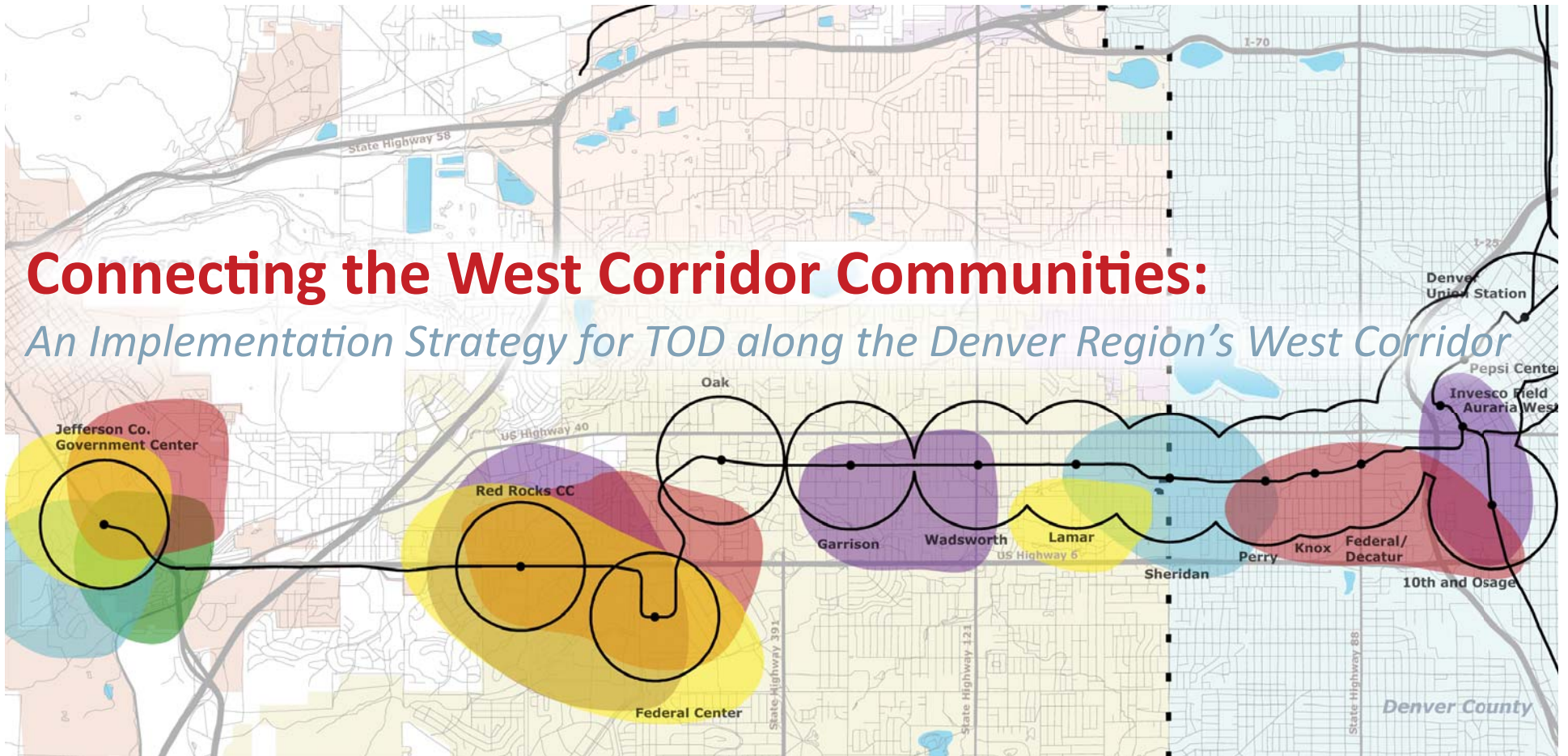


Connecting the West Corridor Communities:

An Implementation Strategy for TOD along the Denver Region's West Corridor



About this Report

This report was created as part of a collaboration between the City and County of Denver, the City of Lakewood, the Denver Housing Authority and Metro West Housing Solutions. The Center for Transit-Oriented Development (CTOD) worked with these entities to create a strategy for implementing successful transit-oriented development (TOD) along the West Corridor light rail line of Denver's transit network, operated by the Regional Transportation District (RTD).

About the Center for Transit-Oriented Development

The Center for Transit-Oriented Development (CTOD) is the only national non-profit effort dedicated to providing best practices, research and tools to support market-based transit-oriented development. CTOD partners with both the public and private market sectors to strategize about ways to encourage the development of high performing communities around transit stations and to build transit systems that maximize development potential. CTOD works to integrate local and regional planning, generate new tools for economic development, real estate and investment issues, improve affordability and livability for all members of the community, and respond to imperatives for climate change and sustainability. CTOD is a partnership of Reconnecting America, the Center for Neighborhood Technology, and Strategic Economics. For more information go to CTOD's website at www.ctod.org.

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Primary Audience

This report provides recommendations to the West Corridor Working Group (WCWG) as it moves forward with implementation activities for transit-oriented development along the West Corridor. The primary audience is WCWG members and their respective agencies: the cities (Denver and Lakewood), their housing authorities (Denver Housing Authority and Metro West Housing Solutions, respectively), and the U.S. General Services Administration, which oversees the Federal Center site in Lakewood. The goal is for the WCWG to use the information, analysis and recommendations contained in the report to strategically prioritize investments, funding sources, and development opportunities to benefit the West Corridor as a whole. The report also serves as evidence of the tremendous amount of work already done by the various agencies along the corridor to make TOD a reality along the West Corridor.

This report will also be a resource to:

- The internal staffs at both cities (planning, economic development, parks & recreation, etc.).
- The development and investment community, both private and nonprofit, looking to invest in station areas along the West Corridor.
- The Regional Transportation District (RTD) and its Board of Directors.
- The Denver Regional Council of Governments (DRCOG).
- Potential government and foundation grantors.
- Other cities, housing authorities, transit agencies, and regional governing bodies around the U.S.
- Citizens of Denver and Lakewood.

Table of Contents

About this Report 2

- Primary Audience 3

Executive Summary 7

I. Introduction 11

- The West Corridor Working Group 13
- Implementation Strategy: The West Corridor as a Model for the Region 14
- The Regional Context: Denver's Transit Network 15
- Defining Transit-Oriented Development (TOD) 17

II. Recent Station Area Planning Efforts 21

- Planned Development along the West Corridor 29
- From Station Area Plans to a Corridor Plan 32

III. Demographics, Major Destinations, and Real Estate Market Conditions 33

- Key Findings 33
- Population and Households 34
- Employment 38
- Real Estate Market Conditions 43
- Permanently Affordable Housing 46
- Challenges to Infill Development 58
- Real Estate Market Conditions Summary 62

IV. Infrastructure and Community Resources 63

- Key Findings 63
- Transportation 64
- Active Transportation: Walking & Bicycling 68
- Funding Connectivity Improvements and Needs 72
- Stormwater & Utility Infrastructure 74
- Community Resources 77
- Healthy Food Choices 78
- Parks, Recreation & Entertainment 80
- Gaps in Community Resources 82

- Conclusion 84

V. Implementation Strategy: Recommendations and Next Steps 85

- Key Implementation Strategies 87
- Identifying Station Area Types for Implementation 88
- The Implementation Typology Framework 90
- Implementation Strategies by Station Type 91
- Implementation Strategies 95

Appendix 100

- Appendix A: List of Possible Funding Sources for TOD 101
- Appendix B. Market Conditions by Station Area 109
- Appendix C. Lessons Learned 123
- Appendix D. Regional and Citywide Plans and Policies 127
- Appendix E. Rails to Real Estate Findings 131
- Appendix F. Overview of HUD Sustainable Communities Regional Planning Grant Indicators 135

Notes 146

Photo Credits 148

List of Figures and Tables

Figure I-1: Map of the West Corridor and the Jurisdictions It Connects	12	Figure V-2: Existing West Corridor Station Area Types	89
Figure I-2: Denver's Future Transit Network	16	Figure V-3a: Analysis of market conditions and existing land use and density	90
Figure I-3: Major Destinations	20	Figure V-3b: Implementation Typology Station Types	92
Figure II-1: Recent Planning Studies	22	Figure VI-C-1: Map of the Central Corridor	123
Figure III-1: Median Income in Station Areas, 2000	36	Figure VI-C-2: Map of the Southwest Corridor	125
Figure III-2: Housing Tenure by Station Area	37	Figure VI-C-3: Map of the Southeast Corridor	126
Figure III-3: Employment Intensity	39	Figure VI-D-1: Blueprint Denver Areas of Change & Stability	128
Figure III-4: Commute Patterns – Where West Corridor Residents Work	42	Figure VI-D-2: Blueprint Denver Conceptual Land Use Map	128
Figure III-5: Housing Type by Station Area	44	Figure VI-E-1: Relationship Between Station Area Characteristics & Development	131
Figure III-6: Affordable Housing, 2010	47	Figure VI-E-2: Total Development Along the Southeast Corridor, 2005-2009	132
Figure III-7: Existing and Proposed Projects	52	Figure VI-E-2: Total Development Along the Southeast Corridor, 2005-2009	133
Figure III-8: West Corridor Parcel Sizes	59	Figure VI-E-3: Employment Along the Southeast Corridor, 2008	132
Figure III-9: West Corridor Utilization Analysis	60	Figure VI-E-4: Vacant and Underutilized Property by Station Area	133
Figure IV-1: Housing and Transportation Costs as a Percent of Regional Median Income, 2000	65	Figure VI-F-2: West Corridor Transportation Costs	137
Figure IV-2: Existing Transit Connections, 2010	67	Figure VI-F-3: Nonauto Commutes Starting in Station Areas	138
Figure IV-3: Proposed Infrastructure Improvements, 2010	69	Figure VI-F-4: Nonauto Commutes Ending in Station Areas	139
Figure IV-4: Existing and Proposed Bicycle Infrastructure, 2010	71	Figure VI-F-6: Subsidized Housing Expiring in 2014	142
Figure IV-5: Cost Estimates for Oak and Wadsworth Street and Public Space Needs and Improvements	72	Figure VI-F-7: Major Employment Centers	143
Figure IV-6: Water Service Providers	75	Figure VI-F-8: Subsidized Affordable Housing Distribution over Job Centers and Concentrations of Poverty	144
Figure IV-7: Sewer/Sanitation Service Providers	76	Figure VI-F-9: Community Resources Within a Mile of Transit Stations	145
Figure IV-9: Grocery Stores	79	Table II-1: Summaries of Station Area Plans	23
Figure IV-10: Parks, Recreation, and Entertainment Facilities	81	Table II-2: Planned Development	29
Figure IV-11: West Corridor Gaps in Community Resources	83	Table III-1: Population and Household Characteristics in Station Areas, 2009	35
Figure V-1: Implementation process in Hot vs. Cool Real Estate Market Locations	86	Table III-2: Employment in Station Areas, 2008	40
		Table III.3: Average Rents – Multi-family	45
		Table III-4: Vacancy Rates – Multi-family Rental (as of 4Q 2010)	45

Table III-5: Vacancy Rates – Single Family Rental	45	Table VI-B-7: Lamar Station Area Existing Market Conditions	116
Table III-6: Average Residential Sale Prices, Oct. 2009 – Oct. 2010	45	Table VI-B-8: Wadsworth Station Area Existing Market Conditions	117
Table III-7: Mixed-Income and Affordable Housing Developments Owned by Public Housing Authorities	48	Table VI-B-9: Garrison Station Area Existing Market Conditions	118
Table III-8: Land Owned By Housing Authorities	50	Table VI-B-10: Oak Station Area Existing Market Conditions	119
Table III-9: Existing and Proposed TOD Projects	53	Table VI-B-11: Federal Center Station Area Existing Market Conditions	120
Table IV-1: Transportation Costs as a Percent of Regional vs. Station Area Median Income	66	Table VI-B-12: Red Rocks Station Area Existing Market Conditions	121
Table IV-2: Commute Patterns – How West Corridor Residents Get to Work	66	Table VI-B-13: Jefferson County Station Area Existing Market Conditions	122
Table IV-3: Average Block Size in West Corridor Station Areas	68	Table VI-D-1: Station Area Typologies for Denver West Corridor Stations	129
Table IV-4: Station Areas Receiving Money from the Better Denver Bond	73		
Table IV-5: Grocery Stores	78		
Table V-1: Strategies for Transformational Stations	95		
Table V-2: Strategies for Intensification Stations	96		
Table V-3: Strategies for Neighborhood Infill Stations	97		
Table V-4: Description of Implementation Actions	98		
Table VI-A-1 Federal Funding Sources	101		
Table VI-A-2 State/Regional Funding Sources	105		
Table VI-A-3 Local Funding Sources	106		
Table VI-A-4 Private Funding Sources	107		
Table VI-A-5 Public/Private Funding Sources	108		
Table VI-B-1: 10th and Osage Station Area Existing Market Conditions	110		
Table VI-B-2: Auraria West Station Area Existing Market Conditions	111		
Table VI-B-3: Federal/Decatur Station Area Existing Market Conditions	112		
Table VI-B-4: Knox Station Area Existing Market Conditions	113		
Table VI-B-5: Perry Station Area Existing Market Conditions	114		
Table VI-B-6: Sheridan Station Area Existing Market Conditions	115		

Executive Summary

Light rail in the West Corridor presents an incredible opportunity for transit-oriented development to leverage market momentum for new investment and community building. A focus on TOD will support growth near new transit stations, enhance access to opportunity, preserve and enhance the supply of a range of housing choices, reduce the combined costs of housing and transportation, and support walking and biking to stations. However, implementing TOD along the West Corridor will not be a quick or simple process. The overall economic conditions in the country are vastly impacting the pace and magnitude of private sector development activity everywhere. This macro-level challenge, combined with some micro-market conditions along the West Corridor, where residential home values are relatively low and the potential value increases related to transit have not yet been realized, indicates that in the near term, most implementation activity in the West Corridor will fall to public agencies.

Fortunately, four public partners in the West Corridor – the Cities of Denver and Lakewood, the Denver Housing Authority and Metro West Housing Solutions – recognize the opportunity for TOD and necessity of a corridor-wide partnership. The West Corridor Working Group (WCWG) coalesced around the objective to create a TOD implementation strategy for the corridor. These public agencies will be the leading public-sector agencies to initiate TOD activities in the corridor. By laying the foundation now through activities such as adopting appropriate policies and investing in high value catalytic projects, the WCWG can ensure that over time and as the market matures, the overall value of new private investment will ultimately surpass the public investment.

This report, funded by the West Corridor Working Group, provides a compre-

hensive summary of relevant information for TOD and strategies for implementing successful in the West Corridor. The Center for Transit-Oriented Development (CTOD) examined the fourteen station area plans as well as demographic, economic and real estate conditions at each station and throughout the West Corridor. Based on the demographics, economics, real estate conditions, the station areas were organized into three types of categories for implementation as transformational, intensification and infill stations. CTOD provides recommendations to the WCWG for moving from vision in the station area plans to reality in the corridor.

The implementation process differs depending on the condition of the real estate market in a particular location. In a cooler market, it is especially important that the WCWG continue to exhibit leadership by intervening with public-sector support for infrastructure and amenities. In hotter market locations, there will be less need for the public sector to intervene initially, but it can assist with the financing of infrastructure and amenities that make a location attractive to TOD.

Key Implementation Strategies

The report includes detailed findings on real estate market, population and households, employment, transportation, infrastructure, community resources and parks and recreation. The implementation strategies respond to the goals identified by the WCWG and can be implemented by at both the corridor scale and station levels. The station-specific strategies are unique to the type of station context and needs. Corridor-level strategies require continued commitment and participation by the WCWG and must, in the long term, be paired with similar strategies for each individual station area. Achieving TOD success in the West Corridor will require ongoing proactive identification of barriers to development

and efforts by WCWG members, including the cities, to work either together or separately to remove those barriers. There are some overarching findings that are illustrated in the report:

The Cities have provided a great foundation for TOD in the West Corridor.

The Cities of Denver and Lakewood, as well as the General Services Administration (GSA), have already laid the groundwork for TOD along the West Corridor with their station area planning efforts. Collectively, there are fourteen completed station area or commercial corridor planning efforts that together create a vision for TOD along the West Corridor. A tremendous amount of staff time and resources has been dedicated to creating and adopting these station area plans. Residents, property owners, businesses and elected officials have also invested time in public meetings, workshops and hearings on the planning efforts. Both cities have reformed their zoning codes to allow for higher density, mixed-use development within station areas and in some cases, rezoned station areas with the new zoning to support TOD.

The West Corridor Working Group can play a significant role in facilitating successful TOD. To a large extent, the WCWG will take the lead on the visioning and coordinating role for development in the West Corridor. In private land development, the developer creates value by establishing a long-term vision for a development site, seeks the entitlements necessary to permit this vision to be built, and provides the major infrastructure necessary to support the future development. Developers often work well ahead of the market and take on a high degree of risk in order to reap a return. By taking on this risk the developer is removing barriers for subsequent development activities. The WCWG can address some of the risk and more quickly facilitate private investment by leading the visioning and coordinating activities, applying appropriate zoning, providing some

necessary infrastructure and removing some of the policy and implementation barriers to future development.

Station areas in the West Corridor are unique and have different opportunities and needs to support TOD. Each of the light rail station areas has a different context and unique attributes. Combined, these stations offer some rich and wonderful amenities as well as connections to some major employment, education and entertainment destinations. However, the West Corridor lacks the strong identity that other corridors in the Denver region enjoy. The diversity of stations and the collective corridor needs to be celebrated and promoted so that it is viewed as an attractive place to live, work and play.

The cities, housing authorities, RTD, DRCOG, GSA, and other stakeholders are working hard to support TOD in the West Corridor. Given the numerous activities and multiple stakeholders, more inter-agency coordination and stakeholder collaboration will maximize the leveraging of resources to support TOD. Most stakeholders share the same objectives but they play different roles and provide different expertise. More formal coordination will help expedite the visions of TOD in the station area plans in the West Corridor.

Key Recommendations

A tremendous amount of work has been accomplished by the local jurisdictions along the corridor. The station area and community based plans identify the visions for change at the station areas. The corridor is far ahead of the curve compared to many other places – both regionally and nationally – with expanding transit systems. Additional implementation activities and commitments from the local jurisdictions, region and state will accelerate private investment in the corridor. The following are some of the key recommendations to move the plans

from vision to reality:

- **Create a permanent West Corridor Collaborative.** A formalized partnership will ensure regular meetings and a commitment to the TOD implementation strategies. In addition, The WCWG should engage new partners in the implementation activities of the West Corridor such as RTD, DRCOG, ULI and the business improvement districts (BIDs) to embrace the vision and actions to implement TOD in the corridor. There should also be a public process on corridor planning and information sharing that includes co-hosted corridor-wide workshops.
- **Develop a marketing and branding plan to market and promote the West Corridor.** A branding and marketing process would help create an identity for the West Corridor in order to generate interest among potential retail, commercial and residential developers, and to attract the public to the West Corridor as a place to live, work and play. In addition, West Corridor Working Group participants should promote the WCWG process and technical work through attendance and presentations conferences, speaking engagements and peer exchanges.
- **Complete the “last mile” of critical bicycle and pedestrian connections.** The WCWG and other partners should collectively work on planning and funding comprehensive bike and pedestrian connections in the corridor. They should jointly explore joint funding opportunities to complete the bicycle system and pedestrian connections.
- **Develop an affordable housing strategy for both preservation and new production.** Work with WCWG partners and others involved with affordable housing in the region to develop an affordable housing plan. The plan should focus on transition of some existing housing stock in all station areas from private market ownership to another structure that would permanently preserve affordable housing; identify targeted opportunities for additional new affordable housing; evaluate possible strategies for expanding the Denver TOD Fund to the entire West Corridor; and evaluate various HUD programs to demonstrate ways that they could be modified to better support affordable housing near transit by adding proximity to transit in HUD's evaluation criteria.
- **Prioritize the Federal Center, Oak and the Federal/Decatur Stations respectively as high priority stations with transformational opportunities.** Lakewood and Denver should each establish an interdisciplinary team of key leads to work together on the short term and longer term redevelopment opportunities at these three key stations by looking at infrastructure, market, demographic and community challenges.
- **Continue to support infrastructure improvements at Oak, Garrison, Wadsworth and Lamar.** Facilitate TOD supportive infrastructure including bike and pedestrian connections. Funding for new infrastructure including utilities should be explored through the city's capital budget, special districts and future HUD/DOT community challenge and TIGER II grants.
- **Collaborate on an implementation plan at Sheridan.** Given the significant infrastructure and transit changes at Sheridan, the Denver and Lakewood planning, parks and public works staff at the cities should collaborate to develop an integrated plan for TOD implementation at the station.
- **Develop some small-scale strategies for the Knox and Perry stations.** Denver should support the redevelopment of existing affordable housing

by preserving those developments due to expire in the coming years and by acquiring land for additional affordable, senior, or student housing. The city should also look at improvements to the pedestrian and bicycle network and leverage the activities planned for this area as part of the Denver's Community Challenge/TIGER II grant.

- **Emphasize Colfax as the retail corridor in both cities.** Continue to focus on Colfax as the retail corridor in both cities with strong physical and visual connections from the West Corridor stations to Colfax. Examine a multi-jurisdictional business improvement district (BID) and explore the creation of a linear urban renewal district for both jurisdictions.

I. Introduction

The West Corridor is the first of the FasTracks-funded transit lines to start construction and will open in 2013. The Corridor will run westward from downtown Denver through the City of Lakewood, terminating at the Jefferson County Government Center in the City of Golden. Figure I-1 shows the route map for the West Corridor light rail line and the different jurisdictions it will connect, including the cities of Denver, Lakewood, and Golden, as well as portions of unincorporated Jefferson County.

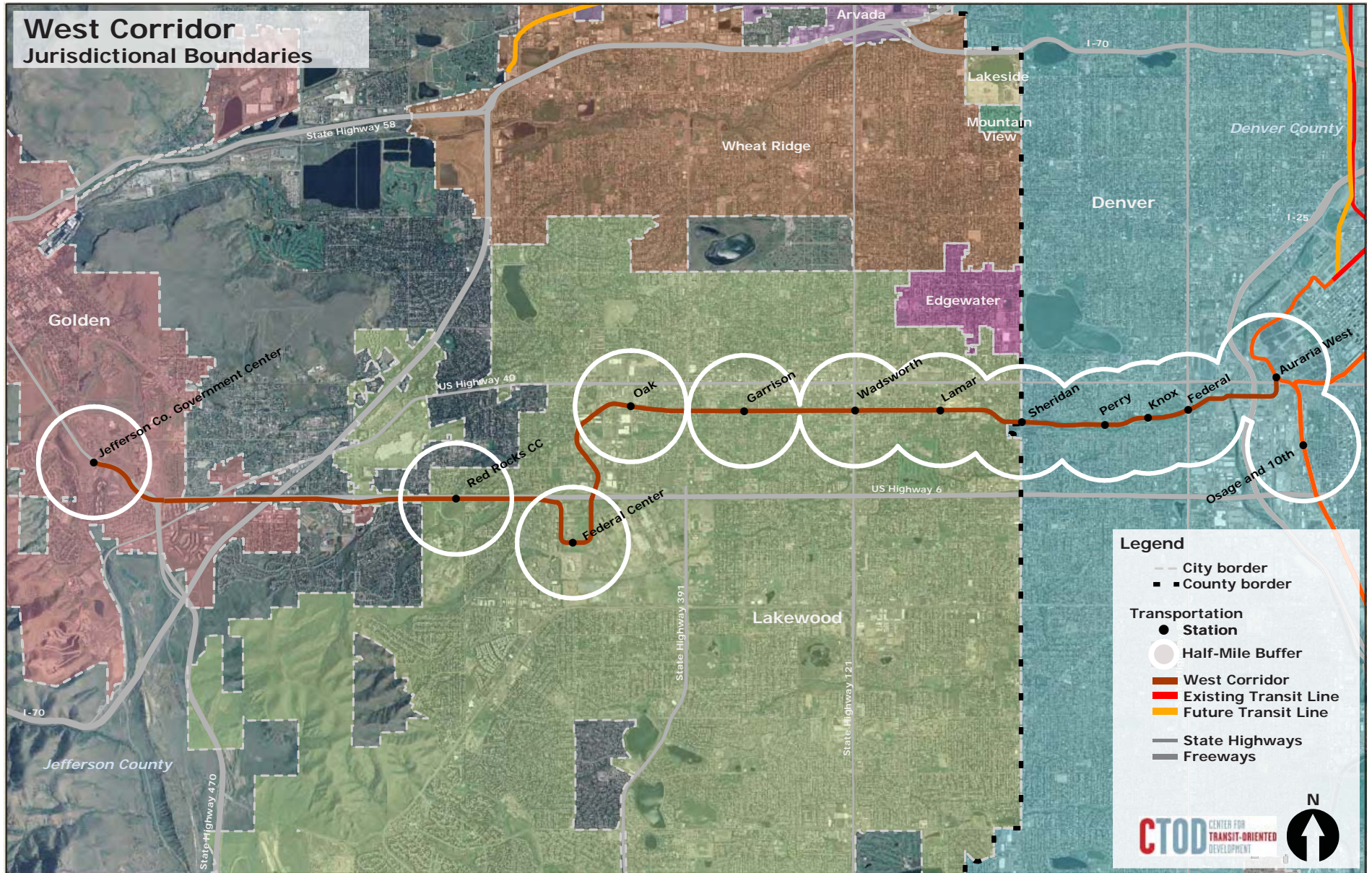
This corridor represents a significant opportunity to achieve the benefits related to transit and transit-oriented development (TOD) for many stakeholders, including the existing neighborhoods and businesses along the corridor, the cities it traverses, and the Denver region as a whole. However, these benefits will only be achievable if there is new investment along the corridor. Many preconditions must be met to facilitate these investments. While the West Corridor communities have met several of preconditions, including rezoning the area around each station to allow for a mix of higher density uses, more action will be needed to continue the corridor's ultimate transformation. As experience from around the country shows, while the very presence of transit and transit-supportive zoning are necessary conditions to support TOD, alone they are insufficient to guarantee TOD. Indeed, transforming existing low-density neighborhoods and auto-oriented commercial corridors into places with a greater mix of densities and uses, while also meeting various social equity goals, requires a concerted effort on the part of both the public and the private sectors. In fact, TOD implementation typically requires a series of consecutive actions that must be executed incrementally over time. The exact list of actions and the order in which they are completed will evolve and must respond to many changing external conditions, including fluctuating market

cycles, funding availability, the presence or absence of strong local leadership, and community support.

Most jurisdictions focus on TOD implementation exclusively at the station area level. However, the West Corridor represents a unique opportunity to undertake a more comprehensive corridor-wide implementation approach with a comprehensive agenda related to economic and community development, as well as the more traditional market-rate real estate projects. This opportunity stems from two factors:

- First, the Cities of Denver and Lakewood already have a very strong commitment to TOD and are proactively engaging in multiple activities to foster appropriate development and investment around their transit stations, including funding critical infrastructure and providing leadership within the broader regional discussion of TOD. The City & County of Denver received a \$2.9 million Community Challenge grant from HUD in October 2010 to conduct planning activities along the West Corridor stations that fall within Denver.
- Second, the three most significant property owners at stations where there is the most long-term development potential are the Denver Housing Authority (DHA), Metro West Housing Solutions (MWHS), and the General Services Administration (GSA) of the federal government. Among the three, each owns at least some property within the station areas in both Denver and Lakewood, and in all cases, these owners have the opportunity to develop transformative projects that could demonstrate the true potential of TOD.

Figure I-1: Map of the West Corridor and the Jurisdictions It Connects



SOURCE: Regional Transportation District; Center for Transit-Oriented Development, 2010.

The West Corridor Working Group

Recognizing that implementing TOD, especially equitable TOD that provides opportunity for everyone working and living in the West Corridor, requires a coordinated multijurisdictional effort, the Cities of Denver and Lakewood, along with their respective housing authorities, DHA and MWHS have come together to form the West Corridor Working Group (WCWG). The GSA provided additional participation in the WCWG. The group's primary objective is to create a synergy where the whole is greater than the sum of the parts, in terms of leveraging resources and achieving mutually supportive objectives for TOD in the West Corridor. This innovative collaboration positions the West Corridor to truly deliver on the promise of TOD and to create a model for other collaborative implementation processes for other transit corridors both in the Denver region and around the country.

The WCWG developed a vision statement that reflects its commitment to implement the community visions articulated in each of the adopted station area plans, but also to capitalize on the resources and opportunities offered by this unique partnership. This vision will guide future implementation processes, decisionmaking and capacity-building along the West Corridor. **The vision statement is as follows:**

The West Corridor is a collection of dynamic, transit-centered communities with a range of housing choices and easy access to jobs, recreation, and educational opportunities. Served by diverse transportation modes and with neighborhood scale retail and services, the West Corridor will support active, healthy, and sustainable lifestyles.

West Corridor Working Group Goals

In addition, the West Corridor Working Group (WCWG) has identified seven goals for implementing TOD along the West Corridor. These goals will frame the strategies and recommendations provided in Section V of this report:

- Leverage market momentum by facilitating regional growth and demand closer to new transit stations.
- Enhance regional access for residents to important destinations, including employment centers, educational and medical campuses, healthy food opportunities, and cultural, retail, and entertainment destinations and districts.
- Preserve and enhance the supply of a range of housing choices.
- Reduce the combined costs of housing and transportation.
- Support walking and biking to stations and within station areas to enhance healthy living and sustainable communities.
- Serve as a model for how new transit investment can support TOD in the rest of the Denver metropolitan region.
- Identify resources of funding for planning and implementation activities.

Implementation Strategy: The West Corridor as a Model for the Region

This report charts an initial course for the WCWG and the other “partners” who will ultimately be responsible for implementing the station area plans and the additional goals identified by the WCWG itself. In these transitional years when the corridor is still under construction and the market is very much in flux, most of the TOD implementation activities will likely be undertaken by the public sector or community-based entities. But to the extent that developers are aware of and clearly understand how this implementation strategy will be executed, this information will provide the certainty around which these private sector actors can begin to make their own investment decisions. Over time and as conditions change, this strategy will need to be updated. Even with what could easily be a 30-year process, there will always be a strong need for clear communication and partnership among the public sector, community development entities, developers and the community.

Because the West Corridor will be the first FasTracks corridor to come on line, this corridor will set the tone for TOD for the rest of the Denver region. Catalytic projects will be critical to ensuring the success of TOD on future transit corridors and could make or break interest from developers, employers, community members, and buyers in this type of development. The opportunities for new development along the West Corridor are extremely varied, but identifying the different building types that may be constructed along the corridor and how much new development is realistic are key steps in understanding how market momentum may be leveraged to create successful TOD.

This report contains five sections:

- Section I provides a brief overview of the regional context for TOD and the benefits of planning at the corridor level.
- Section II provides a description of all the station area plans that have been completed for the corridor, including details on land use mix and infrastructure needs at each station.
- Section III presents demographics of the corridor and discusses the state of the real estate market, with both current conditions and future development opportunities based on trends and interviews with developers.
- Section IV provides additional highlights and existing conditions of the corridor, including infrastructure and community resources availability and gaps.
- Section V then aggregates these existing conditions into an implementation strategy typology with recommendations and next steps for moving forward.
- The appendix to this report contains:
 - A matrix of funding sources,
 - Detailed information on each station area,
 - Lessons learned from other corridors in the Denver transit network,
 - A summary of regional and citywide plans and policies that include the West Corridor,
 - Findings from a recent CTOD report on real estate development in transit corridors, and
 - A description of the indicators used in the Denver region's Sustainable Communities Regional Planning Grant as they relate the implementation strategy for the West Corridor.

Before discussing the West Corridor in detail, a brief overview is provided of the regional context for TOD, including FasTracks, the impetus for new transit construction in the Denver region.

The Regional Context: Denver's Transit Network

The Denver region started investing in fixed-guideway transit in 1994 with the opening of its first light rail line. Since then, the Regional Transportation District (RTD) expanded the system to include the Southwest and Southeast Corridors along with the Central Corridor spur into downtown. In 2004, voters in the Denver metropolitan region approved a 0.4% sales tax to fund a major expansion of the fixed-guideway transit system. Under the FasTracks plan, RTD will construct 122 miles of new rail lines on six corridors, 18 miles of bus rapid transit, and small extensions of three current lines (the Central, Southwest, and Southeast Corridors). The West Corridor was the first light rail line to begin construction and is expected to open in May 2013. Subsequent lines are expected to open between 2016 and 2042, depending on funding. Figure I-2 shows how the proposed corridors add to the existing transit network.

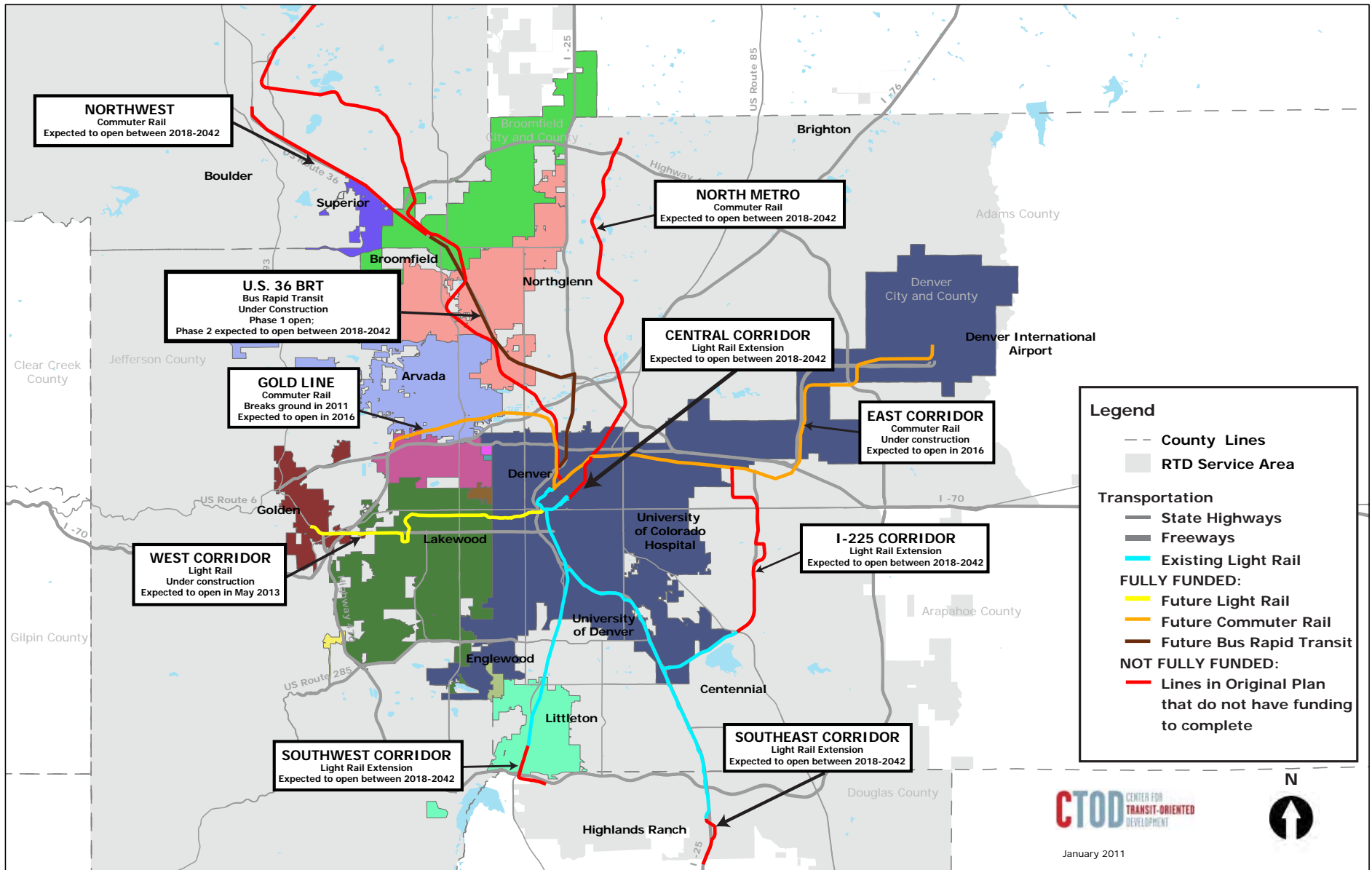
The West Corridor will run 12.1 miles from the Auraria Campus in downtown Denver to the Jefferson County Government Center in Golden. There will be twelve stations along the line: four in Denver, one on the border between Denver and Lakewood, six in Lakewood, and one in Golden. The 10th & Osage station is also included in this analysis because it is within the same neighborhood as other Denver stations and shares many of the same characteristics, opportunities, and challenges.

When the West Corridor opens, all twelve stations will open at once, and ridership estimates predict that 29,700 people will ride the West Corridor light rail by 2030.⁷ Each of these stations has unique characteristics that, when considered on the corridor level, contribute to the overall economic potential for TOD along the

West Corridor. There are major job centers at both ends (Downtown Denver, the Federal Center site, and the Jefferson County Government Center), higher educational institutions throughout (the Auraria Campus, Rocky Mountain College of Arts & Design, and Red Rocks Community College), and important community resources such as grocery stores, hospitals, parks, and recreation centers within close proximity to planned stations. Therefore, the West Corridor light rail line has the potential to improve the quality of life of nearby existing and future residents by increasing access to all of these places and significantly lowering transportation costs. In order to fully leverage this new transit investment, however, the cities along the line must lay the foundation to support more compact, mixed-use development around each station, keeping the needs and values of residents and employers along the whole corridor in mind. The cities have already begun this process with their station area plans, and this report builds on those efforts by looking at the entire corridor as a whole and observing where stakeholders should collaborate and prioritize their investments to make TOD a reality along the West Corridor.

To understand how the implementation strategy supports the creation of successful TOD along the West Corridor, it is important to start with a shared definition of successful TOD. Successful TOD is more than a particular combination of land uses, densities, and urban design. Instead, the success of TOD implementation should be defined and measured based on the broader goals TOD can help stakeholders along the West Corridor achieve.

Figure I-2: Denver's Future Transit Network



SOURCE: Regional Transportation District, 2010; Center for Transit-Oriented Development, 2010.

Defining Transit-Oriented Development (TOD)

The Center for Transit-Oriented Development (CTOD) defines transit-oriented development (TOD) as higher-density, mixed-use development within walking distance—or a half-mile—of transit stations. These types of developments should:

- Increase “location efficiency” so people can walk and bike and take transit.
- Boost transit ridership and minimize automobile traffic.
- Provide a rich mix of housing, shopping and transportation choices.
- Generate revenue for the public and private sectors and provide value for both new and existing residents.
- Create a sense of place.
- Connect residents and employers to job opportunities regionwide.

TOD is really about creating attractive, walkable, sustainable communities that allow residents to have housing and transportation choices and to live convenient, affordable, pleasant lives -- with places for our kids to play and for our parents to grow old comfortably.

TOD is commonly cited as “transit-oriented development.” However, TOD along the West Corridor will not always entail new development, and therefore planners and political leadership in the city have coined many different terms for the types of places that will help to achieve these goals: Transit-Oriented Districts, Transit-Oriented Development, Sustainable Transit Communities, and Walkable Neighborhoods. All these terms refer to the same fundamental set of objectives that can be achieved through integrated transit planning, development, urban design, streetscape improvements, and reinvestment.

Why Do Corridor Planning for TOD?

Planning for TOD at the corridor level can create more efficient pathways to achieving the goals of TOD. Corridor planning can be more cost-effective, as when multiple stations along a corridor face similar challenges and opportunities for TOD implementation. One example of a shared challenge along the West Corridor is the need for new infrastructure investment, especially for pedestrian improvements to make the station areas more walkable places. Instead of doing separate infrastructure plans, a coordinated plan for street and streetscape improvements could help ensure that public investments are phased to support and attract private investment.

The corridor is also the best scale to predict the long-range impacts of transit on the market for new development, on commuter travel behavior and on where the potential for displacement may be greatest. National research has shown that for new transit corridors, the private market does not necessarily follow the supply of land. Instead, other factors, including the proximity of major employment centers, combine to determine which station areas may have the highest market demand. Knowing that Downtown Denver and the Federal Center site are the largest major job centers along the West Corridor can help predict the market demand at other stations along the corridor.

The excitement surrounding new transit investment presents an enormous opportunity to engage stakeholders. Presenting the corridor as one coherent opportunity to developers, despite the many jurisdictions and station area plans, could make it easier to engage with them on where different building types would be most appropriate. Residents living near the West Corridor may understand the implications of the transit investment on their community, but engaging them at

the corridor scale can broaden their understanding of the benefits the transit will provide not only to their own access to downtown and other destinations along the line, but the broader benefits of being connected to the regional rail network.

The Cities of Denver and Lakewood, as well as the housing authorities and the GSA, have done excellent work in creating station-specific visions and development goals. These plans are essential to pinpointing and planning for local hopes, values, fears, and concerns, but at the same time, accomplishing the vision detailed in each of those plans simultaneously would be a costly and overwhelming process. The Implementation Strategy detailed in Section V of this report presents a path to achieving that vision.

The growing demand for transit across the U.S. is resulting in more and more transit corridors being planned, built, and constructed every year. In 2010, 106 regions had proposed 640 transit projects. Of those, 413 had ballpark cost estimates that totaled \$233 billion of capital investment² However, corridor planning for TOD implementation is still a fairly new field, and the success of the West Corridor can be not only a model for the rest of the Denver region's future transit corridors, but also for the rest of the nation.

Destination Connector

The West Corridor is an example of a "destination connector" corridor. Destination connectors link residential neighborhoods to multiple activity centers, including employment, medical and commercial centers and academic campuses. Figure I-3 on the next page displays some of the major destinations along the West Corridor. On the next page are images of some of these major destinations.

Recent transit investments in destination corridors have resulted in consistently

Photos of major destinations



Clockwise from top left: Auraria Campus and Downtown Denver; Federal Center, Invesco Field at Mile High and Jefferson County Government Center. (Photo credits at end of report.)

higher ridership than estimated, creating a “win” for transit agencies while building regional support for future transit investments. Destination connectors encourage ridership in both directions at the same times of the day by linking to employment centers as well as other destinations. Some destination connectors also serve as commuter corridors. The Hiawatha line in Minneapolis, for example, is a destination corridor that connects downtown at one end to the airport and Mall of America on the other end. Other examples include the Rosslyn-Ballston Corridor, which connects a series of job centers in Arlington County, Virginia, to Washington D.C.’s urban core; Phoenix’s light rail line, which connects the city’s downtown to Arizona State University; and Houston’s Red Line, which connects downtown Houston to the Medical Center and Rice University.

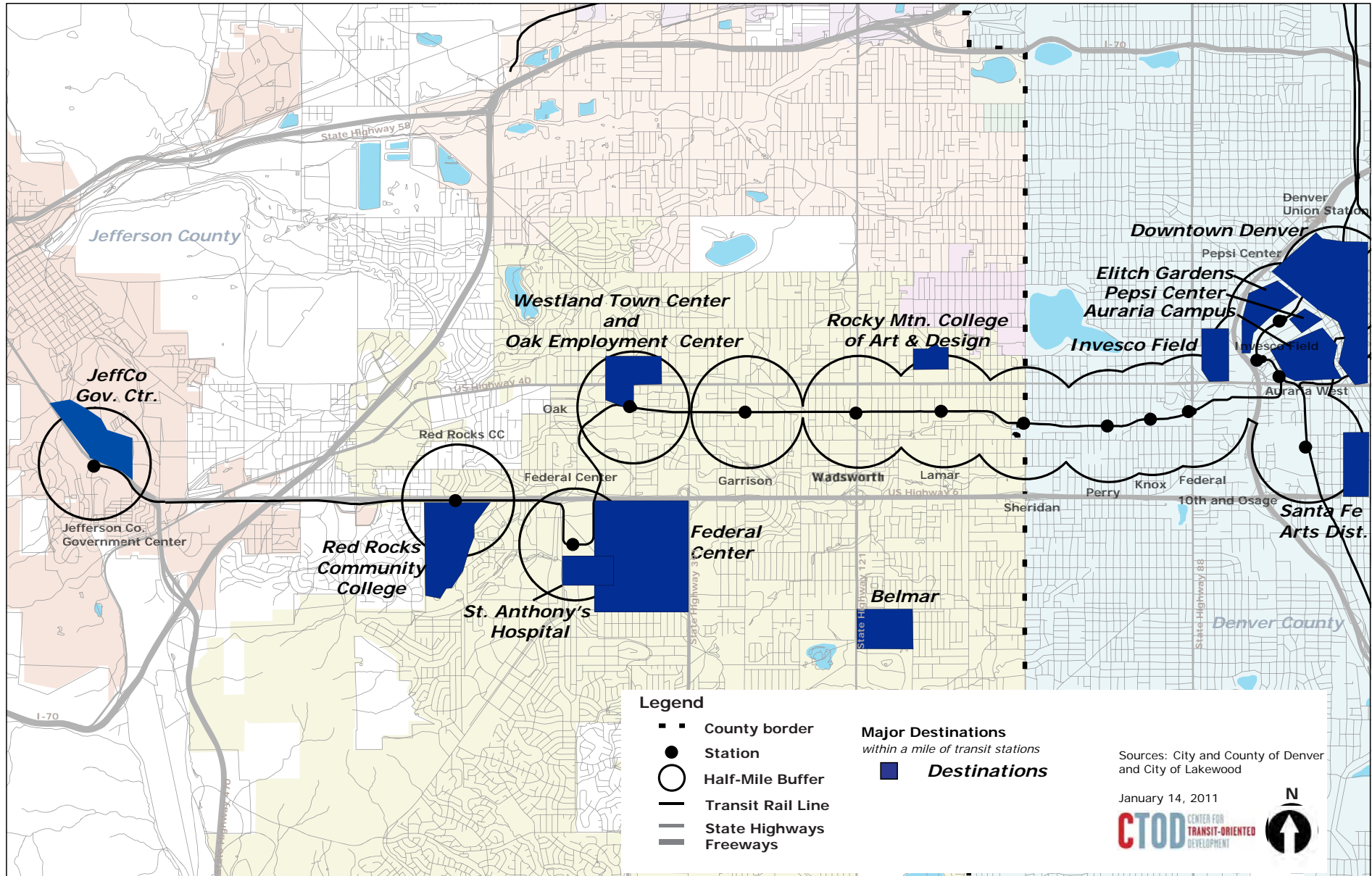
Broadly, the implications of this corridor type for TOD include:

- The demand for new development will likely be highest in station areas identified as destinations, especially those that are walkable, higher-intensity, and well-connected to residential neighborhoods.³
- Destinations outside of downtowns have a stronger potential market for new development if they are centers that people want to visit regularly.
- Auto-oriented job centers or malls along the corridor may require new pedestrian-oriented street and building design before they become truly transit accessible, even if they are physically near stations.
- Walking and biking access to stations is important to encourage transit ridership, especially on the job end of the trip, where people are less inclined to walk long distances.⁴

Corridor planning is a critical component in leveraging investments in public transit and maximizing the potential for TOD success, but it cannot be done without integrating both the regional context and station area planning. The next

section provides a detailed overview of the various station area planning efforts completed or underway along the West Corridor to provide a better understanding of what’s already been done and how these various plans complement each other and can fit into a holistic corridor plan

Figure I-3: Major Destinations



SOURCE: Center for Transit-Oriented Development, 2010.

II. Recent Station Area Planning Efforts

The station areas along the West Corridor present a variety of different development intensities and land uses, offering a diversity of options for living and working along the corridor. While intensifying some of these station areas is a regional priority and a key step to achieving successful TOD, planning for TOD can also mean reinforcing existing communities and neighborhoods with enhanced access to the station area, affordable housing preservation, community visioning and development, and commercial revitalization. The Cities of Denver and Lakewood, as well as the General Services Administration, have already laid the groundwork for TOD along the West Corridor with their station-area planning efforts. This next section describes these plans in more detail and outlines why a corridor-level strategy can help achieve the vision, goals, and objectives prescribed for each station area.

Completed Station Area Plans and Policies

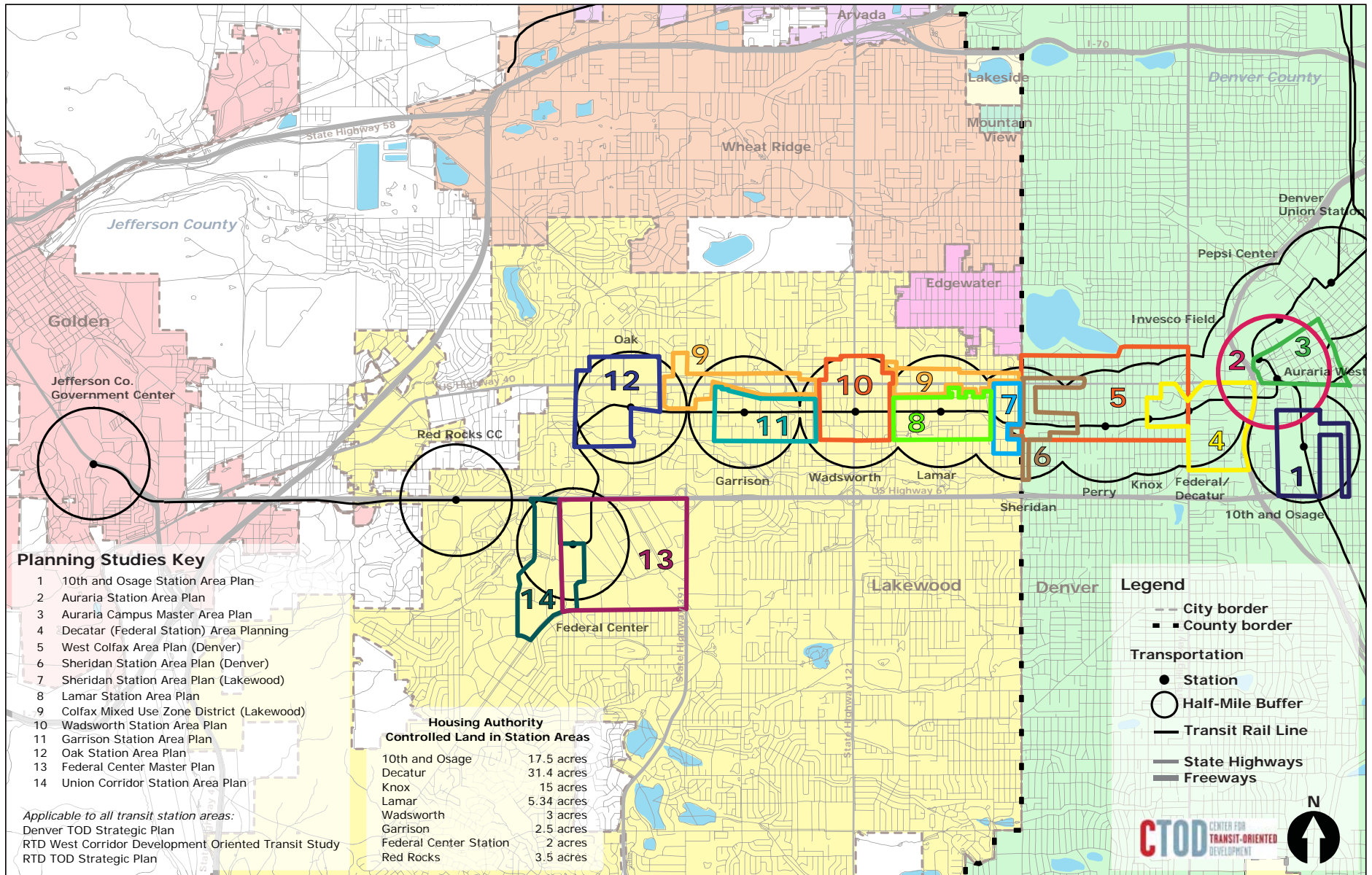
Collectively, the Cities of Denver and Lakewood, along with the GSA, completed fourteen major station area or commercial corridor planning efforts to create a vision for stations along the West Corridor. A tremendous amount of staff time and resources has been dedicated to creating and adopting these station area plans. In addition, residents, property owners, businesses and elected officials have also spent a lot of time and public meetings, workshops and hearings on the planning efforts. Figure II-1 displays the cumulative extent to which these plans overlap and cover the entire corridor. Both cities have reformed their zoning codes to allow for higher density, mixed-use development within station areas and in some cases, rezoned station areas with the new zoning to support TOD.

In addition to station area plans, the two cities and the GSA prepared many other plans for the corridor, including small area plans, infrastructure master plans, and urban design plans. Lakewood received an EPA Brownfields grant to conduct additional planning studies at the Lamar and Federal Center stations, which will address urban design and connectivity challenges at both stations. These two studies were still in the process at the time of this publication. The GSA aims to be the most sustainable federal campus in the United States by 2020 and will achieve their goal by building a grid-tiered photovoltaic solar park, retrofitting existing buildings, and improving stormwater management.

Table II-1 provides a brief description of the main elements of each plan. The predominant character of new development ranges from a mix of residential and commercial, to purely residential stations and employment-focused stations. Station areas envisioned as primarily residential places include 10th and Osage, Federal/Decatur, Knox, Perry, and Garrison. In contrast, Lamar, Oak, Wadsworth, and Sheridan are described as being more mixed use, with some retail and office uses either along Colfax Avenue or near the station and residential spread throughout. Auraria West, Federal Center, and Red Rocks are primarily office or educational-focused stations. However, all of these station areas will have some mixture of uses, with some residential developments proposed for employment areas and some small-scale retail desired in predominantly residential neighborhoods. This general mixture of uses, if at different proportions and scales, is one common component of successful TOD.

These plans show that while there are some common elements to successful TOD, like a mix of residential and commercial uses and pedestrian-friendly streets, the exact mix may differ substantially from station to station. Different building types will be appropriate at different places along the corridor, and the elements of the

Figure II-1: Recent Planning Studies



SOURCE: Center for Transit-Oriented Development, 2010.

Table II-1: Summaries of Station Area Plans

Station Area	Jurisdiction	Year Prepared	Area of Change	Predominant Character of New Development	Vision Statement	Parking Available?	Housing Authority Owns Land
10th & Osage	Denver	2010	15.1 acres (DHA) + 2.4 acres (City)	Residential (medium- and high-density). Includes redevelopment of affordable housing complex and construction of new senior housing.	A stable, mixed income residential neighborhood, with the Santa Fe corridor providing a vital core of arts and commercial uses that provide connections to surrounding neighborhoods, Downtown and the Auraria campus. The neighborhood has multi-modal connections to the light rail corridor and encourages walking, biking and transit use. Transit oriented development in the 10th & Osage station area provides mixed income housing and neighborhood serving commercial uses with connection to the industrial area to the west.... Jobs are provided within the neighborhood by commercial and office uses along the revitalized Santa Fe and Colfax corridors as well as industrial uses in the western portion of the neighborhood.	No	17.5 acres (DHA)
Auraria West	Denver	2009	22 acres south of Colfax, currently industrial uses & underutilized parcels	Mixed-use residential and commercial. New student housing in a "Campus Hot Spot" and a new mixed-use "Entertainment District" on the Pepsi Center site. May also include new athletic fields and academic buildings.	The Auraria West Station will develop over the coming decades into an energized area of sustainable mixed-use development with campus-supportive uses. Students, faculty and visitors will be drawn to the convenience and amenities of this location. The station will be connected to downtown, surrounding neighborhoods and adjacent light rail stations through the regional transportation system.	Yes	No

Station Area	Jurisdiction	Year Prepared	Area of Change	Predominant Character of New Development	Vision Statement	Parking Available?	Housing Authority Owns Land
Auraria Campus Master Plan	Auraria Higher Education Center	2007	126 acres	Academic buildings, some new commercial buildings with ground-floor retail. New hotel learning center.	A thoughtful relationship between the campus and surrounding neighborhoods, introducing land uses to the campus that are typical of these communities – residences, offices and other commercial uses, and retail – that provide continuity in the urban framework of Downtown Denver while respecting the existing boundaries of the campus	Yes	No
Federal/Decatur	Denver	In progress	113 acres in 2 development areas: 68.5 acres owned by the City & Metropolitan Football Stadium and 22.5 acres owned by DHA (Sun Valley)	Residential (medium-density). Redevelopment of public housing (Sun Valley) into mixed-income, mixed-use development. Some new commercial and industrial uses	Support the planned light rail station by providing a mixed-income residential neighborhood that includes supporting open space and neighborhood-serving commercial areas.	Yes	31.4 acres (DHA)
West Colfax (includes Knox & Perry)	Denver	2006	320 acres (25% of study area)	Mostly single-family residential. Some new duplexes, townhouses and other small-scale infill. May be some commercial retail space near stations	West Colfax Avenue will be a safe and attractive mixed-use commercial and residential corridor that complements and sustains the adjacent residential neighborhoods. Future development preserves and enhances the ethnic and economic mix of people while encouraging walking, biking and transit use. Growth promotes and reinforces a positive community image.	No	15 acres (DHA)

Station Area	Jurisdiction	Year Prepared	Area of Change	Predominant Character of New Development	Vision Statement	Parking Available?	Housing Authority Owns Land
Sheridan	Denver	2009	0	Mixed-use residential with ground-floor retail. New affordable housing. Infill of duplexes and townhomes	The Sheridan Station will develop over the coming decades into the vibrant center of a diverse, transit-supportive and economically sustainable urban neighborhood. Residents of all ages, incomes and backgrounds will be drawn to the convenience and amenities of this location.	Yes (garage)	0
Sheridan	Lakewood	2006	0	Five subareas, including residential and commercial hubs (medium density)	The areas surrounding the Sheridan Boulevard station will be transformed into a mixed-use neighborhood center, with a predominately residential focus. Multi-story mixed-use buildings are envisioned in the blocks nearest the station, with lower density residential north and west of the station. Buildings with primarily commercial uses are envisioned along Sheridan Boulevard and Colfax Avenue.	Yes (garage)	90
Colfax Mixed Use District	Lakewood	2006	0	Mixed-Use (commercial/residential)	As a celebration of the historic and eclectic character of north Lakewood, Colfax Avenue will be a place that unites neighborhoods and provides a variety of vibrant businesses and housing opportunities for generations to come."	N/A	N/A

Station Area	Jurisdiction	Year Prepared	Area of Change	Predominant Character of New Development	Vision Statement	Parking Available?	Housing Authority Owns Land
Lamar	Lakewood	2010	120 acres out of 235 total acres identified	Residential, both medium and high density	<p>The Lamar Street Station Area in the Two Creeks neighborhood is an eclectic and vibrant neighborhood. This dynamic community honors the history of the area while encouraging a future that supports:</p> <ul style="list-style-type: none"> • Sustainability through the integration of land use, design, transportation, and the natural environment; • Strong connections with all communities by bike, rail, foot and bus; • A pedestrian-friendly environment with attractive streetscapes, inviting public spaces, and detached sidewalks; • Housing diversity to support people of all income levels and ages; and • Quality development with the right mix of uses to foster a thriving, creative and attractive community. 	No	5.34 acres (Metro West)
Wadsworth	Lakewood	2006	209 acres	Commercial, residential with ground-floor retail	<p>The areas surrounding the Wadsworth Boulevard station will be transformed into a mixed-use urban center. The area is envisioned to be a lively commercial, employment, and residential district that will also serve the surrounding neighborhoods. Multi-story mixed-use buildings are envisioned in the blocks north of the station to connect with</p> <p>Colfax Avenue. Residential uses are envisioned to surround the core area.</p>	Yes (garage)	3 acres (Metro West)

Station Area	Jurisdiction	Year Prepared	Area of Change	Predominant Character of New Development	Vision Statement	Parking Available?	Housing Authority Owns Land
Garrison	Lakewood	2010	60 acres	Residential, some mixed-use commercial	The West 14th Avenue corridor between Garrison Street and Ammons Street should be a pedestrian-friendly business district where residents can walk to specialty shops, bakeries, bookstores, medical offices, art galleries, restaurants and sidewalk cafés. The corridor should be a vibrant and diverse environment that enhances the quality of life in the Eiber Neighborhood and the City of Lakewood by creating an active, spirited destination for residents, businesses, employees, and visitors.	No	2.5 acres (Metro West)
Oak	Lakewood	2006	240 acres	Commercial mixed-use, residential with ground-floor retail	The City of Lakewood's overall vision is to transform the area around the light rail station into a mixed-use center, with an emphasis on research and development, and retail opportunities. Development that occurs in the station area is to be urban in form, with building entrances located directly on sidewalks to allow for easy walking access. The station area will be pedestrian-friendly with wide sidewalks and street trees planted to create a pleasant atmosphere. Multi-story office and residential buildings, with ground floor retail will be located in the blocks nearest the station and in redevelopment areas north of Colfax Avenue. The expansion of office, laboratory, and research and development uses south and west of the station will also help create a strong employment base for the area and the City.	Yes	No

Station Area	Jurisdiction	Year Prepared	Area of Change	Predominant Character of New Development	Vision Statement	Parking Available?	Housing Authority Owns Land
Union Corridor	Lakewood	2006	220 acres	Commercial mixed-use, residential with ground-floor retail.	Transform the area along the Union Boulevard and adjacent to the light rail station into a mixed-use urban corridor. The area will continue to be Lakewood's mid- and high-rise development area and one of the City's urban centers. Development that occurs along the corridor is to be urban in form, with building entrances located directly on sidewalks to allow for easy walking access. The corridor will be pedestrian-friendly with wide sidewalks and street trees planted to create a pleasant atmosphere. Multi-story office and residential buildings, with ground floor retail will be located in the blocks nearest the Federal Center boundary.	Yes	No
Federal Center Site Plan Study	U.S. General Services Administration	2008	640 acres; 65 acres was transferred to Lakewood through federal land disposal and another 40 acres will soon go through the disposition process.	Commercial mixed-use, new residential units, new office center, new parks/athletic fields. New hospital (St. Anthony's)	The world-class federal campus integrates a mix of uses that complement the larger community. The campus serves as a model for innovative partnerships, enhancing value for taxpayers and the efficiency and longevity of federal operations. In meeting the federal mission, the campus embraces sustainability, design excellence, and greater accessibility for the public. It serves as a prominent and progressive community hub, capitalizing on the availability of public transit & services."	Yes	No (but majority of land owned by federal gov't)

streetscape will differ depending on the amount of parking and percentage of people walking and biking to the station.

Planned Development along the West Corridor

Most of the aforementioned station area plans also include specific amounts of desired new development for each station. Table II-2 shows the amount of new

development that the station area plans anticipate accommodating over the next 30 to 50 years. These numbers reflect the vision in the station area plans and often give a range between a low and high estimate. Following the table is a brief description of the land use mix and infrastructure upgrades planned for each station.

Residential

Over 20,000 new residential units are planned along the corridor, with a substantial portion along Colfax Avenue and in the redevelopment of public housing

Table II-2: Planned Development

Station Area Plan	Residential (# units)	Office (s.f.)	Retail (s.f.)
10th & Osage (La Alma/Lincoln Park Neighborhood Plan)	800 to 900	0	0
Auraria West Station Area Plan	1,760 to 2,400	436,000 to 2.4 million	65,400 to 910,000
Auraria Campus Master Plan	0	2.4 million	0
Federal/Decatur Station Area Plan	3,580	510,000	165,000
West Colfax Area Plan	6,000 to 8,000	215,000	0
Sheridan Station Area Plan (Denver)	2,550	35,000 to 62,500	206,000
Sheridan Station Area Plan (Lakewood)	570 to 1,020	35,000 to 62,500	68,000 to 117,500
Lamar Station Area Plan	1,100 to 1,500	15,000 to 20,000	35,000 to 50,000
Colfax Mixed Use Zone District	750 to 1,500	Minimal increase	0
Wadsworth Station Area Plan	1,800 to 2,750	175,000 to 570,000	926,000 to 1.3 million
Garrison Station Area Plan	300 to 475	10,000 to 15,000	5,000 to 10,000
Oak Station Area Plan	1,210 to 2,000	1.5 to 2.0 million	885,000 to 1.2 million
Federal Center Site Plan Study*	1,400	3.2 million	212,000
Union Corridor Station Area Plan	700 to 1,200	2.3 to 3.5 million	485,000 to 775,000
TOTAL	22,520 to 29,275	11.1 to 15 million	3.1 to 4.9 million

*Approximately 2.8 million square feet is existing development that will be retained. The other 1.3 million will either replace current development or be new development (for a total of 4.1 million square feet)

SOURCE: Various station area plans, Cities of Denver and Lakewood, GSA.

near the 10th and Osage, Federal/Decatur, and Perry stations. The Wadsworth, Oak, Sheridan and Federal/Decatur station areas have some of the highest projections for future residential growth, matching the vision for change around those stations. Many of these projections are very long-term and will be reliant on a few catalytic developments.

Commercial (Retail/Office)

Overall, the station area plans for the West Corridor plan for over ten million square feet of new office space and three million square feet of retail. The Auraria West, Oak, and Federal Center station areas are forecast to have the most office space, and along with the Wadsworth station, they are also the places forecast to receive the most new retail.

Education

Three of the West Corridor stations are home to institutions of higher education. The Auraria Campus is the largest educational institution in the State of Colorado,⁵ providing classroom space to three schools: the University of Colorado Denver, Metropolitan State College, and the Community College of Denver. Approximately 37,000 students attend courses at the Auraria Campus each year, and current projections expect this number to grow to 50,000 by 2030.⁶ The Auraria Higher Education Center, the agency responsible for facilities management and common infrastructure for all three schools, has prepared a Campus Master Plan for future development, with a goal of increasing transit ridership and creating new transit-oriented neighborhoods throughout campus. The City of Denver's Auraria West station area plan reconfirms the campus' commitment to TOD, calling for a "campus hot spot" near the station with new student housing opportunities. The campus currently has almost 7,000 parking spaces, at a ratio of one space

per six persons using the Auraria Campus. As of 2002, over 72% of students, faculty and staff drove to campus, with 17% using mass transit. Since then, the campus has seen the percentage of drivers decrease, but with expected growth in the student population, it still expects to maintain this 1:6 ratio by building more structured parking to replace the surface spots lost with new development. .

The Rocky Mountain College of Arts & Design (RMCAD) lies within the Lamar station area. It is home to 585 students, all of whom live off campus. Plans for this station call for creating a new arts district to promote the school and create a sense of place for Lamar.

The Red Rocks Community College is home to 14,000 annual students. It will be the second-to-last station on the West Corridor. Geographically isolated from surrounding neighborhoods by wide open spaces and a major state highway (U.S. 6), the new light rail line will greatly improve access to this school and also provide students with more housing and employment opportunities.

There are also a number of elementary, middle, and high schools along the West Corridor. Improved transit access will make the neighborhoods surrounding these schools more attractive to families with school-age children, and also provide parents with more options to get to work if they choose to live in these neighborhoods.

Parking

Some stations along the corridor vary in the amount of parking provided, from large park-and-ride stations to neighborhood walk-ups with no parking at all. Table II-3 below shows the breakdown between stations with RTD-managed parking and those without and how many parking spaces are allocated at each station

along the corridor. While the station area plans created by the cities of Denver and Lakewood take these parking requirements into account in determining what stations will look like in the future, in most cases, the parking element was already in place before the station area planning process began. In some station areas like Sheridan and Wadsworth, the parking structure is seen as a development opportunity. In the two station area plans for Sheridan (the station straddles both Denver and Lakewood so both cities prepared station area plans), the parking structure is envisioned as having ground floor retail or otherwise making a positive impact on walking and auto connections in the station area. At the Wadsworth station, the City of Lakewood is installing a pedestrian plaza adjacent to the parking structure to link it with the station platform, which will be elevated above the roadway.

Infrastructure

The station area plans also differ in the amount of new infrastructure required to support the vision laid out in the plans. Significant pedestrian improvements are called for in nearly every station area, as are extensions and/or improvements to the bicycle network. New streets are major components of the plans for a few of the stations along the West Corridor, including the Federal/Decatur, Sheridan and Federal Center station areas. The City and County of Denver is using general obligation bond money to make improvements at the 10th & Osage and Federal/Decatur stations. Lakewood has conducted infrastructure master plans at both the Wadsworth and Oak stations, which identify the improvements and investments needed to support TOD at both station areas. Lakewood is also spending money on station enhancements at both Wadsworth (\$2.6 million) and Oak (\$200,000) to improve connectivity. Both cities are investing in new sidewalks and bicycle facilities near stations, and RTD is providing bike racks and lockers at most stations as well. For utilities, both cities and the GSA have been working with local water

and sanitation service providers to prepare cost estimates for maximum build-out of the station areas. Section IV goes into more detail about the infrastructure needs and investments planned for the corridor.

Parks, Recreation & Entertainment Facilities

The alignment of the West Corridor generally follows the Lakewood and Dry Gulches, so many station area plans propose improvements to the gulch to provide more park space and beautify the station areas. The West Colfax Plan and both Sheridan station area plans are especially detailed in improvements to Lakewood Gulch, as these stations will fall within the middle of the gulch. Lakewood will also construct new bike bridges and paths along parts of the light rail line. Lakewood also has a planning study in process for the North Dry Gulch area. There are also several recreation centers within station areas. New athletic fields are a major component of both the Auraria West and Federal Center station area plans, as both station areas contain large swaths of underutilized land where there is a high demand for more park space. The GSA is working with the City of Lakewood to dedicate land to recreational space for use by the surrounding community. Moreover, a major component of the Auraria West and Federal/Decatur station area plans is the redevelopment of surface parking lots currently utilized by professional sports facilities. The owner of the Pepsi Center has proposed a redevelopment of land west of the Pepsi Center into a mixed-use entertainment district. This land is currently surface parking for Pepsi Center events, but future plans call for a movie theater, bowling alley, pool hall or similar uses. Redevelopment of this land will provide improved access to the Pepsi Center from the Auraria Campus and residents along the West Corridor. The northern edge of the Federal/Decatur station area abuts Invesco Field, the home of the Denver Broncos. Plans call for transforming some of the surface parking lots into a mixed-use

entertainment district. Lakewood would like to build a historic railway museum near the Oak station with a potential \$2 million investment from a nonprofit organization.

From Station Area Plans to a Corridor Plan

As highlighted above, the two cities and the GSA have already spent significant time and resources planning and strategizing for the new light rail line. Most if not all of these plans, however, are station-specific and do not look further than the half-mile radius surrounding each station. In order to get a more holistic view of the entire corridor, there is a pressing need to examine the West Corridor on a corridor rather than station-specific level. The next two sections of this report review the existing conditions of the West Corridor in more detail, starting with demographics and the market conditions in Section III and followed by community resources, destinations, and transportation in Section IV.

III. Demographics, Major Destinations, and Real Estate Market Conditions

A compilation of demographic and market data for each station area was necessary to profile the existing conditions of the West Corridor. Station areas along the West Corridor encompass a broad range of demographic, physical, and economic characteristics. The corridor spans some of the lowest income (and most transit-dependent) neighborhoods in the Denver region, yet it also includes middle income, moderate density single-family neighborhoods and many lifelong residents.

This section provides an overview of the existing demographics and other conditions along the West Corridor and in the station areas. It highlights those demographic, employment, and market trends that could impact the potential for TOD in the station areas.

Key Findings

Population and Households

- The median income of West Corridor residents is less than the regional average.
- 63 percent of all households along the West Corridor rent rather than own.
- Oak, Garrison, Wadsworth, and Lamar have the highest proportion of people over the age of 65, which is slightly higher than the proportion in the region.

Employment

- Approximately 40,000 jobs are located in West Corridor station areas. The Jefferson County Government Center, Federal Center, Oak, Wadsworth, Auraria West, and 10th and Osage stations all have over 3,000 workers within a half-mile around the station.
- Office-based industries provide the greatest share of jobs in West Corridor station areas.

Real Estate Market Conditions

- The coordination and implementation of public improvements that support livable communities would generate additional short-term development opportunities in station areas throughout the West Corridor.
- Parcel size and land assembly are challenging issues throughout the corridor. Small scale infill development provides the most opportunities in the near term along the West Corridor. Additional near term market opportunities include affordable, student, and senior housing.
- Long-term market opportunities exist for larger scale, higher density development along the West Corridor, as called for in the station area plans, contingent upon multi-agency collaboration around promoting and educating developers about TOD opportunities.
- Existing land uses directly adjacent to the corridor are predominantly residential, but a significant amount of commercial and industrial uses are located within station areas.
- Recent market activity indicates a stronger demand for commercial development than for new residential construction. Completion of the West Corridor, as well as additional public improvements, will increase the demand for housing in station areas.

- West Colfax Avenue should remain the primary retail corridor. Station area retail should focus more on meeting the immediate needs of neighborhood residents and commuters and thus be smaller in scale.
- Because of its proximity to the Federal Center site, the Oak station area also has potential for large-scale development opportunities.
- The number of students at Red Rocks Community College, the Rocky Mountain College of Art and Design, and the Auraria Campus far exceeds the amount of planned student housing along the corridor.
- Current housing demand is for medium-density, mixed-income development that meets the needs of low to moderate income residents, including students, artists, service workers, and senior citizens.
- Many permanently affordable housing projects are already being located along the West Corridor, but there are also many lower income households who are renting privately owned housing. These households could be vulnerable to displacement should market conditions in the corridor change dramatically over time.

Population and Households

This section provides an overview of the demographics along the West Corridor and in the station areas.

There are an estimated 53,000 people in 19,000 households living within a half-mile of a light rail station along the West Corridor. Household sizes range from a low of 1.84 persons per household in the Federal Center station area to a high of 3.47 persons per household in the Knox station area, with station areas to the west having smaller household sizes, and the cluster of station areas closer to downtown Denver having higher average household sizes (see Table III-1 below).

While 29 percent of residents in the station areas along the West Corridor are under eighteen years old and only 9 percent of residents are over 65, the age of West Corridor residents varies significantly by station area. Oak, Garrison, Wadsworth, and Lamar station areas have the highest proportion of people over the age of sixty-five while the 10th & Osage, Auraria, Federal/Decatur, and Knox station areas have the highest concentrations of residents under eighteen years old.

The West Corridor is more racially and ethnically diverse compared to the cities of Denver and Lakewood. About 42 percent of residents are white, while 49 percent identify as Hispanic or Latino (see Table III-1). Only 4 percent of all residents along the corridor are black, and the highest concentration of African-Americans is in the Auraria West station area.

Compared to the Denver region as a whole, households in the West Corridor have lower median incomes. The regional median household income for the seven-county Denver region was \$52,000 in 2000. The median household income of all West Corridor station areas is below that level, averaging about \$35,000 a year, but ranging significantly from the 10th and Osage and Federal/Decatur station areas, where median income is less than \$26,000, to the stations in western Lakewood and Jefferson County, where median incomes are between \$41,000 and \$52,000 as shown in Figure III-1.

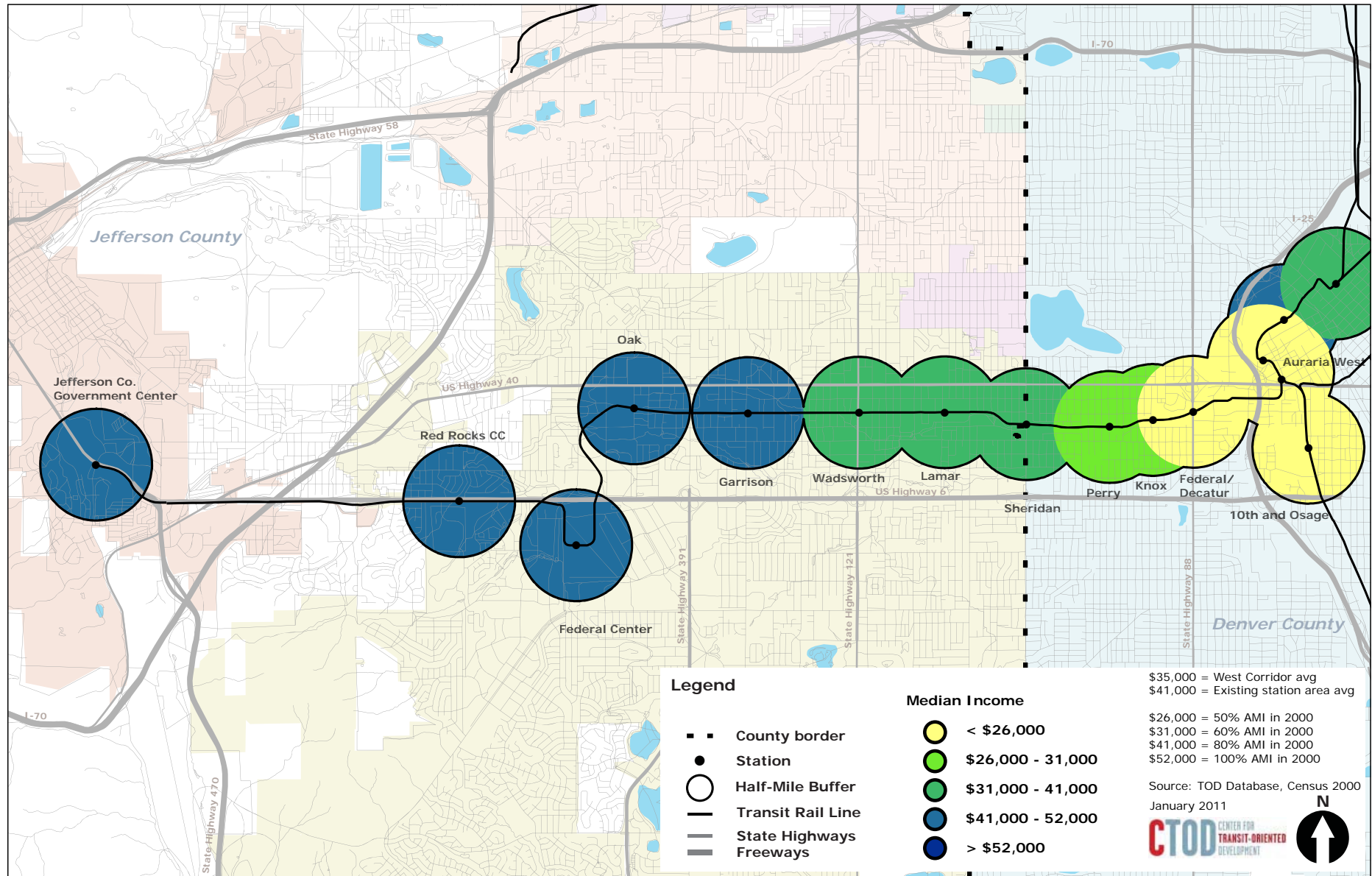
The West Corridor has a very high rate of renter-occupied housing units. Corridor-wide, about 63 percent of station area households are renters, which is about twice the rate compared to the region, where about 34 percent of all households are renters. The Figure III-2 shows how the proportion of renter and owner households differs among station areas, where a cluster of stations including Federal/Decatur, Auraria West, and 10th and Osage have over 70 percent renters,

Table III-1: Population and Household Characteristics in Station Areas, 2009

	Jefferson County Gov't Center	Red Rocks CC	Federal Center Station Area	Oak	Garrison	Wadsworth	Lamar	Sheridan	Perry	Knox	Decatur/ Federal	Auraria	10th & Osage	Denver	Lakewood
Population	.	3,436	725	1,464	2,774	4,497	4,045	6,419	8,642	8,537	5,914	553	3,807	610,345	141,928
Households	841	1,732	393	650	1,132	2,111	1,794	2,239	2,525	2,412	1,706	200	1,349	251,515	62,269
Ave. Household Size	2.30	1.94	1.84	2.08	2.25	2.08	2.11	2.81	3.38	3.47	3.42	2.55	2.80	2.38	2.22
Race/Ethnicity															
% African American	3%	3%	1%	3%	7%	5%	3%	2%	3%	5%	8%	31%	8%	10%	2%
% Asian	2%	2%	3%	2%	1%	1%	1%	1%	1%	3%	6%	3%	6%	3%	3%
% Other	9%	11%	14%	13%	9%	22%	27%	33%	44%	45%	44%	31%	28%	12%	10%
% White	87%	84%	81%	83%	82%	72%	68%	63%	52%	47%	42%	34%	58%	76%	85%
% Hispanic	15%	13%	10%	19%	22%	39%	50%	69%	79%	76%	69%	22%	52%	34%	21%
Age Characteristics															
% Under 18	21%	18%	13%	20%	22%	24%	24%	30%	33%	34%	37%	43%	32%	23%	19%
% Over 65	9%	10%	5%	20%	14%	13%	13%	9%	7%	6%	5%	8%	7%	10%	14%
Household Income															
Less than \$25,000	23%	15%	14%	25%	16%	33%	31%	33%	35%	40%	49%	60%	54%	28%	20%
\$25,000-\$50,000	27%	34%	37%	31%	36%	33%	36%	31%	31%	33%	30%	36%	24%	25%	26%
\$50,000-\$75,000	19%	30%	32%	22%	17%	19%	16%	20%	17%	13%	9%	1%	12%	17%	20%
Over \$75,000	30%	21%	18%	22%	31%	15%	17%	17%	17%	15%	11%	3%	10%	30%	34%
Household Type															
Married w/ Children	17%	9%	7%	10%	14%	10%	11%	22%	27%	25%	22%	8%	13%	16%	16%
Married no Children	23%	20%	16%	17%	23%	14%	13%	12%	12%	11%	9%	4%	8%	18%	27%
Other Family	18%	14%	12%	19%	19%	20%	21%	22%	28%	32%	38%	49%	36%	14%	16%
Non-family	14%	15%	23%	11%	12%	12%	11%	9%	9%	11%	11%	3%	14%	14%	10%
Single	29%	42%	42%	43%	32%	43%	45%	35%	25%	20%	19%	35%	29%	38%	32%

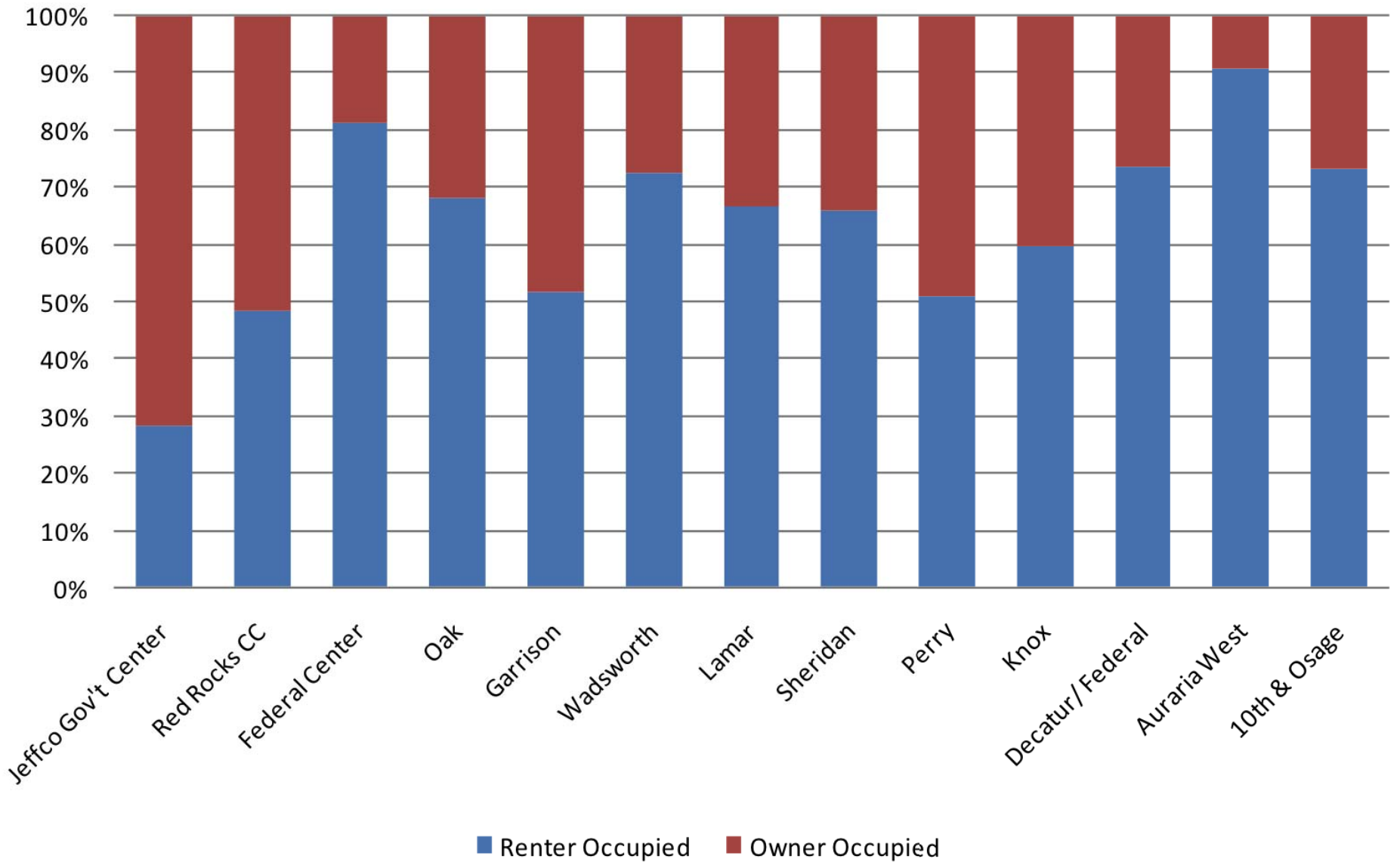
SOURCE: Claritas, 2010; Center for Transit-Oriented Development, 2010.

Figure III-1: Median Income in Station Areas, 2000



SOURCE: Center for Transit-Oriented Development, 2010.

Figure III-2: Housing Tenure by Station Area



SOURCE: Claritas, 2010; Center for Transit-Oriented Development, 2010.

while a little farther west, the typical rental rates are between 50 and 70 percent.

The corridor is well positioned to provide housing for a mix of incomes. The prevalence of renter households and the supply of multi-family units along the West Corridor reflect the fact that the corridor has been attractive to Section 8 and other low- and moderate-income households, which have a higher propensity to use transit. The West Corridor therefore has a competitive advantage relative to other areas in capturing the types of households who will benefit most from living in a transit-oriented development. The corridor will also be attractive to moderate- and high-income households, allowing for a range of housing types and a diversity of residents living along the West Corridor.

Employment

In order to assess the market potential of commercial land uses, it is important to understand the West Corridor within the context of the regional economy. An analysis of employment and commute patterns that originate along the West Corridor to some of the major job centers in the region provides insight into commuter travel patterns.

Employment Intensity in the West Corridor

One of the strengths of the corridor is its proximity to jobs in Downtown Denver, but it is also home to job centers at the Federal Center site, as well as high concentrations of jobs at educational institutions on and near the Auraria Campus and Red Rocks Community College. Figure III-3 on the following page illustrates where employment is concentrated along the West Corridor.

In all, over 40,000 jobs are located in the station areas along the West Corridor.

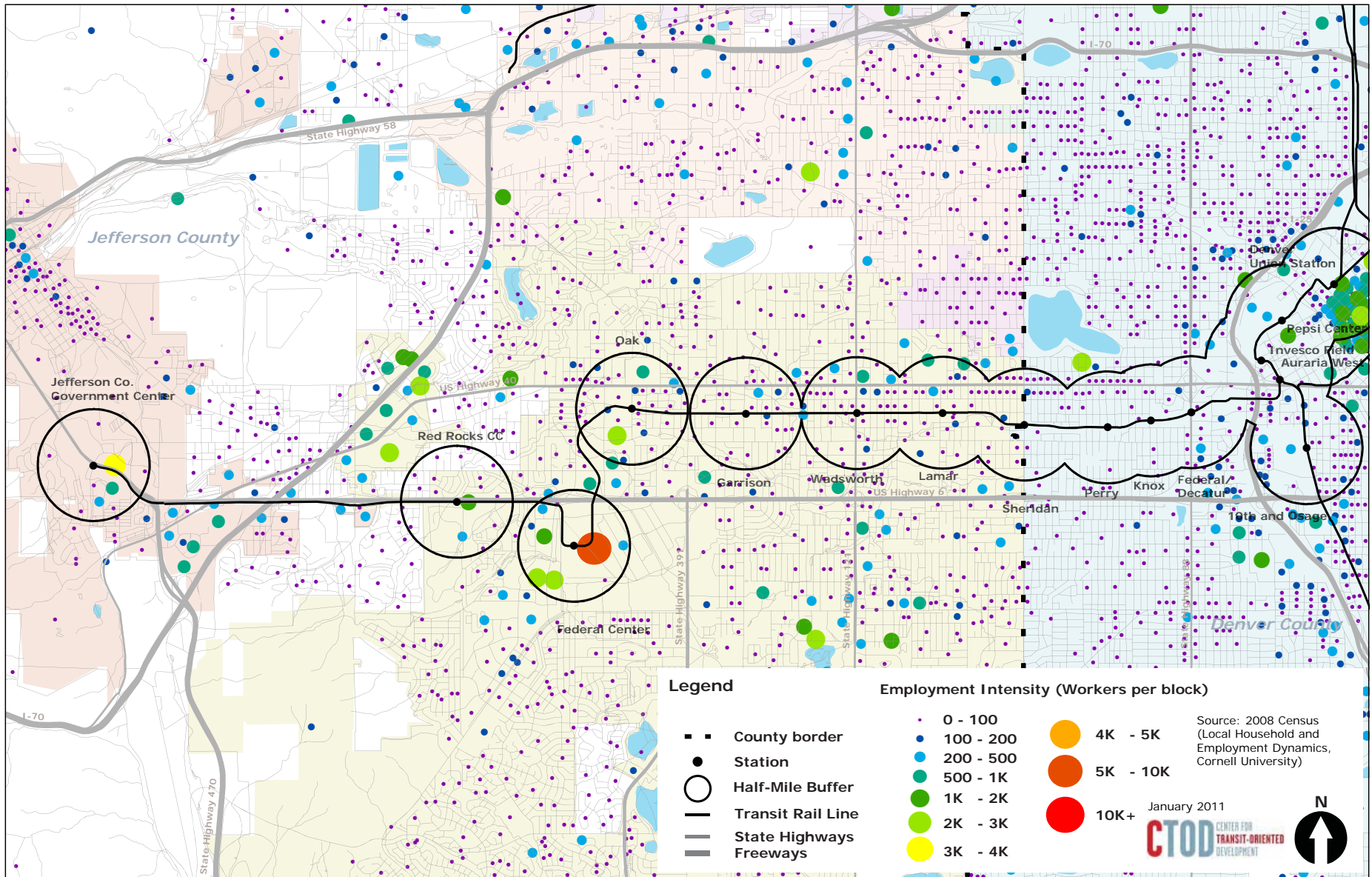
Table III-2 shows the total number of jobs and the breakdown of employment types in each station area.

As shown in the table, the Federal Center and Oak station areas have the largest number of jobs, but the Jefferson County Government Center, Wadsworth, Auraria West, and 10th & Osage stations all have over 3,000 workers within a half mile around the station as well. Office jobs predominate in the Jefferson County Government Center, Federal Center, Wadsworth, and Auraria West station areas.

Research has shown that professional, office jobs are often the most transit friendly.⁷ These employment types can support more employment density than manufacturing or warehousing jobs, and office employees benefit from working in mixed-use environments where it is easy to run errands or walk to lunch without getting into a car.

These employment centers also have the potential to create future demand for housing along the corridor. Workers may choose to live within another station area along the corridor, and thus can utilize public transportation to get to and from work, where previously the only option was to drive. Some stations may develop into workforce housing centers for job centers one to two stations away.

Figure III-3. Employment Intensity



SOURCE: Center for Transit-Oriented Development, 2010.

Table III-2: Employment in Station Areas, 2008

Number of Jobs*	Jefferson County Government Center	Red Rocks CC	Federal Center Station Area	Oak	Garrison	Wadsworth	Lamar	Sheridan	Perry	Knox	Federal	Auraria	10th & Osage
Production, Distribution, and Repair	129	10	719	2,643	100	142	120	64	2	7	186	495	1,967
Retail	23	12	46	1,026	251	1,043	171	121	28	53	98	11	111
Knowledge Based	168	263	2,766	375	269	403	358	55	31	17	158	494	356
Education and Medical	79	904	291	771	261	791	1,116	131	67	170	167	773	154
Entertainment	15	0	869	294	29	177	440	42	61	40	50	1,744	237
Government	3,113	7	6,038**	8	3	13	5	0	0	0	2	12	6
Other	192	12	2,140	571	301	527	345	477	50	67	403	497	841
Total	3,719	1,208	12,912	5,715	1,214	3,097	2,555	892	239	354	1,064	4,026	3,672
Percent of Total Employment													
Production, Distribution, and Repair	3%	1%	6%	46%	8%	5%	5%	7%	1%	2%	17%	12%	54%
Retail	1%	1%	0%	18%	21%	34%	7%	14%	12%	15%	9%	0%	3%
Knowledge Based	5%	22%	21%	7%	22%	13%	14%	6%	13%	5%	15%	12%	10%
Education and Medical	2%	75%	2%	13%	21%	26%	44%	15%	28%	48%	16%	19%	4%
Entertainment	0%	0%	7%	5%	2%	6%	17%	5%	26%	11%	5%	43%	6%
Government	84%	1%	47%*	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	5%	1%	17%	10%	25%	17%	14%	53%	21%	19%	38%	12%	23%

SOURCE: LEHD, 2008; Center for Transit-Oriented Development 2010.

*Total number of jobs in 1/2-mile station area. Total jobs reflects overlap in some station areas.

**Estimated 6,000 Federal Center employees. The City of Lakewood, Federal Center Comprehensive Plan Amendment, August 2008.

Commute Patterns

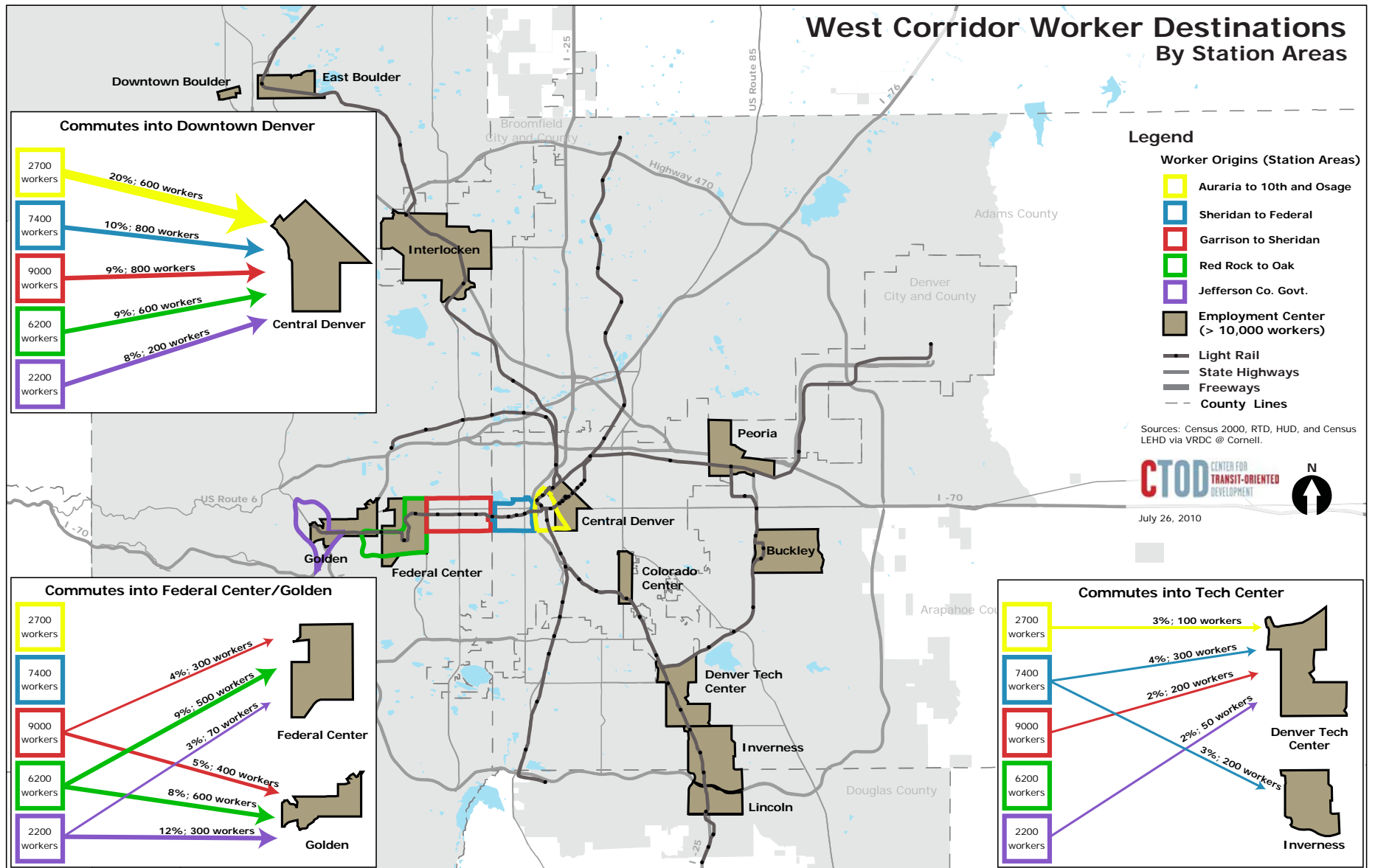
Unsurprisingly, Downtown Denver is a major work destination for West Corridor residents, with nearly 10 percent of commuters traveling there for work. These workers will benefit directly from the enhanced transit connections provided by the light rail. The Federal Center site and the City of Golden are two of the major job centers in the Denver region and are located along the West Corridor. About 8 percent of residents living along the West Corridor commute to these job centers. The Denver Tech Center is the second largest employment center in the Denver region, but is a less common destination for West Corridor residents. Together with Inverness (near the Denver Tech Center), these jobs attract about 4 percent of all West Corridor residents.

Altogether, only 30 percent of commuters in the West Corridor work in major job centers, with the remaining employed residents of the corridor dispersed throughout the region. The new light rail connection provided by the West Corridor may influence commute patterns in the area—making it easier for West Corridor residents to access downtown, jobs in the corridor, and other major employment centers in the region.

Figure III-4 shows the locations within the region where a higher concentration of West Corridor residents work. The brown boxes show the major job centers in the region, and the call out boxes show how many West Corridor residents are commuting to some of those centers.



Figure III-4: Commute Patterns – Where West Corridor Residents Work



SOURCE: Center for Transit-Oriented Development, 2010.

Real Estate Market Conditions

To fully understand the opportunities for TOD along the West Corridor, the character of the existing land uses was examined, interviews with local real estate developers were conducted, and data on rental and home sales trends and parcel size was reviewed. A range of development opportunity sites and the potential relationship between these sites and recent market activity was considered. Information on projects that are currently planned, proposed, or under construction in the area was compiled.

Commercial Land Uses

While land uses directly adjacent to the corridor are predominantly residential, a significant amount of commercial uses are located within station areas. The commercial land uses along major arterials within the corridor are auto-oriented, with a clustering of larger industrial and auto service uses located along the corridor between the Sheridan and Lamar stations as well as around the Oak station. The Union Boulevard Corridor provides the Federal Center station area with a significant amount of office space. The clustering of office space along the Union Boulevard Corridor contributes to the Federal Center station area having the highest concentration of non-institutional office-based workers throughout the corridor.

The majority of retail uses in the West Corridor are located along West Colfax. Much of the commercial real estate along West Colfax is 1950s era auto-oriented with high concentrations of auto sales lots and auto repair businesses. There are also some large format retailers that are located along the corridor at the intersections of Pierce, Wadsworth, and Garrison. The Federal/Decatur and, to a lesser extent, Sheridan station areas also have a significant amount of auto-oriented neighborhood serving retail.

Residential Land Uses

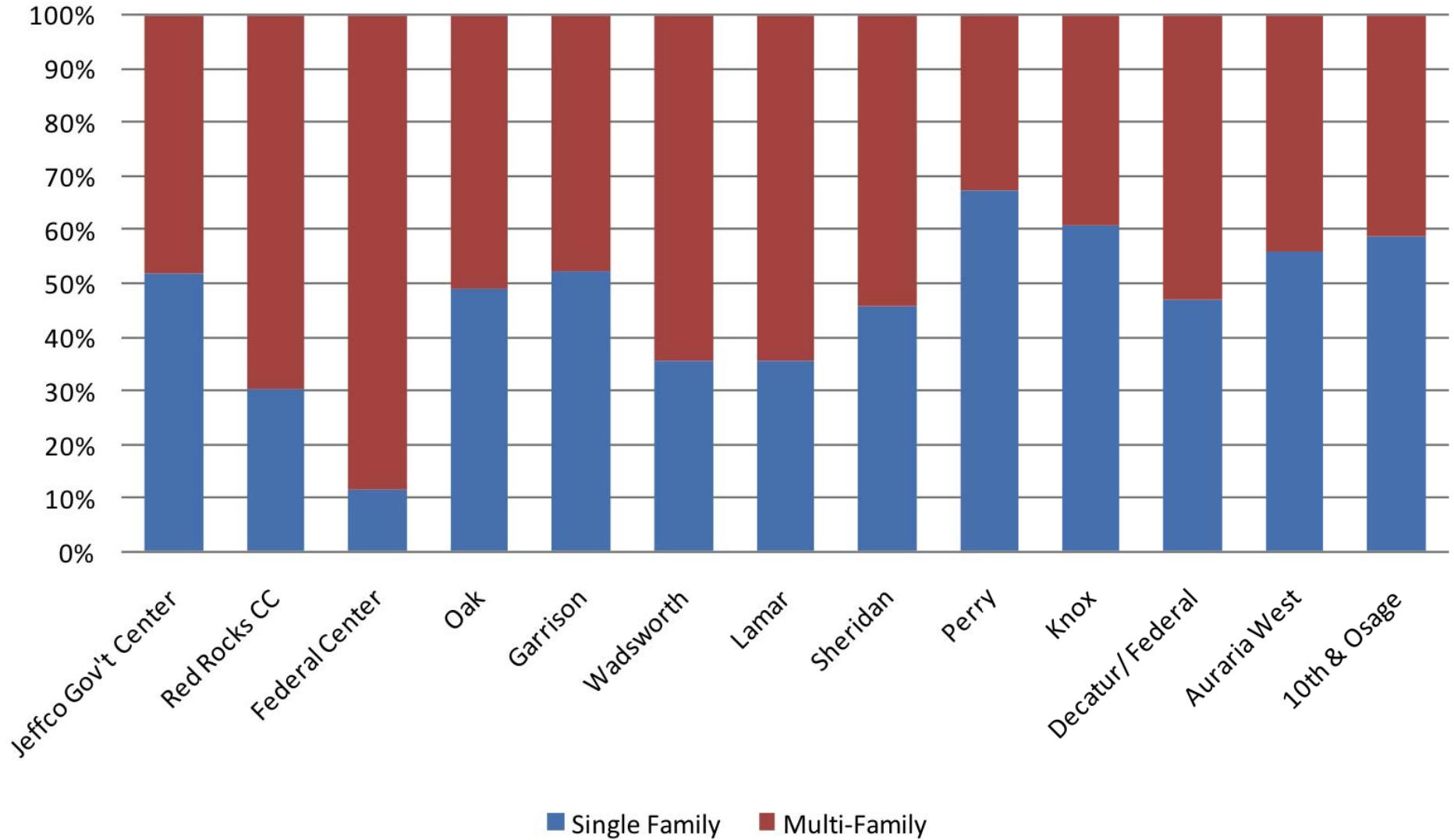
In general, the West Corridor has a higher proportion of multi-family units, 38 percent, than the Denver Metro Area as a whole, but the prevalence of rental units ranges significantly, from 33 percent of total units at Perry to 89 percent of total units at the Federal Center station area. The highest concentrations of multi-family housing units are located in the Sheridan, Lamar and Wadsworth station areas. The high percentage of multi-family units correlates with the higher than average number of renter households, as previously discussed in the section on population and households. Over 60 percent of households along the West Corridor are renter occupied. Figure III-5 shows housing types by station area for the corridor.

Notwithstanding the high prevalence of multi-family units, the housing stock around the West Corridor also includes attached and detached, single-family homes. The diversity of the housing stock along the West Corridor reflects the diversity of residents in the corridor. Many station area along the corridor are located in predominantly single-family neighborhoods. There is a relatively high concentration of postwar-era detached single-family homes on small parcels that provide housing options for lower- or middle-income households.

Rental Market

As described above, the West Corridor has a substantial number of apartment complexes and a relatively high level of renter-occupied housing units. The average rental rates along the West Corridor are generally lower than those regionally. Table III-3 shows the average rents by unit size for the market areas that most closely represent the West Corridor (Denver West Central and Lakewood North) and for the cities of Denver and Lakewood.⁸

Figure III-5: Housing Type by Station Area



SOURCE: FARES; Center for Transit-Oriented Development, 2010.

As shown in Table III-3, average rents for multi-family units are generally higher in the Lakewood segment of the West Corridor compared to the Denver segment of the corridor. Average rents are slightly higher in the Denver segment of the corridor for smaller units of two or less bedrooms. Average rents for two bedroom/two bath and three bedroom units are significantly higher in the Lakewood segment of the corridor.

Another measure of competitiveness for the housing market is vacancy rates. As shown in Tables III-4 and III-5, vacancy rates for multi-family rental units are lower in the Denver portion of the corridor, while vacancy rates for single-family rental units are lower in the Lakewood

Table III-4: Vacancy Rates – Multi-family Rental (as of 4Q 2010)

Market Area	Vacancy Rate
Denver West Central	2.8%
Lakewood North	4.8%
Metro Area	5.5%

SOURCE: Denver Area Apartment Vacancy and Rent Survey, 2010; Colorado Department of Local Affairs, 2010; Center for Transit-Oriented Development 2010.

Table III-5: Vacancy Rates – Single Family Rental

Market Area	Vacancy Rate
Denver West Central	5.4%
Lakewood North	1.7%

SOURCE: Colorado Department of Local Affairs, 2010; Center for Transit-Oriented Development 2010.

portion of the corridor.

Single family rental units have significantly lower vacancy rates than multi-family units on the Lakewood portion of the corridor. The vacancy rate of 1.7 percent in the Lakewood portion of the corridor, particularly, is an indicator of demand for single family rentals. The reverse is true in the Denver portion of the corridor, where vacancy rates are significantly lower for multi-family rental than single-family rental.

Table III.3: Average Rents – Multi-family

Market Area	Efficiency/ Studio	1 Bed	2 Bed 1 Bath	2 Bed 2 Bath	3 Bed	Other	All
Denver West Central	\$575	\$635	\$743	\$736	\$814	\$688	\$652
Lakewood North	\$452	\$691	\$771	\$874	\$1,039	\$914	\$768
City of Denver	\$680	\$823	\$888	\$1,135	\$1,332	\$890	\$910
City of Lakewood	\$492	\$733	\$815	\$924	\$1,142	\$951	\$826
Metro Area	\$655	\$795	\$870	\$1,069	\$1,284	\$1,021	\$909

SOURCE: Denver Area Apartment Vacancy and Rent Survey, 2010; Colorado Division of Housing; Center for Transit-Oriented Development, 2010.

For Sale Market

In order to understand the West Corridor's position in the regional housing market, residential sales prices for the station areas were analyzed and compared to regional data.⁹ Table III-6 shows median residential sales prices for units along the West Corridor, Denver as a whole, and Lakewood as a whole.

The West Corridor offers a relatively affordable alternative for households seeking a single family home in the Denver region. Furthermore, the West Corridor did not experience a significant amount of new building or large escalation in prices during the recent housing boom. As shown in the table, sales prices along West Corridor are significantly lower than sales prices for units in the City of Lakewood and the City of Denver. Additionally, median residential sales prices are lower in the Denver portion of the corridor than in the Lakewood portion

Table III-6: Average Residential Sale Prices, Oct. 2009 – Oct. 2010

Market Area	Median Price
West Corridor	\$167,750
Denver	\$189,000
Lakewood	\$188,050

SOURCE: FARES; Trulia; Center for Transit-Oriented Development, 2010.

of the corridor. The variance in sales prices along the corridor can be attributed to a relatively newer housing stock in Lakewood as well as larger single family parcels.

Developers interviewed for this study noted that current rents and sales prices are too low at this point to warrant new construction unless a project was subsidized.

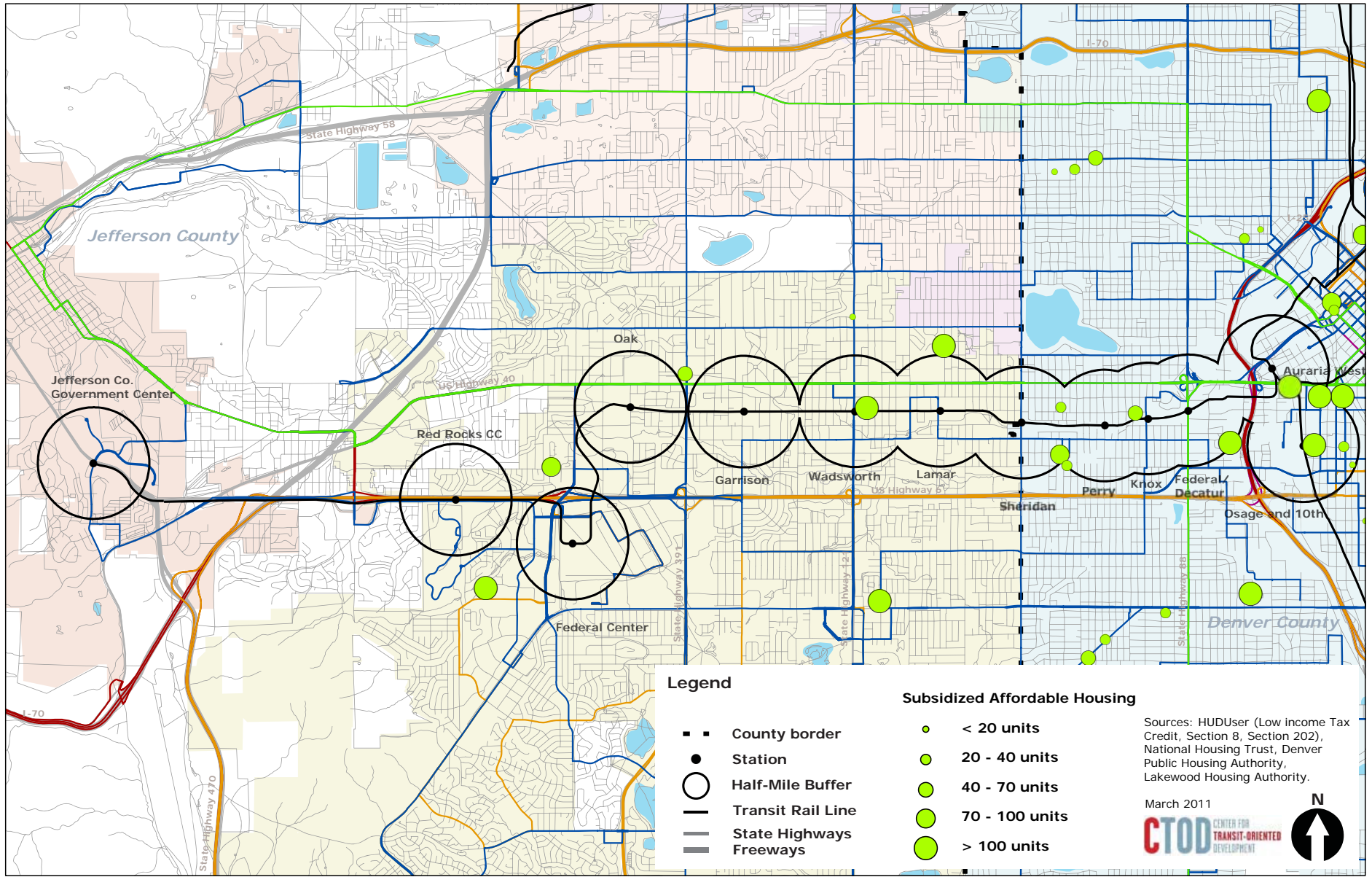
Permanently Affordable Housing

The West Corridor Working Group has recognized that neighborhoods with low transportation costs should be priority areas for affordable housing and equitable development. DHA and MWSH and the nonprofit developer community have made significant investments to preserve and create new affordable and mixed-income housing around West Corridor stations. These groups already owned a significant amount of land within close proximity to the West Corridor light rail line before planning the alignment began. According to the Urban Land Conservancy, a local nonprofit developer, an estimated 1,424 affordable homes are within a half-mile radius of the West Corridor light rail line today.¹⁰ The arrival of this new transit line will benefit these existing housing developments by providing better access to the greater Denver region, but it also raises concerns about displacement. Thus, the two housing authorities, along with nonprofit developers, have begun to acquire more land and proactively plan for redevelopment of existing low-income neighborhoods along the line to ensure there is an adequate supply of housing for people of low to moderate incomes. Figure III-6 on the next page shows affordable housing constructed by public housing authorities and private or nonprofit developers using federal dollars, including the Low Income Housing Tax Credit program, Section 8, and Section 202.



Deck trellis under construction at the Mulroy Apartments near the Knox station. This complex is managed by the Denver Housing Authority.

Figure III-6: Affordable Housing, 2010



SOURCE: Center for Transit-Oriented Development, 2010; HUDUser (Low Income Tax Credit, Section 8, Section 202), National Housing Trust, Denver Housing Authority, Metro West Housing Solutions.

Including the 10th and Osage station area, technically not on the West Corridor but in the same neighborhood as several West Corridor stations, the DHA maintains three affordable housing sites, while MWHS owns several existing properties and is considering acquiring several more. Nonprofit developers including the

Urban Land Conservancy (ULC) have acquired several properties for affordable housing. Table III-7 gives more details about these projects. Overall, both DHA and MWHS provide 1,077 affordable or mixed-income housing units along the West Corridor.

Table III-7: Mixed-Income and Affordable Housing Developments Owned by Public Housing Authorities

Station Area	Housing Development	Owned By	Units	Status
10th & Osage	South Lincoln	DHA	270	The plan is to gradually replace the existing housing with 800 to 900 units. Phase 1 is under construction, and DHA applied for a Hope IV grant in fall 2010.
Federal/ Decatur	Sun Valley	DHA	324	The existing structures will be replaced with a denser urban design, including a fully-connected street grid. Redevelopment may start as soon as 2014. DHA recently submitted an application to HUD for a Choice Neighborhoods grant to begin planning for redevelopment.
Knox	Westridge	DHA	192	The redevelopment of Westridge public housing is third on DHA's priority list so it could be 10 or more years in the future.
Lamar	TBD	Metro West Housing Solutions	TBD	Metro West is in the process of acquiring a parcel at Lamar and 13th for an affordable housing development, and has submitted an application for rezoning to the City of Lakewood.
Lamar	Creekside West	Metro West Housing Solutions	83	A new mixed-income/affordable housing development.
Lamar	Residences at Creekside	Metro West Housing Solutions	118	Senior housing (adults 62 and over)
Garrison	Belmont Manor	Metro West Housing Solutions	20	New mixed-income family housing development
Garrison	Willow Glen Senior Residences	Metro West Housing Solutions	70	Senior housing (adults 62 and over)
TOTAL			1,077	

SOURCE: Denver Housing Authority, Metro West Housing Solutions, 2010.

Both housing authorities have taken significant strides to improve the quality of life of residents in these communities by providing needed supportive services and programs. They are also cognizant that the new light rail will increase



Rendering of new housing developments near the 10th & Osage station

access to community resources and employment opportunities. In Denver, station area planning at 10th and Osage and Federal/Decatur has merged with ambitious plans by DHA to rebuild old public housing complexes into attractive, green, walkable communities. In September 2009, HUD awarded the Denver Housing Authority \$10 million in competitive grant funds from the American Recovery & Reinvestment Act (ARRA) to build a senior housing high-rise at the 10th & Osage station, as part of DHA's larger redevelopment of the South Lincoln Homes (see image above). DHA broke ground on the development in late September 2010 and expects to finish construction in January 2012.



In Lakewood, MWSH is ensuring that early childhood education services like Head Start (photo left) are located near transit and affordable housing. In November 2010, the U.S. Green Building

Council and Bank of America named the Lamar Station as one of ten neighborhoods to receive \$25,000 in cash plus educational resources to pursue LEED for Neighborhood Development certification for its proposed development at 13th and Lamar.¹¹

Besides the housing authorities, nonprofit developers and community development organizations have also taken an interest in preserving and creating



Jody Apartments

new affordable and mixed-income housing units along the West Corridor. The Jody Apartments (see image on left) is a proposed 62-unit, permanently affordable multi-family development located next to the Sheridan station. Urban Land Conservancy owns the land, which it acquired with the help of New West Side Economic Development, Enterprise Community Partners, the Colorado State Division of Housing, and the City and County of Denver.¹²

In other regions, the reduced transportation costs and improved job access that results from transit investments have increased the demand for housing along the transit corridor, pricing out existing residents. However, due to the current weak housing market and the capacity for new development that exists along the West Corridor, displacement is not a major concern in the short term. Because of the capacity for new development that exists along the West Corridor, housing costs are less likely to increase dramatically, and the potential for displacement of existing residents from market rate housing is low. Instead, enhancing equity along the West Corridor can focus on providing affordable housing in places where low and

moderate income households can access low transportation costs.

A recent policy change by RTD could also foster more affordable housing near transit stations. The transit agency recently revised their TOD policy to include an affordable housing requirement for development on land owned by the transportation agency. The policy states that in cases where RTD is soliciting development proposals, the agency will set the affordable housing goal to meet requirements of the local jurisdiction. For unsolicited development proposals, RTD requires that the developer include affordability goals in their proposal. RTD has

also launched a TOD Pilot Program, with four sites selected for further study. One of these sites is the Federal Center station area.

Table III-8: Land Owned By Housing Authorities

Station Area	Publicly Owned Land (acres)
10th & Osage	17.5
Auraria West	0
Federal/Decatur	31.4
Knox	15
Perry	0
Sheridan	0
Lamar	5.34
Wadsworth	3
Garrison	2.5
Oak	0
Federal Center	2
Red Rocks	3.5
Jefferson County Government Center	0

SOURCE: Denver Housing Authority, Metro West Housing Solutions, 2010.

Land Owned by Housing Authorities

The public entities in Lakewood and Denver have the ability to play a major role in showcasing the types of development they have determined to be appropriate around station areas. As mentioned above, the housing authorities in Lakewood (MWHS) and Denver (DHA) own parcels of land around many of the stations along the West Corridor.

Table III-8 below shows the specific

acres of land that MWHS and DHA own in stations along the corridor. While the total acreage in each station area is fairly low, housing authorities are often the first actors to support new development in areas where market activity has not been as strong.



Mulroy Apartments and future community gardens near Knox station

TOD Projects on the West Corridor

The West Corridor is home to some completed TOD projects, and many more are under construction or consideration. RTD keeps track of TOD projects along all existing and future transit lines and makes this information available at its website.¹³ According to the latest data from February 2011, a total of 425,186 square feet of retail, 280,000 square feet of office, and 900,000 square feet of medical space have been built or are under construction along the West Corridor, with an additional 29,560 square feet of retail and 109,252 square feet of office space proposed for station areas. The following map (Figure III-7) displays all of these existing and proposed projects as of February 2011, the last time RTD

updated its TOD Viewer. Each number corresponds to a project listed in Table III-6, which provides more detailed information.

Many of the projects built in recent years have been retail-focused and located along Colfax Avenue and other commercial corridors, such as Union Boulevard. While a significant number of residential projects have been proposed for the area, the majority of completed residential projects include affordable housing or other publicly subsidized components. University, hospital, and other institutional projects also account for a significant portion of the proposed development for the West Corridor, specifically at the Federal Center and Auraria West station areas. The delivery of these projects would further enhance the intensity of uses along the corridor and strengthen the destination nature of station areas at the eastern and western ends of the corridor.

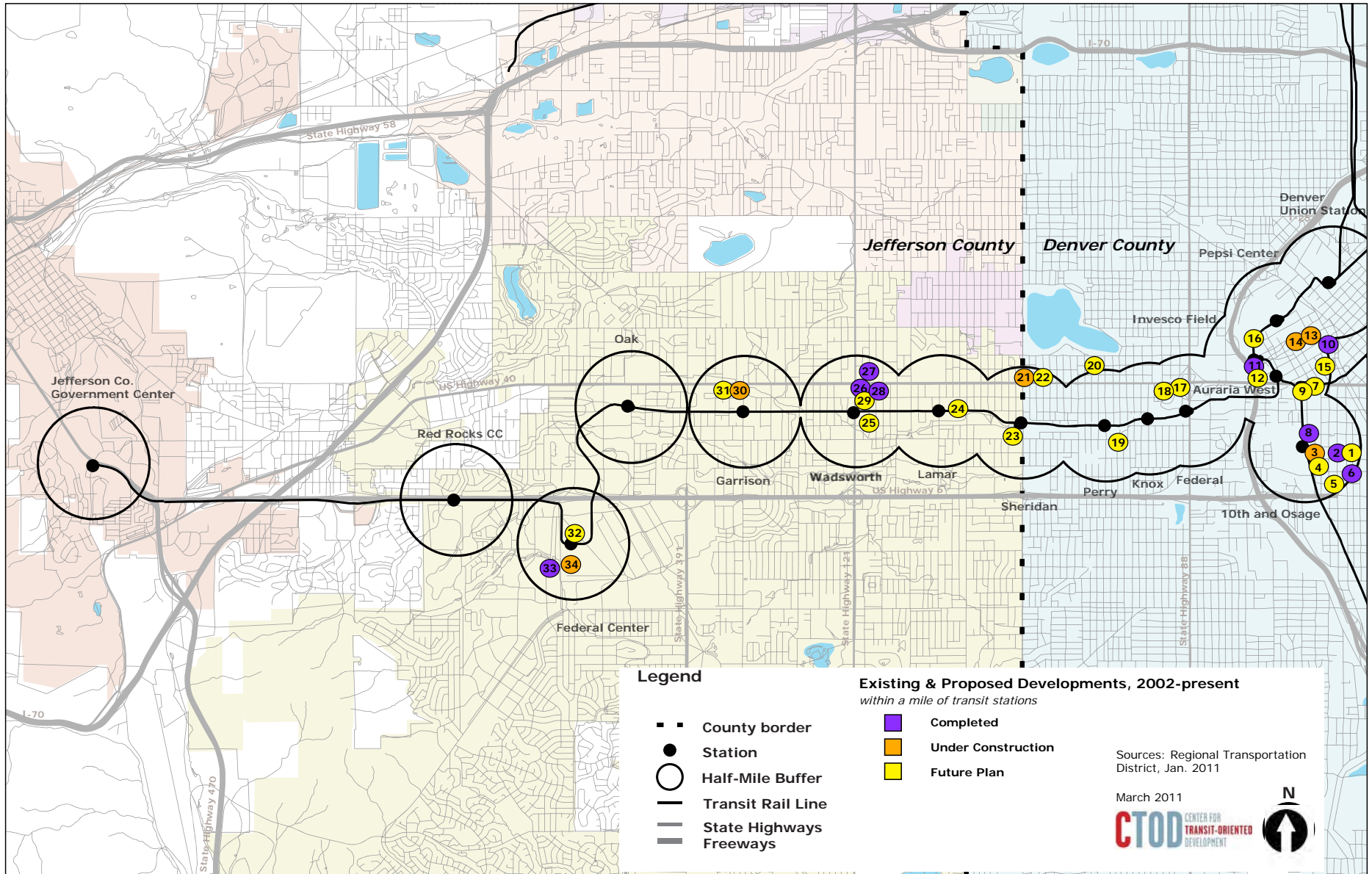


A sign near the Oak Station



Weston Solutions project near Garrison

Figure III-7: Existing and Proposed Projects



SOURCE: Regional Transportation District, Denver Regional Council of Governments, 2010

Table III-9. Existing and Proposed TOD Projects

Map ID	Station Area	Project Name	Acres	Developer	Use	Units/SF	Cost	Status
1	10th & Osage	Antares Urban Townhomes	0	Not specified	Residential	Not specified	Not reported	Proposed, 2015
2	10th & Osage	La Villa de Barela	2	NEWSED CDC	Mixed	38 apartments (100% affordable), 12,000 s.f. retail	Not reported	Completed, 2006
3	10th & Osage	Lincoln Park Redevelopment Phase 1	2	Denver Housing Authority	Residential	100 apartments (100% senior housing)	\$20 million	Under Construction, 2012
4	10th & Osage	Lincoln Park Redevelopment Phase 2	15.1	City of Denver & Denver Housing Authority	Residential	657 condos, 94 townhomes, 26,600 s.f. retail, 11,500 s.f. office, 65,000 s.f. cultural	\$230 million	Proposed, 2012
5	10th & Osage	Maravilla	1	Ted Gill	Residential	75 condos (8 affordable)	Not reported	Proposed, 2015
6	10th & Osage	Nine 10 Arts	1	Spector Development	Residential	5 affordable units	Not reported	Completed, 2006
7	10th & Osage	Osage Apartments	2	Carmel Companies	Residential	288 apartments	Not reported	Proposed, 2015
8	10th & Osage	Osage Lofts	0	John Hickenlooper	Residential	32 condos	Not reported	Completed, 2002
9	10th & Osage	Wellington Apartments	0	Welling Apartments LLC	Residential	250 apartments	Not reported	Proposed, 2014
10	Auraria West	Auraria Science Building	2	Auraria Higher Education Center	Education	197,000 s.f. education	\$111 million	Completed, 2009
11	Auraria West	Campus Village Apartments	4.5	Urban Ventures	Residential	230 apartments (100% student housing)	\$50.4 million	Completed, 2006
12	Auraria West	Campus Village II	0	Urban Ventures	Residential	158 apartments, 19,600 s.f. retail, 412,800 s.f. office	Not reported	Expected, 2015
13	Auraria West	Metro State Hotel & Hospitality Learning Center	5	Metropolitan State College	Hotel	180 hotel rooms, 21,000 s.f. convention, 21,000 s.f. education	\$40 million	Proposed, 2012
14	Auraria West	Student Success Building	4	State of Colorado	Education	145,000 s.f. education	\$62 million	Under Construction, 2015

Map ID	Station Area	Project Name	Acres	Developer	Use	Units/SF	Cost	Status
15	Auraria West	CCD Student Learning and Success Building	0	Community College of Denver	Education	143,000 s.f. education	\$50 million	Proposed, 2013
16	Auraria West	Fifth & Wazee Office Complex	3.5	Jim Neenan/Kroenke Sports Enterprises	Office	325,000 s.f. office	\$150 million	Expected, 2015
17	Federal/Decatur	Festival Plaza	2	Urban Land Conservancy and other developers	Mixed	Not specified	Not reported	Expected, 2015
18	Knox	Westside Library	4	City and County of Denver	Cultural	Not specified	\$12 million	Proposed, 2013
19	Perry	Osceola Street Townhomes	0	Not specified	Mixed	5 townhomes, 16,000 s.f. retail	Not reported	Proposed, 2015
20	Perry	St. Anthony Hospital Redevelopment	10	Not specified	Mixed	Not specified	Not reported	Expected, 2013
21	Sheridan	ARC Thrift Shop	0	Not specified	Retail	55,000 s.f. retail	Not reported	Completed, 2005
22	Sheridan	Renaissance West End Flats	1	Renaissance Housing Development Corp.		102 apartments (100% affordable)	Not reported	Expected, 2012
23	Sheridan	Sheridan Homes	0	NEWSED	Residential	Not specified	Not reported	Expected, 2013
24	Lamar	Lamar Station Apartments	6	Metro West Housing Solutions	Residential	90 apartments (100% affordable)	Not reported	Proposed, 2015
25	Wadsworth	1245 Vance Street	0	Empire Properties	Residential	26 condos	Not reported	Expected, 2015
26	Wadsworth	Colfax Central	1.75	Landon Enterprises	Retail	14,186 s.f. retail	\$4 million	Completed, 2006
27	Wadsworth	Creekside Shopping Center	30	Wal-Mart Stores Inc.	Retail	225,000 s.f. retail	Not reported	Completed, 2005
28	Wadsworth	Home Depot Wadsworth	10	Home Depot	Retail	120,000 s.f. retail	Not reported	Completed, 2006
29	Wadsworth	Wadsworth Public Housing	2.5	Lakewood Housing Authority	Residential	Not specified	Not reported	Expected, 2013
30	Garrison	Garrison Station Redevelopment Phase 1	2.5	Weston Solutions	Office	30,000 s.f. office	Not reported	Under Construction, 2011

Map ID	Station Area	Project Name	Acres	Developer	Use	Units/SF	Cost	Status
31	Garrison	Garrison Station Redevelopment Phase 2	2	Weston Solutions	Office	13,560 s.f. retail, 109,252 s.f. office	Not reported	Proposed, 2013
32	Federal Center	Denver Federal Center	69	General Services Administration	Mixed	1,400 condos, 200 hotel rooms, 100,000 s.f. retail, 800,000 s.f. office, 50,000 s.f. convention	Not reported	Expected, 2013
33	Federal Center	Plaza on Union	0.5	Bush Development	Retail	11,000 s.f. retail	Not reported	Completed, 2007
34	Federal Center	St. Anthony West Hospital	45	Romani Group	Medical	250,000 s.f. office, 900,000 s.f. medical	\$500 million	Under Construction, 2011

SOURCE: Regional Transportation District, Denver Regional Council of Governments, 2010.

Demand for TOD

Interviews were conducted with several local developers to qualitatively gauge the potential for TOD in the West Corridor. The purpose of these interviews was to characterize the types of tenants/residents who may be interested in locating on the West Corridor, and to identify the market strengths and weaknesses of each of the station areas along the West Corridor. Many of the major destinations on the corridor as they relate to demand for TOD were evaluated. This section of the report summarizes that evaluation and the opinions of the developers as they relate to the major destinations and potential for TOD on the corridor.

In general the developers stated that one of the West Corridor's main strengths is the large number of jobs located along the corridor (as described above), especially in Downtown Denver and at the Federal Center site. Developers also expressed interest in many of the station areas for different reasons, and referenced several of the major destinations along the West Corridor as potential anchor institutions

for future development.

The Regional Transportation District also conducts an annual survey of developers on TOD, including the types of development that have the most market potential.¹⁴ In 2010, developers rated residential for lease as the strongest type, followed by residential mixed, office, retail, and residential for sale. This reinforces the responses from developers interviewed specifically for their impressions of the product type and timing of development in the West Corridor.

As discussed in Section I, the West Corridor is a “destination connector,” meaning that it links residential neighborhoods to multiple activity centers, most notably Denver’s Downtown and the Federal Center site, but including other employment centers as described in the employment analysis, commercial centers, and academic campuses (see Figure I-3). The entertainment centers that are just outside of the corridor have the potential to be a major draw to the West Corridor, especially Invesco Field, which is just north of the Federal/Decatur station.

West Colfax

West Colfax Avenue is the primary retail corridor. Due to heavy auto traffic, West Colfax Avenue is more attractive to regional and national retailers. Both cities have acknowledged this in their land-use plans for the West Colfax corridor and both have rezoned parcels of land to foster more pedestrian-friendly, mixed-use development. There are business improvement districts and neighborhood associations with a significant stake in seeing West Colfax Avenue remain a thriving retail corridor. Nevertheless, land near stations can still support retail that provides services to neighborhood residents and commuters. Linking station areas to West Colfax is critical not only to support existing retail patterns along West Colfax, but also to make travel by light rail a viable option for visiting businesses on West Colfax Avenue.

Federal Center

Because of existing plans, partnerships, and availability of land, Federal Center is the station area that is closest to being ready for new development. Because of its proximity to the Federal Center site, the Oak station area also has potential for large-scale development opportunities. There are many large parcels near Oak that could support major new TOD, and the proximity to the Federal Center site enhances this station's attractiveness to developers. The completion of the new St. Anthony's Hospital, as well as other medical facilities under construction at the St. Anthony's Medical Campus, will further solidify the Federal Center's role as one of the most significant destinations along the corridor. The GSA has secured the necessary utility contracts to support a maximum build-out of its master plan, which will help facilitate TOD and lower the costs of providing infrastructure. TOD can also further the GSA's goal of making the Federal Center site the most sustainable campus by 2020, for it will bring more employees and services closer

to the campus, lowering housing and transportation costs.

Jefferson County Government Center

A variety of public institutions including the Jefferson County Courthouse, Jefferson County Administration buildings, and various criminal justice institutions make the Jefferson County Government Center not only a destination for workers, but also a destination for county residents. The completion of the West Corridor will provide enhanced mobility options to both residents and workers.

Educational Institutions

In addition to the major destinations described above, the West Corridor is home to several colleges and universities, including:

The Auraria Campus in Downtown Denver, home to the University of Colorado Denver, Metropolitan State College, and the Community College of Denver (Auraria West), with 37,000 students.

- The Rocky Mountain College of Art & Design (Lamar), with 585 students.
- Red Rocks Community College (Red Rocks), with 14,000 students.

Altogether, an estimated 51,585 students attend these schools, with the majority at the Auraria Campus, which is the largest educational institution in Colorado. Student enrollment on the Auraria Campus is expected to increase between 12 percent and 20 percent by 2030.¹⁵

Rich public transit provides students of these higher education institutions with access to housing and employment opportunities around the region. Over 80 percent of Auraria Campus students work at least part-time, and students need access to internships and apprenticeships in their field in order to secure a job af-

ter graduation.¹⁶ While students at the Auraria Campus already have good access to jobs in Downtown Denver and along the Southeast and Southwest Corridors, access to jobs using transit in other parts of the region is more limited. The West Corridor will improve access to opportunities in Lakewood, the Federal Center site, and Golden, while also providing students at Red Rocks Community College and the Rocky Mountain College of Art & Design (RMCAD) with access to jobs in Downtown Denver and the existing Southwest and Southeast Corridors.

At the college level, providing students with affordable housing opportunities is a key element of keeping educational costs low. The West Corridor currently has few “official” student housing developments despite a large student population. Until 2005, there were no student housing complexes for students attending the Auraria Campus. Since 2005, three student housing developments have been built, two within walking distance of the Auraria Campus and one approximately three miles north of campus near a station on the proposed Gold Line (41st and Fox). The closest student housing to the West Corridor light rail line is the Campus Village complex (see image on right), built in 2006 for \$50 million by Urban Ventures near the Auraria West station. It has 230 units to house 685 students. The University of Colorado Denver and Metro State both now require all first-year full-time students to live in Campus Village.¹⁷ Urban Ventures has proposed a second phase of Campus Village that will include ground-floor retail and office space directly adjacent to the Auraria West station. The Inn at Auraria is located in Downtown Denver on the top floors of the Hotel Curtis, just a few blocks from campus. There are approximately 125 units with 439 beds. Red Rocks Community College has no official student housing but its website recommends several apartment complexes, many of which are adjacent to the new light rail line.¹⁸ RMCAD recommends students live in the Regency Student Housing

complex or find apartments nearby the campus.¹⁹

The West Corridor light rail line provides an opportunity for new investment in student housing and improved access to all of the schools along the corridor. With the cost of tuition on the rise around the country, minimizing housing and transportation costs can significantly reduce the financial burden of getting a degree.

Existing Sources of Demand for TOD

Two major sources of TOD demand already exist along the corridor:

- The first major source is illustrated by the existing pattern of people living and working on the corridor as discussed in the employment analysis. This pattern demonstrates the demand for housing close to employment clusters along the corridor and as employment uses on the corridor increase a similar increase in demand for housing will occur.
- Student populations make up the second significant source of demand for TOD on the corridor. The commuter nature of all three higher education institutions along the corridor creates demand for off campus student housing that is accessible to West Corridor stations.

Potential Sources of Demand for TOD

An additional source of TOD demand could be an increased need for senior housing as aging single family home owners in the area look for a variety of housing choices. Developers also cited potential demand in the short-term for housing with an urban or funky style, including incremental infill in the form of duplexes, triplexes and fourplexes.

Development Opportunities

To understand the potential for new development along the West Corridor, CTOD conducted an analysis of parcel size and utilization.

For the analysis of parcel size, all parcel sizes were evaluated and mapped within the West Corridor station areas to identify significant opportunities for redevelopment.²⁰ Commercial parcels of at least one acre in size were then sorted into three categories:

- One to two acre parcels (shown in green in Figure III-8).
- Two to three acre parcels (shown in yellow in Figure III-8).
- Parcels larger than three acres (shown in red in Figure III-8).

Figure III-8 shows the larger non-residential parcels on the West Corridor.

For the utilization analysis, CTOD analyzed and mapped the assessed value of existing development within the station areas along the corridor. Using county assessor's data, the analysis identified those commercial parcels currently vacant or underdeveloped to determine which parcels were likely candidates for new development or redevelopment.

To identify such development opportunity sites, CTOD used a ratio that divided the two components that determine a parcel's assessed value – improvement value and land value. The resulting “improvement to land value ratio” is a simple measure used to analyze the economic utility of a parcel. If the ratio is above 1.0, the on-site improvement has more value than the land on which it resides. If the ratio is less than 1.0, the assessed value of the land is higher than the on-site improvement, indicating that the property is currently “underutilized” and might be more likely to redevelop over time. This basic threshold is a standard measure

of potential for redevelopment and has been found to represent the point where the market would identify land as eligible for redevelopment. This analysis used an improvement to land threshold of 0.95.

Figure III-9 shows those non-residential parcels that are currently underutilized (as described above) on the West Corridor.

Taken together, the evaluations of parcel size and utilization identify development opportunity sites along the corridor. As shown in the maps, a concentration of large non-residential parcels corresponding with the occurrence of underutilized parcels is found at Federal Center, Oak, Federal / Decatur, Auraria West and 10th & Osage.

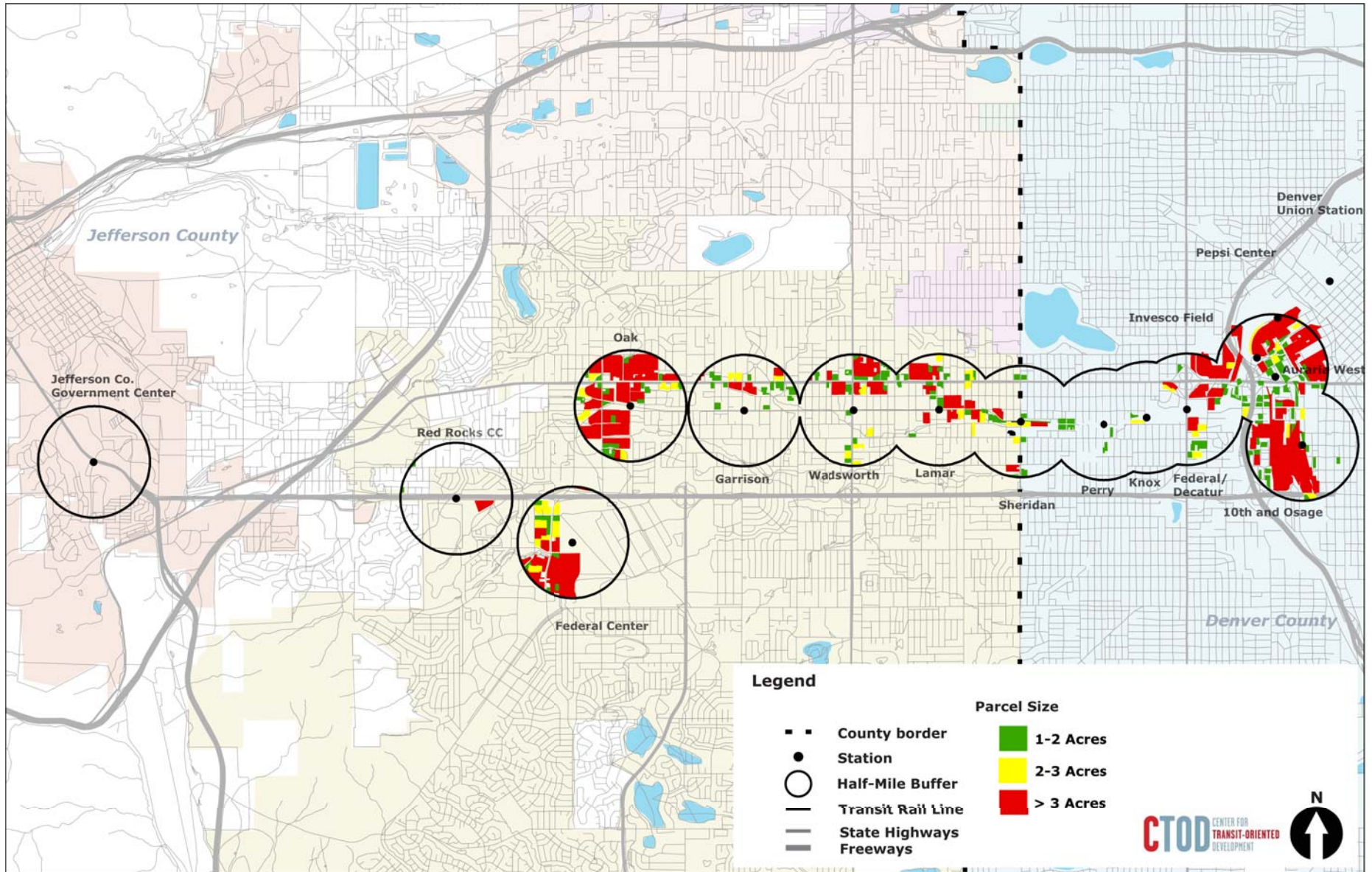
Less significant concentrations of large and underutilized parcels are found at Garrison, Wadsworth,

The potential for development for all station areas is further discussed in the implementation strategy section (Section V) of this report.

Challenges to Infill Development

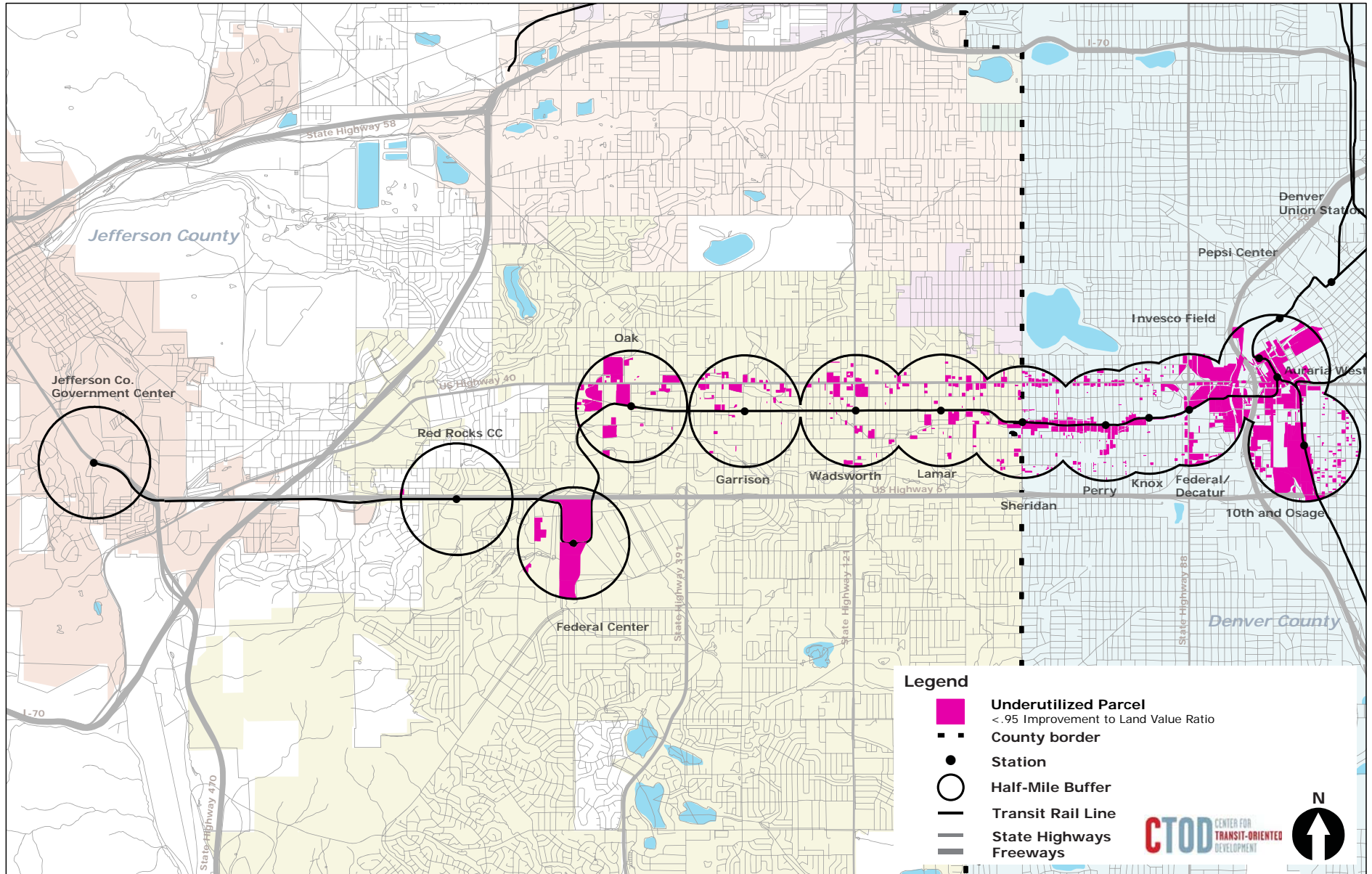
As described in the previous section, parcel size is an indicator of development potential. A major challenge to additional infill development on the West Corridor is the small size of parcels. In general, relatively small projects on parcels less than three acres in size are more expensive to build on a per-square-foot basis, and offer less flexibility in terms of project design. Smaller projects offer higher fixed costs for many “soft” costs such as design, entitlements and legal services. For these smaller projects, lots that are larger than a third of an acre (about 13,000 square feet) are more likely to be feasible for a developer to build.

Figure III-8: West Corridor Parcel Sizes



SOURCE: Center for Transit-Oriented Development, 2010.

Figure III-9: West Corridor Utilization Analysis

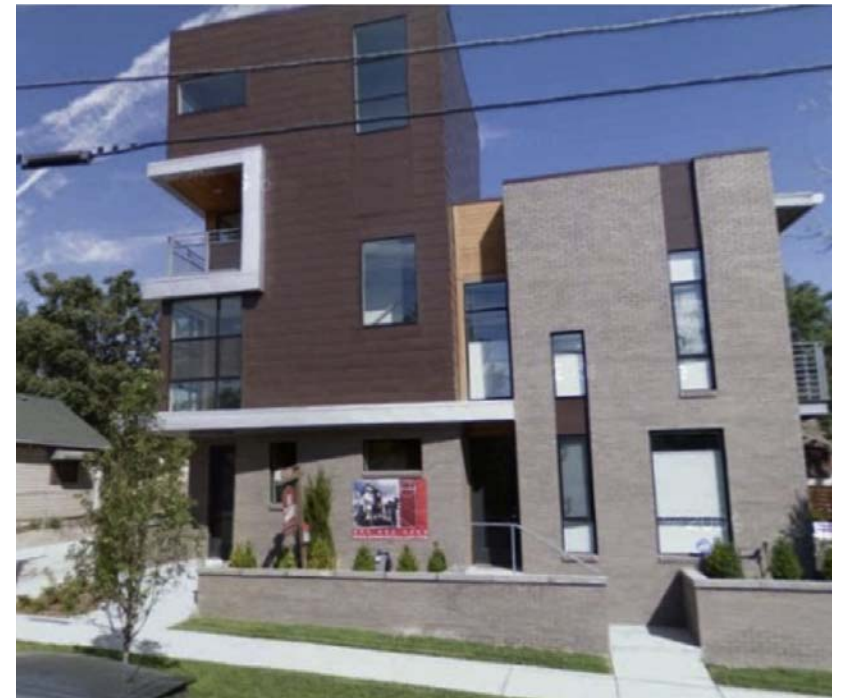


SOURCE: Center for Transit-Oriented Development, 2010.

A key barrier to development on small lots is the need to accommodate parking, which can pose both a financial and physical challenge. The limitations of accommodating parking spaces and circulation within a small site can often constrain the total density and heights that are achievable in a project. Podium parking can be accommodated in most projects, but underground parking requires a parcel of at least a quarter-acre (approximately 10,000 square feet) to accommodate ramps and other access on the ground floor. On a large site parking can be constructed more efficiently because a higher proportion of the ground floor is occupied by parking spaces compared to circulation. This lessens the likelihood that additional floors of underground construction will be necessary. Avoiding the associated cost premium with providing elevators, stairs and ramps to the additional under-

ground floors reduces overall construction costs. Allowing for parking minimums to be met through off-site or shared parking can help to facilitate development on small lots.

Along the West Corridor 85 percent of the parcels are smaller than half an acre and just 2 percent are larger than three acres in size. This means that in most cases a developer would need to assemble multiple properties in order to warrant the construction of a higher density project. The additional time and risk associated with parcel assembly adds an additional cost that would need to be borne by a developer interested in redeveloping properties in and around the study area.



Infill examples in a Northwest Denver neighborhood

Real Estate Market Conditions

Summary

Although there is currently a weak housing market, significant transit investment offers the opportunity to create a stronger market link between existing employment concentrations and housing. Currently, only a few larger-scale development opportunities exist, but this could change as the market improves and the light rail line becomes more popular. For this to happen, however, the light rail line must be accompanied by significant coordination and cooperation among departments from both cities and the other stakeholder agencies in order to improve infrastructure and therefore reduce the costs and risk of development. Transportation and infrastructure considerations are discussed in greater detail in the following section (Section IV).

As discussed above, the prevalence of smaller parcels means that there are many more opportunities for small-scale development than for large-scale projects. Incremental infill in the form of duplexes, triplexes and fourplexes is appropriate in the short term. Market rate development is not likely in the short term for most station areas, without public sector intervention.

Although some commercial development has occurred along the corridor in recent years, little new residential development occurred at the height of the real estate market in the early to mid-2000s. The completion of the West Corridor provides additional opportunities for residential and commercial development as is addressed in the implementation section of this report (Section V).

IV. Infrastructure and Community Resources

This section builds off of the existing demographic and market conditions analysis of Section III by looking at the physical landscape of the West Corridor, highlighting the many community resources and destinations that existing and future residents will be able to access with the new transit line. It also analyzes the existing infrastructure gaps to see where improvements are needed to support new development and improve connections to community resources.

Key Findings

Transportation

- Existing residents are spending more of their income on housing and transportation than the average household in the region.
- About 15 percent of all residents along the West Corridor travel to work by walking, biking, or taking transit, more than twice the regional average.
- Most blocks in station areas along the West Corridor are small and support walkability.
- Station area plans call for many new streets and updated sidewalks to enhance overall walkability.
- Improving bicycle connections between station areas and extending off-street bike trails are both major elements of Lakewood's plans.

Stormwater & Utility Infrastructure

- The alignment of the West Corridor follows low-lying gulches, so many station areas lay within 100-year floodplains. However, efforts are being made to remove land from floodplains to make sites for suitable for development.

- Denver has separate water and sewer/sanitation providers but they each provide services for the entire city. Lakewood is fragmented into several water and sanitation districts, so securing utility permits is more complex.
- Both cities recognize the limitations of their utility infrastructure and are actively working to plan for future development. Funds have been identified to make some improvements, while other investments may have to wait until funding becomes available.

Community Resources

- Successful transit-oriented neighborhoods require places within walking distance where residents can fulfill their daily needs. Places like grocery stores, health clinics, schools, libraries, parks and other community institutions should be nearby or accessible via transit.
- Several grocery stores are located within station areas, and the new light rail line will provide improved access to them from other station areas without grocery stores.
- Both cities are locating new community resources near transit stations: a new library in Denver and a Head Start facility in Lakewood are two examples.

Parks, Recreation, & Entertainment Facilities

- The West Corridor has many leisure-time activity opportunities to complement its great places to live, work, and learn.
- The new light rail line will improve access to entertainment facilities in Downtown Denver and will encourage developer interest in new mixed-use entertainment districts at the Auraria West and Federal/Decatur stations.
- Parks, trails, and recreation centers dot the entire West Corridor. Every station area has at least one park. New parks and open space are parts of the plans for the Federal Center site and the Auraria Campus.

Transportation

One of the benefits of TOD is a reduced need to drive, which can result in a reduction in household living expenses, especially for transportation.²¹ The new light rail has the potential to substantially reduce transportation costs for households living along the West Corridor, especially those that commonly travel to Downtown Denver, the Federal Center site, the Auraria Campus, or other destinations in the regional transit network.

Housing & Transportation Costs

The demographic analysis in Section III showed that residents along the West Corridor have a diverse range of incomes and that many households along the corridor earn less than the regional median income. Lower income households may struggle to pay for housing when transportation costs (car payments, insurance, gas) are high.

CTOD and the Center for Neighborhood Technology created a nationwide database that calculates transportation costs for the average resident of each neighborhood and station area within most major metropolitan regions. Though these values show what the typical household in the region would pay for housing and transportation were they to move to a station area, and not necessarily what the typical residents of each station area pays, this methodology allows each station area along the corridor to be compared to one another and to station areas in the Denver region.

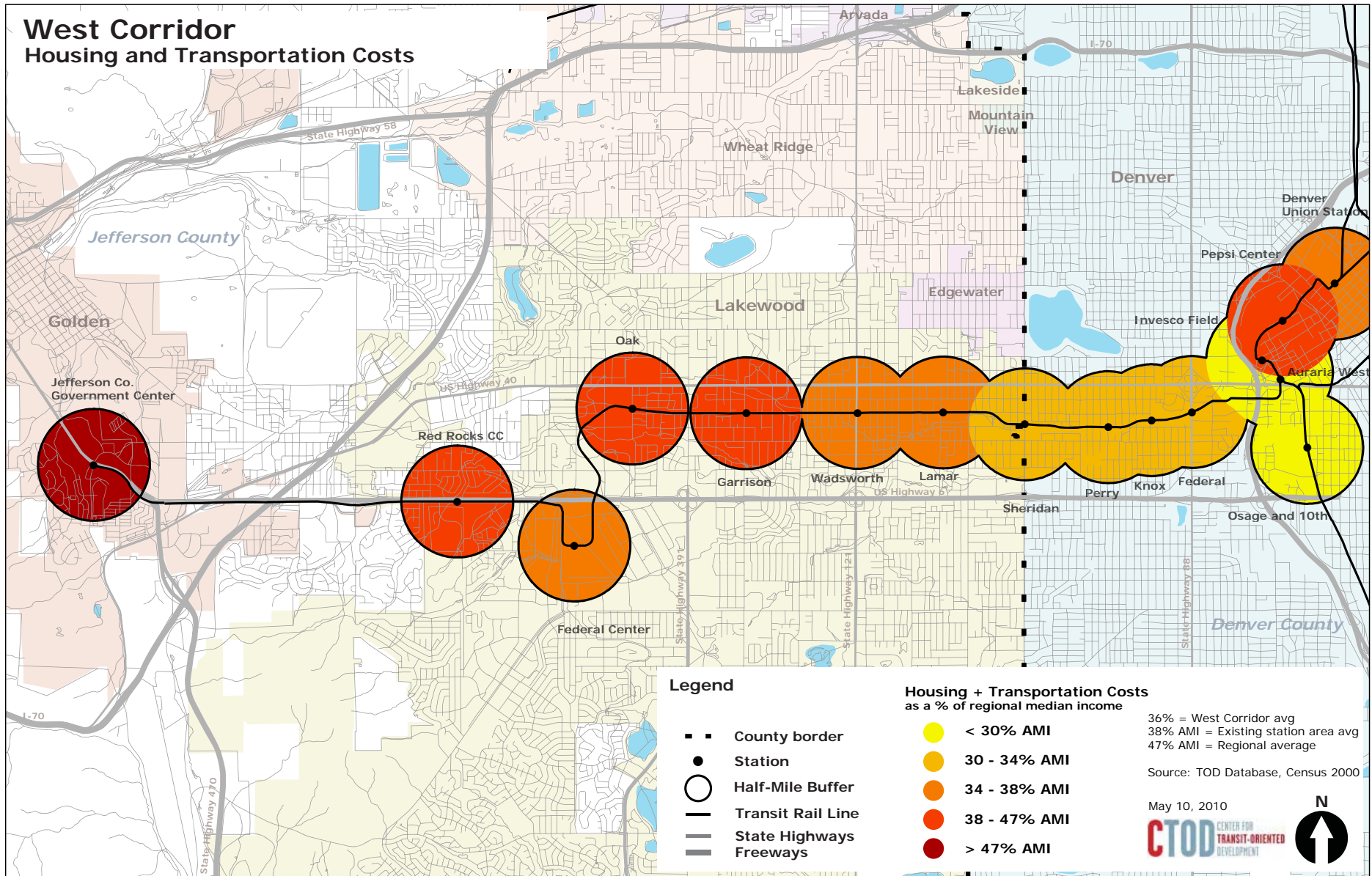
Figure IV-1 shows the combined costs of housing and transportation along the West Corridor as a percent of regional median income. Compared to the region as a whole, the combined costs of housing and transportation are low along the

West Corridor. The average household in the Denver region would spend less than 47 percent of their income on housing and transportation costs—47 percent is both the regional average spent on housing and transportation and the recommended national maximum. However, because most households currently living along the West Corridor earn less than the regional average, existing residents are spending a larger percent of their income on housing and transportation than the average household in the region.

Table IV-1 looks at transportation costs alone along the West Corridor, and compares what the average household in the region would spend on transportation to what the average household in each station area spends. In most cases, residents currently living along the West Corridor spend a greater proportion of their income on transportation costs (including car payments, gas, insurance, taxes and parking) than the typical regional household would if they lived along the West Corridor. People with higher transportation costs have less spendable income or less money to spend on other necessities. Therefore, while these station areas look affordable for the average resident in the region, the people already living there are making, for the most part, less than the average resident in the Denver region. As the transit is improved and other station area investments occur, more people from around the region may want to move into the West Corridor neighborhoods given the low housing and transportation costs.

When the West Corridor light rail starts service in 2013, the transit access for residents in these station areas will be much higher, and their potential transportation costs will decrease significantly. People with lower transportation costs tend to drive less than those with high costs—either by taking transit, walking, and biking to reach their destinations or by driving shorter distances.²² Many residents along the West Corridor are already dependent on non-automotive means of

Figure IV-1: Housing and Transportation Costs as a Percent of Regional Median Income, 2000



SOURCE: Center for Transit-Oriented Development, 2010, H+T™ Center for Neighborhood Technology

transportation to work. In the West Corridor, about 17 percent of all residents walk, bike and take transit to work currently, higher than the regional average. As shown in Table IV-2, residents are more likely to drive to work the further they live from downtown Denver. The average household living along the West Corridor owns about 1.4 cars, which is slightly lower than the regional average (1.8 cars per household) but higher than the stations nearest downtown.

Table IV-1: Transportation Costs as a Percent of Regional vs. Station Area Median Income

Station Area	Median Household Income	% Regional Median Income	% Station Median Income
10th & Osage	\$22,689	13%	30%
Auraria West	\$20,700	14%	34%
Federal/Decatur	\$23,371	16%	35%
Knox	\$26,773	16%	32%
Perry	\$28,729	17%	30%
Sheridan	\$32,437	17%	27%
Lamar	\$33,323	17%	27%
Wadsworth	\$32,500	17%	27%
Garrison	\$42,700	19%	23%
Oak	\$41,211	18%	23%
Federal Center	\$46,026	14%	16%
Red Rocks Community College	\$46,148	17%	19%
Jefferson County Government Center	\$50,348	19%	19%

SOURCE: Center for Transit-Oriented Development, 2010, H+T™, Center for Neighborhood Technology

Table IV-2: Commute Patterns – How West Corridor Residents Get to Work

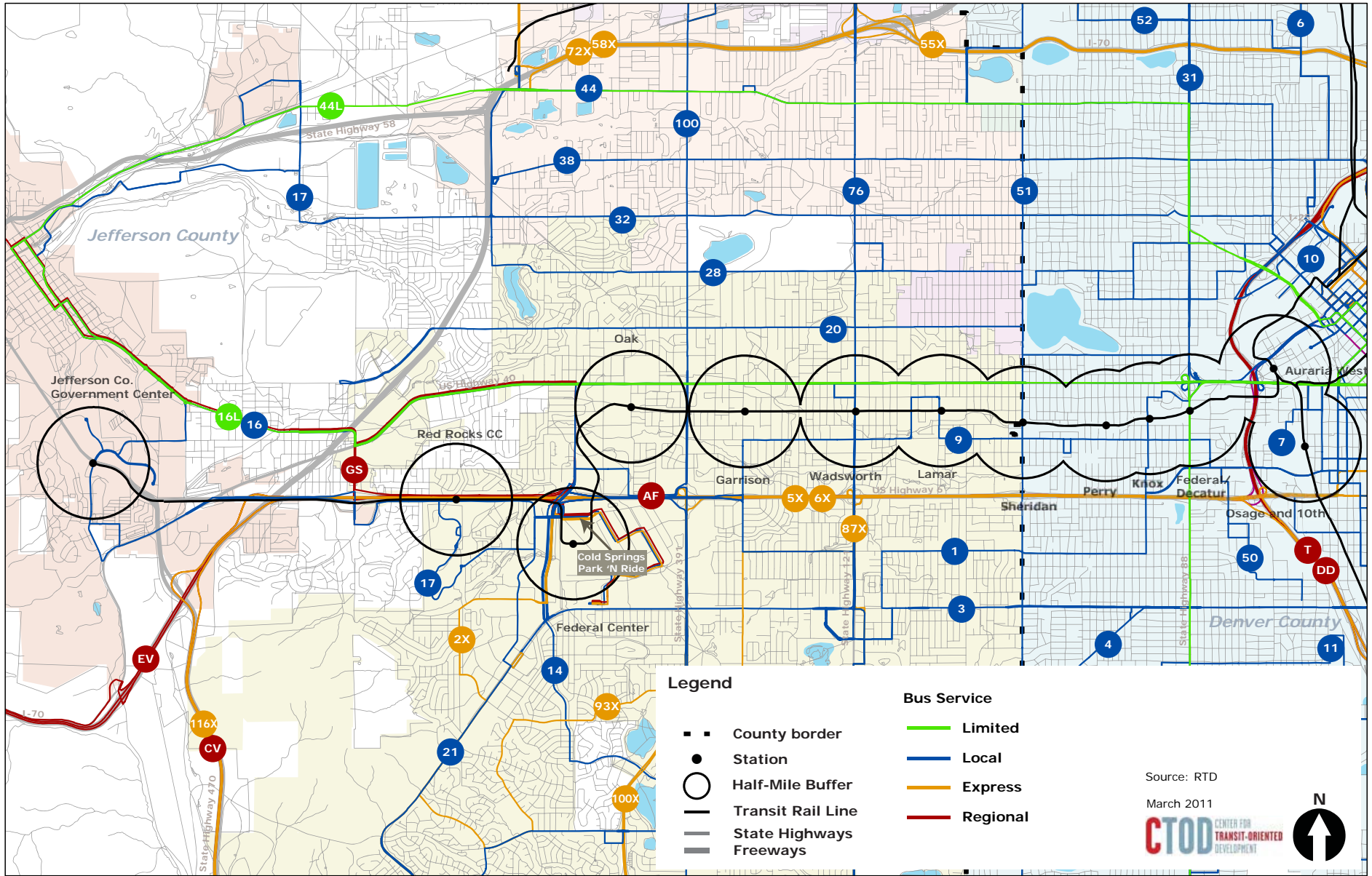
Station Area	Public Transit	Walk/Bike	Drive Alone
10th & Osage	22%	16%	41%
Auraria West	29%	22%	42%
Federal/Decatur	27%	6%	42%
Knox	20%	4%	51%
Perry	12%	2%	59%
Sheridan	10%	4%	61%
Lamar	11%	5%	64%
Wadsworth	8%	9%	62%
Garrison	5%	5%	72%
Oak	4%	3%	67%
Federal Center	4%	6%	79%
Red Rocks Community College	6%	6%	74%
Jefferson County Government Center	5%	1%	80%
Denver (as a whole)	8%	5%	69%
Lakewood (as a whole)	6%	3%	75%

SOURCE: US Census 2000, LEHD 2008, Center for Transit Oriented Development 2010.

Existing Public Transportation

The West Corridor already has several major bus routes that transport residents to job centers and community resources throughout the corridor, and the light rail will supplement these lines. The map on the next page (Figure IV-2) shows how existing bus lines connect residents to downtown and other nearby destinations. Colfax Avenue, which lies on the northern edge of many station areas, has two major bus lines, the 16 and 16L (which provides high frequency service with fewer stops during commute hours). The local route number 9 bus provides

Figure IV-2: Existing Transit Connections, 2010



SOURCE: Center for Transit-Oriented Development, 2010

service to residents south of the Gulch from Federal to Garrison, and other local buses provide north/south connections. The Cold Spring Park-N-Ride near the Federal Center station is a major transit hub for the region as well.

Active Transportation: Walking & Bicycling

Walking

Neighborhood walkability is a prime driver of transportation costs, and this section focuses on the existing infrastructure and existing opportunities for making improvements necessary to support low transportation costs and TOD. Communities where people can walk to more destinations both the light rail stations along the West Corridor and local community resources and retail uses are one aspect of successful TOD.

The existing street and sidewalk infrastructure to support walking and biking in station areas is mixed. Most station areas along the West Corridor are connected to surrounding neighborhoods by a clear grid street network—much easier for walking and biking than curvy, suburban cul-de-sacs. The West Corridor's alignment along the Lakewood and Dry Gulches and in the middle of residential neighborhoods creates an opportunity to bring together neighborhoods and create a new community feature in the neighborhoods along the corridor. Many of the stations are tucked into the community, hidden from major arterial streets. In Denver and part of Lakewood, station area plans identify the Gulch as a place for open space improvements and bicycle and pedestrian trail enhancements. Creating better connections from Colfax Avenue to the stations and to 10th Street to

the south is a key priority for all stations up to Federal Center. Also, block sizes in most station areas are on the smaller side, as shown in Table IV-3.

Small blocks in a grid network are essential infrastructure ingredients to support walkability. In addition, some station area plans call for new streets to further enhance and connect the grid to the light rail stations and provide better “last mile” connections.

Table IV-3: Average Block Size in West Corridor Station Areas

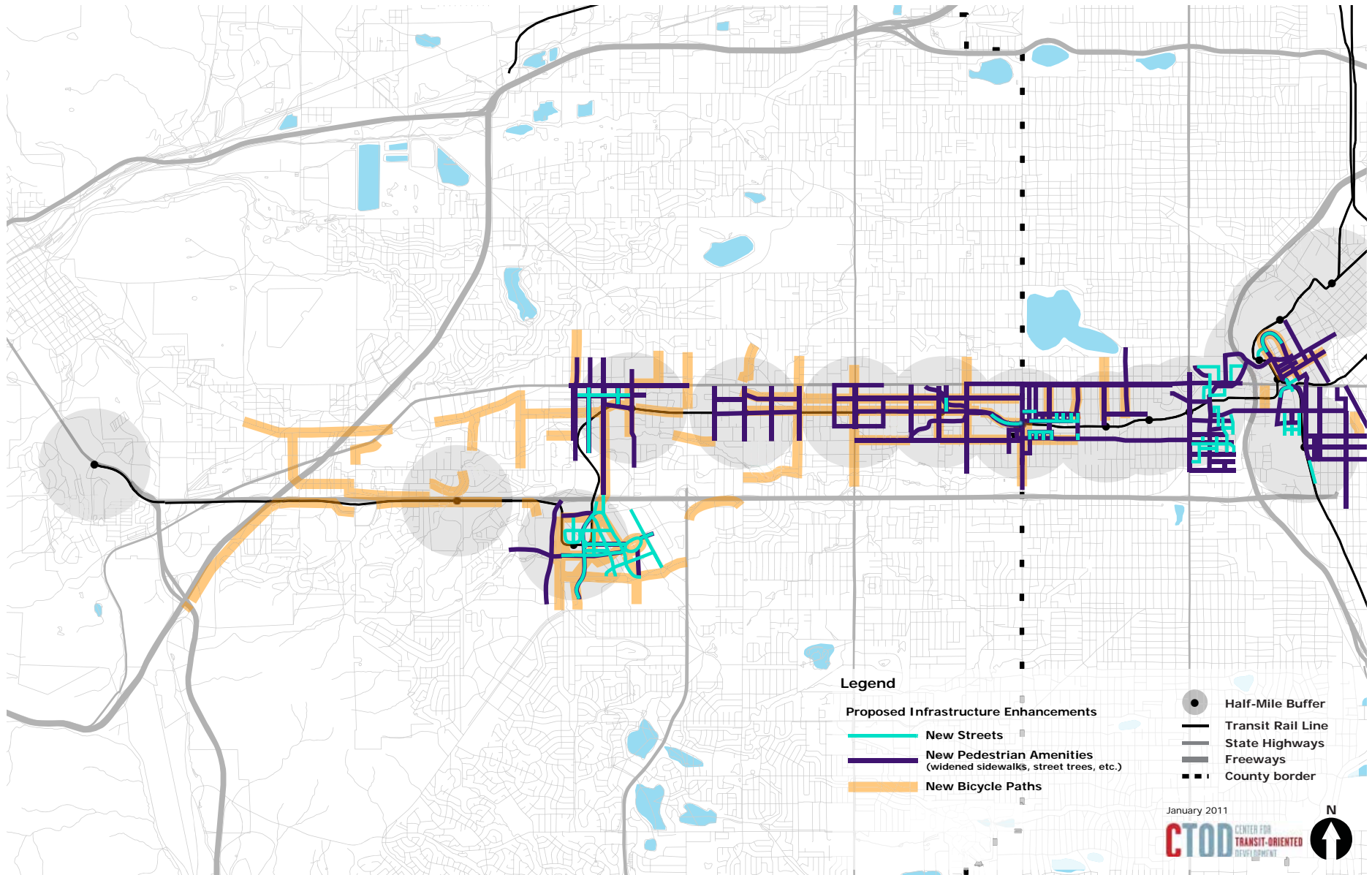
Station Area	Average Block Size (acres)	Reads As
10th & Osage	6.9	Small
Auraria West	6.4	Small
Federal/Decatur	7.2	Small
Knox	5.8	Small
Perry	5.4	Small
Sheridan	5.5	Small
Lamar	7.2	Small
Wadsworth	5.2	Small
Garrison	8	Small
Oak	8.3	Small
Federal Center	32.4	Large
Red Rocks Community College	12.6	Moderate
Jefferson County Government Center	16.4	Large

SOURCE: Census Tiger, 2009; CTOD, 2010.

Planned Pedestrian Improvements

Figure IV-3 shows the infrastructure improvements identified in West Corridor station area plans. Some of these improvements take the form of entirely new streets, especially around the Federal Center, Oak, Sheridan, Federal/Decatur and 10th and Osage station areas. The map identifies these streets in light green. These may be expensive and will be part of new master-planned developments in the case of Federal Center site and Federal/Decatur station. The existing streets create the necessary frame for those connections, and the small block sizes along most of

Figure IV-3: Proposed Infrastructure Improvements, 2010



SOURCE: Center for Transit-Oriented Development, 2010, H+T™ Center for Neighborhood Technology

the corridor support the stations as walkable places.

However, both existing and new streets all need to have continuous sidewalks and other elements that make walking and biking attractive alternatives to driving.

The same map outlines streets prioritized for pedestrian improvements. Existing conditions for pedestrians vary along the corridor. Some streets lack sidewalks entirely, while others may be very narrow with no buffer separating the pedestrian realm from auto traffic.

The station area plans identify the full scale of pedestrian improvements that will contribute to successful TOD outcomes, ranging from requirements that all major arterials have sidewalks with a minimum width of 17 feet, to suggestions for street trees, benches and pedestrian-scale lighting. While the map above groups all of the corridors identified as needing major pedestrian improvements into one category, in the station area plans, they are not so neatly defined. Terms used to define these corridors include priority pedestrian streets, major pedestrian arterials, enhanced streets, sidewalk improvements, grand-scale pedestrian walk and bikeways, tree-lined pedestrian walkways, greenways, and more.

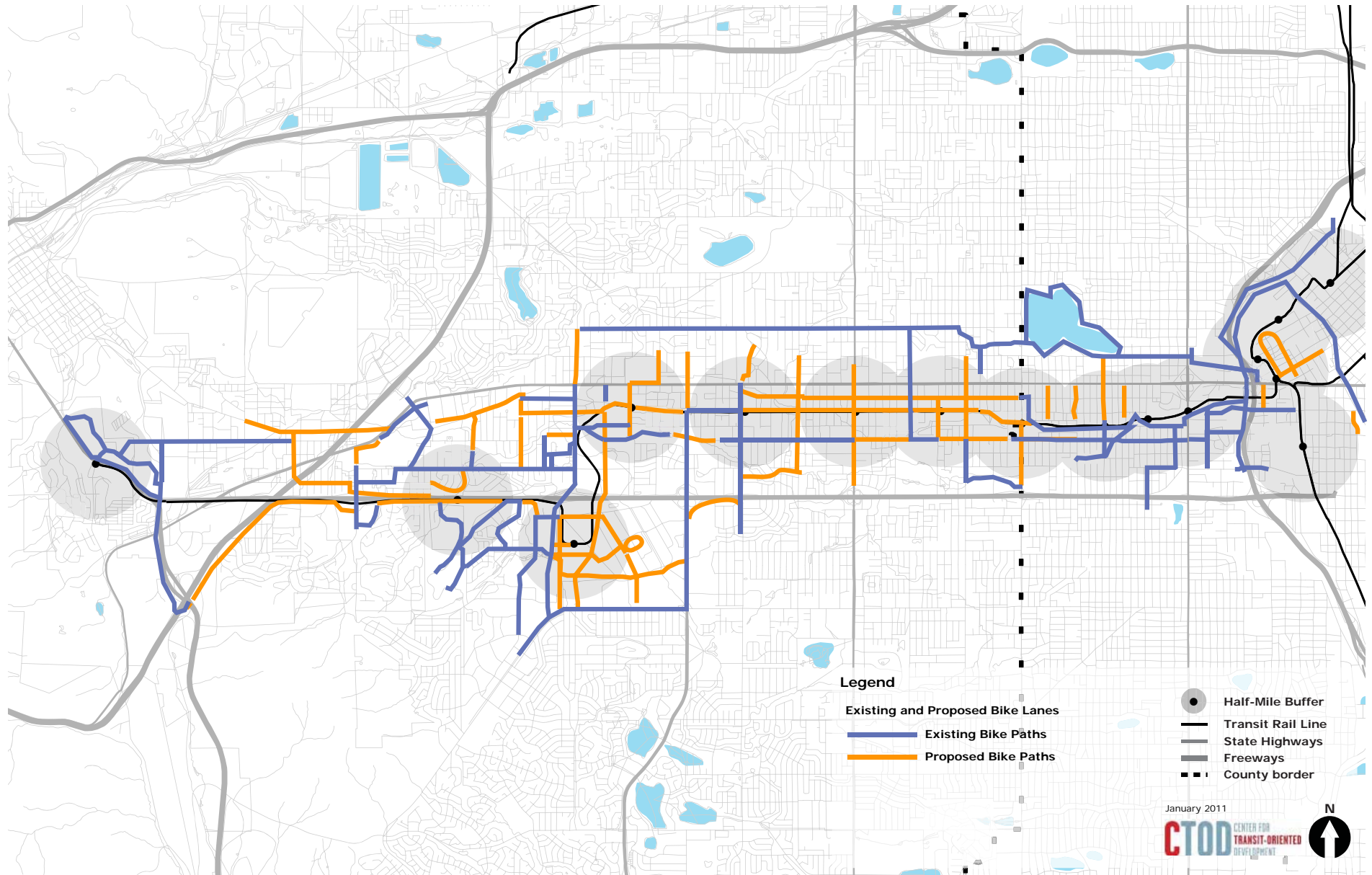
Colfax Avenue is usually identified as a priority corridor for pedestrian improvement, yet it remains a major barrier to connectivity. As the existing commercial corridor along the West Corridor, it will be the focus for most future retail and commercial activity along the West Corridor. Providing the “last mile” connections from light rail stations to Colfax Avenue will help support more pedestrian activity along Colfax and near the station, mutually benefitting both areas.

Bicycling

In addition to pedestrian improvements, many of the West Corridor station area plans identify streets that should be prioritized for bicycle traffic. The Lakewood Gulch is an important off-street trail that will be continued through the Lamar station.

Figure IV-4 shows the existing and proposed bicycle paths along the West Corridor. Taken from the bicycle plans for the City of Denver, Lakewood, and Jefferson County, these paths show a growing bicycle network. At present, there are major holes in the bike network within and between station areas. Within Denver, there are off-street trails in close proximity to the West Corridor, but connections to the surrounding neighborhoods, the retail uses on Colfax Avenue, and Sloane's Lake Park are weak. Moreover, the off-street trail ends at Sheridan Avenue, and bicyclists must navigate a complex maze of busy streets once in Lakewood. The designated bike route along 20th Avenue falls outside the half-mile station area radius and may be too far for some riders to travel to cross through Lakewood. Nevertheless, as Figure IV-4 illustrates, Lakewood and Jefferson County both have ambitious plans to improve bicycle connections along the West Corridor. A new off-street bike path will follow the light rail line along some portions of the right-of-way, and station area plans call for bicycle-friendly improvements to provide better connections to stations. The Federal Center Site Plan Study also includes major bicycle infrastructure improvements to, from, and within the campus. With all of these improvements, bicycling along the West Corridor would be vastly improved and provide another transportation alternative.

Figure IV-4: Existing and Proposed Bicycle Infrastructure, 2010



SOURCE: Center for Transit-Oriented Development, 2010, H+T™ Center for Neighborhood Technology

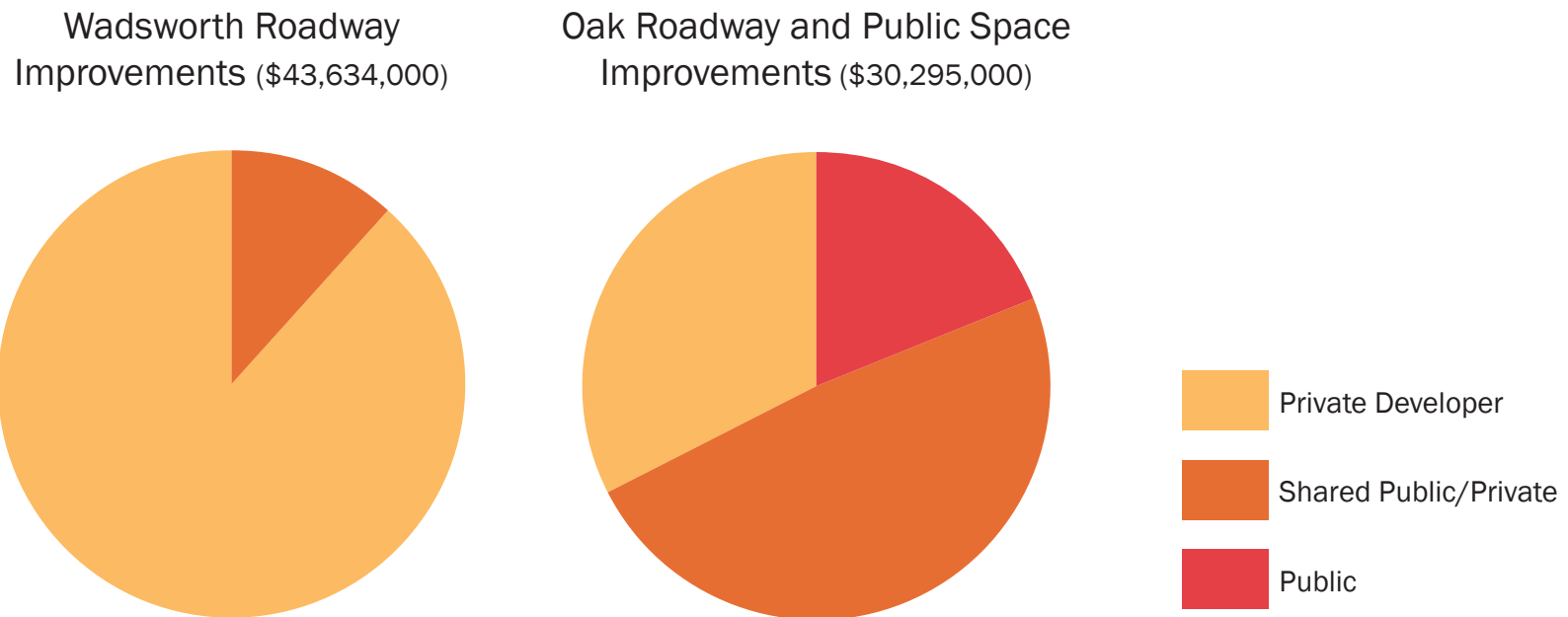
Funding Connectivity Improvements and Needs

While many station area plans call for improvements to the pedestrian and bicycle network, few have identified a funding source to pay for them. Both cities are being proactive about planning for improvement infrastructure, however. Denver has some bond money set aside for some station areas, while Lakewood has set aside betterments money and prepared Master Infrastructure Plans for the Oak and Wadsworth stations that include cost estimates for street improvements. Figure IV-5 displays the cost breakdown for Lakewood's improvements, which also

include water and sewer improvements.

While the cost estimates indicate that the majority of costs for roadway and public space improvements will be funded by private developers or shared public/private costs, that means that these improvements must wait until developer interest in these station areas is strong. Other finance mechanisms identified for all improvements to station areas include tax increment financing (TIF), general improvement districts, Title 32 Metropolitan Districts, public improvement fees, and impact fees. The City of Lakewood will spend \$2.6 million on station enhancements for a bridge at the Wadsworth station and \$200,000 at the Oak

Figure IV-5: Cost Estimates for Oak and Wadsworth Street and Public Space Needs and Improvements



SOURCE: City of Lakewood Oak and Wadsworth Master Infrastructure Plans, 2010.

Station on various improvements. The GSA will also make a \$200 million investment into the Federal Center on utilities and other infrastructure improvements, using \$60 million in stimulus funds from the American Recovery and Reinvestment Act (ARRA) and other funding sources that are part of its Utilities Infrastructure Project. These improvements will be complete by 2012. The GSA has also worked with several partners to provide utility capacity on the western side of the Federal Center site, via utility easements. Through these and other agreements, the GSA anticipates having the utility capacity for the maximum proposed development program in its master plan.

In Denver, the TOD Bond Program is one important source for funding infrastructure improvements. Voters approved up to \$550 million in 2007 to establish a dedicated source of funding for facilities improvements around the city. The

fund includes dedicated pools of funding for five station areas. The only station on the West Corridor line receiving funding is the Federal/Decatur station, but the 10th & Osage station also received a small amount out of the pool. The City is still determining how to allocate the money for the Federal/Decatur station area, but the table below provides information on possible projects.

The Office of Economic Development (OED) in the City of Denver is also providing funding for infrastructure improvements along the West Corridor. The OED has dedicated \$332,000 to fund streetscape and median improvements on West Colfax Avenue between the Federal/Decatur and Sheridan stations. These are great starts to creating detailed infrastructure need and financing plans. Addressing infrastructure needs proactively can help support new development where appropriate as well as supporting ridership on the light rail line.

Table IV-4: Station Areas Receiving Money from the Better Denver Bond

Station Area	Funding Amount	Overall Purpose	Cost Breakdown	Current Status
Federal/Decatur station	\$2.07 million	Provide basic connections to nearby low-income housing and Denver Human Services' offices.	<ul style="list-style-type: none"> • Police cameras • Xcel lighting • Sidewalk improvements along Gulch and 13th Avenue • Improvements to Weir Gulch • Still deciding what to do with the unspent portion of the money; several options have been identified but no decision has been made. 	Construction expected to start in Q1 2011
10th & Osage	\$518,000	Provide basic connections to the Central Line from existing neighborhood and also help facilitate transit oriented development (TOD).	<ul style="list-style-type: none"> • All money spent to reopen 11th Avenue between Kalamath and Lipan Streets 	Completed fall 2010

SOURCES: City & County of Denver's Better Denver Bond Project website (<http://www.denvergov.org/Projects/tabid/429687/Default.aspx>) and personal communications with Karen Good, Senior City Planner in the Public Works department.

Stormwater & Utility Infrastructure

Stormwater & Drainage

The alignment of the West Corridor generally follows two gulches, the Lakewood Gulch and the Dry Gulch. As a result, the areas surrounding the line are low-lying areas prone to flooding. Areas in floodplains pose an increased risk to developers, so both cities have been proactively planning to remove large portions of station areas from 100-year floodplains. On the Denver side, the City and RTD are reconstructing the Lakewood Gulch and South Platte River outfalls near the Auraria West and Federal/Decatur stations, which will take most land out of the 100-year floodplain. This will make these two station areas more suitable for development and set the stage for removing other land near the Pepsi Center and Auraria Campus from the floodplain to encourage the mixed-use entertainment district planned for that area. In Lakewood, the City's Master Infrastructure Plans address the floodplain issue at Wadsworth and Oak. Most existing development in these two station areas occurred prior to the implementation of modern urban flood control practices, so new TOD development will require updates to the stormwater system. Yet an abundance of parks, open space, and undeveloped parcels in these station areas will help to reduce overall imperviousness, and the proposed greenway between Oak and Quail Streets could continue to help manage stormwater runoff. To accommodate future development, Lakewood foresees the need to extend a 100-year storm sewer that currently terminates at 14th Avenue and Oak Street westward (approximately 1,350 ft. of 48" reinforced concrete pipe). The GSA is also working with RTD to construct a detention pond on the Federal Center site to manage stormwater runoff. While none of the Federal Center site is in a floodplain, new development will increase the amount of impervious surfaces, making a detention pond necessary.

Water Infrastructure

The City and County of Denver has one facility that does all of the water management, making the management of new infrastructure and accommodation to new development a straightforward process. The GSA has negotiated with Green Mountain Water and Sewer to provide water and sanitation services to the Federal Center site. Consolidated Water will also provide water to a portion of the site. Lakewood, however, is split up into several different water and sanitation districts, some covering only a few blocks. Figure IV-6 shows the water districts for the two cities.

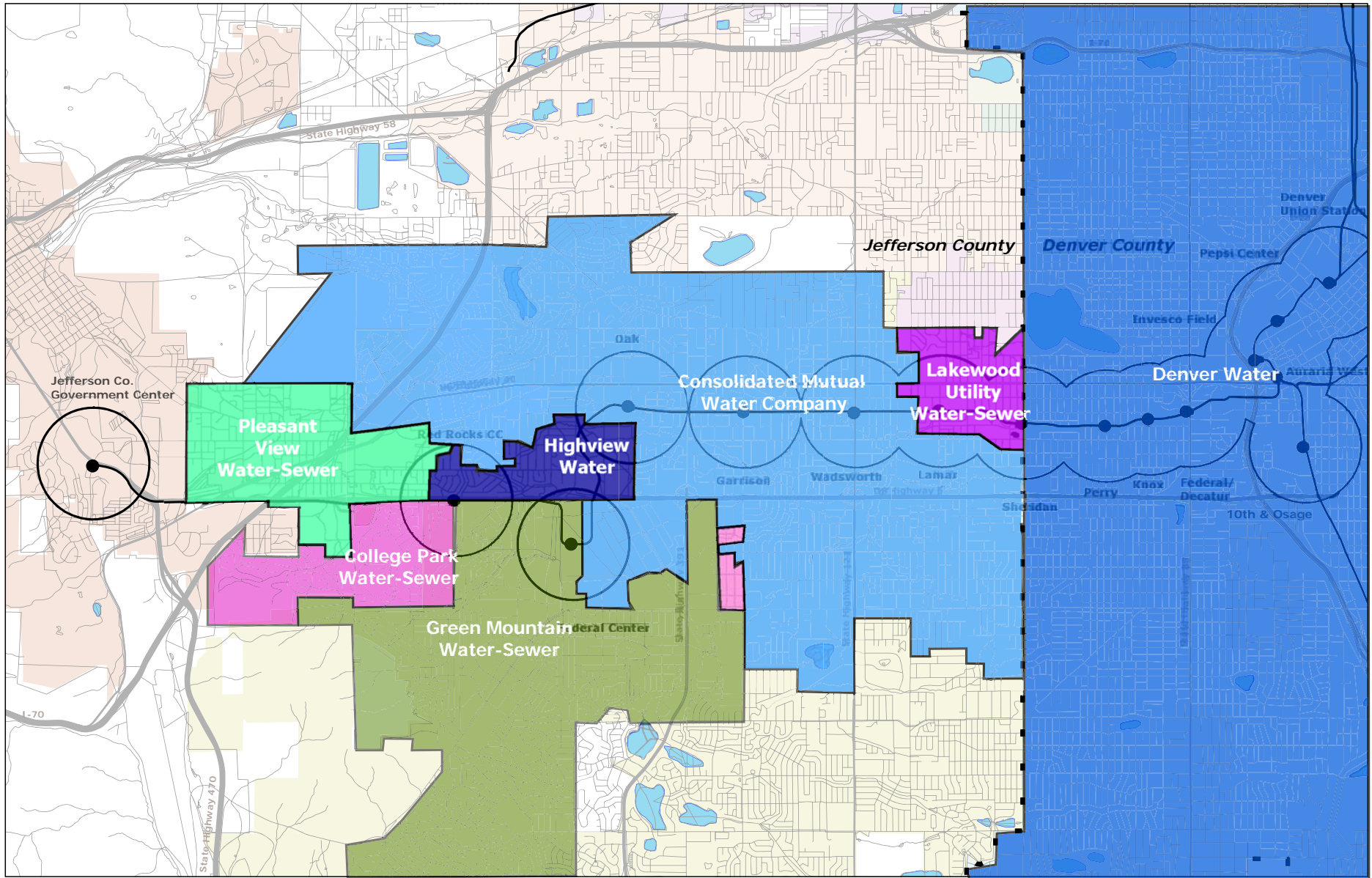
If the process to obtain water and sanitation permits is too complex, it may deter potential developers from building near station areas if they prefer a more streamlined process. There may also be higher costs associated with smaller utility providers who have limited resources, and new developments may stretch existing systems too far, making TOD infeasible. Lakewood's infrastructure master plans for the Oak and Wadsworth stations highlight this issue, as many utilities are in need of facility expansion just to accommodate current needs. Nevertheless, the permitting process is not as complicated as it appears on the surface. For the customer, the process is relatively simple if the developers work with Lakewood staff for assistance in navigating the water and sanitation permits.

Sewer & Sanitation Infrastructure

Denver Wastewater handles sewer and sanitation services for all of Denver. Green Mountain Water and Sewer will handle these services for the Federal Center site. Lakewood has several providers, similar to its water infrastructure. Figure IV-7 displays the boundaries of service providers along the West Corridor.

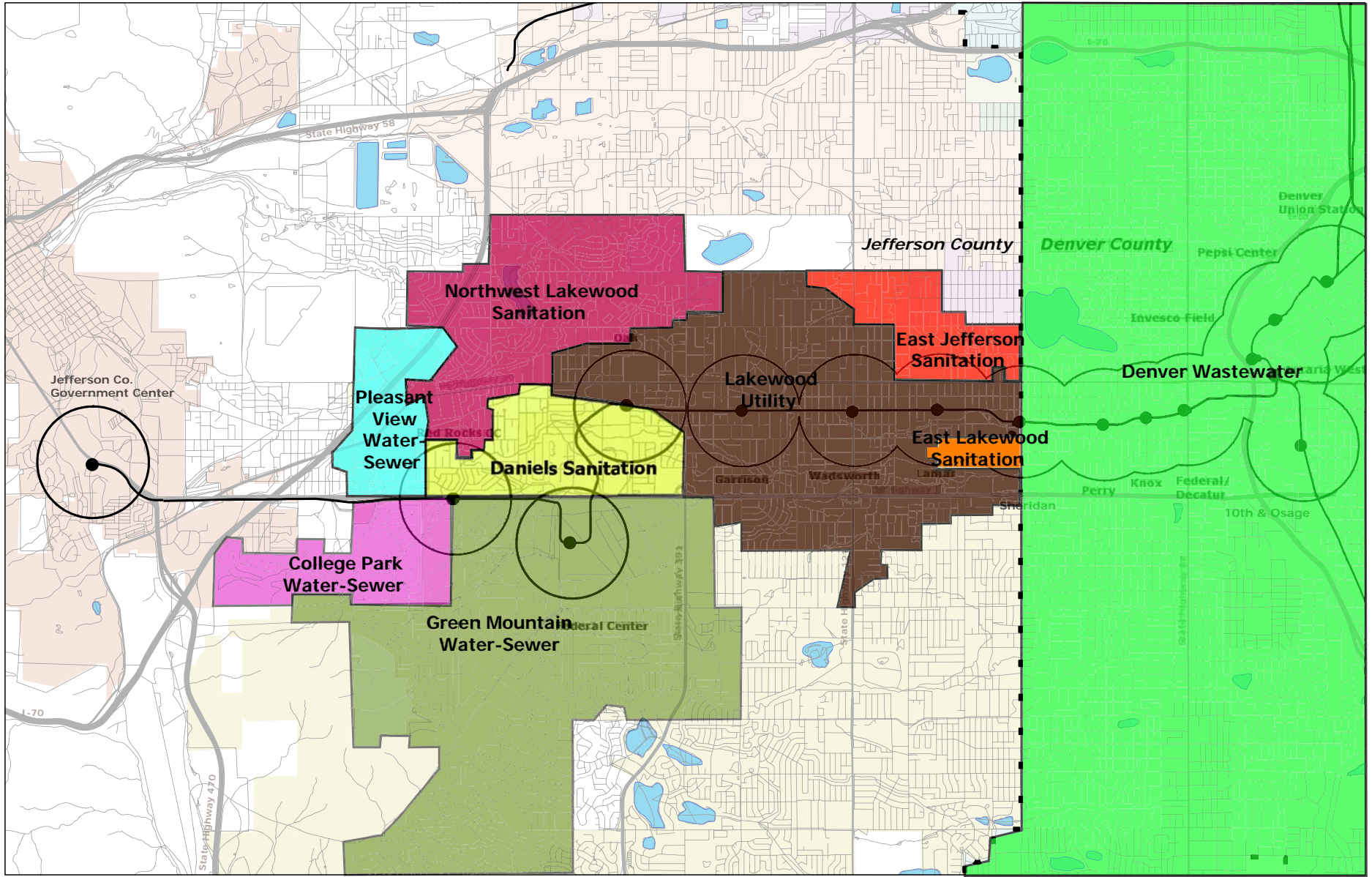
As with water infrastructure, the complexity of service providers may prove

Figure IV-6: Water Service Providers



SOURCE: Center for Transit-Oriented Development, 2010; City of Lakewood and City & County of Denver data, 2010.

Figure IV-7: Sewer/Sanitation Service Providers



SOURCE: Center for Transit-Oriented Development, 2010; City of Lakewood and City & County of Denver data, 2010.

challenging to navigate for developers, especially where the water and sanitation providers do not overlap and two separate contracts need to be negotiated. Lakewood ensures that this process is very simple and transparent, so it may not be a problem.

Community Resources

Enhancing community resources is another important aspect of leveraging transit investments to strengthen existing communities. Walkable communities need not only excellent pedestrian infrastructure, but also need places that provide for the daily needs of residents living within them. Encouraging more walking, bicycling, and public transit trips is only possible if there are destinations nearby and the walk to them is vibrant and engaging. The map below (Figure IV-9) shows several elements that are essential ingredients for walkable neighborhoods, including grocery stores, libraries, community centers and parks, childcare facilities and local schools. The community centers shown in the map represent a collection of public-serving institutions, including libraries, afterschool programs, local recreation centers (in public parks) and other social service institutions.

The West Corridor is also home to several elementary, middle, and high schools as well as preschools, daycare and Head Start facilities. Many people choose a place to live based on the quality of the school system. The new light rail access has the potential to improve the attractiveness of the schools located within station areas, as students can walk or bike to school, or even take the light rail if their school is in another station area.

New Resources: In addition to these existing resources, both Lakewood and Denver have been directly involved in attracting new community resources into

station areas.

- The new Westside Library will be located within walking distance of the Federal/Decatur and Knox stations in Denver. It will be part of the Avondale development on Colfax Avenue. Denver's Office of Economic Development is funding some of the improvements that will be put in place in relationship to the library site there.
- Near the Lamar station, the City of Lakewood has built a new Head Start facility, which provides free early childhood education for three- and four-year-old children whose families are low income, homeless or have other special needs.
- The St. Anthony Medical Campus relocated from the Perry station area north of Colfax to a site near the Federal Center station. The Federal Center site will also have new athletic fields open to the community.



The new St. Anthony's Hospital (Federal Center station area)

Healthy Food Choices

One of the most essential community resources is a grocery store. Having a grocery store within walking distance or close to public transportation can significantly reduce the need to use or even own a car. This is especially critical for low-income populations who often have poor access to healthy food choices. There are many grocery stores of different scales located along the corridor. The map below identifies where the stores are located and identifies two potential holes in service: one in Denver near Federal/Decatur, Knox, and Perry and one in Lakewood near the Federal Center station area and Red Rocks Community College. However, part of the hole in Denver is being filled in by a new grocery store, Mi Pueblo Latin Market, which will offer fresh produce to residents.

Table IV-5 lists all the grocery stores within one mile of stations on the West Corridor. Not all of these stations are within easy walking distance of neighborhoods, however, due to major roads and highways. The Super Target near the Red Rocks Community College station is on the opposite side of U.S. Highway 6 in a large retail center at a higher elevation, making this store very difficult to access without a car. Additionally, most of the remaining stores are on Colfax Avenue, some on the northern side, requiring pedestrians to cross up to six lanes of traffic. These roads serve as major impediments to food access, despite their close proximity to stations.

The West Corridor has the potential to be a model of Healthy Food Access not only for the Denver region, but for the country as a whole, which is grappling with a “food desert” epidemic. Residents living near West Corridor stations, even those without a grocery store in their own station area, will now have access to stores with a variety of prices and products. New development could also spur

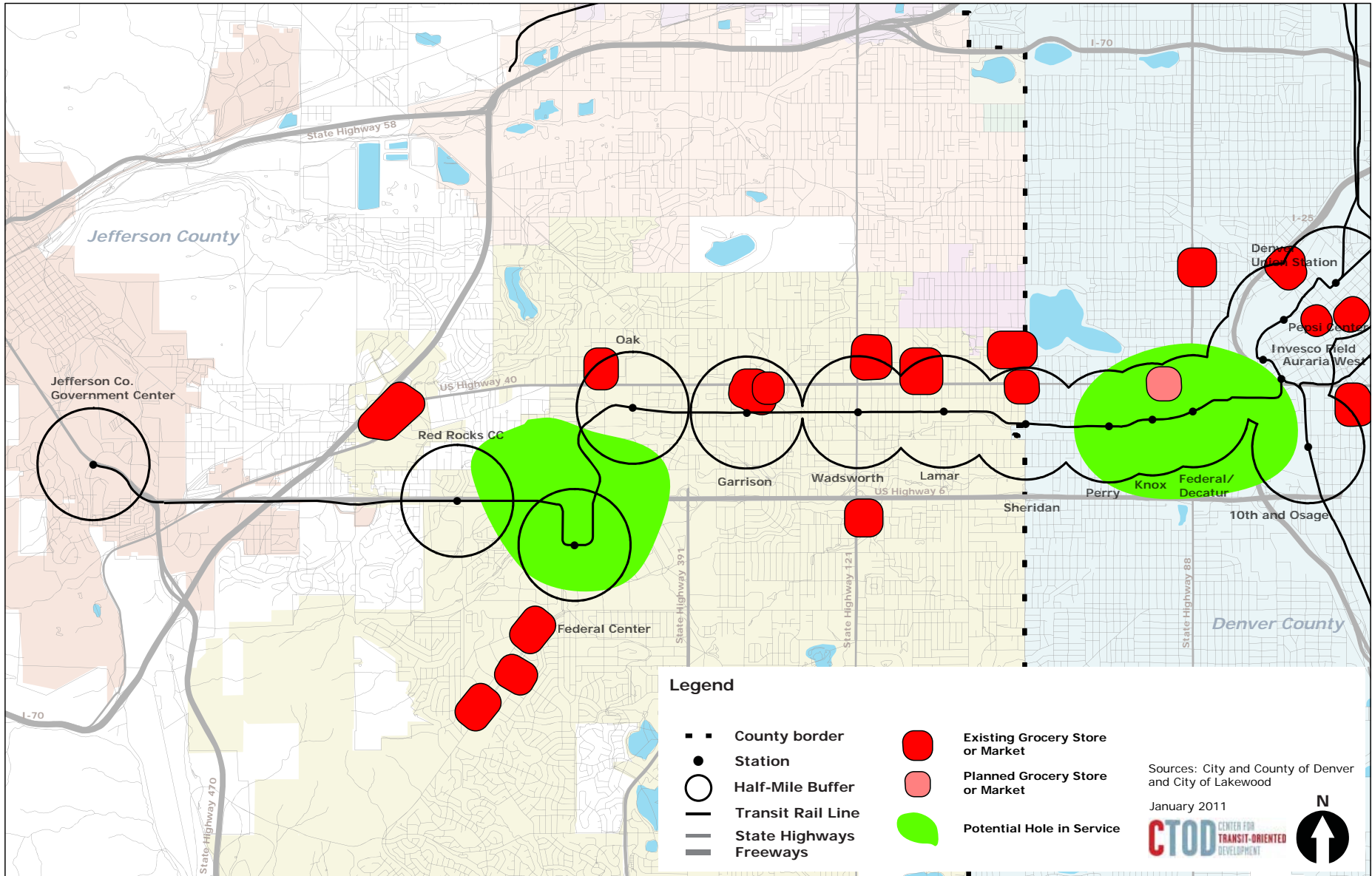
demand for additional healthy food options as well. As part of the HUD/DOT Community Challenge grant, the City and County of Denver will prepare a West Side Healthy Eating Active Living (HEAL) Plan that will identify opportunities for full-service grocery stores and urban agriculture, and provide “connectivity tours” teaching residents how to take public transportation to grocery stores and other healthy food sites along the West Corridor.

Table IV-5: Grocery Stores

Station Area	Grocery Store	Type
10th & Osage	King Soopers	Full-service grocery store
Auraria West	NONE	N/A
Federal/Decatur	Mi Pueblo	Small market
Knox	NONE	N/A
Perry	NONE	N/A
Sheridan	King Soopers	Full-service grocery store
Lamar	Save-A-Lot	Low-cost grocery store
Wadsworth	Wal-Mart Super Center	Full-service grocery store and retailer
Garrison	Safeway	Full-service grocery store
	Vitamin Cottage Natural Grocers	Organic specialty store
Oak	King Soopers	Full-service grocery store
Federal Center	Safeway	Full-service grocery store
	King Soopers	Full-service grocery store
	Vitamin Cottage Natural Grocers	Organic specialty store
Red Rocks	Super Target	Full-service grocery store and retailer
Jefferson County Government Center	NONE	N/A

SOURCE: Center for Transit-Oriented Development, 2010.

Figure IV-9: Grocery Stores



SOURCE: Center for Transit-Oriented Development, 2010.

Parks, Recreation & Entertainment

The West Corridor's great places to live, work, and learn are complemented by great places to play. There are numerous parks, recreation centers, theaters, and sports facilities located along the West Corridor that will now be better connected with the



region. Most prominent among these are the two professional sports facilities. Near the Auraria West station is the Pepsi Center, home to the Denver Nuggets, a professional NBA basketball team, and the Colorado Avalanche, a professional NHL hockey team. While the arena has its own station on the Central Corridor spur, its half-mile radius overlaps with the Auraria West station, and current plans call for redeveloping some of the arena's surface parking lot into a mixed-use entertainment district that would provide a new pedestrian-oriented street between the Pepsi Center and the Auraria West station. This development could include new residential and commercial space as well. Similar plans are in the works for the Federal/Decatur station, which lies directly south of Invesco Field, home to the Denver Broncos, a professional NFL team. The Federal/Decatur station area plan proposes a new mixed-use entertainment district and pedestrian promenade stretching from the stadium down to the station. Exact plans have not been prepared for either site, but the potential is there for some large-scale entertainment opportunities in the near future. In Lakewood near the Oak Station, a nonprofit organization is planning to build a \$2 million Historic Transit Museum and Res-

toration Center and showcase old trolleys that used to run along Colfax Avenue and other parts of the Denver region.

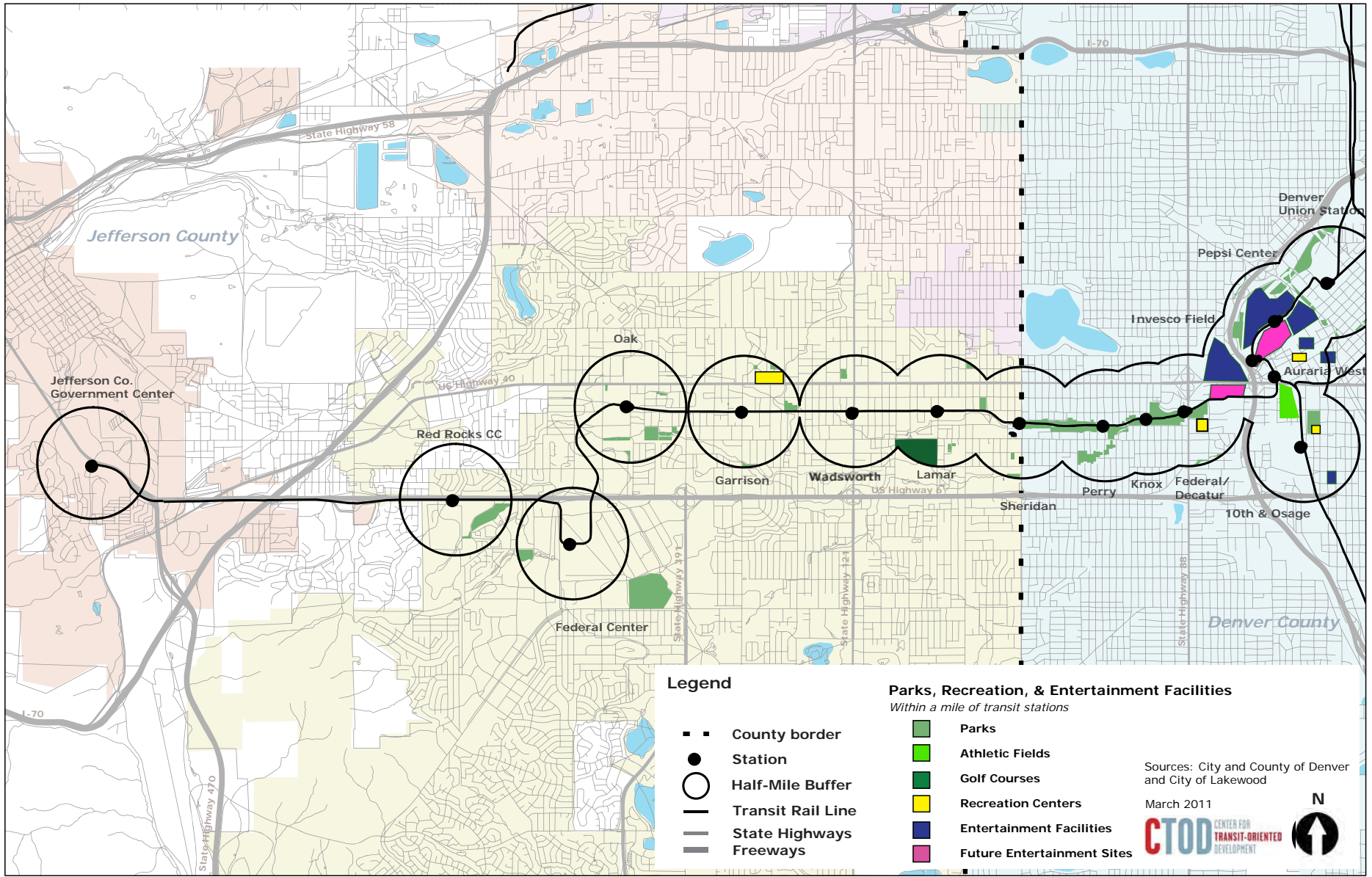
As mentioned in the bicycling section, parks and trails dot the entire West Corridor as well. The alignment of the West Corridor generally follows the Lakewood and Dry Gulches, so many station area plans propose improvements to the gulch to provide more park space and beau-



tify the station areas. The West Colfax and Sheridan plans especially detail improvements to the Denver side of the Lakewood Gulch, as these stations will fall within the middle of the gulch. Lakewood will also construct new bike bridges at Wadsworth and Kipling Avenues. Lakewood is currently conducting a planning study for the North Dry Gulch. The new light rail line will also improve access to several recreation centers within station areas—notably at the Garrison, Federal/Decatur, and 10th & Osage. New athletic fields are a major component of both the Auraria West and Federal Center site plans, as both station areas contain large swaths of underutilized land where there is a high demand for more park space. The GSA is currently working with the City of Lakewood on a potential partnership to provide these athletic fields and other recreational/open space for use by the surrounding community. This space is part of the open space element of GSA's Federal Center Master Plan.

Figure IV-10 displays all the parks, recreation, and major entertainment facilities along the West Corridor.

Figure IV-10: Parks, Recreation, and Entertainment Facilities



SOURCE: Cities of Denver & Lakewood GIS; Center for Transit-Oriented Development, 2010.

Gaps in Community Resources

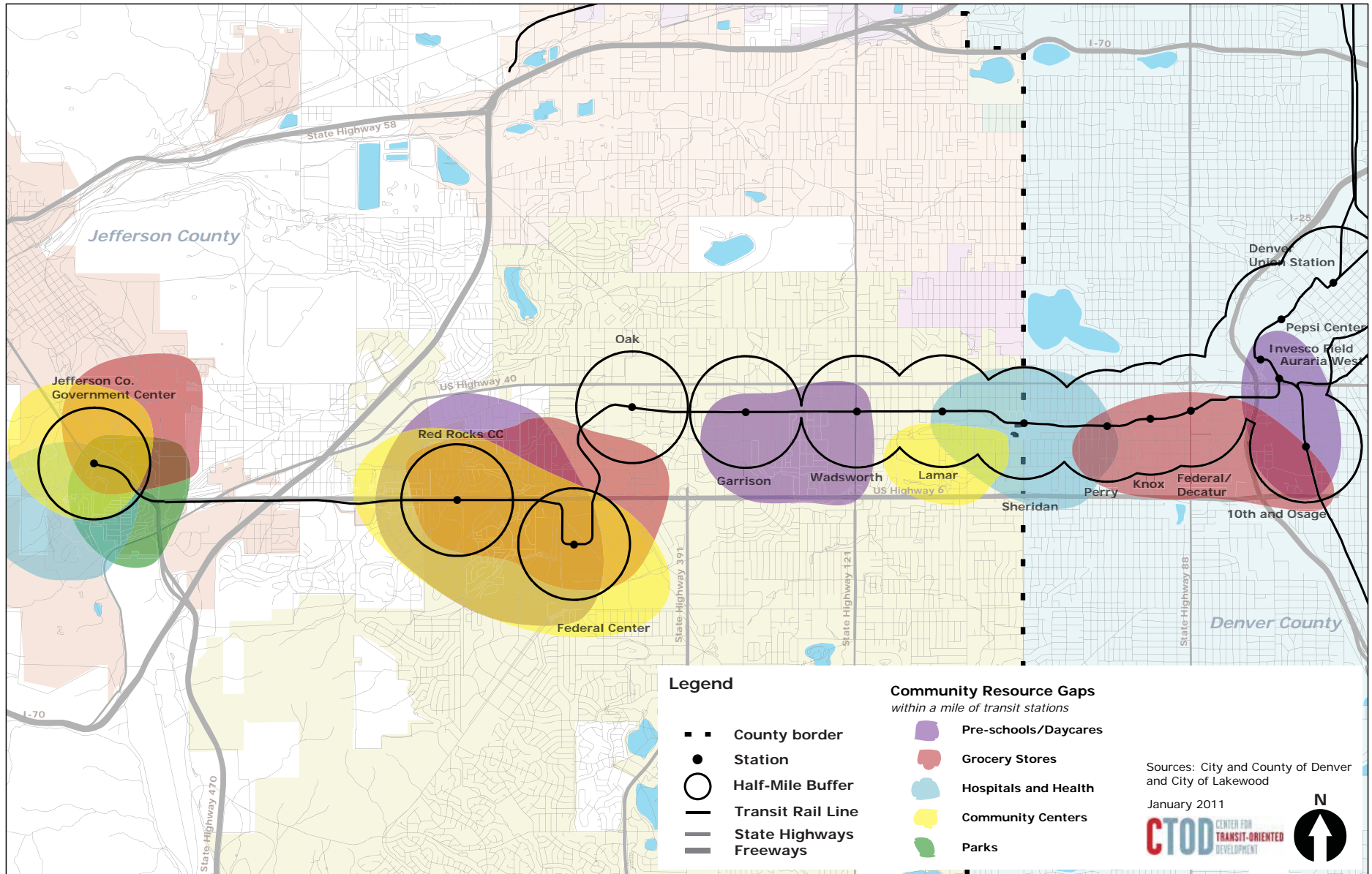
Despite great access to community resources, the West Corridor does have some major gaps that deserve attention. The following map (Figure IV-11) displays these gaps and can help both cities, as well as potential developers, identify where there is the most current development potential and where there needs to be improvement to attract new development.

Most notably, the stations further west along the corridor have fewer community resources. These are places where the development has traditionally been auto-oriented employment buildings, with little to no residential amenities. The Jefferson County Government Center, Red Rocks Community College, and Federal Center station areas are deficient in grocery stores, community centers, and preschools/daycare. These are major opportunities for new public and private investment at these stations. By supporting services and investment to fill these gaps, the Lakewood, Denver, and the GSA can ensure that their visions for each station will come to fruition.

East of the Federal Center site in Lakewood and Denver, West Colfax Avenue is home to many community resources that contribute to TOD neighborhoods, including grocery stores, childcare services and small medical offices. However, most places along the corridor lack one or two highly accessible community resources, and the map identifies where those existing pockets of deficiency currently exist.

Some of these holes are already being filled. The new Head Start Center at Lamar will serve as an early childhood education institution, and the Mi Pueblo market will help to fill in the grocery store gap near Knox and Perry.

Figure IV-11: West Corridor Gaps in Community Resources



SOURCE: Center for Transit-Oriented Development, 2010.

Sources: City and County of Denver and City of Lakewood

January 2011



Conclusion

The previous two sections have summarized the existing conditions of the West Corridor and presented the major development opportunities at each station. The next section will bring together these existing conditions to create a framework for moving forward: an implementation strategy for making TOD a reality along the West Corridor.

V. Implementation Strategy: Recommendations and Next Steps

While the potential for transit-oriented development along the West Corridor is high, implementing successful TOD will not be a quick or simple process.

First and foremost, economic conditions in the country are impacting the pace and magnitude of private-sector development activity everywhere. This macro-level challenge, combined with the micro-market conditions along the corridor, where residential home values are relatively low and the potential value increases related to transit have not yet been realized, indicates that in the near term, most implementation activity in the corridor will fall to public agencies including but not limited to the partners in the West Corridor Working Group (WCWG). However, by laying the foundation now through the adoption of appropriate policies and investment in high-value catalytic projects, including various kinds of infrastructure, the WCWG can ensure that over time and as the market matures, the overall value of new private investment will ultimately surpass the public investment.

To a large extent, the WCWG will take on the visioning and coordinating role of a “master developer” for the West Corridor. In private land development, master developers create value by establishing a long-term vision for a site, seek the entitlements necessary to permit this vision to be built, and provide the major infrastructure necessary to support the future development. Master developers often work well ahead of the market and take on a high degree of risk in order to reap large returns. By taking on this risk the master developer is removing barriers for subsequent development activities. While the WCWG will not collect profits on its investment the way a private master developer would, the visioning and

coordinating role is similar because the WCWG will work to remove many of the barriers and eliminate as much risk for future development as possible.

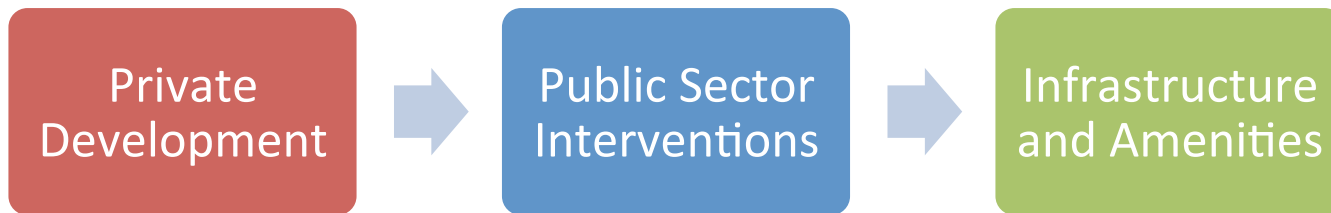
Through the collaboration of the two cities and two housing agencies, the WCWG plays a powerful role in partnering for successful TOD implementation. Given the challenged economic conditions and micro-market of the corridor, the public sectors must play a proactive role to generate needed private-sector investment. The cities each have the capacity to create TOD-supportive policies and regulations, apply the appropriate zoning and use public funds for amenities and transit-supportive infrastructure. The housing agencies bring the development expertise, additional resources and a commitment to affordability and equity. By strategically executing the implementation activities, the WCWG is sending a powerful signal to the private sector that paves the way for appropriate private-sector investment.

Figure V-1 illustrates how the implementation process differs depending on the condition of the real estate market in a particular location. In a cooler market, it is especially important that the WCWG continue to exhibit leadership by intervening with public-sector support for infrastructure and amenities. In hotter market locations, there will be less need for the public sector to intervene initially, but it can assist with the financing of infrastructure and amenities that make a location attractive to TOD.

This section focuses specifically on implementation strategies that respond to the goals of the WCWG (see Section I) and that can be implemented by WCWG members at the corridor scale and the station levels. The station-specific strategies are unique to the type of station context and needs. Corridor-level strategies require continued commitment and participation by the WCWG and must, in the long term, be paired with similar strategies for each individual station

Figure V-1: Implementation process in Hot vs. Cool Real Estate Market Locations

Financing Strategy in **Warm** or **Hot** Market Locations:



Financing Strategy in **Cooler** Market Locations:



area. Achieving TOD success in the West Corridor will require ongoing proactive identification of barriers to development and efforts by WCWG members, including the cities, to work either together or separately to remove those barriers.

Key Implementation Strategies

Much has been accomplished by the local jurisdictions along the corridor. The station-area and community-based plans identify the visions for change at the station areas. The corridor is far ahead of the curve compared to many other areas with expanding transit systems – both regionally and nationally. Additional implementation activities and commitments from local and regional jurisdictions and the state will accelerate private investment in the corridor. The following recommendations should be applied at the corridor scale for both WCWG and other corridor partners to move the plans from vision to reality:

- **Create a permanent West Corridor Collaborative.** A formalized partnership will ensure regular meetings and a commitment to the implementation strategies. In addition, West Corridor Working Group participants should promote the WCWG process and technical work through attendance and presentations at regional and national conferences.
- **Engage new partners in the implementation activities of the West Corridor.** The West Corridor Working Group should establish a broader set of partners (such as RTD, DRCOG, ULI and the BIDs) to embrace the vision and actions to implement TOD in the corridor. There should also be a public process on corridor planning and information sharing that includes co-hosted corridor-wide workshops. Offering communities the opportunity to learn from nearby communities could help them understand how the light rail line will better connect them to community resources and opportunities.
- **Coordinate funding sources and development activities to promote TOD implementation within each city.** A wide range of actors are responsible for implementation, including a number of separate departments within each city (Planning, Public Works, Economic Development) and other governmental agencies such as RTD, DRCOG, the mayors' offices, city councils and county commissions. Establishing interdisciplinary staff teams – with involvement from corridor leadership – would help facilitate better coordination of limited resources and decisions related to development activities and approvals in the West Corridor. This group might support a streamlined development process for the corridor as well as track the public and private investments made in the corridor.
- **Create new implementation tools to support effective and sound decision-making on implementation activities within each jurisdiction.** WCWG should coordinate with the City of Wheat Ridge, which received a Smart Growth Implementation Assistance grant from the EPA to study infrastructure finance at transit stations. The EPA has hired a team of experts to analyze the infrastructure needs of the Ward Road station area on the Gold Line and come up with financing tools that will be applicable in other station areas in the Denver region's transit system. WCWG should also coordinate with other jurisdictions on the development of new tools and funding sources that will aid in project implementation, such as corridor-wide tax increment financing districts.
- **Develop a marketing and branding plan to promote the West Corridor.** A branding and marketing process would help create an identity for the West

Corridor in order to generate interest among potential retail, commercial and residential developers, and to attract the public to the West Corridor as a place to live, work and play. A one-stop website for anyone interested in development, employment, retail or entertainment should be created.

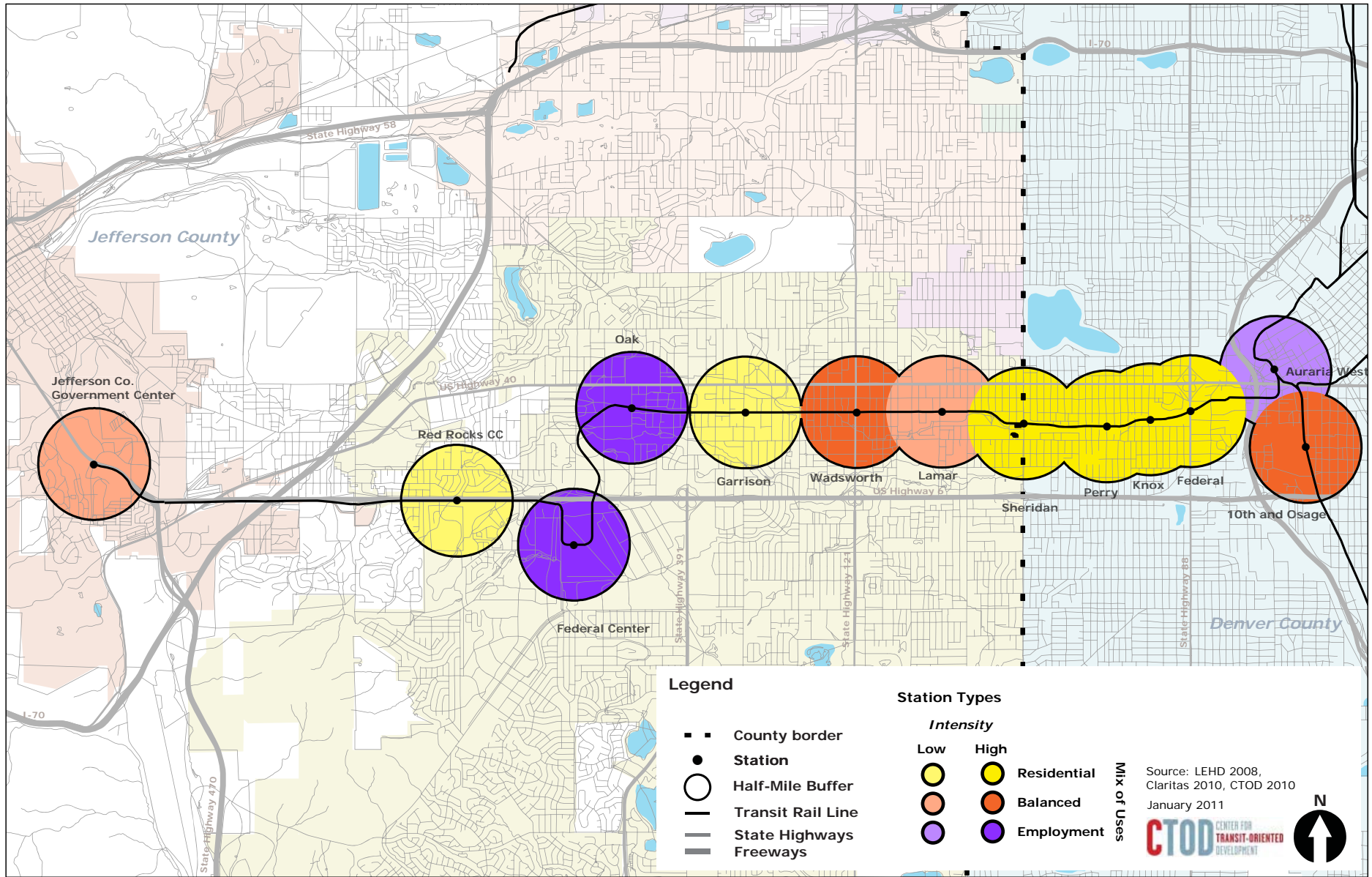
- **Continue to work on bike and pedestrian connections in the corridor for the “last mile.”** Explore joint funding opportunities to continue the system during the next DRCOG TIP cycle, future TIGER II funding and FTA discretionary dollars. Explore extending the B-Cycle program to Lakewood and look for sponsorship opportunities from Wadsworth businesses and RMCAD. Consider applying car-share programs in select station areas.
- **Convene an affordable housing strategy session for both preservation and new production.** Work with WCWG partners and others involved with affordable housing in the region to develop a more detailed plan. The plan should examine the transition of some existing housing stock in all station areas from private market ownership to another ownership structure that would permanently preserve affordable housing; identify targeted opportunities for additional new affordable housing production for three specific market niches: seniors, families with children, and students; evaluate possible strategies for expanding the Denver TOD Fund to the entire West Corridor; and evaluate various HUD programs to demonstrate ways that they could be modified to better support affordable housing near transit by adding proximity to transit in HUD's evaluation criteria.
- **Emphasize Colfax as the retail corridor in both cities.** Continue to focus on Colfax as the retail corridor in both cities with strong physical and visual connections from the West Corridor stations to Colfax. Examine a multi-

jurisdictional business improvement district (BID) and explore the creation of a linear urban renewal district for both jurisdictions.

Identifying Station Area Types for Implementation

Although each station area along the West Corridor is unique in its particular characteristics, all transit station areas can be defined and categorized based on two factors fundamental to the relationship between land use and transit: density and land-use mix. Density, measured in the number of residents and jobs in the station area, is a key factor in determining transit ridership. Land-use mix, or the balance between residential and non-residential uses, is a critical determinant of the qualities and characteristics of a place. Predominantly residential places require different approaches to planning and investment than employment-dominated places. Places with a mix of uses also have their own planning opportunities. Land-use mix correlates to the degree to which people living and/or working in any given station area can take care of some trips by walking or biking because the goods or services they seek are in close proximity. Typically, station areas with more people (either residents or employees) and some mixing of uses have high levels of both transit ridership and pedestrian/bike activity. This is in part because locations with higher density support more local retail and service destinations, though the types of retail and services tend to be different depending on the land-use mix (employment places have local services that cater primarily to workers, residential places to residents, etc.) Residential places may have many locally serving retail uses, though they remain primarily residential. Balanced-use places, by their nature, have an equal proportion of residents and workers. Denser balanced-

Figure V-2: Existing West Corridor Station Area Types



SOURCE: Center for Transit-Oriented Development, 2010

use places may be located on the edges of major employment centers or may have several small but concentrated office or other employment uses surrounded by retail. As density and the mix of uses decline, a higher percentage of trips become auto oriented.

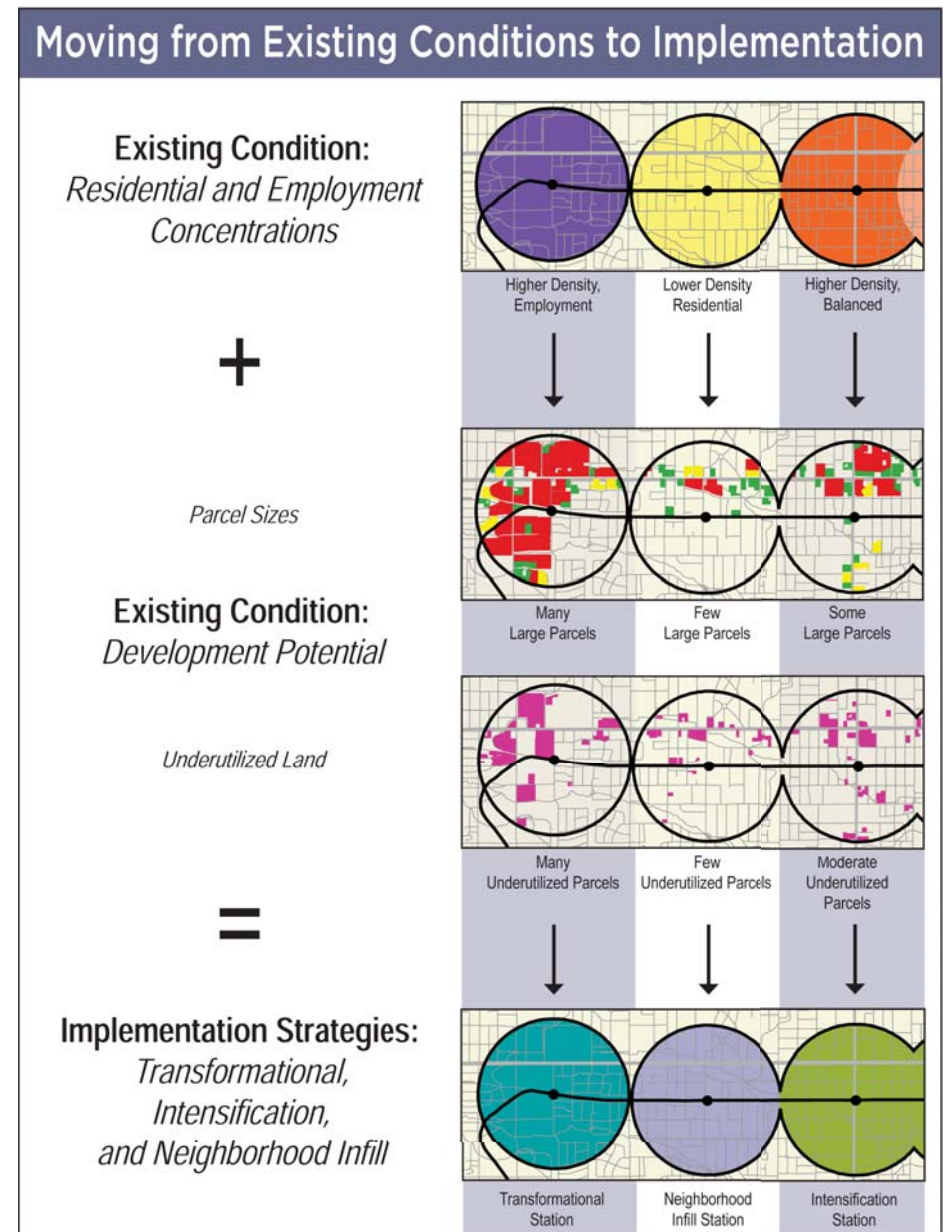
As Figure V-2 shows, almost half of the stations in the corridor (six) have current land uses that are predominately residential; four are fairly dense, with a balance between housing and employment, although the density in these areas is also relatively modest; and, three station areas have primarily employment uses that are relatively dense. High intensity, or high density, locations along the West Corridor have 7,000 or more workers and residents. National research has shown that this is a threshold for transit service.²³ Places with higher intensity can also support more locally-serving retail and other services.”

These station area types identify the existing conditions in each station area. As station area plans are implemented and new TOD projects planned and constructed, these types may change, but they give an important picture of conditions on the ground.

The Implementation Typology Framework

An implementation typology organizes the strategies that can be used to realize the potential for TOD in the West Corridor. Instead of devising a completely different set of strategies for each station area, the types of strategies useful to implementing TOD can be grouped into three broad categories – transformational, intensification, and neighborhood infill – based on a combination of the existing

Figure V-3a: Analysis of market conditions and existing land use and density



station types and on the real estate market conditions (as detailed in Section III).

Figure V-3a illustrates how analysis of real estate market conditions and existing land use and density identifies the three implementation types. To determine the appropriate type of station areas that comprise the West Corridor, the station area's existing conditions are examined. The balance of residential and employment concentrations provide the foundation. Parcel size and the amount of underutilized land are then overlaid indicating how much land is available and at what value. Proximity to major activity centers and availability of community facilities provide additional information on access to amenities and other attractors. Filtering through these existing conditions yields three types of station areas and three different sets of implementation strategies.

Figure V-3b illustrates how the combined data analysis on real estate market conditions, land use and density results in three implementation types.

Implementation Strategies by Station Type

This list of priority actions identifies some of the immediate opportunities and strategies to be applied at specific station areas. Undertaking these activities will move the station areas to be TOD-ready and send a signal to the private market and the local communities that the WCWG partners are readying the station areas for new investment and development, housing preservation, improved station accessibility, better amenities and placemaking (Refer to Tables V-1, V-2, and V-3).

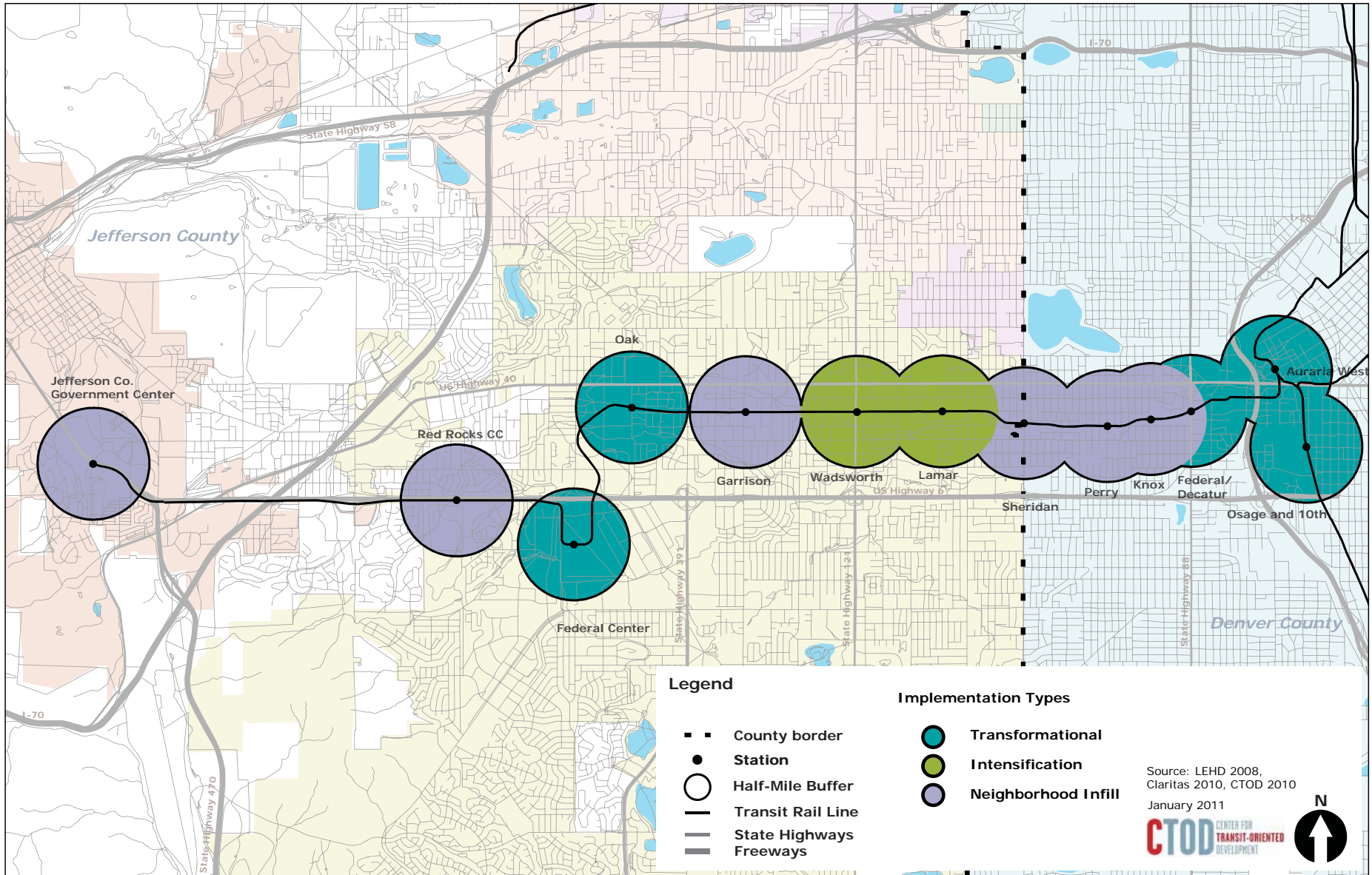
Transformational Stations

Five station areas have sufficient development opportunities to transform into something different and more significant than the current uses and densities. Moderate- to high-density employment places with moderate- to high-development opportunity fall into this “transformational” category. Residential or balanced station areas with both moderate- to high-density and moderate- to high-development potential also fit into the transformational type. (Development potential is the combination of parcel size and development opportunity represented by the amount of underutilized land.)

These stations have the greatest development potential on the corridor based on the amount of land likely to be available for new development. Except for the Federal/Decatur station, these areas all have existing employment concentrations that will help boost their value with respect to market-rate housing. And, in the case of Federal/Decatur, there is so much development potential at several sites that, over time, this area may support more employment than is currently envisioned.

- **Federal Center** – Establish a team of key leads from GSA, Lakewood, RTD, MWHS and other partners to coordinate the redevelopment and disposition of the Federal Center land, the Union Corridor and the RTD TOD Pilot Program. Identify expectations for working together, coordinating on a regular basis, prioritizing key redevelopment activities, and desired outcomes for 2011. Address equity issues by incorporating affordable and senior housing opportunities into the redevelopment process.
- **Oak** – Remove barriers to redevelopment at the station by facilitating TOD-supportive infrastructure. Explore funding mechanisms such as the city's capi-

Figure V-3b: Implementation Typology Station Types



SOURCE: Center for Transit-Oriented Development, 2010.

tal budget, special districts and future community challenge and TIGER II grants. Consider permitting some residential uses along the pedestrian main street connecting to Colfax.

- **Federal/Decatur** – In conjunction with the community challenge and TIGER II grant, bring together key local leaders to work on a long-term, phased master plan. The plan should look at replacing the public housing with a mix of units closer to the station area. A market study exploring the light industrial and research and development opportunities to the south should be examined in a regional context, factoring in the nuances of transit. Developing an entertainment district at Invesco should be evaluated in conjunction with redevelopment opportunities at the Pepsi Center. Address equity issues by incorporating affordable and senior housing opportunities into the redevelopment process.
- **Auraria West** – Work with the Auraria Campus and stadium owners to implement the campus master plan and station area plans, especially catalytic projects such as the campus hot spot and mixed-use entertainment district. It may be necessary to prepare a general development plan for specific areas within the station area as demand for development occurs, as well as changes to the zoning code. Support more student housing on land adjacent to the campus to provide more opportunities for students to live near campus and lower their cost of living.
- **10th & Osage** – Continue to support existing redevelopment of land near the station area. Improve connectivity to the Auraria West and Federal/Decatur station areas with improved pedestrian and bicycle infrastructure.

Intensification Stations

Wadsworth and Lamar, the two station areas falling into this category, already have a balance of employment and housing, although they lack the significant land supply available for new development that is present in the transformational station areas. Each has sufficient land available for development to a significant increment of new development. However, even with the new development, these station areas will not fundamentally transform in terms of their use mix, and they will likely remain mixed use “neighborhood centers” rather than act as major employment destinations.

- **Wadsworth** – Continue to address the infrastructure issues by looking for sources of funding from the city’s capital budget, special districts and future community challenge and TIGER II grants.
- **Lamar** – Work with the current planning grant to develop a more detailed plan for the station area that leverages the potential art district and relationship to RMCAD. Identify some grassroots art districts in other cities that have good proximity to transit. Reconsider zoning for the smaller parcels to allow for duplex and triplex residential units.

Neighborhood Infill Stations

Six station areas are likely to remain relatively unchanged because they lack any significant development opportunity, and any new development will be insufficient to change the area’s overall character. These lower-density residential- and balanced-use station areas with little available land for redevelopment fall into the “neighborhood infill category.”

These stations primarily have small lot infill opportunities where single-family

houses could be replaced with small duplex and triplex projects. Within a later time frame, as demand for TOD increases along the West Corridor, these stations may see more intensification or even transformation.

- **Red Rocks Community College** – Commence work on a station area plan by working with the key administrators at the college. Continue to connect workforce development opportunities in the corridor with education and training at the college.
- **Sheridan** – The infrastructure and transit changes at Sheridan are more significant than many of the other infill stations. The planning, parks and public works staff at the cities should work together to develop an integrated plan, including placemaking, as this is a major gateway between the Denver and Lakewood sides of the West Corridor. The plan should address access issues for all modes, TOD supportive infrastructure and identifying strategic parcels (work with Urban Land Conservancy) for redevelopment.
- **Knox and Perry** – Support the redevelopment of existing affordable housing and preserve those developments due to expire in the coming years. Acquire land for additional affordable, senior or student housing. Also look at improvements to the pedestrian and bicycle network, to and from the station and surrounding neighborhoods. Leverage the activities already planned for this subarea as part of the City's Community Challenge/TIGER II grant.
- **Garrison** – Remove barriers to redevelopment at the station by facilitating TOD-supportive infrastructure. Further study the need for improvements to the pedestrian and bicycle network, including any last-mile connections needed to connect the community resources in the area. This station area may also be a good candidate for senior housing.

Implementation Strategies

Each place type or list of station areas requires a distinct set of actions in the implementation strategy. The recommended actions fall into three categories:

facilitating market-rate development, creating an inventory of permanently affordable housing, and providing TOD-supportive infrastructure. Dots indicate an activity that should be undertaken for the station area.

Table V-1: Strategies for Transformational Stations

	Facilitate Market Rate Development				Create Inventory of Permanently Affordable Housing			TOD Supportive Infrastructure					
								Address Basic Infrastructure Deficiencies and Placemaking		Provide Adequate Community Facilities		Increase Bike/Pedestrian Connectivity	
	Create TOD master development plan	Zoning Reform	Incentives	Site assembly	Acquire existing housing	Build new housing	Create senior housing	Study/ Plan	Financing strategy	Study/ Plan	Financing strategy	Study/ Plan	Financing strategy
10th & Osage			•		•		•		•		•		•
Auraria West		•				•		•		•		•	
Federal/Decatur	•			•		•		•		•		•	
Oak	•		•	•					•			•	
Federal Center	•					•	•		•		•		•

Table V-2: Strategies for Intensification Stations

	Facilitate Market Rate Development				Create Inventory of Permanently Affordable Housing			TOD Supportive Infrastructure					
								Address Basic Infrastructure Deficiencies and Placemaking		Provide Adequate Community Facilities		Increase Bike/Pedestrian Connectivity	
	Create TOD master development plan	Zoning Reform	Incentives	Site assembly	Acquire existing housing	Build new housing	Create senior housing	Study/ Plan	Financing strategy	Study/ Plan	Financing strategy	Study/ Plan	Financing strategy
Lamar		•	•		•	•	•	•					•
Wadsworth									•				•

Table V-3: Strategies for Neighborhood Infill Stations

	Facilitate Market Rate Development				Create Inventory of Permanently Affordable Housing			TOD Supportive Infrastructure					
								Address Basic Infrastructure Deficiencies and Placemaking		Provide Adequate Community Facilities		Increase Bike/Pedestrian Connectivity	
	Create TOD master development plan	Zoning Reform	Incentives	Site assembly	Acquire existing housing	Build new housing	Create senior housing	Study/ Plan	Financing strategy	Study/ Plan	Financing strategy	Study/ Plan	Financing strategy
Knox					•		•					•	
Perry					•		•					•	
Sheridan	•	•	•	•	•	•						•	
Garrison							•					•	
Red Rocks CC	•							•		•		•	
Jeff Co Gov't Center	•							•		•		•	

Table V-4: Description of Implementation Actions

	Strategy	Description	Lead Implementers	Funding Sources
Facilitate Market Rate Development	Master Plan	A Master Plan serves as a guide to where various types of development should be located. The Master Plan will identify where resources should be allocated to provide the infrastructure that is needed to support identified land uses and development types.	Cities, housing authorities, landowners, GSA	DRCOG Transportation Improvement Program (TIP), Capital Improvement Program (CIP), Choice Neighborhood, HUD Challenge Grants
	New Zoning	Modify existing zoning regulations where appropriate to support TOD.	Cities	Staff time
	Incentives	Expedite the entitlement, development review, and building review processes for TOD projects. An expedited review process results in lower soft costs for developers. Includes fast track permits, density bonuses, etc.	Cities	Charge fee for expediting
	Site Assembly	Assemblage of fragmented and small parcels to assist developers with mitigating holding costs associated with medium and long-term site assembly and entitlement.	Cities, housing authorities, transit agency (RTD), nonprofit developers (i.e. ULC), Enterprise, community development corporations, CDFIs	TOD Acquisition Fund, Equity investment, Joint Development Block Grant (CDBG), Brownfields and Land Revitalization
Create Inventory of Permanently Affordable Housing	Acquire and Preserve Existing Housing	Acquire existing housing near transit to achieve goals of preserving affordable housing in the long-term. As demand for TOD increases along the West Corridor, steps should be taken to identify areas vulnerable to displacement pressures once development occurs. Stabilization strategies should be developed to mitigate the displacement effects of certain types of TOD. Develop a detailed strategy outlining funding sources to prevent displacement of residents due to certain types of TOD along the West Corridor.	Housing authorities, nonprofits, CDCs	CDBG, Low Income Housing Tax Credits (LIHTC), Neighborhood Stabilization Program (NSP), HOME, DURA Single Family Rehab Loan Program
	Build New Housing	Invest in affordable housing development in station areas. Intent can be to push developers to build TOD product types, or to provide moderate and lower income households the ability to live in West Corridor station areas.	Housing authorities, nonprofit developers, CDCs	New Markets Tax Credits (NMTC), CDBG, HOPE VI, LIHTC, Section 8, Private Activity Bonds (PABs)
	Create Senior Housing	Create housing options for seniors near transit. As the senior population in the region begins to age out of the need for larger single family homes, cities should take advantage of the opportunities to provide building types that respond to changing needs.	Housing authorities, nonprofit developers, CDCs	CDBG, Section 202-Supportive Housing for the Elderly, Section 8, MNMC, PABs, HOME

	Strategy	Description	Lead Implementers	Funding Sources
Address Basic Infrastructure Deficiencies and Placemaking	Study/Plan	Basic infrastructure includes underground, sewer and water infrastructure and streetscaping, including repaving, trees, etc. Study/Plan activities should focus on analysis at the local, corridor, or regional scale to provide critical information on how to address and improve station area infrastructure deficiencies.	Cities, Housing Authorities, GSA	DRCOG TIP, CIP, EPA Brownfield Grants, EPA Innovative Stormwater Management, Development Impact Fees
	Financing Strategy	Develop detailed strategy outlining funding sources and financing mechanisms for the provision of infrastructure development.	Cities	CIP, Special Districts, TIF, Metropolitan Districts, Development impact fees, Revenue bonds, General obligation bonds, ARRA/TIGER Grants
Provide Adequate Community Facilities	Study/Plan	Identify key public and private investment needed to complete local/community resources and amenities. Includes both public resources (libraries, educational centers, community centers) and market driven retail (grocery stores, locally serving retail, etc.) For market driven amenities, create marketing strategies to invite private investment or incorporate provision of community resources into master plans.	Cities, Housing Authorities	CIP, DRCOG TIP, nonprofits, foundations
	Financing Strategy	Develop detailed strategy outlining funding sources and financing mechanisms for providing community resources.	Cities, Housing Authorities	CIP, NMTC, nonprofits, TIF
Increase Bicycle and Pedestrian Connectivity	Study/Plan	Identify and allocate staff resources necessary for further mapping and analysis of bike and pedestrian connectivity needs, especially focusing on connections to transit stations and major destinations and retail corridors..	Cities, Housing Authorities	CIP, DRCOG TIP, Grants
	Financing Strategy	Develop detailed strategy outlining funding sources and financing mechanisms for the provision of bicycle and pedestrian networks.	Cities, Housing Authorities	CIP, DRCOG TIP, Special Districts, Benefit Assessment District, Metropolitan Districts, CDBG, ARRA/TIGER, FTA Discretionary Programs
Placemaking	Plan/Strategy	Devise strategies to give the station a sense of place, including branding or marketing initiatives, asset mapping, public art, etc.	Cities, business community, local artists	DRCOG Live Work Play, City funds, private donations, non-profit or foundation support

Appendix

- A Funding Sources
- B Market Conditions by Station Area
- C Lessons Learned
- D Regional and citywide plans and policies
- E Rails to Real Estate Findings
- F Overview of Grant Indicators (HUD SCRPG, Community Challenge)
- G Other Maps

Appendix A: List of Possible Funding Sources for TOD

The following tables display possible funding sources for TOD by level of government: federal, state/regional, local, private, and joint public/private. This list is by no means exhaustive but illustrates the variety of actors that the West Corridor Working Group can turn to for assistance with implementing TOD.

Table VI-A-1 Federal Funding Sources

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Brownfields Assessment Grant Program	Federal	Funding for planning/assessing brownfield redevelopment, conducting planning and community involvement, and site cleanup.	Planning	Environmental Protection Agency (EPA)
Brownfields Remediation and Redevelopment	Federal	Funding for assessment, remediation, and restoration of brownfield sites to productive use and revitalization of affected neighborhoods	Planning	EPA
Smart Growth Technical Assistance grants	Federal	Annual, competitive solicitation open to state, local, regional, and tribal governments (and nonprofits that have partnered with a governmental entity) that want to incorporate smart growth techniques into their future development.	Planning	EPA
Water Quality Management Planning Grants (EPA)	Federal	Funding for financing high priority infrastructure projects needed to ensure clean water and safe drinking water	Infrastructure	EPA
Brownfields Economic Development Initiative (BEDI)	Federal	Competitive funding program to spur redevelopment of brownfield sites to productive economic use. Must be used in conjunction with a Section 108 loan	Affordable Housing	Housing & Urban Development (HUD)
Choice Neighborhoods	Federal	Provides support for the preservation and rehabilitation of public and HUD-assisted housing, within the context of a broader approach to concentrated poverty. Funds go towards the development of a Transformation Plan that addresses a wide range of outcomes and encourage the leveraging of public investments to support the broad set of goals identified there.	Affordable Housing, Community Planning	HUD
Community Development Block Grants	Federal	To ensure decent affordable housing, community services to vulnerable neighborhoods, and job creation and retention of businesses.	Affordable Housing	HUD
Economic Development Initiative Grant	Federal	Provide local governments with additional security for the Section 108 loan, thereby reducing the exposure of its CDBG funds in the event of a default in loans made locally with the 108 funds. Or, make the project more feasible by paying some of the project costs with grant funds or by reducing the interest rate to be paid from a revolving loan fund.	Affordable Housing	HUD

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Energy Innovation Fund	Federal	Energy Efficient Mortgage Innovation pilot program for single-family housing (\$25 million); Multifamily Energy Pilot for multi-family housing (\$25 million)	Affordable Housing	HUD
HOME Program	Federal	Formula funding to create affordable housing for low-income households, in the form of direct assistance or loan guarantees. Funds can be used for most kinds of housing development, including acquisition and rehabilitation in the creation of low-income housing.	Affordable Housing	HUD
Hope VI	Federal	Public Housing Authorities that have severely distressed housing in their inventory are eligible to receive funding to rehab, revitalize, or replace existing public housing.	Affordable Housing	HUD
Neighborhood Initiative Grants	Federal	Intended to stimulate investment in distressed areas and may be used for the construction and rehabilitation of affordable housing and community education programs.	Affordable Housing	HUD
Neighborhood Stabilization Program (NSP)	Federal	NSP is intended to stabilize communities that have suffered from foreclosures and abandonment by providing funds to purchase and redevelop distressed residential properties. NSP1 provides grants to all states and selected local governments on a formula basis. NSP2 provides grants to states, local governments, nonprofits and a consortium of nonprofit entities on a competitive basis. NSP3 provides a third round of neighborhood stabilization grants to all states and select governments on a formula basis.	Affordable Housing	HUD
Qualified Redevelopment Bonds	Federal	Bonds for governmental acquisition of distressed property, site preparation, site rehabilitation or relocation of tenants.	Affordable Housing	HUD
Section 8 (Project Based)	Federal	Provide capital advances to finance the construction, rehabilitation or acquisition of properties that will serve as supportive housing for very low-income persons.	Affordable Housing	HUD
Section 108 Loan Guarantee	Federal	Act as a source of financing for economic development, housing rehabilitation, public facilities, and large-scale physical development projects.	Affordable Housing	HUD
Section 202- Supportive Housing for the Elderly	Federal	Provide capital advances to finance the construction, rehabilitation or acquisition of properties that will serve as supportive housing for very low-income elderly persons.	Affordable Housing	HUD
Section 221- Mortgage Insurance for Moderate Income	Federal	Insures mortgage loans to facilitate the new construction or substantial rehabilitation of multi-family rental or cooperative housing for moderate-income families, elderly, and the handicapped.	Affordable Housing	HUD

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Section 542- Risk-Sharing	Federal	Provides credit enhancement for mortgages of multi-family housing projects whose loans are underwritten, processed, serviced, and disposed of by housing finance authorities.	Affordable Housing	HUD
Sustainable Communities Regional Planning Grants/Community Challenge Planning Grants	Federal	Pursuant to the FY 2010 Consolidated Appropriations Act, HUD is issuing \$100 million in competitive grants for regional sustainability plans and capacity support and \$40 million in grants for local development and affordable housing regulation reform. Sustainable Communities Regional Planning Grants will support metropolitan and multi-jurisdictional planning efforts that integrate housing, land use, economic and workforce development, transportation, and infrastructure investments; Community Challenge Planning Grants will support plans, codes and ordinances that incentivize mixed-use development, affordable housing, re-use of existing buildings and other sustainability goals. Grant applications for both programs closed in August of 2010, but success of the first round of grants could lead to additional appropriations. Response to grant applications not anticipated until end of year.	Planning	HUD
Community Transformation Grants (HHS)	Federal	Funding to plan, design and build infrastructure that supports active living	Infrastructure	Health & Human Services (HHS)
Health Impact Assessment to Foster Healthy Community Design	Federal	Seeks to promote an evidence-based approach toward community design decision-making through three major activities: first, improving surveillance related to community design so communities have reliable local data they can use; second, encouraging Health Impact Assessments (HIAs) of policies, programs, and projects that will affect community design; and finally, supporting evaluation within the field.	Planning	HHS/Centers for Disease Control & Prevention (CDC)
Congestion Mitigation & Air Quality (CMAQ) Program	Federal	Support for transportation projects or programs that improve air quality and relieve congestion in areas that do not meet National Ambient Air Quality Standards. Includes capital transportation investments and pedestrian/bicycle facilities and programs	Infrastructure	DOT (FHWA)
Pedestrian and Bicycle Safety Program	Federal	Conduct research and develop guidelines, tools and safety countermeasures to reduce pedestrian and bicycle fatalities.	Planning/Research	DOT (Federal Highway Administration (FHWA))
Recreational Trails Program (RTP)	Federal	Funding for maintenance and new construction of recreational trails and related facilities.	Infrastructure	DOT (FHWA)
Safe Routes to School	Federal/state	Funding to improve sidewalks, crosswalks, bicycle infrastructure, and street improvements near elementary and middle schools	Infrastructure	Transportation (DOT)

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Surface Transportation Program - Transportation Enhancement	Federal	Help expand transportation choices and enhance transportation through 12 eligible transportation enhancement surface transportation activities, including pedestrian & bicycle infrastructure and safety programs, landscaping beautification, historic preservation, and environmental mitigation.	Infrastructure	DOT (FHWA)
Transportation, Community, and System Preservation Program (TCSP)	Federal	Discretionary funding for projects that integrate transportation, community, and system preservation plans and practices that improve the efficiency of the transportation system of the U.S.; reduce the impacts of transportation on the environment; reduce the need for costly future investments in public infrastructure; provide efficient access to jobs, services, and centers of trade; examine community development patterns; and identify strategies to encourage private-sector development	Infrastructure	DOT (FHWA)
Transportation Investment Generating Economic Recovery (TIGER)	Federal	Originally part of the American Recovery and Reinvestment Act (ARRA), the TIGER program awards grants for innovative, multi-modal, and multi-jurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, region, or nation.	Planning or Infrastructure	DOT
Transportation Planning Capacity Building Program (TPCB)	Federal	Provides training, technical assistance, and support to help decision makers, transportation officials, and staff resolve complex transportation needs in their communities. Resources available on topics including land use, scenario planning, TOD, non-motorized transportation, safety, community impact assessments, operations and management strategies, and analysis methods.	Planning	DOT (Federal Highway Administration & Federal Transit Administration)
Urbanized Areas Formula Grant Program	Federal	Transit capital and operating assistance to transit agencies in regions with more than 200,000 people. Funding can be used for planning, engineering design and evaluation of transit projects, and other technical transportation-related studies. At least 1% must be used for enhancements (i.e. historic preservation, landscaping, public art, pedestrian or bicycle access, and enhanced access for persons with disabilities)	Planning or Infrastructure	DOT (Federal Transit Administration (FTA))
American Recovery and Reinvestment Act	Federal/State/Local	Provide a federal subsidy for a larger portion of the borrowing costs of state and local governments than traditional tax-exempt bonds in order to stimulate the economy and encourage investments in capital projects. Enacted by the American Recovery and Reinvestment Act of 2009; expensive for Treasury, program may not be renewed.	Infrastructure	Treasury/Local Government

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Community Development Financial Institutions Fund	Federal	Expand capacity of financial institutions to provide credit, capital and financial services to underserved populations. Promote local economic growth and access to capital through direct investments and technical assistance, tax credits, bank incentives, and financial and training incentives.	Affordable Housing	Treasury Department
Low Income Housing Tax Credit	Federal	Generate equity capital for the construction and rehabilitation of affordable rental housing.	Affordable Housing	Treasury Department/ State Allocated (CHAFA)
New Market Tax Credits	Federal	Issuance of tax credits to investors in exchange for stock or capital interest in designated Community Development Entities. The federal subsidy goes to qualifying projects in the form of below-market interest rates and more flexible loan terms like longer amortizations and higher loan-to-value ratios.	Affordable Housing, Market Rate TOD	Treasury/Qualified CDEs (CDFIs)

Table VI-A-2 State/Regional Funding Sources

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Denver Metro Mayors Caucus TOD Fund, CO Housing & Finance Authority	Regional	Seven cities that are part of the regional Mayors Caucus pooled their Private Activity Bond authority to finance the construction or rehabilitation of multi-family rental projects near existing or planned transit. Money cannot be used to purchase or hold land. Projects must meet criteria related to size, affordability and transit accessibility gain access to lower debt financing costs and to Low Income Housing Tax Credits. The fund has \$65 million	Affordable Housing	Metro Mayors Caucus, CHAFA
Housing Incentives Program (HIP)	Regional/local	MPOs issue grants as subsidies for projects in close proximity to transit. These grants are typically used for public infrastructure improvements.	Infrastructure	DRCOG/Local Government
Station Area & Urban Center Planning Funds	Regional	Station Area/Urban Center Planning grants will assist local governments in developing plans for existing and future transit station areas and designated Urban Centers that further the region's goals and meet the needs of local communities. Program funded at \$3.5 million over 4 years.	Planning	DRCOG
Unified Planning Work Program	Regional	Federally required regional plan detailing use of transportation funds and outlining work programs for mandated transportation planning activities. Station area plans, market studies, station access studies, technical assistance programs, corridor analysis and the development of regional typologies fall under the UPWP. UPWPs are regularly funded through: Federal Highway Administration Planning grants, Federal Transit Administration Planning Grants, State Regional Transportation Planning Organization Planning & Long-range Planning Grants, Special Award Planning Grants, and Non-Federal Match.	Planning	DRCOG

Table VI-A-3 Local Funding Sources

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Benefit Assessment District	Local	Benefit Assessment Districts assess properties in proportion to the benefit conferred by an improvement and are used to pay for local infrastructure. Provides a uniform procedure for local government agencies to finance the maintenance and operation of public systems such as drainage, flood control, and street lighting.	Infrastructure	Local Government
Denver TOD Acquisition Fund (Urban Land Conservancy, Enterprise Community Partners, the City & County of Denver and several other investors)	Local (City & County of Denver only)	Acquires properties in current and future transit corridors, with the goal of creating and preserving up to 1,200 affordable housing. The Fund is capitalized at \$15 million, with an eventual goal of \$25 million in total loan capital. The Fund will purchase and hold sites for up to five years along transit corridors.	Affordable Housing	Urban Land Conservancy, Enterprise Community Partners, City & County of Denver and several others (potential regional expansion with Ford)
Development Fees	Local	Local plan fees for approval of development projects that fund not only current planning/permitting staff, but also long-range planning staff who perform strategic land use, urban design, and less frequently, capital improvement planning related to transit corridor and station area development.	Planning	Local government
Development Impact Fees	Local	Local governments may exact fees to compensate for the projected impact that new development will have on local public infrastructure. The major drawback with impact fees is that they are “pay-as-you-go” and difficult to bond against.	Infrastructure	Local Government
General Obligation Bonds	Local	General obligation bonds are issued for municipal projects that do not generate revenue, including infrastructure upgrades. These tax-exempt bonds are backed by the “full-faith-and-credit” of the issuer and generally include a limited or unlimited property tax levy pledge.	Infrastructure	Local Government
Local Property Tax Levies	Local		Affordable Housing	Municipal
Revenue Bonds	Local	Tax-exempt revenue bonds are issued for specific public works projects and are generally secured with revenues from the infrastructure facility. They can be used to finance utilities upgrades needed to support higher intensity development around transit	Infrastructure	Local Government

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Special Tax Districts	Local	In some states, special tax districts can retroactively pay for plans related to improvements financed by the district. For example, in California, the Mello-Roos or community facilities districts established to pay for community improvements or services can also be used to pay for planning and design work directly related to the improvements being financed.	Planning	Locally enacted; enabled at state-level
Tax Abatement	Local	Full or partial exemption from real estate taxes for a limited time period.	Market Rate TOD	Local Government
Tax Increment Financing (TIF)	Local	In a TIF district, projected TIF revenues are bonded against and the bond proceeds used to pay for major development initiatives or infrastructure investments that catalyze private investment and increases in property values. A TIF district is a legally defined area targeted for redevelopment.	Infrastructure	Local Government/Urban Renewal Authorities

Table VI-A-4 Private Funding Sources

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Commercial Debt	Private	The majority of financing available for private real estate development is debt from banks, commercial mortgage securities, and other privately- and publicly-owned sources. Debt requires repayment under specific terms, including interest rate and repayment schedules. Creditors are not owners but may have recourse to the financed asset should a loan fail. The available pool of commercial real estate debt has been shrinking since 2007 with the housing market turndown and collapse of mortgage-backed securities and has not yet stabilized. Debt financing is scarce and expensive.	Market Rate TOD	Commercial Banks/Commercial Mortgage Backed Securities/Life Insurance Companies
Equity Investment	Private	Equity investment made up about 20 percent of total capital sources for U.S. real estate in 2009. The major sources of equity are predominantly private investors, but also publicly held real estate investment trusts, pension funds and foreign investors. Equity investment is constrained given the current real estate market, with capital flow directed towards low cost existing properties rather than new construction.	Market Rate TOD	Private Investors/Public REITs/Pension Funds/Foreign Investors
Location Efficient Mortgages	Private	The location-efficient mortgage concept is that underwriting should take into account the transportation cost savings available to those living near transit, and their corresponding capacity to support higher mortgage payments relative to their incomes.	Affordable Housing	Lenders

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Structured Loan Funds	Private	Mission-driven structured acquisition funds combine debt, equity and grant investments from public entities, community development finance institutions, commercial banks seeking CRA credit and foundation program and mission-related investment to provide lower cost property acquisition financing to equitable TOD projects (affordable, workforce and mixed income housing). These funds help meet the acquisition financing gap created by the limitations of permanent affordable housing finance which are exacerbated for TOD by the higher cost and scarcity of quality opportunity sites near transit. Public subsidy investments with no return expectations occupy the critical top loss risk position for these funds and are essential to their formation.	Affordable Housing	CDFI
Time "Tranches"	Private	Time tranches are used in a product such as a mortgage-backed security that allows investors to take less risk and enter and exit at different times in the development period. It helps fund complex mixed-use projects.	Market Rate TOD	Private Developers/Real Estate Investment Entities

Table VI-A-5 Public/Private Funding Sources

Resource Program	Resource Type	Program Description	Uses	Source/Actor
Joint Development	Public/Private	There are many different tools that facilitate public and private co-development of real estate projects. These include Requests for Proposals for private development of publicly owned sites, development agreements that delineate investment, responsibilities and outcome for each participant, co-use of improvements and air rights/ground lease development whereby a property owner retains ownership of a parcel while allowing development over an extended lease period. Local and regional governments may use these to obligate private development in exchange for various public contributions, or to delineate agreements with other institutional partners engaged in real estate development.	Market Rate TOD	Public Agencies/Transit Agencies/Private Developers

Appendix B. Market Conditions by Station Area

In order to profile the market conditions of the West Corridor, CTOD compiled demographic and market data for each of the station areas on the Corridor. The data included incomes, race and ethnicity, housing tenure and employment composition. In addition CTOD compiled information on projects that are currently planned, proposed, or under construction in the area.

CTOD also conducted interviews with developers and other real estate professionals who are active in the West Corridor community. The purpose of these interviews was to characterize the types of tenants/residents who may be interested in locating on the West Corridor, and to identify the market strengths and weaknesses of each of the station areas along the West Corridor. A summary of the results of those interviews is appended to this report.

To understand the potential for development along the West Corridor, CTOD conducted an analysis of parcel size and utilization. This analysis analyzed and mapped the size of all parcels within the West Corridor station areas and identified commercial parcels that are underutilized using County Assessor's data.

The utilization analysis used a ratio dividing the two components that determine a parcel's assessed value – improvement value and land value. The resulting "improvement to land value ratio" is a simple measure used to analyze the economic utility of a parcel. If the ratio is above 1.0, the on-site improvement has more value than the land on which it resides. If the ratio is less than 1.0, the assessed value of the land is higher than the on-site improvement, indicating that the property is currently "underutilized" and might be likely to redevelop over time.

The following station area summaries present demographic and market data alongside planned development amounts in order to provide a "reality check" on proposed uses and densities.

10th and Osage

The 10th and Osage station, located in Denver, is characterized by a diversity of land uses in the station area including single and multi-family residential, commercial, industrial and open space. Of the 1,355 households in the station area, 74 percent are renters.²⁴ Additionally, the Denver Housing Authority maintains the South Lincoln property, which consists of 271 row homes on 15.1 acres. The character of the area east of the station is predominantly residential while the area west of the station is dominated by industrial uses.

The sectoral composition of employment in the station area reflects the prevalence of industrial land uses with 54 percent of total jobs accounted for in the Production, Distribution, and Repair industry group. A range of mobility options in the Lincoln Park/La Alma neighborhood contribute to the relatively high percentage, 36 percent, of residents who either take public transportation, walk, or bike to work.

Tables III-1 and III-2 summarize the existing market conditions, market strength, and planned development for the station area.

Table VI-B-1: 10th and Osage Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision		
Race & Ethnicity	64% of Hispanic origin	Parcel Size - Acres	< .5	76.1%	Proximity to the Auraria Campus, the Central Business District, the Santa Fe Arts District, and the Downtown Cultural Complex	Residential	800-900 units
	17% White		.5-1	7.8%			
	9% Black or African American		1-3	14.2%			
Income Mix	38% earn \$25,000 to \$50,000		3-5	1.1%			
	21% earn \$50,000 to \$75,000		5+	0.9%			
Tenure	26% Owner Occupied	Percentage of Underutilized Acres	53%				
Employment	3,672 Jobs						
		3% Retail					

Source: City and County of Denver, 2010; Center for Transit Oriented Development, 2010.

Auraria West

The Auraria West station is located on the Auraria Campus in Denver, which serves approximately 43,000 students at the University of Colorado-Denver, Metropolitan State College, and the Community College of Denver. The character of the area is predominantly institutional directly adjacent to the station and includes 230 student housing units that house approximately 685 students. The Pepsi Center is located to the north of the Auraria West station and includes a significant amount of surface parking. Additionally, the southern end of the station

area has a concentration of industrial uses. The Auraria Higher Education Center has purchased some of the industrial land in the “South of Colfax” area with plans to build campus supportive recreational uses and open space that will also serve neighborhood residents. Access to the Auraria West station, along with frequent bus service on Colfax Avenue, provides commute options to the 31 percent of the population who use public transportation.

Tables III-3 and III-4 summarize the existing market conditions, market strength, and planned development for the station area.

Table VI-B-2: Auraria West Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision		
Race & Ethnicity	38% of Hispanic origin	Parcel Size - Acres	< .5	55.4%	Proximity to the Auraria Campus, the Central Business District, and City/County of Denver and State government buildings	Residential	1,758--2,413 units
	24% Black or African American		.5-1	16.5%		Office	400,000--
	23% White		1-3	15.1%			2.4 million Sq. Ft.
Income Mix	67% earn less than \$25,000		3-5	3.7%		Retail	65,000--
	22% earn \$25,000 to \$50,000		5+	9.4%			900,000 Sq. Ft.
Tenure	11% Owner Occupied	Percentage of Underutilized Acres	82%			Institutional	1.8 million Sq. Ft. of
Employment	4,026 Jobs						of academic and
	<1% Retail			administrative uses			

Source: City and County of Denver, 2010; Center for Transit Oriented Development, 2010.

Federal/Decatur

The Federal/Decatur station, in Denver, is located in an area with a diversity of land uses including single and multi-family residential, commercial, industrial and institutional. Of the 1,510 households in the station area, 76 percent are renters. The Denver Housing Authority maintains 330 units in the Sun Valley row homes. Employment in the station area is equally diverse with high concentrations of workers in Production, Distribution, and Repair, Education and Medi-

cal, and Knowledge Based industry groups. The Federal/Decatur station will also serve Invesco Field at Mile High, which is also located within the station area. Additionally, there is a large amount of surface parking that serves Invesco Field at Mile High.

Tables III-5 and III-6 summarize the existing market conditions, market strength, and planned development for the station area.

Table VI-B-3: Federal/Decatur Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision		
Race & Ethnicity	70% of Hispanic origin	Parcel Size - Acres	< .5	86.0%	Proximity to the Auraria Campus and the Central Business District	Residential	3,600 units
	12% White		.5-1	6.9%		Office	510,000 Sq. Ft.
	9% Black or African American		1-3	4.5%		Retail	165,000 Sq. Ft.
Income Mix	55% earn less than \$25,000		3-5	1.6%			
	30% earn \$25,000 to \$50,000		5+	0.9%			
Tenure	24% Owner Occupied	Percentage of Underutilized Acres	49%				
Employment	1,064 Jobs						
		9% Retail					

Source: City and County of Denver, 2010; Center for Transit Oriented Development, 2010.

Knox

There are 2,337 households in the predominantly residential Knox station area, which is located in Denver. Also located in the station area are the Westridge Homes, managed by the Denver Housing Authority. The Westridge Homes includes 200 row homes on 4.7 acres. Reflective of the residential character, 96 percent of the parcels in the station area are under a half acre in size. The Knox

station area has one of the highest concentrations of low income families in the West Corridor with 46 percent of households earning less than \$25,000 per year. A large majority of residents in the station area (75 percent) are of Hispanic origin.

Tables III-7 and III-8 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-4: Knox Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision	
Race & Ethnicity	75% of Hispanic origin	Parcel Size - Acres	< .5	96.3%	Small parcel sizes. Limited opportunities for new development in short term.	n/a
	15% White		.5-1	2.2%		
Income Mix	46% earn less than \$25,000		1-3	1.2%		
	33% earn \$25,000 to \$50,000		3-5	0.2%		
Tenure	38% Owner Occupied		5+	0.1%		
Employment	354 Jobs	Percentage of Un-derutilized Acres	21%			
	15% Retail					

Source: City and County of Denver, 2010; Center for Transit Oriented Development, 2010.

Perry

The Perry station area, located in the City of Denver, has the highest concentration of households on the West Corridor. Of the 2,595 households in the station area, 60 percent are renters and 76 percent earn less than \$50,000 per year. At 97 percent, the station area also has the highest concentration of parcels under one

half acre in size. A large majority of residents in the station area (74 percent) are of Hispanic origin.

Tables III-9 and III-10 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-5: Perry Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision	
Race & Ethnicity	74% of Hispanic origin	Parcel Size - Acres	< .5	97.0%	Small parcel sizes. Limited opportunities for new development in short term.	n/a
	20% White		.5-1	1.8%		
Income Mix	43% earn less than \$25,000		1-3	1.0%		
	33% earn \$25,000 to \$50,000		3-5	0.2%		
Tenure	40% Owner Occupied		5+	0.1%		
Employment	239 Jobs	Percentage of Underutilized Acres	17%			
	12% Retail					

Source: U.S. Bureau of the Census, 2000; Center for Transit Oriented Development, 2010.

Sheridan

The Sheridan station area is bisected by the jurisdictional boundary between the cities of Denver and Lakewood. The Sheridan station area is predominantly residential with the exception of neighborhood serving strip retail centers along Sheridan Boulevard. There are 2,135 households in the station area. Parcel sizes in the station area reflect the residential character of the neighborhood with 91 percent of parcels less than one half acre in size. A consortium of local community groups

including the Urban Land Conservancy, New West Side Economic Development, and Enterprise Community Partners have recently acquired the Jody Apartments with the intent to redevelop the property as affordable TOD in the future.

Tables III-11 and III-12 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-6: Sheridan Station Area Existing Market Conditions

Existing Character		Development Opportunities			Market Strength	Plan/Vision	
Race & Ethnicity	58% of Hispanic origin	Parcel Size - Acres	< .5	90.8%	Small parcel sizes. Limited opportunities for new development in short term.	Residential	3,120--3,570 units
	36% White		.5-1	4.3%		Office	250,000--
Income Mix	38% earn less than \$25,000		1-3	4.3%		Retail	277,500 Sq. Ft.
	38% earn \$25,000 to \$50,000		3-5	0.6%			274,000--
Tenure	32% Owner Occupied		5+	0.1%			323,500 Sq. Ft.
Employment	892 Jobs	Percentage of Underutilized Acres	15%				
	14% Retail						

Source: City and County of Denver, 2010; City of Lakewood, 2010; Center for Transit Oriented Development, 2010.

Lamar

The Lamar station area, which is located in the City of Lakewood, acts as a transition point between the primarily residential station areas to the east and the more employment intensive station areas to the west. Nearly 20 percent of parcels in the station area are over one half acre in size. Low-rise office buildings along

Lamar Street and West 14th Avenue contribute to 2,555 jobs in the station area.

The majority of jobs are within the Knowledge Based and Education/Medical industry groups.

Tables III-13 and III-14 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-7: Lamar Station Area Existing Market Conditions

Existing Character		Development Opportunities			Market Strength	Plan/Vision		
Race & Ethnicity	35% of Hispanic origin	Parcel Size - Acres	< .5	81.7%	Proximity to the Rocky Mountain College of Art and Design and the Colfax commercial corridor	Residential	1,100--1,500 units	
	57% White		.5-1	11.2%		Office	15,000--	
Income Mix	36% earn less than \$25,000		1-3	5.3%				20,000 Sq. Ft.
	38% earn \$25,000 to \$50,000		3-5	1.1%			Retail	35,000--
	14% earn \$50,000 to \$75,000		5+	0.6%				50,000 Sq. Ft.
Tenure	30% Owner Occupied		Percentage of Underutilized Acres	7%				
Employment	2,555 Jobs							
		7% Retail						

Source: City of Lakewood, 2010; Center for Transit Oriented Development, 2010.

Wadsworth

The Wadsworth station area, located in Lakewood, maintains an intensity of both residential and commercial uses. Of the 2,075 households in the station area, 80 percent are renters. Retail jobs account for 34 percent of the 3,097 jobs in the station area. The high percentage of retail jobs in the station area can be attributed to

the neighborhood serving retail along Wadsworth Boulevard and the retail node around the Wadsworth/Colfax intersection.

Tables III-15 and III-16 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-8: Wadsworth Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision		
Race & Ethnicity	25% of Hispanic origin	Parcel Size - Acres	< .5	78.6%	Proximity to the Colfax commercial corridor	Residential	1,800--2,755 units
	67% White		.5-1	14.0%		Office	175,000--
Income Mix	38% earn less than \$25,000		1-3	6.1%			570,000 Sq. Ft.
	36% earn \$25,000 to \$50,000		3-5	0.9%		Retail	926,000--
	16% earn \$50,000 to \$75,000		5+	0.4%			1,345,000 Sq. Ft.
Tenure	20% Owner Occupied	Percentage of Underutilized Acres	9%				
Employment	3,097 Jobs						
		34% Retail					

Source: City of Lakewood, 2010; Center for Transit Oriented Development, 2010

Garrison

Predominantly residential, the Garrison station area (located in Lakewood) is less dense than other station areas along the west corridor. Of the 1,247 households in the station area, 50 percent are owner occupied. The station area is also more affluent than the station areas to the east with 20 percent of the households in the

station area earning more than \$75,000 per year. Additionally, there are 1,214 jobs in the area. The highest concentration of jobs, or 43 percent, is within the Knowledge Based and Education/Medical industry groups

Tables III-17 and III-18 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-9: Garrison Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision	
Race & Ethnicity	13% of Hispanic origin	Parcel Size - Acres	< .5	72.6%	Proximity to the Colfax commercial corridor	n/a
	79% White		.5-1	20.1%		
Income Mix	38% earn 25,000 to \$50,000		1-3	6.0%		
	19% earn \$50,000 to \$75,000		3-5	0.7%		
	20% earn more than \$75,000		5+	0.7%		
Tenure	50% Owner Occupied	Percentage of Underutilized Acres	5%			
Employment	1,214 Jobs					
		21% Retail				

Source: City of Lakewood, 2010; Center for Transit Oriented Development, 2010.

Oak

The Oak station area, in Lakewood, is located in an area with a diversity of land uses including single family residential, commercial, and industrial. Of the 1,093 households in the station area, 43 percent are owner occupied. Employment in

the station area is equally diverse with high concentrations of workers in Production, Distribution, and Repair (46 percent) and Retail (18 percent).

Tables III-19 and III-20 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-10: Oak Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision		
Race & Ethnicity	12% of Hispanic origin	Parcel Size - Acres	< .5	77.8%	Proximity to the Denver Federal Center	Residential	1,219--2,000 units
	82% White		.5-1	9.9%		Office	1,500,000--
Income Mix	39% earn \$25,000 to \$50,000		1-3	6.7%			2,000,000 Sq. Ft.
	21% earn \$50,000 to \$75,000		3-5	1.5%		Retail	885,000--
	14% earn more than \$75,000		5+	4.0%			1,200,000 Sq. Ft.
Tenure	43% Owner Occupied	Percentage of Underutilized Acres	17%				
Employment	5,715 Jobs						
		18% Retail					

Source: City of Lakewood, 2010; Center for Transit Oriented Development, 2010.

Federal Center

The Federal Center, located in the City of Lakewood, is one of the largest employment centers in the Denver Metropolitan Area. There are approximately 12,912 jobs in the station area, 47 percent of which are Federal. Firms within the Knowledge Based industry group play a supportive role to government activities and

account for 21 percent of jobs in the station area. There are also 997 households located in the station area. Nearly 82 percent of all parcels in the station area are over one acre in size.

Tables III-21 and III-22 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-11: Federal Center Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision		
Race & Ethnicity	8% of Hispanic origin	Parcel Size - Acres	< .5	5.6%	Denver Federal Center high levels of planned investment	Residential	1,440 units
	83% White		.5-1	12.5%		Office	2,800,000 Sq. Ft.
Income Mix	39% earn \$25,000 to \$50,000		1-3	41.7%		Retail	212,000 Sq. Ft.
	28% earn \$50,000 to \$75,000		3-5	19.4%			
	15% earn more than \$75,000		5+	20.8%			
Tenure	17% Owner Occupied	Percentage of Underutilized Acres	7%				
Employment	12,912 Jobs						
		<1% Retail					

Source: City of Lakewood, 2010; Center for Transit Oriented Development, 2010.

Red Rocks Community College

The Red Rocks Community College station area, located in Lakewood, will serve the 14,000 student community college campus in addition to nearby households and workers. Of the 1,593 households in the station area, 60 percent are owner occupied. There are approximately 1,196 jobs in the station area, 75 percent of

which can be attributed to Red Rocks Community College and other educational institutions in the area.

Tables III-23 and III-24 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-12: Red Rocks Station Area Existing Market Conditions

Existing Character		Development Opportunities		Market Strength	Plan/Vision	
Race & Ethnicity	9% of Hispanic origin	Parcel Size - Acres	< .5	95.2%	Proximity to Red Rocks Community College	n/a
	80% White		.5-1	0.7%		
Income Mix	36% earn \$25,000 to \$50,000		1-3	1.3%		
	28% earn \$50,000 to \$75,000		3-5	0.9%		
	17% earn more than \$75,000		5+	1.9%		
Tenure	60% Owner Occupied	Percentage of Underutilized Acres	0.06%			
Employment	1208 Jobs					
		1% Retail				

Source: City of Lakewood, 2010; Center for Transit Oriented Development, 2010

Jefferson County Government Center

The Jefferson County Government Center station area, located in the City of Golden, includes 3,719 jobs, 84 percent of which are employed in the public sector. Of the 491 households in the station area, 75 percent are owner occupied. Household incomes in the station area are relatively high, 42 percent of house-

holds make more than \$50,000 per year. Additionally, parcel sizes in the station area are larger than many other station areas along the West Corridor, 59 percent of parcels are larger than one acre in size.

Tables III-25 and III-26 summarize the existing market conditions, market strength and planned development for the station area.

Table VI-B-13: Jefferson County Station Area Existing Market Conditions

Existing Character		Development Opportunities			Market Strength	Plan/Vision
Race & Ethnicity	12% of Hispanic origin	Parcel Size - Acres	< .5	31.5%	Diversity of parcel sizes reflecting opportunities for different development types	n/a
	80% White		.5-1	9.6%		
Income Mix	29% earn \$25,000 to \$50,000		1-3	21.9%		
	21% earn \$50,000 to \$75,000		3-5	9.6%		
	21% earn more than \$75,000		5+	27.4%		
Tenure	75% Owner Occupied		Percentage of Underutilized Acres	Less than 1%		
Employment	3,719 Jobs					
		1% Retail				

Source: Center for Transit Oriented Development, 2010

Appendix C. Lessons Learned

The Denver region has had a light rail system since 1994. In the sixteen years since, there have been many lessons learned that can be applied to supporting TOD along the West Corridor. The following section describes the Central Corridor, Southeast Corridor, and Southwest Corridor in greater detail, along with successes and struggles of implementing TOD along each corridor.

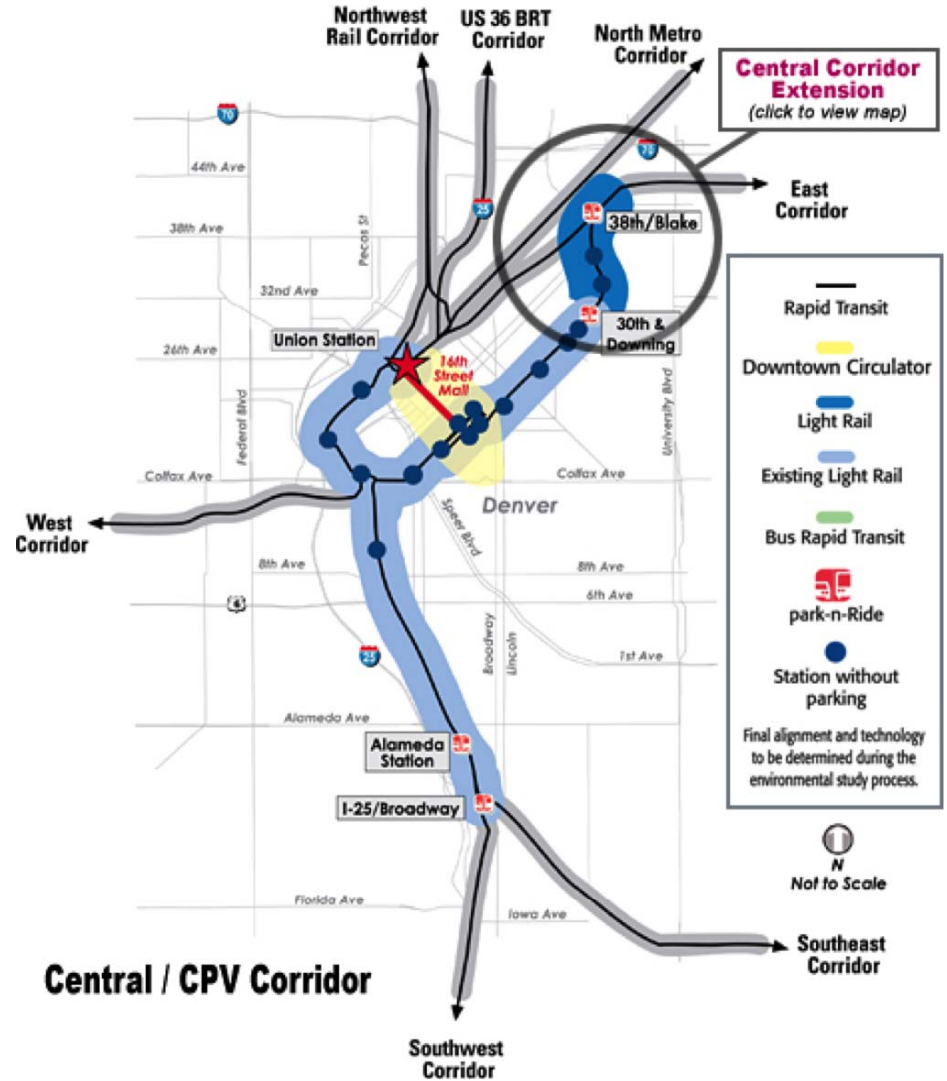
Central Corridor

The Central Corridor was the first light rail line constructed in the region, completed in 1994 and followed by the Central Valley Platte Spur in 2000. While this corridor only covers a small part of the overall region, it laid the groundwork for the eventual expansion of the rail network. Connecting the Central Business District, Lower Downtown (the up-and-coming LoDo neighborhood), Invesco Field (home to the Denver Broncos), Pepsi Center (home of the Denver Nuggets and Colorado Avalanche), Auraria Campus (home to three institutions of higher learning), and the Five Points neighborhood, this corridor is also classified as a destination connector.

The Central Corridor also has one example of proactive infrastructure planning that the West Corridor could replicate. The infrastructure improvements put in place in Lower Downtown/Ballpark neighborhood before most development took place made the area more suitable for compact, mixed-use development that now characterizes the area. The City & County of Denver reconfigured the road connections, built new sidewalks, and had the utility infrastructure in place before the baseball stadium, Coors Field, finished construction. The LoDo neighborhood underwent a major revitalization and soon it will become the hub of the regional transit network as the new FasTracks lines finish construction and all

culminate at Union Station. Infrastructure investments took place ten to twenty years ago, long before the completion of a transit network but with enough foresight to realize the neighborhood's long-range development potential.

Figure VI-C-1: Map of the Central Corridor



SOURCE: Regional Transportation District, 2010

The Central Corridor also presents examples in equitable TOD, as the Denver Housing Authority has heavily invested in several properties near station areas in the Five Points and Curtis Park neighborhoods. In Curtis Park, DHA invested \$132.1 million to demolish 286 units and replace them with 550 mixed-income units, 345 rental and 205 owner-occupied. In the Park Avenue/Benedict Park Place development, DHA invested \$205.4 million to demolish 249 units and replace them with 873 mixed-income units, including 598 rental units. Both sites currently have a waiting list, according to officials at DHA.²⁵

Another key issue in the Five Points neighborhood is a lack of market-rate development. The opening of the light rail line along Downing did not lead to significant displacement as it did in other parts of the city, which while good from an equity standpoint, also highlights that new transit does not always lead to economic development. To address these concerns, the City & County of Denver's Office of Economic Development in 2009 selected Five Points as a pilot neighborhood for its Neighborhood Marketplace Initiative, a program "designed to strengthen business districts and their surrounding neighborhoods citywide."²⁶ The goals of the plan were to strengthen the Welton Corridor through:

- Creating a more accessible and relevant business district for nearby residents through attracting and supporting the right services, amenities and retail to the corridor
- Responding to the development, land use and small business challenges currently facing the corridor
- Developing strong relationships between corridor business and property owners, residents and community leaders to strengthen and improve the Welton Corridor
- Attracting new development and investment to the corridor

Through a public participation process and economic analysis, a strategy was developed for the corridor:

"Welton Street is a multi-cultural entertainment district, rooted in African American history and seen as a destination for arts, culture and entertainment. The corridor also provides neighborhood serving retail and services and is the focal point and central gathering place for the surrounding neighborhoods including San Rafael, Curtis Park, Cole, Whittier and Five Points."

Community members have drafted a 20-year comprehensive plan for revitalizing the neighborhood. It calls for a permanent visitors center, a black firefighters museum, a cultural-preservation commission, and a "Health and wellness village" that would wrap around an existing health clinic and recreation center and include a cooking kitchen and farmers' market.

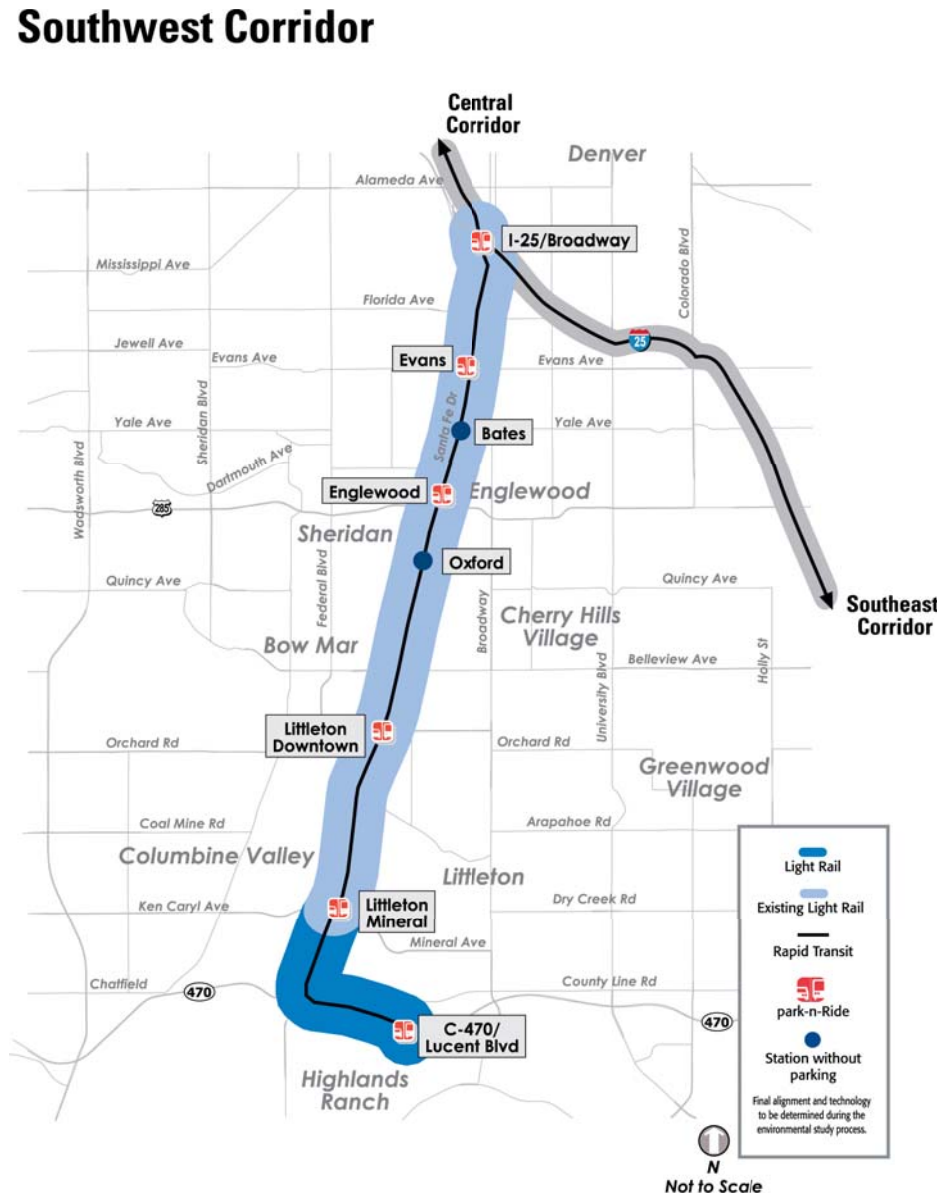
In addition, the Colorado Department of Local Affairs selected Five Points as one of four pilot communities for its Sustainable Main Streets Initiative in 2010. HUD and DOT recently awarded DOLA \$1.8 million as part of the Sustainable Communities Community Challenge and TIGER II grant programs to provide financial and technical assistance to Five Points and the other pilot communities as they revitalize their downtowns with TOD principles in mind.²⁷ The combination of local and federal funds should improve economic opportunities along the Central Corridor, and may provide a useful case study to both Denver and Lakewood as they seek to stimulate TOD investments in similar station areas on the West Corridor.

Southwest Corridor

The Southwest Corridor was the second major addition to Denver's light rail network, and extends south from the Broadway station through south Denver, Englewood, and Littleton. This corridor runs along an older freight rail alignment, passing along the outskirts of communities rather than traveling through their centers (like the Central Corridor.) There are no job centers with over 10,000 workers along the Southwest Corridor, and no new major destinations were connected by the transit, making this more of a commuter corridor. RTD has found that the Southwest Corridor has seen only limited real estate development over the past ten years.²⁸

However, the station areas where the most development has occurred can help inform decision making around the West Corridor. Some infill projects have been built around the Downtown Littleton station, where a historic downtown with small blocks and a walkable grid already supported small-scale retail uses. CityCenter Englewood was a much larger endeavor by the City of Englewood to transform "an aged and failing shopping mall into a pedestrian-oriented, mixed-use center."²⁹ The City not only laid down the infrastructure for this project, creating new streets with wide sidewalks and trees, but also moved their facilities to the new station area, denoting their dedication to the project and bringing in a consistent workforce to attract supportive uses.

Figure VI-C-2: Map of the Southwest Corridor



SOURCE: Regional Transportation District, 2010

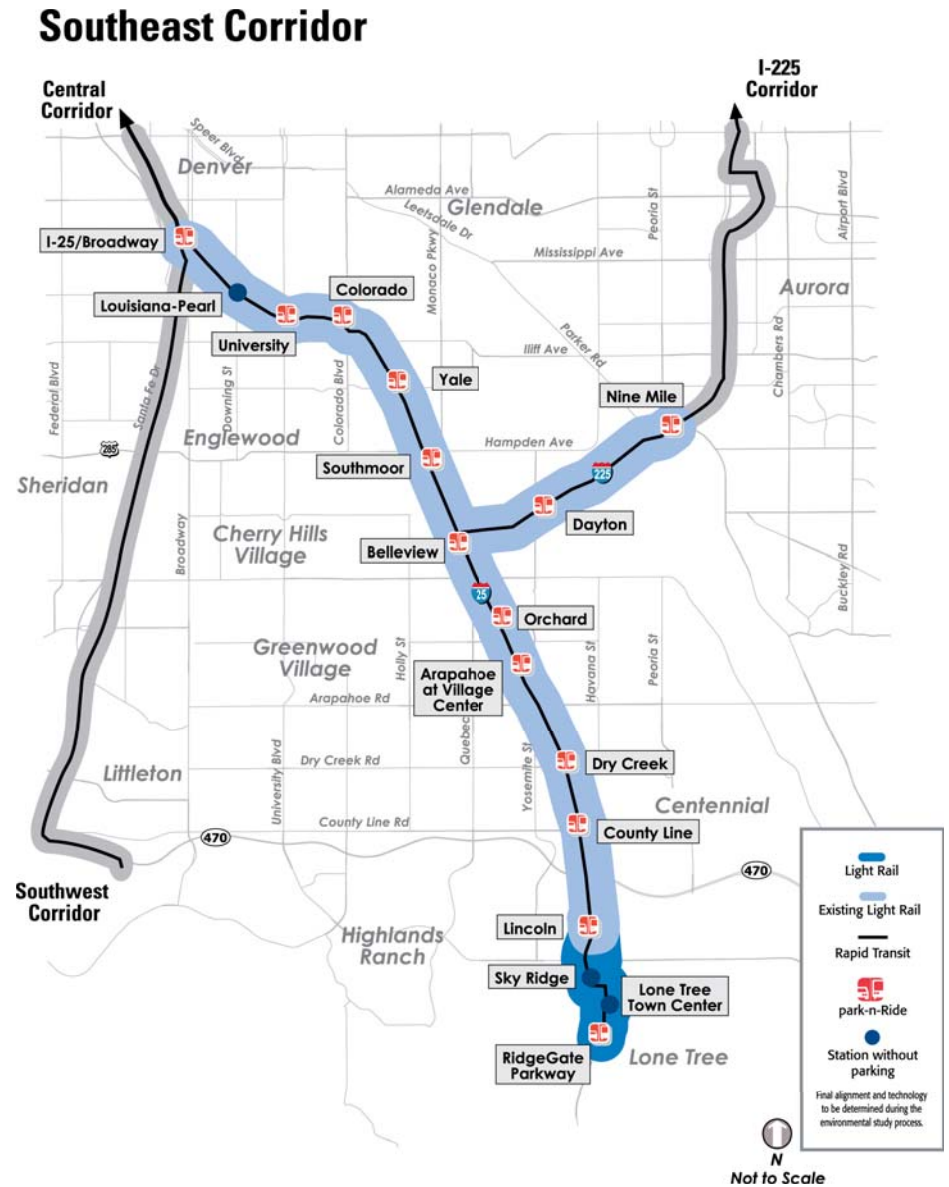
Southeast Corridor

The Southeast Corridor is the newest line in the Denver region and opened in 2006. The line runs down the I-25 freeway through Greenwood Village, Centennial, Arapahoe County, Lone Tree, and Douglas County. While some of the stations are in primarily residential neighborhoods, this line connects to the second major employment center in the Denver region: the Denver Tech Center. These centers of business activity make the corridor a destination connector, with the suburban Tech Center on one end and downtown Denver on the other. Most of the station areas along this corridor are in auto-centric, low-density, suburban areas, and thus they lack the elements that contribute towards walkable, transit-friendly environments, like a walkable street grid, historic buildings, or a mix of land uses.

In a report to the Federal Transit Administration, CTOD found that “the corridor has experienced approximately 7.8 million square feet of new development, much consisting of larger, often phased, projects on greenfield sites. While it is unlikely that the transit itself has stimulated a significant amount of new development, it has reportedly had an impact on the design of projects near stations, and may have resulted in a greater mix of uses in the station areas.”³⁰

The Federal Center and Jefferson County Government Center are the stations on the West Corridor with the most to learn from the Southeast Corridor. The transit investment will not create a new market around these stations, but it may reinforce the existing market, inviting more tenants into buildings that are accessible by transit.

Figure VI-C-3: Map of the Southeast Corridor



SOURCE: Regional Transportation District, 2010

Appendix D. Regional and Citywide Plans and Policies

The following section summarizes the regional and local plans and policies in place for the Denver region, as they pertain to the West Corridor.

DRCOG Metro Vision 2035

The Denver Regional Council of Governments (DRCOG) adopted a regional blueprint for future growth and development in 2007.³¹ Metro Vision 2035 includes four chapters: (1) growth and development policies that influence urban form, (2) transportation policies addressing all modes including transit, bicycles, and pedestrians, (3) environmental air, water and parks/open space policies, and (4) implementation strategies to achieve the plan's vision, goals, and policies. The vision of the blueprint is to concentrate development within an urban growth boundary, especially near existing and proposed transit stations part of the FasTracks initiative. It discourages large-lot development in existing urban centers and encourages higher density, mixed-used, transit-oriented development in urban centers. It also calls for a balanced multimodal transportation network that provides mobility choices for all users. DRCOG plans to update Metro Vision in January 2011 with a new sustainability section. The draft sustainability goal calls for locating 50% of all new housing units and 75% of all new jobs in designated "Urban Centers" between 2005 and 2035.³²

RTD Strategic Plan for TOD

The Regional Transportation District's (RTD) Strategic Plan for Transit Oriented Development (Plan) contains the transit agency's vision, goals, and strategies for implementing TOD along the region's transit corridors. The three core goals are

to (1) provide improved transportation choices and options to the citizens of the District, (2) increase transit mode share during peak travel times, and (3) establish a proactive plan that balances transit needs with future regional growth. RTD's vision statement for TOD is to:

[E]ncourage compact, mixed-used, pedestrian-oriented, high-quality development at and around transit stations consistent with federal requirements, regional goals, and community objectives—including sustainable growth—in partnership with stakeholders while operating an attractive, comfortable, and convenient transit system for the residents of the district.

It seeks to achieve this vision through four key goals: (1) promoting multi-sector, cross-jurisdictional partnerships, (2) encouraging livable communities and sustainable development that support the transit system, (3) ensuring a hierarchy of multimodal access; and (4) protecting & enhancing RTD's transit assets.

RTD first adopted this Plan in 2006 and has subsequently amended it in 2008 and 2010. The most recent update clarifies the agency's role in joint development and includes an affordable housing policy. RTD will consider joint development proposals as long as they do not limit the agency's access and operations in the event the land is needed for future transit purposes. It will not be involved in the physical development of non-transit uses but will ensure the integration of incidental uses with the transit network. The affordable housing policy applies to both solicited and unsolicited joint development proposals and applies to the sale or lease of RTD land that a developer is proposing for residential use. In the case of a solicited RFQ/RFP, RTD will set the affordable housing goal in accordance with the local jurisdiction where the land is located and identify the level of affordability. Where unsolicited, the developer must include affordability goals in their proposal³².

Blueprint Denver

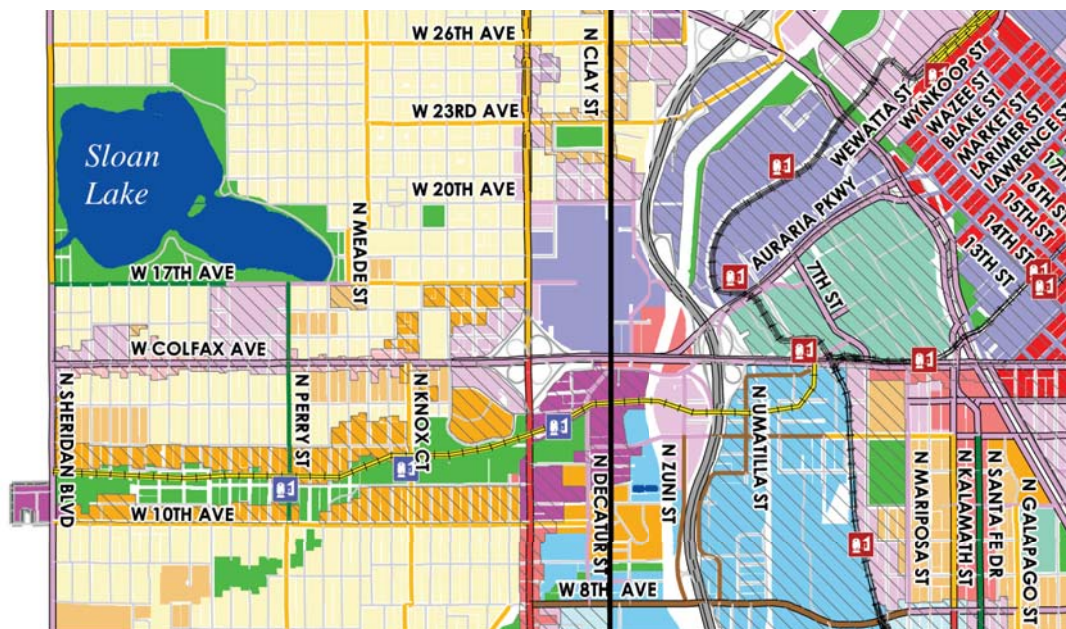
Blueprint Denver is a strategic land use and transportation plan for the City and County of Denver, adopted in 2002 as a supplement to the Denver Comprehensive Plan 2000.³⁴ It divides the city into two areas: Areas of Change and Areas of Stability. Areas of Stability are “stable residential neighborhoods where no significant changes in land use are expected over the next twenty years,” while Areas of Change are “areas that will benefit from, and thrive on, an infusion of population, economic activity and investment.” Blueprint also calls for multi-modal streets and encourages mixed-use development, especially near transit stations.

The following map displays the Areas of Change and Stability along the West Corridor. Most land within the one-half mile radii of station areas is classified as an Area of Change at the

10th & Osage, Auraria West, and Federal/Decatur stations. Significant portions of land at the Knox, Perry, and Sheridan stations are also classified as Areas of Change. The parks and open space along the Lakewood Gulch are classified as Areas of Stability.

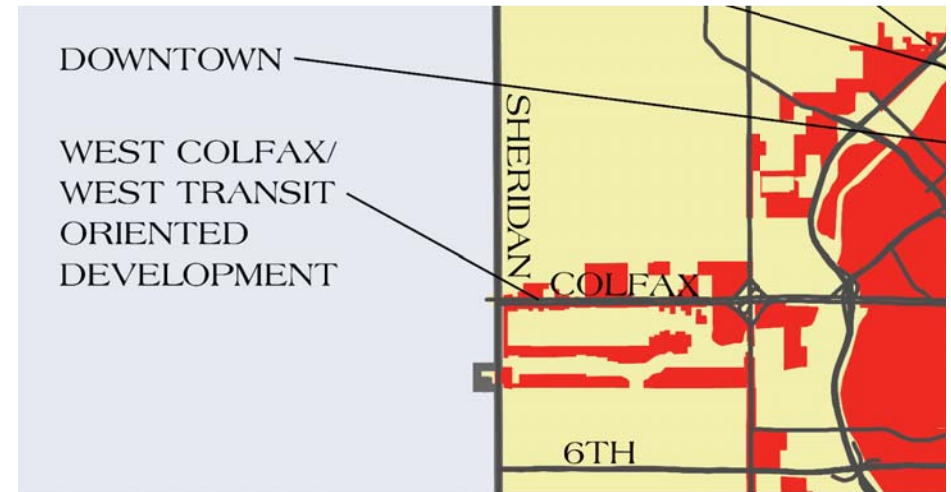
Blueprint Denver also includes a conceptual land use map of the entire city and county. The map shows the

Figure VI-D-2: Blueprint Denver Conceptual Land Use Map



SOURCE: City & County of Denver, Blueprint Denver (2002)

Figure VI-D-1: Blueprint Denver Areas of Change & Stability



SOURCE: City & County of Denver, Blueprint Denver (2002)



conceptual land uses along the West Corridor. The station area plans and recent zoning changes reflect these conceptual land uses.

Denver's TOD Strategic Plan

The City and County of Denver prepared a Transit Oriented Development Strategic Plan in 2006 to prioritize planning and implementation activities at existing and proposed transit stations within the city.³⁵ Reconnecting America and CTOD were also involved with the development of this plan. The plan includes a typology map for each station in Denver, based on desired land use mix, desired housing types, commercial/employment types, proposed scale, and transit system function.³⁶ Typologies include downtown, major urban center, urban center, urban neighborhood, commuter town center, main street, and campus/special events station. It also includes activity priorities based on the market. The following table defines the typology for each West Corridor station within Denver:

The city is currently in the process of updating this plan with new implementa-

Table VI-D-1: Station Area Typologies for Denver West Corridor Stations

Station	Typology	Market Opportunity	Phasing Priority of City Action
10th & Osage	Urban neighborhood	Emerging	Immediate
Auraria West	Campus	Emerging	Monitor & respond
Federal/Decatur	Urban center	Emerging	Immediate
Knox	Urban neighborhood	Emerging	Monitor & respond
Perry	Urban neighborhood	Emerging	Monitor & respond
Sheridan	Urban neighborhood	Emerging	Immediate

SOURCE: City & County of Denver, *TOD Strategic Plan (2006)*

tion strategies and a new typology map. It will use funding from the HUD/DOT Sustainable Communities grant to facilitate this process.

Lakewood Transit-Mixed Use Zone Development Manual

Lakewood has created a Transit Mixed-Use Zone Development Manual to foster TOD around new light rail stations.³⁷ The intent of the document is to acquaint real estate developers and Lakewood citizens with the concept of TOD and provide guidance for how to implement this type of urban form. The Lakewood Planning Commission adopted the manual in October 2007.

Zoning Updates in Denver & Lakewood

Both Denver and Lakewood have reformed their zoning codes to enable transit-oriented development. Lakewood enacted a Transit Mixed-Use Zone District Ordinance in February 2007.³⁸ It then rezoned areas around transit stations to the new TMU district in June 2007.³⁹ The city is now in the process of updating its citywide zoning code, which is 28 years old.⁴⁰ In June 2010, the Denver City Council approved a new citywide zoning code for Denver.⁴¹ The previous code had not been updated in 53 years. The new code shifts the city from a use-based zoning code into a context-based one, with six different neighborhood types (downtown, urban center, general urban, urban, urban edge, and suburban) and a special context type. Within each neighborhood type are allowable building types. Recommendations from Blueprint Denver, the TOD Strategic Plan, and station-specific area plans have been incorporated into the new zoning code to foster TOD. However, some parcels in station areas remain zoned for their existing uses instead of recommended uses, so additional zoning changes will be necessary to foster TOD in some station areas. Along the West Corridor, many existing indus-

trial zones remain zoned industrial, which may limit development potential in the short-term. Additionally, near the Knox, Perry, and Sheridan station areas, many parcels remain zoned for single-family residential despite calls for denser development in these neighborhoods.

Pedestrian, bicycle, & connectivity plans

There are also local plans completed or underway that address walking and bicycling in both cities. These plans address “last mile” connections to transit stations and provide strategies and policy recommendations for making streets safer for active transportation modes.

Denver is currently in the process of updating its Bicycle Master Plan (2001)⁴² and Pedestrian Master Plan (2004)⁴³ with two related initiatives, the Living Streets Initiative and Denver Moves. The Living Streets Initiative is an interdepartmental effort, led by the community planning and public works departments, to create a complete streets policy that addresses not only transportation options within the existing right-of-way, but also the adjacent land uses.⁴⁴ In order to promote walking, bicycling, and public transportation trips, the living streets policy will establish guidelines for street design that require consideration of all users, not just automobiles. It will also provide urban design recommendations for the land uses surrounding the street to encourage people to walk or bike in the city. The effort is led by the city's planning and public works departments. Denver Moves⁴⁵ is a joint planning initiative by the public works and parks & recreation departments to update the existing Bicycle Master Plan and Parks & Recreation Game Plan (2003).⁴⁶ This effort is focused on improving pedestrian and bicycle connections on both streets and off-street trails. Both Living Streets and Denver Moves are still in the planning phase, with both initiatives expected to wrap in 2011.

Lakewood adopted a Bicycle System Master Plan in 2005.⁴⁷ It includes existing conditions and proposed improvements to the bicycling network throughout the city of Lakewood, including along near the West Corridor light rail line. The station area plans go into more detail on specific improvements. The planning department is also working on a Federal Center-Union Corridor Connectivity Plan,⁴⁸ which will provide recommendations for improving pedestrian, bicycle, and vehicle connections to the new light rail station at the Federal Center. Jefferson County is also working on a Bicycle/Pedestrian Plan⁴⁹ and as of late 2010 was soliciting community feedback on suggested improvements.

Appendix E. Rails to Real Estate Findings

The Southeast Corridor was one of three corridors selected as part of CTOD's Rails to Real Estate report. The paper looked at 6 indicators for what combination of elements around transit stations were most highly correlated with new construction.⁵⁰

- Proximity to Downtown and Other Employment Centers
- Vacant and Underutilized Properties
- Block Sizes
- Transit Connectivity
- Station Area Incomes
- Other Physical Factors Influencing Development

Figure AD-1 below shows the relationship between each of these characteristics in the three corridors studied, including the Southeast Corridor in the Denver region. Proximity to employment centers has one of the strongest relationships with development along new light rail construction in all three case studies. Along the West Corridor, station areas that have preexisting employment centers are likely to be strong candidates for new construction. The three case studies also found that the amount of vacant and underutilized land in station areas had a positive relationship with the amount of new construction in those areas, especially along the Southeast Corridor in Denver.

Along the Southwest Corridor specifically, transit had several major impacts on development:

- **Increased the pace of development.** The Southeast Corridor was already the strongest office market in the region, and the residential neighborhoods around the line are some of the more affluent in the region. Most likely, the development seen along the corridor would have happened regardless of the new transit, but the transit helped identify a place to focus development and changed the specific form and type of development. The West Corridor should act like a magnet for development, bringing projects into station areas and encouraging pedestrian and transit-friendly elements in their design.

Figure VI-E-1: Relationship Between Station Area Characteristics & Development

	Hiawatha Line (Minneapolis)	Southeast Corridor (Denver)	Blue Line (Charlotte)
Proximity to Downtown	strong relationship (+)	N/A	strong relationship (+)
Proximity to Employment Centers	strong relationship (+)	strong relationship (+)	strong relationship (+)
Vacant and Underutilized Land	strong relationship (+)	strong relationship (+)	no clear relationship
Block Size (Walkability)	some relationship (+)	some relationship (+)	some relationship (-)
Transit Connectivity	some relationship (+)	no clear relationship	some relationship (+)
Household Income	no clear relationship	some relationship (+)	some relationship (-)

- Influenced the design of new development.** The new transit connections along the Southeast Corridor gave local municipalities compelling reasons to approve higher density development, creating a higher value for developers. In other cases, developers made their projects pedestrian-friendly to provide access to transit stations, more so than if they had been built in an auto-centric place. Lakewood and Denver's station area plans begin to define the design of new construction they envision along the West Corridor, highlighting the importance of walkable design and supporting smart growth.
- Supported more mixing of uses.** Along the Southwest Corridor, the majority of new development between 2005 and 2009 occurred in areas around the Denver Tech Center. While new office construction was a significant portion,

57% was in the form of new residential construction—a striking shift from the development uses prior to the introduction of the light rail. Along the West Corridor, most station area plans call for a mix of residential and employment uses. The GSA site at the future Federal Center station is primarily office uses now, but envisions an active residential component in the future.

Additionally, new development was more likely to happen near existing job centers and on large, vacant properties, while the freeway alignment served as a barrier to transit-oriented development. Finally, support from public agencies in terms of visioning, land use, and parking policies have only been recently implemented. Development along the Southeast Corridor:

Figure VI-E-2: Total Development Along the Southeast Corridor, 2005-2009

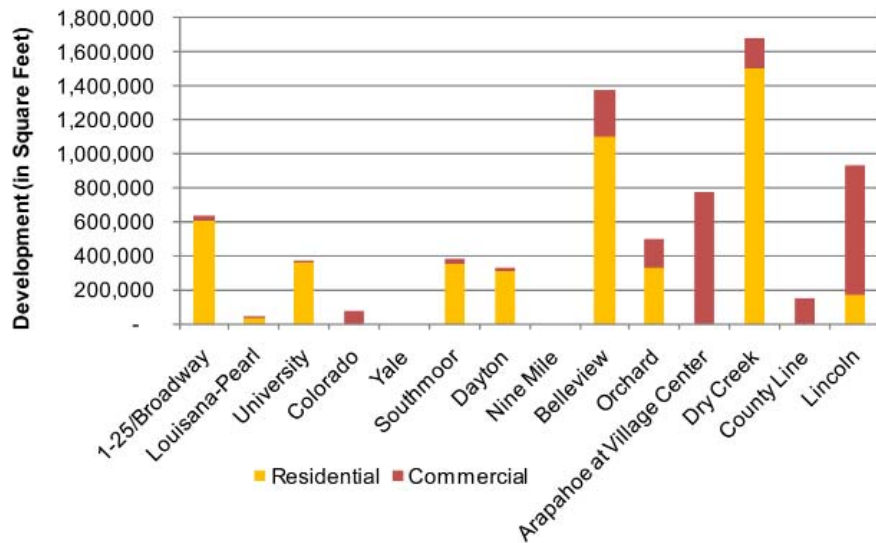
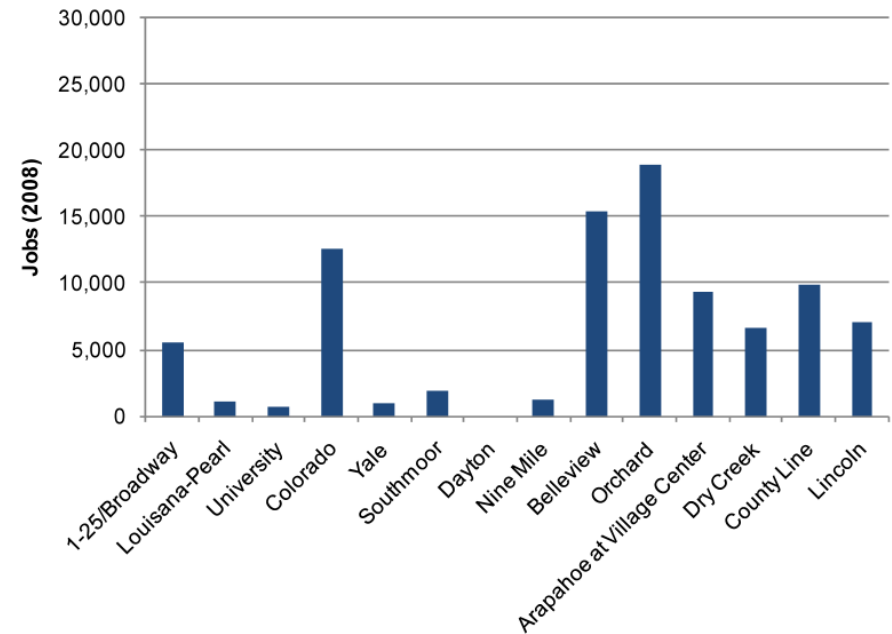
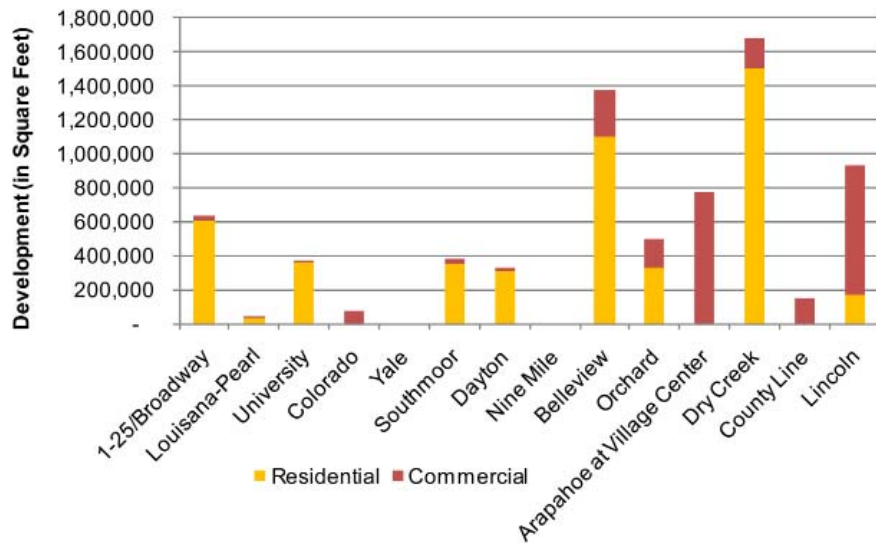


Figure VI-E-3: Employment Along the Southeast Corridor, 2008



- Clustered near existing job centers.** On the other corridors studied in the report, the station areas in and around downtown had the most new development. The Southeast Corridor instead saw the most new development near existing job centers, though as the charts below show, there was not a one-to-one correlation between station areas. Instead, general proximity seemed more important. Along the West Corridor, stations next to the major employment centers or destinations may have the most immediate development potential.
- Occurred on large, vacant properties.** In the case of the Southeast Corridor, the presence of vacant or underutilized properties was a good predictor of the location of subsequent development. This relationship could be in part

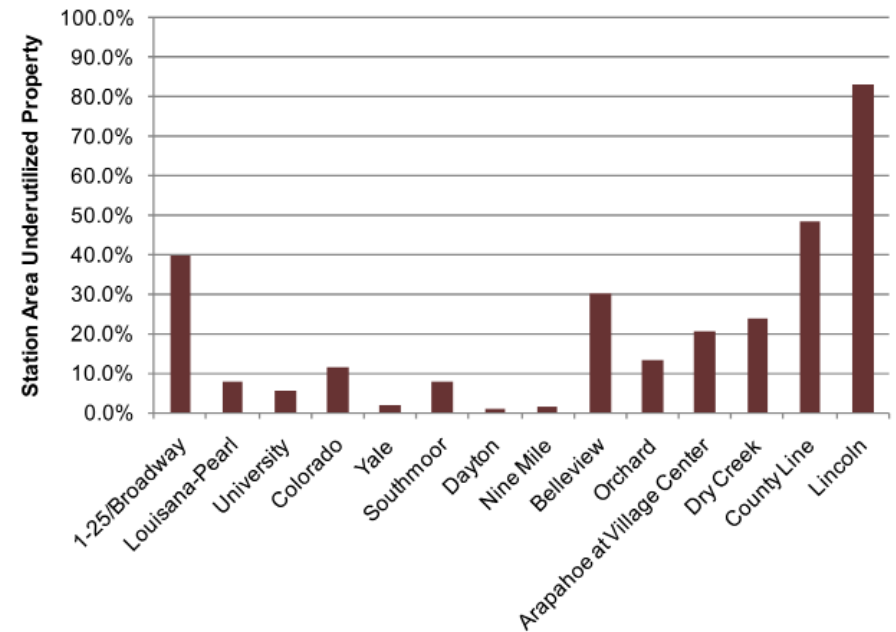
Figure VI-E-2: Total Development Along the Southeast Corridor, 2005-2009



because of the [consistent available of large parcels along the corridor. Most station areas consist of large parcels, many of which were vacant or underutilized. The charts below show the correlation between development and the amount of underutilized or vacant property. Along the West Corridor, stations with large or underutilized parcels tend to have older industrial uses, or, like around the Oak and Federal Center stations, have already been identified by the public agencies as important opportunity sites for new development.

- Had a major barrier in the I-25 highway. Major investments were necessary to offer pedestrian access to the station from the existing and new development, and the exhaust and noise forces development to face away from stations. While the West Corridor's alignment for the most part is along quiet,

Figure VI-E-4: Vacant and Underutilized Property by Station Area



residential streets, ensuring that pedestrian access to the station is a major priority to supporting transit-oriented development.

- Would have benefit from public agency interventions. While the City & County of Denver has actively supported TOD with its land use policies and through direct public financing, suburban jurisdictions have only adopted such policies very recently, and against the backdrop of some public resistance. Now that these policies are in place, including reduced parking standards, increased density allowances, and support of pedestrian infrastructure, future developments may face less resistance and may be designed in a manner that is more transit supportive. Along the West Corridor, many of these elements are already in place.

Appendix F. Overview of HUD Sustainable Communities Regional Planning Grant Indicators

As part of the application for HUD's Sustainable Communities Regional Planning Grant, the Denver region identified 8 broad indicators (housing, public health, community economic development, environment (air and water quality), equitable access to opportunity, cost of community services, carbon footprint, and transportation) that the region would use to track progress towards meeting the goals outlined in the application, as well as engaging community participation and identifying strategies to meet those goals. These 8 indicators could cover a broad range of data needs, but the application narrowed the list down to the following 11:

- VMT per capita
- H+T costs
- Proportion of low-income housing within 30 minutes of major employment centers
- Proportion of affordable housing with access to transit, healthy food, and trails and open space
- Distribution of affordable housing across the region
- Greenhouse gas and ozone-precursor emissions
- Water consumption
- Share of household and employment growth located within Urban Centers
- Single-occupant vehicle mode share
- Development of urban land

For the West Corridor, CTOD has already used many of these indicators (or similar ones) at the corridor and station area scale to create a TOD implementation plan for the corridor. Some of these could be easily expanded to a regional level, while others will require more in depth data collection.

H+T Costs: Along the corridor, the average household pays about 36% of its income to housing and transportation costs, a number lower than the regional and national average. Figure AF-1 shows how this differs from station to station. The existing affordability means that residents currently are able to spend more of their income on groceries, entertainment and other goods and services.

Transportation Costs Alone: CTOD also likes to look at transportation costs alone, to identify whether the heaviest burden for residents is on the housing or transportation side. Along the corridor, transportation costs add up to an average of about 17% of household income. While this number is below the regional and national average (19%) it is a little high, especially for neighborhoods so close to multiple job centers. The new light rail access will certainly lower transportation costs for households who can use the transit to access downtown jobs and amenities, as well as the important destinations at Federal Center and Jefferson County Government Center.

Single-occupant vehicle mode share: For the West Corridor, CTOD has focused on the number of commute trips taken by non-auto modes (transit, biking, and walking.) About 15% of residents who live in the station areas along the future West Corridor use these modes (nearly twice the number of nonauto commutes in the region 8%), and most of the residents who forgo driving to work live closer to downtown. When the light rail is running, these numbers may rise, especially for the more western station areas.

Figure VI-F-1: West Corridor Housing and Transportation Costs

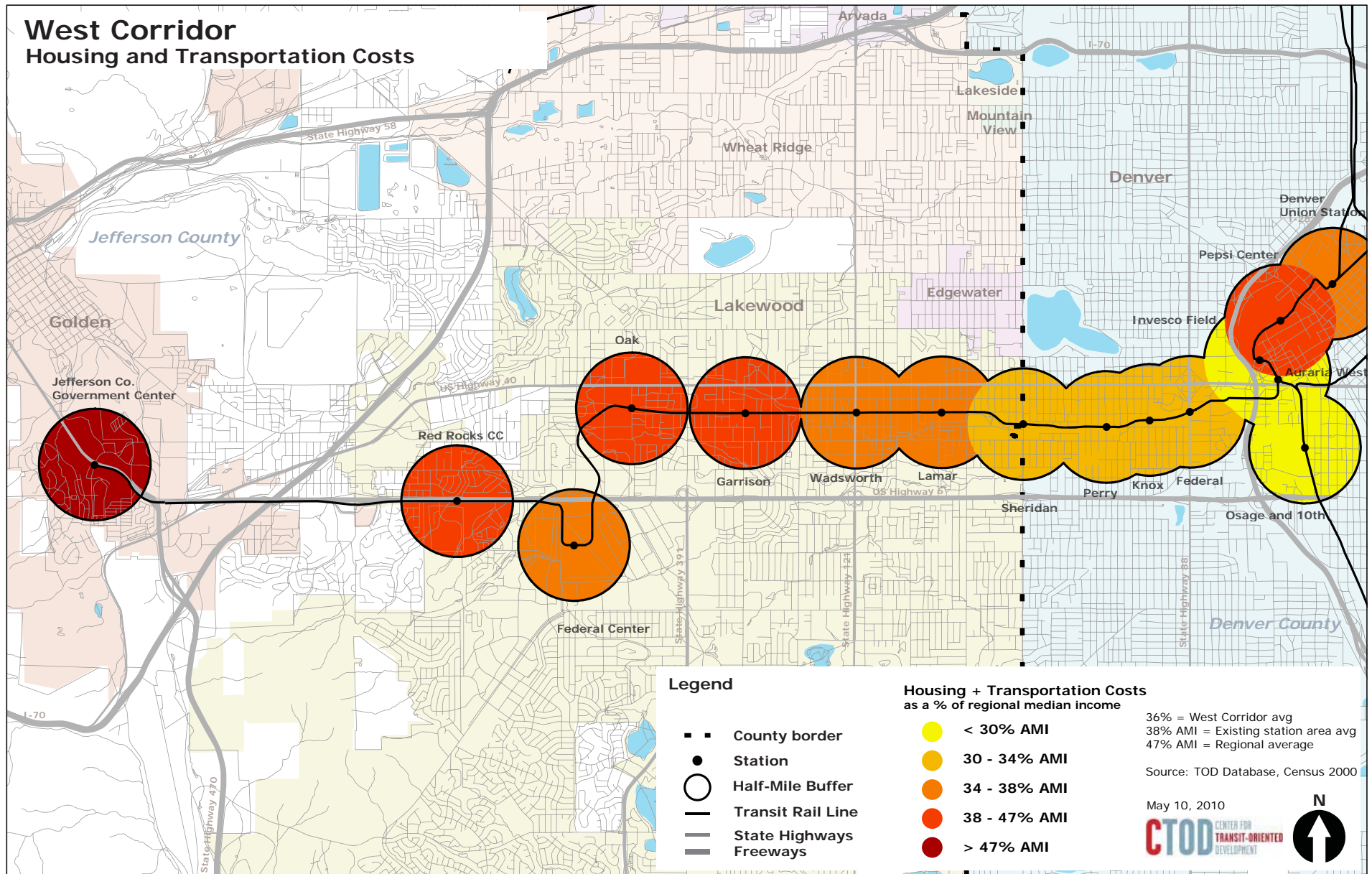


Figure VI-F-2: West Corridor Transportation Costs

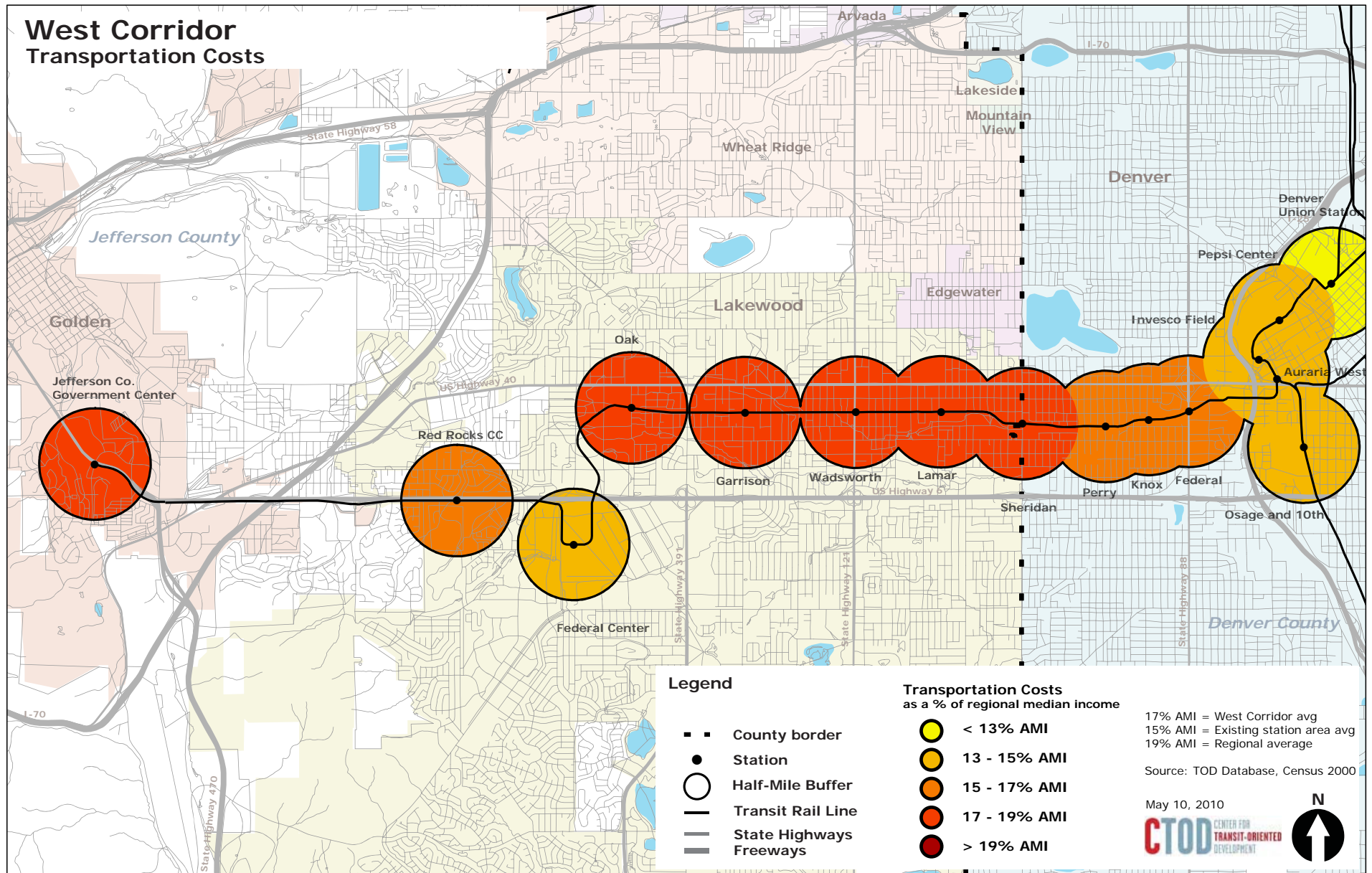


Figure VI-F-3: Nonauto Commutes Starting in Station Areas

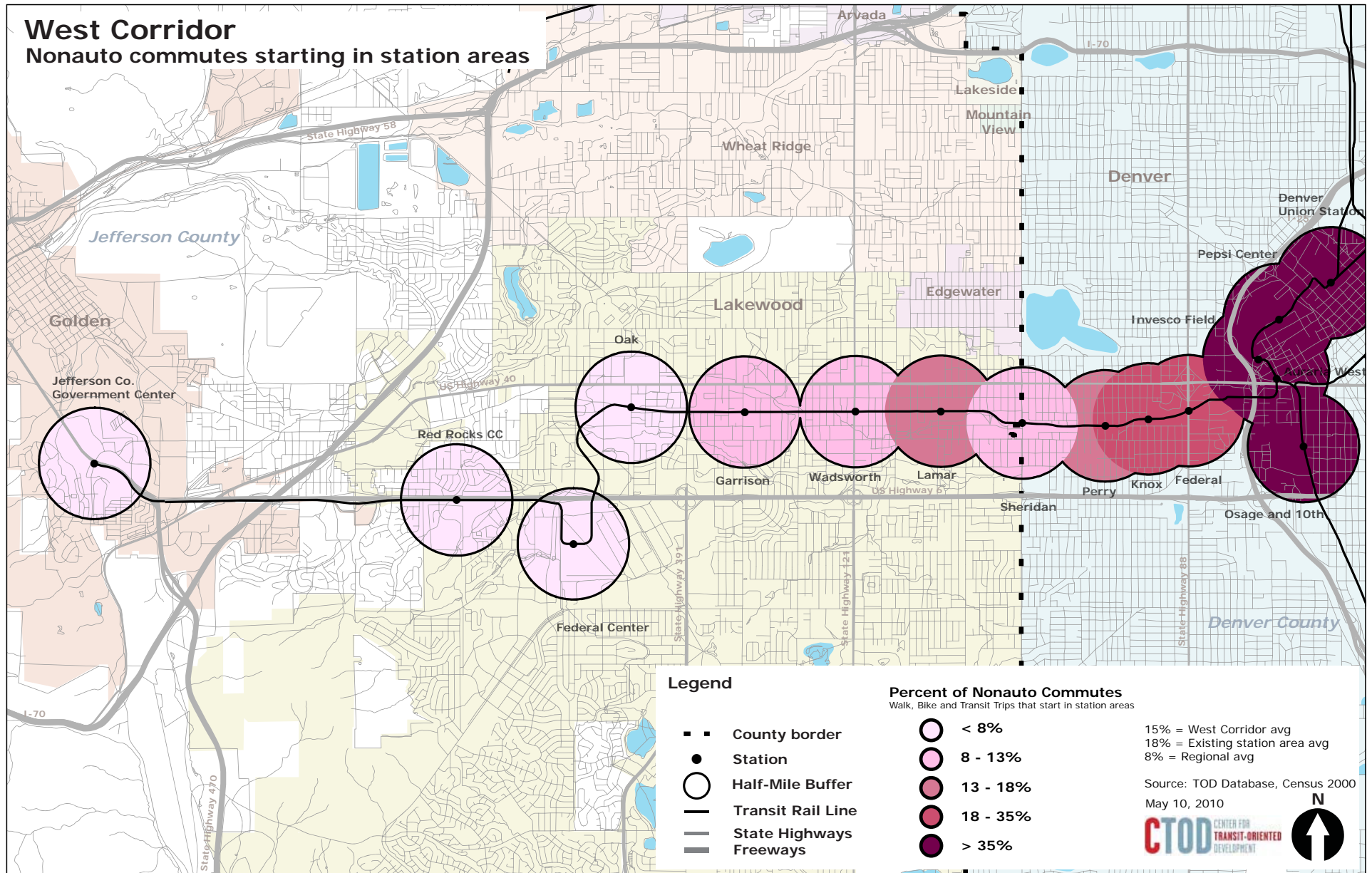
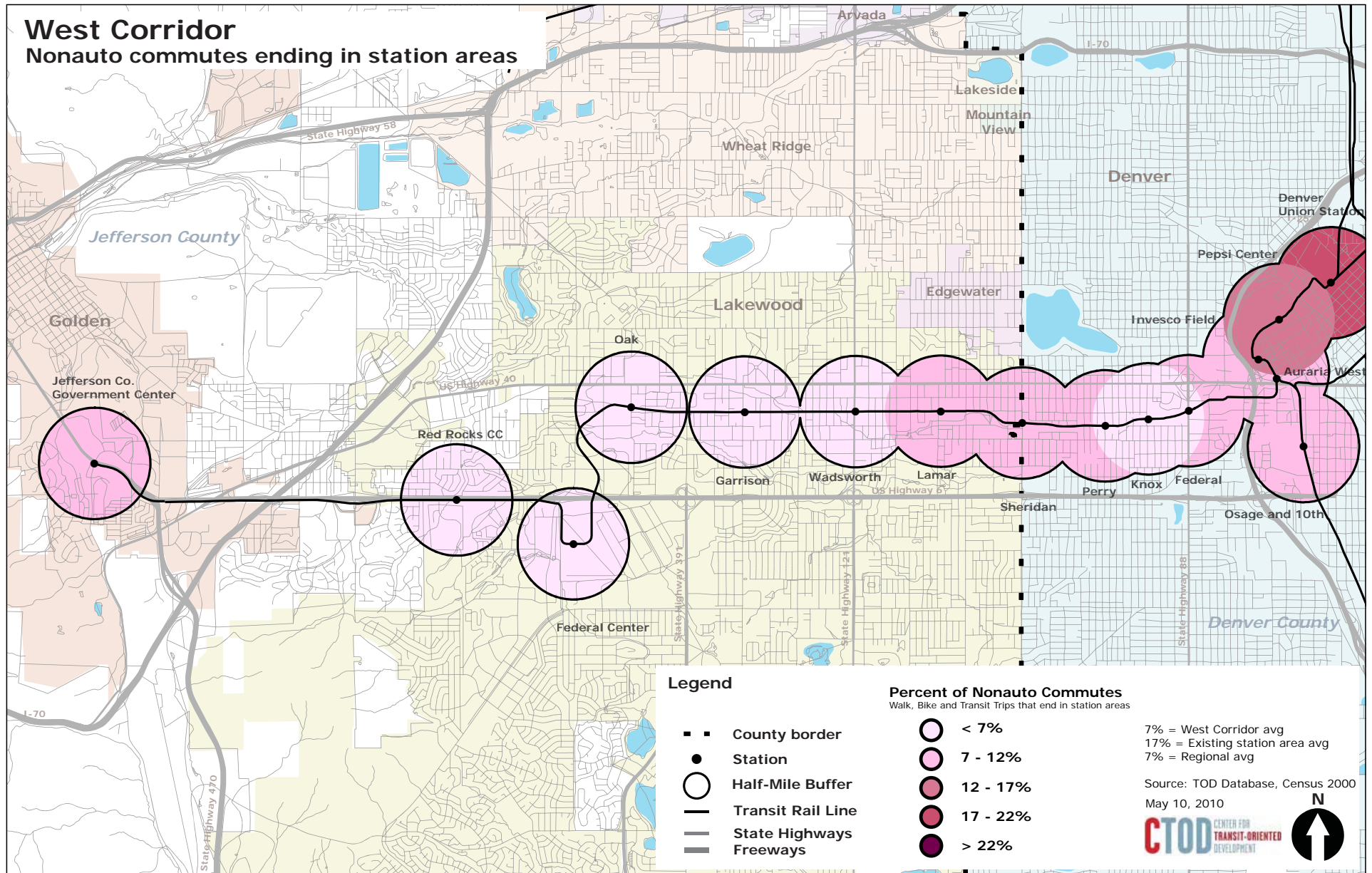


Figure VI-F-4: Nonauto Commutes Ending in Station Areas



CTOD also looks at the nonauto trips taken into these station areas. People from all over the region commute to the job centers near the Federal Center and Jefferson County, but currently, the percent of workers using transit, walking, and biking is fairly low.

Distribution of affordable housing across the region: For the West Corridor, CTOD has created a series of maps showing the affordable housing near the transit line. The map below shows housing provided by the Denver and Lakewood Housing Authority's as well as housing paid for in part by the federal programs: Low Income Housing Tax Credit, Section 202 and Section 8.

CTOD also identified the number of subsidized units (particularly in the Section 8 and 202 funded projects) that are set to expire and potentially become market rate housing in 2014. The map below shows that most of the affordable housing around the West Corridor does not fall into this category, meaning strategies for keeping housing affordable may be focused more on market rate affordability rather than just the subsidized projects.

Proportion of low-income housing within 30 minutes of major employment centers: In the HUD application, major employment centers are defined by the largest single employers. CTOD defined employment centers as highly concentrated clusters of jobs, as shown in the map below. Though identifying clusters of jobs is a more time-intensive process, it allows for a greater understanding of the scale of employment opportunities available in different areas.

Determining how clusters of affordable housing overlay onto and connect to those job centers is the next step, and CTOD began to do that work in the map below, where jobs and affordable housing are both overlaid with the existing and future transit connections in the Denver region.

Proportion of affordable housing with access to transit, healthy food, and trails and open space:

A) Access to transit: The affordable housing map of the West Corridor (see figure above) shows how the amount of existing affordable housing will be able to access the future West Corridor light rail. Overlaying that same data with a map showing the other transit available in the area, as in the map below, shows how those units can access the full regional transit network.

B) Access to healthy food: The map of community resources along the West Corridor beings to identify sources of healthy food for all residents in station areas along the future light rail line. Understanding where affordable housing residents can access healthy food regionally will require a region-wide database of grocery stores and fresh food markets.

Figure VI-F-5: Affordable Housing Units

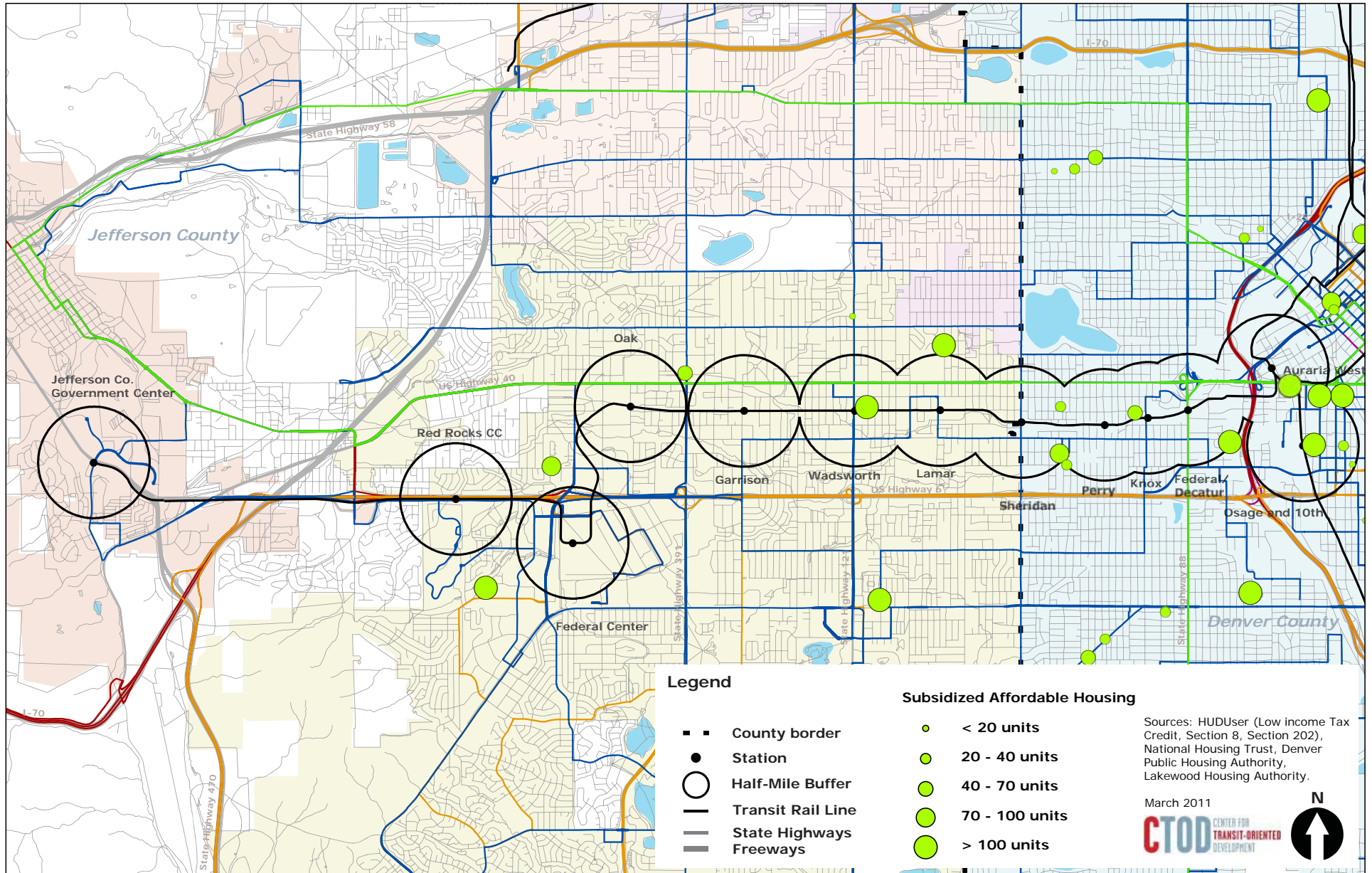


Figure VI-F-6: Subsidized Housing Expiring in 2014

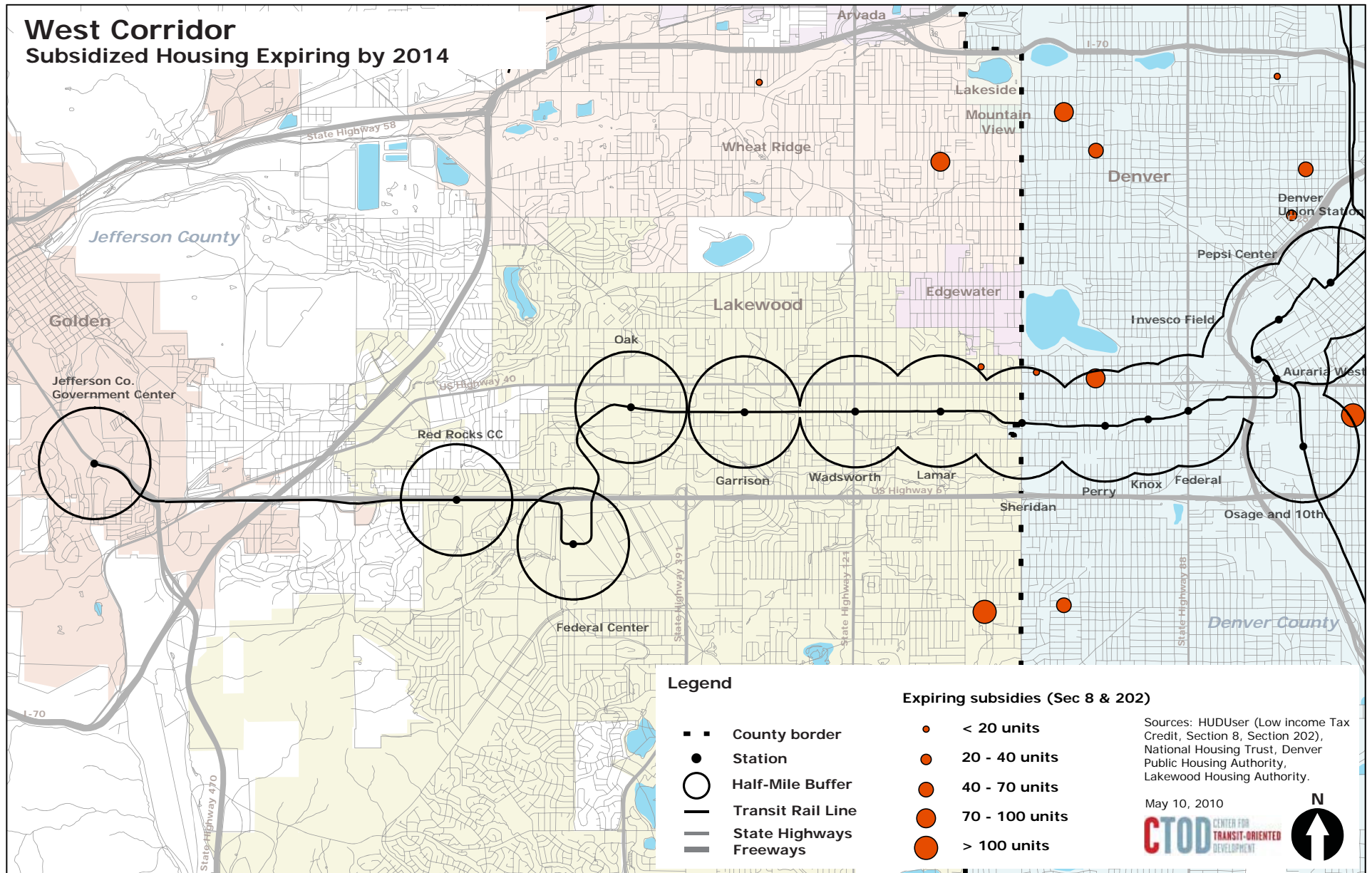


Figure VI-F-7: Major Employment Centers

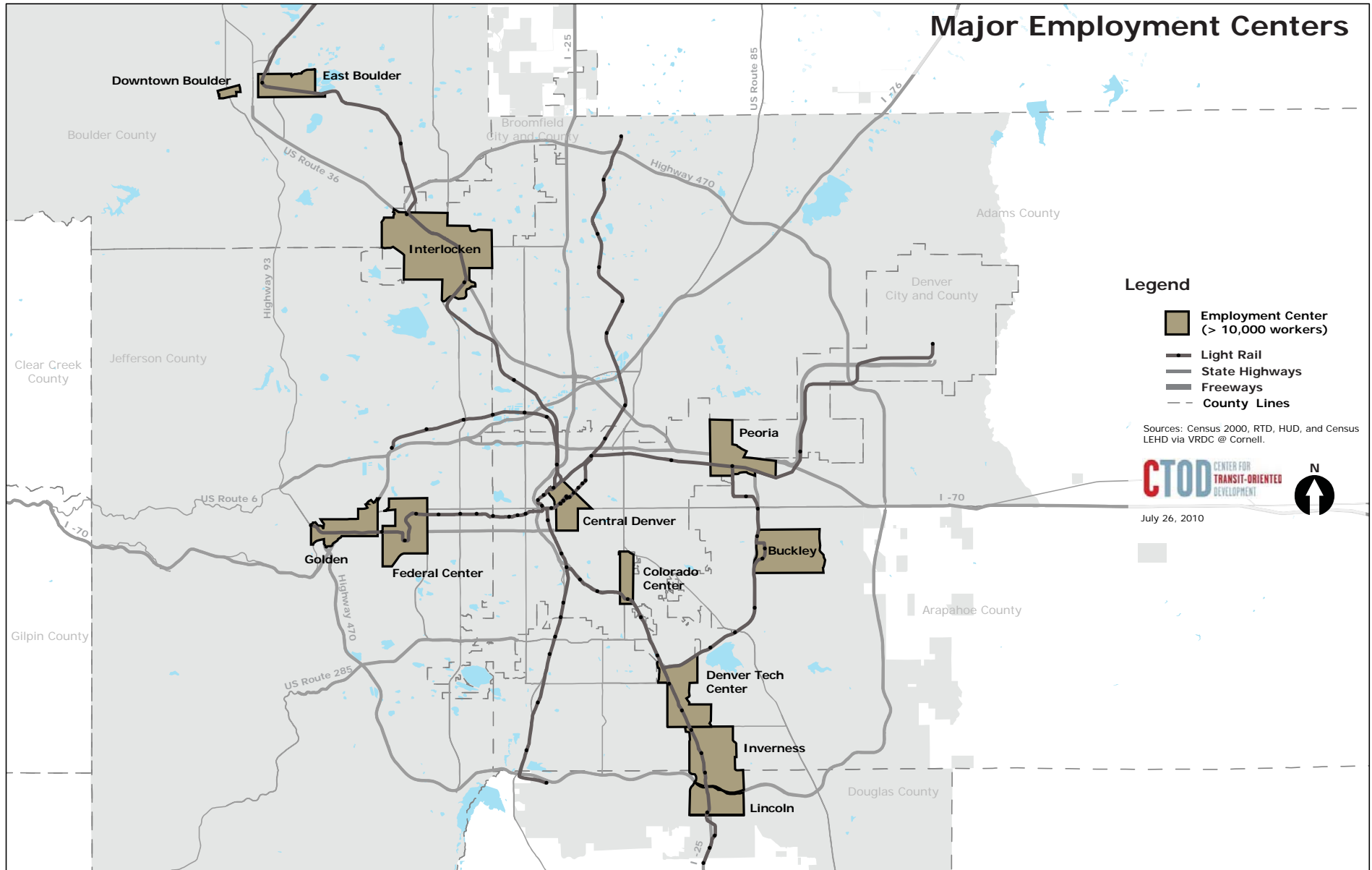


Figure VI-F-8: Subsidized Affordable Housing Distribution over Job Centers and Concentrations of Poverty

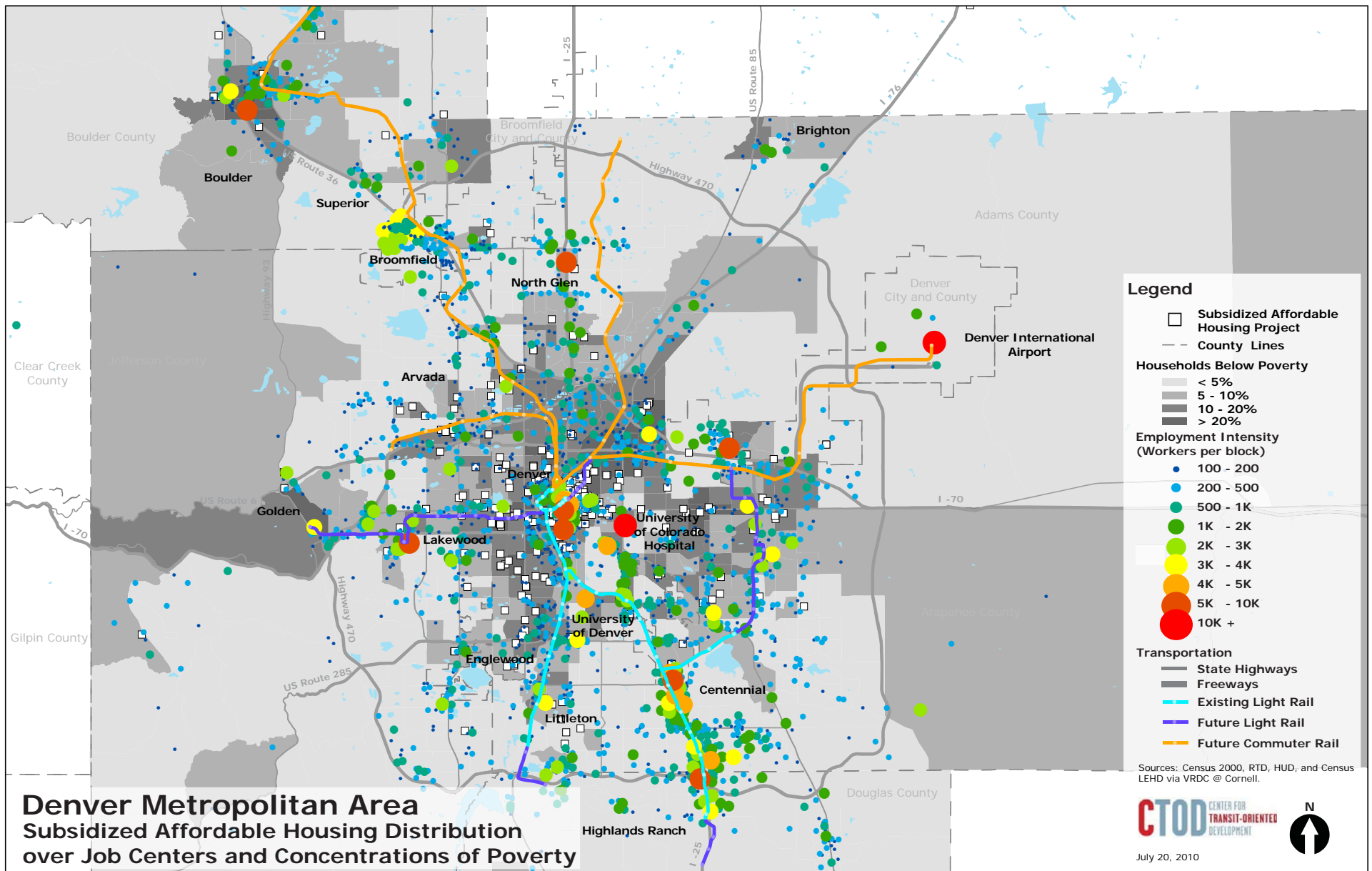
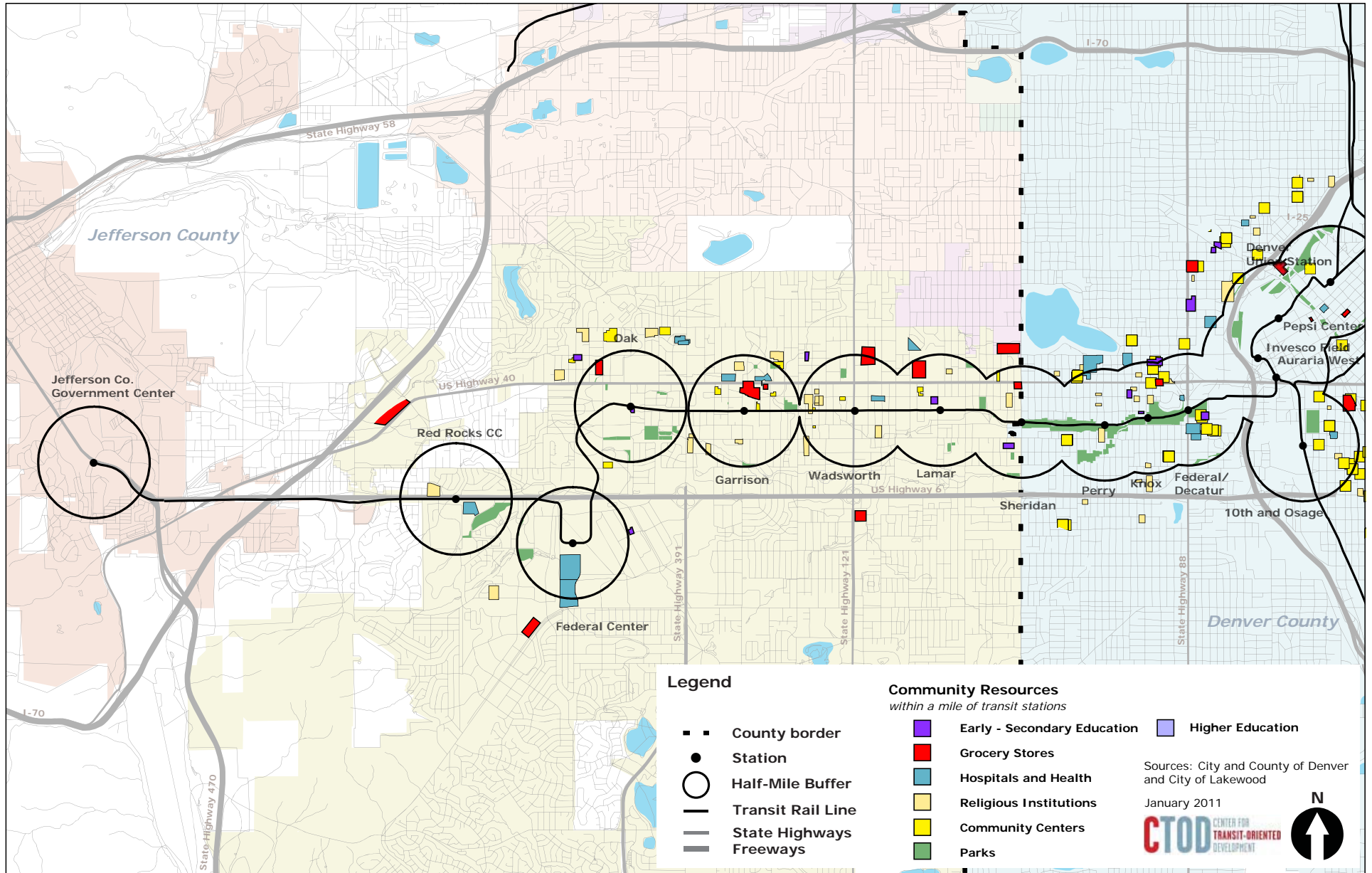


Figure VI-F-9: Community Resources Within a Mile of Transit Stations



Notes

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Page 18: Auraria Campus and Downtown Denver, Jeffrey Beall @ Flickr

Page 18: Invesco Field at Mile High, John Barker @ Flickr

Page 41: Sixteenth Street Walkers, Jesse Varner @ Flickr

Page 41: Downtown Denver traffic at night, pinprick @ Flickr

Page 46: Deck trellis under construction at the Mulroy Apartments, Denver Housing Authority.

Page 49: Rendering of new housing developments near the 10th & Osage station, City & County of Denver

Page 49: Jody Apartments, Urban Land Conservancy

Page 49: Head Start, City of Lakewood

Page 50: Mulroy Apartments and future community gardens, Denver Housing Authority

Page 61: Infill examples in Northwest Denver, Denver Infill

Page 80: Invesco Field, Wally Gobetz @ Flickr

Page 80: Lakewood and Dry Gulches bike path, DenverBikePaths.blogspot.com