25.9	0.5	0.5	0	0.5	80%	0	3
Decatur-Federal	0	0	52%	0	0	0.0	51.37	20.36	17.35	10.92	0.5	0.5	0	0.5	82%	0	1.5
Auraria West Station	0	0	62%	0	3	0.5	64.98	13.38	6.43	15.21	0.5	0	0	0.5	85%	0	1.5
20th & Welton Station	672	1	27%	0.5	3	0.5	38.81	21.52	13.94	25.74	0.5	0.5	0	0.5	86%	0	3.5
Lincoln Station	86	1	32%	0	0	0.0	12.54	20.02	24.44	43.01	0	0.5	0	0	87%	0	1.5
Federal Center	255	1	39%	0	1	0.0	25.49	42	15.45	17.07	0.5	0.5	0	0.5	91%	0	2.5
Bellevue Station	1300	1	35%	0	1	0.0	15.41	35.71	26.4	22.47	0.5	0.5	0.5	0.5	92%	0	3

## Jobs and Economic Development

The region had greater than two-thirds (69%) of its stations rated Improving or Performing for the jobs score. However, the Southeast line did not have any station areas ranked Performing for the jobs score. This leaves almost one-third of stations (31%) rated Needs Improvement—meaning they do not have, and so do not provide access to, the full range of skilled jobs.

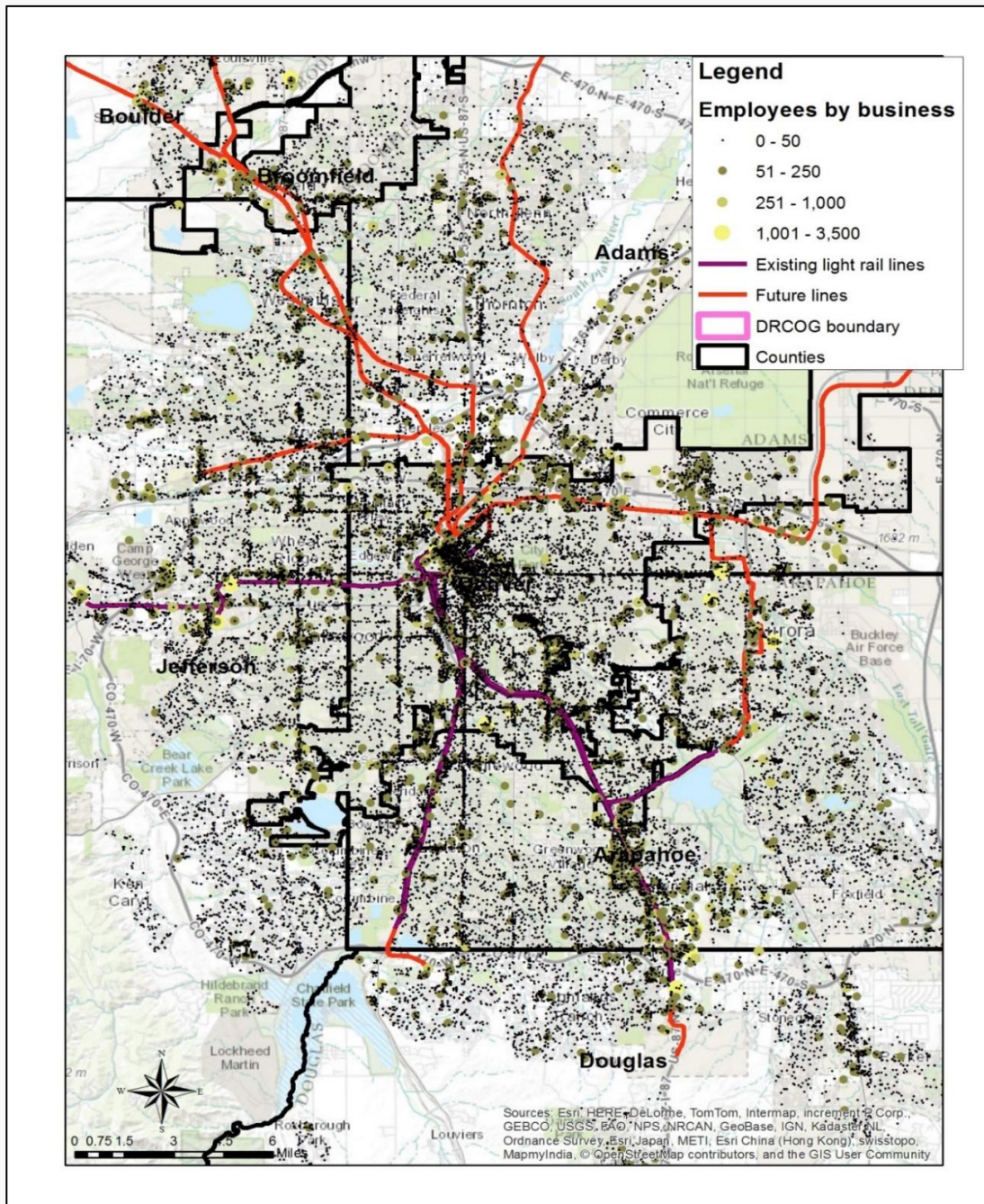


Figure 5A: Number of employees near transit

Figure 6A, below, summarizes the scores for each station. Twenty-percent (9 stations) were well-performing, signifying a high level of job availability, relative to population, a mix of jobs by skill type, and sufficient service for the transit zone’s residents and workers. Slightly over half of the stations received a moderate score and 28% received a low score. At the corridor level, West and Southwest Corridor stations performed well for jobs and economic development. Lower scores were found in the Central Corridor stations and the Southeast Corridor stations.

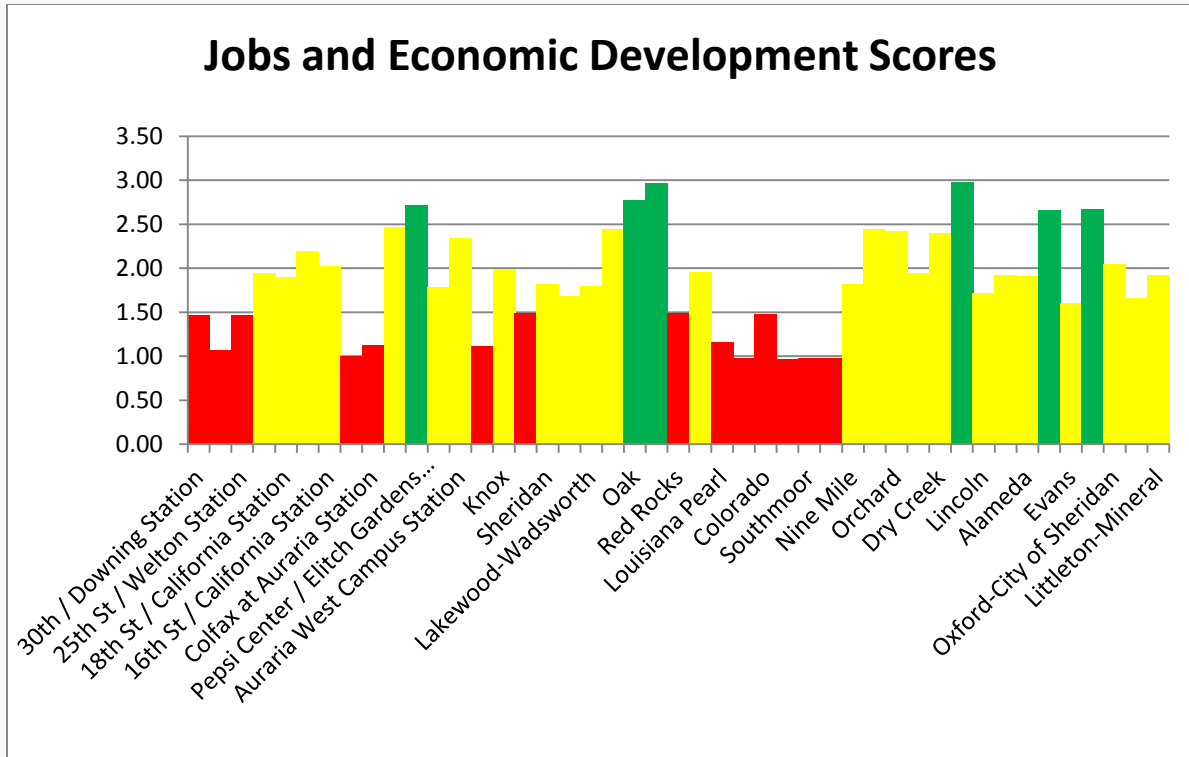


Figure 6A: Jobs and Economic Development Scores by Station

**Table 12A: Downtown corridor station area jobs score rating**

	Proportional Score Low Skill: Population	Proportional Score Middle Skill: Population	Proportional Score High Skill: Population	Sum of Proportional Scores	J:P	Jobs Scores	Rating
<b>30th / Downing Station</b>	0.60	0.18	0.15	0.93	2.00	1.47	Needs Improvement
<b>27th St / Welton Station</b>	0.38	0.31	0.44	1.13	1.00	1.06	Needs Improvement
<b>25th St / Welton Station</b>	1.03	0.61	0.30	1.94	1.00	1.47	Needs Improvement
<b>20th St / Welton Station</b>	0.64	0.68	0.58	1.90	2.00	1.95	Improving
<b>18th St / California Station</b>	0.76	0.75	1.30	2.80	1.00	1.90	Improving
<b>18th St / Stout Station</b>	0.85	0.27	1.28	2.40	2.00	2.20	Improving
<b>16th St / California Station</b>	0.18	0.53	1.34	2.05	2.00	2.03	Improving
<b>Theatre District / Convention Center</b>	0.00	0.11	0.89	1.00	1.00	1.00	Needs Improvement
<b>Colfax at Auraria Station</b>	0.31	0.41	0.53	1.25	1.00	1.13	Needs Improvement
<b>Union Station Transit Center</b>	0.80	0.48	0.64	1.92	3.00	2.46	Improving
<b>Pepsi Center / Elitch Gardens Station</b>	0.68	1.41	0.34	2.43	3.00	2.72	Performing
<b>Sports Authority Field at Mile High</b>	0.63	1.56	0.39	2.58	1.00	1.79	Improving
<b>Auraria West Campus Station</b>	0.11	1.42	0.14	1.68	3.00	2.34	Improving

**Table 13A: West corridor station area jobs score rating**

	Proportional Score Low Skill: Population	Proportional Score Middle Skill: Population	Proportional Score High Skill: Population	Sum of Proportional Scores	J:P	Jobs Score	Rating
<b>Decatur- Federal</b>	0.38	0.27	0.59	1.23	1.00	1.12	Needs Improvement
<b>Knox</b>	0.57	0.35	0.06	0.98	3.00	1.99	Improving
<b>Perry</b>	0.58	0.30	0.10	0.98	2.00	1.49	Needs Improvement
<b>Sheridan</b>	0.33	1.26	0.05	1.64	2.00	1.82	Improving
<b>Lamar</b>	0.46	0.82	0.08	1.37	2.00	1.68	Improving
<b>Lakewood- Wadsworth</b>	0.33	0.94	0.33	1.59	2.00	1.80	Improving
<b>Garrison</b>	0.91	0.74	0.24	1.89	3.00	2.45	Improving
<b>Oak</b>	1.88	0.41	0.26	2.55	3.00	2.77	Performing
<b>Federal Center</b>	0.49	1.69	0.75	2.94	3.00	2.97	Performing
<b>Red Rocks</b>	0.63	0.30	0.05	0.98	2.00	1.49	Needs Improvement
<b>JeffCo Govt Center- Golden</b>	0.80	0.42	1.70	2.91	1.00	1.96	Improving

**Table 14A: Southeast station area jobs score ratings**

	Proportional Score Low Skill: Population	Proportional Score of Mid Skill: Population	Proportional Score of High Skill: Population	Sum of Proportional Score	J:P	Jobs Score	Rating
<b>Louisiana Pearl</b>	0.39	0.26	0.65	1.31	1.00	1.16	Needs Improvement
<b>University of Denver</b>	0.48	0.34	0.12	0.95	1.00	0.98	Needs Improvement
<b>Colorado</b>	0.64	0.87	0.44	1.95	1.00	1.48	Needs Improvement
<b>Yale</b>	0.45	0.33	0.16	0.94	1.00	0.97	Needs Improvement
<b>Southmoor</b>	0.56	0.34	0.07	0.96	1.00	0.98	Needs Improvement
<b>Dayton</b>	0.71	0.17	0.08	0.96	1.00	0.98	Needs Improvement
<b>Nine Mile</b>	0.81	0.34	0.48	1.63	2.00	1.81	Improving
<b>Bellevue</b>	0.64	0.80	1.44	2.88	2.00	2.44	Improving
<b>Orchard</b>	0.20	1.60	1.04	2.84	2.00	2.42	Improving
<b>Arapahoe at Village Center</b>	0.88	1.03	0.99	2.90	1.00	1.95	Improving
<b>Dry Creek</b>	0.87	0.84	1.09	2.80	2.00	2.40	Improving
<b>County Line</b>	2.13	0.49	0.33	2.95	3.00	2.98	Performing
<b>Lincoln</b>	0.11	0.54	1.79	2.44	1.00	1.72	Improving



**Table 15A: Southeast corridor station area jobs score ratings**

	Proportional Score Low Skill: Population	Proportional Score of Middle Skill: Population	Proportional Score of High Skill: Population	Sum of Proportional Score	J:P	Jobs Score	Rating
<b>10<sup>th</sup> and Osage</b>	0.65	0.87	0.31	1.83	2.00	1.92	Improving
<b>Alameda</b>	0.66	1.08	0.06	1.81	2.00	1.90	Improving
<b>I-25 Broadway</b>	0.47	1.63	0.22	2.33	3.00	2.66	Performing
<b>Evans</b>	0.50	1.66	0.06	2.22	1.00	1.61	Improving
<b>Englewood</b>	0.65	0.97	0.74	2.36	3.00	2.68	Performing
<b>Oxford-City of Sheridan</b>	0.70	1.21	0.19	2.10	2.00	2.05	Improving
<b>Littleton-Downtown</b>	0.74	0.41	1.18	2.33	1.00	1.67	Improving
<b>Littleton-Mineral</b>	1.72	0.09	0.03	1.83	2.00	1.92	Improving

### *Affordability*

While the Central Corridor scored highly in many categories, such as accessibility, this area had the lowest performance for housing affordability. Rising housing costs in the Central Business District have made the area unaffordable for those with moderate incomes. 20<sup>th</sup> and Welton station was the only Central Corridor station to receive a high affordable housing score due to the lower household housing cost burden and good mix of income and tenure.

The Southeast Corridor had a similarly low affordability scoring, with 46% of transit areas falling in the Needs Improvement category, and an additional 46% in the Moderate range. Dayton station, located in Aurora on the H line, was the only Southeast Corridor station to receive a high affordability score. The negative housing affordability score assigned to County Line station was impacted by the very low population in the station’s transit zone; according to the census there was no population in the transit zone in 2000 and 50 people in 2010.

The Southwest Corridor, in contrast, had the highest number of transit zones scoring in the higher performing category, with 25% in this range.

The West Corridor is notable in that the area has 10 of the 11 transit zones falling in the Moderate category. For example, Oak Station received an affordable housing score of 4 out of 5 due to the lower share of income spent on household housing costs (19%) and the good mix of incomes and tenures. As the most recently opened light rail line, it will be important to monitor changes in housing prices in this area and take action to maintain affordability.

Data analysis conducted for the affordable housing score revealed many cost burdened households, paying more than 30% of income on housing costs, in transit zones throughout the region, particularly in the Downtown and Southeast Corridors particularly. Low median income, combined with the rising cost of housing in the Central Business District points to the need for a dedication to the provision and preservation of affordable housing in the area.

As the corridor results show, no corridor is high performing overall. Only two corridors have at least one station that is in the Performing category. In contrast, 7 of the Central Corridor, and 6 of the Southeast Corridor stations need improving. In contrast, all corridors have a high number of stations in the Needs Improvement category, from half of the Southwest Corridor stations, to 85% of the Southeast Corridor stations.

**Table 16A: Affordable housing scores by corridor**

Affordability Results by Corridor				
	Needs Improvement	Improving	Performing	Total
Central Corridor Affordability Evaluation	9	5	0	14
	64%	36%	0%	100%
Southwest Corridor Affordability Evaluation	4	3	1	8
	50%	38%	13%	100%
Southeast Corridor Affordability Evaluation	11	1	1	13
	85%	8%	8%	100%
West Corridor Affordability Evaluation	7	4	0	11
	64%	36%	0%	100%
<b>TOTAL</b>	<b>31</b>	<b>13</b>	<b>2</b>	<b>46</b>
	<b>67%</b>	<b>28%</b>	<b>4%</b>	<b>100%</b>

### Jobs and Economic Development

At the corridor level, the Southwest Corridor had the most number of stations rated Improving or Performing, and no stations rated Needs Improvement. The West Corridor also performed well in the jobs scores, with 73% of its stations scored Improving or Performing, and 27% scored Needs Improvement. These two corridors provide a good range and availability of all skill level jobs. Strong scores along the West Corridor may continue to improve given the more recent introduction of the light rail line in the region. The Central and Southeast Corridors had over one-third (38%) and almost one-half (46%) of their stations, respectively, rated Needing Improvement, due to either the lack of jobs at the station areas or the proportional lack of jobs from across the skill spectrum. For example, stations along the Southeast Corridor from Louisiana-Pearl to Dayton are rated Needs Improvement due to low numbers of jobs of all skill types. The Theatre District/Convention Center station, rated Needs Improvement, scored low due to the lack of jobs across the skill spectrum, specifically low and

middle skilled jobs. Strategies for recruitment of employment opportunities with living wages, and for creating transit connections for employees to jobs across the skill spectrum for stations across the region, were recommended by transit zone evaluators and interviewees.

**Table 17A: Jobs & Economic Development Results by Corridor**

<b># of Stations</b>				<b>13</b>
<b>Central Corridor Jobs Scores Evaluation</b>	<b>38%</b>	<b>54%</b>	<b>8%</b>	<b>100%</b>
<b># of Stations</b>				<b>11</b>
<b>West Corridor Affordability Evaluation</b>	<b>27%</b>	<b>55%</b>	<b>18%</b>	<b>100%</b>
<b># of Stations</b>				<b>13</b>
<b>Southeast Corridor Jobs Scores Evaluation</b>	<b>46%</b>	<b>46%</b>	<b>8%</b>	<b>100%</b>
<b># of Stations</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>8</b>
<b>Southwest Corridor Jobs Scores Evaluation</b>	<b>0%</b>	<b>75%</b>	<b>25%</b>	<b>100%</b>

For those jobs with 6-digit wages available, at least 51% of jobs in the transit zones pay less than the \$75,000. This represents 171,000 workers, and 67% of Jobs in Station Areas pay less than \$65,000. Five percent of this population growth occurred within locations that would become, or are, station areas (Table 2A). At the same time, 23% of the region’s businesses, and 30% of the region’s jobs are in these station areas.

Table 18A shows the region’s commute share by public transit. This information is about commute travel only, and not all trips taken by transit. Approximately 26,000 more commuters were using transit to get to work in 2010 than in 1990. This represents a 0.1% increase in commuter ridership by transit.

**Table 18A: Denver Region Population Growth 1990-2010, with transit commuters**

	<b>1990</b>	<b>2000</b>	<b>2010</b>
<b>Total Population in region</b>	1,980,140	2,581,506	3,037,053
<b>Population in transit stations</b>	Predates light rail construction	Stations along Central and Southwest corridors come on line	187,216
<b>Workers commuting by Transit</b>	40,622	58,471	66,336
<b>Percent of workers Commuting by Transit</b>	2.1%	2.3%	2.2%

# Appendix B: Interview Data

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A second level of analysis was undertaken to understand the corridors and region-wide transit system issues in a series of interviews with more than 60 planners, elected officials, developers, and transit community experts. Appendix B is a synthesis and summary of the interviews that informed the final report. The interviews provided important data regarding the history of transit development in the region, perceptions on the impacts on the community, challenges and obstacles that need to be overcome, and potential areas where the region is doing well

## Interview Methodology

The study team conducted interviews with stakeholders involved in the decision-making, planning, design, development, and construction processes for the light rail lines and transit oriented development in the Metro Denver region – more than 60 interviews with representatives from 37 jurisdictions, agencies, organizations and companies. Input from interviewees explored four areas: (1) housing, (2) accessibility, (3) jobs and economic development, and (4) site development. The interview summaries are grouped by corridors:

- Central
- Southwest Corridor
- Southeast Corridor
- West Corridor
- Regional Cross Corridor Perspectives

Interviews were conducted with one to three people at a time, following a semi-structured list of questions. Issues discussed included existing conditions, current and past challenges, and what to continue or do differently in the future. The results of the interviews were synthesized with technical information from the corridors and stations to inform the final report and recommendations.

**Table 1B: Characteristics of Interviewees**

<b>Characteristics</b>	<b>Number of Interviewees</b>		<b>Proportion of Interviewees</b>
<b>Public, Non-Profit, Private</b>			
<b>Public</b>	38		58%
<b>Non-Profit</b>	19		29%
<b>Private</b>	8		12%
<b>Corridor of Experience</b>			
<b>Denver</b>	14		22%
<b>West</b>	8		12%
<b>Southwest</b>	5		8%
<b>Southeast</b>	16		25%
<b>Region Wide</b>	17		26%
<b>Future Corridors</b>	5		8%
<b>Area of Experience (multiple responses allowed)</b>			
<b>Housing</b>	29		48%
<b>Accessibility</b>	28		47%
<b>Jobs</b>	24		40%
<b>Site Development</b>	29		48%

# Central Corridor

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## Overarching

Interviewees emphasized the importance of collaborations, both internal and external to the City and County of Denver, as being integral to transit oriented development at stations within the downtown corridor. Several interviewees pointed to these collaborations as effectively increasing densities around station areas, and development of affordable housing (e.g., Union Station). Interviewees also thought that the City had improved internal collaborations and ultimately coordinated across departments for dealing with development and developers. Interviewees pointed to limited funds and multiple shortfalls within the city necessitating public-private partnerships (P3).

The use of public-private partnerships at Union Station for transit oriented development (including affordable housing) was discussed by interviewees as an example of the City and County of Denver collaborating externally. Some interviewees noted that the City also collaborated successfully externally (e.g., with the City of Lakewood). This collaboration created political leadership for the West Line development and the incorporation of higher densities at station areas along that line and provided a basis for longer term collaboration.

## Housing

The financial ability to develop affordable housing was noted by several interviewees. Some identified the limited pool of low income housing tax credits funds combined with the competitiveness of the nine-percent tax credit grant programs as inhibiting affordable housing development. Without these funds, one interviewee noted, acquiring property for affordable housing development becomes very difficult. With downtown station areas rapidly changing, waiting for increased low income housing tax credits or other funding sources was thought to take time and place development in the middle of a likely higher land cost real estate environment. Being in front of the transit oriented development activity was thought to be essential to building affordable housing. Some interviewees pointed to the time stipulation requiring development be completed within five years of receiving the low income housing tax credit grant as inhibiting early acquisition of properties. Developers are not always willing to land bank though non-profit organizations are interested in doing it or are leading the way. This requirement increases the cost of developing affordable housing near transit.

Interviewees also pointed to the need for affordable housing for those earning less than 30 percent of the area median income within the Central Corridor. A recent report by the City and County of Denver's affordable housing task force noted that there was a need for 27,000 affordable housing units in Denver. Interviewees upheld this estimate and noted two things: The Regional Transportation District has enough land adjacent to stations within the Central corridor to develop (through joint development) all of the needed affordable housing; and the goal of producing 3,000 affordable housing units for five consecutive years will still leave a gap in affordable housing for the current need.

Interviewees called for a stronger link between housing and transportation, with some interviewees advocating affordable housing at every station. Developers that are particularly 'committed to affordable housing, though, usually develop away from light rail stations, due to the cost of the land and transit oriented development design requirements, and the cost of light rail fares for the residents. Instead, these developers cite proximity to frequent service bus lines as more important.

While some interviewees spoke to the region's affordable housing being concentrated in Denver in negative terms, deeply affordable housing developers stated this was necessary to have proximity and/or access to supportive services for their residents. One service was noted by several interviewees as needed at station areas: childcare facilities.

Lastly, the region has a limited pool of willing affordable housing developers, especially those developing deeply affordable housing. Developers willing to do joint development, grant management, or complex financial transactions are difficult to find. And oftentimes, developers with these talents become valuable to for-profit and market rate housing developers, creating a constant churn of affordable housing developer talent. Some interviewees thought programs and funding to attract, train, and retain affordable housing development staff were needed.

## Accessibility

Several interviewees pointed to the light rail alignment along highways, high volume arterials, and/or railway lines as creating problems for accessibility and station area development. Some stated these alignments simply pushed infrastructure costs forward and onto jurisdictions least technically or financially capable of addressing the need, or further onto future developers. It was noted that merely having one transit oriented development project cannot solve all accessibility issues. Other interviewees urged an education campaign to make plain to the public the pedestrian and bicyclist conditions around station areas, as a means of building support for additional infrastructure spending, and as a needed shift of station area access from just being about those accessing the station by car (e.g., parking). Creating metrics for prioritization of these improvements, and tracking the improvement of them, was called for by some interviewees. Many interviewees identified the cost of light rail fares as a barrier to riding, limiting accessibility, even for those receiving discounted fares, such as the disabled.

## Multi-Modal Connections

Though station areas in the Central Corridor consistently had good bus connectivity, interviewees identified changes to bus service, especially those resulting from light rail development, as a threat to the multi-modal connections to the station area. Several interviewees wanted the City and County of Denver to create innovative bus solutions, such as bus corridors and circulators to connect riders from home to station and station to final destination. These connections were considered most important to the transit dependent and/or lowest income households of the region – for which bus is still the most affordable transit choice. Interviewees pointed to the increased pedestrian activity and ridership at the 10<sup>th</sup> & Osage station as a success due to first and last mile connection solutions implemented in that station area. Interviewees felt it was important for future development and re-development in the downtown corridor to include multi-modal connectivity, such as bike shares, bicycling and pedestrian infrastructure, and bus and/or circulator connectivity is necessary.

## Jobs and Economic Development

Light rail stations were viewed by interviewees in two ways: (1) as areas for economic development, and (2) as facilitators of economic development (through linking employers and employees). Some interviewees pointed also to the Work Initiative Now (WIN) program as an example of how FasTracks directly created jobs through a very productive collaboration between the Regional Transportation District and local jurisdictions. The regional Workforce Initiative Now (WIN) is a collaborative partnership between RTD, Community College of Denver (CCD), Denver Transit Partners (DTP) and the Urban League of Metropolitan Denver. WIN helps job seekers, companies, and local communities through demand-driven workforce services and the creation of career pathway opportunities in the transportation and construction industries. WIN creates a pipeline to living wage jobs for residents of communities impacted by FasTracks through job training and placement. Given the proportion of households earning less than \$25,000 per year within many of the transit zones of the Central Corridor, this should be a priority.

Beyond directly linking FasTracks to job creation, providing job seekers access to employers and/or career development centers, was also cited by interviewees as necessary – and currently lacking in priority. Anecdotal evidence was provided by workforce development interviewees of



the role transit plays in job seekers searches – from limiting the jobs considered due to distance and transit accessibility, to the cost of light rail and the bus-light rail transfer restrictions (which also create a distance limiter). An opportunity exists to create collaborations between workforce development, the Regional Transportation District, job training providers, and planning departments to align existing programs, like the Workforce Investment and Opportunity Act, with first and last mile connection and station area planning efforts.

Those interviewees that identified station areas as a place for economic development called for station area plans to encompass not just commercial and residential uses but also employment – and cautioned that the market may not do this without a plan directing it to do so. The proportion of residents and workers commuting within ten miles to station areas suggests the ability to increase ridership through greater transit connectivity to employers and employment centers.

## Site Development

Interviewees identified the Central Corridor as a positive example of transit oriented development, often pointing to Union Station, as a reflection of the role transit plays as a tipping point for development – but a point that also requires jurisdictions to concurrently invest in supporting infrastructure (e.g., street grid, railroad crossings, and sidewalks). Interviewees used caution when translating this tipping point theory to suburban station areas, citing a lack of history of focusing on transit, density, and multi-modal connectivity.

While some interviewees called for greater emphasis on employment within plans for site development, other interviewees called for child care providers at station areas – linking this community service of child care to station area and site development is important to increased ridership and accessibility to jobs. Interviewees noted that the Mariposa housing development (owned and managed by the Denver Housing Authority) has a child care facility at the station area which is not only unique, but uniquely funded through free rent for a nonprofit provider. A financing intermediary is a missing link for child care center and developer.

## Station Area Plans

Interviewees called for all station areas to have a plan – as the first and early step. Having a plan in place creates a template for development. Having a plan in place early means that communities can identify needs to facilitate transit usage before the station is completed, as many interviewees thought was the process during the first phase of light rail construction in the region.

Interviewees thought that ensuring diversification of housing, affordable housing, and employment is imperative to station area planning process, though interviewees doubted this was consistently so.

## Zoning Updates

The need to change regulatory practices, beyond zoning, to meet the identified station area plans, was pointed out by interviewees. One identified the limited time frame and funding under the City and County of Denver municipal code provision for prioritizing affordable housing as an example. This section of the code seeks to preserve expiring affordable housing but uses a 12-month expiry threshold, which is often too late.

## **Denver Regional Council of Governments**

Interviewees wanted the Denver Regional Council of Governments to tie regionally-managed transportation improvement program funds to the production of affordable housing. They also want the Council to create a tool to both discuss and measure livability.

## **Regional Transportation District**

Interviewees had mixed impressions and experiences with the Regional Transportation District. The District was seen as being able to impact many issues discussed here: collaborating with key stakeholders on key issues (such as the fare study), develop their station adjacent properties for affordable housing, being transparent with multi-modal connection plans (such as bus service changes), and accommodating station area and site development demands of jurisdictions.

## **Funding**

Interviewees were unanimous around the need for consistent and appropriate funding sources to achieve station area plan goals: for affordable housing (for which the region was identified as lagging behind its peers), for supportive housing (e.g., transit oriented community services), and first and last mile connection issues (such as a sidewalk fund).

# Southwest Corridor

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## Overarching

Although a corridor collaborative has not emerged similar to those on the Southeast and West Lines, several organizations work together on a sub-regional collaborative basis. One interview identified the South Platte Working Group as sub-regional collaborative planning group for the redevelopment of the South Platte River corridor from the Chatfield reservoir, in the south, to the City of Sheridan. Though this working group is not currently focused on integrating FasTracks or transit oriented development, the revitalization of the river corridor may prompt closer attention to transit and/or increase ridership on the Southwest Line.

The Denver South Economic Development Partnership includes partners from the jurisdictions along the Southwest Line but the Denver South financing mechanism - the Southeast Public Improvement Metropolitan District (SPIMD) operates only along the Southeast Line. It is conceivable, though, that best practices from the Southeast Corridor may be applied to the Southwest Line through Denver South's partners. A similar potential partner/model would be the Arapahoe/Douglas Workforce business development team as part of a statewide effort – aligned with business development teams across the state.

## Regional Transportation District

Interviewees desired improved relationships with the Regional Transportation District and greater ability to improve jurisdictional access to the District's parking lots and station areas from nearby developments. Several interviewees stated they felt the District's staff provided potential to build relationships and were key partners to work with on transit oriented development at the District's parking lots and/or stations. Further, if such relationships are fostered, resulting joint development projects can be structured to meet jurisdictional and regional Sustainable Community Initiative goals of higher density housing and affordable housing by requiring certain housing types be developed on all the District's properties.

## Housing

Interviewee complaints that the state construction defects law inhibits the development of complete housing at station areas were identified in the presence of a large proportion of rentals at several stations. Several interviewees reported the presence of market rate affordable housing – usually due to dated and non-maintained housing stock. This market rate affordable housing stock can be used by transit zone residents as justification for their resistance to new affordable housing developments. An education campaign would aid developers of affordable housing by engaging the public about the actual impacts and beneficiaries of affordable housing.

As noted above, new developments along the Southwest Corridor are multi-family rental developments. A regional collaborative is seeking to incorporate dispersed low cost housing along both the Southwest and Southeast corridors, though no projects have been approved thus far. Interviewees indicated that policy and educational support could encourage efforts to

promote housing in the corridor. Housing authority attempts to develop affordable housing on land they own have been encountered resistance.

### **Diversification of Housing Types**

Interviewees identified resident resistance to densification of the transit zone as an impediment to creating a diversification of housing types describing several issues of concern and confusion: equating higher density housing to poor quality design and construction, a strain to their school districts, and social costs. Most interviewees pointed solely to the construction defects legislation for the lack of diversity in housing types. Additionally, some jurisdictions desired more transit oriented development and transit communities in their transit zone but were unsure why that development had not happened.

There was a sense that communities could benefit from technical assistance, development of messaging, and data and guiding metrics to develop programs, policies, and plans to encourage support and attract desired development, whether greater density, transit oriented development, infill development, and/or rental housing.

### **Accessibility**

The up-front creation of multi-modal infrastructure at Alameda station demonstrates the developer's belief in this infrastructure's ability to catalyze investment in the site and as a pilot for the longer term commitment and perseverance required to marshal investment and multi-agency partnerships.

The importance of these types of multi-modal connections was made clear by several workforce and economic development interviewees who noted the transit dependence of low- and middle-skill employees, and the resulting geographic boundaries these employee's self-impose when searching for work due to transit accessibility. Creating first/last mile connections is also important for increasing transit ridership

### **Multi-Modal Connections**

Several interviewees identified an example of a good multi-modal connector in the City of Englewood partnership. The City and the Regional Transportation District partnered to create ART, a free circulator shuttle that links the Englewood station to the Broadway business district, and several hospitals. The service runs with 15 minute headways from 6:30 a.m. to 6:30 p.m. ART was originally funded with a combination of Federal Congestion Management And Air Quality funds (80 percent), City funds (10 percent), and Regional Transportation District funds (10 percent). It is now majority funded by Regional Transportation District (80 percent) with 20 percent from the City of Englewood. The ART provides first/last mile connection and offers a transit link to major employment centers in, and just beyond, the transit zone.

Connections are important due to strong growth in employers in this corridor. Additionally, large development and redevelopment opportunities exist and employers are aggressively recruited by competitive regional economic development organizations. Interviewees acknowledged the lack of housing for low- and middle- skill employees along the corridor, requiring long commutes. Some interviewees also acknowledged that employers are locating, relocating, and/or expanding to sites that lack transit connections.

## Jobs and Economic Development

Communities in the corridor are rethinking their strategies and approaches to transit oriented development and economic development. Transit oriented development traditionally emphasizes mixed-use development with ground floor retail. However, interviewees along the Southwest line noted that not all stations are currently capable of supporting retail services. For example, Evans station does not have the ridership to support the ground-floor retail within the one transit oriented development. Ensuring market demand exists is necessary so that underutilized and/or vacant properties do not inhibit growth of the transit zone and the region.

These under-utilized spaces provide an opportunity for transit oriented community development, such as child care, education and training, and library facilities.

## Site Development

Alameda Station provides an example of the importance of site development to the transit zone. The developer, D4 Urban, has partnered with the City and County of Denver, the Regional Transportation District, and the Denver Urban Renewal Authority to prepare the site (bus circulation and reintroduction of the street grid) and its infrastructure (storm water, and pedestrian and bicycling infrastructure and amenities). This project marshals public and private funding and advances a development plan to convert the station to an employment district. This example of public-private partnership was recognized by several interviewees as a model for the region. Formalizing relationships between, and creating consistent and transparent processes for, public and private entity collaboration is necessary to both ensure and support success from plan to completion.

In addition to data, some jurisdictions require capacity for site development. In interviews, these jurisdictions acknowledge a lack of development, despite submitted and approved plans. A toolkit of best practices and technical assistance, including for financing, could help to create greater capacity to achieve the Sustainable Communities Initiative goals, particularly as interviewees expressed a desire to rethink their approaches as their experience with transit oriented development matures as one of the first transit corridors.

Some transit adjacent landowners are not interested in transit oriented development. Without a station area plan, these properties may be developed with more automobile-centric types of projects. Policy and public support for development of plans, building collaboratives, and attracting the desired development was noted by interviewees as important to the success of joint development projects.

## Station Area Plans

Station area plans provide clear guidance for developers and ensure station area goals, such as design standards, housing density, or affordable housing, are enabled. These guidelines are also important for the integration of station area transit oriented development with other land uses in the transit zone, and provide opportunity for revitalization. An example of this is the City of Englewood and the City of Sheridan, who will be jointly undertaking a station area planning effort for Oxford-City of Sheridan. Additionally, Littleton-Downtown was designated an urban center

in 2012 by the Denver Regional Council of Governments, which made it eligible to receive regionally-managed transportation improvement program funds for station area planning.

### **Zoning and Development Updates**

Littleton provides an example of zoning's potential for realization of transit oriented development goals. The City of Littleton streamlined and refined the regulatory requirements for transit oriented development, and have received and approved more development applications in the last three years than the last 15 years.<sup>16</sup> Again, interviewees expressed new directions in transit oriented development friendly zoning codes and policies are important in generating new opportunities.

### **Funding**

Interviewees supported the use of tax increment financing, though not all were equally successful in its use. Identifying alternative financing is an option to alleviate this disparity. So would be a toolkit of financial best practices, as well as technical assistance from successful tax increment financing entities

### **Denver Regional Council of Governments**

Interviewees were actively seeking to attract employers and developers to their transit zones, but felt that “getting the word out” was both important and difficult. A matchmaking service or database of properties for development would aid these efforts. One developer interviewed finds parcels for development by driving around—an inefficient and potentially ineffective way to develop where needed and best meet the Sustainable Communities Initiative goals.

### **Regional Transportation District**

Many transit zones on the Southwest Line had attractions (South Platte River trail), employers, education and training centers, etc. Yet ridership does not reflect that this potential is realized. A gap analysis of the multi-modal routes to the station may inform how best to improve ridership.

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<sup>16</sup> That said, after we completed our interviews, a citizen led initiative was passed (March 2015) that would require voter approval for every new urban renewal project in the city.

# Southeast Corridor

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## Overarching

Interviewees called for collaborations within jurisdictions (which could facilitate pragmatic and achievable accessibility goals), between jurisdictions, and between the Regional Transportation District and jurisdictions. Aurora provides a good example of intra-jurisdiction collaboration: the public works and planning departments built inter-departmental FasTracks transit oriented development teams to prepare for the new rail investment in Aurora. The Southeast Public Improvement Metropolitan District (SPIMD) collaboration is a model example of inter-jurisdictional collaboration: multiple taxing districts fund this economic development organization which funds improvements (including first and last mile connections) which work to attract and retain primary employers from across the globe. The metropolitan district collaboration makes the southeast corridor a unique collaboration as a public private partnership with the South Denver Economic Development Partnership also hosting the transportation management association (TMA). The corridor also has a Denver Regional Council of Governments Corridor urban center designation. Interviewees recognized the importance of these collaborations and considered even more formalized structures and relationships to be more impactful in moving the corridor forward. A long term vision process is underway in the corridor that will address economic development, transportation and transit oriented development.

## Public Participation

Jurisdictional interviewees incorporated public processes as being integral to their station area planning processes. These processes were also acknowledged as important to achieving support for transit oriented development when it did occur – addressing local and neighborhood issues, particularly density.

## Regional Transportation District

Multiple interviewees stated a desire for more and better relationships with the Regional Transportation District and provided multiple suggestions for making this possible: continue to expand the District's focus from operations to transit oriented development by empowering the transit communities group within the District to have equal say as the operations department; improve relationships with jurisdictions by developing transparent and clear processes, especially for public-private partnerships; assign non-engineering staff to jurisdiction contracts to expand the District's focus from rail completion to transit communities (including station amenities); and assist with first/last mile connection solutions.

Jurisdictions should also contribute to improving relationships with the Regional Transportation District by addressing first/last mile connection issues, undertaking public-private partnerships, and undertaking a marketing campaign on transit and transit users to directly address prevalent stereotypes.

Consistent with interviewees from other corridors in the region, the District's fare structure was identified by interviewees in the southeast corridor as a major issue with FasTracks and ridership

– some interviewees associating ridership as highly impacted by price. Data from the region found that about half of survey respondents were not likely to change their commuting habits and the other half (that were willing to do so) would do so with a 50 percent reduction in pass costs. Such reductions could be achieved through redesigning the fare and pass fee structure, and developing employer match programs. These sensitivities are very current as interviewees are involved in the Regional Transportation District fare study now underway.

## Housing

The Southeast Corridor has grown in population (since the 2000 Census) and is projected to continue to attract new residents over the next 20 years. Many interviewees acknowledged this and identified a lack of housing as an issue. Some interviewees pointed to the construction defects legislation (as did interviewees from other corridors) as impeding housing development along the corridor. One interviewee thought rental housing was contrary to developing a transit oriented community, reflecting a potentially prevailing attitude toward a diversification of housing types.

### Affordable Housing

Interviewees from the area of the corridor south of Interstate 225 frequently acknowledged affordable housing needs but expressed confidence in the sub-region's levels of production of affordable housing units. They viewed affordable housing requirements on new developments as unproductive some because of a lack of funding for it; others because of the perceived burden of supportive service requirements these units were thought to require. Some felt education and outreach programs could resolve some of these issues; others felt affordable housing entirely feasible in the corridor with funding issues resolved.

Funding, as with all corridors, was identified as a barrier to affordable housing development – affordable housing projects constructed at Denver FasTracks stations took multiple rounds of low income housing tax credit funding before being approved – one interviewee testified to winning three projects over 11 years. If this rate is indicative of affordable housing production rates, the Southeast Corridor will not be able to create enough affordable housing for current needs, let alone in meeting the projected demand.

Some stations (for example Colorado station) had lower housing costs than the region as a whole. This market rate affordable housing was frequently viewed as combined with planned, quality affordable housing by interviewees. This combination created resident resistance to the affordable housing out of fear of additional lower cost housing, and the difficulty in moving these projects forward. On the other hand, interviewees supported and sought greater housing density in the corridor. A number of interviewees felt that greater emphasis should be placed on mixed-income housing options for new and/or transit oriented development housing throughout the southeast, and to work through perception and policy issues.

## Accessibility

Access to opportunity and jobs through transit were discussed by several interviewees: one noted that 30 percent of all current employees of the corridor commute in from north of Interstate 70 representing pent up demand for accessibility. Some spoke to the role transit plays for access to



opportunity and jobs for low- and mid- skill jobs. One identified transit as an interim response to the lack of affordable housing along the corridor. One stated importing workers will always be a necessity, given the sub-region's growth projections for jobs and housing, having identified a lack of capacity for the latter. From this collection of concerns, first and last mile connections were a priority to interviewees.

The transportation management association in the Denver South Economic Development Partnership provides an excellent example of creating those first and last mile connections. The association assists employees of businesses within the sub-region to identify transit options and routes.

### **Multi-Modal Connections**

The primary connection to the station areas in the Southeast Corridor is by automobile. Multiple interviewees identified the presence of state highway C-470 and Interstate 25, major highways in the corridor, as important to the sub-region's popularity and economic development. The suburban land use and transportation forms of this sub-region, including limited transit connections to the stations, was thought by many interviewees to necessitate the large surface parking lots at many of the corridor's stations. Some interviewees believed the Regional Transportation District under-supplied parking, which caused neighborhood stress and resident resistance to transit.

Most stations along the southeast line had bicycling infrastructure at the station but lacked bicycling infrastructure connecting to the station (e.g., Colorado, Yale, and Nine Mile stations). There is potential for improving bicycling connectivity. The Denver South Economic Development Partnership is conducting a scope of work for creating a regional bike and trail system that would connect to the sub-region's parks and open spaces, and to other regional trail systems. The latter, through multi-jurisdictional collaboration, is likely to apply, and is well qualified for Federal Congestion Management-Air Quality funds and/or regionally-managed transportation improvement program grants. It is worth noting that stakeholders in the corridor are pursuing this regional trail system under the umbrella of economic development. First and last mile connections are also being undertaken by Denver South under the premise of economic development. Important to this effort is that agency's ability to plan, coordinate and leverage resources to address identified gaps through its structure, and ultimately, financial assistance.

Interviewees acknowledged that multiple efforts would be needed to resolve the first and last mile connectivity issues. One of these efforts, which is receiving a lot of attention in the Denver region, is the Lone Tree Link. The Link will provide a free, ten minute headway, shuttle service between the Lincoln station and the primary employers (Sky Ridge Medical Center, Schwab, and Kaiser) and secondary (Park Meadows Mall) in and outside of the transit zone. Schwab was mentioned most frequently as the lead for the Link project, with interviewees stating Schwab had good transit connectivity prior to moving to the Lincoln station transit zone, and sought to retain the ridership options for their employees. The shuttle is the result of a public-private partnership between the primary employers and the City of Lone Tree. Interviewees were confident that the Link would provide a model for the entire region. It is interesting to note that the Lone Tree Link is a reincarnation of an earlier version (pre light rail) shuttle service.

Despite the availability of funding for first and last mile connection improvements, and despite the Link, interviewees were skeptical that gap solutions were enough to shift ridership; pointing to the need for multiple approaches, and a need to expand these approaches throughout the region so that connectivity on both ends of the home-work commute was addressed.

## **Jobs and Economic Development**

Interviewees pointed to the presence of transit and major highways (State Highway C-470 and Interstate 25) as important to the region's economic competitiveness. That interviewees and transit zone evaluations noted a lack of connectivity between station areas and employer locations in the corridor.

Several stations along the Southeast Corridor have proportions of residents earning wages below the area median income: transit can link households to living wage jobs – and some interviewees pointed to this potential as a solution for the corridor's lack of affordable housing. Attracting career training centers to the transit zones could also help increase resident wages.

Some interviewees reported to the difficulty of attracting employment and employers to a station, while others readily identified employers being motivated by the presence of light rail. While each station area is certainly different, each jurisdiction's and organization's capacity to attract and incentivize economic development in their transit zones differs. The Southeast Public Improvement Metropolitan District (SPIMD) is an example of exceptional capacity. Over the past five years, the District has invested over \$7 million for economic development efforts, which includes transportation and accessibility improvements. It is able to do so because it is funded by a metro district with taxing authority (a two-mil levy against commercial and retail property within its defined boundaries). This dedicated funding source is both a model for the region and a beacon for the leadership, influence and leverage an organization can wield when funding is available. This influence was explained by interviewees as not just oriented to the Denver region, but nationally and internationally: recruitment of new businesses to this sub-region required it to be able to compete globally – and rail transit was one facet of that global competitiveness.

It should be noted that economic development marketing efforts in multiple corridors have included branding components as a major step to corridor planning and economic development – regional corridor competitiveness which generates interest in ridership but overall promotes the regions transit brand. Interviewees refer to these efforts and their benefits in education and outreach for transit oriented development.

## **Site Development**

Interviewees often spoke to transit oriented development beyond the typical quarter mile and half mile range, suggesting station areas may impact development beyond the currently conceived boundaries. Alternatively, some interviewees pointed to the lack of development within the conventional transit oriented development boundaries, suggesting capacity to create and/or incentivize desired site development may differ across jurisdictions. Assistance to these jurisdictions and collaborating agencies may be needed for some stations. One interviewee noted the lack of developer capacity in their jurisdiction versus that found in Denver, and so the type and quality of site developments can differ as a result.

## **Station Area Plans**

Station area plans have proven helpful in other corridors of the region, especially as response to resident resistance for increased density around stations – identified by interviewees as the biggest threat to transit oriented development. This resistance usually stems from fears for increased traffic and parking demands. Interviewees identified the benefits of creating station area plans early: alignment with the Regional Transportation District station design and development, clear expectations and desires to developers, and identification of jurisdictional needs.

Additionally, the urban center designation from Denver Regional Council of Governments was used by some jurisdictions as a base overlay, with transit oriented development provisions being added on later.

## **Zoning Updates**

Early station area plans were linked by interviewees to early and/or proactive zoning updates.

## **Denver Regional Council of Governments**

Not all station areas along the southeast corridor have developed at equal pace or quality. Some station areas (e.g., Nine Mile) have had no development, some have had little development (e.g., University of Denver, Yale), and some are seeing a lot of development (e.g., Lincoln). Jurisdictions could benefit from guidance, assistance, and/or data provisioning to help them assess, plan, and enact transit oriented development and Sustainable Communities Initiative goals.

Developers interviewed along the southeast corridor called for the Denver Regional Council of Governments to provide data and support to the region's developers, such as for site identification.

Urban centers were acknowledged by interviewees as offering a base layer to which transit oriented development can be added. However, to some interviewed, urban centers have been more an acknowledgment of development, rather than a guide for it. The Denver Regional Council of Governments should revisit the urban centers program and determine if its application should continue and/or should continue in its current form by asking: does this program achieve its intended goals of directing new development within the identified boundaries?

# West Corridor

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## Overarching

The West Line Corridor Collaborative was pointed to as integral to the success of the line. The collaborative includes cities (Denver and Lakewood), housing authorities (Denver Housing Authority, and Metro West Housing Solutions), a Federal agency (U.S. General Services Administration), non-profit organizations (Urban Land Conservancy, the Urban Land Institute, and NEWSSED Community Development Corporation), and special districts (the Regional Transportation District).

According to an interviewee, policy leadership will be important for transit oriented development corridor development, particularly for fiscal policies. The latter influences the market –as developers will not subsidize development financially or through infrastructure investments. Rather, as another interviewee stated, jurisdictions need to invest in infrastructure that the private sector sees as a market opportunity – using tax increment finding funding and public private partnerships are good examples.

Many interviewees emphasized that developed relationships were important for the region’s success. The development of these relationships through organized efforts, such as Mile High Connects working groups, provides transparency and for varied stakeholder participation. In these groups, all participants are then able to understand the implications and impacts of proposed and adopted transit oriented development decisions. This is important because, as one interviewee stated, some requests (for station area development) have been prohibitive. These focused working groups and collaboratives can also provide business opportunities to stakeholders, such as developers and financiers, and information sharing, such as from post light rail completion studies of parking and/or pedestrian connectivity.

Additionally, education for boards, councils, and commissions on infill, funding needs, and affordable housing could encourage and improve corridor and regional thinking.

## Zoning Updates

Zoning was one of the first things done by one jurisdiction when preparing for FasTracks. Some interviewees saw re-zoning as leading to more affordable housing. Others linked re-zoning efforts initially focused on station areas and, subsequently, throughout the jurisdiction, to development outside of the transit zone. Transit can be an impetus for development beyond the quarter mile station area bounds. Despite zoning efforts, not all land uses have the necessary development capacity in the region. One interviewee, for example, noted the region’s strong residential and retail/commercial transit oriented development pipeline, and the limited office, employment center, and/or industrial transit oriented development capacity. Others have noted there is not enough demand for retail therefore retail space near transit oriented development should instead be used for other purposes, including education.

## Regional Transportation District

Relationships with the Regional Transportation District were identified as important with interviewees. Relationships that developed early, reach beyond station design, and continue beyond light rail completion, were described as ideal by interviewees. Community education and marketing does not end when the line opens, according to one interviewee. Aligning the District's governance and operations with local and regional planning would improve current and future rail lines by creating and sustaining working relationships from design to implementation, and on through the lived experience.

## Public Participation

Public participation was used for affordable housing development planning processes, and met expected resident resistance. Education on who lives in affordable housing, and where they work, was identified as needed by interviewees. Developers of affordable housing stated demonstration projects of good quality affordable housing were needed in station areas, especially in those areas that currently have a disproportionate amount of poor quality, aged market rate affordable housing, such as around the Sheridan station.

Technical assistance to developers and financiers, to inspire development, has been undertaken at the corridor level, according to interviewees. This has focused on market rate development. Expanding this work to include non-market rate development, and/or at the regional scale, would be beneficial according to several interviewees.

## Housing

### Affordable Housing

Interviewees report that the ability to create affordable housing is limited by several obstacles and offered a number of solutions:

- There are not enough tax credits to go around: housing authorities have land and/or funds to develop or contribute to the development of affordable housing, but private and other non-profit developers rely more exclusively on tax credits.
- Nine-percent tax credits are competitive and have limited funds but are the best deal. For example, Lamar Station—a catalytic site—took three rounds before being selected for nine-percent low income housing tax credit funds.
- Four-percent tax credits require a large number of units per development to be financially feasible. These do not work as well in suburbs, where larger, denser developments are either not zoned or difficult to get approved due to resident resistance. They also require another major source of equity, such as funding from a city.
- Land costs in transit zones are too expensive for the development of affordable housing – and so pre-speculative parcel purchases for land banking is needed but practiced solely by housing authorities. However, the transit oriented development loan fund is for development that is completed within five years of purchase. This program needs to extend the completion deadline to support pre-speculation land banking.

- Land banking can provide the gap “funding” that enables quality affordable housing. Because of this, one interviewee thought there were multiple potential redevelopment parcels in the corridor.
- Urban renewal, and the associated tax increment funding revenue, is not appropriate along the largely residential West Line, because there are few tax producing entities in place and/or in development.
- The regional transit oriented development fund serves as a means of providing provisional transit oriented development funding by offering a way for financiers to purchase Community Reinvestment Act credits (a tradable credit used by lending institutions to meet their federal obligations for meeting the credit needs of communities they serve), and creates business opportunities for them when the provisional funding transitions to long-term financing
- Funding of mixed use developments is more difficult in the suburbs, where it is more difficult to demonstrate on the pro forma the financials for both the residential and retail/commercial aspects.
- The construction defect legislation is lowering the turnover rate of tenants in affordable housing units, causing a blockage in the affordable housing market. The lack of for-sale multi-family residences keeps those residents who could otherwise purchase a condominium in affordable housing units. Fixing the defects legislation was thought to offer some solution to this blockage

Creating good quality affordable housing is also frustrated by the market, which deploys capital where there is demand. This may be for lower density housing type, may not acknowledge access and connectivity, and may inflate the price of all residences at the station area.

### **Diversification of Housing Types**

Many of the challenges identified to the development of affordable housing along the corridor hold for developing mixed income residential developments that offer a mix of housing types.

Additionally, the state’s construction defects law was cited by many interviewees as inhibiting the homeownership rates and the diversification of housing products along the corridor, and more broadly, the region. Under the state’s construction defects law, lawsuits are more easily filed against developers of newly constructed for-sale products. These lawsuits have increased insurance costs for new development and scared off developers from creating for-sale units. Interviewees thought that correcting this issue at the state level could improve the homeownership rate and median housing value issues seen along the West Line. Another interviewee identified a link between the defects law and the shortage of affordable housing stating tenants who could and would otherwise purchase an entry-level home, such as a condominium or attached single family residence, are staying in affordable housing units longer due to a lack of supply. One interviewee acknowledged the impact correction to the defect law could have, but cautioned that it would be limited in scope.

## Accessibility

### Multi-Modal Connections

Cities often have aged and insufficient infrastructure, while they lack funding for its improvement. Interviewees stated the lack of these improvements as a limitation to investment and growth. Jurisdictions owned property at the station areas that also had bike and pedestrian infrastructure challenges felt these problems were created through value engineering during the FasTracks development. These jurisdictions are also bound by limited financing for the needed solutions.

Bus connectivity was considered by interviewees to be an important element of light rail stations, primarily because of the greater expense for light rail fares versus buses. Some believed that light rail was thought to be too expensive for the residents of the West Corridor.

Additionally, interviewees noted that the location of stations may not have accounted for potential riders or transit usage by station area residents. Interviewees stated that a jurisdiction is unable to properly plan for these service changes because a transparent and timely planning process for these changes is not in place. Station location decisions leave first mile/last mile connectivity issues to be resolved locally.

Some jurisdictions have high rates of on demand (“Call-n-Ride”) utilization. Call-n-Ride provides pre-schedulable (two hours to two weeks in advance) service to/from transit stations, for a single fare price. Golden has a fixed route circulator in addition to the highest usage rate of Call-n-Ride across all light rail lines, and is negotiating with Regional Transportation District to develop a third circulator. These connecting bus services were developed to address the disconnect between the light rail station location and the location of trip generators in the town (downtown Golden, the Colorado School of Mines, and National Renewal Energy Laboratory.). One interviewee called for a vanpool service that accommodates during-the-day mobility needs of the corridor’s employees. Several interviewees noted long head times of greater than five minutes made rail transit less appealing.

Interviewees advocated for post light rail completion analyses of parking utilization at stations and pedestrian connectivity. Jurisdictions portrayed pedestrian connectivity as an unfunded mandate of the corridor. Some jurisdictions had pedestrian infrastructure in the original FasTracks plan that was later removed leaving jurisdictions responsible for resolving needs and impacts. Jurisdictions generally planned for pedestrian and bicycling infrastructure, but because of the lack of funds, relied on new development to provide it.

An interviewee noted that connecting stations to points of origin/destination was difficult, and suggested post light rail completion studies would better identify and prioritize pedestrian infrastructure needs.

### Jobs and Economic Development

Several interviewees pointed out that the West Corridor is just beginning to gain transit oriented development experience and the economic benefits are really part of an emerging corridor investment. Benefits along the West Corridor are expected to continue to improve once the line becomes more established and after the line to the airport opens, which will have a transfer point

with this line. However, preparations have been underway for West Corridor development for some time.

The Center for Transit Oriented Development worked with the West Line Corridor Collaborative to create the *Connecting the West Corridor Communities* report. This process created a corridor, versus station area, focus among the collaborative. The report also provided a strategic plan to frame fiscal preparations, logistics, and the required local fiscal match from FasTracks. One interviewee pointed to the report as informing elected official support for a contested affordable housing project on the corridor.

According to an interviewee, these corridor and/or regional planning relationships need to be formalized, through inter-governmental agreements or similar contracts. These contractual relationships provide clarity but also recourse as changes occur from plan to completion, such as head time changes or changes for pedestrian connectivity. Another interviewee noted that some issues span corridors, such as affordable housing, and formal relationships are needed to address these also.

Several interviewees cautioned that the plan may not necessarily lead to the intended outcomes, and likely not in the desired timeline. One interviewee identified transit as a tipping point: land otherwise overlooked for development becomes viable in the presence of transit. Other interviewees thought some stations areas may require ten or more years for land values to ripen for redevelopment of land uses: current owners will not convert until the land value demonstrates the benefit of doing so.

## Site Development

### Station Area Plans

Some jurisdictions created plans specific to individual stations, reflecting each station's strengths and weaknesses. Some station area plans use typologies, which are used to determine and prioritize the jurisdiction's station area investments, such as pedestrian, streetscape, and/or bike infrastructure and improvements. Some station areas lacked, and some organizations did not undertake, station specific plans. Interviewees testified to the role having a plan in place had in implementing station area development: in one case, an adopted plan convinced city councilors to approve an affordable housing project over the objections of residents. In another case, a station area had no plan in place, and so a planning department advised a developer to scale back the density of a proposed development out of fear of resident resistance.

Some station areas require infrastructure improvements, from drainage to pedestrian and cycling. These improvements were noted by an interviewee as a potential barrier to development. Some infrastructure improvements, such as drainage, fall to jurisdictions to undertake. Others, such as pedestrian infrastructure, are usually planned for future development to undertake. Either way, as one interviewee stated, station area infill development is more expensive than straight development.



# Region Wide

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## Overarching

This section synthesizes the statements of interviewees who worked at a regional scale. Interviewees identified three overarching ideas: (1) the need for shared learning to develop transit leadership and best practices; (2) the need for collaborations to fully leverage the investment and potential of FasTracks, and (3) the need to develop a public (and elected-official) understanding of the importance and need for integrated land use and transportation planning

## Corridor/Regional Planning

Interviewees had mixed views on transit oriented development corridor and regional planning. On institutional leadership:

- Many interviewees wanted the Denver Regional Council of Governments to develop the political leadership and pointed to binding Federal transportation pass through funding to achievement of Sustainable Communities Initiative goals, such as density and affordable housing, as a step towards building the institutional capacity.
- Other interviewees thought greater effectiveness was needed than the Denver Regional Council of Governments currently represents for leading collaborating organizations to achieve the region's Sustainable Communities Initiative goals, and more broadly, to develop an attitude or culture of regionalism for land use and transit oriented development/ transit communities development.
- Other organizations, such as Mile High Connects, Urban Land Institute, Metro Denver Workforce Alliance, the Metro Denver Economic Development Corporation, and the Neighborhood Development Collaborative, are capable of creating or modeling the needed collaborations. The organizations themselves were seen as lacking in the legitimacy (legal and funding) of the Denver Regional Council of Governments.
- Still other interviewees did not think the Denver Regional Council of Governments could lead due to its composition (50+ member board), and level of commitment. Instead, they advocated that the Council act as the “glue” between the existing collaborative. (mentioned above). Interviewees complimented the Sustainable Communities Initiative as integrating equity to transit oriented development and transit communities' conversations occurring in the Denver region.
- Some of these interviewees pointed to interagency collaboration at the Federal and state level (e.g., U.S. Department of Housing and Urban Development, Colorado Housing and Finance Authority, U.S. Department of Agriculture, and U.S. Department of Economic Development) as providing models of the possibility of such collaborations.

## Public Participation

Interviewees identified the need to engage the public, and public officials, through a strategic regional communication and education campaign; one that seeks to increase level of understanding of the importance of the Sustainable Communities Initiative and the opportunities FasTracks offers for the region.

## **Ridership**

Four elements were identified as impairing increased ridership: the challenges to local jurisdictions for developing infrastructure connections to station areas; first and last mile connections; lack of integration of workforce and employers in the FasTracks and the Sustainable Communities Initiative processes; and fares.

Interviewees noted that parking dominated the regional attitude and practice of station area connectivity, and that attitudes have slowly shifted to include moving and connecting people. Connecting people, through what is now a light rail system (rather than a couple of lines), was thought to have the power to increase ridership. The lack of first and last mile connections, such as buses and circulators, was referenced by many interviewees as the reason for lower than projected ridership. Workforce development interviewees from across the region reported anecdotal evidence of job seekers being limited by transit: its level of service, timing and longevity of connections, and fare/pass costs.

The majority of interviewees pointed to the fare structure, for individuals and businesses, as limiting ridership. All stated the light rail fares are too expensive for many riders, who shift their travel to the more affordable bus route instead. Interviewees in workforce development reported that the expense of the EcoPass for all but the largest employers inhibits increased ridership by employees.

## **Safety**

The perception of safety has a profound ability to impact ridership. The range of issues reported included the importance of “eyes on the street,” lighting, safe infrastructure, high pedestrian traffic, connectivity beyond the station and safety in the neighborhoods and parking areas – a long checklist of safety issues, concerns, and importance developing ridership.

## **Housing**

Interviewees noted the expense of developing housing near station areas due primarily to transit’s inflationary influence on land costs. Affordable housing has been concentrated within Denver and along the Southeast Corridor. Some interviewees did not think all station areas worked for housing.

### **Affordable Housing**

Interviewees identified several needs for affordable housing region wide: data collection, metric development, and tracking/reporting around affordable housing; training and development of more and better affordable houses; a focus on affordable housing preservation; an educational campaign to broaden the understanding and acceptance of affordable (and workforce) housing; aggressive planning to meet the scale of need; and additional and more consistent funding sources.

## Data

Interviewees noted a need for a central database for identifying, tracking, and reporting affordable housing, properties for preservation, loss of affordable housing (sales data and/or expiring properties), metrics for achievement of regional affordable housing goals (to support the linkage of funding to achievement of affordable housing goals), and to respond to resistance for affordable and workforce housing (especially in communities where there is a lack affordable housing and low levels of support).

## Training

Developers interviewed all stated the need for more and better trained affordable housing developers in the region. The complexity of affordable housing finances is a specialized skill set and directly impacts the ability to develop affordable housing in the region. Without filling this gap, production will continue to be negatively impacted.

Lastly, the design and form of affordable housing is important to its acceptance by communities in which it may be located. Interviewees noted current practice relies on cheaper, and common designs. Training affordable housing developers to create quality products is necessary to achieving initial acceptance and subsequent support for its scale. Good affordable housing is being built and delivered now, and these quality products can be expanded in the region – because success sells we need to get out the word to regional policy leaders.

## Preservation

The loss of affordable housing, both subsidized and market rate, was acknowledged by interviewees as occurring as a result of FasTracks. Interviewees called for a program to focus on the preservation of affordable housing through city ordinances, station area plans, outreach to buyers of expiring units, and data collection and reporting on properties across the region and over time. Funding for these strategies is also needed.

## Campaign

While data show that affordable housing in the region is concentrated in discrete areas of the region (Denver and the Southeast Corridor), and lacking the scale to meet the identified need, interviewees pointed to the need for “buy-in” by political leadership across the region to deal with the scale of the problem.

Some interviewees characterized suburbs as potentially having the land available but policy leaders do not advocate, or implement affordable housing. Developing the right political message was thought to be a key to this changing the process – building public support and public and community leadership.

Suggestions for doing so included highlighting catalytic affordable housing projects; demonstrating quality affordable housing; making explicit the connections between housing and transportation costs; expanding perceptions of residents of affordable and workforce housing by sharing data on their ages, incomes, and occupations; cultivating regional champions; and linking the provision of affordable and workforce housing to the economic competitiveness of the region.

## Scale

A lack of affordable housing has been quantified by some jurisdictions within the region. For example, the recent City of Denver's affordable housing plan identified today's region wide gap of 27,000 affordable housing units, and sets a plan to build 5,000 units per year. Many jurisdictions, though, did not undertake this planning process and are only now discussing affordable housing. This report has been both lauded for addressing the issue, and critiqued for its lack of scale. Without other jurisdictions in the region addressing the issue, the lack of scale in produced affordable housing will perpetuate.

Developing support within these jurisdictions is only part of the process of development. Jurisdictions must also be willing and able to bring dollars to these projects. Interviewees clearly stated that this willingness was currently lacking, and was absolutely tied to successful development.

Some interviewees pointed to the role the business community could have in swaying more jurisdictions to address the scale issue, since provision of housing for all of their workers is integral to economic stability due to lower tardiness, absences, and employee turnover.

All interviewees identified the lack of funding as the largest barrier to meeting the scale of affordable housing needs. Nine-percent low income housing tax credit funding, the most successful funding stream for affordable housing across the range of jurisdictions (suburban to urban), is also the most limited and competitive – only two to three projects (producing approximately 300-400 units a year) get awarded at each round of funding.

## Funding

Interviewees called for greater and more available funding. Some wanted more Federal funds to support the low income housing tax credit grants. Some interviewees wanted greater jurisdictional support, through reduced fees, and plan and design standards, which can add to the cost of affordable housing development. Some interviewees sought a regional and/or state affordable housing funding stream – though most cautioned that this would be difficult to undertake due to the taxpayer's bill of rights (TABOR) amendment, the Gallagher amendment, and (historic) realtor association resistance.

## Diversification of Housing Stock

Interviewees noted that while densification is occurring near station areas, whether affordable or not, a lack of family housing exists. There is a need to develop three-plus bedroom units to accommodate families. Another interviewee stated that single family residential development should also be developed in transit zones. Without these units, families will continue their current migratory patterns from urban to suburban jurisdictions.

## Accessibility

Interviewees noted multiple accessibility concerns: first and last mile connections, infrastructure, fare and pass costs, and a disconnection between housing and employer locations. Further, several interviewees noted access will need to be the next phase of the region's transit development.

As one interviewee stated; "Despite rail build-out, there are a lot of people who do not live adjacent to it." Some interviewees pointed to the ("easy and cheap") alignment of the light rail line along highways, high traffic arterial roads, and railroad tracks. Some interviewees called for transit oriented development funds to be applied to bus corridors to enhance transit accessibility.

Aggravating this, bus service often gets reduced post-rail completion. Communication between jurisdictions and the Regional Transportation District was characterized as lacking partnership, forethought, and transparency, leaving these jurisdictions unable to plan for and incorporate connectivity solutions.

Jurisdiction interviewees consistently felt the first and last mile connections and station area and transit zone infrastructure fell to them, for which they have no funding sources. However, interviewees were adamant that the provision of first and last mile connections and infrastructure connectivity is integral to the success of the \$7 billion FasTracks investment. One interviewee pointed to the infrastructure improvements built within the 10<sup>th</sup> & Osage light rail station as a catalyst to that transit zone's success.

Some interviewees pointed to the public-private-partnership that developed the Lone Tree Link, which links light rail riders to major employers, as a model for first and last mile connection issues. However, first and last mile connections from the worker's residence to the transit system remain an issue.

Additionally, employees may need work-day mobility – to go to lunch, to move between offices, to run errands, to be prepared for family emergencies. Circulators will also need to provide this level of mobility to induce more ridership.

Fares were also identified as an accessibility issue. Many interviewees found fare cost and the current EcoPass pricing structure as the primary reason FasTracks ridership lags. Inequity in access to the system, for low wage workers, was identified by interviewees, with some identifying the EcoPass price structure as being especially inequitable for small businesses. Other interviewees believed re-structuring fares (and several suggestions were offered) would increase ridership.

Finally, interviewees noted the disconnection between the employee's residence and the employer location was a bigger, contextual problem not being addressed in the region. As one interviewee stated: "FasTracks does not connect employees-to-employers – it connects suburbs to city centers."

Workforce development interviewees noted that firm location does not necessarily consider the transportation needs of the range of their workforce, and that transit dependent job seekers will limit their job search based on transit accessibility (which can limit their achieving self-sufficiency).

Breakdowns in the system, through skill and job gaps, employee turnover, and regional economic competitiveness, are seen as isolated issues. There is a need for creating places and processes for issues of access, land use and transportation, and economic development to occur.

### **Multi-Modal Connections**

Interviewees thought a gulf existed between public understanding of the importance and need for the integration of land use and transportation, and the intention FasTracks implies for regional growth. The large amount of parking and the lack of multi-modal connections at some stations is another indicator of a lack of understanding.

The emphasis on parking at suburban stations was thought to be necessary, given the historic “auto-centric” culture of the region. One interviewee pointed to state statute, which prohibits the Regional Transportation District from charging for parking, as creating incentives for riders to drive, rather than use other modes, to stations.

However, some interviewees pointed to operations at the Regional Transportation District as influencing the amount of parking built – it was thought that the District built parking if they had the land and the money to do so. A more sophisticated approach to parking, such as off-site surface parking lots or use these parking funds to leverage first and last mile connections, was called for by interviewees.

### **Jobs and Economic Development**

Interviewees called for integration of jobs and economic development into regional land use and transportation planning; engaging with the range of employers in the region to elevate transit usage in their business operations; and greater connectivity between employees and employers.

Interviewees called for giving employers a place at the regional land use and transportation planning table. This could align Sustainable Communities Initiative goals with current local and regional economic development strategies, and minimize small and mid-size business displacement from transit zones due to economic development gentrification. For example, the Workforce Innovation and Opportunity Act provides transit passes to enrollees but is currently under-utilized; having workforce development at the transit oriented development table can help to strengthen ridership, improve access to jobs, and increase utilization of transit passes made available through the Act. Another example is to develop a strategy to attract office spaces, and address the over production of ground floor retail and commercial space, at transit oriented development stations and along some corridors of the region. One interviewee provided a third example outcome of this strategy: meet Federal funding requirements for using small and disadvantaged businesses to develop circulator providers.

An interviewee noted that that most businesses do not prioritize transit options for employees. The Denver South Economic Development Partnership provides a model for employer outreach: the associated transportation management association conducts transit education and outreach events at major employers in the sub-region. Employees are helped to identify their transit options and routes. Support for expansion of these and other programs to elevate the role transit plays for both employer and employee could increase ridership.

Interviewees also noted that the region lacks a vision, collaboration, and leadership commitment for creating the full range of skilled jobs (low, middle, and high) near transit. Linking workforce training and education facilities to stations and transit zones will also aid in the region's economic development and access to jobs.

## Site Development

Interviewees provided a range of perspectives on themes regarding site development: financing, jurisdictional site preparation, focusing growth around transit stations, and the mix of uses at station areas.

Light rail transit has created a speculative environment in the region, and was noted as driving up the costs of station area development. Interviewees noted that this speculation develops financier support for station area development. Transit was thought, therefore, to create a tipping point whereby previously undevelopable land is now viable. However, some interviewees cautioned that financing of development can be independent of issues such as accessibility – the market will support development where profit opportunity exists.

For this reason, interviewees called for deliberate efforts to both reorient the market away from highways to transit lines. Several interviewees thought that expansion of station areas from the current one-quarter mile radius to a one-half mile radius could alleviate this speculative competition.

Additionally, jurisdictions can aid this reorientation by preparing the site for development, through infrastructure investments. Preparing sites, though, may be challenging due to high cost infrastructure and cleanup needs. The ability to use transit oriented development funds to address these issues would help create station area site development that support Sustainable Communities Initiative goals.

Interviewees also advocated for attracting the “right form” and mix of development: dense development with a range of quality housing types (for young and old, singles and families) and affordability levels, and services that support residents and employees of the region (including child care, and education and training centers).

## Station Area Plans

Station area plans should be developed as early as possible, and followed with supporting zoning and regulations. Interviewees across the region advocated for this and provided anecdotal evidence when having these plans in place translated into support for the Sustainable Communities Initiative and plan goals by elected officials and completion of desired development (e.g., higher densities and affordable housing). Early planning resulted in public support, understanding of project benefits to communities, and support for community leadership.

The current urban centers designation used by the Denver Regional Council of Governments was thought by some interviewees to no longer be meaningful for station areas and their development. Perhaps this is because of what interviewees cautioned against: plans (or designations) are only the first step and more steps are needed. These include zoning and regulatory changes (undertaken by many jurisdictions in the region), operational and infrastructure assessments, prioritized plans, and

funding mechanisms need to be undertaken to achieve the set goals through addressing the identified needs.

Assembling the resources and public-private partnerships can be aided by these plans and assessments through providing funders and partners with a clear and coherent set of goals and plans for action.

## **Funding**

There is broad agreement that financing for the range of issues addressed above is lacking in the region. From affordable housing to transportation infrastructure and first and last mile connections, consistent, scalable funding does not exist. What funding does exist, such as the regional transit oriented development fund and low income housing tax credit grants, were recognized as effective in meeting their intended goals, but limited by the scale and range of needs in the region.

Interviewees pointed to funded projects, such as 10<sup>th</sup> & Osage multi-modal infrastructure investments, and affordable housing development at Lamar station, as providing catalysts for change. Expanding the ability to fund additional catalysts and to create the right mix of uses and building forms and densities at station areas requires additional, and expanded uses of, funding sources. Funding also needs to be dedicated to the development of talent in the region to meet Sustainable Communities Initiative goals, such as affordable housing developers. A number of interviewees felt that the timing is right because of a strong regional economy to create alternative funding for Sustainable Communities Initiative projects and programs.

Expanded funding sources, such as a real estate transfer tax to finance the development of affordable housing, a regional housing trust fund for diversification of housing stock, or expansion of the regional transit oriented development fund to finance along bus corridors, were thought to be needed in the region. Many interviewees cautioned that the political will does not currently exist in the region to do these, and other similar, funding initiatives. Still other interviewees pointed to the prior successes of organizations like the Metro Mayors Caucus in developing the political will within the Regional Transportation District, the Denver Regional Council of Governments, and the public to approve FasTracks and regional growth management agreements. Some interviewees also pointed to the strength of current organization efforts, like Mile High Connects, the Transit Alliance, and Urban Land Conservancy, to convene the necessary and diversity of stakeholders to achieve Sustainable Communities Initiative goals.

Other financing ideas offered by interviewees include: using New Market Tax Credits, providing tax exemptions for desired housing at station areas (such as for density, affordable housing, or housing for special populations – seniors, homeless, disabled), allocate regionally-managed transportation improvement program funds based on alignment with Sustainable Communities Initiative goals, low income investment funds, Living Cities funds, expansion of the five year time limit for Colorado Housing and Financing Authority funded projects to allow for pre-speculative land banking, public facilities funds or districts (for schools, parks, libraries, child care centers, etc.) which will inspire private investment, special districts with taxing authority (e.g., Southeast Public Improvement Metropolitan District – SPIMD), regional or state infrastructure improvement fund (possibly using an infrastructure improvement district tax increment), housing



rehabilitation fund for individual homeowners (to improve large stock of existing housing stock in under-developing areas of the region), and collaboration between the U.S. Department of Housing and Urban Development and the Colorado Housing and Financing Authority for affordable housing lending to streamline and reduce costs.

## **Data**

Interviewees called for data definition, collection, repository, and tracking and reporting of affordable housing inventory, market rate affordable housing inventory, equity measures, and livability measures. Additionally, they requested data and toolkits to aid the region and its jurisdictions to demonstrate density, affordable housing, and other Sustainable Communities Initiative goals that meet resistance.

## **Denver Regional Council of Governments**

The perception of the Denver Regional Council of Governments on these issues is mixed. For example, interviewees repeatedly desired the Council to articulate and enact a regional transit oriented development vision, by tying funding to articulated goals. Other interviewees questioned whether the Council could take the lead and leverage funding for regional or Sustainable Communities Initiative goals.

The Denver Regional Council of Governments was acknowledged as effective at convening working groups, and was encouraged to leverage this skill to develop capacity in the region's organizations. Additionally, the Council could facilitate the continuum of relationships, from coordination to collaboration to partnerships, in targeted areas, such as between transit oriented development and workforce development, and the Regional Transportation District and the Colorado Housing and Financing Authority.

The Denver Regional Council of Governments was also seen as capable in regional data analysis and modeling. Interviewees suggested expanding on this strength to include funding and/or conducting economic development analyses, plans and strategies, such as what was ultimately done with the Denver South Economic Development Partnership assessment.

Interviewees also suggested developing a regional displacement policy, an employer-employee transit promotion program, and refining the urban centers designation to be more meaningful and coordinated with transit oriented development.

## **The Regional Transportation District**

Interviewees expressed both frustration and optimism regarding the Regional Transportation District and its role in achieving Sustainable Communities Initiative goals. On the one hand, the Regional Transportation District was seen as lacking transparency and commitment to achieving transit oriented development, and on the other, as being able to be the transit provider of the year by enacting Sustainable Communities Initiative programs and projects. Interviewees spoke around three themes when discussing the Regional Transportation District: greater transparency, broadened stakeholders, and a matured mission, specifically:

- Creation of transparent partnerships in the Denver region. These partnerships and initiatives take the Regional Transportation District and the regional transit system from strictly focused on transit, to include communities and ridership.
- Having consistent and transparent processes for joint development which clearly state the requirements, desired outcomes, and delineates the District's willingness and/or ability to "go beyond the platform," for improvement of transit oriented development.
- Proactive transparency regarding changes to bus routes and service at light rail completion, station opening, and beyond. Share bus and service changes, particularly with jurisdictions and/or organizations working with transit dependent populations to support their planning efforts
- The Regional Transportation District has begun a fare study, which included public input. Some feel uninformed or disengaged from the study – there a need to make sure there is broad involvement.
- According to interviewees, broadening the base of decision makers (to be more inclusive of the broad range of decision makers) could better inform fare and EcoPass pricing decisions, better service provision, and ultimately, increase ridership.
- A focus from transit oriented development to transit communities reflects a maturation of the District's mission from strictly the safe movement of people to connecting people and places. Interviewees appreciated this change and called for deeper commitment to the transit oriented communities.

Internally, the Regional Transportation District was asked to empower its transit oriented development department to equal parity with the operations, maintenance, and technical services departments. Doing so would allow for better liaisons with local and/or impacted jurisdictions, competent handling of the process and inevitable changes and challenges that occur from planning to post-implementation, and could shift station area development from its currently perceived auto (and parking) centricity to transit oriented communities.

Transit communities could focus on multi-modal accessibility, including first and last mile connections; could include diversity of housing types and affordability by mandating its development on any jointly developed projects that use Regional Transportation District owned land in the transit zones (such as surface and/or structured parking lots); and could seek partnerships for the provision of community services at station areas – making the places people need to transition from their automobile to light rail transit.

### **NexTracks**

Interviewees stated that the future of FasTracks is not additional lines, rather a more expansive approach to transit which focuses on a broader array of issues including housing, community services (including child care), multi-modal infrastructure, and first and last mile connections.

# Appendix C: Case Studies

For the selection process, the team initially identified Cleveland, Dallas, Miami, Minneapolis-St. Paul, Portland, Sacramento, Salt Lake City, Santa Clara County, San Diego, San Francisco, Seattle, and Washington, D.C. as potential comparison regions. Most of these regions are similar to the Denver region in age and size, and have relatively new light rail systems. Many are addressing station area accessibility and infill development, and are grappling with retrofitting land use patterns to be more transit supportive. An overview of some of the factors we considered are provided in the table below.

**Table 1C: Potential Case Studies**

Region/ MSA	Region Pop.	2010 Pop. Transit region	Avg. VMT/HH (HTA Index, <i>Are We There Yet?</i> )	% Of HHs near fixed- guideway	% of low income HHs near fixed- guideway	% of Sec8/202 HHs near fixed- guideway	% of jobs accessible by 45 min. transit commute	% of Low/ Moderate jobs accessible by 90 min. transit commute	% of jobs to work by walk or bike
Mpls-St. Paul MN-WI	>3M	3,279,833	>17,493	<4.25%	53%	<13.6%	6.50%	38.60%	3.10%
San Jose- Santa Clara,	1M-3M	part of SF	15,974	20.37%	50%	24.80%	9.30%	64.80%	3.60%
Seattle- Tacoma, WA	>3M	3,439,809	>17,493	4.52%	not top 10	22.90%	6.70%	36.30%	4.30%
Washington- Alexandria	>3M	5,756,612	>17,493	15.19%	51%	28.70%	8.80%	43.20%	3.50%
San Francisco- Oakland, CA	>3M	6,666,861	15,476	24.22%	48%	41.70%	10.50%	44.10%	5.70%
Charlotte- Rock Hill, NC-SC	1M-3M	1,947,783	>17,657	not top 10	not top 10	not top 10	<7.9%	<41.4%	<3%
Salt Lake City, UT	1M-3M	1,567,370	>17,657	6.75%	not top 10	34.90%	11.10%	69.40%	<3%
Sacramento- Roseville, CA	1M-3M	1,948,278	>17,657	7.89%	53%	15.90%	<7.9%	<41.4%	3.60%
San Diego- Carlsbad, CA	>3M	3,095,313	16,896	10.95%	52%	21.30%	5.20%	37.00%	3.40%
Denver- Aurora CO	1M-3M	2,784,228	16,973	4.98%	52%	18.80%	<7.9%	57%	<3%
Portland- Vancouver- OR-WA	1M-3M	2,214,943	>17,657	13.56%	51%	39.80%	<7.9%	46.90%	5.00%
Dallas TX	6M-7M	6,437,129	20,188	not top 10	not top 10	not top 10	not top 10	not top 10	1.54

Beyond these objectives measures, the location of the region within the country was also an important criteria; in particular, those in the Western United States, were favored, in large part because they faced a similar context with respect to the timing of the majority of their development during auto-oriented eras. Additionally, regions with older, larger, and more transit oriented systems were considered for their maturity and richness of learning opportunities. Finally, regions considered competitive to Denver for attracting industry and residents were weighted more favorably in the selection process. Ultimately, we ended up with 3 cases for study – Dallas, Portland (Oregon), and San Diego.

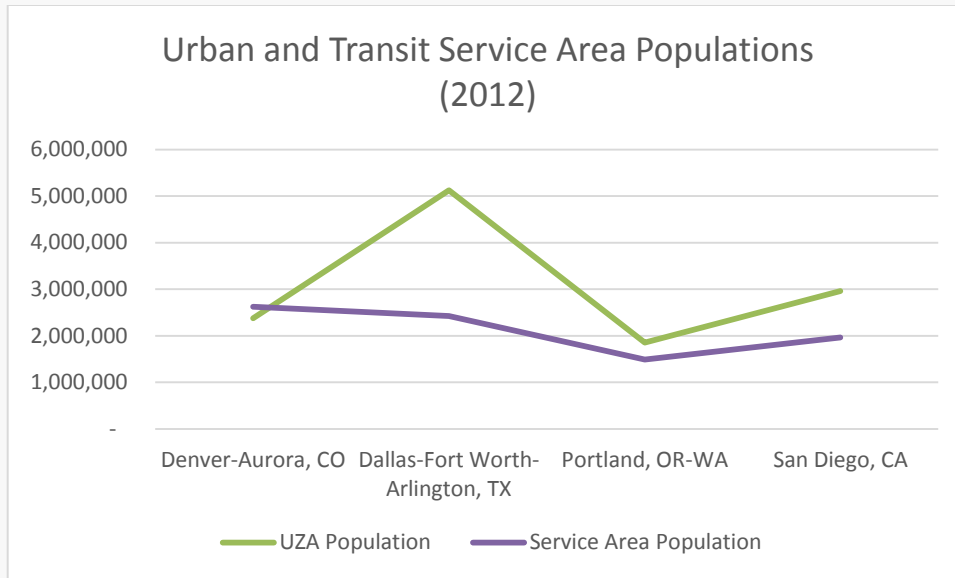
In conducting the case studies, the goal was to understand the challenges faced in these regions and the different strategies, policies, and programs developed to address them. The idea being, that these insights might offer some guidance on how Denver can move forward.

The remainder of this appendix, offers a brief overview of the cases paying particular attention to some of the data sources that were employed.

## **A Brief Overview**

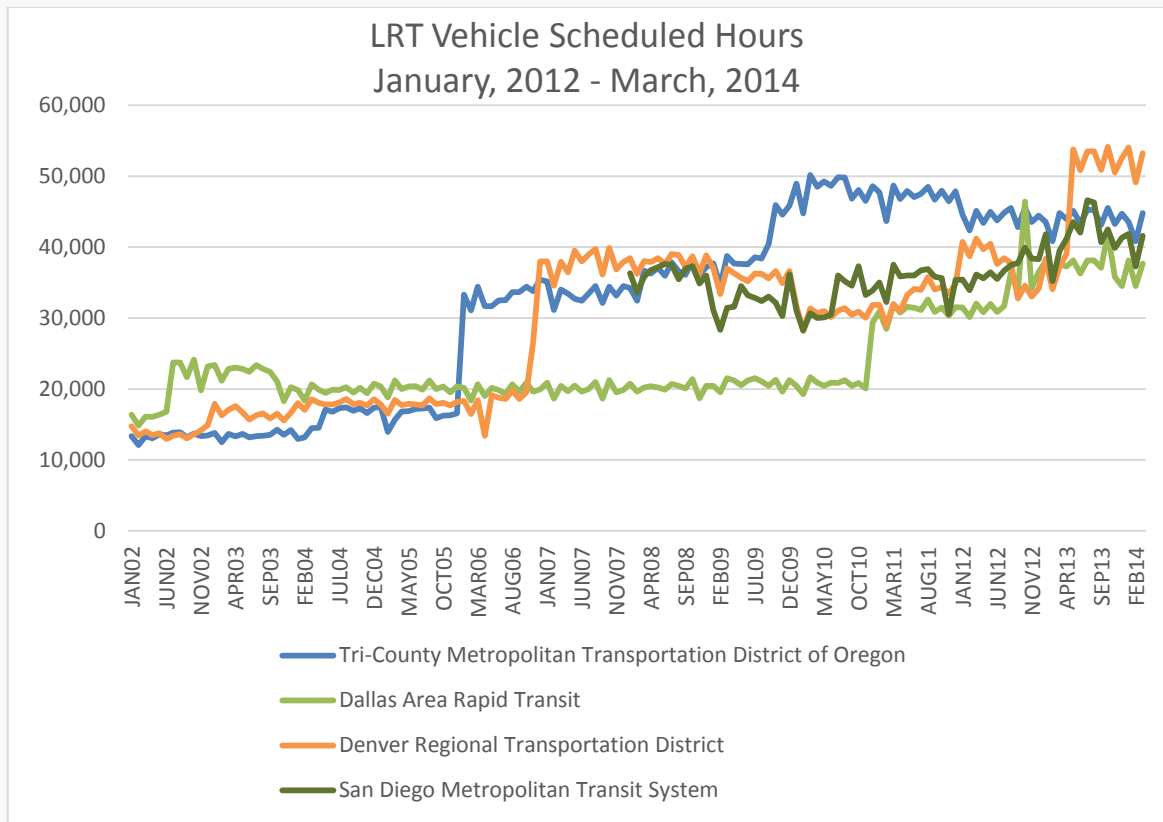
***Both Portland and San Diego have transit service areas that match their urbanized areas. Dallas' transit service area covers only a small portion (39-percent) of its urbanized area. Denver's transit service area is far greater than its urbanized area—a reflection of the commuter park-n-ride facilities which Denver' Regional Transportation District maintains in the ex-urban areas of the region.***

A review of the population of both the urbanized and transit service areas finds that all regions but Dallas have transit service areas that incorporate almost all of their region's urbanized populations. This analysis found that despite Denver's size mismatch of urbanized and transit service areas, the populations of each are roughly equal. Portland tracks equally well. San Diego's transit service area captures just two-thirds of its urbanized area population. Due to only 39 percent of the Dallas region's urbanized area being captured in its transit service area, Dallas' transit service area fares the worst, with less than half of the population living within the transit service area.



**Figure 1C: Comparison of case study urban and transit service populations (Source: APTA)**

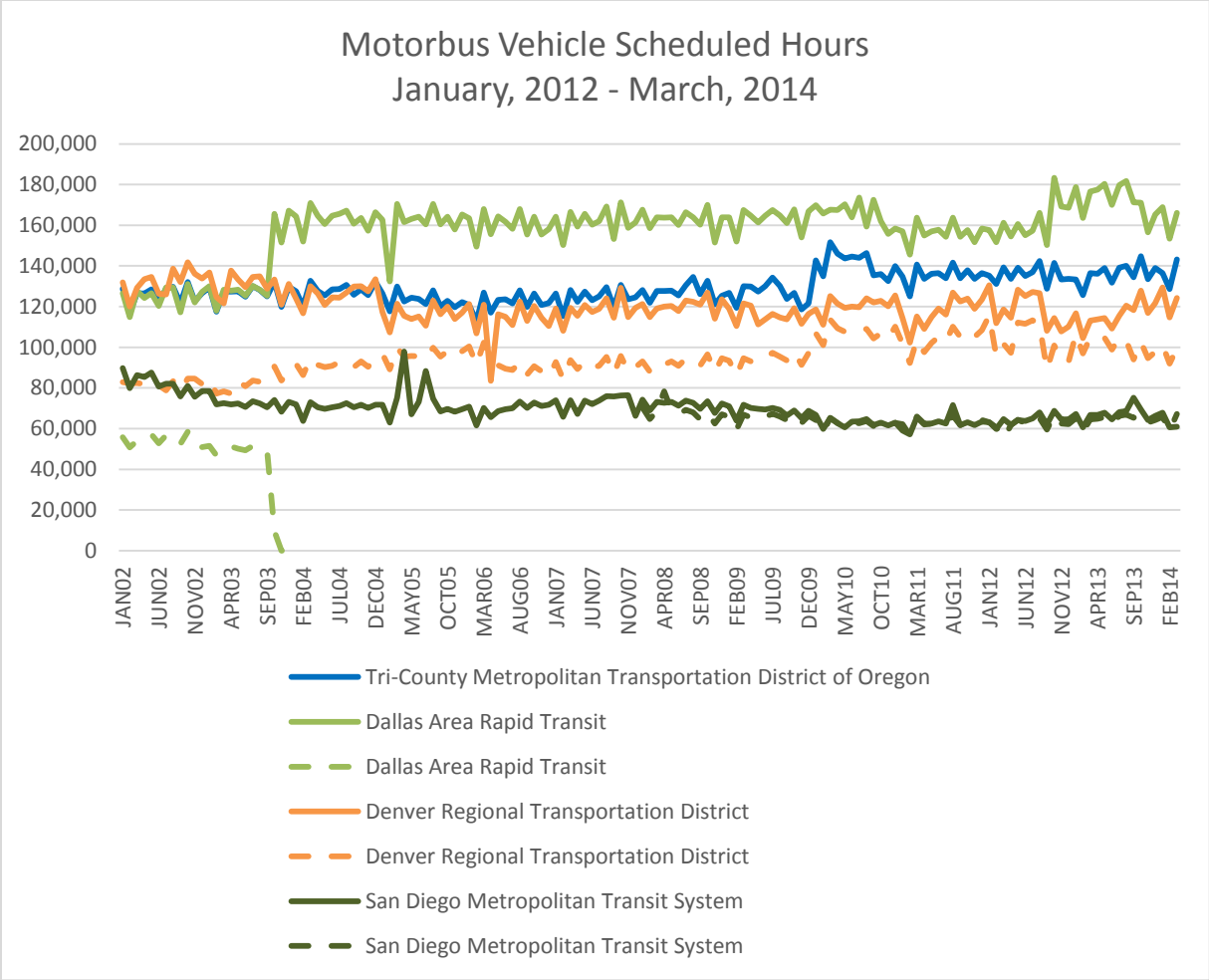
The scheduled hours for operation of each system’s light rail can also highlight the availability of the service. However, this data is at too gross a scale to provide insight into the hours of operation, head times, or other frequency of service measures. For example, high vehicle scheduled hours may reflect low head times at peak times and long head times and/or no service at non-peak times.



**Figure 2C: Comparison of Denver and case study regions' light rail scheduled hours of operation**

This longitudinal view shows the tenure and expansion of each region's light rail system. For example, the opening of the West Line in the Denver region (2012) put Denver above all of the peer regions in scheduled hours of service for its light rail vehicles.

Light rail service and bus service are inextricably linked: bus service provides connection to light rail and bus service often experiences service changes once light rail completion and/or expansion occurs. Despite being linked, light rail and bus service are not necessarily interchangeable transit services: for many, light rail is too expensive, and provides less accessibility than buses. Therefore, it is equally important to review scheduled hours of bus service.



**Figure 3C: Comparison of Denver and case study regions' bus scheduled hours of operation**

Dallas, Denver, and San Diego all directly operate and contract with private providers. Dallas leads the regions with its bus vehicle scheduled hours, followed closely by Portland, which is followed by Denver. However, if private and directly operated bus vehicle scheduled hours are combined, Denver leads all regions.

# Dallas

## Region

The Dallas-Fort Worth region has been experiencing growth for over four decades. From 1970 to 2010 the region grew 157%, with 23.4% of that growth realized from 2000 to 2010, achieving a regional population of 6.5M in 2010. This population increase is expected to continue: the regional population density projections for 2013 to 2035 estimate an increase in population density from 718 pp/square mile to 1,042 pp/square mile. Fort Worth and Dallas are projected to absorb the greatest portion of this growth (North Texas Council of Governments. (2010) Mobility 2035: Social Considerations). Today, Dallas is the 4th largest metropolitan area in the United States.

In addition to a large population, the region is a significant transportation hub. Dallas is the nation's largest inland port, and its sister city, Fort Worth, has the nation's busiest and most congested rail intersection; freight equated to 32% of the Texas GDP in 2008.

This auto dependent, rapidly expanding region is larger than the DRCOG region in population, land area, and developed and expanding rail lines. The economic impact of the Dallas Area Rapid Transit's (DART) light rail system is touted as beneficial, with analysis by the University of North Texas to substantiate these claims. The Regional Transportation Council (RTC), the transportation policy body of the NCTCG, highlights the region's innovative funding for public transportation, which seems to rely significantly on private development. However, the region cautions that it is in a "major transition" from expansion to maintenance.

## System

As of 2013, the DART system had 85 miles of light rail, 61 light rail stations, and 163 vehicles in its light rail fleet. In addition, 34 miles of commuter rail and 10 commuter rail stations comprise the system. By 2018, there will be 93 miles of light rail line and 65 stations. DART owns most of a 62 mile corridor (called the Cotton Belt) which will be used for passenger rail extending from the Dallas-Fort Worth Airport to Plano, Texas. The estimated completion date for this project, which also includes 2 light rail transit lines to the airport and one to Dallas, is 2025 – 2030. Overall, the DART system boasts 2.1 million annual passenger trips. According to Journey to Work data, transit mode share sits at 1.62%. Approximately 3.28% of households are considered to be "near transit", and annual household vehicle miles traveled per capita is 21,093.



Figure 4C: DART



By 2018, DART will more than double the light rail network to 93 miles, with even more expansion identified in its 2030 Transit System Plan.

DART fares are summarized in the table below.

**Table 2C: DART fares**

Fares	Adults	Seniors, Disabled, Medicaid Recipients, Students, and Youth (5-14)
2-Hour pass: Local/Regional	\$2.50/\$5.00	\$1.25/\$1.25
Midday Pass (2 hours between 9:30am and 2:30pm, Monday-Friday): Local/Regional	\$1.75/\$3.50	\$1.75/\$3.50
Monthly pass: Local/Regional	\$80/\$160	\$40/\$40

## Actors

### DART

The Dallas Area Rapid Transit (DART) organized in 1983 as an integrated transit system, and built its first light rail line in 1986. The 2013 DART Annual Report cautions that “DART is in a major transition” from building system to maintaining ridership. DART places strong emphasis on its lobbying efforts at the Federal level to effect/change transit-associated policy through its participation in the Public Transportation Association. As of 2013, DART’s primary source of funding (67%) is a once cent sales tax in Dallas and 13 participating member cities. Additional funding comes from operating revenues (12%), federal funding (10%), debt issuances (6%), and other sources (3%). Local funds, federal grants, and endowments also help fund individual transit projects. DART has TOD Policy and Design guidelines to support their goal to maximize revenues, and they work with private developers interested in TOD. Although DART’s role appears to be limited to acting as a “catalyst” for development, they do have staff in their Economic Development and Planning division actively engaged in advancing TOD efforts.

### North Central Texas Council of Governments (NCTCG)

NCTCG is the region’s Metropolitan Planning Organization. It encompasses the twelve county Dallas-Fort Worth Metropolitan Planning Area (MPA). The Regional Transportation Council (RTC) is the transportation policy body of the NCTCG. NCTCG seems to be largely focused on addressing its air quality non-attainment status; as the entirety of the MPA is an air quality non-attainment area and/or maintenance area for air quality standards. The North Central Texas Council of Governments is funded by state grants (69%), federal grants (13%), in-kind support (9%), local funding (8%), and member dues and program income (1%).

### Texas Department of Transportation (TxDOT)

The Public Transportation Division within the Texas Department of Transportation administers a variety of Federal Transit Administration and Federal Highway Administration grants to support transit development throughout the state.

### Dallas TOD

Dallas TOD is a project led by the City of Dallas' Sustainable Development and Construction and Economic Development Departments to incite the transformation of five identified DART station neighborhoods. The project emphasizes safe, vibrant, and livable community centers with a range of housing options (workforce, mix-income, mixed-use) and convenient access to transit.

### Dallas Office of Economic Development (OED)

The Dallas Office of Economic Development champions the City's business and real estate development efforts with an emphasis on diversity, vibrancy, and strengthening the urban core, including TOD. A stakeholder-supported strategic plan sets Dallas' economic development mission. OED also created a TIF District, with four sub-districts, in 2008 to encourage dense, pedestrian-friendly TOD projects adjacent to DART light rail stations. OED also participates in the creation of the TOD TIF Plan and TOD Annual Report.

### The University of North Texas at Dallas, University of Texas at Arlington, and Texas Transportation Institution

These academic institutions have conducted extensive TOD research in cooperation with the Federal Highway Administration and the Texas Department of Transportation. *Evaluating the Impact of Transit Oriented Development* (2011) is one of their more notable publications.

### Local Governments

Local governments within the DART service area are partners in TOD development and contribute to development by establishing processes, maintaining communication with DART and the developer, coordinating land use and transportation goals, gaining necessary zoning and development approvals, and facilitating TIF, PID (Public Improvement District), and grant funding.

### **Plans**

#### 2030 Transit System Plan (2006)

The Plan addresses transit investments to be made through 2030 in the 13-city DART Service Area. It proposes a robust expansion of light and commuter rail, bus service, HOV lanes, and paratransit service (services for customers with disabilities). These projects are designed to accommodate rapid projected growth in population and associated increases in congestion. It also addresses changing regional land use and development patterns including TOD.

#### A New Paradigm: Strategies for Revitalizing Dallas' Distressed Neighborhoods (2008)

Created through a partnership between the Office of Economic Development and Real Estate Council Foundation, the Strategy specifically addresses affordable housing projects around DART

light rail stations in Dallas. It includes example project concepts from Dallas neighborhoods and best practice case studies around the United States.

*TOD TIF Project Plan & Reinvestment Zone Financing Plan (2010)*

The Plan outlines project plans, the improvements proposed to them, and the financing plans associated with each for 10 areas around light rail station that have been identified as having redevelopment potential.

*Station Area Plans (2013)*

Five station area plans were developed through a 12-month process involving extensive collaboration and input from the public, City, advisory committees, and planning consultants. Based on an evaluation of existing conditions and current market and development research, the plans identify potential catalyst projects for each station area, new adaptive reuse ideas, and recommended strategies and actions related to funding, outreach, zoning, transportation, and community development.

*GrowSouth Initiative*

Dallas Mayor Mike Rawlings' GrowSouth Initiative specifically mentions several of the Dallas TOD station areas, and contains many themes similar to or overlapping with those of the Dallas TOD project. These ideas include strengthening and engaging neighborhoods, stewardship of responsible growth, urban design, and infrastructure development and maintenance.

*DART Strategic Plan (2015)*

Created to guide DART's actions from 2010-2015, the Strategic Plan prioritizes DART's role as a leader in catalyzing development that is transit- and community-friendly. In addition, the Board Strategic Priority of *Maximize Funding Resources* identifies TOD as a "big idea" and lists "maximize real estate and Transit Oriented Development revenue opportunities" as a goal of the Plan.

# Portland

## Region

The Portland metro region is comprised of Clackamas, Columbia, Multnomah, Washington, and Yamhill counties in Oregon, and Clark and Skamania counties in Washington. It has an estimated 2.3 million residents and 4,375.2 people per square mile, and ranks 14<sup>th</sup> among 50 large cities in the nation in domestic migration, just two slots behind the Denver region (US Census). Between 2000 and 2010, Portland's population increased 10.3%.

Portland is comparable to Denver in its population and demographics, domestic migration, and economic growth. Additionally, Portland is considered an economic competitor to Denver for employer location and employee migration (along with Atlanta, Austin, Dallas, Phoenix, and Salt Lake City). Portland has undertaken significant transportation and TOD projects; developed multiple policies at the state, regional, and local level; analyzed its practices and outcomes; and articulated future considerations. Accordingly, it offers lessons learned to the Denver region..

## System

TriMet has four light rail lines with a total of 52 miles of track and 87 stations served by 127 light rail vehicles. The completion of the Orange line will bring the total number of light rail lines to five with an additional seven track-miles and ten stations. The commuter rail system has one line with a total of 14.3 miles of track and five stations.

The Portland region ranks 7<sup>th</sup> in the nation for per capita ridership, though it is only the 24<sup>th</sup> largest metropolitan area (Kirk Dinkelspiel 12<sup>th</sup> Annual Smart Growth Presentation, 2013). TriMet provides 100 million trips each year through bus (regular, frequent [15 minute intervals], and rush hour), streetcar, light rail, and commuter rail service. Average weekday boardings in 2011 totaled 318,000. The streetcar system provided 3.7 million trips in 2012. In 2013, the light rail system carried 39.1 million trips, which accounts for slightly more than one-third of all trips on the TriMet system, and the commuter rail carried 440,000 trips.

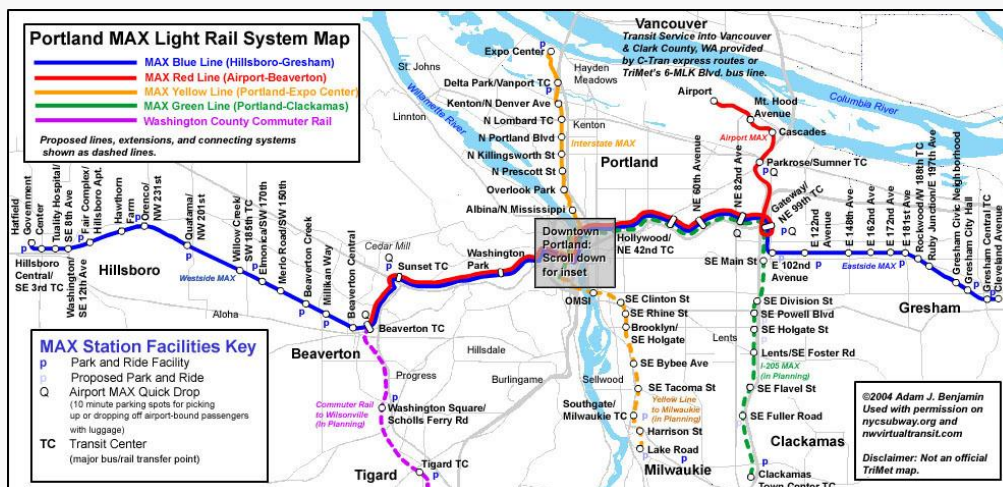


Figure 5C: TriMet System Map

TriMet charges a single fare with no differentiation for local vs. regional travel range, as seen in other case study regions. TriMet fares are summarized in the table below.

**Table 3C: TriMet Fares**

	Adults (18-62)	Senior (65+), Disabled, and Medicaid Recipients	Youth
<b>2-Hour pass</b>	\$2.50	\$1.00	\$1.25
<b>Monthly pass</b>	\$100	\$26	\$28

### Actors

#### Tri-County Metropolitan Transportation District (TriMet)

Established in 1969 as a special district of the State of Oregon, TriMet is the transit agency for the Portland region. Governed by a seven-member Board of Directors appointed by the governor, TriMet serves 1.4 million people in 600 square miles.

Because Oregon does not have an income tax, the majority (53%) of TriMet’s funding comes from a transit payroll tax (.7237% as of January 1, 2014), which applies to gross salary paid for services performed within the transit agency’s district. Other TriMet funding sources include fare box (23%), federal and state government grants (16%), and other sources (8%).

#### Metro

Metro is the Portland regional governing agency. It is the only elected regional government in US, and the only regional government that directly acquires land for TOD. Metro has 17 elected councilors representing three counties and 25 cities. Two sub-committees of Metro, the Metro Policy Advisory Committee and Technical Advisory Committee, are comprised of representatives from a broad range of stakeholders and advise the councilors on regional land use and transportation, and technical assistance issues.

Metro is responsible for overseeing the Portland region’s state-mandated urban growth boundary (UGB), including implementing policy, incentivizing development, analyzing land use, and projecting future needs to make recommendations to the council for UGB expansion. Metro also has a TOD Implementation Program department focused on TOD development in the region.

Metro receives funding through two main sources: enterprise funds (51%) and taxes designated for voter mandates projects (26%). Remaining funding comes from carry-over funding from prior year operations; discretionary general revenue from property tax; excise tax; non-dedicated interest earnings; local, state & federal grants; contributions and restricted donations; local government shared revenues; and restricted earnings.

### Greater Portland, Inc.

Greater Portland, Inc. (GPI), formed in 2011, is a public-private regional partnership focused on economic and job development at the regional scale. GPI recruits and retains employers in seven counties in the region in both the states of Oregon and Washington, earning it a reputation as “the Metro of economic development” (Lisa Abouf, interview, 10/10/14). GPI receives funding through its members, including contributions from 73% of its territory’s cities and counties with populations of 10,000 or more (GPI Annual Report, 2013).

### Portland Development Commission

The Portland Development Commission (PDC), formed in 1958, is a department within the Portland city government that reports to a five-member board of Commissioners who are appointed by the mayor. PDC addresses economic development through two efforts: redevelopment (using urban renewal) and economic development (focused on business and industry) with emphases on the traded sector and their clusters, and small business capacity building. PDC receives 90% of its funding from urban renewal project tax increment financing (TIF); the remaining 10% of funding comes from state and federal grants; Portland General Funds; and income from asset management, contract fees, and lending agreements.

### Portland Housing Bureau

The Portland Housing Bureau (PHB), formed in 2010, is a department within the Portland city government. PHB seeks to “solve the unmet housing needs of the people of Portland” (2011-2013 Strategic Plan). It offers low- to no- interest loans as well as indirect funding resources including tax exemptions and System Development Charge (SDC) waivers. These indirect resources are targeted towards housing developments, primarily around transit light rail stations and frequent service bus corridors. PHB receives 57% of its funding from TIF allocations, 29% from federal sources (Community Development Block Grant, or CDBG, funds), 2% from the Housing Investment Fund, and 12% from the Portland General Fund.

### 1000 Friends of Oregon

1000 Friends of Oregon (1000 Friends) is a non-profit organization formed in 1975 that works “to enhance (the) quality of life by building livable urban and rural communities, protecting family farms and forests, and conserving natural areas” (1000 Friends of Oregon mission statement, <http://www.friends.org/about/our-focus>). 1000 Friends commonly uses litigation to preserve and protect the state’s land use laws. Bianco and Adler (1998) identified 1000 Friends of Oregon as instrumental to the creation and maintenance of regional and local land use policies by acting “as a counterweight to the interests of private business.” In 2010, 1000 Friends aided in the passage of Senate Bill 1059, which linked transportation and land use policies.

### Home Forward

Home Forward formed in 1972 to serve as the city of Portland’s housing authority and later expanded to become the affordable housing authority for the entire region. As of 2014, it served 17,000 households in 6,600 units of housing, and administered an additional 9,000 Section 8 affordable housing vouchers, for which another 20,000 applicants are on the waiting list. According to the Director of Policy and Equity, most of these households rely on transit.

## Plans

### *Portland Central City Plan & Central City Transportation Plan (1988)*

Both adopted in 1988, these plans focus on varying parking requirements in the central business district based on proximity to transit, which in many cases allowed residential construction with no accompanying parking requirements.

### *Metro Urban Growth Management Plan (1996)*

The *Metro Urban Growth Management Plan* (UGMFP) was adopted by Metro in 1996 as a result of a regional visioning process. It mandates that Metro member jurisdictions adopt policies (such as required density minimums, permitting accessory dwelling units in all residential zones, minimum parking requirements for new developments, and obligations for affordable housing) for urban growth boundary management. The *Metro 2014 Urban Growth Report* is the analysis for the sexennial urban growth boundary review and recommendation. Metro creates projections for population, job, and housing growth; and conducts a buildable land inventory to estimate the twenty-year land needs for future growth.

### *Bike and Pedestrian Mode Plan (2011)*

Developed in 1995 and revised in 2011 by the Oregon Department of Transportation (ODOT), the Plan requires bike and pedestrian infrastructure to be included in all road construction and/or re-construction projects, and allows the use of road funds to accomplish this.

### *Transit oriented Development Strategic Plan: Metro TOD Program (2011)*

Developed by Metro in 2011, this Plan assesses and creates action plans based around a “five P” methodology (people, places, physical form, performance, and bike/pedestrian connectivity) to address the lagging TOD development at stations outside of Portland and the lack of affordable housing near successful TODs. This assessment is then used to target project approval and funding. This program is funded by Federal Transit Administration dollars.

### *Metro Urban Growth Management Functional Plan (2012)*

Adopted in 2012, the Plan requires member jurisdictions to accommodate local growth in their comprehensive plans, follow affordable housing recommendations, and coordinate land use and transportation planning.

### *Metro Regional Transportation Plan (2014)*

The *Metro Regional Transportation Plan* seeks to increase access to transit through active transportation, urban design, information sharing, and market mechanisms.

### *The Portland Plan*

Undertaken by the City of Portland’s Office of Management and Finance and the Bureau of Planning and Sustainability, the Plan is a tri-annual review of the Portland region to assess conditions and achievements towards three established goals: thriving educated youth, economic prosperity and affordability, and a healthy connected city.

*Metro Regional Active Transportation Plan*

Based on data from the 2011 Oregon Household Active Transportation Survey and associated data modeling, the *Active Transportation Plan* seeks to improve and expand the active transportation-supportive infrastructure to increase the number of active transportation trips.

*Metro Regional Travel Options (RTO) Strategic Plan*

RTO works to increase awareness of non-SOV travel options (bike, walk, carpool, transit) by providing strategic investments across a range of programs targeting employers, employees, and transportation partners. RTO is funded through CMAQ funding with allocations distributed to Metro (30%), transit agencies (20%), and local partners (50%).

*Metro Regional Transportation System Management and Operations (TSMO) Plan*

The Plan identifies and encourages implementation of strategies to reduce regional congestion and greenhouse gas emissions, and maximize infrastructure investments by marketing and informing commuters of travel options.

*Greater Portland, Inc. Regional Economic Development Blueprint*

The Blueprint, paired with an inventory of industrial lands (including assessing for site readiness for growth), inform an action plan that will include education, workforce development, entrepreneurship, infrastructure, recruitment, and marketing.



# San Diego

## Region

The San Diego metropolitan region consists of 18 city and county governments. It is bounded by Orange and Riverside Counties to the North, Imperial County to the East, the Mexico border to the South, and the Pacific Ocean to the West. The region houses many major military installations, which also serve as some of its major employers. Other employment clusters include Downtown San Diego and the Scripps-University of California San Diego biomedical complex. Besides entertainment and hospitality, major industries include information and communication technology, biotech and pharmaceuticals, and aerospace technology.

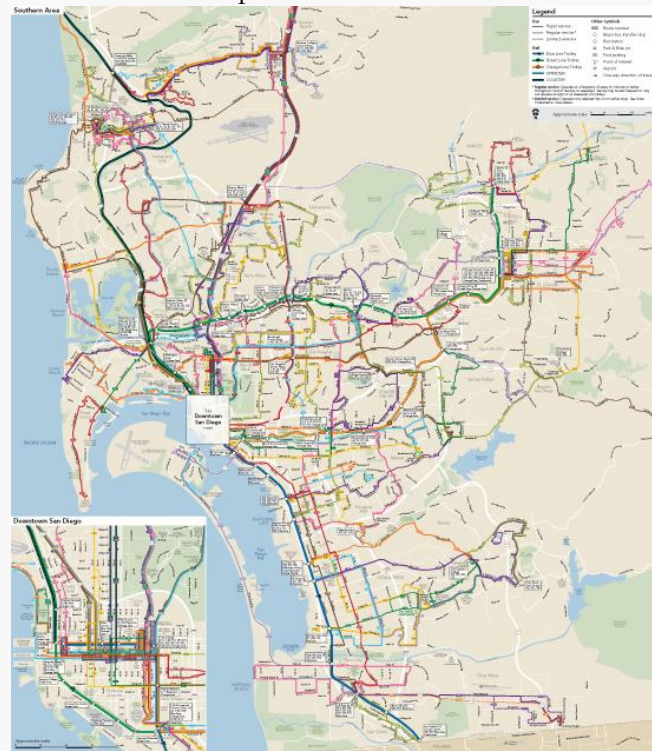
San Diego ranks as the 17th most populous metropolitan statistical area of the U.S. The population grew at a rate of roughly 30% a decade from 1970 (1.4M) to 1990 (2.5M), and slowed to a decennial growth rate of around 11-12% from 1990 to 2010. As of 2013, the region had an estimated 3.2 million people (Census 2013). Seventy-one percent (71%) of residents are White, 11% are Asian, 5% are Black, and around 32% of residents are Hispanic. Median household income is around \$70,926 (2012).

Despite significant differences between the San Diego and Denver regions, San Diego offers valuable insights that can be applied in Denver's unique context. San Diego is a larger region than Denver, has a more mature transit and TOD system and more households near transit, boasts higher ridership per capita, and has state policy in place for TOD. In addition, the region is led by a strong regional council of government.

## System

San Diego's Metropolitan Transit System (MTS) serves approximately 3M people over its territory of 570 square miles of the urbanized area of San Diego County and parts of the East County, which represents an additional 3,240 square miles. The MTS rail system consists of four trolley lines serving 53 stations using 102.6 miles of track. Across all modes of service (bus and trolley), MTS provides 88M passenger trips a year.

MTS is funded through the California Transportation Development Act, the Federal Transit Administration, a one-half cent local sales tax, and fare box recovery. As of fiscal year 2012, MTS' fare box recovery was 40% of annual operating costs, exceptional for an agency of its size.



**Figure 6C: MTS System Map**

In 1981, the Metropolitan Transportation Development Board, now Metropolitan Transit System (MTS), introduced the country’s first light-rail line: the South “Trolley” Line from Downtown San Diego to the Mexican border (Cervero 2003). In 1991, they completed the 17.3-mile East Line to El Cajon and extended this to Santee six years later. The Mission Valley Line opened in late 1997. The Trolley (light rail) runs entirely at grade and links mainly residential areas east and south of the city to the Downtown area. Commuter rail (the Coaster) opened in 1996 and extends 43+ miles up and down the coast. Overall, the Trolley hasn’t had the impact on land development or business activities that it set out to have (Case Studies of TOD, 80).

Rapid is the new bus rapid transit that operates more like light rail, serving riders wanting to travel longer distances with fewer stops. The first line runs along the I-15 corridor between Escondido and Downtown San Diego; this began service in June 2014. The next two lines, opened in late 2014, connect Downtown to San Diego State University and Rancho Bernardo to UC San Diego in La Jolla. A fourth line will open in late 2016 to connect Downtown to Otay Mesa running along I-805. In addition, 11 stations will be constructed in Downtown itself and streetscapes and ROW will be improved at many existing stations. The entire system will be upgraded to differentiate Rapid from existing local bus service and set it apart using a “sleek, contemporary design” (*Downtown San Diego Rapid Transit Stations Fact Sheet*, nd).

The MTS trolley does not have a local/regional price scale, as seen in other case study regions. MTS fares for a two-hour pass are as follows: \$2.50 for Adults and \$1.25 for seniors, the Disabled, and Medicare recipients. Monthly passes are \$72 for Adults, \$18 for seniors, the Disabled, and Medicare recipients, and \$36 for Youth.

**Table 4C: MTS Fares**

	<b>Adults (18-62)</b>	<b>Senior (65+), Disabled, and Medicaid Recipients</b>	<b>Youth</b>
<b>2-Hour pass</b>	\$2.50	\$1.25	-
<b>Monthly pass</b>	\$72	\$18	\$36

**Actors**

San Diego Association of Governments (SANDAG)

SANDAG is the metropolitan planning organization for the San Diego region, covering all the municipal and county governments of its region. In addition to these local governments, SANDAG’s Board of Directors has advisory representatives from several other stakeholder entities. SANDAG creates regional plans, receives and distributes transportation funding and other resources, plans and builds public transit, and provides data and analysis on its region.

### Metropolitan Transit System (MTS)

MTS is the regional transit authority. Formed in 1975, the agency has undergone several changes and now oversees long-range planning, financial programming, and development and construction of transit projects.

### Local authorities

Because they have the authority and regulatory tools – as well as land use controls – to plan for and foster TOD, local authorities are powerful actors in the TOD landscape. Partnerships and cooperation between local authorities and MTS are key in TOD project coordination and advancement, especially since MTS is a major landowner around transit stations. Additionally, the City of San Diego dedicates a planner to work directly with MTS as a technical expert and liaison for TOD (Statewide TOD, 2002, p. 87).

### Centre City Development Corporation (CCDC)

The CCDC was established by the City of San Diego and MTS to operate all land-use matters. It is intended to serve as a separate joint development subsidiary outside of the transit agency.

### Redevelopment Agencies

Redevelopment agencies are key in San Diego's TOD development. They can assemble and help to underwrite the price of land, and improve local infrastructure using TIF (TOD Lit Review, 2002, 61). An important new challenge is that redevelopment authorities/agencies in California were dissolved in 2012 after the passage of State Assembly Bill 26 (AB 26).

## **Plans**

### *Designing for Transit (1993)*

The document specific minimum densities required to support the transit service levels the region desired (RCP, 65) and works in tandem with guidelines developed by the Air Pollution Control District in 1998 to encourage/support alternative modes of transport (RCP, 65).

### *Regional Growth Management Strategy (RGMS) (1993)*

Developed by SANDAG as a result of Prop C, the Regional Planning and Growth Control Measure (1988), this identified opportunities for increased development in “transit focus areas (TFAs)” and called for nearly all growth in the region to occur within one-half mile of transit stations (TOD Lit Review, 2002, 68) The land use distribution element of the RGMS recommended changes to land use and density that would bring the highest density development within walking distance of transit stations and along bus corridors, while encouraging mixed use, compact development in transit station areas.

### *Transit First (2000)*

This is the overall MTS strategic plan/policy for transit development that aims to make transit an attractive alternative to driving. *Transit First* emphasizes fast and frequent service directly serving neighborhood centers, as well as an enhanced rider experience at stations and on vehicles. Operations and infrastructure improvements are also planned.

### *Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region (2002)*

Developed by SANDAG, the Guidelines address accessibility, particularly as it relates to street design standards. Specifically, it call for developing policies in local jurisdictions (with the assistance of SANDAG) to support access to public transit via mixed land uses, network connectivity, bicycle facilities, improved streetscapes and street crossings, etc. Around this same time, San Diego developed new multimodal-transit oriented street design standards (RCP, 65).

### *Statenside TOD Plan (2002)*

The Plan reviews TOD best practices in California and beyond and recommends fourteen strategies for encouraging TOD development at local and regional levels. These recommendations fall into four categories: state policies and practices; planning and zoning; finance and implementation; and information dissemination and research. It also conducts an in-depth assessment of parking issues as they relate to TOD.

### *Mobility 2030 (2003)*

The Region's transportation plan, which calls for measuring certain benchmarks with regard to TOD monitoring equity variables, establishing neighborhood centers around transit stations that mix land uses in order to "improve livability" and maximize the number of potential transit users, developing more bicycle- and pedestrian-friendly communities, particularly around transit stations, and investing \$8.5 billion in transit facility improvement and extension throughout the region (99)

### *Regional Comprehensive Plan (2004)*

Most notably, the Plan expanded the call for development in Transit Focus Areas to existing, planned, and potential Smart Growth Areas (SGAs), of which is establishes seven categories based on three characteristics relating to land use intensity, transportation system, and transit service features. The Plan also proposes a matrix which acts as a guide for future development by establishing the desired transportation and land use intensities in these areas, and encourages innovations like shared parking (RCP, 71).

### *Regional Transit Oriented Development (TOD) Strategy*

Currently being prepared by SANDAG, this Strategy will assist the region in creating TOD projects and neighborhoods that will reduce GHG emissions; increase transit ridership, walking and biking, and housing and employment opportunities for all residents of the region.

### *Local TOD Plans*

San Diego has outlined their smart growth strategy in their *City of Villages Plan*, which aims to focus growth in areas of redevelopment and infill. Cities of Oceanside and Carlsbad have developed plans for TOD in large swaths of land surrounding Coaster commuter rail stations (TOD Lit Review, 2002, 4).

### *TOD Design Guidelines*

The City of San Diego was among the first in the nation to develop TOD design guidelines (Arrington, ND, 12), which they did with Calthorpe in 1992. Among other measures, these establish parking reductions in mixed use projects, define their urban village overlay zones, and establish small-lot residential areas.

### TOD Parking Requirements

The City of San Diego has implemented a floating “Urban Village Overlay Zone” that allows developers to apply TOD principles (including reduced required parking) in areas adjacent to stations. License agreements with business for sharing parking with MTS have also been put in place.

### Joint Development

MTS has participated directly in several commercial real estate projects, contributing land and transit infrastructure while the developer finances the building construction under a cost-sharing agreement. More of these projects are planned for the future, in fact, MTS is siting new stations to capitalize on private sector investment already planned or underway (Case Studies in TOD, 83).

### TOD Incentives

As established in the Regional Plan, the stance the region has taken to encourage TOD is to develop a system of incentives such as “expedited entitlement,” relaxed parking standards, density bonuses, tax breaks, and public infrastructure improvements to attract compact development around transit stations (TOD Lit Review, 2002, 69). These are captured in “performance-based land guidance systems” implemented by some communities that would give points to proposed developments based on their satisfaction of community goals, and compatibility with neighboring uses, all while letting the “market” determine the highest and best use of individual properties (TOD Lit Review, 2002, 69).